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NUNAVUT WATER BOARD
NUNAVUT IMALIRIYIN KATIMAYINGI
OFFICE DES EAUX DU NUNAVUT

File No.: **1BR-KRK1318**

August 16, 2013

Shah Alam, Municipal Planning Engineer
Department of Community & Government Services
Government of Nunavut
Helen Magsagak Building
Cambridge Bay, NU
X0B 0C0
Email: salam@gov.nu.ca
michel.gregoire@tetrattech.com

RE: NWB Renewed Licence No. 1BR-KRK1318

Dear Mr. Alam and Mr. Grégoire:

Please find attached Water Licence No. **1BR-KRK1318** issued to the Government of Nunavut – Department of Community & Government Services (GN-CGS) by the Nunavut Water Board (NWB or Board) 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 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 NLCA and the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* (NWNSTRTA). 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's 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 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 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/sj/ri

Enclosure: Licence No. **1BR-KRK1318**
Comments – AANDC, EC, DFO

cc: Kitikmeot Distribution List

¹ Aboriginal Affairs and Northern Development Canada (AANDC), March 20, 2013; Environment Canada (EC), March 20, 2013 and Fisheries and Ocean Canada (DFO), March 5, 2013.

DECISION

LICENCE NUMBER: 1BR-KRK1318

This is the decision of the Nunavut Water Board (NWB) with respect to the complete application received on February 13, 2013 for the renewal of a water licence made by:

GOVERNMENT OF NUNAVUT – DEPARTMENT OF COMMUNITY & GOVERNMENT SERVICES (GN-CGS)

to allow for the disposal of waste during operation of the Hydrocarbon Impacted Soil Treatment Facility(Kugaaruk Landfarm or Landfarm Facility) located approximately 1.5 kilometres southeast of the Hamlet of Kugaaruk within the Kitikmeot Region, Nunavut, with geographical coordinates generally as follows:

Latitude: 68° 31' 10" N	Longitude: 89°48' 22" W
Latitude: 68° 31' 12" N	Longitude: 89°48' 09" W
Latitude: 68° 31' 10" N	Longitude: 89°48' 07" W
Latitude: 68° 31' 07" N	Longitude: 89°48' 23" W

DECISION

After having been satisfied that the application was for a project located within an area in which there is no approved Land Use Plan² and is exempt from the requirement for screening as described within Schedule 12-1 by the Nunavut Impact Review Board (NIRB)³ in accordance with Article 12 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 NWB decided that the application could proceed through the regulatory process. 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 *Nunavut Waters and Nunavut Surface Rights Tribunal Act* (NWNSTRA), waived the requirement to hold a public hearing, and determined that:

Licence No. 1BR-KRK1112 be renewed as Licence No. 1BR-KRK1318 subject to the terms and conditions contained therein. (Motion #: 2013-B1-032)

SIGNED this 14th day of August 2013 at Gjoa Haven, NU.



Thomas Kabloona
Nunavut Water Board, Chair

TK/sj/ri

² Nunavut Planning Commission (NPC) Land Use Conformity Decision, June 26, 2013.

³ Nunavut Impact Review Board (NIRB) Screening Exemption Decision, February 28, 2013.

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NWB LICENCE No. 1BR-KRK1318

I. BACKGROUND

In 2005 the Government of Nunavut – Department of Community and Government Services (GN-CGS) constructed a Landfarm Facility approximately 1.5 kilometres southeast of the Hamlet of Kugaaruk. The facility consists of a soil treatment cell and a water retention cell with approximately one year's storage capacity. Following construction of the Landfarm Facility, in 2006 a Phase III Environmental Site Assessment (ESA) was conducted that identified approximately 3,500 m³ of petroleum hydrocarbon contaminated soil located at a former fuel storage compound.

Treatment of approximately 2,172 m³ of the soil identified in the ESA commenced in 2007 and continues to date with the aim of meeting appropriately defined remediation objectives. All effluent collected from the Landfarm Facility is required to at least meet discharge criteria before being discharged into the local drainage system that eventually reports to the St. Peter's Bay, approximately 1.2 kilometres downstream of the Landfarm Facility.

The Licensee indicated that it has not placed any additional soil for treatment at the Landfarm Facility; however, unauthorized dumping of soil, debris, and lubricants by unknown parties have been noted over the years following the commencement of operation of the facility. The Licensee has stated that after the soil that is currently being treated is remediated, it plans to continue operating the facility.

II. PROCEDURAL HISTORY

The original three-year licence for the project, which allowed for the deposit of waste, was issued on October 13, 2006 and expired on August 31, 2009. Following a written renewal application and review process, a two-year renewal licence was issued on January 17, 2011; however, that licence expired on December 31, 2012.

On February 13, 2013, the NWB received a complete application (Application) from Tetra Tech WEI Inc., on behalf of the GN-CGS (Applicant or Licensee) for the five year renewal of Licence 1BR-KRK1112. The renewal Application consisted of the following documents:

- Request for renewal cover letter;
- Kugaaruk Landfarm Facility 2011 Annual Report Revision;
- Operations and Maintenance Manual Kugaaruk Landfarm Facility NWB Licence No. 1BR-KRK1112;
- Application for Water Licence Renewal;
- Interim Abandonment and Reclamation Plan for the Kugaaruk Landfarm Facility;
- Letter of authorization from GN-CGS to Tetra Tech;
- Cover letter for revision to Kugaaruk Landfarm Facility 2011 Annual Report; and
- Renewal translated summary.

Following a preliminary technical review, which determined that the Application met the requirements under section 48(1) of the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* (NWNSRTA or Act), the NWB distributed the Application on February 18, 2013 for a thirty (30) – day public comment period.

Prior to the deadline for comments, March 18, 2013, the NWB received submissions from Aboriginal Affairs and Northern Development Canada (AANDC) – Water Resources Division, Environment Canada (EC), and Fisheries and Oceans Canada (DFO). The Interveners' submissions included in their submissions comments and recommendations related to improving the overall operational aspects of the Landfarm Facility. No objections, however, were expressed with respect to any potential Board decision that will result in issuance of a renewal Licence.

III. ISSUES

Term of Licence

In accordance with the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* s. 45, the NWB may issue a licence for a term not exceeding twenty-five years. The applicant requested a five (5) – year term for this licence, which the NWB believes is consistent with and appropriate for the type of undertaking. The Board has, therefore, granted the five-year term requested by the Applicant;

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 waste deposit activities carried out under the Licence. This information is kept in the NWB's public registry and made available to interested persons upon request. In addition, the NWB maintains annual reporting information on its FTP site, which can be accessed using the following link (username: "**public**" and password: "**registry**"): http://nunavutwaterboard.org/en/public_registry.

The Licensee has filed with the Board Annual Reports for both the 2011 and 2012 reporting periods; however, the 2012 Annual Report was received several months following the due date. The Licensee should note that future reports required under the licence must be submitted on time and in accordance with the requirements in the licence.

Water Use

The Applicant has indicated that based on the type of activities associated with the project there are no requirements for the use of Water for domestic and/or industrial purposes; therefore, the NWB has not included conditions in this renewal licence authorizing the use of water.

Effluent Discharge

Under this renewed licence, the original effluent discharge criteria have been maintained, which implies that the Licensee is not allowed to discharge effluent not meeting the criteria set in the Licence.

As-Built Drawings

The NWB has excluded from this renewal Licence terms and conditions Part E, Items 1, 2, and 3 that had been included and satisfied under the expired Licence, 1BR-KRK1112. Part E, Items 1, 2, and 3 pertain to the submission of details regarding ground water monitoring wells, as-built drawings for the Landfarm Facility, and as-built drawings for the Splash Pad, respectively.

Operations and Maintenance Manual

Under Part E, Item 1 in this Licence, the Licensee is required to submit to the Board for approval a revised Operations and Maintenance Manual. This is a requirement that has been carried over from the now expired Licence, 1BR-KRK1112. A revised copy of the Manual was submitted to the Board in April 2011, which the Board had reviewed and identified a number of deficiencies to be addressed before approval is granted, as indicated in the Board's April 8, 2011 correspondence to the Licensee. A copy of the same version of the manual was submitted as part of the renewal application; however, the Board has not approved the document with the issuance of this licence for the aforementioned reason.

Drilling

Conditions related to drilling for the installation of monitoring wells have been carried over from the previously expired Licence to this Licence to allow for flexibility should the installation of additional monitoring wells be required in the future.

Spill Contingency Plan

A revised Spill Contingency Plan (SCP) was included as an appendix under the revised Operations and Maintenance Manual submitted as part of the Application. The Board has reviewed the SCP and identified deficiencies, which the Licensee must address in the form of an addendum to be submitted to the Board for review.

Abandonment and Restoration

The Licensee has submitted a revised Interim Abandonment and Restoration Plan to the previously approved Plan. The revised plan has been accepted by the Board under this renewed Licence.

Monitoring

All of the monitoring requirements under the expired licence have been carried over to this Licence; however, the names of the groundwater monitoring stations have been changed and/or included to reflect existing conditions at project site. In addition, the Quality Assurance and Quality Control Plan submitted as an appendix under the Operations and Maintenance Manual has been accepted by the Board with the issuance of the licence.

The Board, having appropriately considered the Application, interveners' submissions and the requirements associated with the type of undertaking, has accordingly set terms and conditions in this renewed Licence to govern the deposit of Wastes associate with the Kugaaruk Landfarm Facility.



NUNAVUT WATER BOARD WATER LICENCE RENEWAL

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

GOVERNMENT OF NUNAVUT – DEPARTMENT OF
COMMUNITY AND GOVERNMENT SERVICES (GN-CGS)

(Licensee)

HELEN MAGSAGAK BUILDING, CAMBRIDGE BAY, NU X0B 0C0

(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 and amendment:

Licence Number/Type: 1BR-KRK1318 TYPE “B”

Water Management Area: GULF OF BOOTHIA WATERSHED (34)

Location: KUGAARUK LANDFARM FACILITY
HAMLET OF KUGAARUK KITIKMEOT REGION, NUNAVUT

Classification: INDUSTRIAL UNDERTAKING

Purpose: DEPOSIT OF WASTE

Quantity of Water use not
to Exceed: NO WATER USE AUTHORIZED UNDER THE LICENCE

Date of Licence Issuance: AUGUST 16, 2013

Expiry of Licence: AUGUST 15, 2018

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 deposit of Waste for an undertaking classified as Industrial as per Schedule I of the *Regulations* at the Kugaaruk Hydrocarbon Impacted Soil Treatment Facility (Kugaaruk Landfarm Facility or Landfarm Facility), located 1.5 kilometres south-east of the Hamlet of Kugaaruk within the Kitikmeot Region, Nunavut.

- a. This Licence is issued subject to 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 Act, or other statutes imposing more stringent conditions relating to the quantity, type or manner under which any such Waste may be so deposited, this Licence shall be deemed 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 all applicable legislation, guidelines and directives.

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;

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

“**Applicant**” means the Licensee;

“**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*;

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

“**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;

“Grab Sample” means a single Water or wastewater sample taken at a time and place representative of the total discharge;

“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;

“Landfarm” comprises the area and associated infrastructure, including the soil disposal cell, water retention cell, and Splash Pad, designed to contain and remediate hydrocarbon impacted soils as described in the application for water licence filed by the Applicant on May 25th, 2005 and as illustrated in drawings signed and stamped by S. Sebastian entitled “Contaminated Soil Site Plan and Section”, drawings no’s 01-4109-C1001 Rev C and 01-4109-C1002 Rev B.

“Licensee” means the holder of this Licence;

“Modification” means an alteration to a physical work that introduces new structure or eliminates an existing structure and does not alter the purpose or function of the work, but does not include an expansion, and changes to the operating system that are consistent with the terms of this Licence and do not require amendment;

“Monitoring Program” means a monitoring program established to collect data on surface water and groundwater quality to assess impacts to the freshwater aquatic 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 *Nunavut Waters Regulations SOR 2013/669 18th April, 2013*;

“Splash Pad” means the infrastructure design to minimize the potential for erosion during discharge of Effluent from the Landfarm as illustrated in the drawing stamped by S. Sebastian, P. Eng., entitled “Landfarm Water Handling Facilities, Kugaaruk Nunavut, Overall Site Plan” Drawings No. 022880805-SKT-V0002-01, prepared by Wardrop for GN-CGS, dated 10/02/01;

“Treatment Objective” means the treatment objective for the soil within the Kugaaruk Landfarm which is the Canadian Council of Ministers of the Environment (CCME) *Canada – Wide Standard for Petroleum Hydrocarbon (PHC) in Soil*, revised January 2008 as determined by the Government of Nunavut, Environmental Protection Division based on the 2009 *Environmental Guideline for Site Remediation*;

“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;

“Waste” means, as defined in section 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 water as defined in section 4 of the Act; and

“Water Treatment Facilities” means the activated carbon water treatment unit and associated structures as described in the application for the water licence filed by the Applicant on September 15, 2009.

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;
- 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 for review, no later than March 31st of the year following the calendar year being reported, which shall contain the following information collected during that period:
 - a. A summary of all waste disposal activities including;
 - i. Quantity and quality of effluent discharged from the Landfarm;
 - ii. Characterization of soils placed in the Landfarm for treatment; and
 - iii. Quantity of soils placed in the Landfarm for treatment;
 - b. Tabular summaries of all data generated under the Monitoring Program, an analysis and interpretation of the results, and any follow-up measures that may be required;
 - c. The monthly and annual quantities in cubic metres of all Effluent discharged;
 - d. A summary of modifications and/or major maintenance work carried out on the Landfarm, including all associated structures and facilities;
 - e. An analysis of progress achieved in remediating the contaminated soil in the Landfarm;
 - f. The final destination of treated soil and intended use;
 - g. Any modifications to the Monitoring Program in accordance with Part J, Item 21;
 - h. A list of unauthorized discharges and summary of follow-up action taken;
 - i. A summary of any abandonment and restoration work completed during the year and an outline of any work anticipated for the next year;
 - j. Any revisions to approved plans and manuals as required by Part B, Item 9 submitted in the form of an Addendum;
 - k. A public consultation/participation report describing any consultation with local organizations and the residents of the nearby communities;
 - l. A summary of any studies or reports requested by the Board that relate to Waste disposal or restoration, and a brief description of any future studies planned; and
 - m. Any other details on Waste disposal requested by the Board by November 1st of the year being reported.
2. The Licensee shall comply with the Monitoring Program described in this Licence, and any amendments to the Monitoring Program as may be made from time to time, pursuant to the conditions of this Licence.
3. The Monitoring Program and compliance dates specified in the Licence may be modified at the discretion of the Board.
1. The Licensee shall install flow meters or other such devices, or implement suitable methods required for measuring of volumes of water discharged as required under Part J, Item 5.
4. The Licensee shall, within ninety (90) days after the first visit by the Inspector following issuance of this Licence, post the necessary signs to identify the stations of the Monitoring Program. All signage postings shall be in the Official Languages of Nunavut.

5. The Licensee shall post signs in the appropriate areas to inform the public of the location of the Landfarm. All signage postings shall be in the Official Languages of Nunavut.
6. 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.
7. The Licensee shall, for all Plans submitted under this Licence, implement the Plan as approved by the Board in writing.
8. 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 condition 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.
9. The Licensee shall review the Plans referred to in this Licence as required by changes in operation and/or technology and modify the Plans or Manuals accordingly. Revisions to the Plans or Manuals are to be submitted in the form of an addendum to be included with the Annual Report required by Part B, Item 1(j), complete with a revisions list detailing where significant content changes are made.
10. The Licensee shall ensure a copy of this Licence is maintained onsite 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
11. The Licensee shall submit one (1) paper copy and one (1) electronic copy of all reports, studies, and plans to the Board or as otherwise requested by the Board. Reports or studies submitted to the Board by the Licensee shall include an executive summary in English and Inuktitut, and Inuinnaqtun.

12. The Licensee shall ensure that any document(s) or correspondence submitted by the Licensee to the Board, is received by the Board and maintain on file a copy of the acknowledgment of receipt issued by the Manager of Licensing.
13. This Licence is assignable as provided in Section 44 of the Act.

PART C: CONDITIONS APPLYING TO WATER USE AND MANAGEMENT

1. The use of Water is not authorized under the terms and conditions of this Licence.
2. The Licensee shall not remove any material from below the ordinary High Water Mark of any water body.
3. The Licensee shall not conduct any activity that will cause erosion to the banks of any body of water and shall provide necessary controls to prevent such erosion.
4. The Licensee shall implement and maintain sediment and erosion control measures prior to and during the operations to prevent entry of sediment and/or dust into Water.

PART D: CONDITIONS APPLYING TO WASTE DISPOSAL AND MANAGEMENT

1. The Licensee shall treat, to the appropriate Treatment Objective, Type B Soil in the Landfarm Facility, or as otherwise approved by the Board.
2. The Licensee shall maintain the Landfarm Facility to the satisfaction of the Inspector.
3. The Licensee shall provide at least fifteen (15) days written notice to the Inspector prior to any planned discharges from the Landfarm Facility. The notice shall include an estimated discharge volume, Effluent quality or results of monitoring under Part J, Item 7, and the proposed location for the discharge.
4. All Effluent discharged from the Landfarm at Monitoring Program Station SW2 shall not exceed the following Effluent quality limits:

Parameter	Maximum Concentration of any Grab Sample (mg/L)
pH	6.5 to 9
TSS	50
Oil and grease	15 and no visible sheen
Total Lead	0.001
Benzene	0.37
Toluene	0.002
Ethylbenzene	0.090

5. Effluent that exceeds Effluent quality limits in Part D Item 4 shall be treated until it meets the

above limits or it shall be considered Hazardous Waste and disposed off-site at an approved facility or as otherwise authorized by the Board in writing.

6. The Licensee shall direct all Effluent from the Landfarm that meets the Effluent quality limits of Part D, Item 4 to the Splash Pad, unless otherwise approved by the Board in writing.
7. The discharge point for all Effluent described in Part D, Item 4 shall be located at a minimum of thirty-one (31) metres from the ordinary High Water Mark from any Water body and where direct or indirect flow into a Water body is not possible and no additional impacts are created.
8. The Licensee shall dispose of soils containing contaminants in excess of the Treatment Objectives off site at an approved treatment facility or as otherwise approved by the Board in writing.
9. The Licensee shall, prior to the removal of any treated soil from the Landfarm Facility confirm with the Government of Nunavut, Environmental Protection Service that the soils have been treated to meet all legislatively-required treatment objectives.

PART E: CONDITIONS APPLYING TO CONSTRUCTION AND OPERATIONS

1. The Licensee shall submit to the Board for approval within thirty (30) days following the date of issuance of this Licence, a revised Operations and Maintenance Manual for the Landfarm Facility. The revised Plan shall address the issues identified in the NWB's December 8, 2011 correspondence as well as take into consideration the *Federal Guidelines for Landfarming Petroleum Hydrocarbon Contaminated Soils* (2005).
2. The Licensee shall not mix or blend petroleum hydrocarbon contaminated soils with non-contaminated soils for the expressed purpose of achieving the Treatment Objective.
3. The Licensee shall use clean material for construction, operation, and maintenance activities obtained from an approved source which has been demonstrated not to produce acid rock drainage and to be non-metal leaching.

PART F: CONDITIONS APPLYING TO DRILLING OPERATIONS

1. The Licensee is not authorized to drill except for the purposes of installing monitoring stations.
2. The Licensee shall not conduct any land-based drilling within thirty-one (31) metres of the ordinary High Water Mark of any Water body, unless otherwise approved by the Board in writing.
3. The Licensee shall ensure that all drill waste, including chips, muds and salts (CaCl₂) in any quantity or concentration, from land-based drilling, shall be disposed of in a properly constructed sump or an appropriate natural depression located at a distance of at least thirty one (31) metres 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.

4. If artesian flow is encountered, drill holes shall be immediately sealed and permanently capped to prevent induced contamination of groundwater or salinization of surface waters. The Licensee shall report all artesian flow occurrences within the Annual Report, including the location (GPS coordinates) and dates.

PART G: CONDITIONS APPLYING TO MODIFICATIONS

1. The Licensee shall submit to the Board for approval in writing, construction drawings stamped and signed by an Engineer, prior to the construction of any dams, dykes or structures intended to contain, withhold, divert or retain Water or Wastes.
2. The Licensee may, without written approval from the Board, carry out Modifications to the Landfarm Facility 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. the proposed 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.
3. Modifications for which all of the conditions referred to in Part G, Item 1, have not been met, may only be carried out upon approval from the Board in writing.
4. 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.
5. 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 H: CONDITIONS APPLYING TO SPILL CONTINGENCY PLANNING

1. The Licensee shall submit to the Board for review, within thirty (30) days of issuance of this Licence, an addendum to the Plan entitled “Kugaaruk Landfarm Spill Contingency Plan” dated April 2011, in the format set out by the *Consolidation of Spill Contingency Planning and Reporting Regulations R-068-93*. The revision shall include:
 - a. A site plan or topographical map of a suitable scale showing the facility location and surrounding sensitive environmental components including water bodies;

- b. An interactive fillable copy of the NT-NU Spill Report Form should be appended to the Plan as well as the guide to spill reporting; and
 - c. Additional contact information for the following agencies or organizations: the Nunavut Water Board, Government of Nunavut –Department of Environment (GN-DoE), Environment Canada (EC), Fisheries and Oceans Canada (DFO), and the Hamlet of Kugaaruk.
- 2. If, during the period of this Licence, an unauthorized discharge of Waste and/or Effluent occurs, or if such a discharge is foreseeable, the Licensee shall:
 - a. Employ the Spill Contingency Plan;
 - b. Report the incident immediately via the 24-Hour Spill Reporting Line at (867) 920-8130 and to the Inspector at (867) 975-4295;
 - c. For each spill occurrence, submit a detailed report to the Inspector, no later than thirty (30) days after initially reporting the event, which includes the amount and type of spilled product, the GPS location of the spill, and the measures taken to contain, clean up and restore the spill site; and
 - d. Response measures for addressing spills in water on land or ice.
- 3. 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.
- 4. The Licensee shall ensure that any equipment maintenance and servicing be conducted only in designated areas and shall implement special procedures (such as the use of drip pans) to manage motor fluids and other waste and contain potential spills.

PART I: CONDITIONS APPLYING TO ABANDONMENT, RESTORATION AND CLOSURE

- 1. The Board has accepted the revisions to the approved plan entitled “Interim Abandonment and Reclamation Plan for the Kugaaruk Landfarm Facility,” dated December 2012 that has been approved by the Board under the previous licence.
- 2. The Licensee shall, at least six (6) months prior to abandoning any facilities or upon submission of final design drawings for the construction of new facilities to replace existing ones, submit to the Board for approval in writing, a Final Abandonment and Restoration Plan for the facilities being decommissioned. The Plan shall incorporate, where applicable, information on the following:
 - a. Waste disposal and treatment facilities;
 - b. Petroleum and chemical storage areas;
 - c. Any site affected by waste spills;
 - d. Leachate prevention;
 - e. An implementation schedule;

- f. Maps delineating all disturbed areas, and site facilities;
 - g. Consideration of altered drainage patterns;
 - h. Type and source of cover materials;
 - i. Future area use;
 - j. Hazardous wastes; and
 - k. A proposal identifying measures by which restoration costs will be financed by the Licensee upon abandonment.
3. The Licensee shall carry out progressive reclamation of any components of the project no longer required for the Licensee's operations.
 4. In order to promote growth of vegetation and the needed microclimate for seed deposition, all disturbed surfaces shall be prepared by ripping, grading, or scarifying the surface to conform to the natural topography.
 5. Areas that have been contaminated by hydrocarbons shall be reclaimed to meet objectives as outlined in the Government of Nunavut's Environmental Guideline for Site Remediation, January 2009. The use of reclaimed soils for the purpose of back fill or general site grading may be carried out only upon consultation and approval by the Government of Nunavut, Department of Environment and an Inspector.
 6. The Licensee shall complete the restoration work within the time schedule specified in the approved Abandonment and Restoration Plan in Part I, Item 2, or as subsequently revised and approved by the Board.
 7. The Licensee shall complete all restoration work prior to the expiry of this Licence.

PART J: CONDITIONS APPLYING TO THE MONITORING PROGRAM

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

Monitoring Station Label	Description	Frequency	Parameters
SW1	Monitoring station located within the run-off water retention cell	Prior to discharge	Quality in accordance with Part J Item 6 and Part J, Item 7
SW2	Effluent discharged point for the Landfarm Facility	At least once during discharge	Volume in accordance with Part J Item 5 Quality in accordance with Part J, Item 10

MW1	Groundwater monitoring station located approximately 3 m outside landfarm berm to west of the southwest corner and to north of stream	Twice per year (Once during spring freshet and once during mid-summer)	Quality in accordance with Part J, Item 8 Static groundwater level in accordance with Part J, Item 9
MW2	Groundwater monitoring station located approximately 3 m outside landfarm berm at approximately centre of the west-southwest wall and to northwest of MW1	Twice per year (Once during spring freshet and once during mid-summer)	Quality in accordance with Part J, Item 8 Static groundwater level in accordance with Part J, Item 9
MW3	Groundwater monitoring station located approximately 3 m outside landfarm berm to south of the west corner and to northwest of MW2	Twice per year (Once during spring freshet and once during mid-summer)	Quality in accordance with Part J, Item 8 Static groundwater level in accordance with Part J, Item 9
MW4	Groundwater monitoring station located approximately 3 m outside landfarm berm to north of the west corner and to north of MW3	Twice per year (Once during spring freshet and once during mid-summer)	Quality in accordance with Part J, Item 8 Static groundwater level in accordance with Part J, Item 9
MW5	Groundwater monitoring station located approximately 3 m outside landfarm berm to the northeast of the west corner and to northeast of MW4	Twice per year (Once during spring freshet and once during mid-summer)	Quality in accordance with Part J, Item 8 Static groundwater level in accordance with Part J, Item 9
MW6	Groundwater monitoring station located approximately 10 m outside landfarm to east of the east Corner	Twice per year (Once during spring freshet and once during mid-summer)	Quality in accordance with Part J, Item 8 Static groundwater level in accordance with Part J, Item 9

2. The Licensee shall confirm the locations and GPS coordinates for all Monitoring Program Stations referred to in Part J, Item 1 with an Inspector.
3. The Licensee shall measure and record the volume of all soil from all locations entering the Landfarm Facility.
4. The Licensee shall assess and record the concentration of F1 – F4 fractions in petroleum hydrocarbon contaminated soil entering the Landfarm Facility from all sources, as per the CCME *Canada-Wide Standard for Petroleum Hydrocarbons in (PHC) in Soil*.

5. The Licensee shall record the volume of all Effluent discharged from the Landfarm Facility at Monitoring Program Station SW2.
6. The Licensee shall sample prior to discharge at Monitoring Program Station SW1, to verify compliance with the Effluent quality limits under Part D, Item 4.
7. The Licensee shall sample prior to discharge at Monitoring Program Station SW1 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 (TPH)	
Polycyclic Aromatic Hydrocarbons (PAH)	
Benzene, Toluene, Ethylbenzene, Xylene (BTEX)	

8. The Licensee shall sample twice per year, once during spring freshet and once during mid-summer, at Monitoring Program Stations MW1, MW2, MW3, MW4, MW5, and MW6 and analyze for the parameters listed under Part J, Item 7.
9. During sampling events conducted under Part J, Item 8, the Licensee shall monitor the static depth to the groundwater level at Monitoring Program Stations MW1, MW2, MW3, MW4, MW5, and MW6.
10. The Licensee shall sample the Effluent discharged from Monitoring Program Station SW2 at least once during a particular discharge event to verify compliance with the Effluent quality limits under Part D, Item 4 and to analyze for the parameters listed under Part J, Item 7.
11. The Licensee shall maintain at least two groundwater monitoring wells down-gradient of the Landfarm Facility.
12. The Licensee shall maintain at least one groundwater monitoring well up-gradient of the Landfarm Facility for background data collection.
13. The Licensee shall sample soil at being treated in the Landfarm Facility no less

frequently than once every four (4) months during the period of active land treatment to monitor contaminant levels until analytical results are below acceptable levels as determined under Part D, Item 9.

14. The Licensee shall determine the GPS coordinates of all locations where remediated soil is deposited.
15. The Licensee shall record the date, amount, soil quality and final destination of all treated soil removed from the Landfarm Facility under Part D, Item 9.
16. 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.
17. All analyses shall be performed in a laboratory accredited according to ISO/IEC Standard 17025. The accreditation shall be current and in good standing.
18. The Board has accepted the Plan entitled “Quality Assurance and Quality Control Plan for the Kugaaruk Landfarm Facility NWB Licence No 1BR-KRK1112, dated April 2011.
19. The Licensee shall review as per Part B, Item 9, the plan submitted under Part J, Item 18 and modify it as necessary. Any revision to the plan shall be submitted to the NWB with an approval letter from an accredited lab that meets standards set in Part J, Item 17.
20. The Licensee shall, include in the Annual Report required under Part B, Item 1, all monitoring data and analysis and information required by this Part.
21. Modifications to the Monitoring Program may be made only upon written request and subsequent approval of the Board in writing.