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NUNAVUT WATER BOARD
NUNAVUT IMALIRIYIN KATIMAYINGI

File No: NWB4NUN0511

September 13, 2005

Mr. Alain Carriere
Nunatta Environmental Services Inc.
P.O. Box 267
Iqaluit, NU X0A 0H0
Email: a.carriere@sympatico.ca

RE: NWB Licence No. NWB4NUN0511

Dear Mr. Carriere:

Please find attached Licence No. NWB4NUN0511 issued to Nunatta Environmental Services Inc. by the Chief Administrative Officer of the Nunavut Water Board pursuant to Article 13.7.5 of the *Agreement between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in Right of Canada*. The terms and conditions of the attached Licence related to water use and waste disposal are an integral part of this approval.

Sincerely,

Philippe di Pizzo
Executive Director

Enclosure: Licence No. **NWB4NUN0511**

cc: Jim Rogers, DIAND Iqaluit
Scott Stewart, DIAND Inspector
Salamonie Shoo, Qikiqtani Inuit Association
Gladys Joudrey, Nunavut Impact Review Board
Josee Gallipeau, Nunavut Wildlife Management Board
Colette Spagnuolo, Environment Canada
Earle Baddaloo, GN-DOE
Derrick Moggy, Department of Fisheries and Oceans
Tania Gordanier, Department of Fisheries and Oceans



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NUNAVUT WATER BOARD

NUNAVUT IMALIRIYIN KATIMAYINGI

DECISION

LICENCE NUMBER: NWB4NUN0511 -Type "B"

This is the decision of the Nunavut Water Board (NWB) with respect to an application for a Licence dated August 4, 2004 made by:

NUNATTA ENVIRONMENTAL SERVICES INCORPORATED (NESI)

to allow for the use of water and disposal of waste during operations at the NESI Hydrocarbon-Impacted Soil Landfarm Facility, located in the North 40 Industrial Park within the City of Iqaluit, Nunavut (City of Iqaluit Lot 1, Block 229).

DECISION

After having been satisfied that the application was in conformity with the applicable Land Use Plan and exempt from the requirement for screening by the Nunavut Impact Review Board in accordance with Schedule 12.1, Paragraph 5 of the *Nunavut Land Claim Agreement* (NLCA), the NWB decided that the application could proceed through the regulatory process. In accordance with S.55.1 of the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* (NWNSRTA) and Article 13 of the *NLCA*, public notice of the application was given and interested persons were invited to make representations to the NWB.

After reviewing the submission of the Applicant and representations made by interested persons, the Chief Administrative Officer of the NWB, having given due regard to the facts and circumstances, the merits of the submissions made to it and to the purpose, scope and intent of the *NLCA* and of the *NWNSRTA*, determined that:

Licence Number NWB4NUN0511 -Type "B" be issued subject to the terms and conditions contained therein.

SIGNED this 13th day of September, 2005 at Gjoa Haven, NU.

Philippe di Pizzo

Chief Administrative Officer

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I. INTRODUCTION

On August 4, 2004, an application for a water license was filed with the Nunavut Water Board by Nunatta Environmental Services Incorporated (“NESI”) for water use and waste disposal activities at NESI’s Hydrocarbon-Impacted Soil Landfarm Facility located in the North 40 Industrial Park, within the City of Iqaluit, Nunavut (City of Iqaluit Lot 1, Block 229).

After having been satisfied that the application was in conformity with the applicable Land Use Plan and exempt from the requirement for screening by the Nunavut Impact Review Board in accordance with Schedule 12.1, Paragraph 5 of the *Nunavut Land Claim Agreement (NLCA)*, the NWB decided that the application could proceed through the regulatory process.

In accordance with S.55.1 of the *Nunavut Waters and Nunavut Surface Rights Tribunal Act (NWNSRTA)* and Article 13 of the *NLCA*, public notice of the application was given and interested persons were invited to make representations to the NWB. No public concerns were expressed, and after reviewing the submission of the Applicant and representations made by interested persons, the Chief Administrative Officer of the NWB approved the application, having given due regard to the facts and circumstances, the merits of the submissions made to it and to the purpose, scope and intent of the *NLCA* and of the *NWNSRTA*.

II. 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. While the applicant makes no specific request for the Term of the licence, NESI has proposed in the additional information submitted with the application an analytical monitoring program for six years with reevaluation to take place in 2011 based on historical values. Based on this information, the Board considers that a term of six years is appropriate. The licence term will allow the Licensee to properly carry out the terms and conditions of the licence and will ensure that sufficient time is given to permit the Licensee to develop, submit and implement the plans required under the licence to the satisfaction of the NWB.

B. Annual Report

In accordance with S. 15 of the Regulation every licensee shall maintain accurate and detailed books and records and shall submit a report to the Board each year on or before the anniversary of the date of issuance of the licence, setting out the quantity of water used under the licence and the quantity, concentration and type of any waste deposited under the licence. The requirements imposed on the Licensee in this licence are for the purpose of ensuring that the NWB has an accurate annual update of water use and depositions of waste during a calendar year. This information is maintained on the public registry and is available to any interested parties upon request. The information requests are based on commitments made by NESI and/or

recommendation by interested parties including Environment Canada (EC), Town of Iqaluit, Government of Nunavut (GN) and/or Indian and Northern Affairs Canada (INAC).

C. Security

In its application, NESI proposes to manage a trust fund \$50,000 to cover the eventual decommissioning of the facility should the undertaking require closure. In their submission to the NWB, DIAND does not question the amount of security, but points out that while the NWB has the powers to require an applicant to furnish security, that security is held by the Crown, and furthermore that its form must be acceptable to the Minister. In their submission, the City of Iqaluit is of the opinion that the amount of security proposed by the Applicant is insufficient, but it does not provide substantiation for this claim.

The Board agrees with DIAND that the proposed trust fund does not meet legislative requirements found in the Act. Indeed, in accordance with the Regulations S. 12, the Board may fix the amount of security to be furnished by an applicant in an amount not exceeding the aggregate of the costs of abandoning of the undertaking; restoration of the site of the undertaking; and any ongoing measures that may remain to be taken after the abandonment of the undertaking.

Notwithstanding the Board's powers to impose security, the Board does not at this time have sufficient information to determine an appropriate amount of security to be required of the Applicant. Accordingly, the NWB has decided not to require the Applicant to furnish any security in this licence. However, the Board has decided to require the Licensee to file within six (6) months of issuance of this licence a detailed cost assessment based on third party rates to reclaim the facility upon closure, for water related components of the undertaking.

D. Spill Contingency Planning

As required by S. 6 (2)(g) of the Regulation, where the undertaking involves the handling or storage of petroleum products or hazardous materials, the Board may require an applicant to file a plan for the safe handling, storage and disposal thereof, and a contingency plan for their containment and for the clean-up thereof in the event of a spill. The Board generally requires that all Licensees prepare a comprehensive Spill Contingency Plan to establish a state of readiness to ensure a prompt and effective response to possible spills or system failure events. The site-specific spill contingency plan will assist the Licensee in responding to emergencies such that the impacts to water in particular and the environment and public health in general are minimized. NESI submitted a "Spill and General Contingency Plan" in support of its application. Comments with respect to the adequacy of this plan were submitted by the GN and DIAND, and the NWB agrees with the deficiencies outlined in these submissions. Accordingly, the licence contains a requirement to submit a revised plan that will address the deficiencies outlined by GN and INAC in their respective submissions

E. Abandonment and Restoration (A&R)

In accordance with S. 6 (2) (h) of the Regulations the Board may also require an applicant to file plans for abandonment, or any temporary closing of the proposed undertaking. To ensure that all future abandoned facilities are reclaimed in an appropriate manner, the NWB requires the Applicant to submit an Abandonment and Restoration Plan. Such plan shall be submitted to the NWB within six (6) months of issuance of this licence and shall take into account measures during short and long term closures

F. Monitoring Requirements

The Licence issued by the NWB does not contain any requirements regarding the quality of effluent to be discharged from the facility. However, the NWB requires NESI to implement a thorough monitoring program to provide adequate data at various locations within and outside of the facility in order to assess potential impacts of landfarming operations on the receiving environment in general and on water in particular. Based on the results of this monitoring program, the NWB reserves the right to amend the licence on its own motion to include regulated parameters for effluent discharge from the facility.

LICENCE NWB4NUN0511 –Type “B”

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

of **NUNATTA ENVIRONMENTAL SERVICES INCORPORATED**
(Licensee)

P.O. BOX 267, IQALUIT, NU X0A 0H0
(Mailing Address)

hereinafter called the Licensee, the right to alter, divert or otherwise use water for a period subject to restrictions and conditions contained within this licence:

Licence Number **NWB4NUN0511 - Type “B”**

Water Management Area **NUNAVUT 05**

Location **NORTH 40 INDUSTRIAL PARK, IQALUIT, NUNAVUT**

Purpose **WATER USE AND WASTE DISPOSAL**

Classification of Undertaking **INDUSTRIAL**

Quantity of Water Not to Exceed **NOT APPLICABLE**

Date of Licence **SEPTEMBER 13, 2005**

Expiry Date of Licence **DECEMBER 31, 2011**

Dated this 13th day of September, 2005 at Gjoa Haven, NU.


Philippe di Pizzo
Chief Administrative Officer

PART A: SCOPE, DEFINITIONS, AND ENFORCEMENT

1. Scope

- a. This License allows for the use of water and the disposal of waste for an undertaking classified as Miscellaneous at the Nunatta Environmental Services Incorporated (NESI) Landfarm Treatment Facility located in the North 40 Industrial Park, within the City of Iqaluit, Nunavut (City of Iqaluit Lot 1, Block 229);
- b. This License 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;
- c. 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; and
- d. The Licensee shall notify the Board within thirty (30) days of any decision to suspend temporarily its operations or enter into a Care and Maintenance phase.

2. Definitions

In this Licence: **NWB4NUN0511 -Type “B”**

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

“Amendment” means a change to original terms and conditions of this licence requiring correction, addition or deletion of specific terms and conditions of the licence; modifications inconsistent with the terms of the set terms and conditions of the Licence;

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

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

“Board” means the Nunavut Water Board established under the *Nunavut Land Claims Agreement* and the *Nunavut Waters and Nunavut Surface Rights Tribunal Act*;

“Care and Maintenance” in respect of a operation, means when the licensee ceases production or commercial operation for an undefined period of time;

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

“Construction” means any activities undertaken to construct or build any component of, or associated with, the development of the NESL Landfarm;

“Deposit” means the placement of waste rock or other solid materials on land or in water;

“Discharge” means the release of any water or waste to the receiving environment;

“Effluent” means the liquid discharge from all site water management facilities;

“Engineer” means a professional engineer registered to practice in Nunavut in accordance with the *Engineering, Geological and Geophysical Act (Nunavut)* S.N.W.T. 1998, c.38, s.5;

“Engineered Structure” means any facility, which was designed and approved by a Professional Engineer registered with the Association of Professional Engineers, Geologists and Geophysicists of Nunavut;

“Landfarm Treatment Facility” comprises the fenced area and associated infrastructure designed to contain and biologically treat hydrocarbon-impacted soils as described in the Water License Application Additional information filed by the Applicant on April 4, 2005, and illustrated on the “Landfarm Section and Details Drawing 00-7944” and Figure 1 titled “Landfarm Layout at the North 40 park, Iqaluit, Nunavut”;

“ICP Metal Scan” means, for the purpose of the License, elements detected in an inductively coupled plasma (ICP) mass spectrometer including, but not limited to, aluminum, barium, boron, cadmium, chromium, copper, iron, lead, manganese, molybdenum, nickel, selenium, strontium, uranium and zinc;

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

“Licence” means this Type “B” Water Licence NWB4NUN0511, issued by the Nunavut Water Board in accordance with the *Act*, to Nunatta Environmental Services Incorporated for the Landfarm Treatment Facility;

“Licensee” means to whom Licence NWB4NUN0511 is issued to or assigned;

“Minister” means the Minister of Indian and Northern Affairs Canada;

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

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

“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;

“Reclamation” means the process of converting disturbed land back to its former or other productive use;

“Receiving Environment” means both the aquatic and terrestrial environments that receive any discharge resulting from the Project;

“Regulations” means the *Northwest Territories Water Regulations SOR/93-303 8 June, 1993*;

“Seepage” means any water that drains through or escapes from any structure designed to contain, withhold, divert or retain water or waste;

“Surface Drainage” means all surface waters resulting from the flow over, through or out of an operations area and is collected by means of engineered structure;

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

“Use” means use as defined in section 4 of the *Act*;

“Waste” means waste as defined in section 4 of the *Act*;

“Waste Water” means the water generated by site activities or originates on-site that requires treatment or any other water management activity;

“Water” means water as defined in section 4 of the *Act*;

“Water Licence Application” means the application submitted August 5, 2004 and all supporting documents filed by the Licensee;

“Water Treatment Facilities” means the activated carbon water treatment facility and associated piping and pumps used for collection and handling of surface runoff.

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. Licensee shall file an Annual Report on the appurtenant undertaking with the Board no later than March 31st of the year following the calendar year reported which shall contain the following information:
 - a. A summary report of water use activities:
 1. Quantity of water collected as surface runoff from the site or collected within the bermed cells;
 2. Quantity of water discharged daily to the treatment cells;
 3. Quantity of water discharged to the receiving environment.
 - b. A summary report of waste disposal activities:
 1. Characteristics of the soils present at the landfarm including; origin/source, volume and characteristics for each year being reported;
 2. Historical Total tonnage of soil within the LTF;
 3. Rate of degradation;
 4. Treatment efficiency;
 5. Location and Quality of discharge effluent from Cells and/or Water Treatment Facility.
 - c. A list of unauthorized discharges and a summary of follow-up actions taken;

- d. Revisions to the Spill Contingency Plan and Abandonment and Restoration Plan;
 - c. Progressive reclamation work undertaken;
 - f. All information as required by Part H of the Licence;
 - g. Tabular summaries for all data and information generated under the “Monitoring Program”;
 - h. An analysis of data collected during the “Monitoring Program” and a brief description of any future studies planned by the Licensee; 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, to be operated and maintained to the satisfaction of an Inspector.
 4. If the Licensee contemplates the renewal of Licence No. NWB4NUN0511, it is the responsibility of the Licensee to apply to the NWB for its renewal. The past performance of the Licensee, new documentation and information, and issues raised during a public hearing, if the NWB is required to hold one, will be used to determine the terms and conditions of the Licence renewal. Note that if the Licence expires before the NWB issues a new one, then water use and waste disposal must cease, or the Licensee will be in contravention of the Nunavut Land Claims Agreement. The NWB recommends that an application for the renewal of Licence No. NWB4NUN0511 be filed at least three months before the Licence expiry date.
 5. If Licence No. NWB4NUN0511 requires an amendment; a public hearing may be required. 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 may vary depending on the scope of the amendment requested.
 6. 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:

(i) Chief Administrative Officer:

Executive Director
Nunavut Water Board
P.O. Box 119
Gjoa Haven, NU X0B 1J0
Telephone: (867) 360-6338
Fax: (867) 360-6369

(ii) Inspector Contact:

Water Resources Officer
Nunavut District, Nunavut Region
P.O. Box 100
Iqaluit, NU X0A 0H0
Telephone: (867) 975-4298
Fax: (867) 979-6445

7. 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.
8. This Licence is not assignable except as provided in Section 44 of the *Act*.

PART C: CONDITIONS APPLYING TO SECURITY

1. The Licensee shall submit to the Board for approval with the 2005 Annual Report required by Part B, Item 1, a detailed cost estimate for the reclamation and abandonment of the undertaking based on third party rates.

PART D: CONDITIONS APPLYING TO WATER USE AND WATER MANAGEMENT

1. The Licensee shall obtain all water for the appurtenant undertaking from excess surface runoff water accumulating along the perimeter edges of the treatment cells, unless otherwise authorized by the Board.

PART E: CONDITIONS APPLYING TO WASTE DISPOSAL

1. The Licensee shall provide at least fifteen (15) days written notice to an Inspector prior to any planned discharges from the Cells and/or Water Treatment Facilities. The notice shall include the volumes proposed for discharge and the effluent quality of the discharge.

2. Any surface drainage within the Landfarm Treatment Facility shall be treated by the Water Treatment Facilities to remove any residual hydrocarbons prior to discharge.
3. Areas designated for waste disposal that may impair the quality, quantity, or flow of water shall be located at least thirty (30) metres above the ordinary high water mark of any water body, unless otherwise authorized by the Board.
4. The Licensee shall direct all hydrocarbon-impacted soil to the Landfarm Treatment Facility, or as otherwise approved by the Board.
5. The Licensee shall ensure temporary storage areas are maintained such that dust control measures are implemented and surface ponding of water is minimized.
6. The Licensee shall ensure that all Stockpile Rejects Rock pressure washing is done within the berms confines of the Landfarm Treatment Cells.
7. The Licensee shall maintain the Landfarm Treatment Facility to the satisfaction of an Inspector.
8. The Licensee shall operate and maintain the Landfarm Treatment Facility to engineering standards and meet the following requirements:
 - a. If seepage is found, the Licensee shall collect and return it to the Landfarm Treatment Facility and corrective measures shall be implemented immediately;
 - b. During periods of flow, the Licensee shall carry out, at a minimum, weekly inspection of all berms, and shall keep all inspection records for review upon request of an Inspector. Areas of deterioration and erosion shall be repaired immediately;
 - c. Monitoring Wells shall be monitored in accordance with the Monitoring Plan and should analytical results indicate contamination associated with the LTF, the Licensee shall implement immediate corrective action;
 - d. The Cell treatment areas shall be sufficiently contoured to maximize aeration and prevent the creation of anaerobic conditions within the cells.
9. The Licensee shall submit to the Board for approval, a Remediated Soil/Rock Reject Usage Plan at least sixty (60) days prior to the removal of any soil/rock from the Landfarm Treatment Facility intended for alternative use. The Plan shall include, but not be limited to, the following:

- a. the intended usage of the soil;
 - b. the Soil Quality Remediation Objective (SQRO);
 - c. the site specific chemical and physical conditions in the receiving soil environment;
 - d. Full suite parameter analysis prior to final use to ensure that remediation criteria have been met.
12. The Licensee shall ensure that the remediation criteria adopted are protective for all PHC fraction, based on the end use for the soil.
 13. Prior to use of rock rejects as foundation material within the LTF property, the Licensee shall submit monitoring information confirming the acceptability of this material as fill.
 14. With respect to access road, pad construction or other earthworks, the deposition of debris or sediment into any water body is prohibited. These materials shall be disposed of above the ordinary high water mark in such a fashion that they do not enter the water.
 15. The Licensee shall not do anything that will cause erosion to the banks of any body of water and shall provide necessary controls to prevent such erosion.
 16. Sediment and erosion control measures shall be implemented during all operations to prevent entry of sediment into water.

PART F: CONDITIONS APPLYING TO MODIFICATIONS

1. The Licensee may, without written consent from the Board, carry out Modifications to the Landfarm Treatment Facility provided that such Modifications are consistent with the terms of this License 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 License or the *Act*;
 - c. the Board has not, during the sixty (60) days following notification of the proposed Modifications, informed the Licensee that review of the proposal will require more than sixty (60) days; and
 - d. the Board has not rejected the proposed Modifications.

2. Modifications for which all of the conditions referred to in Part F, Item 1 have not been met can be carried out only with written approval from the Board.
3. The Licensee shall provide as-built plans and drawings of the Modifications referred to in this License within ninety (90) days of completion of the Modification. These plans and drawings shall be stamped by an Engineer.

PART G: CONDITIONS APPLYING TO CONSTRUCTION

1. At least sixty (60) days prior to the commencement of construction of any dams, dykes or structures intended to contain, withhold, divert or retain water or waste, including facilities or systems for the treatment of hydrocarbon contaminated soil, the Licensee shall submit to the Board for approval, design drawings and plans stamped by an Engineer.
2. The Licensee shall provide to the Board, within ninety (90) days of completion of the construction of any dams, dykes or structures intended to contain, withhold, divert or retain water or waste, including facilities or systems for the treatment and disposal of hydrocarbon contaminated soil, all respective design drawings and construction reports, including as-built drawings, documentation of field decisions that deviate from original plans, and any data used to support these decisions.
3. The Licensee shall submit as required by Part G, Item 2 details for the construction and installation of the groundwater monitoring wells.
4. The Licensee shall submit to the Board as required by Part G, Item 2 details for the construction of Cell 1, Cell 2 and Cell 3.
5. Any fill material must be obtained from an approved source.

PART H: CONDITIONS APPLYING TO SPILL CONTINGENCY PLANNING

1. The Licensee shall submit to the Board for approval, two (2) months following issuance of this licence, a Spill Contingency Plan prepared in accordance with the Northwest Territories' "*Guidelines for Contingency Planning (1987)*".
2. If not approved by the Board, the plan referred to in Part H, Item 1 shall be revised and resubmitted within thirty (30) days of receiving notification of the Board's decision.
3. The Licensee shall annually review the approved Spill Contingency Plan and modify the Plan as necessary to reflect changes in personnel, operations and/or technology. Any

proposed modifications shall be submitted to the Board as an addendum to the original plan in accordance with Part B, Item 1(iii).

4. The Licensee shall ensure that any chemicals, petroleum products or wastes associated with the project do not enter water. All sumps and fuel caches shall be located a minimum of thirty (30) metres above the ordinary high water mark of any adjacent water body.
5. The Licensee shall ensure that any equipment maintenance and servicing be conducted at least thirty (30) metres from any water body and shall implement special procedures (such as the use of drip pans) to manage fluids, waste and contain potential spills.
6. 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 Spill Contingency Plan;
 - b. Report the spill immediately to the 24-Hour Spill Line at (867) 920-8130 and to the DIAND Water Resources Inspector at (867) 975-4298; and
 - c. Submit to the DIAND Water Resources Inspector on each occurrence, a detailed report including the GPS location, no later than thirty (30) days after initially reporting the event.

PART I: CONDITIONS APPLYING TO ABANDONMENT AND RESTORATION

1. The Licensee shall submit to the Board for approval, six (6) months following issuance of this licence, an interim stand alone Abandonment and Restoration Plan.
2. If not approved by the Board, the plan referred to in Part I, Item 1 shall be revised and resubmitted within thirty (30) days of receiving notification of the Board's decision.
3. The Licensee shall annually review any approved Abandonment and Restoration Plan and modify the Plan as necessary to reflect changes in personnel, operations and/or technology. Any proposed modifications to the Plan shall be submitted to the Board as an addendum to the original Plan in accordance with Part B, Item 1(iii).
4. The Licensee shall complete the restoration work within the time schedule specified in the approved Plan, or as subsequently revised and approved by the Board.
5. The Licensee shall endeavor to carry out progressive reclamation for any components of the project no longer required for the Licensee's operations.

6. All disturbed areas shall be stabilized and re-vegetated as required, upon completion of work, and restored prior to site abandonment.
7. The Licensee shall notify the Board of its intention to proceed with final abandonment of the undertaking at least six (6) months prior to the planned dates of closure.

PART J: CONDITIONS APPLYING TO THE MONITORING PROGRAM

1. The Licensee shall maintain Monitoring Stations at shown in Table 1.
2. All sampling, sampling preservation and analysis shall be conducted in accordance with methods prescribed in the current edition of "*Standard Methods for the Examination of Water and Wastewater*".
3. All analysis shall be performed in a laboratory approved by an Analyst.
4. The Licensee shall within sixty (60) days of issuance of this licence submit to the Board for approval by the Analyst a Quality Assurance/Quality Control Plan in accordance with INAC "*QA and QC Guidelines for use by Class "B" Licensees in Collecting Representative Water samples in the Field and for submission of a QA/QC Plan (1996)*".
5. If not approved, the Plan referred to in Part J, Item 4 shall be revised and resubmitted within thirty (30) days of receiving notification of the Analyst's decision.
6. The Plan referred to in Part J, Item 4 shall be implemented as approved by the Analyst.
7. Additional sampling and analysis may be requested by an Inspector.
8. The Licensee shall maintain and submit with the Annual Report as per Part B, Item 1, an Operations Monitoring Plan which shall include but not be limited to the following:
 - a. Frequency and depth of tillage;
 - b. Soil profile temperatures;
 - c. pH;
 - d. Moisture content;
 - e. Quantity and frequency of fertilizer application;
 - f. If soil warming undertaken and bio-augmentation occurs; and

- g. Changes in permafrost depth.
9. The Licensee shall, within thirty (30) days following the month being reported, submit to the Board all data and information required by the “Monitoring Program”, including the results of the approved QA/QC Plan.
 10. The Licensee shall include a summary of all data and information collected by the “Monitoring Program” (Table 1 and Part J, Item 4 & 8) in the Licensee's Annual Report required under Part B, Item 1.

Station	Location	Parameter ¹	Frequency	Flow Measurement Required (cu.m)
MW 1	Monitoring Well South West of Cell 3 (Downgradient)	TPH BTEX HM PAH PCB	Twice per year (after freshet and end of treatment season)	NA
MW 2	Monitoring Well North West of Cell 3 (Upgradient)	TPH BTEX HM PAH PCB	Twice per year (after freshet and end of treatment season)	NA
MW 3	Monitoring well North of Cell 3 (Downgradient)	TPH BTEX HM PAH PCB	Twice per year (after freshet and end of treatment season)	NA
MW 4	Monitoring Well North East of Cell 2 (Upgradient)	TPH BTEX HM PAH PCB	Twice per year (after freshet and end of treatment season)	NA
MW 5	Monitoirng Well North East of Cell 1 (downgradient)	TPH BTEX HM PAH PCB	Twice per year (after freshet and end of treatment season)	NA
MW 6	Monitoring Well South West of Cell 1	TPH BTEX HM PAH PCB	Twice per year (after freshet and end of treatment season)	NA
NUN 1	Discharge from the Activated Carbon Treatment Facility		EC once per year	Required volume discharged to the Cells and/or the Receiving Environment
NUN 2	Discharge from Cell 1		EC once per year	Required Volume discharged to the Receiving Environment

Station	Location	Parameter ¹	Frequency	Flow Measurement Required (cu.m)
NUN 3	Discharge from Cell 2		EC once per year	Required Volume discharged to the Receiving Environment
NUN 4	Discharge from Cell 3		EC once per year	Required Volume discharged to the Receiving Environment
NUN 5	Incoming Soils to the Landfarm Treatment Facility	TPH C ₁₀ -C ₅₀ Heavy Metals (6) Mercury PCB PAH	For every 500 cubic metres, prior to deposition in the LTF unless they originate from a well-documented spill.	
		Nitrogen Phosphorus Potassium		To assess nutrient content optimal for biodegradation assess amount of fertilizer needed
		PAH PCB	Testing only if soil suspected of containing contaminants other than heating fuel, Diesel or gasoline.	
NUN 6	Soils within LTF Cell No. 1	TPH C ₁₀ -C ₁₅ C ₁₆ -C ₃₅ C ₃₆ -C ₅₀ Total Micro-organism count and type Nitrogen Phosphorus Potassium	1 sample at the end of the field season (end of September)	

Station	Location	Parameter ¹	Frequency	Flow Measurement Required (cu.m)
NUN 7	Soils within LTF Cell No. 2	TPH C ₁₀ -C ₁₅ C ₁₆ -C ₃₅ C ₃₆ -C ₅₀ Total Micro-organism count and type Nitrogen Phosphorus Potassium	1 sample at the end of the field season (end of September)	
NUN 8	Soils within LTF Cell No. 3	TPH C ₁₀ -C ₁₅ C ₁₆ -C ₃₅ C ₃₆ -C ₅₀ Total Micro-organism count and type Nitrogen Phosphorus Potassium	1 sample at the end of the field season (end of September)	
NUN 9	Rock Reject Stockpile	TPH	Once per year or prior to use	

! Parameters:

- TPH (Total Petroleum Hydrocarbons)
- PAH (Polycyclic aromatic hydrocarbons)
- PCB (Polychlorinated biphenyls) Total
- BTEX (Benzene, toluene, ethylbenzene and xylene)
- HM (Heavy Metals) as defined by CCME