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a minimum of thirty (30) days is required from time of acceptance by the NWB. It is the responsibility of the Licensee to ensure that all application materials have been received and acknowledged by the Manager of Licensing.

The NWB strongly recommends that the Licensee consult the comments received by interested persons on issues identified. These comments are attached for your information.¹

Sincerely,



Thomas Kabloona
Nunavut Water Board Chair

TK/sj/ip

Enclosure: Licence No. **1BR-ROS1116**
Comments – EC, DFO, KIA

Cc: Kitikmeot Distribution List

¹ Department of Fisheries and Ocean Canada (DFO), June 2, 2011; Environment Canada (EC), June 2, 2011 and Kitikmeot Inuit Association (KIA), May 26, 2011.



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NUNAVUT WATER BOARD
NUNAVUT IMALIRIYIN KATIMAYIT
OFFICE DES EAUX DU NUNAVUT

DECISION

LICENCE NUMBER: 1BR-ROS1116

This is the decision of the Nunavut Water Board (NWB) with respect to an application for a new Licence dated April 7, 2011 made by:

INDIAN AND NORTHERN AFFAIRS CANADA (INAC)

to allow for the use of water and disposal of waste during camp operations and site remediation activities at the Pin-D Ross Point Intermediate Distance Early Warning (DEW) Line site, which is located approximately 180 kilometres northwest of the Hamlet of Kugluktuk within the Kitikmeot Region, Nunavut, generally at the following geographical coordinates:

Latitude: 68° 35' 19" N to 68° 36' 45" N
Longitude: 111° 05' 34" W to 111° 13' 35" W (Project Extents)

Latitude: 68° 35' 49" N and Longitude: 111° 06' 50" W (Camp)

DECISION

After having been satisfied that the application was for a location within an area in which there is no Land Use Plan² and subject to a 12.4.3 Screening Decision by the Nunavut Impact Review Board³ in accordance with Article 12 of the *Nunavut Land Claim Agreement* (NLCA), the NWB decided that the application could proceed through the regulatory process. In accordance with S.55.1 of the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* (NWNSTRTA) and Article 13 of the NLCA, public notice of the application was given and interested persons were invited to make representations to the NWB.

After reviewing the submission of the Applicant and representations made by interested persons, 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 NLCA and of the NWNSTRTA, decided to waive the requirement to hold a public hearing and determined that:

² NPC Conformity Determination, April 21, 2011.

³ NIRB Screening Decision, July 13, 2011.

Licence Number 1BR-ROS1116 be issued subject to the terms and conditions contained therein. (Motion #: 2011 – 11-L14)

SIGNED this ~~29th~~ — 2nd day of August, 2011 at Gjoa Haven, NU.



Thomas Kabloona
Nunavut Water Board Chair

TABLE OF CONTENTS

DECISION.....	I
TABLE OF CONTENTS	III
INTRODUCTION.....	1
PROCEDURAL HISTORY	2
GENERAL CONSIDERATIONS	2
A. TERM OF THE LICENCE	2
B. ANNUAL REPORT.....	3
C. WATER USE	3
D. DEPOSIT OF WASTE	3
<i>BORROW SOURCES</i>	3
<i>NON-HAZARDOUS WASTE</i>	3
<i>HAZARDOUS WASTE</i>	3
<i>LANDFARM</i>	4
<i>SEWAGE LAGOONS</i>	4
E. SPILL CONTINGENCY PLANNING.....	4
F. ABANDONMENT AND RESTORATION.....	4
G. MONITORING	4
H. OPERATIONS AND MAINTENANCE	5
WATER LICENCE	6
PART A: SCOPE, DEFINITIONS AND ENFORCEMENT	7
PART B: GENERAL CONDITIONS	10
PART C: CONDITIONS APPLYING TO WATER USE.....	13
PART D: CONDITIONS APPLYING TO WASTE DISPOSAL	13
PART E: CONDITIONS APPLYING TO THE UNDERTAKING.....	16
PART F: CONDITIONS FOR CAMPS, ACCESS INFRASTRUCTURES AND OPERATIONS	18
PART G: CONDITIONS APPLYING TO DRILLING OPERATIONS.....	19
PART H: CONDITIONS APPLYING TO CONSTRUCTION AND MODIFICATIONS.....	19
PART I: CONDITIONS APPLYING TO SPILL CONTINGENCY PLANNING	20
PART J: CONDITIONS APPLYING TO ABANDONMENT AND RESTORATION	21
PART K: CONDITIONS APPLYING TO THE MONITORING PROGRAM.....	21

INTRODUCTION

The PIN-D Ross Point Intermediate Distant Early Warning (DEW) Line site is located on the south coast of Victoria Island, approximately 180 kilometres northeast of Kugluktuk in the Kitikmeot Region, Nunavut. The facility was constructed by the Department of National Defence in 1957 and abandoned in 1963. Immediately following abandonment, responsibilities for the site were transferred to Indian and Northern Affairs Canada (INAC).

In 1985 some of the surface contaminants known to exist on the PIN-D Ross Point site were cleaned up under a program conducted by the DND, Environment Canada (EC) and INAC. Subsequent to the clean up, in August 2009, AECOM conducted a Phase III Environmental Site Assessment (ESA). The results of the ESA were then used to develop a Remedial Action Plan (RAP) in accordance with *INAC Abandoned Military Sites Remediation Protocols* (2009), which specifies clean-up criteria for inorganic elements, Petroleum Hydrocarbons (PHC) and PCBs. In addition, an archaeological investigation was completed and an Archaeological Impact Assessment Report generated. Information from the assessment report was used to identify heritage features needing protection or avoidance during site remediation activities.

To achieve the objectives outlined in the RAP, INAC submitted to the Nunavut Water Board (NWB) a water licence application proposing to undertake the following remediation activities at the PIN-D Ross Point Intermediate DEW Line site during the summer of 2011:

- Access to site via sealift and fixed wing aircraft;
- Establishment of a camp to support site operations;
- Existing site infrastructure will be demolished and demolition wastes will be segregated into hazardous and non-hazardous materials and disposed of properly;
- All hazardous materials will be packaged, transported south, and disposed of at an off-site licensed disposal facility;
- Non-hazardous wastes will be disposed of in the non-hazardous waste landfill to be constructed;
- Existing landfills/dumps at this site will be remediated as described in the RAP;
- A Landfarm will be constructed for the treatment of hydrocarbon contaminated soil;
- Contaminated soils will be handled as described in the RAP;
- Barrels with like contents will be consolidated and sampled, depending on test results the contents will either be incinerated on-site or shipped off site for disposal. Empty barrels will be crushed and disposed of in the non-hazardous waste landfill to be constructed;
- Scattered surface debris and partially buried debris (non-hazardous) will be collected, packaged and disposed on in the non-hazardous waste landfill to be constructed;
- Roads and the airstrip will be re-constructed and repaired as required; and
- Several borrow sources will be developed and the material will be used during the remediation work.

PROCEDURAL HISTORY

The NWB received from Indian and Northern Affairs Canada, the following documents as part of the water licence application for the PIN-D Ross Point Intermediate DEW Line Site Remediation Project:

- INAC Letter for Water Licence Application April 7, 2011 received April 11, 2011;
- Water Licence Application Form received April 11, 2011;
- DRAFT Remote Camp SIG received April 11, 2011;
- DRAFT Landfarm SIG received April 11, 2011;
- Appendix 1 NIRB Part 1 Form English and Inuktitut received April 11, 2011;
- Appendix 2 Part 2 Form Project Specific Information Requirements received April 11, 2011;
- Appendix 3 Executive Summary English and Inuktitut received April 11, 2011;
- Appendix 4 Remedial Action Plan received April 11, 2011;
- Appendix 5 Maps and Drawings received April 11, 2011;
- Appendix 6 Environmental Screening received April 11, 2011;
- Appendix 7 Project Schedule received April 11, 2011;
- Appendix 8 Archaeological Impact Assessment received April 11, 2011;
- Appendix 9 List of Additional Documents received April 11, 2011;
- Appendix 10 Supplemental Info & Confirmation from NPC Not required received April 11, 2011; and
- Appendix 11 Site Specific Health and Safety Plan received April 11, 2011.

On April 27, 2011, the Board acknowledged receipt and distributed the application to interested parties and persons for a thirty-day comment and/or review period with the deadline for submission being set for 5 p.m. MST on May 27, 2011. Prior to the deadline for comments, Environment Canada (EC) requested⁴ that the comment period be extended to June 10, 2011. The proponent, INAC, was informed of the extension request; however, no objections were expressed. NWB therefore extended comment period to June 10, 2011.

On or before the extended deadline, comments were received from Department of Fisheries and Ocean Canada (DFO), Environment Canada (EC) and the Kitikmeot Inuit Association (KIA). None of the parties objected to a possible decision that would favor the issuance of the licence.

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 applicant requested a five-year term for the licence, which the NWB believes is consistent with and appropriate for the

⁴ Email from Environment Canada (EC) to the Nunavut Water Board (NWB), 8:45 a.m. MST, May 27, 2011.

type of activities proposed in the application. The Board has therefore granted the term requested.

B. Annual Report

Under the reporting section in the Licence, Part B, Item 1, the Licensee is required to submit, on an annual basis, a report pertaining to the use of water and deposition of wastes. The NWB also maintains annual reporting information on its public registry. The information is also made available to interested parties and/or persons upon request.

C. Water Use

The proponent has requested seven (7.0) cubic metres per day of water for domestic and miscellaneous purposes identified in the application submitted for the Ross Point Intermediate DEW Line Site Remediation Project. Water for the purposes outlined will be trucked from a fresh water lake proximal to the camp facility. The NWB has determined that the quantity of water requested is appropriate and has set the maximum water use for the purpose of this Licence at seven (7.0) cubic metres per day under Part C, Item 1 of the Licence.

D. Deposit of Waste

Borrow Sources

The Licensee has indicated that borrow materials will be required for construction of new landfills, development and treatment areas, backfilling of contaminated soil excavation, closures of existing landfills, general re-grading, and road construction/maintenance. Conditions have been included in the Licence, under Part D, requiring that geo-chemical analyses be conducted on borrow materials suspected of having acid generating and metal leaching potential prior to the use of such materials. In cases where it is determined that the materials are suitable for use, the Licensee is required to implement drainage control measures to prevent sediment loading to nearby water bodies.

Non-Hazardous Waste

The Licensee has proposed to construct a Non-Hazardous Waste Landfill to treat Solid Wastes, residues from incinerated combustible wastes; double bagged asbestos materials, Tier I/Type A Soils and Non-Hazardous Wastes originating from both the PIN-D Ross Point and PIN-E Cape Peel Intermediate DEW Line sites. Conditions have been included under Part D in the Licence to ensure that effluent from the waste treatment facilities does not negatively impact the receiving environment.

Hazardous Waste

The Licence has proposed to package and ship to a licensed facility in the south all Hazardous Wastes including waste oil, items contaminated with PCBs and Heavy Metals, and Tier II soils. All Hazardous Wastes must be handled in accordance with applicable regulations including the Transportation of Dangerous Goods Act. The Licensee is required, under Part D, Item 21, to dispose of all hazardous substances and/or materials at an approved facility.

Landfarm

According to information provided in the application, the proponent has proposed to construct an on-site Landfarm to treat Type B Hydrocarbon contaminated soils. It is anticipated that treated soils from this facility meeting criteria specified in the *Abandon Military Site Remediation Protocol for PHC* will be reshaped within the Landfarm area to blend in with surrounding areas. Requirements have been included under Part D in the Licence to govern the Landfarm Facility.

Sewage Lagoons

The Licensee has proposed to construct a Sewage Treatment Facility (Sewage Lagoon) at a distance of approximately 100 metres downwind from the camp facility, to treat sewage generated. The Sewage Treatment Facility will consist of two separate lagoon cells designed to operate in series, each with the capacity to handle influent for a 50-day period. Effluent from the lagoons will be monitored to ensure that the characteristics are consistent with the criteria stipulated in the Licence before being discharged onto the surface of the land. Criteria governing the quality of the effluent are included under Part D, Item 10 in the Licence.

E. Spill Contingency Planning

Under Part I, Item 1, the Licensee is required to submit to the Board for approval, within sixty (60) days from the issuance of the Licence, a revised, stand-alone Spill Contingency Plan. The Plan shall address items identified by the Board and relevant comments provided by intervening parties during the review process.

F. Abandonment and Restoration

The Board has approved, under Part J, Item 1, the Plan entitled “PIN-D Ross Point Intermediate Distant Early Warning (DEW) Line Site Remediation Project Remedial Action Plan” dated March 8, 2010 that was submitted as additional information with the application. The Licensee is required to submit to the Board for review any revision made to the aforementioned Plan.

G. Monitoring

Conditions have been included requiring the Licensee to install monitoring stations at the Sewage Treatment Facility, Non-Hazardous Waste Landfill, Non-Hazardous Waste Segregation and storage area(s), Hazardous Waste storage area(s), Landfarm Facility, and fresh water supply intake. In addition, the Licensee is required to submit to the Board for review a Quality Assurance/Quality Control (QA/QC) plan. The Plan must receive approval from an analyst confirming that the plan is acceptable. All of the monitoring results, along with analyses of the results are to be provided to the NWB as part of the annual reporting requirements. This requirement is included under Part K in the Licence.

In addition, the Board has also included under Part K, Item 1 in the Licence, a condition requiring the Licensee to submit a Long Term Monitoring Plan to the Board for approval at least sixty (60) days prior to initiating Long-Term Monitoring.

H. Operations and Maintenance

The Licensee is required to submit to the Board for approval at least sixty (60) days prior to the commissioning of the Landfarm, Non-Hazardous Waste Landfill and Sewage Disposal Facility, an Operation and Maintenance (O&M) Manual that includes O&M procedures for each of the facilities approved under the Licence.

Further, the Licensee is required to submit to the Board for review within sixty (60) days of issuance of this Licence, For-Construction Drawings that are 95 % complete, signed and stamped by an Engineer. The drawings shall identify the final discharge location for the Sewage Treatment Facility, sludge disposal instructions, monitoring stations for the Landfarm, Non-Hazardous Waste Landfill and any other facility approved under the Licence. This requirement is detailed under Part E, Item 2.

The Board having, considered the application submitted, interveners' comments and the nature of the undertaking, has accordingly set terms and conditions in this Licence to govern the use of water and the disposal of wastes during the proposed undertaking.



NUNAVUT WATER BOARD WATER LICENCE

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

INDIAN AND NORTHERN AFFAIRS CANADA (INAC)

(Licensee)

P.O. BOX 2200, IQALUIT, NUNAVUT X0A 0H0

(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:

Licence Number/Type: **1BR-ROS1116 Type "B"**

Water Management Area: **NUNAVUT 04**

Location: **PIN-D ROSS POINT INTERMEDIATE DEW-LINE SITE,
KITIKMEOT REGION, NUNAVUT**

Classification: **INDUSTRIAL – TYPE "B"**

Purpose: **DIRECT WATER USE AND DEPOSIT OF WASTE**

Quantity of Water use not
to Exceed: **SEVEN (7) CUBIC METRES PER DAY**

Date of Licence Issuance: **AUGUST 2, 2011**

Expiry of Licence: **AUGUST 31, 2016**

This Licence, issued and recorded at Gjoa Haven, Nunavut, includes and is subject to the annexed conditions.

Thomas Kabloona
Nunavut Water Board Chair

PART A: SCOPE, DEFINITIONS AND ENFORCEMENT

1. Scope

This Licence allows for the use of water and the disposal of waste for an undertaking classified as Industrial at the PIN-D Ross Point Intermediate Distant Early Warning (DEW) Line Site, located approximately 180 kilometres northeast of Kugluktuk, within the Kitikmeot Region, Nunavut at the following general coordinates:

Latitude: 68° 35' 19" N to 68° 36' 45" N
Longitude: 111° 05' 34" W to 111° 13' 35" W (Project Extents)

Latitude: 68° 35' 49" N and longitude: 111° 06' 50" W (Camp)

- a. 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;
- b. 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: 1BR-ROS1116

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

“Addendum” means the supplemental text that is added to a full plan or report usually included at the end of the document and is not intended to require a full resubmission of the revised report.

“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;

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

“Appurtenant undertaking” means an undertaking in relation to which a use of waters or a deposit of waste is permitted by a licence issued by the Board;

“Board” means the Nunavut Water Board established under the *Nunavut Land Claims Agreement*;

“Borrow Sources” mean materials required for the development of new landfills and/or general grading purposes as described in the “Abandon Military Site Remediation Protocol” (INAC 2009).

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

“Demolition Rinse Wastewater” means water and associated waste generated by the operation of decontamination and decommissioning activities;

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

“Engineer” means a professional engineer registered to practice in Nunavut in accordance with the *Consolidation of Engineers and Geoscientists Act S. Nu 2008, c.2* and the *Engineering and Geoscience Professions Act S.N.W.T. 2006, c.16 Amended by S.N.W.T. 2009, c.12*;

“Final Discharge Point” means the point at which the Licensee no longer exerts care and/or control over the quality and/or quantity of the effluent from a treatment process;

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

“Hazardous waste” means waste classified as “hazardous” by Nunavut Territorial or Federal Legislation, or as “dangerous goods” under the *Transportation of Dangerous Goods Act* at the time of clean-up;

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

“Landfarm Facility” means the facility designed and constructed to bio-remediate Type B soils, as described in the *Remedial Action Plan PIN-D, Ross Point DEW Line Site* dated March 8, 2010;

“Licensee” means the individual or organization to which Licence 1BR- ROS1116 Type “B” is issued or assigned;

“Modification” means an alteration to a physical work that introduces a new structure or eliminates an existing structure and does not alter the purpose or function of the work, but does not include an expansion;

“Monitoring Program” means a program established to collect data on surface water and groundwater quality to assess impacts to the environment of an appurtenant undertaking.

Non-Hazardous Waste Landfill” the facility designed and constructed to contain and/or treat solid waste, domestic waste, Tier I soils and other materials identified in the *Remedial Action Plan PIN-D, Ross Point DEW Line Site* dated March 8, 2010;

“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;

“Regulations” means the *Northwest Territories Water Regulations* sor/93-303 8th June, 1993, omitting Section 5, Water Use or Waste Deposit without a Licence;

“Sewage” means all toilet wastes and greywater;

“Sewage Disposal Facility” comprises the area and engineered structures designed to contain and/or treat sewage;

“Solid Waste” means non-hazardous waste and Type-A soil;

“Spill Contingency Plan” means a Plan developed to deal with unforeseen petroleum and hazardous materials events that may occur during the operations conducted under the Licence;

“Sump” means an excavation in impermeable soil for the purpose of catching or storing water or waste;

Tier I Soil means soil containing contaminant concentrations within the types and ranges defined as DCC Tier I in Appendix E of the NTI Agreement, including its preamble and schedules, and any amendments made pursuant to that agreement (see Table No.1);

Tier II Soil means soil containing contaminant concentrations within the types and ranges defined as DCC Tier II in Appendix E of the NTI Agreement including its preamble and schedules, and any amendments to made pursuant to that agreement (see Table No.1);

“Type A Soil” means soil contaminated with hydrocarbons in which the primary petroleum product present in the soil as determined by laboratory analysis consists of

lubricating oil and grease (F3 – F4 Fractions);

“Type B Soil” means soil contaminated with hydrocarbons in which the primary petroleum product present in the soil as determined by laboratory analysis consists of fuel oil and/or diesel fuel and /or gasoline (F1 – F2 Fractions);

“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.

Water Supply Facility” consist intake structure, transport equipment and other infrastructure designed to collect and supply water for the PIN-D Ross Point DEW Line Site Project as described in the documents accompanying the Water Licence Application dated April 7, 2011;

“Waste Disposal Facilities” means all facilities designated for the disposal and/or treatment of waste including the Sewage Disposal Facility, Landfarm Facility and Non-Hazardous Waste Landfill as described in the documents accompanying the Water Licence Application dated April 7, 2011;

Enforcement

- i. Failure to comply with this Licence will be a violation of the *Act*, subjecting the Licensee to the enforcement measures and the penalties provided for in the *Act*;
- ii. All inspection and enforcement services regarding this Licence will be provided by Inspectors appointed under the *Act*; and
- iii. For the purpose of enforcing this Licence and with respect to the use of water and deposit or discharge of waste by the Licensee, Inspectors appointed under the *Act*, hold all powers, privileges and protections that are conferred upon them by the *Act* or by other applicable law.

PART B: GENERAL CONDITIONS

1. Licensee shall file an Annual Report on the appurtenant undertaking with the Board no later than March 31st of the year following the calendar year being reported which shall contain the following information:
 - a. The monthly and annual quantities (in cubic metres) of fresh water obtained from all sources;
 - b. The monthly and annual quantities (in cubic meters) of treated sewage discharged;
 - c. The monthly and annual quantities (in cubic metres) of material deposited in the on-site Landfarm;
 - d. A summary of all waste disposed of at the Non-Hazardous Waste Landfill, including waste backhauled from the PIN E, Cape Peel Intermediate DEW Line site;
 - e. A summary of all waste backhauled to any community in Nunavut required under Part D, Item 5;
 - f. A summary of any construction work, modification and major maintenance work (including as-built diagrams) carried out on the Landfarm Facility, Non-Hazardous Waste Landfill, Sewage Disposal Facility and Water Treatment Facility, and all other facilities approved under the Licence;
 - g. Tabular summaries for all data and information generated under the “Monitoring Program”;
 - h. An analysis of data collected during the “Monitoring Program” and a brief description of any future studies planned by the Licensee;
 - i. A summary of remediation work undertaken during the year and an outline of work anticipated for the following year;
 - j. A summary of any studies requested by the Board that relate to waste disposal, water use or reclamation, and a brief description of any future studies planned;
 - k. A list of unauthorized discharges and summary of follow-up actions taken;
 - l. Any revisions to the approved Plan entitled “Remedial Action Plan, PIN-D Ross Point Intermediate DEW Line Site” dated March 8, 2010;
 - m. Any revisions to the site specific; Spill Contingency Plan, submitted under Part I, Item 1;
 - n. If applicable, a description of any trenches and sumps excavated, including but not limited to the following: GPS coordinates, dimensions, depth below active layer, and secondary containment features;
 - o. A public consultation/participation report describing consultation with local organizations and the residents of the nearby communities;
 - p. A brief summary of work done to address concerns or deficiencies listed in inspection reports and/or compliance reports prepared by an Inspector;
 - q. An executive summary in English, Inuktitut, and Inuinnaqtun of all plans, reports, or studies conducted under this Licence; and
 - r. Any other details on water use or waste disposal requested by the Board by November 1st 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. The Licensee shall install flow meters or other such devices, or implement suitable methods required for the measuring of water volumes as required by the Monitoring Program under Part K.
4. The Licensee shall, for all Plans submitted under this Licence, include a proposed timetable for implementation. Plans submitted, cannot be undertaken without subsequent written Board approval and direction. The Board may alter or modify a Plan if necessary to achieve the legislative objectives and will notify the Licensee in writing of acceptance, rejection or alteration of the Plan.
5. The Licensee shall, for all Plans submitted under this Licence, implement the Plan as approved by the Board in writing.
6. The Licensee shall review the Plans referred to in this Licence, as required by changes in operation and/or technology, and modify the Plan accordingly. Revisions to the Plans are to be submitted in the form of an Addendum to be included with the Annual Report.
7. Every Plan to be carried out pursuant to the terms and conditions of this Licence shall become a part of this Licence, and any additional terms and conditions imposed upon approval of a Plan by the Board become part of this Licence. All terms and conditions of the Licence should be contemplated in the development of a Plan where appropriate.
8. The Licensee shall, within sixty (60) days of issuance of this Licence, post signs in the appropriate areas identifying the locations and the “Monitoring Program Stations” for the Landfarm Facility, Non-Hazardous Waste Landfill, Sewage Disposal Facility, Water Supply Facility and all other facilities authorized under the Licence. All postings shall be in the Official Languages of Nunavut.
9. The Licensee shall ensure a copy of this Licence is maintained at the site of operations at all times. Any communication with respect to this Licence shall be made in writing to the attention of:

(a) **Manager of Licensing:**
Nunavut Water Board
P.O. Box 119
Gjoa Haven, NU X0B 1J0
Telephone: (867) 360-6338
Fax: (867) 360-6369
Email: licensing@nunavutwaterboard.org

(b) **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

10. 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 and Inuinnaqtun.
11. The Licensee shall ensure that any document(s) or correspondence submitted by the Licensee to the Board is received and acknowledged by the Manager of Licensing.
12. This Licence is not assignable except as provided in Section 44 of the *Act*.

PART C: CONDITIONS APPLYING TO WATER USE

1. The Licensee shall obtain water for camp use and/or miscellaneous purposes identified in the application from a fresh water supply lake proximal to the PIN-D Ross Point Intermediate DEW Line Site, at Monitoring Program Station ROS-1. The maximum quantity of water allowed for the purpose of this Licence is seven (7) cubic meters per day.
2. The Licensee shall equip all water intake hoses with a screen of an appropriate mesh size to ensure that there is no entrainment of fish and shall withdraw water at a rate such that fish do not become impinged on the screen.
3. The Licensee shall not remove any material from below the ordinary high water mark of any water body.
4. If the Licensee requires water in sufficient volume that the source water body may be drawn down the Licensee shall, at least thirty (30) days prior to commencement of use of water, submit to the Board for approval in writing, the following: volume required, hydrological overview of the water body, details of impacts and proposed mitigation measures.
5. The Licensee shall implement sediment and erosion control measures to prevent the deposition of dust and/or sediment into the Water Supply Lake, arising from contractor activities or on-site vehicular travel.

PART D: CONDITIONS APPLYING TO WASTE DISPOSAL

1. The Licensee shall locate areas designated for waste disposal at a minimum distance of thirty-one (31) metres from the ordinary high water mark of any water body such that the quality, quantity or flow of water is not impaired, unless otherwise approved by the Board in writing.
2. The Licensee is authorized to dispose of all acceptable food waste, paper waste and untreated wood products in an incinerator.
3. The Licensee shall not open burn plastics, wood treated with preservatives, electric wire, Styrofoam, asbestos or painted wood to prevent the deposition of waste materials of incomplete combustion and/or leachate from contaminated ash residual, from impacting any surrounding waters, unless otherwise approved by the Board in writing.
4. The Licensee shall direct all Non-Hazardous Waste originating from both the PIN-D Ross Point and PIN-E Cape Peel Intermediate DEW Line Sites to the Non-Hazardous Waste Landfill (NHWL) at the PIN-E Cape Peel site for the disposal and/or treatment, or as otherwise approved by the board in writing. Materials allowed for disposal include non-combustible solid waste including surface debris, residues from combustion, Tier I Contaminated Soil, compressed gas cylinders and double-bagged asbestos containing materials.
5. The Licensee shall provide to the Board, documented authorization from any community in Nunavut receiving waste from the PIN-D Ross Point Intermediate DEW Line Site project, prior to backhauling any waste for storage or disposal.
6. The Licensee shall maintain records of all waste backhauled and records of confirmation of proper disposal of backhauled waste and include this information within the Annual Report, under Part B, Item 1. These records shall be made available to an Inspector upon request. The Licensee shall not transport hazardous wastes prior to registering with the Government of Nunavut as a waste generator and utilizing the prescribed manifests.
7. The Licensee shall direct all sewage generated from camp operations to the Sewage Disposal Facility as described in the Licence application dated April 7, 2011 or as otherwise approved by the Board in writing.
8. During camp setup and construction of the Sewage Disposal Facility, the Licensee may contain all camp Sewage in a sump. The sump shall be located at a distance of at least thirty-one (31) meters above the ordinary high water mark of any water body, treated with lime and covered with native material to achieve the pre-existing natural contours of the land prior to abandonment. The location shall be included in the Annual Report, as per Part B, Item 1.
9. The Licensee shall direct all Type B Hydrocarbon Contaminated soils for treatment at an onsite Landfarm constructed and operated in accordance with the information contained in the Application dated April 7, 2011 or as otherwise approved by the Board in writing.

10. The Licensee shall provide notice to an Inspector at least ten (10) days prior to initiating any decant or discharge from the Sewage Disposal Facility, Non-Hazardous Waste Landfill, Landfarm Facility and areas designated for segregating and storing wastes.
11. All waste discharged from the Final Discharge Point of the Sewage Disposal Facility at Monitoring Program Station ROS-2 shall not exceed the following effluent quality limits:

Parameter	Maximum Allowable Concentration
BOD	80 mg/L
Total Suspended Solids	100 mg/L
Faecal Coliforms	1×10^4 CFU/100 mL
pH	6.0 to 9.0
Oil and GREASE	No visible sheen

12. The Licensee shall collect and temporarily store, in preparation for future disposal, all Demolition Rinse Wastewater from decontamination procedures.
13. All water associated with dewatering of contaminated soil areas, and/or water within the perimeter of the Landfarm, Non-Hazardous Waste Landfill, solid waste segregation and storage area(s), Demolition Rinse Wastewater, water from Borrow Areas and seepage from Monitoring Program Stations, prior to being released onto land to a location at least thirty-one (31) metres away from the ordinary high water mark of any adjacent water body, where direct flow into a water body is not possible and no additional impacts are created, shall meet the following wastewater discharge limits:

Parameter	Maximum Allowable Concentration (µg/L)
pH	6 to 9 (pH units)
Oil and Grease	5000
Arsenic (total)	100
Cadmium (dissolved)	10
Chromium (dissolved)	100
Cobalt (dissolved)	50
Copper (dissolved)	200
Lead (dissolved)	50
Mercury (total)	0.6
Nickel (dissolved)	200
PCB (total)	1000
Phenols	20
Zinc (total)	500

14. If the effluent referred to in Part D, Item 11 and Item 13 does not meet the wastewater

discharge limits, it shall be considered hazardous waste and disposed off-site at an approved facility or as otherwise approved by the board in writing.

15. The discharge location for all treated effluents described in Part D, Items 11 and 13, shall be located at a minimum of thirty-one (31) metres from the ordinary high water mark of any water body and where direct flow into a water body is not possible and no additional impacts are created.
16. The Licensee shall sample and carry out laboratory analyses on potential Borrow Sources prior to the using materials from those sources. Borrow Materials possessing acid generating and metal leaching characteristics cannot be used as construction materials and/or for remediation purposes
17. All pump out water from excavation and borrow pits shall be pumped to an area as described in Part D, Item 12, or as otherwise approved by the Board in writing.
18. The Licensee shall provide proper storage, transport and treatment off site at an approved facility of all Hazardous Waste Materials identified in the Application dated April 7, 2011, including Tier II Contaminated Soils, items contaminated with PCBs and Heavy Metals and waste oil generated through construction and remediation activities, or as otherwise approved by the Board in writing.
19. The Licensee shall not mix or blend soils that exceed the maximum levels of Tier II criteria for the expressed purpose of attaining the specific limits of Tier I as listed under Table No.1.
20. The Licensee shall dispose of all soils containing substances in excess of Tier II criteria, as indicated in Table No.1, by collection, containment and shipment off-site to a licensed disposal facility.
21. The Licensee shall, for the purposes of monitoring, install ground water monitoring wells, at least one up-gradient and one down-gradient of the Landfarm Facility and Non-Hazardous Waste Landfill Facility identified in the "Remedial Action Plan, "PIN-D Ross Point Intermediate DEW Line Site" dated March 8, 2010.
22. The Licensee shall dispose of any material coated with Polychlorinated Biphenyl (PCB) - amended paints hazardous materials and soils containing contaminants in excess of Canadian Environmental Protection Act (CEPA) Guidelines, off site at an approved treatment facility in accordance with the application on April 7, 2011.

PART E: CONDITIONS APPLYING TO THE UNDERTAKING

1. The Licensee is authorized to use Borrow Materials for the purposes specified in the

“Remedial Action Plan PIN-D, Ross Point Cape Peel Intermediate DEW Line Site” provided that Borrow Sources are approved by an Inspector, free of contaminants and satisfies the requirement of Part D, Item 16 of this Licence.

2. The Licensee shall submit to the Board for approval, within sixty (60) days of the issuance of this Licence, an Operation and Maintenance Manual for all facilities operated on the PIN-D Ross Point Intermediate DEW Line site, including the Sewage Disposal Facility, Landfarm Facility, Non-hazardous Waste Landfill Facility and Water Treatment Facility. The manual shall be prepared in accordance with the *“Guidelines for the Preparation of an Operation and Maintenance Manual for Sewage and Solid Waste Disposal Facilities in the Northwest Territories; 1996”*.
3. The Operations and Maintenance Manual referred to in Part E, Item 2 shall address the following items with respect to the Land Farm component:
 - a. For Construction, Engineered design drawings of the facility (stamped by a professional engineer registered in Nunavut);
 - b. Feasibility of alternative disposal methods and sites;
 - c. Operation and maintenance procedures for the facility;
 - d. Runoff diversion and management;
 - e. Soil Quality Remediation Objectives (SQRO’s); and
 - f. Monitoring program for both water and soil.
4. The Operations and Maintenance Manual referred to in Part E, Item 2 shall provide closure alternatives for the management of sludge from the Sewage Disposal Facility.
5. The Licensee shall review the Plan referred to in this Part as required by changes in operation and/or technology and modify the Plan accordingly. Revisions to the Plan are to be submitted in the form of an Addendum to be included with the Annual Report.
6. The Licensee shall, upon the failure of any constructed facilities, repair such facilities immediately to the appropriate standards as recommended by an Engineer.
7. The Licensee shall implement proper handling, storage and transportation procedures for hazardous materials during clean-up activities.
8. The Licensee shall minimize disturbance to terrain, permafrost and drainage during extraction of granular material, development and closure of landfills, movement of contractor’s equipment and personnel around the site and removal of site debris.
9. The Licensee shall not cause erosion to the banks of any body of water and shall provide necessary controls to prevent such erosion.
10. Sediment and erosion control measures shall be implemented prior to and maintained

during the operation to prevent entry of sediment into water.

11. The Licensee shall design and construct all stream crossings to minimize erosion and/or deposition of waste into water.
12. The Licensee shall ensure that existing creek channels are maintained at their normal width and depth to the extent possible, during and after construction.
13. Granular materials and rock rip-rap used for any temporary stream crossings, approaches or as may be required for bank stabilization must be obtained from a source satisfying the requirements of Part D, Item 15, that is approved by an Inspector, and is clean and free of contaminants. Such material must not be removed or gathered from below the ordinary high water mark of a creek, stream or from any water body.
14. All sites affected by construction or removal activities shall be stabilized, landscaped as necessary, and suitable erosion control measures implemented to minimize sediment deposition into watercourses located on or adjacent to the site.
15. The Licensee shall restore and stabilize all areas affected by the undertaking upon completion of the work.
16. The Licensee shall not deposit any waste in any body of water, or on the banks thereof, which may impair the quality, quantity, or flow of water.
17. Areas designated for waste disposal shall be located at a minimum of thirty-one (31) metres from the ordinary high water mark of any body of water, unless otherwise authorized.
18. The Licensee shall dispose of all scrap metal, discarded machinery and parts, and other bulky material in a manner that conforms to the Remedial Action Plan that was submitted with the Licence Application.

PART F: CONDITIONS FOR CAMPS, ACCESS INFRASTRUCTURES AND OPERATIONS

1. The Licensee shall not erect camps or store material on the surface of frozen streams or lakes except what is for immediate use. Camps shall be located such as to minimize impacts on surface drainage.
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, and shall be removed prior to spring break-up.
4. With respect to access road, 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 ordinary high water mark in such a fashion that they do not enter the water.

PART G: CONDITIONS APPLYING TO DRILLING OPERATIONS

1. The Licensee is authorized to drill for the purpose of installing monitoring wells and/or thermistors.

PART H: CONDITIONS APPLYING TO CONSTRUCTION AND MODIFICATIONS

1. The Licensee shall provide to the Board for review, within sixty (60) days of issuance of this Licence, a detailed design for the, Landfarm Facility, Non-Hazardous Waste Landfill Facility, Sewage Disposal Facility and Water Treatment Facility referred to in this Licence, complete with For-Construction drawings, signed and stamped by an Engineer. These designs shall consider siting, operation, monitoring, sampling and analytical methods, decommissioning and closure options and plans for the proposed Facilities.
2. The Licensee shall provide to the Board, within ninety (90) days of completion of construction, as-built plans and drawings of the facilities referred to in this Licence. These plans and drawings shall be stamped by an Engineer.
3. The Licensee may, without written consent from the Board, carry out Modifications to the Water Supply Facilities and/or Waste Disposal Facilities provided that such Modifications are consistent with the terms of this Licence and the following requirements are met:
 - a. the Licensee has notified the Board in writing of such proposed Modifications at least sixty (60) days prior to beginning the Modifications;
 - b. such Modifications do not place the Licensee in contravention of the Licence or the *Act*;
 - c. such Modifications are consistent with the NIRB Screening Decision;
 - d. the Board has not, during the sixty (60) days following notification of the proposed Modifications, informed the Licensee that review of the proposal will require more than sixty (60) days; and
 - e. the Board has not rejected the proposed Modifications.
4. Modifications, for which all of the conditions referred to in Part H, Item 3 have not been

met, can be carried out only with written approval from the Board.

5. The Licensee shall provide as-built plans and drawings of the Modifications referred to in this Licence within ninety (90) days of completion of the Modification. These plans and drawings shall be stamped by an Engineer.

PART I: CONDITIONS APPLYING TO SPILL CONTINGENCY PLANNING

1. The Licensee shall submit for Board approval, within sixty (60) days following the issuance of this Licence, a revised, stand-alone, site specific, Spill Contingency Plan prepared in accordance with the format set out by the *Consolidation of Spill Contingency Planning and Reporting Regulations R-068-93*. The revised Plan shall also take into consideration the comments received from intervening parties during the review of the application and shall address the following items:
 - a. Recommendations made by EC during the review of the application;
 - b. The Plan should be a stand-alone document;
 - c. Include the effective date of the Plan and the date prepared;
 - d. Provide contact information for INAC's Manager of Field Operations, Kitikmeot Inuit Association and DFO;
 - e. Include measures for responding to spill on land, water, snow/ice;
 - f. Include a copy of the NT-NU spill report form;
 - g. Include an inventory of the fuel stored on site; and
 - h. Include a detailed topographic map depicting the project area, camp infrastructure, nearby water bodies, the location of spill kits, fuel caches and any other relevant information.
2. Licensee shall review the Plan referred to in this Part as required by changes in operation and/or technology and modify the Plan accordingly. Revisions to the Plan are to be submitted in the form of an addendum to be included with the Annual Report, unless directed otherwise by the Board.
3. 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-one (31) metres above the ordinary high water mark of any adjacent water body and inspected on a regular basis. The Licensee is encouraged to use some form of secondary containment on fuel and chemical storage facilities associated with this undertaking.
4. The Licensee shall ensure that any equipment maintenance and servicing be conducted only in designated areas and shall implement special procedures (such as the use of drip pans) to manage fluids, waste and contain potential spills.

5. If during the term of this Licence, an unauthorized discharge of waste occurs, or if such a discharge is foreseeable, the Licensee shall:
 - a. Employ the Approved Spill Contingency Plan;
 - b. Report the spill immediately to the 24-Hour Spill Line at (867) 920-8130 and to the INAC Water Resources Inspector at (867) 975-4295; and
 - c. Submit to the INAC Water Resources Inspector on each occurrence, a detailed report including the GPS location, no later than thirty (30) days after initially reporting the event.

PART J: CONDITIONS APPLYING TO ABANDONMENT AND RESTORATION

1. The Board has approved the recommended options identified within the Plan entitled “PIN-D Ross Point Intermediate Distant Early Warning (DEW) Line Site Remediation Project Remedial Action Plan” dated March 8, 2010 and submitted with the Application filed with the Board on April 11, 2011.
2. The Licensee shall complete all restoration work for the temporary camp facilities and waste disposal activities not included under Part J, Item 1 of this Licence, prior to the expiry of this Licence.
3. The Licensee shall backfill and restore, all temporary containment sumps, to the pre-existing natural contours of the land.
4. All disturbed areas shall be stabilized and re-vegetated as required, upon completion of work, and restored as practically as possible to a pre-disturbed state.

PART K: CONDITIONS APPLYING TO THE MONITORING PROGRAM

1. The Licensee shall submit to the Board for approval, at least sixty (60) days prior to initiating Long-Term Monitoring, a Post-closure Monitoring Plan for the site that includes information on Long-Term Monitoring of Waste Disposal Facilities and that addresses water quality monitoring, stability and the need for thermal monitoring and ground water monitoring.
2. The Licensee shall maintain Monitoring Program Stations at the following locations:

Monitoring Program Station Number	Description	Status
ROS-1	Raw water supply intake at the unnamed	Active

	lake proximal to the Ross Point Intermediate DEW Line Site	(Volume)
ROS-2	Final Discharge Point from the Sewage Disposal Facilities, Lagoon No. 2	Active (Water Quality)
ROS-3	Final Point of Discharge from the Solid Waste Segregation and Storage Areas	Active (Water Quality)
ROS-4	Final Point of Discharge from the Landfarm Facility.	Active (Water Quality)
ROS-5	Monitoring Well installed up-gradient of the Land Farm Facility	Active (Water Quality)
ROS-6	Monitoring well installed down-gradient of the Land Farm Facility	Active (Water Quality)
ROS-7	Final Point of Discharge from the Non-Hazardous Waste Disposal Facility	Active (Water Quality)

3. The Licensee shall measure and record in cubic metres the daily quantities of water utilized for camp operations, for all purposes at the intake of the Water Supply Facility, Monitoring Program Station ROS-1.
4. The Licensee shall measure and record in cubic metres, the daily quantities of effluent discharged from the Sewage Disposal Facility at monitoring stations ROS-2.
5. The Licensee shall determine the GPS co-ordinates (in degrees, minutes and seconds of latitude and longitude) of all locations where sources of water are utilized for all purposes.
6. The Licensee shall determine the GPS co-ordinates (in degrees, minutes and seconds of latitude and longitude) of all locations where wastes associated with camp operations are deposited.
7. The Licensee shall monitor compliance with respect to Part D Item 11, by collecting a representative composite sample once at the beginning of discharge upon initial release and prior to the end of discharge, from the Final Discharge Point of the Sewage Treatment Facility at Monitoring Program Station ROS-2
8. The Licensee shall monitor compliance with respect to Part D Item 13, by collecting a representative composite sample from a minimum of 5% of the total volume to be released from the Final Discharge Point identified in Part K, Item 2 of this Licence.
9. The Licensee shall monitor groundwater quality proximal to the Landfarm and Landfill facilities by collecting representative samples from all monitoring wells installed under Part D, Item 21. Samples shall be analyzed for parameters listed under Part D, Item 13.

10. All sampling, sample preservation and analyses shall be conducted in accordance with methods prescribed in the current edition of *Standard Methods for the Examination of Water and Wastewater*, or by such other methods approved by the Board.
11. All analyses shall be performed in a laboratory accredited according to ISO/IEC Standard 17025. The accreditation shall be current and in good standing
12. The Licensee shall submit to the Board for information, at least ninety (90) days prior to releasing any effluent, a Quality Assurance/Quality Control Plan that conforms to the guidance document "*Quality Assurance (QA) and Quality Control (QC) Guidelines For Use by Class "B" Licensees in Collecting Representative Water Samples in the Field and for Submission of a QA/QC Plan*" INAC (1996). The Plan shall be acceptable to an accredited laboratory and include a covering letter from the accredited laboratory confirming acceptance of the Plan for analyses to be performed under the Licence.

Table No.1
(From INAC Abandoned Military Site Remediation Protocol)
DEW Line Clean-up Criteria (DCC)^a

Substance	DCC Tier I ^{bc} (mg/L)	DCC Tier II ^d (mg/L)
Arsenic	-	30
Cadmium	-	5.0
Chromium	-	250
Cobalt	-	50
Copper	-	100
Lead	200	500
Mercury	-	2.0
Nickel	-	100
Zinc	-	500
PCB's	1.0	5.0

a. These criteria were adopted specifically for the cleanup of Arctic DEW Line Sites from the 1991 versions of the Quebec Soil Contamination Indicators and the Canadian Council of Ministers of the Environment Interim Canadian Environmental Criteria for Contaminated Sites.

b. Soil criteria are given in parts per million, ppm.

c. Soils containing lead and/or PCBs at concentrations in excess of DCC I, but less than DCC II, may be landfilled,

d. Soils containing one or more substrates in excess of DCC II must be containerized - i.e. removed in a manner which precludes contact with the Arctic ecosystem.