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NUNAVUT WATER BOARD
NUNAVUT IMALIRIYIN KATIMAYINGI
OFFICE DES EAUX DU NUNAVUT

File No: **3BM-RAN2025**

December 02, 2020

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Acting SAO
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Government of Nunavut
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X0C 0G0

email: sao@rankininlet.ca

email: scollins@gov.nu.ca

RE: NWB Renewal Water Licence No: 3BM-RAN2025

Dear Ms. Ymana and Ms. Collins:

Please find attached Water Licence No: **3BM-RAN2025** issued to the Hamlet of Rankin Inlet 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 Agreement)*. 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 may be in contravention of the *Nunavut Agreement* and the *Nunavut Waters and Nunavut Surface Rights Tribunal Act*. However, the expiry or cancellation of a licence does not relieve the holder from any obligations imposed by the licence. The NWB recommends that an application for the renewal of this Licence be filed at least three 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 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,

Lootie Toomasie
Nunavut Water Board
Chair

LT/dd/rqd

Enclosure: Licence No: **3BM-RAN2025**
Comments – CIRNA

Cc: Kivalliq Distribution List

¹ Crown-Indigenous Relations and Northern Affairs (CIRNA), October 21, 2020.

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DECISION

LICENCE NUMBER: 3BM-RAN2025

This is the decision of the Nunavut Water Board (NWB or Board) with respect to a complete application received on September 16, 2020 for a renewal/amendment of a Water Licence made by:

HAMLET OF RANKIN INLET

to allow for the use of Water and deposit of Waste for a Municipal undertaking by the Hamlet of Rankin Inlet, for the operation of their Solid Waste Disposal Facility and Landfarm, located within the Kivalliq Region, Nunavut, generally located at the geographical coordinates as follows:

Latitude: 64° 49' N and Longitude: 92° 05' W

DECISION

After having been satisfied that the application conforms to the Keewatin Regional Land Use Plan (KRLUP),¹ and exempt from the requirement for screening by the Nunavut Impact Review Board (NIRB) under section 12-1 of the *Nunavut Agreement*², 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 *Nunavut Agreement*, 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 *Nunavut Agreement* and of the *Act*, waived the requirement to hold a public hearing and determined that:

Licence No: 3BM-RAN1520 be renewed as Licence No: 3BM-RAN2025 subject to the terms and conditions contained therein. (Motion #: 2020-B1-027).

Signed this 02 day of December 2020 at Gjoa Haven, NU.

Lootie Toomasie
Nunavut Water Board
Chair
LT/dd/rqd

¹ Nunavut Planning Commission (NPC) Conformity Determination, July 29, 2020

² Nunavut Impact Review Board (NIRB) Exemption from Screening Decision, June 12, 2015.

I. BACKGROUND

The Hamlet of Rankin Inlet (Hamlet) is located within the Kivalliq Region of Nunavut, generally at a latitude of 64° 49' N and a longitude of 92° 05' W. The Hamlet is on the west coast of Hudson Bay, 96 km southwest of Chesterfield Inlet and 1,088 km east of Yellowknife. Waste disposal infrastructure for the Hamlet of Rankin Inlet (Hamlet) consists of an Old Landfill from the 1950's, a New Landfill that was built between 2003 and 2006, and a Landfarm built in 2005.

The Old Landfill site is the non-engineered solid waste facility that has been in operation since the early 1950's. This is the only solid waste facility in operation at the Hamlet of Rankin Inlet, at the time of issuance of this Licence. The Old Landfill had reached capacity in 2002, however through improved operations (including the sorting and compressing of waste prior to disposal) the site is no longer at capacity and is still in operation. The Old Landfill is located approximately 0.5 km south of the community. The site consists of two main areas: a general non-hazardous waste disposal area and a miscellaneous storage area. The total area of the Old Landfill is almost 6 ha. The general waste disposal area is surrounded by a fence and sand/gravel perimeter road. The miscellaneous storage area has historically been used for fire training, drum storage, sewage disposal, bulky metal storage, and hazardous waste storage for transport to suitable disposal facilities in the south.

The New Landfill is a solid waste facility that was constructed between 2003 and 2006. Though the facility was constructed in 2006 the facility has never been used as a solid waste site, as of the time of the issuance of this Licence. The New Landfill has not been used because of Transport Canada's concerns pertaining to the sites' proximity to the Hamlet of Rankin Inlet's operational Airport. However, the Licensee had indicated under the previous Licence that they wish to include the New Landfill in the Licence for potential use in the future.

The Landfarm in Rankin Inlet was constructed in 2005 and is located 5 km northwest of the Hamlet. The Landfarm was constructed with a liner and containment berm, and covers an area of 2100 m². The Licensee has indicated that contaminated soils are no longer being accepted at this Landfarm and the Hamlet intends to decommission this facility during the period of the new licence.

The Water Supply Facility (the Utilidor) and Sewage Treatment Facility, in the Hamlet of Rankin Inlet are authorized under a separate Water Licence held by the Government of Nunavut, Community and Government Services (GN-CGS). Refer to Water Licence No: 3AM-GRA1624 for more information on Water Supply Facility and Sewage Treatment Facility facilities in Rankin Inlet.

II. FILE HISTORY

The Hamlet Rankin Inlet has held Water Licences with the NWB specific to their Solid Waste Disposal Facility and Landfarm since 2012, and prior to this community water use and waste deposit was under the same Licence, as outlined in Table 1.

Table 1. Project Licensing History

Licence No.	Date Issued	Comments
NWB3RAN0207	December 1, 2002	Water use 400,000 m ³ per year and deposit of waste.
3BM-RAN1214	May 20, 2012	Deposit of waste for Solid Waste Disposal Facility and Landfarm.
3BM-RAN1520	December 21, 2015	Water use of 5 cubic metres per year and deposit of waste for Solid Waste Disposal Facility and Landfarm.

III. APPLICATION PROCEDURAL HISTORY

On **September 16, 2020**, the Government of Nunavut - Department of Community and Government Services (GN-CGS), on behalf of the Hamlet of Rankin Inlet, submitted a renewal/amendment water licence application and pertinent documentation (Application), which included the following:

- Summary – English;
- Summary, Inuktitut;
- Application Renewal Form;
- NPC Conformity Determination Letter;
- 2019 Annual Report;
- Plan for Compliance;
- Map with Relevant Facilities
- Application Fee;
- Authorization Letter; and
- Plan for Compliance.

On **September 21, 2020**, the NWB concluded that the Application met the requirements of section 48(1) of the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* (NWNSTRA or Act) and forwarded notice of the Application to regulators, the council of the municipality most affected by the project, and other interested parties. All parties were invited to make representations to the Board by October 21, 2020.

On **October 21, 2020**, Crown-Indigenous Relations and Northern Affairs (CIRNA) submitted comments, noting that they “*reviewed the renewal application documents and has identified no issue with the application.*”⁴

4 Crown-Indigenous Relations and Northern Affairs Canada (CIRNA) comments on 3BM-RAN1520 Water Licence

NWB technical staff followed up with the Applicant regarding clarification and additional information. All information received in support of the Application as well as the submissions provided by intervening parties can be found at the following link:

<ftp://ftp.nwb-oen.ca/registry/3%20MUNICIPAL/3B/3BM%20-%20Municipality/3BM-RAN2025/1%20APPLICATION/2020%20Renewal/>

Based upon the results of the completed detailed assessment, including consideration of any potential accidents, malfunctions, or cumulative environmental effects that the overall project might have in the area, the Board has approved the application for the renewal of Licence No: 3BM-RAN1520 as Licence No: **3BM-RAN2025**.

IV. GENERAL CONSIDERATIONS

The following sections provide background information relevant to the terms and conditions included in this Renewal Licence, in the context of submissions received and/or the Board's rationale. Where appropriate, the Board has removed or modified terms and conditions associated with the previous licence, which are no longer applicable under this Renewal Licence.

Term of the Licence

In accordance with S. 45 of the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* (NWNSTRA or the Act), the NWB may issue a licence for a term not exceeding twenty-five (25) years. In determining an appropriate term of a water licence, the Board considers a number of factors, including intervener's comments, the Licensee's compliance history, the rationale contained in the Application, as well as the risk to water resources posed by the undertaking.

The Licensee has requested a five (5) year term for the Renewal Licence. The Board agrees and believes that a licence term of five (5) years will allow sufficient time to allow the Licensee the opportunity to properly carry out the terms and conditions of the Licence.

Compliance Plan

Part A, Item 1c of the previous Licence (3BM-RAN1520) required the Licensee to submit a Compliance Plan that clearly demonstrates how the Hamlet will achieve full compliance with the Licence conditions during the term of the Licence. The Compliance Plan submitted with the Application was found to be missing key information. For example, the Applicant should indicate where licence conditions have not yet been met such as requested updated plans that have not yet been submitted. The Licensee is required in Part A, Item 1d, of this renewed Licence to submit a revised Compliance Plan for Board Approval, which address the terms and conditions as detailed in this Licence, and this updated plan is to be submitted with the 2020 Annual report.

Renewal Application, October 21, 2020.

Annual Reports

Under Part B, Item 1 of the Licence, the Licensee is required to submit Annual Reports for the purpose of ensuring that the NWB has an accurate annual update of municipal activities related to Water use and Waste disposal during each calendar year. This information is maintained on the Public Registry and is available to interested parties upon request. A “Standardized Form for Annual Reporting” is to be used by the Licensee and is available from the NWB file transfer protocol (FTP) site under the Public Registry link at the NWB Website:

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

The NWB has also taken this opportunity to review the Annual Reports submitted in recent years, and finds that generally acceptable. However, the Annual Report shall include all Monitoring Program results as per requirements included within Part H (Conditions applying to the Monitoring Program) of the Licence, and this condition is not always adhered to. The Board would like to remind the Licensee that the Annual Reporting requirements of the Licence should be adhered to at all times so as to help maintain full compliance with respective terms and conditions in the Licence. The Board strongly recommends that for all subsequent annual submissions the Licensee submit a more systematic monitoring report, in accordance with Part B, Item 1 of current Water Licence, including a short analysis and interpretation of the data.

Water Use

Water use under this Licence only pertains to monitoring and sampling activities, as described in the *Solid Waste Management Facility Operation and Maintenance (O&M) Plan*. Consistent with the previous Licence, the maximum permitted usage of Water by the Licensee, over the term of the Water Licence and for all purposes, has been set at 5 m³ per year. Based upon the projected requirements of the Licensee, the Board has set the terms and conditions in the Water Licence, which govern water usage.

All other Water use for the Hamlet is mainly regulated by Licence No: 3AM-GRA1624 held by the GN-CGS.

Deposit of Waste

Sewage

Disposal of Sewage is not authorized under this Licence No: 3BM-RAN2025.

Solid Waste

The Old Landfill is nearing capacity and the Applicant has indicated that there are plans to expand or move the Solid Waste Disposal Facility. The licensee will be required to provide plans for the construction and operation of a new facility as per Part F, Item 1, as well as a reclamation plan for the Old Landfill as per Part G, Item 1. Conditions related to the management of solid waste generated by the undertaking are included under Part D in the Renewal Licence.

The Licensee previously indicated that the New Landfill should be included in this Licence as it may be used as the future Solid Waste Facility. As such, conditions from the previous Licence pertaining to the New Landfill have been carried over to this Renewal Licence.

The Licensee has also indicated that a third Solid Waste Facility is planned in Rankin Inlet with design stages expected to begin in 2023/2024 and planned construction completion in 2027. For this reason this future facility is left off the current Licence, and will be included as an amendment when information becomes available.

Landfarm

The Licensee has indicated that the Landfarm in Rankin Inlet is no longer accepting contaminated soil and the Hamlet intends to decommission this facility during the period of the new Licence. However, because abandonment and reclamation of the Landfarm has not yet begun, and in the case that the Landfarm is required again in the future, conditions pertaining to the Landfarm have been carried over from the previous Licence. The Board would like to also remind the Licensee of the requirement to submit an abandonment and reclamation plan for this facility six months prior to its abandonment and reclamation, as outlined in Part G.

Management Plans and Manuals

The NWB has reviewed the following plans that were approved under the previous Licence:

- *Solid Waste Management Facility Operation and Maintenance (O&M) Plan Hamlet of Rankin Inlet*, dated September 2015;
- *Environmental Emergency Contingency Plan, Hamlet of Rankin Inlet*, dated August 2015;
- *Environmental Monitoring Program and Quality Assurance/Quality Control Plan Hamlet of Rankin Inlet, Nunavut*, dated April 2015.

The Board notes that updates to specific managements plans required by the previous Licence have not been submitted and has determined that these management plans will require updates to be considered fully functional.

The review of the aforementioned plans, determined that the manuals should be updated to reflect current conditions, and include items required by the previous Licence as outlined under Part F, Items 2 and 3 of this Licence. The Board therefore requires the Licensee to provide updated plans within 2020 Annual Report to reflect these changes. The Licensee is also required to review and if needed update these plans on an annual basis to reflect any changes in operations or other factors that may impact the functionality of the plan.

Carried over from the previous Licence, the Licensee is required under Part F, Item 10, to submit for approval by the Board in writing, within 2020 Annual Report , a brief “Landfarm Operational Contingency Plan.” This plan will include aspects of seepage and runoff management for the facility as required by the previous Licence, and a timeline for implementation of abandonment and restoration plans.

Abandonment and Restoration Plans

Under Part G, Item 1, an Abandonment and Restoration Plan (A&R Plan) is required six months prior to the abandonment of any facility, including the Landfarm. The Board encourages the development of a standardized template for this plan to facilitate this process across all Nunavut communities.

Monitoring Program

Part H of the Licence details the environmental monitoring requirements. Requirements are similar to the previous Licence. Sampling is required for all discharges from the Solid Waste Disposal Facility (RAN-2 and RAN-3) and Landfarm (RAN-4). The Licensee is reminded to complete all monitoring as required under this Licence and that additional sampling may be required upon request by the Board or the Inspector.



NUNAVUT WATER BOARD RENEWAL WATER LICENCE

Water Licence No: 3BM-RAN2025

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

HAMLET OF RANKIN INLET

(Licensee)

P.O. BOX 310, RANKIN INLET, NUNAVUT X0C 0G0

(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: 3BM-RAN2025 TYPE "B"

Water Management Area: WILSON WATERSHED (13)

Location: HAMLET OF RANKIN INLET
KIVILLIQ REGION, NUNAVUT

Classification: MUNICIPAL UNDERTAKING

Purpose: USE OF WATER AND DEPOSIT OF WASTE

Quantity of Water use not
to Exceed: FIVE (5) CUBIC METRES PER YEAR

Licence Effective Date: DECEMBER 21, 2020

Licence Expiry Date: DECEMBER 20, 2025

This Licence renewal issued and recorded at Gjoa Haven, Nunavut includes and is subject to the annexed conditions.

**Lootie Toomasie,
Nunavut Water Board, Chair**

PART A: SCOPE, DEFINITIONS AND ENFORCEMENT

1. Scope

This Licence allows for the use of water (only for monitoring/sampling requirements) and the deposit of waste for a Municipal undertaking classified as per Schedule 1 of the *Regulations* at the Hamlet of Rankin Inlet, Kivalliq Region, Nunavut (Latitude: 64°49' N and Longitude: 92°05'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.
- c. The Licensee shall, in relation to any application to renew or amend the Licence, have in place, approved by the Board in writing, a Plan for Compliance to achieve full compliance with the conditions of this Licence, or a Plan for Compliance must be submitted at the time of Application, in order for the Application to be deemed complete.
- d. The Licensee shall submit to the Board for review with the 2020 Annual Report, the Plan for Compliance mentioned above under Part A, Item 1a, in a form that accurately represents the current state of Licence conditions.

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*;

“**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 Agreement* and the *Nunavut Waters and Nunavut Surface Rights Tribunal Act*;

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

“**Geotechnical Engineer**” means a professional engineer registered with the Association of Professional Engineers, Geologist and Geophysicists of Nunavut and whose principal field of specialization with the engineering properties of earth materials in dealing with man-made structures and earthworks that will be built on a site. These can include shallow and deep foundations, retaining walls, dams, and embankments;

“**Grab Sample**” means an undiluted quantity of material collected at a particular time and place that may be representative of the total substance being sampled at the time and place it was collected;

“**Hazardous Waste**” means waste classified as “hazardous” by Nunavut Territorial or Federal legislation, or as “dangerous goods” under the *Transportation of Dangerous Goods Act*;

“**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**” means the facility constructed in 2005, which is operated by the Hamlet of Rankin Inlet, and licensed under 3BM-RAN2025. The facility is an area designed to biologically remediate petroleum hydrocarbon-impacted soil, as described in the renewal application filed by the Applicant on September 16, 2020 and as described in the *Solid Waste Management Facility Operation and Maintenance Plan Hamlet of Rankin Inlet*, dated September 2015;

“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;

“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;

“New Landfill” means the solid waste facility that was constructed between 2003 and 2006. Though the facility has been constructed since 2006, the facility has never been used as a solid waste site, as of the time of the issuance of this Licence. This solid waste facility has never been used because of Transport Canada’s concerns pertaining to the sites’ proximity to the Hamlet of Rankin Inlet’s operational Airport. The facility is as described in the *Solid Waste Management Facility Operation and Maintenance Plan Hamlet of Rankin Inlet*, dated September 2015;

“Nunavut Agreement” 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;

“Old Landfill” means the non-engineered solid waste facility that has been in operation since the early 1950’s. This is the only solid waste facility in operation at the Hamlet of Rankin Inlet, at the time of issuance of this License. The facility is described in the *Rankin Inlet Solid Waste Site Abandonment and Restoration Plan* (AECOM, July 2009);

“Petroleum Hydrocarbon-Impacted Soil” means soil in which the primary petroleum product present, as determined by laboratory analysis consistent with that described in the *Canada-Wide Standards for Petroleum Hydrocarbons in Soil*, generally consists of fuel oil, diesel fuel, gasoline and/or jet fuel and does not include lubricating oil or grease;

“Regulations” means the *Nunavut Waters Regulations SOR/2013-69 18th April, 2013*;

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

“Solid Waste Disposal Facility” means the facilities designated for the disposal of solid waste, as described in the Application for Water Licence renewal and associated documents filed by the Applicant with the Application;

“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;

“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;

“Waste Disposal Facilities” means all facilities designated for the disposal of solid waste, and includes the Old Landfill and New Landfill; and

“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 no later than March 31st of the year following the calendar year being reported, containing the following information:
 - a. tabular summaries and a brief written interpretation of all data generated under the “Monitoring Program”;
 - b. the monthly and annual quantities in cubic metres of Water obtained from all sources;
 - c. the monthly and annual quantities in cubic metres of each and all Waste discharged; including the Hazardous and non-hazardous Waste accepted at the Waste Disposal Facilities;
 - d. a summary of modifications and/or major maintenance work and/or investigations

- carried out on the Waste Disposal Facilities (Old Landfill, New Landfill, and Landfarm), including all associated structures and facilities;
- e. a list of unauthorized discharges and summary of follow-up action taken;
 - f. a summary of any abandonment and restoration work completed during the year and an outline of any work anticipated for the next year;
 - g. Any updates or revisions for all manuals and plans (*i.e., Operations and Maintenance, Abandonment and Restoration, QA/QC, etc.*) as required by changes in operation and/or technology;
 - h. a summary of any studies, reports and plans requested by the Board that relate to waste disposal, water use or reclamation, and a brief description of any future studies planned;
 - i. any other details on Water use or Waste disposal requested by the Board by November 1st of the year being reported.
2. The Licensee shall 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.
 4. The Licensee shall install, operate and maintain meters, devices or other such methods as approved by the Board in writing, used for measuring the volumes of Waste discharged.
 5. The Licensee shall, post the necessary signs, where possible, to identify the stations of the Monitoring Program. All signage postings shall be in the Official Languages of Nunavut, and shall be located and maintained to the satisfaction of an Inspector.
 6. The Licensee shall immediately report to the 24-Hour Spill Report Line at (867) 920-8130, any spills of Waste, which are reported to, or observed by the Licensee, within the municipal boundaries or in the areas of the Waste Disposal Facilities and Landfarm.
 7. 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/or 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.
 8. The Licensee shall, for all Plans submitted under this Licence, implement the Plan as approved by the Board in writing.
 9. 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.

10. 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.
11. 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@nwb-oen.ca
 - (b) **Inspector Contact:**
Manager of Field Operations, CIRNA
Nunavut District, Nunavut Region
P.O. Box 100
Iqaluit, NU X0A 0H0
Telephone: (867) 975-4295
Fax: (867) 979-6445
12. The Licensee shall submit 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.
13. 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.
14. This Licence is assignable as provided for in Section 44 of the *Act*.
15. The expiry or cancellation of this Licence does not relieve the Licensee from any obligation imposed by the Licence, or any other regulatory requirement.

PART C: CONDITIONS APPLYING TO WATER USE

1. The total volume of Water for monitoring and related purposes shall not exceed five (5) cubic metres per year.
2. The Licensee shall not remove any material from below the ordinary High Water Mark of any Water body.

3. The Licensee shall implement and maintain sediment and erosion control measures prior to and during the operation to prevent entry of sediment and/or dust into Water.
4. Equipment used should be well cleaned and free of oil and grease and maintained free of fluid leaks. The Licensee shall ensure that pollutants from machinery used do not enter 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 shall dispose of all solid Wastes at the Waste Disposal Facilities in such a manner as to prevent the deposition of such Waste into Water.
3. The Licensee shall not open burn plastics, wood treated with preservatives, electric wire, styrofoam, asbestos or painted wood to prevent the deposition of Waste materials of incomplete combustion and/or leachate from contaminated ash residual, from impacting any surrounding waters, unless otherwise approved by the Board in writing.
4. The Licensee shall segregate and store all hazardous materials and Hazardous Waste, including waste oil, within the Waste Disposal Facilities in a manner to prevent the deposit of deleterious substances into any water, until such a time that the materials have been removed for proper disposal at licensed facility.
5. The Licensee shall implement measures to ensure leachate from the Waste Disposal Facilities and Landfarm do not enter Water.
6. The Licensee shall treat all Petroleum Hydrocarbon Impacted Soil in the Landfarm to the Treatment Objective, or as otherwise approved by the Board.
7. The Licensee shall provide at least ten (10) days' notice in writing to an Inspector, of the intent to discharge Effluent from the Landfarm.
8. All water from dewatering contaminated soil areas and discharge of Effluent at Monitoring Station RAN-4 at the Landfarm, shall not exceed the following Effluent quality limits:

Parameter	Maximum Concentration of any Grab Sample (mg/L)
pH	6 to 9 (units)

Parameter	Maximum Concentration of any Grab Sample (mg/L)
Total Suspended Solids	50
Oil and Grease	15 and no visible sheen
Benzene	0.370
Toluene	0.002
Ethylbenzene	0.090

9. Effluent that exceeds the Effluent quality limits of Part D, Item 8 shall be considered hazardous waste and require further treatment or disposal off-site at an approved facility, or as otherwise approved by the Board in writing.
10. The discharge location for all treated Effluent described in Part D, Item 8 shall be to the satisfaction of an Inspector and shall be located at a minimum of thirty-one (31) metres from the ordinary High Water Mark of any water body and where direct or indirect flow into a Water body is not possible and no additional impacts are created.
11. 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.
12. The Licensee shall, prior to the removal of any treated soil from the Landfarm, confirm with the Government of Nunavut Environmental - Protection Service that the soils have been treated so as to meet all legislatively-required Soil Quality Remediation Objectives.
13. 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.

PART E: CONDITIONS APPLYING TO MODIFICATIONS AND CONSTRUCTION

1. The Licensee shall submit to the Board for approval, for construction drawings stamped and signed by a qualified Engineer registered in Nunavut, sixty (60) days 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 consent from the Board, carry out Modifications to the Waste Disposal Facilities provided that such Modifications are consistent with the terms of this Licence and the following requirements are met:
 - a. the Licensee has notified the Board in writing of such proposed Modifications at least sixty (60) days prior to beginning the Modifications;
 - b. such Modifications do not place the Licensee in contravention of the Licence or the

- Act;*
- c. the Board has not, during the sixty (60) days following notification of the proposed Modifications, informed the Licensee that review of the proposal will require more than sixty (60) days; and
 - d. the Board has not rejected the proposed Modifications.
3. The Modifications for which all of the conditions referred to in Part E, Item 2 have not been met, may only be carried out upon written approval from the Board.
 4. The Licensee shall, within ninety (90) days of completion of Modifications and/or Construction of facilities and/or infrastructure associated with the project, submit to the Board a Construction Summary Report along with stamped as-built plans and drawings, providing explanation to reflect any deviations from for construction drawings taking into account construction and field decisions and how they may affect the performance of engineered facilities.
 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.
 6. The Licensee shall implement and maintain sediment and erosion control measures prior to and during activities carried out under this Part, to prevent impacts to water resulting from the release of sediment and to minimize erosion.
 7. With respect to earthworks, the deposition of debris or sediment into or onto any water body is prohibited. These materials shall be disposed a distance of at least thirty-one (31) metres from the ordinary High Water Mark in such a fashion that they do not enter the water.
 8. The Licensee shall use material that is free of contaminants for construction, operation, and maintenance activities and that is obtained from approved sources and has been demonstrated not to be potentially acid generating and metal leaching.

PART F: CONDITIONS APPLYING TO OPERATION AND MAINTENANCE

1. The Licensee shall submit to the Board for approval in writing, at least sixty (60) days prior to commissioning the New Landfill, a Status Update Report and photographic record, which demonstrates the implementation of the pre-commissioning recommendations outlined in the *Solid Waste Management Facility Operation and Maintenance (O&M) Plan, Hamlet of Rankin Inlet*, dated September 2015, including:
 - a. The design and construction of the drainage of water surrounding the landfill;
 - b. The need to construct a Hazardous Waste storage area;
 - c. Stockpiling of top soil in the fill area for use as cover material;

- d. Background sampling of soil and water quality of the site;
 - e. Review of the O&M Plan by a bird hazard expert;
 - f. The provision of signed/as-built drawings of the Landfill and Landfarm following the completion of the above measures;
 - g. Confirmation of correspondence with Transport Canada and a copy of any authorizations or recommendations provided through this consultation confirming that Transport Canada requirements have been met; and
 - h. A schedule of activities.
2. The Licensee shall implement the *Solid Waste Management Facility Operation and Maintenance (O&M) Plan Hamlet of Rankin Inlet*, dated September, 2015. The Licensee shall submit to the Board for approval in writing within 2020 Annual Report, a revised *O&M Plan* to address the following:
- a. A translation of the executive summary in Inuktitut;
 - b. Procedures for the testing and characterization of sewage sludge generated to ensure the materials are non-hazardous and proper storage and/or handling and disposal at the Waste Disposal Facilities are provided;
 - c. The Licensee shall dispose of and permanently contain all solid Wastes from the sewage treatment facility under 3AM-GRA1624 at the Waste Disposal Facilities described in this Licence, or as otherwise approved by the Board in writing.
 - d. Updated monitoring requirements in accordance with the Monitoring Program outlined in Part H;
 - e. Types of wastes suitable for treatment in the Landfarm in accordance with the definition provided in Part A of the Licence for Petroleum Hydrocarbon Impacted Soil;
 - f. Though the Applicant has specified that no contaminated soil is currently accepted, the Applicant is required to state what the recommended depths of contaminated soil placed in the Landfarm is, for existing contaminated soils on site;
 - g. Independent third party sampling and testing of treated soil prior to removal from the Landfarm for reuse; and
 - h. Landfarm Effluent quality criteria in accordance with Part D.
3. The Licensee shall implement the “*Environmental Emergency Contingency Plan, Hamlet of Rankin Inlet*”, dated August 2015. The Licensee shall submit for approval of the Board in writing, within 2020 Annual Report, a revised Plan to address the following:
- a. A translation of the executive summary in Inuktitut;
 - b. A map of the 50 year flood plain relative to the Landfarm and Waste Disposal Facilities;
 - c. The revised EECF specifies that drip pans should be used when refueling equipment however, the EECF should be revised to clearly state that a secondary containment or surface liners (drip pans, fold a tanks, etc.) should be placed under all containers and vehicle fuel tank inlet and outlet points, hose connections and hose ends during fuel transfer or for the transfers of any hazardous substance;

- d. The revised EECF specifies what items should be included in the Spill Kits, in section 4.3.1 of the EECF, however it needs to be further revised to specify that appropriate spill response equipment and clean-up materials (absorbents, containment devices, etc.) should be on hand during any transfer of fuel or hazardous substances and at vehicle maintenance areas;
 - e. Submitted EECF should show the locations of all hazardous materials, spill response equipment and clean up materials.
- 4. The Licensee shall implement the *Environmental Monitoring Program and Quality Assurance/Quality Control Plan Hamlet of Rankin Inlet*, Nunavut, dated April, 2015.
- 5. An inspection of all engineered facilities related to the management of Water and Waste shall be carried by an Engineer (Civil, Municipal or Geotechnical) in accordance with the *Canadian Dam Safety Guidelines*, before commissioning any facility and once annually thereafter. The Engineer's report shall be submitted to the Board within sixty (60) days of the inspection, including a Cover Letter from the Licensee outlining an implementation plan addressing each of the Engineer's recommendations.
- 6. The Licensee shall carry out an inspection of all engineered structures or facilities designed to contain, withhold, divert or retain Water or Waste, conducted by a Geotechnical Engineer during the summer months (July/August), in accordance with the Canadian Dam Safety Guidelines, at least one (1) year prior to expiry of the Licence. The Geotechnical Engineer's report shall be submitted to the Board within sixty (60) days of the inspection, including a cover letter from the Licensee outlining an implementation plan to address each of the Engineer's recommendations.
- 7. The Licensee shall perform more frequent inspections of the engineered facilities at the request of an Inspector.
- 8. If, during the period of this Licence, an unauthorized discharge of waste occurs, or if such a discharge is foreseeable, the Licensee shall:
 - a. employ the appropriate contingency measures outlined in the Spill Contingency Plan for the Hamlet of Rankin Inlet. Take whatever steps are immediately practicable to protect human life, health and the environment;
 - b. report the incident immediately to the NWT/NU 24-Hour Spill Report Line at [\(867\) 920-8130](tel:867-920-8130) and to the Inspector at [\(867\) 975-4295](tel:867-975-4295); and
 - c. for each spill occurrence, submit to the Inspector, within thirty (30) days after initially reporting the event, a detailed report that provides the necessary information on the location (including the GPS coordinates), initial response action, remediation/clean-up, status of response (ongoing, complete), proposed disposal options for dealing with contaminated materials and any preventative measures to be implemented.
- 9. The Licensee shall, in addition to Part F, Item 8, regardless of the quantity of releases of

harmful substances, report to the NWT/NU Spill Report Line if the release is near or into a water body.

10. The Licensee shall submit for approval of the Board in writing, within 2020 Annual Report, a Landfarm Operational Contingency Plan to deal with seepage from the facility.

PART G: CONDITIONS APPLYING TO ABANDONMENT AND RESTORATION

1. The Licensee shall submit to the Board for approval in writing, a minimum of six (6) months prior to abandonment of the Old Landfill, a revised *Hamlet of Rankin Inlet, Rankin Inlet Solid Waste Site Abandonment and Restoration (A&R) Plan*, dated July 2009 (for the Old Landfill). The revised A&R Plan for the Old Landfill shall at a minimum address the following:
 - a. A clear rationale for the decision to abandon and remediate the existing site rather than the option of removing and relocating the waste materials into a new engineered facility;
 - b. Design criteria for the cover, gas ventilation system and surface water management system;
 - c. Containment along the base given that the facility is unlined and test pit logs are unclear in specifying whether refusal was met in frozen ground when no bedrock was encountered;
 - d. Whether permafrost encapsulation was considered and the potential effects of saline permafrost conditions at the facility;
 - e. A geothermal design basis for the cover;
 - f. The need to monitor ground temperatures within the waste;
 - g. Concerns associated with the placement of the liner's outer edges on top of natural ground as indicated in Figure 9 of the A&R Plan;
 - h. Authorizations for the quarry source;
 - i. An assessment of alternative design strategies for the planned drainage ditches;
 - j. Describe how the area will be re-graded and what drainage and erosion protection measures will be implemented for the areas where contaminated soils are planned to be removed;
 - k. Justification for why the contaminated soil test pits were stopped at each of the respective depths;
 - l. Clarification that the estimated contaminated soil volumes are based on removing all the soil to the top of the permafrost table or bedrock;
 - m. Method for dealing with surface water flows and contact water during the planned excavation;
 - n. A contingency for dealing with seepage and drainage for soil excavated below the water table;
 - o. A contingency for dealing with free phase hydrocarbons and other potential liquid contaminants which may be encountered, especially near the bedrock or permafrost interfaces;

- p. Reclamation and cover requirements for exposed soils within the excavations following the removal of contaminated soil;
 - q. The need for water quality monitoring up-gradient of the landfill to establish background water quality;
 - r. The need to install thermistors to monitor ground temperatures; and
 - s. Any other items or issues identified through regular annual inspections, compliance inspections or otherwise identified as a requirement of facility closure.
2. The Licensee shall submit to the Board for approval, an Abandonment and Restoration Plan at least six (6) months prior to abandoning any facilities (including the Landfarm) or the construction of new facilities to replace existing ones. Where applicable, the Plan shall include information on the following:
 - a. water intake facilities;
 - b. the water treatment and waste disposal sites and;
 - d. petroleum and chemical storage areas;
 - e. any site affected by waste spills;
 - f. leachate prevention;
 - g. an implementation schedule;
 - h. maps delineating all disturbed areas, and site facilities;
 - i. consideration of altered drainage patterns;
 - j. type and source of cover materials;
 - k. future area use;
 - l. hazardous wastes; and
 - m. a proposal identifying measures by which restoration costs will be financed by the Licensee upon abandonment.
 3. If the Plans referred to in Part G, Items 1 and 2 are not approved the Licensee shall make the necessary revisions and resubmit the Plan within thirty (30) days following notification from the Board.
 4. The Licensee shall implement the Plans specified in Part G, Items 1 and 2 as and when approved by the Board.
 5. The Licensee shall complete all restoration work within the time schedule specified in the Plans, or as subsequently revised and approved by the Board.
 6. The Licensee shall carry out progressive reclamation of any components of the project no longer required for the Licensee's operations.

PART H: CONDITIONS APPLYING TO THE MONITORING PROGRAM

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

Monitoring Program Station Number	Description	Status
RAN-1	Unassigned	Inactive
RAN-2	Runoff from the Old Landfill	Active
RAN-3	Runoff from the New Landfill	Active Upon Commissioning
RAN-4	Discharge from the Landfarm at the controlled point of release	Active
RAN-5	Monitoring well located up gradient of the Landfarm	Active
RAN-6	Monitoring well located down gradient of the Landfarm	Active

2. The Licensee shall sample monthly at Monitoring Program Stations RAN-2 and RAN-3 upon commissioning of the New Landfill, during periods of observed flow and annual discharges, to be analyzed for the following parameters:

Biochemical Oxygen Demand (BOD ₅)	Fecal Coliforms
Total Suspended Solids	pH
Conductivity	Nitrate-Nitrite
Oil and Grease (visual)	Total Phenols
Magnesium	Calcium
Sodium	Potassium
Chloride	Sulphate
Total Hardness	Total Alkalinity
Ammonia Nitrogen	Total Zinc
Total Cadmium	Total Iron
Total Cobalt	Total Manganese
Total Chromium	Total Nickel
Total Copper	Total Lead
Total Aluminum	Total Arsenic

3. The Licensee shall carry out weekly inspections at Monitoring Program Stations RAN-2 and RAN-3 upon commissioning of the New Landfill, from May to August inclusive, to identify Effluent or water flow in order to fulfill the monitoring requirements of Part H, Item 2. A record of inspections shall be retained and made available to an Inspector upon request.
4. The Licensee shall measure and record the origin and volume of all soil, from all locations entering the Landfarm.

5. The Licensee shall characterize through laboratory analysis and record the concentrations of petroleum hydrocarbons in Petroleum Hydrocarbon Impacted Soil entering the Landfarm from all sources, as per the CCME *Canada-Wide Standard for Petroleum Hydrocarbons (PHC) in Soil*.
6. The Licensee shall record the date, amount of soil and soil quality and the final destination of all treated soil removed from the Landfarm in order to meet the objectives of Part D, Item 12, and shall provide the ultimate final intended use and GPS coordinates of all soils removed.
7. The Licensee shall sample prior to discharge at Monitoring Program Station RAN-4, to verify compliance with the Effluent quality limits under Part D, Item 8.
8. The Licensee shall record the volume of all Effluent discharged from the Landfarm at Monitoring Program Station RAN-4.
9. The Licensee shall install groundwater monitoring wells at the Landfarm. These wells shall be located with at least one located upstream of the facility for background data collection (RAN-5) and at least one downstream of the facility (RAN-6).
10. The Licensee shall sample at Monitoring Program Stations RAN-4, RAN-5 and RAN-6 once annually in the summer, giving consideration to adequate ground thaw and obtaining a representative groundwater sample. Samples shall be analyzed for the following parameters:

Biochemical Oxygen Demand (BOD ₅)	Fecal Coliforms
Total Suspended Solids	pH
Conductivity	Nitrate-Nitrite
Oil and Grease	Total Phenols
Magnesium	Calcium
Sodium	Potassium
Chloride	Sulphate
Total Lead	Total Mercury
Total Hardness	Total Alkalinity
Ammonia Nitrogen	Total Zinc
Total Cadmium	Total Iron
Total Aluminum	Total Manganese
Total Chromium	Total Nickel
Total Copper	
Total Arsenic	
TPH (Total Petroleum Hydrocarbons)	
PAH (Polycyclic Aromatic Hydrocarbons)	
BTEX (Benzene, Toluene, Ethylbenzene, Xylene)	
11. Additional monitoring stations, sampling and analysis may be requested by the Board or

an Inspector.

12. The Licensee shall conduct all sampling, sample preservation and analyses 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 a laboratory certified by the Canadian Association for Laboratory Accreditation (CALA).
13. All analyses shall be performed in a laboratory accredited according to ISO/IEC Standard 17025 for all required analyses. The accreditation shall be current and in good standing.
14. The Licensee shall annually review the Quality Assurance/Quality Control Plan and modify it as necessary. Proposed modifications shall be submitted to the Board for review. The submitted Plan shall include a covering letter from an accredited laboratory confirming acceptance of the Plan for the monitoring and analyses to be performed under the Licence
15. The Licensee shall include all of the data and information required by the “Monitoring Program” complete with an interpretation and discussion of the results, in the Licensee's Annual Report, as required *per* Part B, Item 1, or as requested by an Inspector.
16. Modifications to the Monitoring Program may be made only upon written approval of the Board.