



ᓄᓇᓂᓪ ᐃᓕᓕᓂᓪ ᑲᓂᓕᓂᓪ
NUNAVUT WATER BOARD
NUNAVUT IMALIRIYIN KATIMAYINGI
OFFICE DES EAUX DU NUNAVUT

File No.: 1BR-RES1626

January 12, 2016

David Rochette, Regional Director General
Charlotte Lamontagne, A/Director
Department of Indian Affairs and Northern Development
969 Qimugjuk Building, Iqaluit, NU, X0A 0H0

Email: David.Rochette@aadnc-aadnc.gc.ca
charlotte.lamontagne@aadnc-aadnc.gc.ca

RE: NWB Renewal Licence No. 1BR-RES1626

Dear Mr. Rochette and Ms. Lamontagne:

Please find attached Licence No. **1BR-RES1626**, issued to the Department of Indian and Northern Affairs Canada (INAC) by the Nunavut Water Board (NWB) 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 (Nunavut Land Claims Agreement or NLCA)*. The terms and conditions of the attached Licence related to Water use and Waste deposit 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. It is important to note that if the Licence expires before the NWB issues a new one, then Water use and Waste deposit must cease, or the Licensee may be in contravention of the *Nunavut Land Claims Agreement* and the *Nunavut Waters and Nunavut Surface Rights Tribunal Act*. 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 (3) months** prior to the Licence expiry date. It is important to note that in accordance with s. 75 (1) (a) of the Nunavut Planning and Project Assessment Act (NuPPAA), the Board is not allowed to issue licences or authorizations for Project proposals not submitted to and authorized by the Nunavut Planning Commission (NPC) in accordance with s. 76 of NuPPAA

If the Licensee contemplates or requires an amendment to this Licence, the NWB may decide,

in the public's interest, to hold a public hearing. The Licensee should submit any application 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 sixty (60) 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 are acknowledged by the Manager of Licensing.

The NWB strongly recommends that the Licensee consult the comments received from interested persons on issues identified. This information is attached for your consideration.¹

Sincerely,

Thomas Kabloona
Nunavut Water Board, Chair

TK/sj/ip

Enclosure: **Licence No. 1BR-REP1626**
 Comments – INAC Water Resources Division

cc: Qikiqtani Distribution List

¹ Indigenous and Northern Affairs Canada (INAC) – Water Resources Division, June 24, 2016

TABLE OF CONTENTS

A.	INTRODUCTION	ii
B.	File History:	ii
C.	APPLICATION SCOPE	iii
D.	PROCEDURAL HISTORY	iii
E.	GENERAL CONSIDERATIONS	iii
	<i>Term of the Licence</i>	iii
	<i>Annual Report</i>	iv
	<i>Water Use</i>	iv
	<i>Deposit of Waste</i>	iv
F.	SPILL CONTINGENCY PLANNING	iv
G.	CLOSURE AND RECLAMATION	iv
H.	LONG-TERM MONITORING PLAN	v
	WATER LICENCE RENEWAL	1
	PART A: SCOPE, DEFINITIONS AND ENFORCEMENT	2
1.	Scope	2
2.	Definitions	2
3.	Enforcement	5
	PART B: GENERAL CONDITIONS	5
	PART C: CONDITIONS APPLYING TO WATER USE	7
	PART D: CONDITIONS APPLYING TO WASTE DISPOSAL	7
	PART E: CONDITIONS APPLYING TO THE UNDERTAKING	9
	PART F: CONDITIONS FOR CAMP, ACCESS INFRASTRUCTURE AND OPERATION	10
	PART G: CONDITIONS APPLYING TO MODIFICATIONS	10
	PART H: CONDITIONS APPLYING TO SPILL CONTINGENCY PLANNING	11
	PART I: CONDITIONS APPLYING TO CLOSURE AND RECLAMATION	12
	PART J: CONDITIONS APPLYING TO MONITORING PROGRAM	12

A. INTRODUCTION

The Resolution Island, BAF-5, former DEW Line site is located approximately 310 kilometres on the southeastern tip of Iqaluit, outside of Frobisher Bay, within the Qikiqtani Region of Nunavut. Included as part of the Pole Vault Line from 1953 to 1972, the site was used primarily to transmit intercepted signals to southern military stations.

The site, which consisted of four areas spanning approximately 3 km² in size, was operated by the United States (US) Military for several years. After military use of the site terminated, several environmental assessments, conducted between 1985 and 1997, identified and delineated contaminants of concern including copper, cobalt, lead, and mercury. Clean-up and remediation of the site occurred from 1997 to 2005 after which a 25 – year, long-term monitoring program that includes annual monitoring of the site was initiated in 2006. The Licensee, the Department of Indian and Northern Affairs Canada (DIAND), anticipates that it will be continuing long-term monitoring of the site in the coming years; therefore, it applied to the NWB to renew the existing Licence issued to the Project, which expired on June 1, 2016. In addition to the planned monitoring activities, maintenance plans are being developed to address deficiencies noted in the 2013 Maintenance Assessment (AECOM, 2014) and the 2014 Supplemental Maintenance Assessment (AECOM, 2015). These plans will be addressed at a later date, and if needed, as part of an amendment application.

The summer of 2016, marked year 10 of the proposed 25 – year, long-term monitoring program. Based on its monitoring schedule, the Licensee anticipates that two more monitoring events will be carried subsequent to 2016, one in 2025 and the other in 2031. The long-term monitoring activities include, among other activities, soil and water sampling, visual and thermal inspection of facilities, and maintenance of interceptor and barrier systems.

B. File History:

The NWB has issued the following Licences and amendment to the Project in the past:

- Licence No NWB5RES9803 was issued on July 31, 1998 and expired on August 1, 2003. The Licence allowed for the use of four hundred (400) cubic metres of Water per month and the deposit of Waste in support of an Industrial undertaking that involved preparatory work for future clean-up of the site.
- Licence No NWB5RES9803 was renewed as NWB5RES0308 on August 31, 2003, and the renewed licence expired on August 31, 2008. The Licence allowed for the use of twenty (20) cubic metres of Water per day in support of remediation activities for an Industrial undertaking.
- Licence No. NWB5RES0308 was renewed as 1BR-RES0916 on June 10, 2009. The Licence, which allowed for the use of five (5) cubic metres of Water per day and the deposit of Waste for an Industrial undertaking, expired on June 1, 2016.
- Licence No. 1BR-RES0916 was amended on December 3, 2016 to allow for the implementation of a post-closure, long-term monitoring program, and an increase in

Water use from five (5) to seven (7) cubic metres per day: Two (2) cubic metres for domestic use and five (5) cubic metres for sampling and related activities.

C. APPLICATION SCOPE

On May 16, 2016, the Nunavut Water Board (NWB) received from the Department of Indian and Northern Affairs Canada (DIAND), an application and supporting information (the Application) to renew Licence No. 1BR-RES0916. Based on details included in the Application, the proposed scope for the renewed licence it expected to cover care and maintenance activities, continuation of a long-term monitoring program in support of the Project, and continued use of a 10 – person camp facility, initially approved for use under the expired licence,

D. PROCEDURAL HISTORY

The above-mentioned Application submitted on May 16, 2016 to the NWB to renew the Licence consisted of the following Application:

- 2010 Spill Emergency Response Plan;
- Amendment to the Spill Emergency Response Plan;
- Appendix A Map Photographs;
- Appendix D 20 14 Maintenance Assessment Report;
- Renewal 2016 Executive Summary English & Inuktitut; and
- Water Licence Renewal Application Form.

Following receipt and an internal preliminary review, the NWB distributed the Application on May 30, 2016 for a thirty-day (30) comment period with the deadline for submission set for June 10, 2016. On or before the submission deadline, comments¹ were received from Indigenous and Northern Affairs Canada (INAC) – Water Resources Division (INAC – WRD). INAC – WRD, in its submission, requested that the Licensee provide response(s) to several questions regarding the Project’s existing sewage lagoon facility. On November 4, 2016, the Licensee submitted its response² to the intervener’s comments and questions.

With respect to pre-licensing matters, the Nunavut Planning Commission (NPC) provided its determination for the file on April 20, 2016, in which it indicated that the Project proposal falls outside of the areas of the approved Land Use Plans in place and that further screening from the Nunavut Impact Review Board (NIRB) was not required.

E. GENERAL CONSIDERATIONS

Term of the Licence

In accordance with s. 45 of the *Act*, the NWB may issue a licence for a term not exceeding twenty-five (25) years. The Licensee requested a fifteen-year (15) year term for the Licence; however, the Board has decided to grant a ten (10) year term for the Licence at this time to allow the opportunity for stakeholders to evaluate the performance of the Project (assessment of

¹ Email from I. Parson, INAC to K. Kharatyan, NWB, Re: v BR-RES0916 –BAF-5 Dew Line Site, Resolution Island –Renewal Application - Indigenous and Northern Affairs Canada, June 24, 2016.

² Email from E. Solski, INAC – Lands and Contaminated Site Directorate, Re: 161028 1BRRES0916 NWB Request for Intervener Comments OAAE, November 4, 2016.

initial Phase I and Phase II monitoring) and potentially adjust conditions and requirements of any future renewal licence that may be issued to the Project to address potential changes in Project requirements.

Annual Report

Similar to conditions that are generally included in licences issued for this type of undertaking, the Board, has included under Part B, Item 1 of the renewed licence, the requirement for the Licensee to submit to the Board for review prior to the 31st of March, annually, a report detailing the Water use and Waste deposit activities for the preceding year. The Board provides public access to the information submitted in licensees' annual reports through its ftp site as well as upon request from interested parties.

The NWB has included on its FTP site a standardized form for annual reporting that licensees can use to submit reporting information, supplemented by other relevant details. A copy of the NWB's generic annual reporting form can be obtained from the NWB upon request or electronically from the NWB's FTP site using the following link:

<ftp://ftp.nwb-oen.ca/other%20documents/Standardized%20Forms/>

Water Use

The Licensee requested that the Water use currently allowed for under the expired Licence be retained with issuance of the renewed Licence. In keeping with the Licensee' request, the Board has allowed for the use of seven (7) cubic metres of Water under Part C, Item 1 of the renewed Licence: Five (5) cubic metres for sampling activities and two (2) cubic metres for domestic purposes.

Deposit of Waste

In its Application to renew the Licence, the Licensee identified several Waste types that are expected to be generated by the Project and how these Wastes are going to be managed. Sewage including greywater will be disposed of at an existing sewage lagoon facility. Waste oil and solid waste, which are expected to be generated in limited quantities will be backhauled to licenced facilities for disposal.

INAC – WRD in its submission inquired about whether or not the existing sewage lagoon facility is capable of effectively managing the sewage that will be generated by the personnel carrying out the long-term monitoring activities. The Licensee in its response indicated that the lagoon, which is unlined and works by way of exfiltration, has adequate capacity to treat waste generated by ten people over a four-week period.

F. SPILL CONTINGENCY PLANNING

The Licensee submitted an amended Spill Contingency Plan to the one approved under the expired Licence. The Board has approved the amended plan under Part H, Item 1 of the renewed Licence.

G. CLOSURE AND RECLAMATION

Under Amendment No.1 to the Expired Licence, the Licensee was required to submit a Closure and Reclamation Plan that addresses closure and reclamation of the sewage lagoon, camp

facility and any other facilities associated with the monitoring program. As no submission date was previously included in the Licence for this facility, the Board has amended conditions with issuance of the renewed licence to include a date for submission of the Plan for review and approval, ninety (90) days prior to final closure of the site.

It should be noted that as most of the infrastructure and waste management facilities associated with the Project have already been decommissioned, the scope of the Closure and Reclamation Plan to be submitted under the Licence is expected to be significantly reduced.

H. LONG-TERM MONITORING PLAN

The Board, under Part J, Item 1, authorizes with issuance of the renewed Licence, the implementation of the long-term monitoring plan entitled *Resolution Island Monitoring Program*, dated December 31, 2003 that was approved with issuance of the expired Licence. As part of the general terms and conditions of the Licence, the Licensee is required to submit any updates to the plan in the form of an addendum to the Board for review. The next update to the Plan should address the fact that active monitoring is no longer required for some of the waste management facilities that were captured in previous Licences issued to the Project.

The Licensee was required to submit, to the Board for review and acceptance, a Quality Assurance/Quality Control (QA/QC) Plan along with a letter of acceptance from an accredited laboratory confirming that the QA/QC Plan is acceptable. The Licensee provided in 2010 a copy of the aforementioned Plan and letter, which the Board accepted at the time. The Board has, therefore, carried over this plan under conditions associated with Part J, Item 5 of this licence for implementation of the 2015 plan. Further, the Licensee is required to update the Plan as needed to reflect any changes in monitoring requirements associated with the Project.

DECISION

LICENCE NUMBER: 1BR-RES1626

This is the decision of the Nunavut Water Board (NWB) with respect to an Application received on May 16, 2016 for the renewal of a Water Licence made by the:

DEPARTMENT OF INDIAN AND NORTHERN AFFAIRS CANADA (DIAND)

to allow for the continued use of Water and deposit of Waste during temporary camp operations, maintenance activities, and monitoring activities at the Resolute Island, Long-term Monitoring Project, located on Resolution Island, in the Qikiqtani Region, Nunavut, at the following general geographic coordinates:

Latitude: 61° 35' 46" N	Longitude: 64° 40' 22" W
Latitude: 61° 36' 00" N	Longitude: 64° 37' 48" W
Latitude: 61° 35' 02" N	Longitude: 64° 38' 16" W
Latitude: 61° 34' 46" N	Longitude: 64° 39' 38" W – <i>Project Extent</i>
Latitude: 61° 53' 48" N	Longitude: 64° 38' 20" W – <i>Monitoring Camp</i>

DECISION

After having been satisfied that the Application is for a Project proposal that falls outside of an area with an applicable Regional Land Use Plan in place and exempt from the screening requirements of the Nunavut Impact Review Board (NIRB), as determined by the Nunavut Planning Commission (NPC)),³ the NWB determined 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 (Act)* 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 considering the 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 *Act*, waived the requirement to hold a public hearing, and determined that:

Licence No. 1BR-RES0916 be renewed as Licence No. 1BR-RES1626 subject to the terms and conditions contained therein. (Motion #: 2016-B1-019)

Signed this 12th day of December 2016 at Gjoa Haven, NU.

Thomas Kabloona
Nunavut Water Board, Chair

TK/sj/ip

³ Nunavut Planning Commission (NPC) Determination, April 20, 2016.



NUNAVUT WATER BOARD WATER LICENCE RENEWAL

Licence No. 1BR-RES1626

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

DEPARTMENT OF INDIAN AND NORTHERN AFFAIRS CANADA (DIAND)

(Licensee)

969 QIMUGJUK BUILDING, IQALUIT, NU 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 renewal:

Licence Number/Type: 1BR-RES1626 / TYPE "B"

Water Management Area: FROBISHER BAY (#53) & HUDSON STRAIT (#65)
WATERSHEDS

Location: RESOLUTION ISLAND LONG-TERM MONITORING
PROJECT, QIKIQTANI REGION, NUNAVUT

Classification: INDUSTRIAL UNDERTAKING

Purpose: USE OF WATER AND DEPOSIT OF WASTE

Quantity of Water use not
to Exceed: SEVEN (7) CUBIC METRES PER DAY FOR DOMESTIC AND
SAMPLING AND RELATED PURPOSES

Date of Licence Issuance: DECEMBER 12, 2016

Expiry of Licence: DECEMBER 11, 2027

This Licence renewal, 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 deposit of Waste for an Industrial undertaking classified as per Schedule 1 of the *Regulations* at the Resolution Island Long-Term Monitoring Project, located approximately 320 kilometres, southeast of Iqaluit, within the Qikiqtani Region, Nunavut.

- 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 legislations.

2. Definitions

In this Licence: 1BR-RES1626

“**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;

“**Appurtenant Undertaking**” means an undertaking in relation to which a use of water 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* and the *Nunavut Waters and Nunavut Surface Rights Tribunal Act*;

“**Effluent**” means treated or untreated liquid waste material that is discharged into the

environment from a structure such as a settling pond, landfarm or a treatment plant;

“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;

“High Water Mark” means the usual or average level to which a body of water rises at its highest point and remains for sufficient time so as to change the characteristics of the land (ref. Department of Fisheries and Oceans Canada, Operational Statement: Mineral Exploration Activities);

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

“Interceptor Barriers” means the S1/S4 Valley barrier and the S1/S4 Beach barrier designed to filter PCBs prior to reaching the ocean, as described Application for Water Licence filed by the Applicant on December 1, 2008;

“Licensee” means the holder of this Licence;

“Long Term Monitoring Program” means the program entitled “Resolution Island Monitoring Program” Dated December 31, 2003 and approved August 5, 2004.

“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;

“Non-Hazardous Waste Landfills” comprises the area and associated structures designed to contain solid waste and includes the East Camp Non-Hazardous Landfill; West Camp Non-Hazardous Landfill; and Beach Non-Hazardous Landfill as described in the Application for renewal filed by the Applicant on December 1, 2008;

“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 *Nunavut Waters Regulations* sor 2013/669 18th April, 2013;

“Sewage” means all toilet wastes and greywater;

“Sewage Disposal” means the lagoon built in 2006 as described in the amendment application dated April 9, 2010;

“Solid Waste” means non-hazardous waste, Type A soil, Tier I soil and Tier II 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 to that agreement made pursuant to it;

“Tier II Soil” comprises the area and associated structures designed to contain Tier II contaminated soil and petroleum hydrocarbon contaminated soils and to permanently isolate the contents of the disposal facility from the environment, as described in the document “Specifications for Resolution Island Clean-up Project, Tier II Landfill, UMA Engineering Ltd., June 5, 2003”;

“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;

“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 in the F1 and F2 fraction;

“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” or “Waters” means waters as defined in section 4 of the Act;

3. 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. The Licensee shall file an Annual Report with the Board on the Appurtenant Undertaking no later than the 31st of March of the year following the calendar year being reported. The report shall contain the following information:
 - a. Tabular summaries for all data and information generated under the “Long Term Monitoring Program”;
 - b. A review and analysis of data collected during the “Long Term Monitoring Program” and a brief description of any future studies planned by the Licensee;
 - c. A summary of any abandonment and restoration work undertaken during the year and an outline of any work anticipated for the next year;
 - d. The results of any review conducted and any recommendations regarding any changes to the Monitoring Plan and/or remediation requirements;
 - e. 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;
 - f. A list of unauthorized discharges and summary of follow-up actions taken;
 - g. If applicable, a description of any trenches and sumps excavated, including the following: GPS coordinates, dimensions, depth below active layer, and secondary containment features;
 - h. A public consultation/participation report describing consultation with local organizations and the residents of the nearby communities;
 - i. A brief summary of work done to address concerns or deficiencies listed in the inspection reports and/or compliance reports prepared by an Inspector or other parties;
 - j. An executive summary in English and Inuktitut of all plans, reports, or studies conducted under this Licence; and
 - k. Any other details on water use or waste disposal requested by the Board

by the 1st of November 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 changes.
3. The Licensee shall, where applicable, install flow meters or other such devices, or implement suitable methods required for the measuring of water volumes, as required under Part J.
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 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. 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.
7. The Licensee shall, within thirty (30) days of arrival on site, post signs in the appropriate areas identifying the locations of any the Water Supply Facilities, Solid Waste Disposal Facilities, and the “Monitoring Program Stations”. All postings shall be in the Official Languages of Nunavut
8. 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 shall be submitted in the form of an Addendum to be included with the Annual Report.
9. The Licensee shall ensure that 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@nwb-oen.ca

(b) Inspector Contact:
Manager of Field Operations, INAC

Nunavut District, Nunavut Region
P.O. Box 100
Iqaluit, NU X0A 0H0
Telephone: (867) 975-4295
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.
11. The Licensee shall ensure that any document(s) or correspondence submitted by the Licensee to the NWB is received and acknowledged by the Manager of Licensing.
12. This Licence is assignable as provided for in section 44 of the *Act*.

PART C: CONDITIONS APPLYING TO THE USE OF WATER

1. The Licensee is authorized to use up to two (2) cubic metres of Water per day for domestic purposes and five (5) cubic metres of Water per day for the sampling and related activities identified in the Application. Water for domestic purposes shall be obtained from Old Water Lake. The total volume of Water for the purposes of this Licence shall not exceed seven (7) cubic metres per day.
2. Streams cannot be used as a water source unless authorized and approved by the Board in writing.
3. The Licensee shall equip all Water intake hoses with a screen of an appropriate mesh size to ensure that fish are not entrained and shall withdraw Water at a rate such that fish do not become impinged on the screen.
4. The Licensee shall not remove any material from below the ordinary High Water Mark of any Water body unless authorized.
5. The Licensee shall not cause erosion to the banks of any body of Water and shall provide necessary controls to prevent such erosion.
6. The Licensee shall implement sediment and erosion control measures to prevent the deposition of dust and/or sediment into local Water bodies, arising from contractor activities or on-site vehicular travel.

PART D: CONDITIONS APPLYING TO THE DEPOSIT OF WASTE

1. The Licensee shall dispose of all sewage generated by the Project at the Sewage Lagoon facility approved under the previous Licence and or amendment.

2. All pump out Water from Water sampling activities shall be pumped to an area approved by an Inspector.
3. The Licensee shall not deposit any Waste in any body of Water, or on the banks thereof.
4. The Licensee shall provide notice to an Inspector at least ten (10) days' prior to initiating any decant or discharge from any waste disposal facility.
5. Any contact Water collected from the Landfarm shall meet the following discharge limits prior to being released onto land a minimum of thirty-one (31) metres from the ordinary High Water Mark of the nearest Water body:

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
Zinc (total)	500
Benzene	370
Toluene	2
Ethylbenzene	90

6. Effluent from the Sewage Lagoon shall not exceed the following Effluent discharge criteria prior to discharge at least thirty-one (31) metres from the ordinary High Water Mark of any Water Body:

Parameter	Maximum Average Concentration
Faecal Coliform	10E5 CFU/dL
BOD ₅	120 mg/L
Total Suspended Solids	180 mg/L
Oil and Grease	No visible sheen
pH	6 – 9 pH units

7. All Effluent referred to in Part D, Items 5 and 6 that exceeds the relevant discharge limits, shall be considered Hazardous Waste requiring disposal off-site at an approved facility or as otherwise approved by the Board in writing.

8. 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.
9. The Licensee shall not practice on-site landfilling of domestic Waste or Waste products, unless otherwise approved by the Board in writing.
10. The Licensee is authorized to dispose of all acceptable food waste, paper waste and untreated wood products in an incinerator.
11. 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.
12. The Licensee shall remove and dispose of all Hazardous Wastes, waste oil, incinerator ash and non-combustible waste generated through the course of the operations, to a licensed waste disposal facility. The Licensee shall not transport hazardous wastes prior to registering with the Government of Nunavut as a Waste generator and utilizing the prescribed manifests.
13. The Licensee shall provide to the Board with documented authorization from any community in Nunavut receiving backhauled Wastes from the Resolute Island Long-Term Monitoring Project prior to doing so.
14. 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 also be made available to an Inspector upon request.

PART E: CONDITIONS APPLYING TO THE UNDERTAKING

1. The Licensee shall, if any constructed facilities designed to contain Waste and/or Water were to fail, repair such facilities immediately to the satisfaction of an Inspector.
2. The Licensee shall minimize disturbance to terrain, permafrost and drainage during the movement of contractor's equipment and personnel around the site during post-closure monitoring activities.
3. All sites affected by sampling 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, to the satisfaction of an Inspector.

4. The Licensee shall design and construct all stream crossings to minimize erosion and/or deposition of Waste into Water.
5. The Licensee shall ensure that existing creek channels are maintained at their normal width and depth to the extent possible, during and after site remediation.
6. 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 approved by an Inspector, and be clean and free of contaminants. Such material must not be removed or gathered from below the ordinary High Water Mark of any Water body.
7. All sites affected by remediation activities shall be stabilized, contoured as necessary, and suitable erosion control measures implemented to minimize sediment deposition into watercourses located on or adjacent to the site.
8. The Licensee shall restore and stabilize all areas affected by the undertaking upon completion of the work.
9. 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.
10. 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.

PART F: CONDITIONS FOR CAMP, ACCESS INFRASTRUCTURE AND OPERATIONS

1. The Licensee is authorized to operate a seasonal camp facility in support of the Resolute Island Long-Term Monitoring Project.
2. 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.
3. 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.

PART G: CONDITIONS APPLYING TO MODIFICATIONS

1. The Licensee is authorized to drill for the purposes of installing monitoring instrumentation.

2. The Licensee may, without written consent from the Board, carry out Modifications to any Water and Waste disposal facilities under this Licence such that the Modifications are consistent with the terms and conditions 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.
2. Modifications for which all of the conditions referred to in Part G, Item 1 have not been met can be carried out only with written approval from the Board.
3. The Licensee shall provide as-built plans and drawings of 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 H: CONDITIONS APPLYING TO SPILL CONTINGENCY PLANNING

1. The Board has approved the amended plan entitled *Long Term Monitoring of BAF-5 Pole Vault Military Radar Station, Resolution Island, Nunavut, Spill contingency and Emergency Response Plan*, dated April 2016.
2. All sumps and fuel caches shall be located at 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 for fuel and chemical storage associated with this undertaking.
3. 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 Manager of Field Operations at (867) 975-4295; and
 - c. Submit to 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.
4. The Licensee shall, in addition to Part H, Item 3, regardless of the quantity of releases of harmful substances, report to the NWT/NU Spill Line if the release is near or into a

Water body.

PART I: CONDITIONS APPLYING TO CLOSURE AND RECLAMATION

1. The Licensee shall ensure that any areas disturbed as a result of the undertaking are stabilized and re-vegetated as required, upon completion of work, and restored as practically as possible to a pre- disturbed state to the satisfaction of an Inspector.
2. Licensee shall submit to the Board for approval, at least ninety (90) days prior to final closure of the site, a Closure and Reclamation Plan for the Project that addresses closure measures for the camp, fuel storage, the Sewage Lagoon and any other facilities associated with the BAF-5, long term monitoring Project.

PART J: CONDITIONS APPLYING TO THE MONITORING PROGRAM

1. The Long Term Monitoring Program shall be implemented in accordance with the approved plan entitled *Resolution Island Monitoring Program*, dated December 31, 2003 or any subsequently approved or accepted version thereof.
2. The Licensee shall monitor the quantity of Water withdrawn for domestic and sampling or monitoring purposes.
3. The Licensee shall ensure that 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.
4. All analyses shall be performed in a laboratory accredited according to ISO/IEC Standard 17025. The accreditation shall be current and in good standing.
5. The Licensee shall implement the Plan entitled *Quality Assurance / Quality Control Plan for Long Term Monitoring of the BAF-5, Resolution Island Remediation Project*, dated April 20, 2010 and accepted under the expired Licence.
6. An Inspector may impose additional monitoring requirements.
7. The Licensee shall include in the Annual Report, required under Part B, Item 1, all monitoring results and information required by this Part.

Table No.1

(From INAC Abandoned Military Site Remediation Protocol)
DEW Line Clean-up Criteria (DCC)^a

Parameter	DCC Tier I ^{bc} (mg/kg)	DCC Tier II ^d (mg/kg)
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.