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NUNAVUT WATER BOARD
NUNAVUT IMALIRIYIN KATIMAYIT
OFFICE DES EAUX DU NUNAVUT

File No.: **1BR-PEE1116**

August 4, 2011

Natalie Plato
Director, Contaminated Sites Program
Indian and Northern Affairs Canada
P.O. Box 2200
Iqaluit, NU X0A 0H0
E-mail: natalie.plato@inac-ainc.gc.ca

RE: NWB LICENCE No. 1BR-PEE1116

Dear Ms. Plato:

Please find attached Licence No. **1BR-PEE1116** issued to Indian and Northern Affairs Canada (INAC) by the Nunavut Water Board (NWB) **Motion #: 2011-11-L11** pursuant to its authority under Article 13 of the *Agreement between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in Right of Canada*. The terms and conditions of the attached Licence related to water use and waste disposal are an integral part of this approval.

If the Licensee contemplates the renewal of this Licence, 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. However, the expiry or cancellation of a Licence does not relieve the holder from any obligations imposed by the Licence. The NWB recommends that an application for the renewal of this Licence be filed at least three months prior to the Licence expiry date.

If the Licensee contemplates or requires an amendment to this Licence, the NWB may decide, in the public interest, to hold a public hearing. 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 and timing may vary depending on the scope of the amendment; however, 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.

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-PEE1116**
 Comments – DFO, EC, INAC, KIA

Cc: Kitikmeot Distribution List

¹ Department of Fisheries and Ocean Canada (DFO), January 4, 2011; Environment Canada (EC), January 13, 2011 and April 12, 2011; Indian and Northern Affairs Canada (INAC), January 11, 2011 and April 12, 2011; and Kitikmeot Inuit Association (KIA), January 12, 2011 and April 12, 2011.



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NUNAVUT WATER BOARD
NUNAVUT IMALIRIYIN KATIMAYIT
OFFICE DES EAUX DU NUNAVUT

DECISION

LICENCE NUMBER: 1BR-PEE1116

This is the decision of the Nunavut Water Board (NWB) with respect to an application for a new Licence dated November 12, 2010 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-E, Cape Peel Intermediate Distance Early Warning (DEW) Line site, which is located approximately 80 kilometres west of the Hamlet of Cambridge Bay within the Kitikmeot Region, Nunavut, generally located at the following geographical coordinates:

Latitude: 69° 02' 04" N to 69° 03' 25" N
Longitude: 107° 16' 16" W to 107° 21' 25" W (Project Extents)

Latitude: 69° 02' 50.55" N Longitude: 107° 18' 58.65" 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 exempt from the requirement for screening as described within Section 12.4.3 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* (NWNSRTA) 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 NWNSRTA, decided to waive the requirement to hold a public hearing and determined that:

Licence Number 1BR-PEE1116 be issued subject to the terms and conditions contained therein. (Motion #: 2011 – 11-L11)

² Nunavut Planning Commission (NPC) Conformity Determination, September 2, 2010.

³ Nunavut Impact Review Board (NIRB) Screening Decision Report, July 13, 2011.

SIGNED this 25th day of July, 2011 at Gjoa Haven, NU.



Thomas Kabloona
Nunavut Water Board Chair

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INTRODUCTION

PIN-E, Cape Peel Intermediate Distant Early Warning (DEW) Line Site Remediation Project is located on the north shore of Dease Strait, Victoria Island, approximately 350 kilometres northeast of Kugluktuk and 80 kilometres west of Cambridge Bay within the Kitikmeot Region, Nunavut, at the general coordinates:

Latitude: 69° 02' 04" N to 69° 03' 25" N
Longitude: 107° 16' 16" W to 107° 21' 25" W (Project Extents)

Latitude: 69° 02' 50.55" N Longitude: 107° 18' 58.65" W (Camp)

The site was constructed in 1959 by the Department of National Defence (DND) and deactivated in 1963, after which responsibilities for the site were transferred to Indian and Northern Affairs Canada (INAC). Some of the surface contaminants on the site were cleaned up under a program conducted by the DCC, EC, and INAC.

A Phase III Environmental Site Assessment (ESA) was conducted on the site in 2009, and the results were used to develop a Remedial Action Plan (RAP) in accordance with the Abandoned Military Site Remediation Protocol (INAC 2009), the Canadian Environmental Protection Act (CEPA) and the Transportation of Dangerous Goods (TDG) Act and Regulations.

In its water licence application submitted to Nunavut Water Board (NWB), INAC has proposed to commence remediation activities on the site during the spring or summer of 2011. The remediation activities are scheduled to last until the fall of 2011 or 2012 and will include the following:

- Access to site by means of sealift and fixed-wing aircraft;
- Establishment of a camp to support site operations;
- Demolition of existing site infrastructure and segregation of demolished waste into hazardous and non-hazardous materials for proper disposal;
- Disposal of all hazardous materials and soil at an off-site licensed disposal facility;
- Packaging and transporting of Non-hazardous wastes to the PIN-D Ross Point DEW Line site for disposal at a non-hazardous waste landfill to be constructed there;
- Remediation of existing landfills/dumps at the PIN-D site as described in the RAP;
- Construction of a Landfarm for the treatment of hydrocarbon contaminated soil;
- Contaminated soil will be handled as described in the RAP;
- Consolidation of contents of barrels that are similar; depending on test results, the contents will either be incinerated on-site or shipped off site for disposal. Empty barrels will be crushed and transported to the PIN-D Cape Peel site for disposal in a non-hazardous waste landfill to be constructed there;
- Collecting and packaging scattered surface debris and partially buried debris (non-hazardous) for shipment to the PIN-D site for disposal in the non-hazardous waste landfill to be constructed there;
- Re-construction and repair of the roads and the airstrip, as required; and

- Development of several borrow sources to obtain material to assist in the remediation work.

PROCEDURAL HISTORY

The NWB received on December 3, 2010, from INAC – Contaminated Sites, the following application documents for the PIN-E, Cape Peel Intermediate DEW Line Site Remediation Project:

- Cover Letter dated November 12, 2010;
- General Water Licence Application Form;
- Draft Recreational Supplemental Information Guideline for Tourist/Remote Camp (R1);
- Draft Industrial Supplemental Information Guideline for Hydrocarbon Impacted Soil Storage and Landfarm Treatment Facilities (I3);
- Appendix 1 – Nunavut Impact Review Board Part 1 Form;
- Appendix 2 – Nunavut Impact Review Board Part 2 Form;
- Appendix 3 – Executive Summary (English, Inuinnaqtun, Inuktitut);
- Appendix 4 – Remedial Action Plan;
- Appendix 5 – Maps & Drawings;
- Appendix 6 – Environmental Screening;
- Appendix 7 – Project Schedule;
- Appendix 8 – Archaeological Impact Assessment;
- Appendix 9 – List of Additional Documents;
- Appendix 10 – Supplementary Information;

Following receipt, the NWB conducted a preliminary technical and administrative review of the application and informed the proponent that a site-specific, Spill Contingency Plan (SCP) is required prior to the application being distributed for public review and comments.

Prior to receiving the SCP, on December 13, 2010, the Board acknowledged receipt and distributed the application documents to interested parties and persons for a thirty-day comment and/or review period with the deadline for comments being set for January 13, 2011. On or before the comment deadline, submissions were received from DFO, EC, INAC and KIA.

The NWB then invited the applicant to respond to the comments provided by interveners⁴ during the review process. On March 23, 2011, the Board received from the applicant a summary of its responses to interveners' comments and a copy of a site specific, Health and Safety Plan (H&S Plan). The Plan consisted of the following documents:

- Appendix A: Hazardous Materials Audit;
- Appendix B: Fire Safety Plan;

⁴ NWB Letter to Indian and Northern Affairs Canada (INAC) – Contaminated Sites, January 16, 2011.

- Appendix C: Medical Emergency Response;
- Appendix D: Use and Maintenance of an AED;
- Appendix E: Wildlife Response Plan;
- Appendix F: Spill Contingency Plan/Grey Water and Effluent;
- Appendix G: Land Use Permit (When Available);
- Appendix H: Water License (When Available); and
- Appendix I: Safe Work Practice for Asbestos Abatement.

The NWB distributed the H&S Plan for a ten-day public review and/or comment period on March 29, 2010. Comments⁵ were received from EC, INAC and KIA.

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 (25) years. The applicant requested a five-year Licence, which the NWB believes is appropriate for the type of remediation 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 to the Board for information, on an annual basis, a report that pertains to use of water and deposition of wastes. The NWB maintains the annual reporting information on its public registry. The information is also made available to interested persons upon request.

C. Water Use

The proponent has requested seven (7) cubic metres per day of water for domestic and miscellaneous uses identified in the application for the PIN-E Cape Peel Intermediate DEW Line site Remediation Project. Water for the aforementioned purposes will be obtained from a Fresh Water Lake, proximal to the project site at the following coordinates: Latitude 69° 03' 25" N and Longitude 107° 21' 26" W. The NWB has determined that the quantity of water requested is reasonable and has set the maximum quantity of water use allowed, in Part C, Item 1 of the Licence at seven (7.0) cubic metres per day.

D. Deposit of Waste

Borrow Sources

The Licensee has indicated that it has identified several possible sources of granular materials that can potentially be used for purposes outlined the Remedial Action Plan accompanying the

⁵ Environment Canada (EC), April 12, 2011; Indian and Northern Affairs Canada (INAC), April 12, 2011 and Kitikmeot Inuit Association, April 12, 2011.

application. Under Part E, Item 1 of the Licence, the Board has included the requirement that Borrow Materials meet specific requirements prior use. If analytical results determine that the materials are suitable for use, the Licensee is required to implement appropriate drainage control measures to prevent sediment loading into nearby water bodies. This requirement is included under Part D, Item 16 in the Licence.

Non-Hazardous Wastes

The Licensee has stated that combustible solid waste (paper, packaging food waste, etc) will be incinerated using an on-site incinerator and that the non-combustible solid waste, including empty barrels/fuel drums, surface debris cylinders, etc. will be disposed of at an approved Non-Hazardous Waste Landfill (NHWL), to be constructed at the PIN-D Ross Point Intermediate DEW Line Site (pending). Barrel/Fuel waste will be handled in accordance with the “Abandoned Military Site Remediation Protocol” (INAC 2009). The board has included conditions relating to the disposal of Non-Hazardous Wastes under Part D, Item 4 in the Licence.

In addition, Waste Asbestos (tiles containing asbestos, insulation, etc) and Tier I contaminated soil (86 cubic metres) will be transported from the PIN-E Cape Peel Intermediate DEW Line site to the PIN-D Ross Point Intermediate DEW Line site for treatment at the NHWL. Conditions have been included under Part B, Item 1 requiring the Licensee to track and record the types and quantities of waste transported to the PIN-D NHWL and or other approved facilities.

Hazardous Wastes

The Licensee stated that approximately 92 cubic metres of Tier-II soil, existing on the PIN-E Cape Peel site, as well as other hazardous wastes will be transported to a licensed disposal facility in the south. This includes Hazardous materials identified at the PIN-E Cape Peel Intermediate DEW Line site, debris consisting of asbestos and PCB/Lead amended painted materials, batteries, barrel contents and electrical components and miscellaneous chemicals. The Licensee is required to package and ship all Hazardous Wastes and waste oil in accordance with the Transportation of Dangerous Good Regulation. The Board has included the relevant requirement for disposing of all Hazardous waste under Part D, Items 6 and 17.

Landfarm

According to the information provided in the water licence application, the proponent is proposing to construct an on-site Landfarm, on Crown Lands, to treat approximately 1955 cubic metres of Type B (Hydrocarbons F1-F3) soil situated in the vicinity of the Storage Pad and the Beach areas. The requirement for the Landfarm Facility is included under Part D, Item 20.

Sewage Lagoons

The Licensee has stated that camp sewage and greywater will be treated using a Sewage Disposal Facility consisting of two independently operated temporary lagoons. Each lagoon will have a capacity of approximately 307 cubic metres, excluding freeboard. Effluent from the lagoons will be monitored to ensure that the characteristics of the effluent are consistent with that of Effluent quality limits stipulated in the Licence, prior to discharging into the environment. The Board has set criteria to govern the lagoons’ effluent quality under Part D, Item 10 of 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 following issuance of the Licence, a revised Spill Contingency Plan. The Plan shall address the relevant comments provided and/or issues identified by EC, INAC and other parties, including the NWB, during the review process.

F. Abandonment and Restoration

The Board has approved, under Part J, Item 1, the Remedial Action Plan entitled "PIN-E, Cape Peel Intermediate DEW Line Site" dated March 8, 2010 that was submitted as additional information with the application. The Licensee is required to submit, under Part B, Item 1, any revision of the Plan to the Board for review. In addition, conditions have been included under Part J, item 2 to ensure that the Licensee removes from the project site, all infrastructure and site materials, including, fuel caches, docks, water pumps prior to the expiry of the Licence

G. Monitoring

In addition to installing monitoring stations at the Sewage Treatment Facility, Non Hazardous Waste segregation and storage area(s), Hazardous Waste storage area(s), Landfarm Facility, and Fresh Water Lake intake, the Licensee is required to submit to the Board for review, a Quality Assurance/Quality Control (QA/QC) Plan. The Plan must be approved by an accredited laboratory 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 report. This requirement is included under Part K, Item 12 of the Licence.

The Board has also included the conditions under Part K, Item 1 in the Licence, requiring that the Licensee submit to the Board for approval in writing, at least sixty days (60) days prior to initiating Long-Term Monitoring, a Post Closure Monitoring Plan.

H. Operations and Maintenance

The Licensee is required to submit to the Board for approval in writing, within sixty (60) days of the issuance of the Licence, an Operation and Maintenance Plans (O&M Plan) for the Landfarm and Sewage Disposal Facilities. The O&M Plan shall include 95% complete for-construction drawings, stamped and signed by an Engineer. The drawings shall identify the final discharge location for the Sewage Treatment Facility, sludge disposal instructions, monitoring stations for the Landfarm and other relevant information. This requirement is detailed under Part E, Item 2.

The Board, having duly considered the submission of the Applicant, the comments received from intervening parties and the issues identified above, has accordingly set the terms and conditions in the water licence for governing the use of water and the deposit of waste 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 or dispose of waste for a period subject to restrictions and conditions contained within this Licence:

Licence Number/Type: **1BR-PEE1116 Type "B"**

Water Management Area: **NUNAVUT 04**

Location: **PIN-E CAPE PEEL 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: **JULY 25, 2011**

Expiry of Licence: **JULY 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-E, Cape Peel Intermediate DEW Line Site, located approximately 80 kilometres west of the Hamlet of Cambridge Bay and 350 kilometres northeast of Kugluktuk, within the Kitikmeot Region, Nunavut with camp facility at the general coordinates, latitude 69° 02' 50.55" N and longitude 107° 18' 58.65" W:

- 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-PEE1116

“**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 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;

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

“Landfarm Facility” means an area designed to biologically treat Type B soils, as described in the Application for Water Licence filed by the Applicant on November 12, 2010;

“Licensee” means the individual or organization to which Licence 1BR-PEE1116 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;

“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;

“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.

“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;

“Solid Waste Disposal Facility” means the Non-Hazardous Waste Landfill to be constructed at the Ross Intermediate Point DEW Line site as described in the application dated November 12, 2010.

“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);

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

“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 of the pump(s), intake structure, storage tanks and other infrastructure designed to collect and supply water for the Cape Peel DEW Line site as described in the documents accompanying the Water Licence Application dated November 12, 2010;

“Waste Disposal Facilities” means all facilities designated for the disposal of waste and includes the Sewage Disposal Facility and Landfarm Facility as described in the documents accompanying the Water Licence Application dated November 12, 2010;

Enforcement

- a. 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*;
- b. All inspection and enforcement services regarding this Licence will be provided by Inspectors appointed under the *Act*; and
- c. 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 materials deposited in the on-site Landfarm;
 - d. A summary of all waste backhauled for disposal at the proposed NHWL at the PIN-D, Ross Point Intermediate DEW Line site, or as required under Part D, Items 4;
 - 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 drawings) carried out on the Waste Disposal Facilities and Water Treatment Facility including all associated structures;
 - 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-E Cape Peel Intermediate DEW Line Site," dated March 8, 2010;
 - m. Any revisions to the site specific, Spill Contingency Plan, submitted under Part I, Item 1 and submitted in the form of an addendum;
 - 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 the 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 of the Water Supply Facility, Landfarm Facility, Sewage Disposal Facility and the "Monitoring Program Stations". 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 miscellaneous purposes identified in the application, from the Fresh Water Lake adjacent to the PIN-E, Cape Peel Intermediate DEW Line Site, at Monitoring Program Station PEE-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 Fresh Water 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 dispose of all non-combustible solid waste including surface debris, Tier I Contaminated Soil, compressed gas cylinders, and asbestos containing materials originating from the PINE-E Cape Peel DEW Line site at the Non-Hazardous Waste Landfill (NHWL) site to be constructed at the PIN-D, Ross Point Intermediate DEW Line site, or as otherwise approved by the board in writing.
5. The Licensee shall provide to the Board, documented authorization from any community in Nunavut receiving waste from the PIN-E Cape Peel Intermediate DEW Line Site Remediation Project, prior to backhauling any waste for storage and/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, 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 to the Sewage Disposal Facility as described in the application 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 provide notice to an Inspector at least ten (10) days prior to initiating any decant or discharge from the Sewage Disposal Facility, Landfarm Facility and areas designated for segregating and storing solid waste.
10. All waste discharged from the Final Discharge Point of the Sewage Disposal Facility at Monitoring Program Stations PEE-2a and PEE-2b and shall not exceed the following Effluent quality limits:

Parameter	Maximum Allowable Concentration of any Grab Sample
BOD	80 mg/L
Total Suspended Solids	100 mg/L
Faecal Coliforms	1x10 ⁴ CFU/100 mL

pH	pH
Oil and GREASE	No visible sheen

11. The Licensee shall collect and temporarily store, in preparation for future disposal, all Demolition Rinse Wastewater from decontamination processes and procedures.
12. All water associated with dewatering of contaminated soil areas, and/or water within the perimeter of the Landfarm Facility, Solid Wastes segregation and storage area(s), rinsing of Demolition Waste, Borrow Areas and seepage from Monitoring Program Stations, shall not exceed the following wastewater Effluent quality limits, 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:

Parameter	Maximum Allowable Concentration (µg/L) of any Grab Sample
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

13. If the effluent referred to in Part D, Item 10 and Item 12 does not meet the limits, it shall be considered hazardous waste and disposed off-site at an approved facility, or as otherwise approved by the board.
14. The discharge location for all treated effluents described in Part D, Item 10 and Item 12, 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.
15. The Licensee shall sample and carry out laboratory analyses on potential Borrow Sources prior to the using materials from those potential sources. Borrow Materials possessing acid rock drainage and metal leaching characteristics cannot be used as construction materials and/or for remediation purposes.

16. All pump out water from excavation and borrow pits satisfying the requirement of Part D, Item 15 shall be pumped to an area to undergo treatment or as otherwise approved by the Board in writing.
17. The Licensee shall provide proper storage, treatment and disposal at an approved facility for any hazardous waste material, including waste oil generated through the construction and remediation activities, unless otherwise approved by the Board in writing.
18. 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.
19. 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.
20. The Licensee shall treat Type B soils in the Land Farm Facility, constructed and operated in a manner in accordance with the Plans contained in the "Remedial Action Plan, Pin-E, Cape Peel Intermediate DEW Line Site" date March 8, 2010.
21. The Licensee shall, for the purposes of monitoring impacts to water, install ground water monitoring wells in the vicinity of the constructed Landfarm Facility, at a minimum, one up-gradient and one down-gradient of the Landfarm Facility.
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 submitted to the Board by the Applicant on November 12, 2010.

PART E: CONDITIONS APPLYING TO THE UNDERTAKING

1. The Licensee is allowed to use Borrow Material for the purposes specified in the "Remedial Action Plan PIN-E, 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 15 of this Licence.
2. The Licensee shall submit to the Board for approval, within sixty (60) days of the issuance of the Licence, an Operation and Maintenance Manual for the facilities being operated on the PIN-D, Cape Peel Intermediate DEW Line site, including the Sewage Disposal Facility and the Landfarm Facility, 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 Landfarm component:
 - i. Engineered design drawings of the facility (stamped by a professional engineer registered in Nunavut);
 - ii. Feasibility of alternative disposal methods and sites;
 - iii. Operation and maintenance procedures for the facility;
 - iv. Runoff diversion and management;
 - v. Soil Quality Remediation Objectives (SQRO's); and
 - vi. Monitoring program for both water and soil.
4. The Operations and Maintenance Manual referred to in Part E, Item 2 shall provide closure alternatives and management of sludge from the Sewage Disposal Facility.
5. The Licensee shall review the Manual referred to in this Part as required by changes in operation and/or technology and modify the Manual accordingly. Revisions to the Manual 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. The Licensee shall obtain all granular materials and rock rip-rap used for any temporary

stream crossings, approaches or as may be required for bank stabilization 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 any water body.

14. The Licensee shall stabilize landscape/grade as necessary, and implement suitable erosion control measures 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 approved by the Board in writing.
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 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 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, at within ninety (90) days of issuance of this licence, a detailed design for the Sewage Disposal Facility and Land Farm Facility referred to in this Licence, complete with for-construction drawings, signed and stamped by an Engineer. These designs shall consider location, 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 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. 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
 - d. 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 to the Board for approval in writing, within sixty (60) days following the issuance of the Licence, a revised 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 during the review of the application and shall address the following items:

- a. The Plan should be a stand-alone document containing a table of contents, an introduction, page numbers, an effective date and date prepared;
 - b. Update the contact information to include the information provided in the comments for INAC's Manager of Field Operation, EC contacts, KIA and the GN-DOE. Correct the NWB contact information to refer to the Nunavut Water Board;
 - c. Include a product inventory and locations;
 - d. Include measures to deal with spills on land, water, snow/ice;
 - e. Include a copy of the NT-NU spill report form;
 - f. Include copies of the relevant Material Safety Data Sheets (MSDS); and
 - g. Include a site map depicting the area encompassed by the project, camp infrastructure, nearby water bodies, fuel caches, the location and contents of spill kits and any other relevant information.
2. The Licensee shall not allow any chemicals, petroleum products or wastes associated with the project to 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.
 3. 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.
 4. 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 "Remedial Action Plan, PIN-E Cape Peel Intermediate DEW Line Site," dated March 8, 2010, submitted with the Application filed with the Board on November 12, 2010.
2. The Licensee shall remove from the site, all site infrastructures, equipment, and site materials, constructed on or mobilized to the site for the purpose of the remediation project 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 initiation Long-Term Monitoring, a Post-closure Monitoring Plan for the site that includes information on Long-Term Monitoring of the Waste Disposal Facilities and 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
PEE-1	Intake of Fresh Water Supply Lake proximal to the Cape Peel Intermediate DEW Line Site	Active (Volume)
PEE-2a	Final Discharge Point from the Sewage Disposal Facility, Lagoon 1	Active (Water Quality)
PEE-2b	Final Discharge Point from the Sewage Disposal Facility, Lagoon 2	Active (Water Quality)
PEE-3	Final Point of Discharge from the Solid Waste Segregation and Storage Areas and associated Demolition Rinse Wastewater	Active (Water Quality)
PEE-4	Final Point of Discharge from the Land Farm Facility.	Active (Water Quality)
PEE-5	Monitoring Well installed up-gradient of the Land Farm Facility	Active (Water Quality)
PEE-6	Monitoring well installed down-gradient of the Land Farm 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 Fresh Water Supply Lake, Monitoring Program Station PEE-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 PEE-2a and PEE-2b.
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 10, 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 Disposal Facility, Monitoring Program Station PEE-2a and PEE-2b
8. The Licensee shall monitor compliance with respect to Part D Item 12, by collecting a representative composite sample from a minimum of 5% of the total volume to be released from the Final Discharge Points of the Demolition Rinse Wastewater area, Monitoring Program Station PEE-3 and the Final Discharge Point of the Landfarm Facility, PEE-4.
9. The Licensee shall monitor groundwater quality proximal to the Landfarm Facility 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 12 or as otherwise approved by the Board in writing.
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 release of 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 QAQC 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.