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NUNAVUT WATER BOARD
NUNAVUT IMALIRIYIN KATIMAYINGI

DECISION

LICENCE NUMBER: NWB6FOH0409 – Type “B”

This is the decision of the Nunavut Water Board (NWB) with respect to an application for a Licence dated August 20, 2003, made by:

Department of National Defence, Government of Canada

to allow for the use of water and disposal of waste during operations at the FOX-M North Warning System Long Range Radar Station, located at Hall Beach within the Baffin Region, Nunavut (latitude 68°45'35" N; longitude 81°11' 41" W). With respect to this application, the NWB gave public notice that the Department of National Defence had filed an application for a water licence.

DECISION

In accordance with S. 13.5.1 of the *Nunavut Land Claim Agreement* (NLCA), the application was forwarded to the Nunavut Impact Review Board, to determine whether the application required a review pursuant to S.12.4.1 of the NLCA. After having been advised by the Nunavut Impact Review Board that the application could proceed without a review pursuant to S. 12.4.4(a), the NWB decided that the application could go through the regulatory process.

After reviewing the submission of the Applicant and written comments expressed by interested parties, the NWB, having given due regard to the facts and circumstances, the merits of the submissions made to it and to the purpose, scope and intent of the *Nunavut Land Claims Agreement* and of the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* (NWNSRTA), decided to waive the requirement to hold a public hearing and furthermore to delegate its authority to approve the application to the Chief Administrative Officer pursuant to S. 13.7.5 of the NLCA and S. 49(a) of the NWNSRTA and determined that:

Licence Number NWB6FOH0409 Type “B” be issued subject to the terms and conditions contained therein. (Motion #: 2004-15)

SIGNED this 25th day of June 2004 at Gjoa Haven, NU.

Original signed by:

Philippe di Pizzo
Chief Administrative Officer

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I. INTRODUCTION

On August 20, 2003, an application was filed with the Nunavut Water Board by the Department of National Defence for a water licence for water use and waste disposal activities during operations at the FOX-M North Warning System Long Range Radar Station, located at Hall Beach within the Baffin Region, Nunavut (latitude 68°45'35" N; longitude 81°11' 41" W). In accordance with S. 13.5.1 of the *Nunavut Land Claim Agreement* (NLCA), the application was forwarded to the Nunavut Impact Review Board, to determine whether the application required a review pursuant to S.12.4.1 of the NLCA. After having been advised by the Nunavut Impact Review Board that the application could proceed without a review, pursuant to S. 12.4.4(a), the NWB decided that the application could go through the regulatory process.

In accordance with the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* S. 55.1 and Article 13 of the *Nunavut Land Claims Agreement*, public notice of the application was posted. The application was then referred for review and comments to Federal, Territorial and local organizations. No public concerns were expressed, and after reviewing the submission of the Applicant and written comments expressed by interested parties, the NWB, having given due regard to the facts and circumstances, the merits of the submissions made to it and to the purpose, scope and intent of the *Nunavut Land Claims Agreement* and of the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* (NWNSTRA), decided to waive the requirement to hold a public hearing and furthermore to delegate its authority to approve the application to the Chief Administrative Officer pursuant to s.13.7.5 of the NLCA and S.49(a) of the NWNSTRA.

II. GENERAL CONSIDERATIONS

A. Term of the Licence

In accordance with the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* S. 45, the NWB may issue a licence for a term not exceeding twenty-five years. The NWB believes that a term of five (5) years is appropriate. The 5-year licence will allow the Licensee to properly carry out the terms and conditions of the licence and will ensure that sufficient time is given to permit the Licensee to develop, submit, and implement any Plans required under the licence to the satisfaction of the NWB.

B. Annual Report

The requirements imposed on the Licensee in this licence are for the purpose of ensuring that the NWB has an accurate annual update of water use and depositions of waste during a calendar year. This information is maintained on the public registry and is available to any interested parties upon request.

C. Emergency Response

The Board generally requires that all Licensees prepare comprehensive Spill Contingency Plan to establish a state of readiness to ensure a prompt and effective response to possible spills or system failure events. The site-specific emergency response plan will assist the Licensee in responding to emergencies such that the impacts to water in particular and the environment and public health in general are minimized. The NWB approves the Spill Contingency Plan as submitted with minor revisions to be submitted to the Board as an addendum to the plan.

D. Abandonment and Restoration (A&R)

To ensure that all future abandoned facilities are reclaimed in an appropriate manner, the NWB request Licensees to submit an Abandonment and Restoration Plan. The Board has imposed on the Licensee the requirement that six (6) months prior to the abandonment of the FOX-M North Warning System Long Range Radar Station that a Plan for the Abandonment and Restoration of the Site be submitted to the Board.

LICENCE NWB6FOH0409 -TYPE "B"

Pursuant to the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* and the *Agreement Between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in Right of Canada*, the Nunavut Water Board, hereinafter referred to as the Board, hereby grants to

DEPARTMENT OF NATIONAL DEFENCE, GOVERNMENT OF CANADA

(Licensee)

of

101 Colonel By Drive, OTTAWA, ON K1A 0K2

(Mailing Address)

hereinafter called the Licensee, the right to alter, divert or otherwise use water for a period subject to restrictions and conditions contained within this licence:

NWB6FOH0409 – Type "B"

Licence Number

NUNAVUT 05

Water Management Area

**FOX-M NORTH WARNING SYSTEM SITE, HALL BEACH,
BAFFIN REGION, NUNAVUT**

Location

WATER USE AND WASTE DISPOSAL

Purpose

MUNICIPAL UNDERTAKINGS

Description

10 CUBIC METRES DAILY

Quantity of Water Not to be Exceeded

JUNE 25, 2004

Date of Licence

JUNE 30, 2009

Expiry Date of Licence

Dated this 25th day of June 2004 at Gjoa Haven, NU.

Original signed by:

Philippe di Pizzo

Chief Administrative Officer

PART A: SCOPE AND DEFINITIONS

1. Scope

- a. This Licence allows for the use of water and the disposal of waste for municipal undertakings at the FOX-M North Warning System Long Range Radar Station, located at Hall Beach within the Baffin Region, Nunavut (latitude 68°45'35" N; longitude 81°11' 41" W) ;
- b. This Licence is issued subject to the conditions contained herein with respect to the taking of water and the depositing of waste of any type in any waters or in any place under any conditions where such waste or any other waste that results from the deposits of such waste may enter any waters. Whenever new Regulations are made or existing Regulations are amended by the Governor in Council under the *Nunavut Waters and Nunavut Surface Rights Tribunal Act*, or other statutes imposing more stringent conditions relating to the quantity or type of waste that may be so deposited or under which any such waste may be so deposited, this Licence shall be deemed, upon promulgation of such Regulations, to be subject to such requirements; and
- c. Compliance with the terms and conditions of this Licence does not absolve the Licensee from responsibility for compliance with the requirements of all applicable Federal, Territorial and Municipal legislation.

2. Definitions

In this Licence: **NWB6FOH0409 Type “B”**

“Act” means the *Nunavut Waters and Nunavut Surface Rights Tribunal Act*;

“Amendment” means a change to original terms and conditions of this licence requiring correction, addition or deletion of specific terms and conditions of the licence; modifications inconsistent with the terms of the set terms and conditions of the Licence;

“Board” means the Nunavut Water Board established under the *Nunavut Land Claims Agreement* and the *Nunavut Waters and Nunavut Surface Rights Tribunal Act*;

“Chief Administrative Officer” means the Executive Director of the Nunavut Water Board;

“Effluent” means treated or untreated liquid waste material that is discharged into the environment from a structure such as a settling pond or a treatment plant;

“Final Discharge Point” means an identifiable discharge point of a Waste Disposal Facility beyond which the Licensee no longer exercises care and control over the quality of the Effluent;

“Greywater” means all liquid wastes from showers, baths, sinks, kitchens and domestic washing facilities, but does not include toilet wastes;

“Inspector” means an Inspector designated by the Minister under Section 85 (1) of the *Act*;

“Licensee” means the holder of this Licence

“Nunavut Land Claims Agreement” (NLCA) means the “*Agreement Between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in right of Canada*”, including its preamble and schedules, and any amendments to that agreement made pursuant to it;

“Sewage” means all toilet wastes and greywater;

“Sewage Disposal Facilities” comprises the tertiary sewage treatment system and effluent discharge structures designed to treat sewage as described in the Application for Water Licence filed by the Applicant on August 20, 2003 and illustrated on Drawing No. H-C25/4-8400-102;

“Spill Contingency Plan” means the plan titled “Nasittuq (NWS) Spill Contingency Plan” (2003) developed to deal with unforeseen events during site operation activities;

“Toilet Wastes” means all human excreta and associated products, but does not include greywater;

“Waste” means, as defined in S.4 of the *Act*, any substance that, by itself or in combination with other substances found in water, would have the effect of altering the quality of any water to which the substance is added to an extent that is detrimental to its use by people or by any animal, fish or plant, or any water that would have that effect because of the quantity or concentration of the substances contained in it or because it has been treated or changed, by heat or other means;

PART B: GENERAL CONDITIONS

1. The Licensee shall file an Annual Report with the Board not later than March 31st of the year following the calendar year reported which shall contain the following information:
 - i. A summary report of water use and waste disposal activities;

- ii. A summary of data collected during the Monitoring Program;
 - iii. A list of unauthorized discharges and a summary of follow-up actions taken;
 - iv. Revisions to the Spill Contingency Plan;
 - v. Progressive reclamation work undertaken; and
 - vi. Any other details on water use or waste disposal requested by the Board by November 1 of the year being reported.
2. The Licensee shall notify the NWB of any changes in operating plans or conditions associated with this project at least thirty (30) days prior to any such change.
3. Flow meters or other such devices used for measuring the volumes of water used shall be installed by the Licensee, and operated and maintained to the satisfaction of an Inspector.
4. If the Licensee contemplates the renewal of Licence No. NWB6FOH0409 Type “B”, it is the responsibility of the Licensee to apply to the NWB for its renewal. The past performance of the Licensee, new documentation and information, and issues raised during a public hearing, if the NWB is required to hold one, will be used to determine the terms and conditions of the Licence renewal. Note that if the Licence expires before the NWB issues a new one, then water use and waste disposal must cease, or the Licensee will be in contravention of the Nunavut Land Claims Agreement. The NWB recommends that an application for the renewal of Licence No. NWB6FOH0409 Type “B” be filed at least three months before the Licence’s expiry date.
5. If Licence No. NWB6FOH0409 Type “B” requires an amendment, a public hearing may be required. The Licensee should submit applications for amendment as soon as possible to give the NWB sufficient time to go through the amendment process. The process may vary depending on the scope of the amendment requested
6. The Licensee shall ensure a copy of this Licence is maintained at the FOX-M North Warning System Long Range Radar Station at all times. Any communication with respect to this Licence shall be made in writing to the attention of:

(i) Chief Administrative Officer:

Executive Director
Nunavut Water Board
P.O. Box 119
Gjoa Haven, NU X0B 1J0
Telephone: (867) 360-6338
Fax: (867) 360-6369

(ii) Inspector Contact:

Water Resources Officer
Nunavut District, Nunavut Region
P.O. Box 100
Iqaluit, NU X0A 0H0
Telephone: (867) 975-4298
Fax: (867) 979-6445

7. The Licensee shall submit one paper copy and one electronic copy of all reports, studies, and plans to the Board. Reports or studies submitted to the Board by the Licensee shall include a detailed executive summary in Inuktitut.

PART C: CONDITIONS APPLYING TO WATER USE

1. The Licensee shall obtain water for domestic use from the FOX-M North Warning System Long Range Radar Station Water Supply Lake to a maximum of 10 cubic metres per day.
2. The Licensee shall equip all water intake hoses with a screen with an appropriate mesh size to ensure that there is no entrainment of fish.
3. The Licensee shall not remove any material from below the ordinary high water mark of any water body.
4. The Licensee shall not do anything that will cause erosion of the banks of any body of water on or adjacent to the land and shall provide necessary controls (including re-vegetation) to prevent such erosion.
5. Sediment and erosion control measures shall be implemented prior to and maintained during the operation to prevent entry of sediment into water.

PART D: CONDITIONS APPLYING TO WASTE DISPOSAL

1. The Licensee shall direct all solid waste to an approved solid waste disposal facility.
2. The Licensee shall ensure that all hazardous wastes and waste oil generated through the course of the operation are disposed of in an approved hazardous waste disposal site outside of Nunavut.

3. The Licensee shall direct all Sewage to the Sewage Disposal Facilities or as otherwise approved by the Board.
4. All Effluent discharged from the Final Discharge Point of the Sewage Disposal Facilities shall meet the effluent quality standards prescribed in the *Guidelines for Effluent Quality and Wastewater Treatment at Federal Establishments*.
5. The Licensee shall submit to the Board for review within six (6) months of the issuance of this license a report identifying each Final Discharge Point. The report shall at least include:
 - i. Plans, specifications and a general description of each Final Discharge Point together with its specific geo-referenced location; and
 - ii. A description of how each Final Discharge Point is designed and maintained.
6. If, during the term of this Licence, additional Final Discharge Points are identified, the Licensee shall submit the information as required by Part D, Item 5 for each new Final Discharge Point within 30 days after the discharge point is identified and at least 60 days prior to depositing Effluent from the new Final Discharge Point and/or proposed changes are made to a Final Discharge Point.

PART E: CONDITIONS FOR CAMPS AND ACCESS INFRASTRUCTURES

1. The Licensee shall not erect camps or store material on the surface of frozen streams or lakes except what is for immediate use.
2. All activities shall be conducted in such a way as to minimize impacts on surface drainage and the Licensee shall immediately undertake any corrective measures in the event of any impacts on surface drainage.
3. Winter lake and stream crossings, including ice bridges, shall be constructed entirely of water, ice or snow; stream crossings shall be removed or notched prior to spring break-up.
4. With respect to access road and pad construction or other earthworks, the deposition of debris or sediment into any water body is prohibited. These materials shall be disposed of above the high water mark in such a fashion that they do not enter the water.

PART F: CONDITIONS APPLYING TO EMERGENCY RESPONSE

1. The Licensee shall revise the approved Spill Contingency Plan to reflect the following:

- i. The addition of DIAND Water Resources and Environment Canada personnel in Iqaluit to the spill response contact list for Nunavut;
 - ii. The notification of the DIAND Water Resources Inspector at (867) 975-4298 following the occurrence of any spill of chemicals, petroleum products or waste associated with the project; and
 - iii. The provision of an updated site map which more clearly identifies the location of Spill Response kits on the FOX-M site.
2. The information required in Part F, Item 1 shall be submitted as an addendum to the approved Plan within thirty (30) days of issuance of the Licence.
3. The Licensee shall revise their Spill Contingency Plan annually to reflect changes in personnel, operations and/or technology or as directed by the Board.
4. The Licensee shall ensure that any chemicals, petroleum products or wastes associated with the project do not enter water. All sumps and fuel caches shall be located a minimum of thirty (30) metres from the normal high water mark of any adjacent water body.
5. The Licensee shall ensure that equipment maintenance and servicing shall be conducted only in designated areas and shall implement special procedures (such as the use of drip pans during re-fueling operations) to manage fluids, waste and contain potential spills.
6. If, during the duration of this Licence, an unauthorized discharge of waste occurs, or if such a discharge is foreseeable, the Licensee shall at a minimum:
 - i. Employ the Spill Contingency Plan;
 - ii. Report the spill immediately to the 24-Hour Spill Line at (867) 920-8130 and to the DIAND Water Resources Inspector at (867) 975-4298; and
 - iii. Submit to the DIAND Water Resources Inspector a detailed report, including the GPS location, on each occurrence no later than thirty (30) days after initially reporting the event.

PART G: CONDITIONS APPLYING TO ABANDONMENT AND RESTORATION

1. The Licensee shall submit to the Board for approval, six (6) months prior to the abandonment of the FOX-M North Warning System Long Range Radar Station, an Abandonment and Restoration Plan. The Plan shall include, but not be limited to where applicable:
 - i. water intake facilities;

- ii. water treatment and waste disposal sites and facilities;
 - iii. petroleum and chemical storage areas;
 - iv. any site affected by waste spills;
 - v. leachate prevention;
 - vi. an implementation schedule;
 - vii. maps delineating all disturbed areas, and site facilities;
 - viii. consideration of altered drainage patterns;
 - ix. type and source of cover materials;
 - x. future area use;
 - xi. hazardous wastes; and
 - xii. a proposal identifying measures by which restoration costs will be financed by the Licensee upon abandonment.
2. The Licensee shall implement the plan specified in Part G, Item 1 as and when approved by the Board.
 3. The Licensee shall revise the Plan referred to in Part G, Item 1 if not approved. The revised Plan shall be submitted to the Board for approval within thirty (30) days of receiving notification of the Board's decision.
 4. The Licensee shall complete any restoration work within the time schedule specified in an approved Plan, or as subsequently revised and approved by the Board.
 5. The Licensee shall revise their Abandonment and Restoration Plan annually (if necessary) to reflect changes in operations and/or progressive reclamation activities or as directed by the Board.

PART H: CONDITIONS APPLYING TO THE MONITORING PROGRAM

1. The Licensee shall maintain Monitoring Stations at the following locations:

Monitoring StationDescription

FOH-1

Raw water supply intake at the FOX-M DEW Line Water Supply Lake prior to treatment

FOH-2

Effluent discharge from the Final Discharge Point of the Sewage Disposal Facilities

2. The Licensee shall sample monthly at Monitoring Station FOH-2 during the months of May to August, inclusive. Samples shall be analyzed for the following parameters:

BOD

Faecal Coliforms

pH

Conductivity

Total Suspended Solids

Ammonia Nitrogen

Nitrate-Nitrite

Oil and Grease

Total Phenols

Sulphate

Sodium

Potassium

Magnesium

Calcium

Total Arsenic

Total Cadmium

Total Copper

Total Chromium

Total Iron

Total Lead

Total Mercury

Total Nickel

Total Zinc

3. The Licensee shall measure and record in cubic metres the monthly and annual quantities of water pumped from Monitoring Station FOH-1 for all purposes.
4. The Licensee shall measure and record in cubic metres the monthly and annual quantities of treated sewage discharged at Monitoring Station FOH-2 for all purposes.
5. Additional sampling and analysis may be requested by an Inspector.
6. The Licensee shall include all of the data and information required by the Monitoring Program described in the Application in the Licensee's Annual Report, as required *per* Part B, Item 1(ii).
7. Modifications to the Monitoring Program may be made only upon written approval of the Chief Administrative Officer.