uma

October 10, 2001 File: 0171-095 (CAM-1) -3.6

Rita Becker
Licensing Administrator
Nunavut Water Board
P.O. Box 119
Gjoa Haven, NT X0B 1J0

Dear Ms. Becker:

RE: Water Use License Application #NWB5JEN0101 Renewal for the Site Investigation at CAM-1, Jenny Lind Island

UMA Engineering Ltd. is submitting the attached Water Use License Application Renewal for the site investigation at the CAM-1, Jenny Lind Island Distant Early Warning (DEW) Line site, on behalf of Defence Construction Canada. The application includes an abstract in both English and Inuktitut, the application form, the remote camp supplemental questionnaire, and supporting background information.

The project has been screened by the Nunavut Impact Review Board as part of the original application submitted in March 2001.

I trust that sufficient information has been provided to process this application. If you require any further information or clarification, please contact the undersigned or Graham Emmerson at (403) 270-9200. Thank you for your consideration of this application.

Sincerely,
UMA ENGINEERING LTD.

Eva Schulz, P.Ag.
Environmental Scientist
EMS:elt
Encl. Abstract - English and Inuktitut
Application for Water Use License
Remote Camp Supplemental Questionnaire
Appendix A - Figures
Appendix B - Site Investigation Activities
Appendix C - Environmental Impact Table
Appendix D - Contingency Plans
Appendix E - Project Description for Nunavut Impact Review Board Clean Up of Fifteen DEW Line Sites in the Nunavut Settlement Area

cc: Suzanne Belanger-Fontaine, DCC
Roland Merkosky/Michelle Rurka, UMA

UMA Engineering Ltd. 2540 Kensington Road NW Calgary Alberta T2N 3S3 Canada
telephone (403) 270-9200 facsimile (403) 270-0399 web site www.umagroup.com

From 1955 to 1993, the Distant Early Warning - DEW Line – system provided radar surveillance of the polar approaches to North America using a chain of 42 radar stations. As the North American Air Defence System was upgraded, some of the DEW Line sites were upgraded or dismantled. The Jenny Lind Island DEW Line Site, designated CAM-1, has been abandoned, and is not longer required for any operations.

Prior to all DEW Line clean up (DLCU) activities, a detailed site investigation is undertaken to provide information to be used in the reclamation design. The Jenny Lind Island (CAM-1) site investigation is scheduled for June through August of 2002.

The CAM-1 site investigation activities will include the following:

- Collection of soil samples to delineate known areas of contaminated soil. Subsurface samples will be collected from test pits excavated using a mini-excavator.
- Collection of water samples. Sampling location may include surface and groundwater samples. If required, temporary groundwater wells may be installed in test pits.
- Collection of structural materials samples (to determine concentrations of PCB and lead in paint and asbestos in insulating materials).
- Inventory of buildings and facilities on site.
- Identification of surface debris areas.
- Geophysical survey of landfills to determine lateral extent of buried waste.
- Identification of potential sources of granular material required for the clean up activities.
- Identification of potential locations for site disposal facilities, storage areas, construction camp, etc. required for clean up activities.
- Completion of topographic and location surveys.

Site investigation activities are predominantly confined to the Department of National Defence (DND) reserve and all DLCU activities have been preceded by a thorough impact assessment. The existing airstrip will be used to access the site and the existing roads will be utilized for vehicular traffic on site. The proposed site investigation activities are not anticipated to impact any of the existing roads, landing strips, streams, or other features and structures located at the site.

A temporary camp will be set up at the site to facilitate the site investigation activities. The outfitter contract for the camp operation will be put out for tender in the spring of 2002. Major equipment requirements will include items such as ATVs and trailers, pumps, mini-excavator, satellite phone and radio, and laboratory analytical equipment. A final list of equipment shall be provided after the Outfitter contract award along with information on the actual location and size of the camp, water supply, waste management, fuel handling and storage. Generally, domestic garbage is incinerated and the residual waste is buried along with sewage.

Bear monitors from nearby communities will be employed for wildlife management during the site investigation.

Upon completion of the investigation work, all excavated test pits will be backfilled; laboratory waste will be containerized and stored (in the warehouse or other suitable building) for disposal during site clean up; and camp facilities, equipment and excess fuel will be removed from the site. Surplus materials that can not be stored safely for disposal during clean up are also removed.

A Land Use Permit, number N2001X0012, has been received..

CAM-1, ᔭᓂ ᓚᓐ ᑎᐅᓚᐃᓐ ᐃᓂᖃᕐᕕᑐᖃᖕ ᐃᓂᐅᑉ ᖃᐅᔨᓴᖅᑕᐅᓂᖕ ᐱᓕᕆᐊᖑᓂᐊᖅᑐᑉ ᐅᓂᒃᑳᖅᑕᐅᑉᕕᖕ ᖃᓄᐃᓕᖓᒋᐊᒃᓴᖓᓂᒃ

1955-ᒥᑦ 1993-ᒧᑦ, ᐅᓇᑕᖅᑐᖃᓚᖅᐸᑦ ᖃᐅᔨᓴᑉᕕᐅᔪᑦ ᓇᐅᑦᑎᖅᑐᕐᕕᐅᔪᑦ - ᑎᐅᓚᓐ - ᐊᑐᐃᓐᓇᐅᑎᑦᑎᖃᑦᑕᓚᐅᖅᐳᑦ ᓈᓚᐅᑎᒃᑯᑦ ᖃᐅᔨᓴᐃᔾᔪᑎᓂᒃ ᐅᑭᐅᖅᑕᖅᑐᒥ ᓄᐊᑦ ᐊᒥᐊᓕᑲᒧᑦ ᐊᑐᖅᓗᑎᒃ 42-ᓂᒃ ᓈᓚᒻᕕᖕᓂᒃ. ᓄᐊᑦ ᐊᒥᐊᓕᑲᒥ ᑎᖕᒥᔫᓕᕆᓂᕐᒧᑦ ᐅᓇᑕᖅᑐᓕᕆᔨᑦ ᐋᖅᑭᒋᐊᖅᑕᐅᑎᓪᓗᒋᑦ, ᐃᓚᖏᑦ ᖃᐅᔨᓴᐃᑉᕕᐅᔪᑦ ᓈᓚᒻᕖᑦ ᓄᑖᓐᖑᕆᐊᖅᑕᐅᓚᐅᖅᐳᑦ ᓯᖁᑉᑎᖅᑕᐅᑉᓗᑎᓪᓗ ᐃᓚᖏᑦ. ᔭᓂ ᓚᓐ ᐊᐃᓚᓐ ᑎᐅᓚᐃᓐ ᐅᓇᑕᖅᑐᒃᓴᑦ ᓈᓚᒻᕕᕕᓂᖏᑦ ᐃᓂᖓ, ᑕᐃᔭᐅᔪᖅ CAM-1, ᕿᒪᒃᑕᐅᓂᖓᓂᒃ, ᐊᒻᒪ ᐊᐅᓚᑦᑎᔾᔪᑕᐅᓗᓂ ᐊᑐᖅᑕᐅᒋᐊᖃᕈᓐᓃᖅᐳᖅ.

ᑕᒪᐃᓐᓂᒃ ᓈᓚᒻᕕᕕᓃᑦ ᓴᓗᒻᒪᖅᓴᖅᑕᐅᓚᐅᓐᖏᓐᓂᖏᓐᓂ, ᐅᓂᒃᑳᖅᑕᐅᑦᑎᐊᖅᓯᒪᔪᖅ ᖃᐅᔨᓴᖅᑕᐅᑦᑎᐊᖅᑐᖅ ᖃᐅᔨᓴᖅᑕᐅᖃᑦᑕᖅᐳᖅ ᐊᑐᐃᓐᓇᐅᑎᑦᑎᔪᒪᑉᓗᑎᒃ ᑐᓴᒐᒃᓴᓂᒃ ᓄᑖᓐᖑᖅᑎᕆᓂᕐᒧᑦ ᐊᑐᖅᑕᐅᓂᐊᖅᑐᓂᒃ ᐱᓕᕆᐊᖃᕈᑕᐅᓗᑎᒃ. ᔭᓂ ᓚᓐ ᐊᐃᓚᓐ (CAM-1,) ᐃᓂᖓᑕ ᖃᐅᔨᓴᖅᑕᐅᓂᕆᓂᐊᖅᑕᖓ ᐱᓕᕆᐊᖑᒥᐊᕐᓂᐊᖅᐳᖅ ᔫᓐᒥᑦ ᑎᑭᓪᓗᒍ ᐋᒡᒍᓯ 2002-ᒧᑦ.

CAM-1, ᐃᓂᒋᔭᖓᑕ ᖃᐅᔨᓴᖅᑕᐅᓂᖓ ᐅᑯᓂᖓ ᐃᓚᖃᕐᓂᐊᖅᐳᖅ:

- ᑲᑎᑕᐅᓂᖏᑦ ᒪᓂᕋᕐᒥᑦ ᖃᐅᔨᖅᑕᐅᔪᒃᓴᑦ ᖃᐅᔨᔾᔪᑕᐅᓂᐊᖅᑐᑦ ᐅᓗᕆᐊᓇᖅᑐᖃᖅᑐᓂᒃ ᒪᓂᕋᕐᓂᒃ. ᒪᓂᕋᐅᑉ ᐃᓗᐊᓂ ᖃᐅᔨᓴᖅᑕᐅᔪᒃᓴᑦ ᑲᑎᑕᐅᓂᐊᖅᐳᑦ ᐳᐊᕐᕆᔭᖅᑕᐅᓯᒪᔪᓂ ᐊᑐᕐᓗᑎᒃ ᒥᑭᑦᑐᒥᒃ ᐳᐊᕐᕆᔭᐅᑎᒥᒃ.
- ᑲᑎᑕᐅᓂᖏᑦ ᐃᒪᐅᑉ ᖃᐅᔨᓴᖅᑕᐅᓂᒃᓴᖏᑦ. ᖃᐅᔨᓴᖅᑕᐅᔪᑦ ᐃᓚᖃᕈᓐᓇᖅᐳᑦ ᒪᓂᕋᐅᑉ ᖄᖓᓂ ᒪᓂᕋᐅᑉᓗ ᐃᓗᐊᓂᑦ ᐃᒪᕐᓂᒃ ᖃᐅᔨᓴᖅᑕᐅᔪᓂᒃ. ᐱᒋᐊᖃᖅᐸᑕ, ᖃᐅᔨᓴᐃᑉᕕᐅᔪᑦ ᒪᓂᕋᐅᑉ ᐃᓗᐊᓂ ᐃᒪᐃᑦ ᐃᓕᐅᖃᖅᑕᐅᑐᐃᓐᓇᕆᐊᖃᕐᓂᐊᖅᐳᑦ ᖃᐅᔨᓴᕐᕕᐅᔪᓂ.
- ᑲᑎᑕᐅᓂᖏᑦ ᐱᓕᕆᐊᖃᕈᓯᒃᓴᐃᑦ ᐆᒃᑑᑕᐅᔪᑦ ᖃᐅᔨᓴᖅᑕᐅᔪᑦ ᓴᓇᔭᐅᓯᒪᔪᓂᑦ (ᓇᓗᓇᐃᖅᓯᔪᒪᑉᓗᑎᒃ ᐲᓯᐲ ᑐᖁᓐᓇᖅᑐᓂᒃ ᐊᒻᒪ ᓴᐱᖕᓂᒃ ᒥᖑᑎᓂ ᐃᑯᐊᓪᓚᔪᐃᑦᑐᓂᓗ ᐃᑭᐊᖅᓕᕆᔭᐅᔪᓂ).
- ᐃᓪᓗᕐᔪᐊᑦ ᖃᐅᔨᓴᖅᑕᐅᓂᖏᑦ ᐱᓕᕆᐊᖃᕐᕕᐅᔪᓪᓗ ᐃᓂᐅᔪᒥ.
- ᓇᓗᓇᐃᖅᑕᐅᓂᖏᑦ ᒪᓂᕋᐅᑉ ᖄᖓᓂ ᐊᒃᑕᑯᖃᕐᕕᐅᔪᑦ.
- ᓄᓇᐅᑉ ᖃᐅᔨᓴᖅᑕᐅᓂᖏᑦ ᓴᐅᔭᐅᓯᒪᔪᑦ ᓇᓗᓇᐃᖅᓯᓇᓱᓪᓗᑎᒃ ᓴᐅᔭᐅᓯᒪᔪᑦ ᐊᒃᑕᑯᐃᑦ ᖃᓄᖅ ᐊᖏᑎᒥᒋᐊᒃᓴᖏᓐᓂᒃ.
- ᓇᓗᓇᐃᖅᑕᐅᓂᖏᑦ ᑐᐊᐸᐃᑦ ᐊᑐᖅᑕᐅᒋᐊᖃᕋᔭᖅᑐᑦ ᓴᓗᒻᒪᖅᓴᐃᔪᓄᑦ ᐱᓕᕆᐊᖑᔪᓂ.
- ᓇᓗᓇᐃᖅᑕᐅᓂᖏᑦ ᐃᓂᐅᔪᑦ ᐊᒃᑕᑰᕐᕕᐅᓂᐊᖅᑐᑦ, ᑐᖁᖅᓯᓯᒪᑉᕕᐅᓂᐊᖅᑐᑦ, ᓴᓇᑉᕕᐅᓂᐊᖅᑐᓂᒃ ᓄᓇᓕᐅᕐᕕᐅᓂᐊᖅᑐᑦ, ᐊᓯᖏᓪᓗ ᓴᓗᒻᒪᖅᓴᐃᓂᕐᒧᑦ ᐊᑐᖅᑕᐅᒋᐊᖃᖅᑐᑦ.
- ᐱᐊᓂᒃᑕᐅᓂᖏᑦ ᓄᓇᐅᑉ ᐋᖅᑭᐅᒪᓂᖓᓄᑦ ᐅᓂᒃᑳᖅᑕᐅᑦᑎᐊᖅᑐᑦ ᐃᓅᓪᓗ ᖃᐅᔨᓴᖅᑕᐅᓂᖏᓐᓄᑦ.

ᐃᓅᑦ ᖃᐅᔨᓴᖅᑕᐅᓂᖏᑦ ᐱᓕᕆᐊᖃᕐᕕᐅᓂᖏᑦᑕ ᐱᓕᕆᐊᖑᖃᑦᑕᖅᐳᑦ ᐅᓇᑕᖅᑐᒃᓴᓄᑦ ᐊᒻᒪ ᑕᒪᐃᓐᓂᒃ ᓈᓚᒻᕕᕕᓂᑦ ᐅᓇᑕᖅᑐᒃᓴᓄᑦ ᐱᓕᕆᐊᖑᔪᑦ ᐱᓕᕆᐊᖑᓯᒪᔪᑦ ᓯᕗᓂᐊᓂ ᐋᖅᑭᒃᑕᐅᓯᒪᔪᒃᑯᑦ ᐃᒃᐱᒋᔭᖃᕐᓂᐊᖅᑐᑦ ᖃᐅᔨᓴᖅᑕᐅᓯᒪᓂᖏᑦᑎᒍᑦ. ᒫᓐᓇ ᒥᑦᑕᕐᕕᒃ ᐊᑐᖅᑕᐅᓂᐊᖅᐳᖅ ᐊᖁᑎᒋᔭᐅᓗᓂ ᐃᓂᒧᑦ ᐊᒻᒪᓗ ᐊᖁᑏᑦ ᐊᑐᐃᓐᓇᐅᔪᑦ ᐊᑐᖅᑕᐅᓂᐊᖅᐳᑦ ᓄᓇᒃᑰᕈᑎᓄᑦ ᐃᓂᖃᕐᕕᐅᓗᑎᒃ. ᐃᓂᐅᔪᖅ ᖃᐅᔨᓴᖅᑕᐅᔪᒪᔪᖅ ᓂᕆᐅᒋᔭᐅᓐᖏᓚᑦ ᐃᒃᐱᒋᔭᖃᖅᑎᑦᑎᓂᐊᕆᐊᒃᓴᖏᓐᓂᒃ ᒫᓐᓇ ᐊᖁᑎᓂᒃ, ᒥᑦᑕᕐᕕᖕᓂᒃ, ᓴᕐᕙᐅᓂᐅᔪᓂᒃ ᐃᒪᕐᓂᒃ, ᐅᑉᕙᓘᓐᓃᑦ ᓄᓇᐃᑦ ᐃᓂᖏᓐᓂᒃ ᓴᓇᔭᐅᓯᒪᔪᓂ ᐃᓂᓃᑦᑐᓂ.

ᑕᖕᒫᕐᕕᐅᖃᑦᑕᓚᐅᐱᓪᓚᖕᓂᐊᖅᑐᖅ ᐋᖅᑭᒃᑕᐅᓂᐊᖅᐳᖅ ᐃᓂᐅᔪᒥ ᐱᓕᕆᐊᖑᓂᐊᖅᑐᑦ ᐱᓕᕆᐊᖑᓂᐊᖅᑎᓪᓗᒋᑦ ᐱᓕᕆᐊᖃᕈᑕᐅᓂᐊᖅᑐᑦ. ᐱᓕᕆᐊᖃᕐᓂᐊᖅᑐᖅ ᑳᓐᑐᕌᖃᕐᓗᓂ ᑕᖕᒫᕐᕕᐅᔪᒥ ᐊᐅᓚᑦᑎᓇᔭᖅᑐᑉ ᑳᓐᑐᕌᒃᑕᒃᓴᖕ ᓴᕿᑕᐅᓂᐊᖅᐳᖅ ᐅᐱᓐᖓᒃᓵᖓᓂ 2002. ᐊᖏᔪᑦ ᓴᓇᕐᕈᑎᑦ ᓲᕐᓗ ᓯᑕᒪᓂᒃ ᐊᒃᓴᓗᐊᓖᑦ ᓄᓇᓯᐅᑎᑦ ᐊᒻᒪᓗ ᐃᓪᓗᑕᕆᔭᐅᕙᒃᑐᑦ ᐅᓯᑲᑦᑕᐅᓲᑦ ᓄᓇᓯᐅᑎᓄᑦ ᐊᑐᖅᑕᐅᒋᐊᖃᕐᓂᐊᖅᐳᑦ, ᒥᓗᑲᐅᑎᑦ ᐸᒻᖑᔪᑦ, ᒥᑭᑦᑐᑦ ᐳᐊᕆᔭᐅᑦ, ᖃᖓᑦᑕᖅᑎᑕᐅᓯᒪᔪᒃᑯᑦ ᐅᖃᓘᑦ ᐊᒻᒪ ᓈᓚᐅᑎ, ᖃᐅᔨᓴᐃᑉᕕᖕᒥ ᖃᐅᔨᓴᕈᑕᐅᔪᖅ. ᑭᖑᓪᓕᖅᐹᒥᒃ ᐊᑐᖅᑕᐅᒋᐊᖃᖅᑐᑦ ᓇᓗᓇᐃᖅᑕᐅᓂᐊᖅᐳᑦ ᐱᓕᕆᐊᖃᕐᓂᐊᖅᑐᑦ ᑳᓐᑐᕌᒃᑐᒃᓴᐃᑦ ᑐᓂᔭᐅᓯᒪᓕᐊᓂᒃᐸᑕ ᑐᓴᒐᒃᓴᐃᑦ ᐃᓚᐅᓗᒋᑦ ᐃᓂᖓ ᓇᓃᓐᓂᐊᕆᐊᒃᓴᖓᓂᒃ ᐊᒻᒪᓗ

CAM-1, ᔪᓂ ᓪᓚᒥᐃᓐ ᐃᓂᖅᓴᑐᖅᓯᒪᓂᖅ ᐃᓂᐅᑦ ᖃᐅᔨᓴᖅᑕᐅᓂᖅᓄᑦ ᓯᓚᓕᐊᖏᓂᐊᖅᑐᑦ ᐅᓂᒃᖅᑕᐅᔪᓴᖅᓄᑦ ᖃᓄᐃᓕᓂᖅᑭᐊᓴᖅᓄᓂᒃ

ᖃᐹᓯᐅᓴᕆᐊᒃᓴᖏᓐᓂᒃ ᑕᖅᒪᑦᓴᐊᖏᑎᒋᑦᑐᑦ, ᐃᒪᑉᑎ ᐊᑐᖅᑐᑦ, ᐊᒃᑕᑯᓂᒃ ᐊᐅᓪᓕᑎᔾᔪᑦ, ᐅᖅᓯᐊᓗᐃᐅᑦ ᐱᓕᕆᐊᖖᓂᖏᑦ ᑐᓴᖅᑕᐅᓯᒪᓂᖏᓐᓂᔪᓂ. ᐃᒪᓐᓇᐅᑦᓴᒃᖅ, ᐊᒃᑕᑯᐃᑦ ᐃᓄᖅᓂᑦ ᐊᑐᖅᑕᐅᔾᔪᑦ ᐃᑯᐊᓕᔪᑎᑕᐅᓂᐊᖅᓵᑦ ᐊᒥᐊᒃᑯᖏᓐᓂᔪ ᓴᐅᐅᐅᓗᑎᒃ ᓴᑯᖅᐃᑦ ᑯᐃᓴᐅᖅᓴᖅᖏᑦ ᓴᐅᓴᐅᑎᓕᒥᑦ.

ᓇᓄᐃᑦ ᖃᐅᔨᓴᖅᑕᐅᖅᑕᑦᑎᓂᐊᖅᓵᑦ ᓄᓇᖅᑐᑐᓂᑦ ᖃᓂᒋᔭᖏᓐᓂᓂ ᐅᒪᔾᔪᓕᔪᓂᓕᒫᑦ ᐊᐅᓪᓕᑎᑦᓯᑦ ᐱᓕᕆᐊᖅᓴᓗᑎᒃ ᐃᓂᐅᔾᔨᓂᖅ ᖃᐅᔨᓴᖅᑕᐅᓂᖏᓂ.

ᖃᐅᔨᓴᖅᑕᐅᔾᔨᖅ ᐱᐊᓂᒃᑕᐅᒃᐸᑦ, ᑕᒪᐃᓐᓂᒃ ᐳᐊᖁᓴᖅᑕᐅᒋᒪᔾᔪᑦ ᖃᐅᔨᓴᖅᑕᐅᔾᔨᑦ ᓴᐅᔭᐅᓂᐊᖅᓵᑦ; ᖃᐅᔨᓴᖅᐃᓕᓴᕐᓗᒍ ᐊᒃᑕᑯᓚᒃᓴᐃᑦ ᐅᖓᖅᑕᐅᓂᐊᖅᓵᑦ ᑐᖁᓂᖅᑕᐅᓗᑎᒃᓗ (ᒋᖁᓕᐊᓂ ᐊᒋᖏᓐᓂᓂᓗᓂᑦ ᐃᒃᓗᓕᔪᐊᒥ ᐊᓐᓇᖁᑐᑦ) ᐃᑎᑕᐅᓯᖅᓗᑎᒃ ᓴᓗᒪᒃᓴᐃᓕᖅᐸᑦ; ᐊᒪᒪ ᑕᖅᒪᑦᓴᐃᑦ ᐱᖁᑎᖏᓐᓂᑦ, ᓴᓐᔭᑎᖏᓐᓂᑦ ᐊᒥᐊᒃᑯᓂᓗ ᐅᖅᓯᐊᓗᐃᑦ ᓄᒃᑎᖅᑕᐅᓂᐊᖅᓵᑦ ᐃᓂᐅᔾᔨᒥᑦ. ᐊᒥᐊᒃᑯᐃᑦ ᑐᖁᖅᑕᐅᔾᔨᓐᓇᖖᓂᑐᑦ ᐅᓗᓕᐊᓇᖖᓂᑦᑐᒥ ᐊᒃᑕᑯᖅᑕᐅᓗᑎᒃ ᓴᓗᒪᒃᓴᐃᓕᓴᕐᓗᒍᑦᓯᒪᓂᖅᓵᑦ.

NUNAVUT WATER BOARD
NUNAVUT IMALIRIYIN KATIMAYINGI

WATER LICENCE APPLICATION FORM

Application for: (check one)

___ **New** ___ **Amendment** _X_ **Renewal** ___ **Assignment**

LICENCE NO:
(for NWB use only)

1. NAME AND MAILING ADDRESS OF APPLICANT/LICENSEE

Suzanne Belanger-Fontaine, Environmental Officer, DLCU
Defence Construction Canada,
Place de Ville, Tower B
112 Kent Street, Ottawa, Ontario K1A 0K3
Phone: (613) 998-9523
Fax: (613) 998-1061
e-mail: BELANGSU@dcc-cdc.gc.ca

as administered by:
Eva Schulz, P.Ag. Environmental Scientist
UMA Engineering Ltd.
Calgary, Alberta T2N 3S3
Phone: (403) 270-9220
Fax: (403) 270-0399
Email: eschulz@umagroup.com

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

N/A

Phone:_____
Fax: _____
e-mail: _____

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

Jenny Lind Island (CAM-1) DEW Line Site
Appendix A contains figures of the site. Figure 1 is a topographic map, which shows the location of the CAM-1 site and Figure 2 is an overall site plan.

Latitude: 68°, 41' N **Longitude:** 101°, 43'W **NTS Map No.** 67B/10 **Scale:** 1:50,000

4. DESCRIPTION OF UNDERTAKING (attach plans and drawings)

This application is a request for renewal of water use license NWB5JEN0101. The purpose of this project is to conduct a site investigation to obtained the detailed information required to finalize the clean-up plans for the Jenny Lind Island (CAM-1) DEW Line site.

A detailed description of the intended activities is provided in Appendix B.

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

___ Industrial
___ **Mine Development**
_X_ **Remote/Tourism Camps:** Conservation activities (see Appendix B)
___ **Municipal**

___ **Advanced Exploration** ___ Power

___ **Exploratory Drilling** ___ Other (describe)_____

6. **WATER USE**

_X_ **To obtain water**
___ **To modify the bed or bank of a watercourse**
___ **To alter the flow of , or store, water**
___ **To cross a watercourse**
___ **To divert a watercourse**
___ **Flood control**
___ **Other (describe):**

7. **QUANTITY OF WATER INVOLVED** (litres per second, litres per day or cubic metres per year, including both quantity to be used and quality to be returned to source)

It is estimated that domestic water for the camp use will be up to 2,500 litres/day. Water for the camp will be obtained from the Water Supply Lake (see Figure 2 for location). Water from the lake will likely be pumped into a water tank on a truck using a portable pump and then transferred to a water tank at the Camp. As the contract for the camp outfitter has not yet been awarded the size of the tank is not available. Wastewater will be discharged to the ground surface a minimum of 30 m from natural drainage courses. No water will be returned to the source.

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

_X_ **Sewage**
_X_ **Solid Waste**
___ **Hazardous**
___ **Bulky Items/Scrap Metal**
___ **Waste oil**
_X_ **Greywater**
___ **Sludges**
___ **Other (describe)**_____

All wastewater/greywater from camp operations will be discharged to a greywater pit and buried a minimum of 30 metres from natural drainage courses. Sewage will be buried on site a minimum of 100 m from the camp or any temporary facilities and a minimum of 100 m from any natural drainage course or water body. Domestic garbage will be incinerated on site and residual waste will be buried with the sewage. Following the investigation, all excess fuels, camp facilities and equipment will be removed from the site. Laboratory wastes will be containerized and stored in the warehouse, or other suitable DEW Line facility, for disposal during the DEW Line site clean up.

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

This project should not have any effect on persons or properties.

Land Use Permit number N2001X0012 has been received.

DIAND Land Use Permit _X_ **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.)

Please refer to the following: Site Investigation Activities – Appendix B; Environmental Impact Summary Table – Appendix C; and Contingency Plans – Appendix D.

NIRB Screening ___ **Yes** ___ **No** **If no, date expected** _____

The proposed site investigation activities were screened by NIRB in April 2001.

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?

Site Investigation activities are not expected to have any effect on waters flowing through Inuit Owned Lands.

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)

A list of contractors and sub-contractors is not available at this time, as the camp outfitter contract has not yet been offered for tender. A list of contractors will be submitted after the Outfitter Contract has been awarded.

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

Appendix E contains a report entitled, Project Description for Nunavut Impact Review Board Clean Up of Fifteen DEW Line Sites in the Nunavut Settlement Area.

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/English Summary of Project ✓ Yes ___ No
If no, date expected _____

Application fee $30.00 (c/o of Receiver General for Canada) ✓ Yes ___No
If no, date expected _____

15. PROPOSED TIME SCHEDULE

___ Annual (or) ___ Multi Year

Start Date: July 2002 Completion Date: September 2002

Eva Schulz, P.Ag. **Environmental Scientist** Eva Schulz

Name (Print) **Title (Print)** **Signature**

Date Oct. 15, 2001

For Nunavut Water Board use only

APPLICATION FEE **Amount: $_____** **Receipt No.:**

WATER USE DEPOSIT **Amount: $_____** **Receipt No.:**

P.O. Box 119
Gjoa Haven, NT X0E 1J0 ᓄᓇᕗᑦ ᐃᒪᓕᕆᔨᑦ ᑲᑎᒪᔨᖏᑦ
Tel: (867) 360-6338 NUNAVUT WATER BOARD
Fax: (867) 360-6369 NUNAVUT IMALIRIYIN KATIMAYINGI

EXPLORATION/ REMOTE CAMP SUPPLEMENTARY QUESTIONNAIRE

Applicant: Defence Construction Canada **Licence No:** _____
(For NWB Use Only)

ADMINISTRATIVE INFORMATION

1. Environment Manager: Eva Schulz, P.Ag. Tel: (403) 270 9220 Fax: (403) 270 0399
E-mail:eschulz@umagroup.com

2. Environmental Officer: Suzanne Belanger-Fontaine. Tel: (613) 991-9358 Fax: (613) 998 1061
E-mail: BELANGSU@dcc-cdc.gc.ca

3. Does the applicant hold the necessary property rights?

Yes. Work is being performed on the Federal Reserve. Land Use Permit number N2001X0012 has been received.

4. Is the applicant an 'operator' for another company (i.e., the holder of the property rights)? If so, please provide letter of authorization.

No.

5. Duration of the Project

[≤] Annual
[ ] Multi Year:
If Multi-Year indicate proposed schedule of on site activities
Start: July 2002 Completion: September 2002

CAMP CLASSIFICATION

6. Type of Camp

[ ] Mobile (self-propelled)
[≤] Temporary
[ ] Seasonally Occupied: _____
[ ] Permanent
[ ] Other: _____

7. What are the design population of the camp and the maximum population expected on site at one time? What will be the fluctuations in personnel?

The average population of the camp for the duration of the site visit will be approximately 15 people including site investigation staff, camp outfitters, bear monitors and an equipment operator. The work is completed in stages with some groups of site investigators leaving when other groups arrive. The maximum population of the camp is expected to be approximately 20 people.

8. Provide history of the site if it has been used in the past.

During the 1950's and 60's the site was operated as a Distant Early Warning System (DEW Line) radar site by the Canadian and American governments. The Jenny Lind Island Site was designated CAM-1. No other development of the site is recorded.

CAMP LOCATION

9. Please describe proposed camp location in relation to biogeographical and geomorphological features, and water bodies.

Figure 1 is a topographic map segment showing the location of the CAM-1 site. Figure 2 is a localized site plan of the CAM-1 DEW Line site showing the proximity of the current station to Jenny Lind Bay to the south and Victoria Strait to the east. The site investigation camp will likely be situated in the vicinity of the Airstrip or the Station Area.

10. How was the location of the camp selected? Was the site previously used? Was assistance from the Regional Inuit Association Land Manager sought? Include maps and/or aerial photographs.

The location of the camp was selected to provide close working proximity to the CAM-1, DEW Line Site. Figure 2 is a topographic map segment showing the DEW Line Site.

11. Is the camp or any aspect of the project located on:

[≤] Crown Lands Permit Number (s)/Expiry Date: LUP #N2001X0012 exp. April 11, 2003.
[ ] Commissioners Lands Permit Number (s)/Expiry Date: _____
[ ] Inuit Owned Lands Permit Number (s)/Expiry Date: _____

12. Closest Communities (distance in km):

The closest community to Jenny Lind Island is Cambridge Bay approximately 150 km west of the site.

13. Has the proponent notified and consulted the nearby communities and potentially interested parties about the proposed work?

Please see Part 4 of the document in Appendix E.

14. Will the project have impacts on traditional water use areas used by the nearby communities? Will the project have impacts on local fish and wildlife habitats?

The site investigations are expected to have no significant impact on water usage and local fish and wildlife habitats. Appendix C contains an Environmental Impact Summary Table.

PURPOSE OF THE CAMP

15. O Mining
O Tourism (hunting, fishing, wildlife observation, adventure/expedition, etc.)
(Omit questions # 16 to 21)
) Other Conservation, DEW Line Site Investigation (Omit questions # 16 to 22)

16.
O Preliminary site visit
O Prospecting
O Geological mapping
O Geophysical survey
O Diamond drilling
O Reverse circulation drilling
O Evaluation Drilling/Bulk Sampling (also complete separate questionnaire)
O Other: _____

N/A

17. Type of deposit:
O Lead Zinc
O Diamond
O Gold
O Uranium
O Other: _____

N/A

DRILLING INFORMATION

18. Drilling Activities
O Land Based drilling
O Drilling on ice

N/A

19. Describe what will be done with drill cuttings?

N/A

20. Describe what will be done with drill water?

N/A

21. List the brand names and constituents of the drill additives to be used? Includes MSDS sheets and provide confirmation that the additives are non-toxic and biodegradable.

N/A

22. Will any core testing be done on site? Describe.

N/A

SPILL CONTINGENCY PLANNING

23. Does the proponent have a spill contingency plan in place? Please include for review.

Fuel and hazardous material spill contingency plans are provided in Appendix D and in Annex E of the Environmental Protection Plan in Appendix E.

24. How many spill kits will be on site and where will they be located?

The spill kit will be located within the camp area and will consist, at minimum, of the following items:

- Oil Absorbent materials
- Salvage drum
- Shovel – 2
- Gloves, rubber lined – 1 pair
- Wheelbarrow - 1

25. Please describe the types, quantities, and method of storage of fuel and chemicals on site, and provide MSDS sheets.

It is estimated that camp operation will require a combined total of 4000 litres of gasoline and diesel fuel. Fuel is to be stored in 205 litre barrels in a location situated a minimum of 100 metres from any natural water course or water body.

The fuel is provided by the camp outfitter. MSDS information will be provided by the outfitter after award of the contract.

WATER SUPPLY AND TREATMENT

26. Describe the location of water sources.

Potable water will be obtained from the water supply lake indicated on the site plan (Figure 2 in Appendix 1).

27. Estimated demand (in L/day * person):

) Domestic Use: 2500 L/day total Water Source: Water Supply Lake
O Drilling Units: _____ Water Source: _____
O Other: _____ Water Source: _____

28. Describe water intake for camp operations? Is the water intake equipped with a mesh screen to prevent entrapment of fish? Describe:

Water will be pumped from the water supply lake into a mobile water tank using a portable pump. The water tank will be brought to the camp to service the domestic water requirements. The water withdrawal rate will not exceed 10% of the existing stream flow or 10% of the total water body volume. All water intake hoses will be equipped with a 2.5 millimetre wire mesh.

29. Will drinking water quality be monitored? What parameters will be analyzed and at what frequency?

Drinking water quality is monitored by site investigation personnel at the outset of camp operations. The water will be analysed for the following parameters: pH, conductivity, hardness, sodium, potassium, magnesium, calcium, iron, manganese, nitrate, nitrite, sulphate, chloride, copper, nickel, cobalt, cadmium, lead, zinc, chromium, arsenic, PCBs, total petroleum hydrocarbons, total coliforms, E.coli, heterotrophic plate count.

30. Will drinking water be treated? How?

If required, drinking water will be treated in accordance with the Health Canada Guidelines for Canadian Drinking Water Quality. Iodine, chlorination and thermal methods are common on-site drinking water treatments.

31. Will water be stored on site?

Water will be stored at the camp in the mobile tank.

WASTE TREATMENT AND DISPOSAL

32. Describe the characteristics, quantities, treatment and disposal methods for:

) Camp Sewage (blackwater)
Sewage will be buried on site a minimum of 100 metres from the camp and any natural drainage course or water body.

) Camp Greywater
Greywater from camp operations will be discharged to a greywater pit and buried a minimum of 30 metres from the camp or any natural drainage course or water body.

) Solid Waste

Domestic garbage will be incinerated on site and the residual waste will be buried along with the sewage. Any laboratory waste will be containerized and stored in an on-site building such as the warehouse for disposal during the DEW Line site clean up.

) Bulky Items/Scrap Metal

All excess fuels, camp equipment and facilities will be removed from the site after completion of the site investigation. Large or cumbersome items that are unable to be removed after the site investigation will be contained appropriately and stored in an appropriate on-site building such as the warehouse.

○ Waste Oil/Hazardous Waste

It is not anticipated that site investigation activities will generate hazardous wastes.

) Empty Barrels/Fuel Drums

Refer to the sub-points for Bulky Items/ Scrap Metal and Waste Oil/Hazardous Waste above.

○ Other:

---

33. Please describe incineration system if used on site. What types of wastes will be incinerated?

Domestic wastes (food scraps, packaging, papers and select plastics) will be incinerated in an enclosed space located 100 metres away from the camp, any site facilities and natural water courses or water bodies. An extinguisher will be available at the incineration site.

34. Where and how will non-combustible waste be disposed of? If in a municipality in Nunavut, has authorization been granted?

Non combustible waste will be contained and stored in an on-site building until it can be disposed of appropriately during the DEW Line Site clean up (either in a landfill or transport to a waste treatment facility off-site).

35. Describe location (relative to water bodies and camp facilities) dimensions and volume, and freeboard for sumps (if applicable).

N/A

36. Will leachate monitoring be done? What parameters will be sampled and analyzed, and at what frequency?

N/A

OPERATION AND MAINTENANCE

37. Have the water supply and waste treatment and disposal methods been used and proven in cold climate? What known O&M problems may occur? What contingency plans are in place?

The water supply, and waste treatment and disposal methods employed during the CAM-1 site investigation have been employed during previous DEW Line Site Investigations (16 of the 21 sites within the Canadian Arctic have been investigated). Contingency plans for fuel and hazardous material spills; wildlife encounters; and finding heritage resources are provided in Appendix D.

ABANDONMENT AND RESTORATION

38. Provide a detailed description of progressive and final abandonment and restoration activities at the site.

All equipment, supplies and materials brought to the site for the purpose of the investigation will be removed from the site at the completion of the activities. All test pits will be backfilled and waste products will be disposed of as previously mentioned.

BASELINE DATA

39. Has or will any baseline information be collected as part of this project? Provide bibliography.

-) Physical Environment (Landscape and Terrain, Air, Water, etc.)
-) Biological Environment (Vegetation, Wildlife, Birds, Fish and Other Aquatic Organisms, etc.)
-) Socio-Economic Environment (Archaeology, Land and Resources Use, Demographics, Social and Culture Patterns, etc.)
- O Other:

Information related to baseline impact studies is provided in Appendix E.

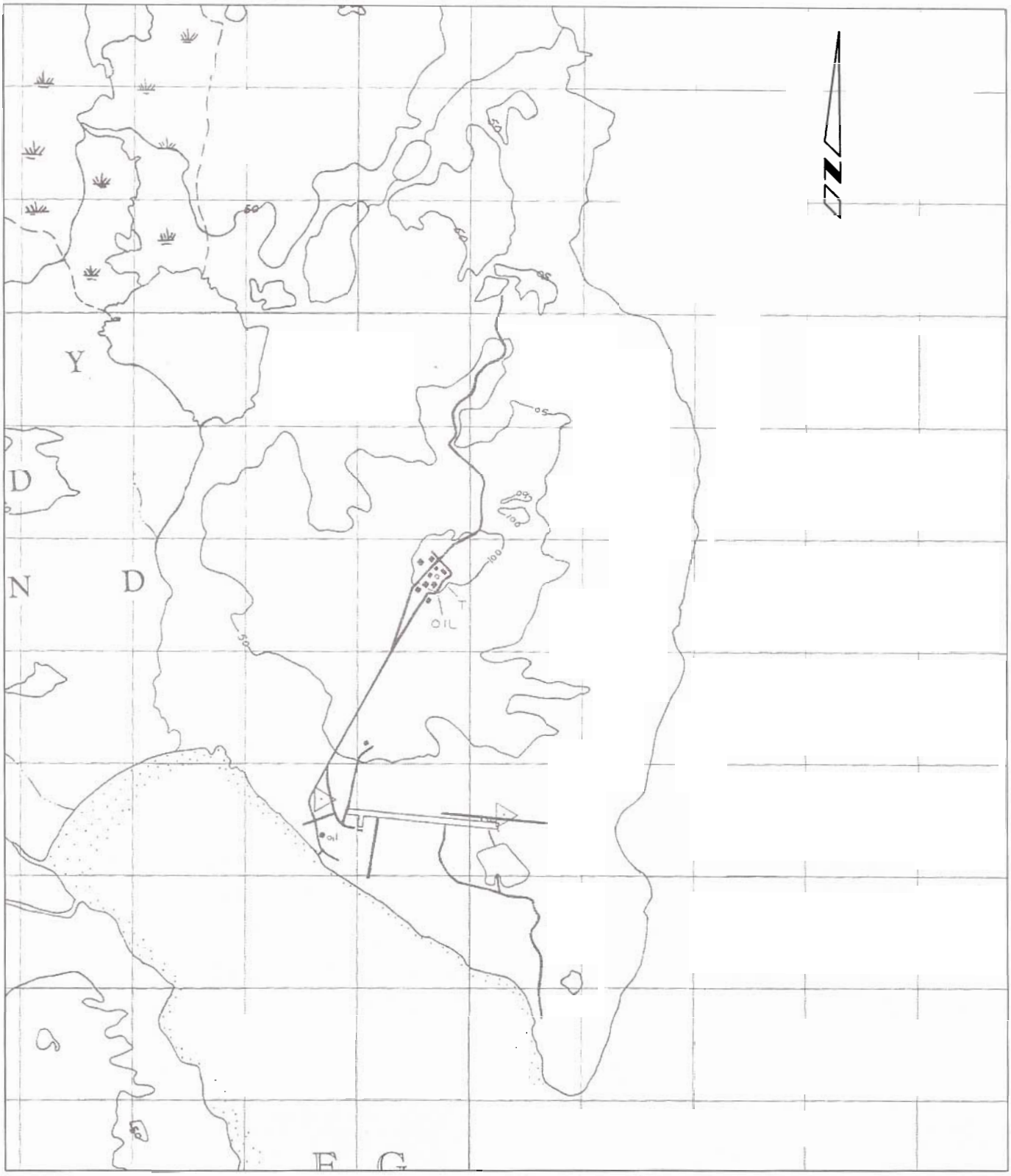
REGULATORY INFORMATION

40. Do you have a copy of

- Article 13 - Nunavut Land Claims Agreement
- NWB - Water Licensing in Nunavut - Interim Procedures and Information Guide for Applicants
- NWB - Interim Rules of Practice and Procedure for Public Hearings
- NWTWB - Guidelines for the Discharge of Treated Municipal Wastewater in the NWT
- NWTWB - Guidelines for Contingency Planning
- DFO - Freshwater Intake End of Pipe Fish Screen Guideline
- Fisheries Act - s.35
- RWED - Environment Protection- Spill Contingency Regulations
- Canadian Drinking Water Quality Guidelines
- Public Health Act Camp Sanitation Regulations
- Public Health Act Water Supply Regulations
- Territorial Land Use Act and Regulations

You should consult the above document, guidelines, and legislation for compliance with existing regulatory requirements.

APPENDIX A: FIGURES



LEGEND:

0 1 2 4 Km

SCALE

REFERENCE FROM 1960 PROVISIONAL MAP, JENNY LIND ISLAND, 67B/10 WEST PRODUCED BY THE ARMY SURVEY ESTABLISHMENT, R.C.E.

REV	Y	M	D	ISSUE/REVISION DESCRIPTION	DRN	DES	CHK	ENG
0	01	03	21	FOR REPORT	CO	ES	ES	

UMA Engineering Ltd.
Engineers, Planners & Surveyors
2540 Kensington Road N.W., Calgary, Alberta, Canada T2N 3S3

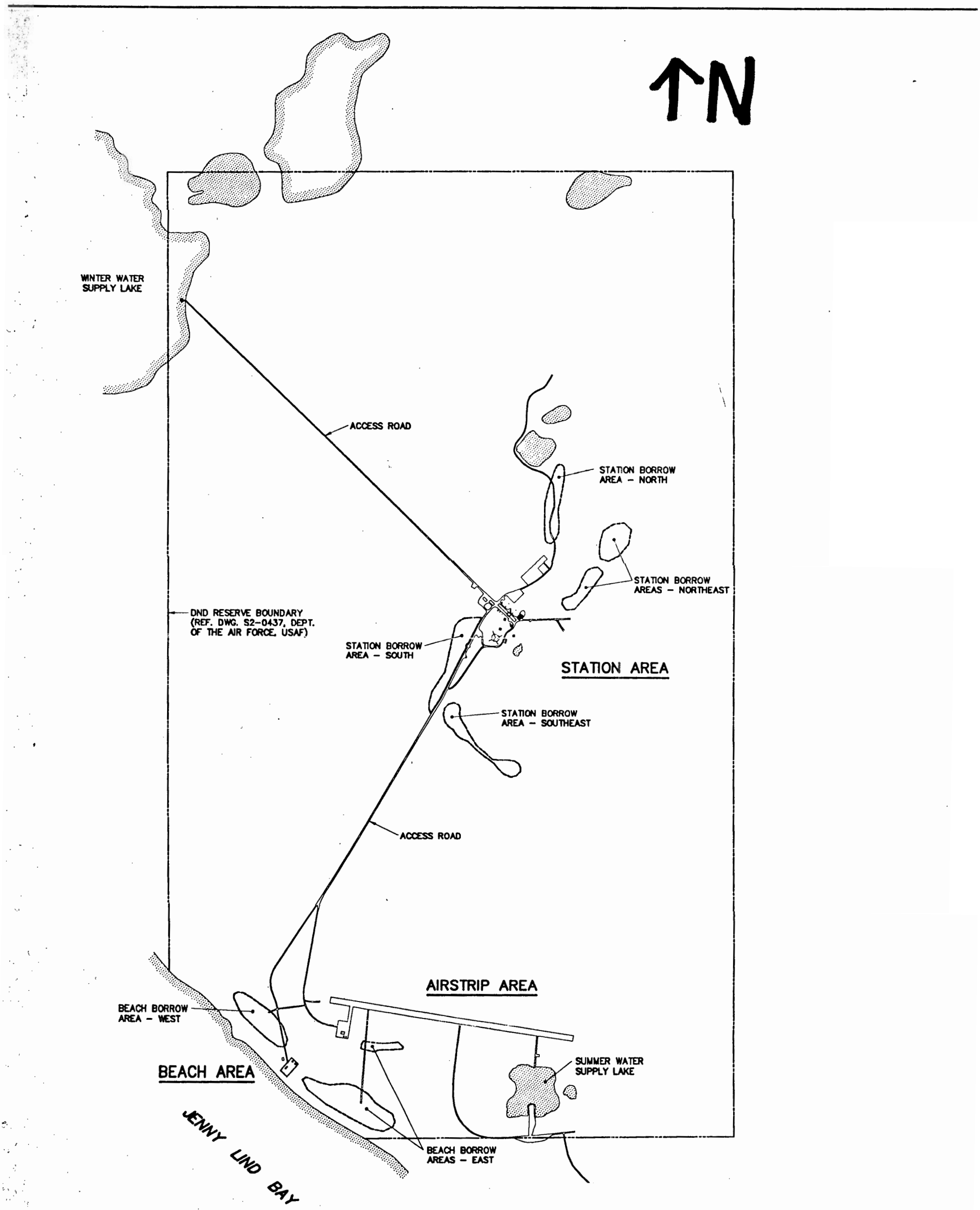
METRIC

NUNAVUT TERRITORY

CAM-1, JENNY LIND ISLAND

MAP SHEET

UMA JOB No.	ACAD FILE No.		ISS/REV
0171-095-52-08	EW-82	FIGURE 1	0


↑N
WINTER WATER SUPPLY LAKE
ACCESS ROAD
STATION BORROW AREA – NORTH
STATION BORROW AREAS – NORTHEAST
DND RESERVE BOUNDARY (REF. DWG. S2-0437, DEPT. OF THE AIR FORCE, USAF)
STATION BORROW AREA – SOUTH
STATION AREA
STATION BORROW AREA – SOUTHEAST
ACCESS ROAD
AIRSTRIP AREA
BEACH BORROW AREA – WEST
BEACH AREA
SUMMER WATER SUPPLY LAKE
BEACH BORROW AREAS – EAST
JENNY LIND BAY

APPENDIX B: SITE INVESTIGATION ACTIVITES

The site investigation activities include the following:

1. Collection of soil samples to delineate known areas of contaminated soil. Subsurface samples will be collected from test pits excavated using a mini-excavator.
2. Collection of water samples. May include surface and groundwater samples. If required, temporary groundwater wells may be installed in test pits.
3. Collection of structural materials samples (to determine concentrations of PCB and lead in paint and asbestos in insulating materials).
4. Inventory of buildings and facilities on site.
5. Identification of surface debris areas.
6. Geophysical survey of landfills to determine lateral extent of buried waste.
7. Identification of potential sources of granular material required for the clean up activities.
8. Identification of potential locations for site disposal facilities, storage areas, construction camp, etc. required for clean up activities.
9. Completion of topographic and location surveys.

In accordance with Section 22 (2) of the Territorial Land Use Regulations:

a. Land to be used is shown on attached drawings.
b. Existing roads are to be used for access. These are shown on enclosed drawings. No new trails are proposed.
c. The existing airstrip will be used for access to the site.
d. The actual location and size of the camp, water supply, waste management, fuel handling and storage for the operation of the camp shall be provided once the Outfitter contract is awarded. Generally, domestic garbage is incinerated and the residual waste is buried along with sewage.
e. Major equipment requirements will include items such as ATVs and trailers, pumps, mini-excavator, satellite phone and radio, and laboratory analytical equipment. A final list of equipment shall be provided after the Outfitter contract award.
f. The proposed site investigation activities are not anticipated to impact any of the existing roads, landing strips, streams, or other features and structures located at the site.

Post Investigation

Upon completion of the investigation work, the site will be restored as follows:

1. All excavated test pits will be backfilled.
2. Laboratory waste will be containerised and stored (in the warehouse or other suitable building) for disposal during site clean up.
3. Camp facilities, equipment and excess fuel will be removed from the site. Surplus materials that cannot be stored safely for disposal during clean up are also removed.

APPENDIX C: ENVIRONMENTAL IMPACT SUMMARY TABLE

The following table summarizes the identified impacts associated with the site investigation activities at the DND DEW Line sites and the required mitigative actions.

Description	Significance	Monitoring/ Mitigation Requirements
Degradation of permafrost due to test pit excavation activities	Potentially significant in excavations in ice rich ground	• Backfill excavations as soon as practical • Replace vegetation cover or topsoil as soon as possible after excavation
Potential risks to soils, terrestrial and aquatic habitat and human safety from accidental events, such as fuel spills	Potentially significant in the case of spillage	• Development of a contingency plan outlining procedures to follow in the event of an accidental spill, such as secondary containment • Training and education of personnel in emergency procedures • Proper fuel handling and storage techniques (particularly when refuelling equipment)
Disruption of heritage sites from test pit excavation activities and activities of on-site personnel	Potentially significant (prior to mitigation) in areas of high archaeological resources	• Report and record any features of potential interest, ensure areas are clearly marked • Monitor during excavation for additional features • All personnel to be discouraged from visiting archaeological and other heritage sites
Effect of site investigation activities and/or personnel (e.g. disturbance) on habitats and vegetation	Potentially significant on previously undisturbed areas	• Use of ATVs and other vehicles to be restricted to existing roadways (where possible)
Effect of site investigation activities on wildlife (i.e. noise or disturbances)	Potentially significant on sites where wildlife was noted	• Avoid concentration of fish or wildlife during site activities
Effect of camp operations on habitats, vegetation, wildlife and heritage resources	Potentially significant in previously undisturbed areas and areas where wildlife was noted	• Site camp and storage areas on previously disturbed areas and at least 30 m from the nearest water body • Avoid siting the camp in areas containing archaeological/heritage features • Store camp waste (i.e. kitchen) in animal proof containers to prevent scavenging by wildlife • Dispose of domestic garbage and sewage in such a manner that waste is removed from contact with the environment
Use of local services and northern residents during implementation of site investigation activities	Positive impact on northern socio-economic development	• Maximize employment and business opportunities in the North

APPENDIX D: CONTINGENCY PLANS

1.1. GENERAL

.1 The following generic contingency plans present the prescribed course of action to be followed in the case of unanticipated events during clean up 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 protection response and meet all regulatory requirements for reporting to the appropriate authorities.

.2 Spill contingency plans for the site will be included in the Site Specific Investigation Plans. 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 phone numbers;
.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.

1.2. FUEL AND HAZARDOUS MATERIAL SPILLS

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

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

.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. Fuel tanks, connection lines, etc. shall be checked on a daily basis to identify any spills, leaks, or damage.

.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 discovering a spill shall:

1. Ensure personnel are appropriately trained.
2. Provide materials and equipment necessary for adequate response to fuel spills, such as excavators for creating earthen dykes and 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.
8. Make every effort to contain the spill by dyking with earth or other barriers on land and containment booms on water.
9. 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.
10. Follow all applicable federal/ territorial regulations and guidelines or the disposal of spill materials.
11. Document all events and actions taken. Include information required by applicable regulations and guidelines.
12. Notify appropriate government agencies using the contact list. Report spills immediately on the 24-Hour Spill Report Lone (867)920-8130.

1.3. WILDLIFE ENCOUNTER

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

.2 EMPLOY DEDICATED BEAR MONITORS AT ALL TIMES DURING CLEAN UP OPERATIONS.

.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.

.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 reasons 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 vehicles, 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, contact the appropriate wildlife officer and alert them to 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 GNWT wildlife officer who will issue instructions as to disposal of the carcass and the formal reporting procedures to be followed.

.5 Due to the possibility of rabies, shoot any animal which 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.

1.4. HERITAGE RESOURCES

.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.

.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.

1.5. KEY CONTACT LIST

.1 24 Hour Spill Report Line

.1 In the event of a spill, contact the 24-Hour Spill Report Line and provide 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.

.2 Other Contacts

.1 In the event of a non-spill emergency (e.g. related to wildlife, fisheries, heritage resources, etc.) contacts are provided in Table 1. If any activities adversely affect the North warning System operations, contact immediately R. Helm, NWSO Ottawa (613) 992-0755 fax: 996-3925.

.3 PMO Contacts

All significant events should be reported to the Project Management Office in Ottawa. Key contacts are as follows (Fax number is 613-998-1061):

- Contract Manager - Shawn Helmerson (613) 998-4511
- Planning Officer – Nicolas Monteiro (613) 998-9540
- Project Manager – Pete Quinn (613) 998-9523
- Deputy Project Manager - Scott Munn (613) 990-9641

TABLE 1
CONTACTS FOR RESOURCE INTERESTS

Resource	Location	Agency	Phone No.	Fax No.
Land Use	Yellowknife	Indian and Northern Affairs	(867) 669-2671	(867) 669-2713
	Iqaluit	Indian and Northern Affairs	(867) 979-4405	(867) 979-6445
Fisheries, Marine Mammals	Yellowknife	Fisheries and Oceans Canada	(867)667-4900	(867)669-4941
	Iqaluit	Fisheries and Oceans Canada	(867) 979-8002	(867) 979-8039
Wildlife	Iqaluit	Department of Sustainable Development	(867) 975-5902	(867)975-5980
Migratory Birds	Yellowknife	Canadian Wildlife Service	(867) 669-4700	(867) 873-8185
Heritage Resources	Yellowknife	Prince of Wales Northern Heritage Centre	(867) 873-7551	(867) 873-0205
	Iqaluit	Inuit Heritage Trust	(867) 975-5500	(867)975-5504