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December 10, 2002

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Nunavut Water

DEC 12 2002

Public Registry

Jim Wall
Technical Advisor
Nunavut Water Board
P.O. Box 119
Gjoa Haven, NU X0B 1J0

Dear Mr. Wall:

RE: Water Use Licence Application for the Site Investigation at PIN-4, Byron Bay

UMA Engineering Ltd. is submitting the attached water use licence application for the site investigation at PIN-4, Byron Bay on behalf of Defence Construction Canada and the Department of National Defence.

If you have any questions or comments regarding the application, please do not hesitate to contact the undersigned or Graham Emmerson at 403-270-9200.

Sincerely,

UMA ENGINEERING LTD.

Eva Schulz, P.Ag.
Environmental Scientist
eschulz@umagroup.com

EMS:elt

Encl. Water Use Licence Application

cc: Graham Emmerson, UMA
Scott Hamilton, DCC

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PIN-4, BYRON BAY DEW Line Site
Site Investigation Project Description Abstract

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 Byron Bay DEW Line Site (PIN-4) has been abandoned, and is no 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 PIN-4 site investigation is scheduled for June through August of 2003.

The PIN-4 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. Temporary groundwater wells may be installed in test pits.
- Collection of structural materials samples.
- 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 2003. Major equipment requirements will include items such as ATVs and trailers, pumps, mini-excavators, satellite phones and radios, and laboratory analytical equipment. Typically, 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 cannot be stored safely for disposal during clean up are also removed.

PIN-4, ᐸᕋᓐ ᐸᐃ ᐅᓇᑕᖅᑐᒃᓴᑦ ᐃᓂᖃᕐᕕᖓᑦ ᐃᓂᐅᔪᖅ ᖃᐅᔨᓴᖅᑕᐅᔪᖅ ᐅᓂᒃᑳᖅᑕᐅᓂᖓ

1955-ᒥᑦ 1993-ᒧᑦ, ᖃᓂᑦᑐᒥᑦ ᖃᐅᔨᔾᔪᑕᐅᓇᓱᖅᑐᑦ ᐅᓇᑕᖅᑐᖃᓕᖅᐸᑦ - ᑎᐅᓚᐃᓐ ᐃᓂᖓ - ᐊᑐᐃᓐᓇᐅᑎᑦᑎᖃᑦᑕᓚᐅᖅᐳᖅ ᖃᐅᔨᓴᕈᑎᒃᓴᓂᒃ ᓄᓇᒥᔭᐅᔪᒥ ᐅᑭᐅᖅᑕᖅᑐᒥ ᓄᐊᑦ ᐊᒥᐊᓕᒃᒥ ᐊᑐᖅᓗᑎᒃ 42 ᓂᒃ ᓈᓚᐅᑎᑎᒍᑦ ᐊᔾᔨᒋᔭᐅᔪᓂᒃ ᖃᐅᔨᓴᐃᕝᕕᖕᓂᒃ ᑐᓴᕐᕕᐅᖃᑦᑕᕋᔭᖅᑐᓂᒃ. ᓄᐊᑦ ᐊᒥᐊᓕᒃᒥ ᑎᖕᒥᓲᓕᕆᓂᕐᒧᑦ ᐱᓕᕆᔾᔪᓯᐅᔪᖅ ᓄᑖᙳᖅᑕᐅᑎᓪᓗᒍ ᐃᓚᖏᑦ ᐅᓇᖅᑐᒃᓴᐃᑦ ᐃᓂᖃᕐᕕᓂᖏᑦ ᓄᑖᙳᖅᑕᐅᓚᐅᖅᐳᑦ ᐅᕝᕙᓘᓐᓃᑦ ᐃᒍᑉᑎᖅᑕᐅᑉᓗᑎᒃ. ᐸᕋᓐ ᐸᐃᒥ ᐅᓇᑕᖅᑐᒃᓴᐃᑦ ᐃᓂᕕᓂᖓᑦ (PIN-4) ᕿᒪᒃᑰᓕᖅᐳᖅ, ᐊᒻᒪ ᐊᑐᖅᑕᐅᒋᐊᖃᕈᓐᓇᐃᖅᓗᓂ ᐊᐅᓚᑦᑎᔾᔪᑕᐅᓗᓂ.

ᐅᓇᑕᖅᑐᒃᓴᑦ ᐃᓂᖃᕐᕕᖏᑦ ᓴᓗᒻᒪᖅᓴᖅᑕᐅᙱᓐᓂᖏᓐᓂᒃ, ᖃᐅᔨᓴᐃᖃᑦᑕᖅᐳᑦ ᐊᑐᐃᓐᓇᐅᑎᑦᑎᔪᒪᑉᓗᑎᒃ ᑐᓴᒐᒃᓴᓂᒃ ᐊᑐᖅᑕᐅᓂᐊᖅᑐᓂᒃ ᓄᑖᙳᖅᑎᓇᓂᕐᒧᑦ. PIN-4 ᖃᐅᔨᓴᖅᑕᐅᔪᖅ ᐱᓕᕆᐊᖑᓂᐊᖅᐳᖅ ᔫᓐᒥᑦ ᐋᒡᒐᓯ 2003-ᒧᑦ.

PIN-4 ᖃᐅᔨᓴᖅᑕᐅᓂᖓᑕ ᐱᓕᕆᐊᖑᓂᖓ ᐃᓚᖃᕐᓂᐊᖅᐳᖅ ᐅᑯᓂᖓ:

- ᑲᑎᑕᐅᓂᖏᓐᓂᒃ ᒪᓂᕋᕐᒥ ᖃᐅᔨᓴᖅᑕᐅᔪᒃᓴᑦ ᐃᓚᐅᓗᒋᑦ, ᖃᐅᔨᒪᔭᐅᔪᑦ ᐋᓐᓂᐊᕐᓇᖅᓯᑉᓗᑎᒃ ᐅᓗᕆᐊᓇᖅᓯᓂᖏᓐᓂᒃ ᒪᓂᕋᐃᑦ. ᒪᓂᕋᐅᑉ ᐊᑖᓂ ᖃᐅᔨᓴᖅᑕᐅᔪᒃᓴᓂᒃ ᑲᑎᑦᑎᓂᐊᖅᐳᑦ ᖃᐅᔨᓴᐃᕝᕕᖕᓂ ᐳᐊᕆᔭᖅᑕᐅᓯᒪᔪᓂ ᒥᑭᑦᑐᓂᒃ ᐳᐊᕆᑎᓂᒃ ᐊᑐᖅᓗᑎᒃ.
- ᑲᑎᑕᐅᓂᐊᖅᐳᑦ ᐃᒪᖅ ᖃᐅᔨᓴᖅᑕᐅᔪᒃᓴᖅ. ᖃᐅᔨᓴᖅᑕᐅᕝᕕᐅᔪᖅ ᐃᓚᖃᕈᓐᓇᖅᐳᖅ ᒪᓂᕋᐅᑉ ᖄᖓᓂᒃ ᐊᒻᒪ ᐃᒪᕐᒥᒃ ᓄᓇᐅᑉ ᐃᓗᐊᓂ ᖃᐅᔨᓴᖅᑕᐅᔪᓂᒃ. ᒪᓂᕋᐅᑉ ᐃᓗᐊᓂ ᐱᒪᓇᓴᐅᓚᐅᐱᓪᓚᒃᑐᑦ ᐃᓕᓴᐅᔪᓐᓇᖅᐳᑦ ᖃᐅᔨᓴᐃᔾᔪᑕᐅᓗᑎᒃ.
- ᑲᑎᑕᐅᓂᖏᑦ ᐃᒡᓗᕐᔪᐊᓂᑦ ᖃᐅᔨᓴᖅᑕᐅᔪᒃᓴᑦ.
- ᖃᐅᔨᓴᖅᑕᐅᓂᖏᑦ ᐃᒡᓗᕐᔪᐊᑦ ᐱᕐᑯᑎᓪᓗ ᐃᓂᓃᑦᑐᑦ
- ᓇᓗᓇᐃᖅᑕᐅᓂᖏᑦ ᒪᓂᕋᐅᑉ ᖄᖓᓂ ᓲᓇᐅᓂᖏᓐᓂᒃ ᐊᒥᐊᒃᑯᒋᔭᐅᑎᓪᓗᒋᑦ ᓯᕐᑯᒥᓯᒪᐅᖅᑐᑦ.
- ᐊᖏᓂᖏᑦ, ᖃᓄᐃᑑᓂᖏᑦ ᓴᕿᓯᒪᓂᖏᑦ ᓄᓇᐅᑦ ᓴᐅᔭᐅᓂᑯᐃᑦ ᓇᓗᓇᐃᖅᓯᓗᑎᒃ ᓱᓇᑦ ᓴᐅᔭᐅᓯᒪᒋᐊᒃᓴᖏᓐᓂᒃ.
- ᓇᓗᓇᐃᖅᓯᓗᑎᒃ ᑐᐊᐸᖕᓂᒃ ᐊᑐᖅᑕᐅᒋᐊᖃᕐᓂᐊᖅᑐᓂᒃ ᓴᓗᒻᒪᖅᓴᐃᑎᓪᓗᒋᑦ
- ᓇᓗᓇᐃᖅᓯᓗᑎᒃ ᐃᓂᐅᓇᔭᖅᑐᒃ ᐊᒃᑕᑰᕝᕕᐅᓗᑎᒃ, ᑐᖁᖅᓯᓯᒪᕝᕕᐅᓗᑎᒃ, ᓴᓇᕝᕕᐅᓗᑎᒃ ᑕᖕᒫᕝᕕᐅᓗᑎᒃ, ᐊᓯᖏᓪᓗ ᐊᑐᖅᑕᐅᒋᐊᖃᖅᑐᑦ ᓴᓗᒻᒪᖅᓴᐃᑎᓪᓗᒋᑦ.
- ᐱᐊᓂᒃᑕᐅᓂᖓ ᐅᓂᒃᑳᖅᑕᐅᓂᖓᓗ ᐊᒻᒪ ᐃᓃᑦ ᖃᐅᔨᓴᖅᑕᐅᔪᑦ

ᐃᓂᐅᔪᑦ ᖃᐅᔨᓴᖅᑕᐅᔪᑦ ᓇᓗᓇᐃᖅᑕᐅᕗᑦ ᐅᓇᑕᖅᑐᒃᓴᓂᑦ ᐊᒻᒪ ᑎᐅᓚᐃᓐ ᓴᓗᒻᒪᖅᓴᖅᑕᖏᓐᓂ ᐅᓇᑕᖅᑐᒃᓴᐃᑦ ᐃᓂᖃᕐᕕᕕᓂᖏᓐᓂ ᐱᓕᕆᐊᖑᓂᓇᓴᖏᑦ ᑲᔪᓯᑎᑕᐅᕗᑦ ᖃᐅᔨᓴᖅᑕᓚᐅᖅᓗᑎᒃ. ᒥᑦᑕᕐᕕᒃ ᐊᑐᖅᑕᐅᓂᐊᖅᐳᖅ ᐃᓂᐅᔪᒧᑦ ᑎᑭᔾᔪᑕᐅᓗᓂ ᐊᒻᒪ ᐊᖅᑯᑎᑦ ᐊᑐᖅᑕᐅᓗᑎᒃ ᓄᓇᓯᐅᑎᓂ ᐃᖏᕐᕋᔾᔪᓯᐅᔪᓄᑦ. ᐃᓂᐅᔪᑉ ᖃᐅᔨᓴᖅᑕᐅᔪᒪᓂᖓ ᐃᒃᐱᒋᓴᖃᖅᑎᑦᑎᓂᐊᙱᓚᑦ ᐊᖅᑯᑎᓂᒃ ᒫᓐᓇ ᐊᑐᐃᓐᓇᐅᔪᓂᒃ, ᒥᑦᑕᕐᕕᖕᓂᒃ, ᓴᕐᐸᐅᓂᐅᔪᓂ ᐃᒪᕐᓂᒃ, ᐅᕐᐸᑐᓐᓂᒃ ᐊᓯᖏᓐᓂᒃ ᓴᕿᓯᒪᔪᓂᒃ ᐊᒻᒪ ᐃᒡᓗᕐᔪᐊᓂᒃ ᐃᓂᐅᔪᓃᑦᑐᓂᒃ.

ᑕᖕᒫᕝᕕᒃ ᐋᖅᑭᒃᑕᐅᓚᐅᑲᓐᓂᐊᖅᐳᖅ ᖃᐅᔨᓴᐃᔾᔪᓯᐅᔪᓄᑦ ᐱᓕᕆᐊᖑᔾᔪᑕᐅᔪᒧᑦ ᐊᑐᖅᑕᐅᔪᒃᓴᖅ. ᑳᓐᑐᕿᒃᑎ ᑕᖕᒫᕝᕕᖕᒥᒃ ᐊᐅᓚᑦᑎᔪᖅ ᑲᒪᒋᔭᖃᕐᓂᐊᖅᑐᖅ ᑐᒃᓯᕋᐅᑕᐅᓂᐊᖅᐳᖅ ᐅᐱᓐᖓᒃᓵᖓᓂ 2003. ᐊᖏᔪᑦ ᐊᑐᖅᑕᐅᔪᒪᔪᑦ ᓴᓇᕿᑎᑦ ᐃᓚᖃᕐᓂᐊᖅᐳᑦ ᓄᓇᒥᐅᑕᓂᒃ, ᑲᓕᔾᔪᑎᓂ, ᓱᑉᓗᓕᖕᓂᒃ ᐸᑉᓂᒃ, ᒥᑭᔪᓂᒃ ᐳᐊᓇᔭᐅᑎᓂᒃ, ᖃᖓᑦᑕᖅᑎᑕᐅᓯᒪᔪᒃᑯᑦ ᐅᖄᓗᑎᓂᒃ ᓈᓚᐅᑎᓂᒃ, ᐊᒻᒪ ᖃᐅᔨᓴᕈᑎᒃᓴᓂᒃ. ᐊᒃᑕᑯᐃᑦ ᐊᑐᖅᑕᐅᔪᑦ ᖃᐅᔨᓴᖅᑎᓂᑦ ᐃᑯᐊᓪᓚᒃᑎᑕᐅᖃᑦᑕᖅᐳᑦ ᐊᒻᒪ ᐃᑯᐊᓪᓚᖕᓂᖓ ᓴᐅᔭᐅᑉᓗᓂ ᖁᕐᕕᖃᕐᕕᔪᑉ ᖃᓂᒋᔭᖓᓂ.

ᓇᓄᕐᓂᒃ ᑎᑭᓕᓇᐊᒃᓴᖏᓐᓂᒃ ᖃᐅᔨᓴᕈᑎᑦ ᐊᑐᖅᑕᐅᓂᐊᖅᐳᑦ ᓄᓇᓕᖕᓂ ᐆᒪᔪᓂᒃ ᐊᐅᓚᑦᑎᔾᔪᑕᐅᓗᑎᒃ ᐃᓂᐅᔪᖅ ᖃᐅᔨᓴᖅᑕᐅᓂᖓᓂ.

ᖃᐅᔨᓴᖅᑕᐅᔪᖅ ᐱᐊᓂᒃᑕᐅᒃᐸᑦ, ᑕᒪᐃᓐᓂᒃ ᖃᐅᔨᓴᖅᑕᐅᔪᑦ ᐳᐊᕐᓇᔭᖅᑕᐅᔪᑦ ᓴᐅᔭᐅᒃᑲᓐᓂᕐᓂᐊᖅᐳᑦ; ᖃᐅᔨᓴᐃᕝᕕᖕᒥ ᐊᒃᑕᑯᐃᑦ ᐳᕐᓄᑦ ᐃᓕᔭᐅᓗᑎᒃ ᑐᖁᖅᑕᐅᓂᐊᖅᐳᑦ (ᓯᕐᓗᐊᒧᑦ ᐅᕝᕙᓘᓐᓃᑦ ᐊᓯᖓᓄᑦ ᓈᒻᒪᒃᑐᒧᑦ ᐃᒡᓗᕐᔪᐊᒧᑦ) ᐊᒃᑕᑰᖅᑕᐅᓂᐊᕐᓗᑎᒃ ᓴᓗᒻᒪᖅᓴᐃᓕᖅᐸᑕ, ᐊᒻᒪ ᑕᖕᒫᕝᕕᖕᒥ ᐃᒡᓗᕐᔪᐊᑦ, ᓴᓇᕿᑎᑦ ᐅᖅᓱᐊᓗᐃᑦ ᓄᒃᑎᖅᑕᐅᓂᐊᖅᐳᑦ ᐃᓂᐅᔪᒥᑦ . ᑐᖁᖅᑕᐅᓯᒪᔪᓐᓇᙱᑦᑐᑦ ᐅᓗᕆᐊᓇᙱᑦᑐᒥ ᐊᒃᑕᑰᖅᑕᐅᔪᙱᑦ ᓴᓗᒻᒪᖅᓴᐃᑎᓪᓗᒋᑦ ᓄᒃᑎᖅᑕᐅᖃᑕᐅᓂᐊᖅᐳᑦ.