Indian and Northern Affairs Canada | Affaires indiennes et du Nord Canada

FOX-C EKALUGAD FJORD LONG-TERM MONITORING PLAN WATER LICENCE APPLICATION

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Appendix 1: Nunavut Water Board Water Licence Application Form

Effective June 16, 2006

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NUNAVUT IMALIRIYIN KATIMAYINGI
NUNAVUT WATER BOARD
OFFICE DES EAUX DU NUNAVUT

WATER LICENCE
APPLICATION FORM

Application for: (check one)

☐ **New** ☒ **Renewal** ☐ **Amendment** ☐ **Assignment** ☐ **Cancellation**

LICENCE NO:
(for NWB use only)

1. NAME AND MAILING ADDRESS OF APPLICANT/LICENSEE

Natalie Plato
Director, Contaminated Sites
Indian and Norther Affairs Canada
PO Box 2200
Iqaluit, NU X0A 0H0

Phone: 867-975-4730
Fax: 876-975-4736
e-mail: natalie.plato@inac-ainc.gc.ca

2. ADDRESS OF CORPORATE OFFICE IN CANADA (if applicable)

Same

Phone: n/a
Fax: n/a
e-mail: n/a

3. LOCATION OF UNDERTAKING (describe and attach a topographical map, indicating the main components of the Undertaking)

FOX-C Ekalugad Fjord former Distant Early Warning (DEW) Line site. See attached Maps (Appendix 5)

Latitude: (68°42'0" N) Longitude: (68°33'0" W)
NTS Map Sheet No. 027B13 Scale: 1/50,000

4. DESCRIPTION OF UNDERTAKING (attach plans and drawings)

See attached Long-Term Monitoring Plan (Appendix 4). The main activities that will take place include: monitoring of the Non-Hazardous Waste Landfill and the general condition of the site.

5. TYPE OF PRIMARY UNDERTAKING (A supplementary questionnaire **must** be submitted with the application for undertakings listed in **"bold"**)

☐ **Industrial**
☐ **Mining and Milling**(includes exploration/drilling)
☐ **Municipal** (includes camps/lodges)
☐ Power
☐ Agricultural
☐ **Conservation**
☐ Recreational
☒ **Miscellaneous** (describe below):

Long-term monitoring of FOX-C Ekalugad Fjord former DEW line site. Remediation completed in 2008.

See Schedule II of *Northwest Territories Waters Regulations* for Description of Undertakings

6. WATER USE

☐ To obtain water
☐ To cross a watercourse
☐ To modify the bed or bank of a watercourse
☐ Flood control
☐ To divert a watercourse
☐ To alter the flow of , or store, water

☒ Other (describe): Sampling of water from monitoring wells

7. QUANTITY OF WATER INVOLVED (cubic metres per day including both quantity to be used and quality to be returned to source)

Water use ☒ $100m^3$/day or less
☐ Greater than $100m^3$/day; if greater, indicate quantities to be used for each purpose (camp, drilling, etc.)

Monitoring wells will be purged and then a 3 Litre sample will be taken from each well (maximum of 25 Litres)

Water returned to source
0 m^3/day

8. WASTE (for each type of waste describe: composition, quantity (cubic metres per day), methods of treatment and disposal, etc.)

☐ Sewage
☒ Solid Waste
☐ Hazardous
☐ Bulky Items/Scrap Metal
☐ Waste oil
☐ Greywater
☐ Sludges
☐ Other describe):

A small amount of domestic waste may be generated during the on-site monitoring work. All waste will be removed from the site and disposed of in a community landfill.

9. OTHER PERSONS OR PROPERTIES AFFECTED BY THIS UNDERTAKING (give name, mailing address and location; attach if necessary)

Land Use Permit

DIAND	☐ Yes	☒ No	If no, date expected _____
Regional Inuit Association	☐ Yes	☒ No	If no, date expected _____
Commissioner	☐ Yes	☒ No	If no, date expected ___

10. PREDICTED ENVIRONMENTAL IMPACTS OF UNDERTAKING AND PROPOSED MITIGATION MEASURES (direct, indirect, cumulative impacts, etc.)

None

NIRB Screening ☒ Yes ☐ No If no, date expected _____

11. INUIT WATER RIGHTS

Will the project or activity substantially affect the quality, quantity, or flow of water flowing through Inuit *Owned Lands and the rights* of Inuit under Article 20 of the Nunavut Land Claims Agreement?

No.

If yes, has the applicant entered into an agreement with the Designated Inuit organization to pay compensation for any loss or damage that may be caused by the alteration. If no compensation agreement has been made, how will compensation be determined?____

12. CONTRACTORS AND SUB-CONTRACTORS (name, address and functions)

To be determined

13. STUDIES UNDERTAKEN TO DATE (list and attach copies of studies, reports, research, etc.)

A comprehensive list of the studies, reports, research, etc. that have been conducted to date is provided in Appendix 6. Copies of many of these have already been provoded to the Nunavut Water Board. If you require copies of any of these reports please let us know.

14. THE FOLLOWING DOCUMENTS MUST BE INCLUDED WITH THE APPLICATION FOR THE REGULATORY PROCESS TO BEGIN

Supplementary Questionnaire (where applicable: see section 5) ☐ Yes ☒ No If no, date expected ____

Inuktitut and/or Inuinnaqtun/English Summary of Project ☒ Yes ☐ No If no, date expected ____

Application fee of $30.00 (Payee Receiver General for Canada) ☐ Yes ☒ No If no, date expected n/a

Water Use fee of $30.00 (unless otherwise indicated in Section 9 of the *NWT Waters Regulations;* Payee Receiver General for Canada)

☐ Yes ☒ No If no, date expected n/a

15. PROPOSED TIME SCHEDULE (unless otherwise indicated, the NWB will consider the application for a five (5) year term)

☐ one year or less (or) ☒ Multi Year

Start Date: July 1, 2009 Completion Date: September 30, 2033

Natalie Plato	Director, Cont. Sites	Natalie Plato	9/16/09
Name (Print)	Title (Print)	Signature	Date

Water Use fee of $30.00 (unless otherwise indicated in Section 9 of the *NWT Waters Regulations;* Payee Receiver General for Canada)

☐ Yes ☒ No If no, date expected n/a

For Nunavut Water Board office use only

APPLICATION FEE **Amount: $____** **Pay ID No.: ____**

WATER USE DEPOSIT **Amount: $____** **Pay ID No.: ____**

Appendix 2: Executive Summary (English)

EXECUTIVE SUMMARY

1. PROJECT BACKGROUND

The FOX-C Intermediate Distant Early Warning (DEW) Line Site was constructed in 1957 and subsequently abandoned in 1963. A hazardous materials removal program completed in 1985 and an environmental assessment completed in 1994 corroborated the presence of various hazardous materials and contaminated soils at the site. This included elevated concentrations of Polychlorinated Biphenyls (PCBs) in soil and paint samples collected from various locations.

Indian and Northern Affairs Canada (INAC) augmented the 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. Based on the results of these investigations, as well as information gathered during the public consultation process, INAC finalized the FOX-C Remedial Action Plan.

Implementation of the Remedial Action Plan began in 2005 with the mobilization of equipment and materials to FOX-C via sealift. The on site remediation work took place over three field seasons (June/July-September of 2006, 2007, and 2008) and included the construction of a Non-Hazardous Waste Landfill, the cleaning and disposal of drums, debris collection, contaminated soil excavation, hazardous waste removal, and building and structure demolition. The equipment and materials were demobilized from the site in September 2008.

2. PROJECT LOCATION

The FOX-C Intermediate DEW Line Site is located at 68°42' N, 68°33' W on the Northeast coast of Baffin Island, Nunavut, on the South shore of Ekalugad Fjord. It is approximately 240 kilometres northwest of Qikiqtarjuaq and 260 kilometres south of Clyde River. The terrain at FOX-C consists of high rugged hills cut by rock outcrops. The site is accessible primarily by barge; due to the uneven terrain on site, an airstrip was never constructed at FOX-C. A nearby freshwater lake has previously been used as a landing strip in the winter and there was a helipad located at the Upper Station.

The site can be broken down into three main areas: Upper Station, Mid Station, and Lower Station. The Upper Station is located on a summit at an elevation of 770 metres above mean sea level. The main site facilities were located here and included a module train, warehouse, garage, a former Quonset building, Inuit house, bulk fuel storage tanks and a radar tower.

The Mid Station is located at the base of the summit approximately 500 metres east of the Upper Station. A glacier located across from the Mid Station feeds a river that flows alongside the access road to the Lake. A dump area, barrel storage pad, four former Quonset buildings and numerous barrel and debris areas were located here.

At the Lower Station near the Lake Area the access road from the Upper Station splits into two parts; one section heads southwest to the Lake Area and the other section of the road heads north to the Beach Area (Qarmaralik Cove). A river flows out of the lake and empties into the ocean at the beach. At the Beach Area there were two bulk fuel storage tanks, barrel caches and abandoned construction equipment. The landing area at the beach was used to allow ships to transfer fuel to the POL storage tanks.

3. PROJECT ACTIVITIES & SCHEDULE

During the summer of 2009 INAC will implement the FOX-C Ekalugad Fjord Long-Term Monitoring Plan (See Appendix 4). Monitoring of the site will continue for 25 years (site visits and sampling will take place in years 1, 3, 5, 7, 10, 15, 20, and 25) at which time a review will be conducted and the need for continued monitoring assessed.

The monitoring plan for FOX-C includes monitoring of the Natural Environment and the Non-Hazardous Waste Landfill. The parameters that will be measured consist of visual characteristics, water, and soil (if required).

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.

Consultations were held in Qikiqtarjuaq and Clyde River throughout the FOX-C Ekalugad Fjord remediation project. 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 local people 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; and
- To identify resources (labour and equipment) in the community that would be able to assist in the execution of the project

Appendix 3: Executive Summary (Inuktitut)

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1. ᐱᓕᕆᐊᖑᔪᒧᑦ ᐅᓂᒃᑳᖅᓯᒪᔪᖅ

ᖃᕐᒪᖅᑕᓕᒻᒥ ᐅᓇᑕᖅᑐᖃᖅᑎᓪᓗᒍ ᓈᓚᐅᑎᖃᕐᕕᒥᓂᖅ (DEW) ᓴᓇᔭᐅᓚᐅᖅᓯᒪᔪᖅ 1957-ᒥ ᐊᒻᒪ ᕿᒪᐃᓐᓇᖅᑕᐅᓪᓗᓂ 1963-ᒥ. ᓴᓗᒻᒪᓴᖅᑕᐅᒋᐊᓯᓚᐅᖅᑐᖅ ᓱᕈᕈᔪᓐᓂᒃ ᐊᒻᒪ ᐱᔭᕇᖅᑕᐅᓪᓗᓂ 1985-ᒥ ᐊᒻᒪ ᐊᕙᑎᖓᑕ ᖃᐅᔨᓴᖅᑕᐅᓂᖓ ᐱᔭᕇᖅᑕᐅᓪᓗᓂ 1994 ᐊᒻᒪ ᓇᓗᓇᐃᖅᑕᐅᑦᑎᐊᓕᓚᐅᖅᑐᓂ ᐱᑕᖃᕐᓂᖓᓂᒃ ᓱᕈᕐᓇᖅᑐᓂᒃ ᐊᒻᒪ ᓄᓇᖓ ᑕᒪᓐᓇ ᓱᕈᖅᑕᐅᓯᒪᓂᖓᓂᒃ. ᐱᑕᖃᓗᐊᙳᐊᓚᐅᕐᒥᔪᖅ ᓱᕈᕈᔪᒻᒥ ᑐᖁᓐᓇᖅᑐᒥᒃ ᓄᓇᒥ ᐊᒻᒪ ᐊᒥᐊᕈᑎᒥᓂᐅᔪᓂᒃ ᓄᐊᑕᐅᓯᒪᔪᑦ ᐊᔾᔨᒌᙱᑦᑐᓂᑦ.

ᐃᓄᓕᕆᔨᑐᖃᒃᑯᑦ ᖃᐅᔨᓴᕆᐊᓪᓚᑲᓐᓂᓚᐅᖅᑐᑦ ᐊᕐᕌᒍᓂ ᐊᓂᒍᖅᑐᓂ ᐊᑕᖐᓪᓗᑎᒃ ᖃᐅᔨᓴᑦᑎᐊᓕᖅᑐᑎᒃ ᐊᐅᔭᖓᓂ 2004. ᑕᐃᒃᓱᒪᓂᒃᓴᐃᓐᓇᕐᓗ, ᓄᓇᐅᑉ ᖃᐅᔨᓴᖅᑕᐅᓂᖓ ᐱᔭᕇᖅᑕᐅᓚᐅᖅᑐᖅ ᓇᓗᓇᐃᖅᓯᓗᑎᒃ ᓱᓇᒃᑯᑖᖑᔪᓂᒃ ᐊᒻᒪ ᓱᑯᑦᑎᐊᓂ ᑕᒪᒃᑯᐊ ᓄᓇᐅᑉ ᐃᑭᐊᖓᓅᖅᑕᐅᔪᓐᓇᕐᒪᖓᑕ ᐊᑦᑕᕐᓇᙱᑦᑐᑦ. ᓱᑯᑦᑎᐊᓃᓐᓂᖏᑦ ᐃᓄᓐᓄᑦ ᓇᔪᖅᑕᐅᓗᓂ ᖃᓄᐃᙱᓐᓂᖓᓄᑦ ᐊᒻᒪ ᐊᑦᑕᕐᓇᙱᒃᑲᓗᐊᕐᒪᖔᑕ ᖃᐅᔨᓴᖅᑕᐅᓂᖓ ᐱᔭᕇᖅᑕᐅᓚᐅᖅᑐᖅ ᖃᐅᔨᓇᓱᐊᕈᑕᐅᓪᓗᓂ ᖃᓄᐃᑦᑐᓂ ᐊᑐᓇᐊᖃᕐᓂᐊᕐᒪᖓᑕ ᓄᓇ ᐅᑎᖅᑎᑕᐅᓇᓱᐊᖅᑎᓪᓗᒍ ᐊᑐᖅᑕᐅᔪᓐᓇᖅᓯᒃᑲᓐᓂᕐᓗᓂ. ᒪᓕᑦᑐᒋᑦ ᖃᐅᔨᔭᐅᓚᐅᖅᑐᑦ ᖃᐅᔨᓴᖅᑎᓪᓗᒋᑦ, ᐊᒻᒪ ᑕᐃᒃᑯᐊ ᑐᑭᓯᒋᐊᒃᑲᓐᓂᕈᑕᐅᔪᑦ ᓄᐊᑕᐅᓯᒪᔪᑦ ᐃᓄᓐᓂᒃ ᑲᑎᒪᖃᑎᖃᖃᑦᑕᑎᓪᓗᒋᑦ, ᐃᓄᓕᕆᔨᑐᖃᒃᑯᑦ ᐱᔭᕇᖅᓯᓚᐅᖅᑐᑦ ᖃᕐᒪᖅᑕᓕᒻᒥ ᐅᑎᖅᑎᑦᑎᓂᕐᒧᑦ ᖃᓄᖅᑑᕈᑕᐅᓂᐊᖅᑐᒥ ᐸᕐᓇᒍᑕᐅᔪᒥᒃ.

ᐊᑐᓕᖅᑎᑕᐅᓂᖓ ᐅᑎᖅᑎᑦᑎᓇᓱᐊᕐᓂᕐᒧᑦ ᖃᓄᐃᓕᐅᕆᐊᖃᕐᓂᕐᒧᑦ ᐸᕐᓇᒍᑕᐅᔪᖅ ᐱᒋᐊᓚᐅᖅᑐᖅ 2005-ᒥ ᓄᒃᑎᖅᓯᓪᓗᑎᒃ ᓱᓇᒃᑯᑖᓂᒃ ᐊᒻᒪ ᓴᓗᒻᒪᓴᐃᔾᔪᑎᒃᓴᖏᓐᓂᒃ ᖃᕐᒪᖅᑕᓕᒻᒥ ᐅᓇᑕᖅᑐᖃᖅᑎᓪᓗᒍ ᓇᓚᐅᑎᖃᕐᕕᒥᓂᐅᔪᒧᑦ ᐅᒥᐊᕐᔪᐊᒃᑯᑦ. ᓴᓗᒻᒪᖅᓴᐃᒋᐊᓕᓚᐅᖅᑐ ᐋᖅᑭᒃᓱᐃᓪᓗᑎᒃ ᐱᖓᓱᓂ ᐊᕐᕌᒍᓂ ᐊᐅᔭᒃᑯᑦ (ᔫᓂ/ᔪᓚᐃ-ᓰᑎᒻᐱᕆ 2006, 2007 ᐊᒻᒪ 2008) ᐊᒻᒪ ᓴᓇᓪᓗᑎᒃ ᐊᑦᑕᕐᓇᙱᑦᑐᓄᑦ ᓄᓇᐅᑉ ᐃᑭᐊᖓᓅᖅᑕᐅᓂᖏᓐᓄᑦ, ᓴᓗᒻᒪᓴᖅᑕᐅᓂᖏᓐᓄᑦ ᐊᒻᒪ ᐃᒋᑕᐅᓂᖏᓐᓄᑦ ᖃᑦᑕᐅᔭᒥᓂᐅᔪᑦ, ᓴᓂᐅᔪᑦ ᓄᐊᑕᐅᓪᓗᑎᒃ, ᓱᕈᖅᓯᒪᔪᒥᓃ ᓄᓇ ᐲᔭᖅᑕᐅᓂᖏᓐᓄᑦ, ᐊᑦᑕᕐᓇᖅᑐᑦ ᐊᑦᑕᑰᔪᑦ ᐲᔭᖅᑕᐅᓪᓗᑎᒃ, ᐊᒻᒪ ᐃᓪᓗᒥᓂᐅᔪᑦ ᒪᑭᑕᔪᑦ ᓯᖁᖅᑎᖅᑕᐅᓪᓗᑎᒃ. ᐱᓕᕆᔾᔪᑎᖏᑦ ᐊᒻᒪ ᓱᓇᒃᑯᑖᖑᔪᑦ ᓯᖁᖅᑎᖅᑕᐅᓚᐅᖅᑐᑦ ᑕᒫᙵᑦ ᓰᑎᒻᐱᕆ 2008.

2. ᐱᓕᕆᐊᖑᔪᖅ ᓱᑯᑦᑎᐊᓃᓐᓂᖓ

ᖃᕐᒪᖅᑕᓕᒃ ᐅᓇᑕᖅᑐᖃᖅᑎᓪᓗᒍ ᓈᓚᐅᑎᖃᕐᕕᒥᓂᐅᔪᖅ ᒫᓃᑦᑐᖅ 68°42' ᐅᐊᓐᓇᖓᓂ, 68°33' ᐱᖓᓐᓇᖓᓂ ᐅᑭᐅᖅᑕᖅᑐᒥ ᑲᓇᓐᓇᖅᐸᓯᖓᓂ ᐃᒪᐅᑉ ᑭᑦᓕᖓᓂ ᕿᑭᖅᑖᓗᒻᒥ, ᓄᓇᕗᒻᒥ, ᓂᒋᐊᓂ ᐃᒪᐅᑉ ᑭᑦᓕᖓᓂ ᖃᒻᒪᖅᑕᓕᒻᒥ. ᖃᓂᒋᔭᖓᓂ ᐅᖓᓯᓐᓂᖃᖅᑐᖅ 240 ᑭᓚᒦᑕ ᐅᐊᓐᓇᖅᐸᓯᒻᒥ ᐱᖓᓐᓇᖓᓂ ᕿᑭᖅᑕᕐᔪᐊᑉ ᐊᒻᒪ 260 ᑭᓚᒦᑕ ᓂᒋᐊᓂ ᑲᖏᖅᑐᒑᐱᐅᑉ. ᑕᒪᓐᓇ ᖃᒻᒪᖅᑕᓕᐅᑉ ᓄᓇᖓ ᐃᒪᐃᑦᑐᔪᖅ ᐃᓐᓇᕈᒐᓚᐅᓪᓗᓂ ᕿᖓᖃᖅᑐᓂ. ᑕᐸᓐᓇ ᐅᐸᒐᒃᓴᐅᓪᓗᐊᑕᖅᑐᖅ ᓯᑲᐅᒃᑯᑦ; ᒪᓂᕐᐅᙱᓐᓂᖓᓄᑦ ᓄᓇᖓ ᒥᑦᑕᕐᕕᐅᔪᒥ ᓴᓇᔪᖃᓚᐅᖅᓯᒪᙱᑦᑐᖅ ᖃᕐᒪᖅᑕᓕᒻᒥ. ᖃᓂᒋᔭᖓᓂ ᑕᓯᖅᑕᖃᕐᒪᑦ ᒥᑦᑕᕐᕕᐅᖃᑦᑕᖅᓯᒪᒻᒥᔪᖅ ᐅᑭᐅᒃᑯᑦ ᐊᒻᒪ ᖁᓕᒥᒎᓕᒻᒧᑦ ᒥᕝᕕᐅᔪᒥᒃ ᐱᑕᖃᓚᐅᕆᓗᓂ ᐹᓃᓐᓂᖅᓴᒥ.

ᑖᓐᓇ ᐊᕕᒃᑐᖅᑕᐅᓯᒪᔪᓐᓇᕐᒪᑦ ᐱᖓᓲᓕᖅᑲᖓᑦᑐᐊᑕᕐᓗᓂ: ᐹᓂᓯᓐᓂᖅᓴᖅ, ᕿᑎᐊᓂ, ᐊᒻᒪ ᐊᐸᐸᓯᓐᓂᖅᐹ. ᐹᓃᓐᓂᖅᐹᖅ ᐳᖅᑐᓂᖅᐹᖓᓃᑦᑐᖅ 770 ᒦᑕᓂ ᐃᒪᐅᑉ ᖁᓛᓂᑦ. ᐊᑐᖅᑕᐅᓪᓗᐊᑕᖅᐸᓚᐅᖅᑐᖅ ᑕᒫᓃᑦᑐᑦ ᐊᒻᒪ ᑕᕝᕙᓃᑦᑐᖅ ᐃᓪᓗᕐᖓᐅᑎᒥᓂᖅ, ᓯᕐᓗᐊᖅ, ᓄᓇᓯᐅᑎᖃᕐᕕᒃ, ᒥᖅᓲᑕᐅᔭᒥᓂᐅᔪᖅ, ᐃᓄᓐᓄᑦ ᐃᑦᑐᕆᔭᐅᕙᑦᑐᒥᓃᑦ, ᐅᖅᓱᖃᐅᑎᒥᓃᑦ ᐊᒻᒪ ᖃᐅᒪᓪᓗᓂ ᓇᓗᓇᐃᒃᑯᑕᖅ (ᑕᒻᒪᕇᒃᑯᑦ).

ᕿᑎᐊᓃᑦᑐᖅ ᐊᓪᓚᐅᔪᖅ ᖁᓪᓕᖅᐹᒥ ᐅᖓᓯᓐᓂᖃᖅᑐᓂ 500 ᒦᑕᓂᑦ ᑲᓇᓐᓇᖓᓂ ᐹᓃᓯᓐᓂᖅᓴᐅᔪᒥᒃ. ᓯᕐᒥᐅᔪᖅ ᐊᑭᐊᓃᑦᑐᖅ ᕿᑎᐊᓃᑦᑑᑉ ᑰᑦᑐᖅ ᖃᓂᒋᔭᖓᓂ ᓯᓚᑖᓄᓇᐊᕐᒧᑦ ᐊᑐᓇᐊᕐᒧᑦ ᑕᓯᕐᒧᑦ. ᐊᑦᑕᕐᕕᐅᔪᖅ, ᖃᑦᑕᐅᔭᒃᑯᕕᐅᕙᑦᑐᒥᓂᖅ, ᑎᓴᒪᑦ ᒥᖅᓲᑕᐅᔭᒥᓂᐅᔪᑦ ᐊᒻᒪ ᐊᒥᓱᒃᓪᓚᐅᔪᑦ ᖃᑦᑕᐅᔭᒥᓃᑦ ᐊᒻᒪ ᓴᓂᐅᔪᑦ ᑖᒪᓂᓚᐅᖅᑐᑦ.

ᐊᓪᓕᖅᐸᐅᔪᒥ ᖃᓂᒋᔭᖓᓂ ᑕᓯᐅᑉ ᓯᓚᑖᓄᐊᖓᔪᖅ ᐊᖅᑯᑦ ᑕᕝᕙᙵᑦ ᖁᑦᑎᓂᖅᐸᐅᔪᒥᑦ ᒪᕐᕈᐃᓕᖓᓪᓕᒥᔪᖅ; ᐊᑕᐅᓯᖅ ᓴᓪᓕᔪᖅ ᓂᒋᐊᓂ ᐱᖓᓐᓇ ᑕᕙᖓ ᑕᓯᕐᒧᑦ ᐊᒻᒪ ᐊᐃᑉᐸᖓ ᐊᖅᑯᑎᐅᑉ ᑕᓪᓕᒥᔪᖅ ᐅᐊᓐᓇᖓᓄᑦ ᑕᒪᐅᖓ ᖃᕐᒪᖅᑕᓪᓗᒧᑦ. ᑖᓐᓇ ᑕᓯᖓ ᑰᑦᑐᓂ ᐃᒪᕕᓪᒧᑦ, ᓯᔾᔭᖓᓂ ᒪᖅᑮᑦᑐᑎᒃ ᐊᖏᔫᑉ ᐅᖅᓯᖃᐅᑎᒥᓂᐅᔪᒃ, ᖃᑦᑕᐅᔭᒥᓂᐅᔪᑦ ᐊᒻᒪ ᕿᒪᐃᓐᓇᖅᑕᐅᓂᑯᑦ ᐃᑦᑐᓕᐅᖅᑐᓄᑦ ᓴᓇᔾᔪᑎᒥᓂᐅᔪᑦ. ᓂᐅᕐᕈᐃᕝᕕᐅᕙᓚᐅᖅᓯᒪᔪᖅ ᓯᔾᔭᒥ ᐊᑐᖅᑕᐅᔪᓐᓇᖅᐸᓚᐅᕐᒥᔪᖅ ᐅᒥᐊᕐᔪᐊᒃᑯᑦ ᓄᒃᑎᖅᑕᐅᑦᑐᑎᒃ ᐅᖅᓱᐊᓗᖃᐅᑎᐅᔪᓄᑦ.

3. ᐱᓕᕆᐊᒥ ᖃᓄᐃᓕᐅᕐᓂᐅᔪᑦ ᐊᒻᒪ ᐋᖅᐲᒃᓯᒪᓂᖏᑦ

ᐅᐱᕐᖔᖓᓂ ᐊᐅᔭᖓᓂᓗ 2009 ᐃᓄᓕᓇᔩᑐᖃᒃᑯᑦ ᐊᑐᓕᖅᑎᑦᑎᕆᐊᕐᓂᐊᖅᑐᑦ ᖃᕐᒪᖅᑕᓪᓗᒧᑦ ᓯᕗᑐᔪᒧᑦ ᐅᔾᔨᖅᑐᖅᑕᐅᓂᖓᓄᑦ ᐸᕐᓇᒍᑕᐅᔪᒥᒃ (ᑕᑯᓗᒍ ᐅᐃᒍᖓ 4). ᐅᔾᔨᖅᑐᖅᑕᐅᓂᐊᖅᑐ ᑕᑉᐸᓐᓇ ᐅᑭᐅᓄᑦ 25-ᓄᑦ (ᐅᐸᒃᑕᐅᖃᑦᑕᕐᓗᓂ ᐊᒻᒪ ᖃᐅᔨᓴᕋᒃᓴᐅᔪᓂᒃ ᐱᕙᓪᓗᑎᒃ ᐅᑯᐊ ᐊᕐᕌᒍᑦ ᐊᓂᒍᕐᕕᑉᐸᑕ 1, 3, 5, 7, 10, 15, 20, ᐊᒻᒪ 25) ᑕᐃᒃᓯᒪᓂᐅᓕᖅᐸᑦ ᕿᒥᕐᕈᓂᐊᖅᑐᑦ ᐊᒻᒪ ᐅᔾᔨᖅᑐᖅᑕᐅᖃᑦᑕᕐᓂᓇᓂᐊᖅᑕᖏᑦ ᖃᐅᔨᓴᖅᑕᐅᑎᐊᕐᓗᑎᒃ.

ᐅᔾᔨᖅᑐᕐᓂᕐᒧᑦ ᐸᕐᓇᒍᑕᐅᔪᖅ ᖃᕐᒪᖅᑕᓪᓗᒧᑦ ᐱᖃᓯᐅᔾᔨᔪᖅ ᐅᔾᔨᖅᓱᖅᑕᐅᓂᖓ ᑕᒪᓐᓇ ᓄᓇᖓ ᓱᕐᖁᒃᓯᒪᓐᖏᑦᑐᖅ ᐊᒻᒪ ᐊᑦᑕᕐᓇᓐᖏᑦᑐᓂ ᐊᑦᑕᕐᕕᐅᓯᒪᔪᖅ ᓄᓇᐅᑉ ᐃᑭᐊᖓᓄᑦ. ᑭᓪᓕᒋᔭᖓ ᖄᑦᑐᖅᑕᐅᓂᐊᕐᓂᖓ ᐃᒪᐃᑦᑐᒃᑯᑦ ᑕᑯᑐᐃᓐᓇᕐᒧᑦ ᖃᓄᐃᓕᖓᓂᖓᓂᒃ, ᐃᒪᖓ, ᐊᒻᒪ ᑕᒪᓐᓇ ᐃᔾᔪ (ᑕᐃᒪᐃᑦᑕᓇᐊᖃᖅᐸᑦ).

4. ᐃᓅᓯᓇᔭᓄᑦ ᐃᒃᐱᓐᓇᕐᓂᖓ ᐱᓕᕆᐊᖑᔪᑉ

ᐊᔪᕐᓇᙱᑲᐃᓪᒪᑦ, ᐱᓕᕆᐊᖑᔪᖅ ᐋᖅᑭᒍᑎᒃᓴᐅᔪᓂᒃ ᐊᑐᕋᓯᐊᖅᐸᑦᑐᑦ ᑐᕌᖓᔪᓂᒃ ᐅᑭᐅᖅᑕᖅᑑᑉ ᖃᓄᐃᑦᑑᓂᖓᓄᑦ ᐊᒻᒪ ᐃᓄᖕᒋᓐᓄᑦ ᐊᑐᕐᓗᑎᒃ ᓄᓇᓕᓐᓂ ᖃᐅᔨᒪᔭᐅᔪᓂᒃ ᐊᒻᒪ ᐱᖅᑯᓯᐅᑎᓗᒋᑦ ᑭᓐᖑᒪᔭᐅᔪᑦ ᐅᑭᐅᖅᑕᖅᑐᒥᐅᓄᑦ ᐊᒻᒪ ᐊᕙᑎᖕᒋᓐᓄᑦ.

ᑲᑎᒪᑎᑦᑎᖃᑦᑕᓚᐅᖅᑐᑦ ᕿᑭᖅᑕᕐᔪᐊᒥ ᐊᒻᒪ ᑲᖏᖅᑐᒑᐱᓪᒥ ᑕᐃᓐᓇ ᖃᕐᒪᖅᑕᒃ ᓴᓗᒪᓴᖅᑕᐅᑎᓪᓗᒍ. ᓄᓇᓕᐅᔪᑦ ᐅᖃᐅᓯᓇᔭᖏᑦ ᐊᑐᖅᑕᐅᖃᑦᑕᓚᐅᖅᑐᑦ ᐅᑯᓂᖓ ᑐᑮᓯᖅᑕᐅᔪᓂᒃ ᐱᔭᕇᕿᓯᐊᖅᑐᑎᒃ:

- ᑐᓴᐅᒪᑎᑦᑎᔪᒪᓪᓗᑎᒃ ᐱᓕᕆᐊᖑᓂᐊᖅᑐᒥᒃ ᓄᓇᓕᓐᓄᑦ;
- ᑐᓴᕈᒪᓪᓗᑎᒃ ᖃᕐᒪᖅᑕᓪᓗᒧᑦ ᑐᑮᓯᖓᔪᓂᒃ ᐃᓱᒫᓗᒍᑕᐅᔪᓂᒃ ᐃᓄᓐᓄᑦ ᖃᐅᔨᒪᔪᓂ ᒫᓇᐅᔪᖅ ᖃᓄᐃᓕᐅᕐᓂᖓᓄᑦ ᑕᐃᓐᓇ ᐅᕝᕙᓗ ᖃᐅᔨᒪᓂᖃᖅᐸᓚᐅᖅᑐᑦ ᑕᑉᐸᒃᓯᒥᖓ ᐊᐅᓚᑕᐅᑎᓪᓗᒍ;
- ᓇᓗᓇᐃᖅᑐᐃᓗᑎᒃ ᑲᒪᒋᔭᐅᔭᓇᐊᖃᖅᓯᒪᔪᓂᒃ ᐊᒻᒪ ᐃᓱᒫᓗᒍᑕᐅᖃᑦᑕᖅᓯᒪᔪᓂᒃ ᓄᓇᓕᓐᓂᑦ ᑕᐃᓐᓇ ᐱᔾᔪᑎᒋᓪᓗᒍ ᐊᒻᒪ ᖃᓄᖅ ᐃᖅᑲᓇᐃᔮᖑᓂᐊᕐᓂᖓ; ᐊᒻᒪ
- ᓇᓗᓇᐃᖅᑐᐃᓗᑎᒃ ᐊᑐᖅᑕᐅᔪᓐᓇᖅᑐᓂᒃ (ᐃᖅᑲᓇᐃᔭᕐᓂᖅ ᐊᒻᒪ ᓄᓇᓯᐅᑎᐅᔪᑦ ᓱᓇᒃᑯᑖᑦ) ᑕᕝᕙᓂ ᓄᓇᓕᓐᓂ ᐊᑐᖅᑕᐅᔪᓐᓇᑐᐃᓐᓇᓇᐊᖃᕋᔭᖅᑐᑦ ᑕᒪᓐᓇ ᓴᓗᒪᓴᖅᑕᐅᑎᓪᓗᒍ ᐱᓕᕆᐊᖅ;

Appendix 4: FOX-C Ekalugad Fjord Long-Term Monitoring Plan

Indian and Northern Affairs Canada | Affaires indiennes et du Nord Canada

FOX-C EKALUGAD FJORD LONG-TERM MONITORING PLAN

March 23, 2008

Table of Contents

Appendices

1.0 Introduction

FOX-C Ekalugad Fjord was an Intermediate Distant Early Warning (DEW) Line site; a remediation project was conducted at the site between 2005 and 2008. The remediation involved the demolition and disposal of buildings, structures and other debris, as well as the clean up of hazardous materials and contaminated soil.

1.1 Location

FOX-C Ekalugad Fjord It is located on the Northeast coast of Baffin Island, Nunavut on the south shore of Ekalugad Fjord. The two nearest communities are Qikiqtarjuaq, located approximately 240 kilometres to the Southeast, and Clyde River, which is located approximately 260 kilometres to the North. The GPS Coordinates of the site are 68°42'0"N - 68°33'0"E (see Figure 1).

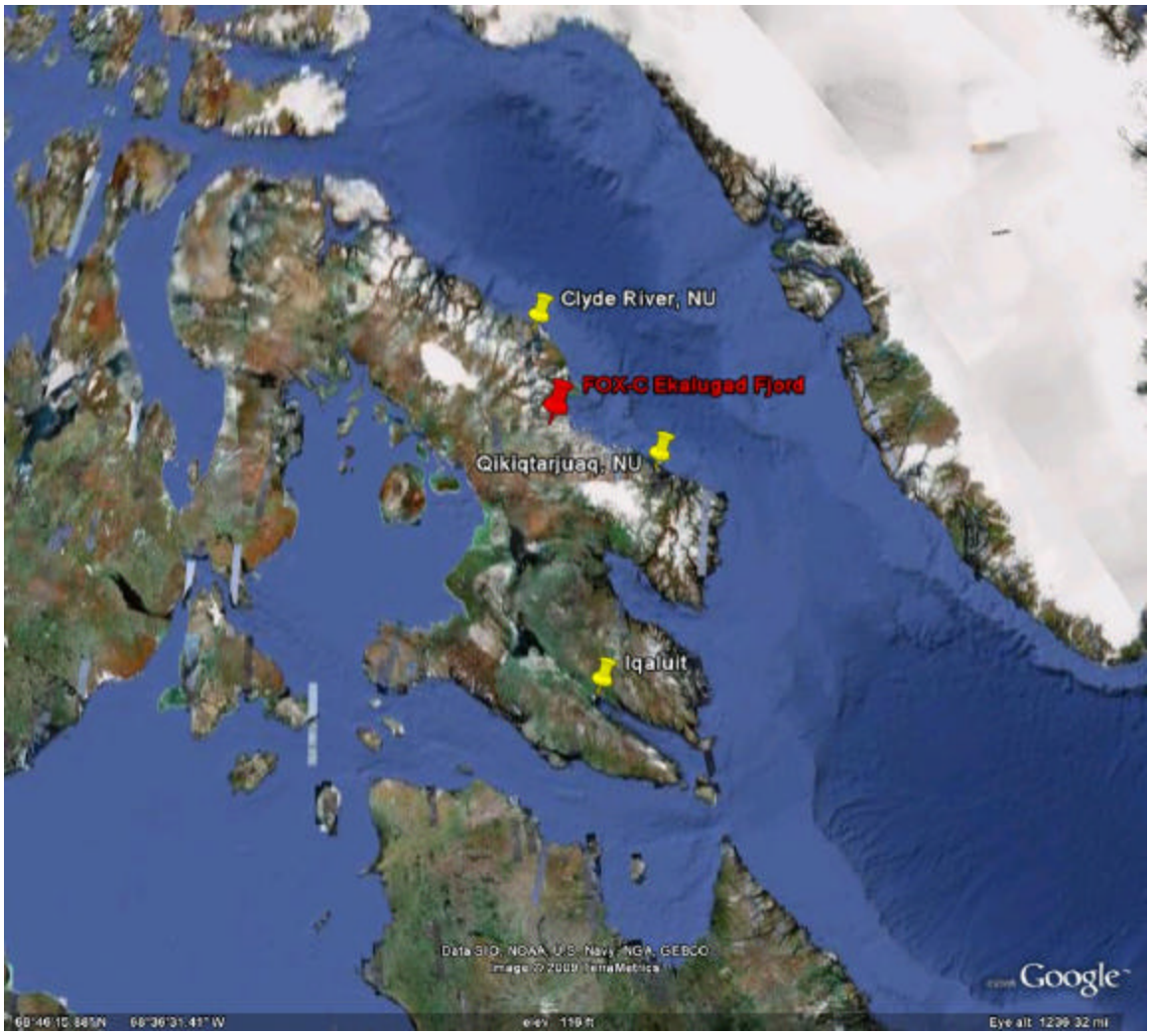


Figure 1: FOX-C Ekalugad Fjord Location

1.2 Site Characteristics

The FOX-C Intermediate Distant Early Warning (DEW) Line Site was constructed in 1957 and subsequently abandoned in 1963. The site can be broken down into three main areas: Upper Station, Mid Station, and Lower Station (including the Lake and Beach Areas).

The Upper Station is located on a summit at an elevation of 770 metres above mean sea level. The main site facilities were located here and included a module train, warehouse, garage, a former Quonset building, Inuit house, bulk fuel storage tanks, a radar tower and other site debris. An access road leads east through the Mid Station down to a junction near the Lake Area and is approximately 5.9 kilometres long.

The Mid Station is located at the base of the summit approximately 500 metres east of the Upper Station. A glacier located across from the Mid Station feeds a river that flows alongside the access road to the Lake. Located at the Mid Station was a dump area, barrel storage pad, four former Quonset buildings and numerous barrel and debris areas.

At the Lower Station near the Lake Area the access road from the Upper Station splits into two parts. One section heads southwest to the Lake Area and is approximately 1.1 kilometres long. A river flows out of the lake and empties into the ocean at the beach.

The other section of the road heads north to the Beach Area and is approximately 2.2 kilometres long. At the Beach Area there were two POL storage tanks, barrel caches and abandoned construction equipment. The landing area at the beach was used to allow ships to transfer fuel to the POL storage tanks.

2.0 Monitoring Areas

The monitoring program for the FOX-C Ekalugad Fjord site includes the natural environment as well as the Non-Hazardous Waste Landfill (NHWL); the only structure remaining on-site after the completion of remediation.

2.1 Natural Environment Monitoring

Natural environment data has been collected during the environmental assessment and remediation of the site as well as during community meetings. This data includes local and traditional knowledge of the site and will serve as a reference for post construction monitoring.

2.1.1 Monitoring Requirements

Natural environment data will be collected during site visits as well as during community meetings with people who use or visit the site/area frequently. The purpose of collecting this new data is not to find correlations with the landfill monitoring data but rather to provide anecdotal data related to the presence of wildlife and changes over time.

The site specific data to be collected during the site visit will include:

- Wildlife sightings (species, number, gender, juveniles)
- Other evidence of recent presence of wildlife (droppings, tracks, feathers/fur, carcass remains, etc.)
- Wildlife activity (summering/nesting/denning, migratory/passing through)
- Qualitative assessment of relative numbers versus previous years (more, same, less)
- Revegetation of disturbed areas versus previous years (more, same, less)

Information regarding visits made to the site by local people may also be collected through consultations with local community members and/or local Hunter and Trapper Associations (HTOs) and/or the Qikiqtani Inuit Association (QIA). The type of information that may be collected includes:

- Wildlife sightings
- Use by people for traditional activities
- Season(s)
- Activities (hunting, fishing, trapping, camping, other harvesting)
- Relative frequency versus previous years (more, same, less)
- Wildlife species present (sightings or evidence)
- Wildlife presence versus previous years (more, same, less)
- Health of wildlife observed or harvested (good, average, poor)
- Relative health of wildlife versus previous years (better, same, worse)

2.2 Non-Hazardous Waste Landfill (NHWL)

Construction of the NHWL at FOX-C started in 2006, continued in 2007, and was completed in September 2008. A site map detailing the location of the NHWL can be found in Appendix B.

2.2.1 Design

The NHWL was designed to contain non-hazardous materials only. It was constructed on native ground with the organic matter stripped and consists of four perimeter berms constructed of granular material. The non-hazardous waste was placed in the landfill in layers consisting of 0.5 metre lifts of waste covered by 0.15 metres of granular fill. Once all the layers were completed a final cover consisting of a minimum of 1.0 metres of granular fill was used to cap the landfill. See Appendix B for a detailed schematic of the design.

2.2.2 Contents

The NHWL at FOX-C contains the following:

- Tier I contaminated soil (see Table 1)
- F3 and F4 fraction hydrocarbon contaminated soil
- Non-hazardous demolition debris, such as timbers, plywood, and sheet metal
- Non-hazardous site debris, such as scrap metal and wood
- Non-hazardous debris/soil excavated from landfills
- Creosote timbers
- Double-bagged asbestos

Table #1: DEW Line Cleanup Criteria Tier I Contaminant Criteria

Parameter	Criteria
Lead	200 to 500 ppm
PCBs	1 to <5 ppm

2.2.3 Monitoring Requirements

The NHWL will be monitored by:

- Visual Monitoring
  - This will check the physical integrity of the NHWL and look for evidence of settlement, erosion, frost action, animal burrows, vegetation, staining, vegetation stress, seepage points, exposed debris, and condition of monitoring instruments (Appendix D contains a Visual Monitoring Checklist).
  - Photographs will be taken to document the condition of the NHWL and substantiate the recorded observations.

- Active Layer Water Monitoring
  - Samples will be taken from the 5 monitoring wells installed around the NHWL. These samples will be analysed and the results will be compared to those from background samples. The parameters that will be analysed include:
    - Petroleum Hydrocarbon Fractions, F1 and F2
    - Total and Dissolved Metals
    - Major Ions
    - Hardness
    - Total Dissolved Solids
    - Total Suspended Solids
    - pH
    - Conductivity
    - Polychlorinated biphenyls (PCBs)
- Soil Monitoring (as required)
  - Soil sampling will be limited to locations where seepage or staining has been identified as part of the visual inspection. When required soil samples will be collected over the interval of 0 to 0.15 metres and 0.35 to 0.50 metres depth. The parameters that will be analysed include:
    - Petroleum Hydrocarbon Fractions, F1 to F4
    - Arsenic, Cadmium, Cobalt, Chromium, Lead, Nickel, and Zinc
    - Polychlorinated biphenyls (PCBs)

2.3 Monitoring Schedule

The 25 years of monitoring at the FOX-C Ekalugad Fjord site will begin in 2009 and continue until 2033. Monitoring will occur on years 1, 3, 5, 7, 10, 15, 20 and 25. At the completion of the 25 year monitoring program a review will take place and the need for continued monitoring will be assessed. The table below outlines the schedule:

Table #2: Monitoring Schedule

Year	Site Monitoring Scheduled (X)
2009	X
2010	
2011	X
2012	
2013	X
2014	
2015	X
2016	
2017	
2018	X
2019	
2020	
2021	
2022	
2023	X
2024	
2025	
2026	
2027	
2028	X
2029	
2030	
2031	
2032	
2033	X

2.4 Monitoring Plan Summary

The monitoring plan at FOX-C Ekalugad Fjord will begin in 2009 and continue for 25 years. The monitoring will include the natural environment and the NHWL; the parameters that will be monitored include site specific data and regional information, visual characteristics, water, and soil (if required). The monitoring requirements for the natural environment and the NHWL are summarized in the tables below:

Table #3: Natural Environment Monitoring Requirements

Area	Monitoring Parameter
Natural Environment	• Wildlife sightings (species, number, gender, juveniles) • Other evidence of recent presence of wildlife (droppings, tracks, feathers/fur, carcass remains, etc.) • Wildlife activity (summering/nesting/denning, migratory/passing through) • Qualitative assessment of relative numbers versus previous years (more, same, less) • Revegetation of disturbed areas versus previous years (more, same, less)

Table #4: NHWL General Monitoring Requirements

Area	Monitoring Parameter		
	Visual	Water	Soil
NHWL	X	X	as required

Table #5: NHWL Specific Monitoring Requirements

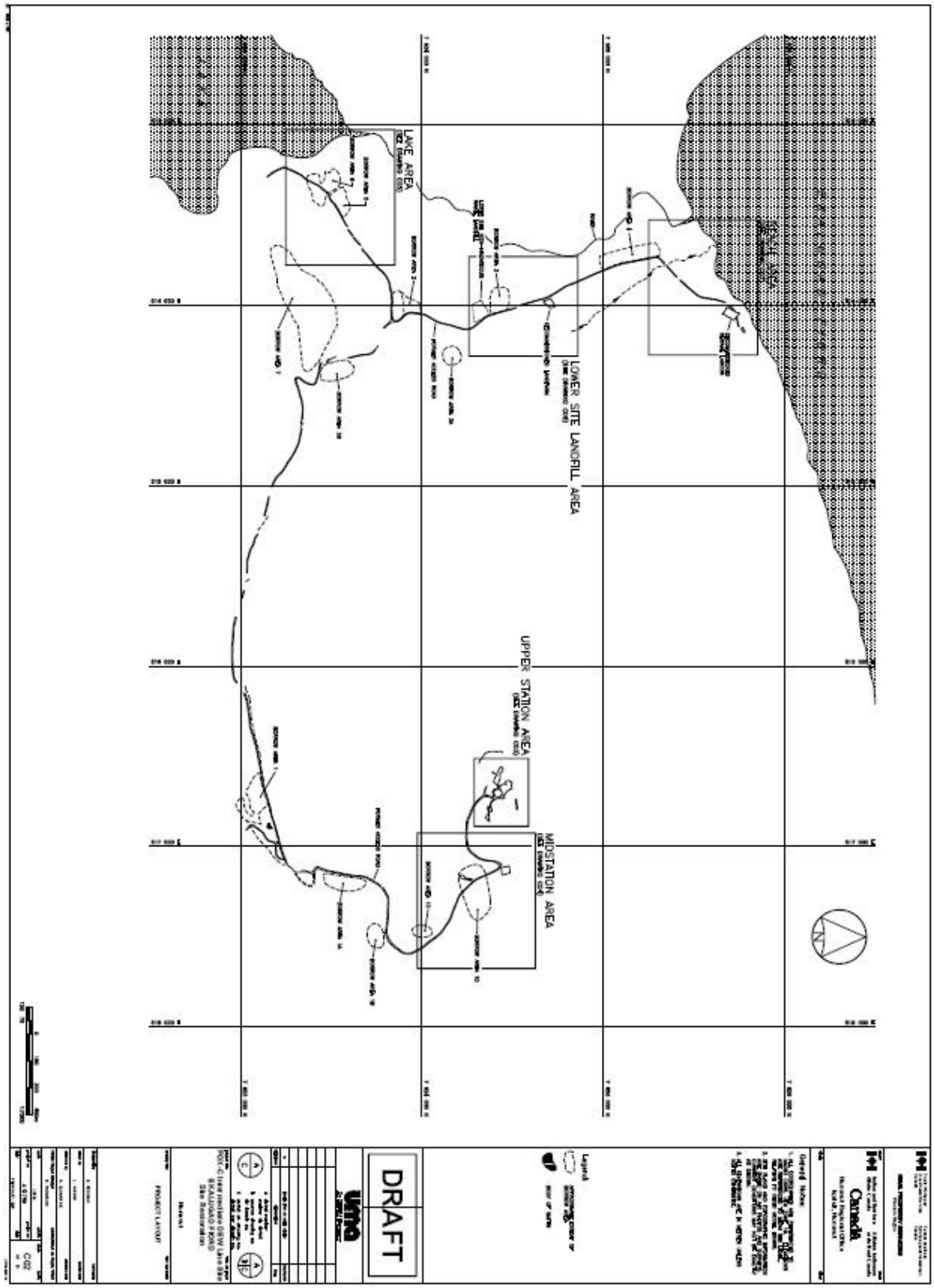
Area	Water		
	ID	Notes	Elevation
NHWL	MW-North		74.8 m
	MW-East	Background	69.8 m
	MW-South		72.4 m
	MW-Southwest		71.5 m
	MW-Northwest		72.0 m

3.0 Quality Assurance/Quality Control

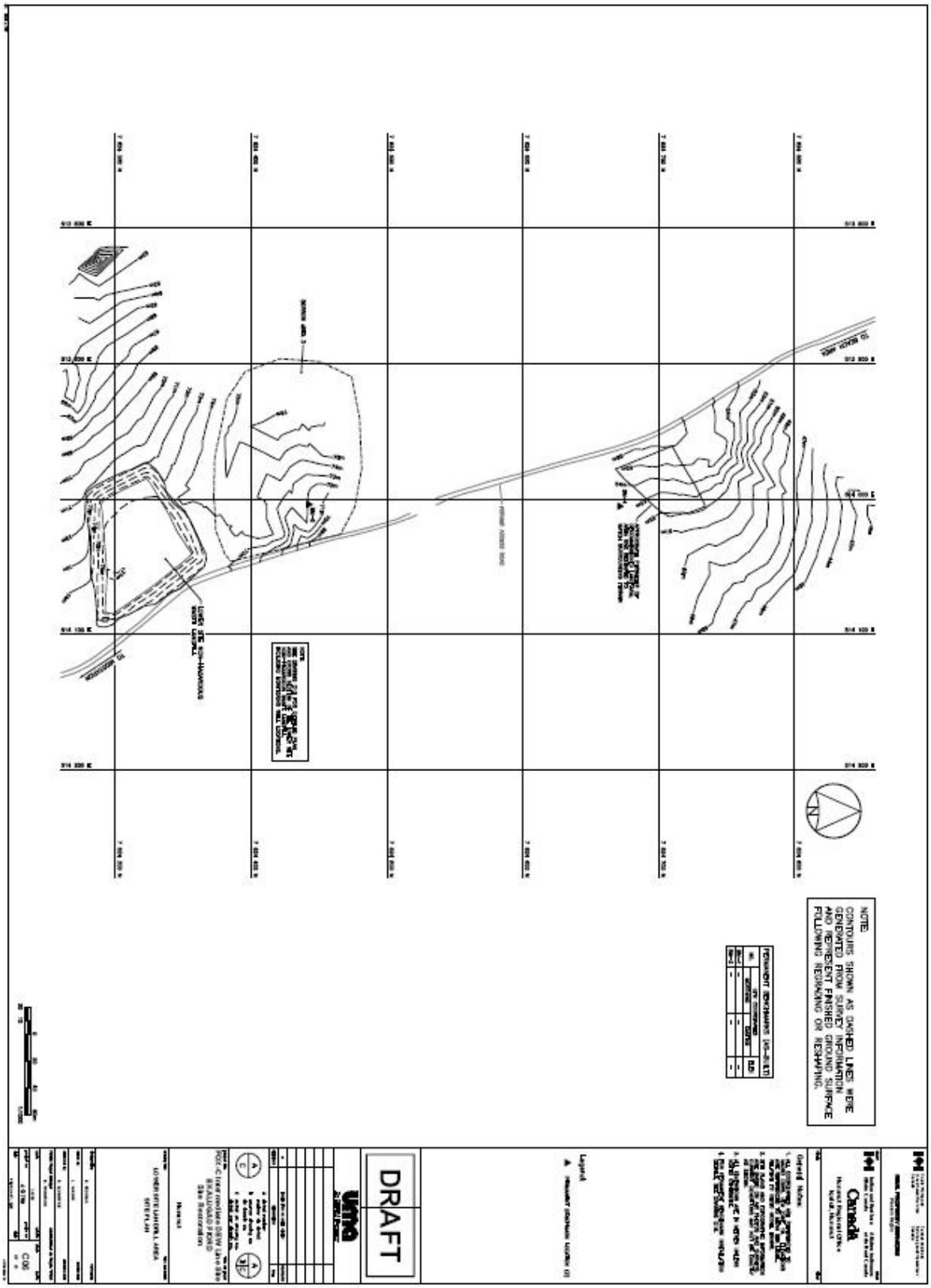
All sampling, sample preservation and analyses will be conducted in accordance with methods prescribed in the current edition of "Standard Methods for the Examination of Water and Wastewater". All analysis will be performed in a Canadian Association of Environmental Analytical Laboratories (CAEAL) Accredited Laboratory.

Quality Assurance/Quality Control (QA/QC) will be consistent with CAEAL regulations and guidelines. At least 20% of samples will be taken and analyzed in duplicate and all appropriate QA/QC data will be generated and reported.

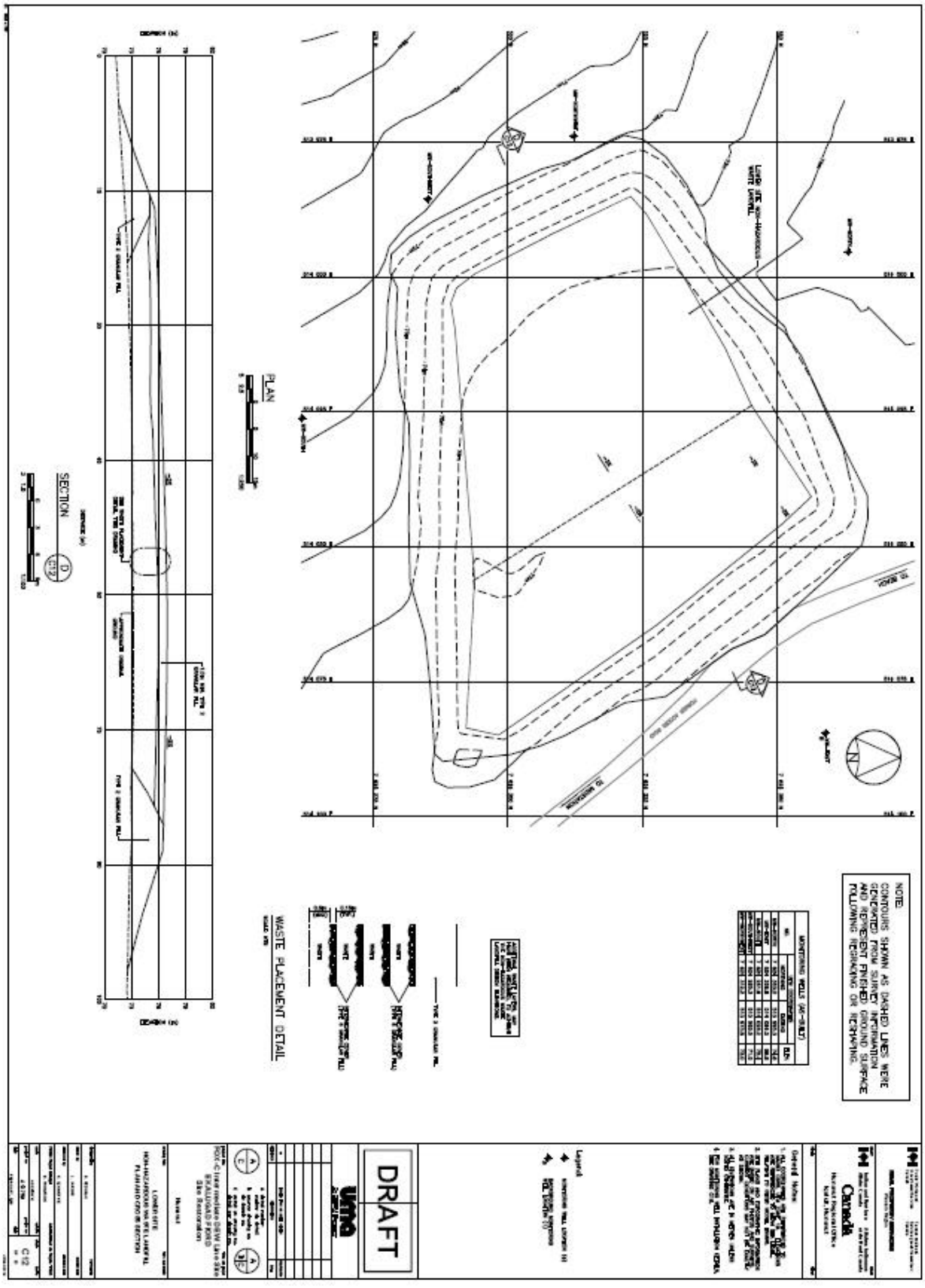
Appendix A: FOX-C Ekalugad Fjord Site Map


LAKE AREA
LOWER SITE LANDFILL AREA
UPPER STATION AREA
MIDSTATION AREA
DRAFT

Appendix B: Non-Hazardous Waste Landfill Location Map


NOTE:
CONTOURS SHOWN AS DASHED LINES WERE GENERATED FROM SURVEY INFORMATION AND REPRESENT FINISHED GROUND SURFACE FOLLOWING REGRADING OR RESHAPING.
DRAFT

Appendix C: Non-Hazardous Waste Landfill As-Built Drawing


NOTE:
CONTOURS SHOWN AS DASHED LINES WERE GENERATED FROM SURVEY INFORMATION AND REPRESENT FINISHED GROUND SURFACE FOLLOWING REGRADING OR RECAPPING.
MONITORING WELLS (AS-BUILT)
WASTE PLACEMENT DETAIL
PLAN
SECTION
DRAFT

Appendix D: Visual Monitoring Checklist

FOX-C EKALUGAD FJORD
VISUAL MONITORING CHECKLIST

ITEM	PRESENCE/ ABSENCE	EXTENT	DESCRIPTION/ PHOTOGRAPHIC REFERENCE
Instructions	*Yes or No*	*Provide dimensions as applicable: Length, Width, Depth*	*Features of note, photographic reference with scale, point of view & direction*
Settlement			
Erosion			
Frost Action			
Animal Burrows			
Vegetation			
Staining			
Vegetation Stress			
Seepage Points			
Exposed Debris			
Condition of Monitoring Instruments			
Other Features of Note			

Appendix 5: FOX-C Ekalugad Fjord Maps

0 150 300 450m

150 75 1:7500

Public Works and Government Services Canada / Travaux publics et Services gouvernementaux Canada

REAL PROPERTY SERVICES
Western Region

Client: **Indian and Northern Affairs Canada** / **Affaires indiennes et du Nord Canada**

Canada

Nunavut Regional Office
Iqaluit, Nunavut

General Notes:

1. ALL COORDINATES ARE REFERENCED TO NAD83 CSRS, UTM ZONE 19. ELEVATIONS ARE REFERENCED TO MEAN SEA LEVEL, RELATIVE TO GEOID MODEL EGM96.
2. SITE PLANS AND TOPOGRAPHIC INFORMATION ARE BASED ON AIR PHOTOS AND SURVEYS. CURRENT CONDITIONS MAY NOT BE EXACTLY AS SHOWN.
3. ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.
4. EXTENT OF BORROW AREAS SHOWN ON THE DRAWINGS WERE PROVIDED BY EBA ENGINEERING CONSULTANTS LTD.
5. ALL NON-HAZARDOUS DEBRIS REMOVED WITHIN THE PLAN AREA WAS PLACED IN THE LOWER SITE NON-HAZARDOUS WASTE LANDFILL. REFER TO TABLE 02219-1 IN THE SPECIFICATIONS FOR A DESCRIPTION OF THE DEBRIS AREAS.

Legend:

APPROXIMATE EXTENT OF BORROW AREA

DRAFT

uma An AECOM Company

REVISIONS	DESCRIPTION	DATE
A	ISSUED FOR AS BUILT REVIEW	09/03/05

A detail number / number du detail
B source drawing no. / de dessin no.
C detail on drawing no. / detail sur dessin no.

project title / titre du projet
FOX-C Intermediate DEW Line Site
EKALUGAD FIORD
Site Restoration

Nunavut

drawing title / titre du dessin
OVERALL SITE PLAN

designed by / conçu par	B. FEDORAK
drawn by / dessiné par	L. VARGAS
approved by / approuvé par	R. SCHMIDTKE
PWGSC Project Manager / Administrateur de Projets TPSGC	B. THOMPSON
scale / échelle	1:7500
project no. / projet no.	413759
date / date	FEBRUARY, 2005
sheet / feuille	C01
	OF 20

413759-C01.DWG

81 1000 x 707

513 000 E
514 000 E
515 000 E
516 000 E
517 000 E
518 000 E

7 626 000 N
7 625 000 N
7 624 000 N
7 623 000 N

EKALUGAD FIORD

BEACH AREA
(SEE DRAWING C07)

DECOMMISSIONED SEWAGE LAGOON

BORROW AREA 4

RIVER

LOWER SITE LANDFILL AREA
(SEE DRAWING C06)

DECOMMISSIONED LANDFARM

BORROW AREA 3

LOWER SITE NON-HAZARDOUS WASTE LANDFILL

BORROW AREA 3A

FORMER ACCESS ROAD

BORROW AREA 2

LAKE AREA
(SEE DRAWING C05)

BORROW AREA 5

BORROW AREA 6

BORROW AREA 3B

BORROW AREA 7

LAKE

UPPER STATION AREA
(SEE DRAWING C03)

MIDSTATION AREA
(SEE DRAWING C04)

BORROW AREA 1D

BORROW AREA 1C

FORMER ACCESS ROAD

BORROW AREA 1B

BORROW AREA 1A

BORROW AREA 1

0 150 300 450m
150 75 1:7500

Public Works and Government Services Canada
Travaux publics et Services gouvernementaux Canada

REAL PROPERTY SERVICES
Western Region

Client
Indian and Northern Affairs Canada
Affaires indiennes et du Nord Canada
Canada

Nunavut Regional Office
Iqaluit, Nunavut

General Notes:

1. ALL COORDINATES ARE REFERENCED TO NAD83 CSRS, UTM ZONE 19. ELEVATIONS ARE REFERENCED TO MEAN SEA LEVEL, RELATIVE TO GEOID MODEL EGM96.
2. SITE PLANS AND TOPOGRAPHIC INFORMATION ARE BASED ON AIR PHOTOS AND SURVEYS. CURRENT CONDITIONS MAY NOT BE EXACTLY AS SHOWN.
3. ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.

Legend:

APPROXIMATE EXTENT OF BORROW AREA

BODY OF WATER

DRAFT

uma
An AECOM Company

REVISIONS	DESCRIPTION	DATE
A	ISSUED FOR AS BUILT REVIEW	09/03/05

A detail number / number du detail
B source drawing no. / de dessin no.
C detail on drawing no. / detail sur dessin no.

project title / titre du projet
FOX-C Intermediate DEW Line Site
EKALUGAD FIORD
Site Restoration

Nunavut

drawing title / titre du dessin
PROJECT LAYOUT

designed by / conçu par	B. FEDORAK
drawn by / dessiné par	L. VARGAS
approved by / approuvé par	R. SCHMIDTKE
PWGSC Project Manager / Administrateur de Projets TPSGC	B. THOMPSON
scale / échelle	1:7500
project no. / projet no.	413759
date	FEBRUARY, 2005
sheet / feuille	C02 OF 20

413759-C02.DWG

BI 1000 x 707

Appendix 6: List of Relevant Reports

Environmental Study of Abandoned DEW Line Sites: II. Six Intermediate Sites in the Eastern Arctic. Volume Two: Site Analysis March 1994. Environmental Sciences Group, Royal Roads Military College

Engineering Design (95% submission) and Cost Estimate for the Clean 0up of Ekalugad Fjord (FOX-C) Intermediate Dew Line Site (rev), October 2001, Sinanni

PW has Environmental Review of INAC Contaminated Sites in the Territory of Nunavut September 2003 Public Works and Government Services Canada Environmental Services Western region

Natural Environment of the FOX-C Dew Line Site, October 2004, Jacques Whitford

Ecological Risk Evaluation For FOX-C Ekalugad Fjord Former Military Site, November 2003, Senes Consultants Limited

Human Health Screening Level Risk Assessment For FOX-C Ekalugad Fjord Former Military Site, November 2003, SENES Consultants Limited

Remediation Work Plan, FOX-C Ekalugad Fjord Intermediate DEW line Site, January 2005, UMA Engineering, Edmonton

FOX-C DEW line Site Phase III Environmental Site Assessment and Waste Audit< January 2005, Earth Tech Canada Inc., Edmonton

Human Health and Ecological Risk Assessment for FOX-C Dew Line Site, Sarcpa Lake, February 2005, Jacques Whitford, Calgary

Review of Risk Assessments for Sarcpa Lake (CAM-F) and Ekalugad Fiord (FOX-C), February 2005, Qikiqtaaluk Environmental

DEW Line Clean-up Project, FOX-C (Ekalugad Fjord) DEW line Site 2004 Geotechnical Investigation, March 2005, EBA Engineering Consultants Ltd., Edmonton

Environmental Screening of the Proposed Site Remediation at the former FOX-C DEW Line Site at Ekalugad Fjord, March 31, 2005, Jacques Whitford

Archaeological Impact Assessment, FOX-C Dew Line Site Remediation Program, Oct 2005, FMA Heritage Resources Consultants Inc. for Jacques Whitford Limited

FOX-C Ekalugad Fjord 2006 Construction Clean-Up Summary, May 2008, UMA Engineering Limited

FOX-C Ekalugad Fjord 2007 Construction Clean-Up Summary, June 2008, UMA Engineering Limited

FOX-C Ekalugad Fjord 2008 Construction Clean-Up Summary (Draft), March 2009, AECOM Canada Limited