



NUNAVUT WATER BOARD

TYPE “A” WATER LICENCE NO: 3AM-GRA1631

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Licence No: 3AM-GRA1631

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

GOVERNMENT OF NUNAVUT, COMMUNITY AND GOVERNMENT SERVICES

(Licensee)

P.O. BOX 490 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 amended Licence:

Licence Number/Type: **3AM-GRA1631 / TYPE "A"**

Water Management Area: **WILSON WATERSHED (13)**

Location: **KIVALLIQ REGION, NUNAVUT**

Classification: **MUNICIPAL UNDERTAKING**

Purpose: **USE OF WATER AND DEPOSIT OF WASTE**

Quantity of Water use not To exceed: **850,000 CUBIC METRES ANNUALLY FROM NIPISSAR LAKE; AND TRANSFER OF 10,000 CUBIC METRES PER DAY FROM LOWER LANDING LAKE TO NIPISSAR LAKE**

Effective Date: **JULY 08, 2021**

Expiry of Licence: **JULY 07, 2031**

This Licence issued (Motion Number: 2021-04-P10-05) and recorded at Gjoa Haven, Nunavut, includes and is subject to the annexed conditions.

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

APPROVED Daniel Vandal
BY: Minister of Northern Affairs

APPROVAL

DATE:



PART A: SCOPE, DEFINITIONS AND ENFORCEMENT

1. SCOPE

1. The amended Type “A” Water Licence No: 3AM-GRA1631 (Licence) authorizes the Government of Nunavut, Community and Government Services (Licensee) to use Water and dispose Waste in support of a Municipal undertaking, as classified under Schedule 1 of the Regulations, located within the municipal boundaries at the following approximate geographic coordinates:

Undertaking	Latitude	Longitude
Municipal	62°49’24” N	92°06’53” W

The scope of activities, works, and undertakings authorized in accordance with the terms and conditions of this Licence is as follows:

- a. Relocate the pumping station from Char River to Lower Landing Lake for replenishing Nipissar Lake during the open water season;
 - b. Pump Water from Lower Landing Lake to Nipissar Lake during open water season;
 - c. Withdrawal of Water from Nipissar Lake to support community needs;
 - d. Continued operation and maintenance of the following municipal facilities:
 - Water Treatment and Supply Facilities
 - Sewage Treatment Facility
 - e. Updates to the Monitoring Program;
 - f. Licence expiry set at 2031;
 - g. Proposed upgrades to the wastewater treatment facility in the near future.
2. This Licence is issued subject to conditions contained herein with respect to the use of Waters and the depositing of Waste of any type in any Waters or in any place under any conditions where such Waste or any other Waste that results from the deposits of such Waste may enter any Waters. Whenever new Regulations are made or existing *Regulations* are amended by the Governor in Council under the *Act*, or other statutes imposing more stringent conditions relating to the quantity, type or manner under which any such Waste may be so deposited, this Licence shall be deemed, upon promulgation of such Regulations, to be subject to such requirements; and
3. Compliance with the terms and conditions of this Licence does not absolve the Licensee from the responsibility for compliance with all applicable legislation, guidelines, and directives.



2. DEFINITIONS

1. The Licensee shall refer to [Schedule A](#) for definitions of terms used in this Licence.

3. ENFORCEMENT

1. Failure to comply with this Licence shall be a violation of the *Act*, subjecting the Licensee to the enforcement measures and the penalties provided for in the *Act*.
2. All inspection and enforcement services regarding this Licence will be provided by Inspectors appointed under the *Act*.
3. For the purpose of enforcing the terms and conditions of this Licence with respect to the use of Water and deposit or Discharge of Waste in Waters, Inspectors appointed under the *Act*, hold all powers, privileges, and protections that are conferred upon them by the *Act* or by other applicable laws.

PART B: GENERAL CONDITIONS

1. The Licensee shall file, with the Board for review, no later than the 31st of March of the year following the calendar year being reported, an Annual Report formulated in accordance with the requirements under [Schedule B](#) of this Licence.
2. The Licensee shall maintain a copy of this Licence at the Rankin Inlet Office and Water Treatment and Supply Facilities at all times.
3. The Licensee shall file an application for renewal or amendment of this Licence at least one (1) year prior to the Licence expiry or requested amendment.
4. The Licensee shall install, operate, and maintain the meters, devices or other appropriate methods for measuring the volumes of Water used and Waste discharged or deposited to the satisfaction of an Inspector.
5. The Licensee shall post the necessary signs to identify the stations of the Monitoring Program included under [Schedule J](#) of this Licence. All signage shall be in the Official Languages of Nunavut.
6. The Licensee shall, for all Plans submitted under this Licence, include a proposed timetable for implementation. Plans submitted cannot be undertaken without subsequent written approval and/or directions from the Board. The Board may alter or modify a Plan if necessary to achieve legislative objectives and will notify the Licensee in writing of acceptance, rejection, or alteration of the Plan.



7. The Licensee shall, for all Plans submitted under this Licence, implement the Plan as accepted by the Board or approved by the Board in writing.
8. The Licensee shall, within thirty (30) days of notification or within the timeframe specified by the Board, submit for review and/or the Board's approval revisions to any plan that is unacceptable to the Board.
9. Every Plan to be carried out pursuant to the terms and conditions of this Licence shall become a part of the Licence, and any additional terms and conditions imposed upon approval of a Plan by the Board shall also become part of the Licence. All relevant terms and conditions of the Licence should be contemplated in the development of a Plan where appropriate.
10. The Licensee shall review the Plans or Manuals referred to in this Licence as required by changes in operation and/or technology and modify the Plans/Manuals accordingly. Revisions to any Plan/Manual shall be submitted in the form of an addendum to be included within the Annual Report required under Part B, Item 1, complete with the lists of revisions detailing where significant content changes are made.
11. The Licensee shall immediately report to the NWT/NU 24-Hour Spill Report Line (867-920-8130) any spills of Waste, which are reported to or observed by the Licensee, which may have resulted from the operations of Water supply and Waste disposal activities.
12. Any communication with respect to this Licence shall be made in writing to the attention of:

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

13. Any notice made to an Inspector shall be made in writing to the attention of:

Water Resources Officer
Nunavut District, Nunavut Region
P.O. Box 100
Iqaluit, NU X0A 0H0
Telephone: (867) 975-4284
Fax: (867) 979-6445



14. Unless otherwise directed by the Board in writing, the Licensee shall submit to the Board one (1) electronic copy of all reports, studies, and Plans generated for the works, activities, and undertakings under this Licence. All Reports, studies or Plans submitted to the Board by the Licensee shall include an executive summary in English, Inuktitut, and French.
15. The Licensee shall ensure that any document(s) or correspondence submitted by the Licensee to the Board is received by the Board and maintain on file a copy of the acknowledgment of receipt issued by the Manager of Licensing or his/her designate.
16. This Licence is assignable as provided for in section 44 of the *Act*.
17. The expiry or cancellation of this Licence does not relieve the Licensee from any obligation imposed by the Licence, or any other regulatory requirement.
18. The Schedules attached to this Licence provide details regarding the requirements associated with specific items in the main body of the Licence and are included in the Schedule to provide greater clarity and as an aid to interpretation for the Licensee. If the Board subsequently determines that an item in any of the Schedules requires revision in order to better reflect the intent and objectives of the Licence, the Board may at its discretion, and upon consulting and providing written notice to the Licensee and interested parties, revise the Schedule accordingly. Unless the Board directs otherwise, such revision may not necessarily be considered as an "Amendment" to the Licence.
19. Unless otherwise stated, references in the Licence to any specific legislation, policy, guideline or other regulatory requirement are deemed to refer to the regulatory requirement as may be amended or as may be expressly replaced by successor legislation, policy, guidelines or other regulatory requirements after the Licence is approved by the Minister.

PART C: CONDITIONS APPLYING TO SECURITY

1. The Licensee is not required to post reclamation security for the activities, works, and undertakings authorized under this Licence.

PART D: CONDITIONS APPLYING TO THE USE OF WATERS AND WATER MANAGEMENT

1. The Licensee shall obtain all fresh Water for the Municipal Undertaking, from Nipissar Lake at Monitoring Program Station GRA-1 using the Water Supply Facilities, or as otherwise approved by the Board in writing.



2. The annual quantity of Water used for all purposes from Nipissar Lake shall not exceed eight hundred and fifty thousand (850,000) cubic metres *per annum*, or as otherwise approved by the Board in writing.
3. The Licensee is authorized to withdraw and transfer Water from Lower Landing Lake at Monitoring Program Station GRA-7, and pump to Nipissar Lake annually during the open water season.
4. The daily quantity of Water pumped from Lower Landing Lake to Nipissar Lake shall not exceed ten thousand (10,000) cubic metres *per day*.
5. The Licensee shall, within the 2021 Annual Report, submit to the Board for review an updated Water Pumping Plan. This Plan will reflect the changes in pumping location, volumes and procedures.
6. The Licensee shall equip all Water intake hoses with a screen of an appropriate mesh size to ensure that fish are not entrained and shall withdraw Water at a rate such that fish do not become impinged on the screen.
7. The Licensee shall not remove any material from below the ordinary High Water Mark of any water body unless otherwise approved by the Board in writing.
8. The Licensee shall not cause erosion to the banks of any water body and shall provide necessary controls to prevent such erosion.
9. Sediment and erosion control measures shall be implemented prior to and maintained during the operation to prevent entry of sediment into Water.
10. The Licensee shall maintain the Water Supply Facilities to the satisfaction of the Inspector.
11. The Licensee shall monitor the Water level of Nipissar Lake at Monitoring Program Station GRA-5, or as otherwise approved by the Board.

PART E: CONDITIONS APPLYING TO WASTE DISPOSAL AND MANAGEMENT

1. The Licensee shall direct all Sewage to the Sewage Treatment Facility or as otherwise approved by the Board.
2. The Licensee shall deposit sewage sludge and solid waste to a licensed waste disposal facility.



3. The licensed facilities shall be maintained and operated in such a manner as to prevent structural failure.
4. The Licensee shall maintain the Licensed Facilities to the satisfaction of an Inspector.
5. The Licensee shall remove from the site, all Hazardous Wastes, waste oil and noncombustible waste generated through the course of the operation, for disposal at a licensed waste disposal facility.
6. The Licensee shall maintain records of all Waste removed from site and records of confirmation of proper disposal of removed Waste. These records shall be made available to an Inspector upon request.

PART F: CONDITIONS APPLYING TO MODIFICATIONS AND CONSTRUCTION

1. The Licensee shall submit to the Board, for approval in writing, construction drawings signed and stamped by an Engineer registered in Nunavut prior to the construction of any dams, dykes or structures intended to contain, withhold, divert or retain Water or wastes.
2. The Licensee may, without written approval from the Board, carry out Modifications provided that such Modifications are consistent with the terms of this Licence and the following requirements are met:
 - a. The Licensee has notified the Board in writing of such proposed Modifications at least sixty (60) days prior to beginning the Modifications;
 - b. Such Modifications do not place the Licensee in contravention of the Licence or the Act;
 - c. Such Modifications are consistent with the NPC Land Use Planning and NIRB Screening Determinations;
 - d. The Board has not, within sixty (60) days following notification of the proposed Modifications, informed the Licensee that review of the proposal will require more than sixty (60) days; and
 - e. The Board has not rejected the proposed Modifications.
3. Modifications for which any of the conditions referred to above have not been met can be carried out only with written approval from the Board.
4. Applications for modifications shall contain:
 - a. A description of the facilities and/or works to be constructed;
 - b. The proposed location of the structure(s);
 - c. Identification of any potential impacts to the receiving environment;



- d. A description of any monitoring required, including sampling locations, parameters measured, and frequencies of sampling;
 - e. Schedule for construction;
 - f. Drawings of Engineered Structures stamped by a Professional Engineer; and
 - g. Proposed sediment and erosion control measures.
5. The Licensee shall provide as-built plans and drawings of the construction and/or modifications referred to in Part F of this Licence within ninety (90) days of completion of the Construction or Modification. These plans and drawings shall be signed and stamped by an Engineer.

PART G: CONDITIONS APPLYING TO OPERATIONS AND MAINTENANCE

1. The Licensee shall implement the Plan entitled “Water Supply Facility Operation and Maintenance (O&M) Plan, Hamlet of Rankin Inlet, Department of Community and Government Services, Government of Nunavut” dated April 2010 that was originally approved by the Board.
2. The Licensee shall, within the 2021 Annual Report, submit to the Board for review, an updated Operation and Maintenance (O&M) Plan for the Water Supply Facility to take into account the changes in the water supply system for the Hamlet of Rankin Inlet.
3. The Licensee shall implement the Plan entitled “Operation and Maintenance (O&M) Plan Sewage Treatment Facility, Hamlet of Rankin Inlet, Nunavut” updated January 2016, which was originally approved by the Board.
4. The Licensee shall review all Manuals referred to in this Part as required by changes in operation and/or technology and modify accordingly. Revisions are to be submitted in the form of an Addendum to be included with the Annual Report, unless directed otherwise by the Board or an Inspector.
5. The Licensee shall maintain all facilities approved under this Licence in accordance with applicable guidelines, procedures, and regulations and to the satisfaction of an Inspector.
6. An inspection of all engineered facilities associated with this Licence shall be carried out at least once annually, in July or August, by an Engineer (Civil, Municipal or Geotechnical). 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 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.



PART H: CONDITIONS APPLYING TO SPILL CONTINGENCY

1. The Licensee shall implement the Plan entitled "Environmental Emergency Contingency Plan", dated April 2021 which is approved by the Board with the issuance of this Licence.
2. The Licensee shall prevent any chemicals, petroleum products or Wastes associated with the activities under this Undertaking from entering Water. All Sumps and fuel caches shall be located at a distance of at least thirty-one (31) metres from the ordinary High Water Mark of any adjacent water body and inspected on a regular basis.
3. The Licensee shall conduct any equipment maintenance and servicing in designated areas and shall implement special procedures (such as the use of drip pans) to manage motor fluids and other Waste and contain potential spills.
4. The Licensee shall, subject to Section 16 of the Regulations, report any unauthorized deposits of waste or foreseeable unauthorized deposits of waste and/or discharges of Effluent, and:
 - a. Employ the appropriate contingency measures outlined in the Environmental Emergency Contingency Plan referred to in Part H, Item 1; take whatever steps are immediately practicable to protect human life, health and the environment;
 - b. Report the incident immediately via the NWT/NU 24-Hour Spill Reporting Line (867) 920-8130 and to the Inspector at (867) 975-4284; 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.
5. The Licensee shall, in addition to Part H, Item 4, regardless of the quantity of releases of harmful substances, report to the NWT/NU 24-Hour Spill Line, if the release is near or into a water body.

PART I: CONDITIONS APPLYING TO CLOSURE AND RECLAMATION

1. The Licensee shall, at least six (6) months prior to decommissioning any facilities or upon submission of final design drawings for the construction of new facilities to replace the existing ones, submit to the Board for approval in writing a Closure and Reclamation Plan for the facilities being decommissioned. The Plan shall be prepared by an Engineer in accordance with the industry's best practices and relevant guidelines and shall incorporate, where applicable, the following information:



- a. Facilities being abandoned;
 - b. Maps delineating all disturbed areas and site facilities;
 - c. Environmental conditions existing before the use of the site;
 - d. Remediation objectives;
 - e. Any sites affected by waste spills and measures taken to remediate these sites;
 - f. An implementation schedule;
 - g. Type and source of cover materials;
 - h. Future use of the area;
 - i. Hazardous wastes;
 - j. Financing of the restoration/remediation costs.
2. The Licensee shall carry out progressive reclamation of any components of the project no longer required for the Licensee’s operations.
3. In order to promote growth of vegetation and the needed microclimate for seed deposition, all disturbed surfaces shall be prepared by ripping, grading, or scarifying the surface to conform to the natural topography.
4. Areas that have been contaminated by hydrocarbons shall be reclaimed to meet objectives as outlined in the Government of Nunavut’s Environmental Guideline for Site Remediation, January 2002. The use of reclaimed soils for the purpose of back fill or general site grading may be carried out only upon consultation and approval by the Government of Nunavut, Department of Environment and an Inspector.
5. The Licensee shall complete the restoration work within the time schedule specified in an approved Closure and Reclamation Plan, or as subsequently revised and approved by the Board.
6. The Licensee shall complete all restoration work prior to the expiry of this Licence.

PART J: CONDITIONS APPLYING TO THE MONITORING PROGRAM

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

Monitoring Program Station Number	Description	Frequency	Status
GRA-1	Raw Water supply prior to treatment	Monthly	Active (Volume)



GRA-2	Point of discharge in Prairie Bay (within 20 m of discharge pipe outfall approximately 5 m below the surface)	N/A	Inactive
GRA-3	Effluent discharge from Sewage Treatment Facility	Quarterly	Active (Quality)
GRA-4	Sludge removed from the Sewage Treatment Facility	Monthly	Active (Volume)
GRA-5	Water level gauge in Nipissar Lake	Monthly (during open water season)	Active (Water Level)
GRA-6	Char River Water pumped to Nipissar Lake	Daily, Monthly/Annually; Annually (spring freshet)	Inactive
GRA-7	Lower Landing Lake	<u>Quality</u> : Annually; <u>Volume</u> : Daily during resupply; <u>Water Level</u> : Monthly (during open water season)	Active (Quality, Volume, Water Level)

2. The Licensee shall measure by instrument and record in cubic metres, the daily, monthly and annual quantities of Water extracted for all purposes at Monitoring Program Station GRA-1, and extracted from Lower Landing Lake at Monitoring Program Station GRA-7.
3. The Licensee shall sample at least once during a Calendar Quarter at Monitoring Program Station GRA-3 and analyze for the following parameters:

cBOD5	Fecal Coliforms
pH	Conductivity
Total Suspended Solids	Ammonia Nitrogen
Nitrate – Nitrite	Sulphate
Total Phenols	Potassium
Sodium	Calcium
Magnesium	Chloride
Total Arsenic	Total Cadmium
Total Chromium	Total Copper
Total Iron	Total Lead
Total Mercury	Total Nickel



Total Zinc

Total Cobalt

Oil and Grease

Total Petroleum Hydrocarbons (TPH) with using method that measures mineral sources of hydrocarbons (e.g. ASTM D7678 PHC test or other)

4. The Licensee shall sample annually during open water season, at Monitoring Program Stations GRA-1 and GRA-7 and analyze for the following parameters in accordance with the Canadian Council of Ministers of the Environment (CCME, 2013) Water Quality Guidelines for the Protection of Freshwater Aquatic Life:

pH

Conductivity

Total Suspended Solids

Ammonia Nitrogen

Nitrate – Nitrite

Sulphate

Total Phenols

Total Alkalinity

Total Hardness

Potassium

Sodium

Calcium

Magnesium

Chloride

Total Aluminum

Total Arsenic

Total Chromium

Total Cobalt

Total Copper

Total Iron

Total Lead

Total Manganese

Total Mercury

Total Nickel

Total Phosphorous

Total Zinc

Oil and Grease

Total Petroleum Hydrocarbons (TPH) (using a method that measures mineral sources of hydrocarbons; e.g. ASTM D7678 PHC test or other)

Benzene, Toluene, Ethylbenzene, Xylene (BTEX)

5. The Licensee shall measure and record in cubic metres, the monthly and annual volumes of sludge removed from the Sewage Treatment Facility at Monitoring Program Station GRA-4.
6. The Licensee shall provide the GPS co-ordinates (in degrees, minutes and seconds of latitude and longitude) of all locations where sources of Water are utilized for all purposes and at all Monitoring Program Stations.
7. The Licensee shall record Water elevation monthly, during open water season at Monitoring Program Stations GRA-5 and GRA-7.
8. All sampling, sample preservation and analyses shall be conducted in accordance with methods prescribed in the current edition of Standard Methods for the Examination of Water and Wastewater, or by such other methods approved by the Board.



9. All analyses shall be performed in a laboratory accredited according to ISO/IEC Standard 17025. The accreditation shall be current and in good standing.
10. The Licensee shall implement the Plan entitled “Environmental Monitoring Program and Quality Assurance/Quality Control Plan” dated April 2021.
11. The Licensee shall annually review the QA/QC Plan referred to in Part I, Item 10 and modify it as necessary. Revised QA/QC Plans shall be submitted to the Board with a current approval letter from an accredited lab and shall meet the standards set out in Part I, Items 8 and Item 9 of the Licence.
12. The Licensee shall include all of the data and information required by the Monitoring Program in the Licensee's Annual Report, as required per Part B, Item 1(a) or as otherwise requested by an Inspector.
13. Modifications to the Monitoring Program may be made only upon written approval of the Board.

SCHEDULES

[Schedule A](#): Scope, Definitions, and Enforcement

[Schedule B](#): General Conditions

Schedule C: No Schedule for Security

Schedule D: No Schedule for Use of Water and Water Management Plans

Schedule E: No Schedule for Deposit of Waste and Waste Management

Schedule F: No Schedule for Modifications and Construction

Schedule G: No Schedule for Operations and Maintenance

Schedule H: No Schedule for Spill Contingency Planning

Schedule I: No Schedule for Closure and Reclamation

[Schedule J](#): No Schedule for Monitoring Program



Schedule A: **Definitions**

In this Licence No: 3AM-GRA1631

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

“**Adaptive Management**” means a management plan that describes a way of managing risks associated with uncertainty and provides a flexible framework for mitigation measures to be implemented and actions to be taken when specified thresholds are exceeded;

“**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. It may also be considered as an appendix or supplement;

“**Amendment**” means a change to any terms and conditions of this Licence through application to the NWB, requiring a change, addition, or deletion of specific terms and conditions of the Licence not considered as a modification;

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

“**Annually**” means, in the context of monitoring frequency, one sampling event occurring every 365 days with a minimum of 200 days between sampling events;

“**Application**” means, for the purposes of this License, the totality of the NWB Public Registry opened as a result of the filing of the application amend and renew the existing Water Licence No: 3AM-GRA1624;

“**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 Article 13 of the *Nunavut Agreement* and under section 14 of the *Act*;

“**Calendar Quarter**” means divisions of the calendar year, comprised of three month intervals from January to December, inclusive (January – March, April – June, July – September and October – December);

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

“**Effluent**” means treated or untreated liquid waste material that is discharged into the environment from the site water management facility such as a settling pond or a treatment plant;



“**Engineer**” means a professional engineer registered to practice in Nunavut in accordance with the *Consolidation of Engineers and Geoscientists Act S. Nu 2008, c.2* and the *Engineering and Geoscience Professions Act S.N.W.T. 2006, c.16 Amended by S.N.W.T. 2009, c.12*;

“**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;

“**Greywater**” means the component of effluent produced from domestic use (i.e. washing, bathing, food preparation and laundering), excluding sewage;

“**Hazardous Waste**” means materials or contaminant which are categorized as dangerous goods under the *Transportation of Dangerous Good Act (1992)* and/or that is no longer used for their original purpose and is intended for recycling, treatment, disposal or storage;

“**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;

“**Licence**” means this Type “A” Water Licence 3AM-GRA1631, issued by the Nunavut Water Board in accordance with the *Act*, to Government of Nunavut, Community and Government Services for the Hamlet of Rankin Inlet;

“**Licensed Facilities**” means the Water Supply Facilities, Utilidor and Sewage Treatment Facility;

“**Licensee**” means to whom the Licence 3AM-GRA1631 is issued to or assigned;

“**Minister**” means the Minister of 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;

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

“**Monthly**” means, in the context of monitoring frequency, one sampling event occurring every thirty (30) days with a minimum of twenty one (21) days between sampling events;

“**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;



"Quality Assurance / Quality Control (QA/QC)" Quality Assurance means the system of activities designed to better ensure that quality control is done effectively; Quality Control means the use of established procedures to achieve standards of measurement for the three principle components of quality: precision, accuracy and reliability;

"Regulations" means the *Nunavut Waters Regulations (SOR/2013/669 18th April, 2013)*;

"Sewage" means all toilet wastes and greywater;

"Sewage Treatment Facility" means the facility designed to receive sewage from the Utilidor, designed to provide primary treatment via a rotating drum screen, and discharge Sewage to the marine environment in Prairie Bay as described in the Application for a Water Licence Renewal dated March 6, 2015;

"Undertaking" means an undertaking in respect of which water is to be used or waste is to be deposited, of a type set out in Schedule I of the *Regulations*;

"Use" means use as defined in S.4 of the Act;

"Utilidor" means the piped distribution system designed to transport treated water from the Water Supply Facilities to structures and dwellings in Rankin Inlet and the piped collection system designed to collect sewage from structures and dwellings and transport to the Sewage Treatment Facility, as described in the Application for a Water Licence Renewal dated March 6, 2015;

"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;

"Wastewater" means the water generated by site activities or originates on-site that requires treatment or any other water management activity;

"Water or Waters" mean water as defined in S.4 of the *Act*, inland waters, whether in a liquid or solid state, on or below the surface of the land;

"Water Supply Facilities" means the areas and associated infrastructure at Nipissar Lake including the Lake, intake lines, pump house, underground pipeline and Williamson Lake water tank, and the areas and associated infrastructure at the Lower Landing Lake including the water intake and pipeline extending from Lower Landing Lake to Nipissar Lake as described in the Amendment Application for Water Licence dated September 16, 2020.



Schedule B: Annual Reporting Requirements

The Annual Report referred to in Part B, Item 1, shall include the following:

- a. The monthly and annual quantities in cubic metres of fresh Water withdrawn from Nipissar Lake at Monitoring Station No: GRA-1;
- b. The daily, monthly and annual quantities in cubic metres of fresh Water withdrawn from Lower Landing Lake during annual resupply (spring freshet) at Monitoring Station No: GRA-7;
- c. The monthly and annual quantities in cubic metres of any Discharges from the Sewage Treatment Facility at Monitoring Station GRA-3;
- d. The monthly and annual quantities in cubic metres of sludge removed from the Sewage Treatment Plant at Monitoring Station GRA-4;
- e. A summary report which includes all data and information generated under the Monitoring Program, including the QA/QC program, in electronic formats acceptable to the Board;
- f. With the 2021 Annual Report, an update covering the tentative schedule for steps towards upgrading the Sewage Treatment Facility. This Memo will take into account the recommendations received during the application process.
- g. A summary of modifications and/or major maintenance work carried out on the Water Supply and Sewage Treatment Facilities, including all associated structures;
- h. A progress report and revisions (if applicable) to any studies requested by the Board that relate to Waste management, Water use or reclamation and a brief description of any future studies planned by the Licensee including, a non-technical executive summary for the general public, translated into Inuktitut;
- i. Any revisions required, in the form of addenda, to Plans, Manuals and Reports approved under the Licence;
- j. A list and description, including volumes, of all unauthorized discharges, spills and summaries of follow-up action taken;
- k. A summary of any closure and reclamation work undertaken and an outline of any work anticipated for the next year, including any changes to implementation and scheduling;
- l. A summary of actions taken to address concerns or deficiencies listed in the inspection reports and/or compliance reports filed by an Inspector;
- m. 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; and
- n. Any other details on the use of Water or Waste disposal requested by the Board by November 1st of the year being reported.



Schedule J: Conditions Applying to Monitoring

Table 1 – Water Quality Parameters

Test Group	Analytical Parameter	Unit of Measurement
Effluent (E)	pH (field and lab)	NA
	Conductivity (field and lab)	$\mu\text{S}/\text{cm}$
	Temperature (field)	$^{\circ}\text{C}$
	Total Suspended Solids (TSS)	mg/L
	Biochemical Oxygen Demand	mg/L
	Fecal Coliform	CFU/100 mL
	Nitrate-Nitrite	mg/L
	Ammonia Nitrogen	mg/L
	Sulphate	mg/L
	Chloride	mg/L
	Total Hardness	mg/L
	Total Alkalinity	mg/L
	Total Phenols	mg/L
	Total Organic Carbon - TOC	mg/L
ICP Metals Scan (Total) (Me)	Al, As, Ca, Cd, Co, Cr, Cu, Fe, Hg, K, Mg, Na, Ni, Pb, Zn	mg/L
Flow (F)	Volume	m^3



Table 2 – Water Quality Monitoring Criteria

Station ID	Description	Status	Parameter	Testing / Measurement Frequency	Reporting Frequency
GRA-1	Raw Water supply prior to treatment	Active	F	Daily & Monthly	Annually
GRA-2	Point of discharge in Prairie Bay (within 20 m of discharge pipe outfall approximately 5 m below the surface)	Inactive	N/A	N/A	N/A
GRA-3	Effluent discharge from Sewage Treatment Facility	Active	F, E, Me	When flow is observed	Quarterly
GRA-4	Sludge removed from the Sewage Treatment Facility	Active	F	Monthly	Annually
GRA-5	Water level gauge in Nipissar Lake	Active	Water Level	Monthly	Annually
GRA-6	Char River Water pumped to Nipissar Lake	Inactive	N/A	N/A	N/A
GRA-7	Lower Landing Lake	Active	F, E, Me, Water Level	Daily & Monthly, Annually during pumping, Monthly	Annually