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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 by interested persons on issues identified. This information is attached for your consideration.¹

Sincerely,



Thomas Kabloona
Nunavut Water Board
Chair

TK/kk/ri

Enclosure: Licence No. **1BR-HLR1314**
 Comments – AANDC, DFO, EC and KIA

Cc: Kitikmeot Distribution List

¹ Aboriginal Affairs and Northern Development Canada (AANDC), January 4, 2013; Department of Fisheries and Oceans (DFO), January 3, 2013; Environment Canada (EC), December 20, 2012; and Kitikmeot Inuit Organization (KIA), December 14, 2012.

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DECISION

LICENCE NUMBER: 1BR-HLR1314

This is the decision of the Nunavut Water Board (NWB) with respect to an application dated October 3, 2012 for a new Water Licence made by:

DEPARTMENT OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT (DIAND)

to allow for the use of water and disposal of waste during camp operations and site remediation activities associated with the Hope Lake Remediation Project which includes three (3) individual sites that have been grouped together. The largest site is Hope Lake the others are satellite sites and include Husky Creek located approximately 16 km from Hope Lake, and Willow Creek – includes South Cabins and Southwest Cabin and located approximately 20 km from Hope Lake.

The Hope Lake is located approximately 75 km southwest of Kugluktuk within the Kitikmeot Region, Nunavut generally located at the geographical coordinates as follows:

Project Extents

NW:	Latitude: 67° 26' 33" N	Longitude: 116° 27' 20" W
NE:	Latitude: 67° 26' 06" N	Longitude: 116° 23' 34" W
SE:	Latitude: 67° 25' 17" N	Longitude: 116° 22' 53" W
SW:	Latitude: 67° 26' 20" N	Longitude: 116° 29' 10" W

Camp Location(s)

Latitude: 67° 26' 06.45" N Longitude: 116° 25' 40.30" W

DECISION

After having been satisfied that the application was for a location within an area in which there is no Land Use Plan and subject to a 12.4.4(a) Screening Decision by the Nunavut Impact Review Board¹ 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 (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-HLR1314 be issued subject to the terms and conditions contained therein (Motion #: 2013-B1-014).

¹ NIRB Decision dated December 11, 2012.

Signed this 18th day of June 2013 at Gjoa Haven, NU.

A handwritten signature in dark ink, appearing to read 'T. Kabloona', written over a horizontal line.

Thomas Kabloona
Nunavut Water Board
Chair

TK/kk/ri

INTRODUCTION

The Hope Lake Remediation Project (Project) consists of three sites: Hope Lake, Willow Creek and Husky Creek. The Hope Lake site, which would have been the site of an operating mine in 1968, is the largest of three separate exploration sites. It is located 75 km southwest of Kugluktuk. The others are satellite sites: Willow Creek, which includes South Cabins and Southwest Cabin, is located approximately 65 km south of Kugluktuk and 20 km from Hope Lake; the Husky Creek site is located about 55 km from Kugluktuk and approximately 16 km from Hope Lake.

Access to the Hope Lake site is via airplane. A trail system exists throughout Hope Lake linking on-site infrastructure. Infrastructure at Hope Lake sites includes an unmaintained airstrip, abandoned exploration camps and equipment, drum caches, and fuel tanks (mostly empty). However, there is no functional infrastructure at either the Husky Creek or Willow Creek sites. Contamination at the sites is a result of mineral exploration activities. The contaminants identified at the site include debris, heavy metals, asbestos and hydrocarbons.

The site investigation and characterization phases for this project were completed in the summer of 2010 and a Remedial Action Plan (RAP) was developed and finalized by EBA Engineering Consultants Ltd., (EBA) in 2011. The RAP is a continuation of work that began in 2008 with a Phase I and II Environmental Site Assessments (ESA) (WESA 2009) and continued in July 2010 with a Phase III ESA (EBA 2010).

During the summer of 2012 (from July 17 to August 16) work at the Husky Creek and Willow Creek satellite sites was completed. The work completed included:

- Drum sampling and consolidation;
- Debris collection and incineration of untreated/unpainted wood;
- Excavation and containerization of contaminated soil; and
- Transportation of consolidated materials to Hope Lake via helicopter.

The main portion of remedial activities will be completed at Hope Lake during the summer of 2013, the activities planned include:

- Access to site via fixed wing aircraft and establishment of a camp to support site operations;
- Existing site infrastructure will be demolished and demolition wastes will be segregated;
- All hazardous and non-hazardous materials will be packaged, transported south, and disposed of at a licensed disposal facility;
- Contaminated soils will be excavated, packaged, and transported south for disposal at an off-site licensed disposal facility;
- Barrels with contents will be consolidated, sampled, packaged for transportation and shipment off site for disposal at a licensed disposal facility;
- Scattered surface debris and partially buried debris will be collected, packaged and transported off-site for disposal at a licensed facility;
- The trails and airstrip will be re-constructed and repaired as required; and
- A borrow source (previously disturbed) will be developed and the material will be used during the remediation work.

PROCEDURAL HISTORY

The NWB received on October 15, 2012, the following documents, as part of the new Water Licence Application (Application) from AANDC, in support of the Hope Lake Remediation Project:

- Cover letter dated October 1, 2012;
- General Water Licence Application;
- Appendix 1: NIRB Part 1 Form (English Inuinnaqtun & Inuktitut);
- Appendix 2: NIRB Part 2 Form – Project Specific Information Requirements;
- Appendix 3: Executive Summary (English Inuinnaqtun & Inuktitut);
- Appendix 4: Remedial Action Plan dated March 2011;
- Appendix 5: Maps and Drawings;
- Appendix 6: Environmental Screening Report dated March 2011;
- Appendix 7: Project Schedule;
- Appendix 8: Archaeological Impact Assessment;
- Appendix 9: List of Additional Documents;
- Appendix 10: Site Specific Health and Safety Plan (Includes Spill Contingency Plan) dated April 24, 2012;

On November 28, 2012 the AANDC submitted the following additional information in support of the water licence application package:

- Exploration/Remote Camp Supplementary Questionnaire; and
- Fuel Contingency Plan Remediation of Hope Lake, NU dated October 22, 2012.

On December 4, 2012, following a preliminary internal technical review the NWB concluded that the Application met the requirements of section 48(1) of the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* (NWNSRTA or Act) and distributed notice of the Application to interested parties. All parties were invited to make representations to the NWB within thirty (30) days. Prior to the deadline for comments, set for January 4, 2013, submissions were received from AANDC Water Resources Division, Department of Fisheries and Oceans (DFO), Environment Canada (EC) and Kitikmeot Inuit Association (KIA). AANDC – Water Resources Division and EC provided several comments and recommendations aimed at ensuring that any potential adverse effects of the project are minimized.

On December 11, 2012, the Nunavut Impact Review Board (NIRB) issued a Screening Decision as per Section 12.4.4(a) of the *Nunavut Land Claim Agreement (NLCA)* stating that the proposal may be processed without a review under Part 5 or 6, and recommended project-specific terms and conditions.

Based upon the results of the detailed assessment of the Application, including consideration of any potential accidents, malfunctions, or impacts to water that the overall project might have on the area, the Board has approved the Application and has issued Water Licence 1BR-HLR1314.

GENERAL CONSIDERATIONS

A. Term of the Licence

In accordance with the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* s. 45, the NWB may issue a licence for a term not exceeding twenty-five years. The applicant requested a one term for this licence, which the NWB believes is consistent with and appropriate for the type of activities proposed in the application. The Board has therefore granted the one year term that the Licensee requested.

B. Annual Report

Under the reporting section in the Licence, Part B, Item 1, the Licensee is required to submit, on an annual basis, a report that pertains to water use and the deposition of waste. This information is generally made available to interested persons upon request. In addition, the NWB maintains annual reporting information on its public registry, which can be accessed by through the NWB's ftp site using the following link (username: "*public*" and password: "*registry*"): http://nunavutwaterboard.org/en/public_registry.

C. Water Use

The proponent has requested ten (10) cubic metres of water *per* day for domestic and miscellaneous uses as identified in the Application. Water will be sourced from a small lake north of the camp area or from Hope Lake. Of this amount, 4.8 cubic metres of water will be used for domestic purposes (32 person camp, 150 L per capita per day) and 5.2 cubic metres will be used for miscellaneous activities (i.e., barrel and equipment washing). The NWB has determined that the quantity of water that is requested is appropriate for the type of undertaking and has set maximum water use for all purposes under this Licence at ten (10) cubic metres *per* day under Part C, Item 1 of the Licence.

D. Deposit of Waste

Borrow Sources

The Licensee has indicated that Borrow Materials be required for backfilling of excavations and repairs to the Hope Lake site's airstrip. Accordingly, a borrow area at the Hope Lake site will be exploited to provide the aggregate material required. The Applicant stated that studies for acid-generating and metal leaching of potential quarry sites and borrow sources have not been completed. EC in its technical review comments for the application recommended that studies to determine the acid-generating and metal leaching potential of prospective aggregated sources be completed before the project proceeds. The NWB has included conditions in the Licence, under Part D, requiring that geochemical analyses be carried out on potential borrow sources and quarry sites to determine acid-generating and metal leaching potential prior to the use of such materials. Further, the Licensee is required to implement adequate drainage control measures at the sites used to source aggregates so as to prevent or minimize sediment loading into nearby freshwater water bodies.

Non-Hazardous Waste

The Licensee has stated that solid combustible Camp Waste (paper, packaging, food etc.) will be incinerated or shipped south to a licensed disposal facility. EC recommended that burning

should only be considered after all other alternatives for waste disposal have been explored and the devices used for incineration meet the emission limits established under CCME Canada-wide Standards (CWS) for Dioxins and Furans and the CWS for Mercury Emissions, available at: http://www.ccme.ca/ourwork/environment.html?category_id=108

Bulky items including wood and metal debris will be packaged and shipped south to a licensed disposal facility. As a result, the scope of remediation activities does not include the construction of non-hazardous waste landfills. Conditions have been included under Part D in the Licence to ensure that appropriate measures are developed and implemented for the storage and shipment of waste originating from the Project.

Hazardous Waste

The Licensee has proposed to package and ship to a licensed disposal facility in the south all hazardous waste including asbestos, cylinders, items painted with lead-based paint, organic liquids and contaminated soils (metal and petroleum hydrocarbons). It should be noted that all Hazardous Wastes must be handled in accordance with applicable regulations including the *Transportation of Dangerous Goods Regulations*. EC suggested that confirmation and authorization be obtained from the intended community landfill prior to shipment of waste to any community in Nunavut for disposal. The Licensee is required, under Part D to dispose of all hazardous substances and/or materials at approved facilities.

Contaminated Soils

The Licensee has proposed to excavate and ship to a licensed disposal facility in the south all petroleum hydrocarbons contaminated and heavy metal impacted soils with the TPH (F1-F3 Fractions) concentration exceeding 2500 mg/kg. The criteria being used for the metal impacted soils are the Canadian Council of Ministers of Environment *Soil Quality Guidelines for the Protection of Environmental and Human Health (Agricultural)* with the exception of copper and vanadium for which site specific remediation criteria are proposed. Conditions have been included under Part D in the Licence to ensure that appropriate measures are developed and implemented for the storage and shipment of PHC contaminated and metal impacted soils.

Wastewater Disposal Facility

The Licensee has proposed to construct a Sewage Treatment Facility (Sewage Lagoon) at the Hope Lake Project site to treat/dispose sewage and greywater generated by personnel carrying out the remediation activities for the sites. Criteria governing the quality of the effluent are included under Part D, Item 10 in this Licence.

The Licensee is required to submit to the Board for approval, at least sixty (60) days prior to commissioning, an Operation and Maintenance Manual for Sewage Treatment Facility as indicated under Part E, Item 2. For-construction engineering design drawings are required for Sewage Treatment Facility at least sixty (60) days prior to construction as indicated under Part H, Item 1.

H. Spill Contingency Planning

Subsequent to submitting the water licence application, the Proponent submitted a site specific Spill Contingency Plan (SCP). The Board has approved the SCP under Part I, Item 1 of the Licence.

I. Abandonment and Restoration

The Board has approved, under Part J, Item 1, the Plan entitled “Remedial Action Plan Hope Lake, Nunavut” dated March 2011, that was submitted as additional information with the application. The Licensee is required to submit to the Board for review, any revision to the Plans undertaken throughout the life of the project.

G. Monitoring

Conditions have been included within the Licence, under Part K, requiring the Licensee to install Monitoring Stations at the Water Supply Facility, Wastewater Disposal Facility and Waste segregation and storage, borrow sources and potential excavations area(s). All of the monitoring results and analyses involving the results are to be provided to the NWB as part of the annual reporting requirements. This requirement is included under Part K in the Licence.

Although the “Walk Away” option has been selected, the Board has, nevertheless, included under Part K, Item 1 in the Licence, a condition requiring the Licensee to submit, if necessary, a Post-closure Monitoring Plan to the Board for approval at least sixty (60) days prior to initiating Post-closure monitoring activities.

The Board, having considered the Application, interveners’ comments and the nature of the undertaking, has accordingly set terms and conditions in this Licence to govern the use of Water and the disposal of Wastes during the proposed undertaking.



NUNAVUT WATER BOARD WATER LICENCE

Licence No. 1BR-HLR1314

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 AFFAIRS AND NORTHERN DEVELOPMENT (DIAND)
(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 renewal:

Licence Number/Type: **1BR-HLR1314 TYPE "B"**

Water Management Area: NUNAVUT 27 AMUNDSEN GULF WATERSHED

Location: HOPE LAKE REMEDIATION PROJECT
KITIKMEOT REGION, NUNAVUT

Classification: INDUSTRIAL UNDERTAKING

Purpose: DIRECT WATER USE AND DEPOSIT OF WASTE

Quantity of Water use not
to Exceed: TEN (10) CUBIC METER PER DAY

Date of Licence Issuance: JUNE 27, 2013

Expiry of Licence: JUNE 26, 2014

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 disposal of waste for an undertaking classified as Industrial at the Hope Lake Remediation Project consisting of the Hope Lake largest site and Husky Creek and Willow Creek satellite sites. The Hope Lake site is located approximately 75 km Southwest of Kugluktuk within the Kitikmeot Region, Nunavut (generally at latitude 67° 26' 06''N and longitude 116° 25' 40''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

“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*;

“Borrow Sources” mean sources of aggregates used backfilling of excavations and repairs to the Hope Lake site's airstrip and/or for purposes as described in the Water

Licence Application received October 15, 2012.

“Demolition Rinse Wastewater” means water and associated waste generated by the operation of decontamination (i.e., barrel and equipment washing) 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, sewage lagoon, 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/disposal 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*;

“Licensee” means the holder of this Licence;

“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;

“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;

“PHC Contaminated Soil” means soil contaminated with hydrocarbons in which the total petroleum hydrocarbons (F1 to F3 Fractions) concentration exceeds 2500 mg/kg as described in the Remedial Action Plan included with the Water Licence Application received October 15, 2012.

“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 Treatment Facility” comprises the area and engineered structures designed for the containment and/or treatment of sewage and greywater generated at the Hope Lake Remediation Project site as described in the Water Licence Application received October 15, 2012;

“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;

“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” 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 on the Appurtenant Undertaking with the Board within sixty (60) days of completion of the remedial work field program, containing the following information:
 - a. A summary report of water use and waste disposal activities;
 - b. A list of unauthorized discharges and a summary of follow-up actions taken;
 - c. A summary of all waste backhauled to any community in Nunavut required under Part D, Item 5;
 - d. A summary of all remediation work undertaken, including photographic records of site conditions before, during and after completion of operations;
 - e. Any revisions to the approved Plan entitled “Remedial Action Plan, Hope Lake, Nunavut” dated March 2011;
 - f. Any revisions to the site specific, Spill Contingency Plan, submitted under Part I, Item 1;
 - g. 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;
 - h. A summary of all information requested and results of the Monitoring Program; and
 - i. Any other details on water use or waste disposal requested by the Board by November 1 of the year being reported.
2. The Licensee shall notify the NWB of any changes in operating plans or conditions associated with this project at least thirty (30) days prior to any such change.
3. The Licensee shall install flow meters or other such devices, or implement suitable methods required for the measuring of water volumes as required under Part K, Item 4.
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 shall be submitted in the form of an Addendum to be included with the Annual Report.

7. Every Plan to be carried out pursuant to the terms and conditions of this Licence shall become a part of this Licence, and any additional terms and conditions imposed upon approval of a Plan by the Board become part of this Licence. All terms and conditions of the Licence should be contemplated in the development of a Plan where appropriate.
8. The Licensee shall, within sixty (60) days of issuance of this Licence, post signs in the appropriate areas identifying the locations and the “Monitoring Program Stations” for each Sewage Treatment Facility, Water Supply Facility and all other facilities authorized under this Licence. All postings shall be in the Official Languages of Nunavut.
9. The Licensee shall ensure a copy of this Licence is maintained at the site of operations at all times. Any communication with respect to this Licence shall be made in writing to the attention of:
 - (a) **Manager of Licensing:**
Nunavut Water Board
P.O. Box 119
Gjoa Haven, NU X0B 1J0
Telephone: (867) 360-6338
Fax: (867) 360-6369
Email: licensing@nunavutwaterboard.org
 - (b) **Inspector Contact:**
Manager of Field Operations, AANDC
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 (and/or Inuinnaqtun).
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 WATER USE

1. The Licensee shall obtain all water for domestic camp use and/or miscellaneous purposes from the small lake north of the camp area or from Hope Lake as stated in the Application received October 15, 2012. Total water use for the Hope Lake Remediation

Project shall not exceed ten (10) cubic meters per day.

2. 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.
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. Sediment and erosion control measures shall be implemented prior to and maintained during the undertaking to prevent deposition of dust and/or of sediment into water.

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 practice on-site land filling of domestic waste, unless otherwise approved by the Board in writing.
4. 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.
5. The Licensee shall provide to the Board documented authorization from the communities prior to any backhauling and disposal of wastes to those communities from the Hope Lake Remediation Project.
6. The Licensee shall maintain records of all waste backhauled and records of confirmation of proper disposal of backhauled waste. These records shall be made available to an

Inspector upon request.

7. The Licensee shall direct all Sewage to the Sewage Treatment Facility as described in the application or as otherwise approved by the Board in writing.
8. During camp setup and construction of Wastewater Disposal Facility, the Licensee may contain all camp sewage and greywater in a sump. The sump shall be located at a distance of at least thirty one (31) metres 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 of any sump 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 Treatment Facility and areas designated for segregating and storing wastes.
10. All Waste discharged from the Discharge Point(s) of the Sewage Treatment Facility at monitoring Program Station(s) HLR-2 shall not exceed the following Effluent quality limits:

Parameter	Maximum Allowable Concentration
BOD ₅	80 mg/L
Total Suspended Solids	100 mg/L
Faecal Coliforms	1 x 10 ⁴ CFU/100 mL
pH	6.0 to 9.0 (pH units)
Oil and Grease	No visible sheen

11. The Licensee shall collect and temporarily store in preparation for future disposal all water generated from the storage and segregation of solid waste, demolition and cleaning rinse water resulting from decontamination processes or procedures and water derived from borrow pits, quarry sites and excavation activities.
12. If the Effluent referred to in Part D, Item 10 does not meet the discharge criteria stipulated in this Licence, it shall be considered hazardous waste and disposed off-site at an approved facility or as otherwise approved by the board in writing.
13. The discharge location for all treated effluents described in Part D, Item 10 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.
14. The Licensee shall provide, as part of its Annual Report, the results of any laboratory analyses carried out on materials from potential Borrow Sources prior to use as construction materials. Borrow Sources containing materials that possess acid generating and metal leaching characteristics cannot be used as construction materials for the remediation projects.

15. All water collected from excavated areas including borrow pits shall be pumped to an area as described in Part D, Item 11, or as otherwise approved by the Board in writing.
16. The Licensee shall provide proper storage, transport and disposal off site at an approved facility of all Non-hazardous and Hazardous Waste materials, scrap metal, discarded machinery and parts, and other bulky material, identified in the Application received on October 15, 2012, including PHC Contaminated soils and waste oil generated through construction and remediation activities, or as otherwise approved by the Board in writing. The Licensee shall not transport Hazardous Waste prior to registering with the Government of Nunavut as a waste generator and utilizing the prescribed manifests.
17. The Licensee shall dispose of all soils containing substances in excess of maximum allowable concentrations, as indicated in Table No.1, by collection, containment and shipment off-site to a licensed disposal facility.
18. The Licensee shall dispose of all scrap metal, discarded machinery and parts, and other bulky material in a manner that conforms to the Remedial Action Plan that was submitted with the Licence Application.

PART E: CONDITIONS APPLYING TO THE UNDERTAKING

1. The Licensee is allowed to use material from Borrow sources for the purposes specified in the “Remedial Action Plan Hope Lake, Nunavut” dated March 2011, provided that those Borrow Sources are approved by an Inspector, free of contaminants and satisfies the requirement of Part D, Item 14 of this Licence.
2. The Licensee shall submit to the Board for approval, within sixty (60) days prior to commissioning, an Operation and Maintenance Manual for all facilities constructed under the Hope Lake Remediation Project, including the Sewage Treatment Facility. The manual shall be prepared in accordance with the *Guidelines for the Preparation of an Operation and Maintenance Manual for Sewage and Solid Waste Disposal Facilities in the Northwest Territories* (1996).
3. The Operations and Maintenance Manual referred to in Part E, Item 2 shall address as a minimum the following items with respect to the Sewage Treatment Facility:
 - a. Design specification with complete as-built engineering design drawings, signed and stamped by an Engineer;
 - b. Operations and maintenance procedures;
 - c. Monitoring program, sampling and analytical methods, licensed discharge criteria;
 - d. Erosion control measures during the discharge of treated effluent; and
 - e. Decommissioning and Closure options for the proposed Facility.
4. The Licensee shall, upon the failure of any constructed facilities, repair such facilities

immediately to the appropriate standards as recommended by an Engineer.

5. The Licensee shall implement proper handling, storage and transportation procedures for hazardous materials during clean-up activities.
6. The Licensee shall minimize disturbance to terrain, permafrost and drainage during extraction of granular material, development and closure of site infrastructure, movement of contractor's equipment and personnel around the site and removal of site debris.
7. The Licensee shall not cause erosion to the banks of any body of water and shall provide necessary controls to prevent such erosion.
8. Sediment and erosion control measures shall be implemented prior to and maintained during the operation to prevent entry of sediment into water.
9. The Licensee shall design and construct all stream crossings to minimize erosion and/or deposition of waste into water.
10. The Licensee shall ensure that existing creek channels are maintained at their normal width and depth to the extent possible, during and after construction.
11. 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 sources satisfying the requirements of Part E, Item 1. Such material must not be removed or gathered from below the ordinary high water mark of a creek, stream or from any water body.
12. All sites affected by construction or removal activities shall be stabilized, landscaped as necessary, and suitable erosion control measures implemented to minimize sediment deposition into watercourses located on or adjacent to the site.

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 including the immediate banks except what is for immediate use. Camps shall be located such as to minimize impacts on surface drainage.
2. The Licensee shall conduct all activities in such a way as to minimize impacts on surface drainage and the Licensee shall immediately undertake corrective measures in the event of any impacts on surface drainage.
3. The Licensee shall construct all winter lake and stream crossings, including ice bridges, entirely of water, ice or snow. The Licensee shall minimize disturbance by locating ice bridges in an area that requires the minimum approach grading and the shortest crossing

route. Stream crossings shall be removed or the ice notched prior to spring break-up.

4. With respect to access road, pad construction or other earthworks, the deposition of debris or sediment into or onto any water body is prohibited. These materials shall be disposed of at a distance of at least thirty one (31) metres from the ordinary High Water Mark in such a fashion that they do not enter Water.

PART G: CONDITIONS APPLYING TO DRILLING AND TRENCHING OPERATIONS

1. The Licensee is not authorized to drill under the provisions of this Licence.

PART H: CONDITIONS APPLYING TO CONSTRUCTIONS AND MODIFICATIONS

1. The Licensee shall submit to the Board for review within sixty (60) days prior to the construction of the Sewage Treatment Facility, complete for-construction engineering design drawings, signed and stamped by an Engineer. These designs shall consider, siting, operation, monitoring, sampling and analytical methods, decommissioning and closure options and plans for the proposed Facility.
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. such Modifications are consistent with the NIRB Screening Decision;
 - d. the Board has not, during the sixty (60) days following notification of the proposed Modifications, informed the Licensee that review of the proposal will require more than sixty (60) days; and
 - e. the Board has not rejected the proposed Modifications.
4. Modifications for which all of the conditions referred to in Part G, Item 1 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 Board has approved the Plan entitled “Fuel Contingency Plan Remediation of Hope Lake, Nunavut” dated October 22, 2012 that was submitted on November 28, 2012 as additional information with the Application.
2. The Licensee shall prevent any chemicals, petroleum products or wastes associated with the project from entering Water. All sumps and fuel caches shall be located at a distance of at least thirty one (31) metres from the ordinary High Water Mark of any adjacent water body and inspected on a regular basis.
3. The Licensee shall conduct any equipment maintenance and servicing in designated areas and shall implement special procedures (such as the use of drip pans) to manage motor fluids and other 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 Inspector at (867) 975-4295; and
 - c. For each spill occurrence, submit to the Inspector, no later than thirty (30) days after initially reporting the event, a detailed report that will include the amount and type of spilled product, the GPS location of the spill, and the measures taken to contain and clean up the spill site.

PART J: CONDITIONS APPLYING TO ABANDONMENT AND RESTORATION OR TEMPORARY CLOSING

1. The Board has approved the Plan entitled “Remedial Action Plan Hope Lake, Nunavut” dated March 2011 and received as part of the Application on October 15, 2012.
2. The Licensee shall complete all restoration work for the temporary camp facilities and waste disposal activities not included under Part J, Item 1 of this Licence, prior to the expiry of this Licence.
3. The Licensee shall backfill and restore all sumps to the pre-existing natural contours of the land.
4. The Licensee shall contour and stabilize all disturbed areas and restore as practically as possible to a pre-disturbed state upon completion of work.

PART K: CONDITIONS APPLYING TO THE MONITORING PROGRAM

1. The Licensee shall submit to the Board for review, within sixty (60) days subsequent to completion of remediation activities, a Post Remediation Report that includes analytical results obtained from sampling conducted to determine whether remediation objectives have been satisfied. This Report should include an evaluation of any groundwater quality, soil analysis, a general investigation of the project area, and any other information that would assist in confirming the state of the site.

2. The Licensee shall maintain Monitoring Program stations at the following location:

Monitoring Program Station	Description	Status
HLR-1	Raw water supply intake at the Small Lake and/or Hope lake	Active (Volume)
HLR-2	Final Discharge Pont(s) from the Sewage Treatment Facility-(Cell #1 and/or Cell #2)	Active (Volume) (Water Quality)
HLR-3	Final Discharge Point(s) from the Solid Waste Segregation and Storage, Borrow Sources and Excavations Area(s)	Active (Water Quality)

3. If there is a need for Post-closure monitoring, the Licensee shall submit to the Board for approval, at least sixty (60) days prior to initiating any Post-closure monitoring activities, a Post-closure Monitoring Plan for the project sites. The plan shall include information on stability of the sites and the need for groundwater monitoring.
4. The Licensee shall measure and record, in cubic metres, the daily quantities of water utilized for camp and other purposes at the Intake of Water Supply Facility.
5. The Licensee shall measure and record in cubic metres, the daily quantities of effluent discharged from the Sewage Disposal Facility at Monitoring Station HLR-2.
6. The Licensee shall sample contact water associated with the dewatering of contaminated soil areas and/or water within the perimeter of the solid waste segregation and storage area(s), demolition rinse water, and water from Borrow Sources at Monitoring Station(s) HLR-3 prior to discharge and analyze for the following parameters:

pH	Conductivity
Total Suspended Solids	Ammonia Nitrogen
Nitrate – Nitrite	Oil and Grease (visual)
Total Phenols	Sulphate
Total Hardness	Total Alkalinity

Sodium	Potassium
Magnesium	Calcium
Chloride	Total Cadmium
Total Copper	Total Chromium
Total Iron	Total Lead
Total Mercury	Total Nickel
Total Zinc	Total Phosphorous
Total Aluminum	Total Manganese
Total Cobalt	Total Arsenic
Total Petroleum Hydrocarbons (PHC)	
Polycyclic Aromatic Hydrocarbons (PAH)	
Benzene, Toluene, Ethylbenzene, Xylene (BTEX)	

7. The Licensee shall provide 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.
8. The Licensee shall provide the GPS co-ordinates (in degrees, minutes and seconds of latitude and longitude) of all locations where wastes associated with camp operations and exploration activities are deposited.
9. 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 Wastewater Disposal Facility.
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. Additional monitoring requirements may be requested by an Inspector.
13. The Licensee shall include in the Annual Report required under Part B, Item 2 all data, monitoring results and information required by this Part.

Table No. 1

From Canadian Council of Ministers of the Environment (CCME) Soil Quality Guidelines for the Protection of Environmental and Human Health (Agricultural)

Parameter	Concentration (mg/kg dry weight)
Arsenic	12
Boron	2
Cadmium	1,4
Chromium (total)	64
Copper ⁱ	580
Lead	70
Nickel	50
Tin	5
Vanadium ⁱⁱ	310
Zn	200

ⁱ Site Specific Criteria proposed by Licensee with the Water Licence application, submitted on October 15, 2012.

ⁱⁱ Site Specific Criteria proposed by Licensee with the Water Licence application, submitted on October 15, 2012.