



NUNAVUT WATER BOARD

TYPE “A” WATER LICENCE NO. 3AM-PAN1828



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Licence No. 3AM-PAN1828

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 the

HAMLET OF PANGNIRTUNG

(Licensee)

P.O. BOX 253 Municipality of Pangnirtung, NU X0A 0R0

(Mailing Address)

hereinafter called the Licensee, the right to alter, divert or otherwise use Water or deposit Waste for a period subject to restrictions and conditions contained within this Licence:

Licence Number / Type:	3AM-PAN1828 / TYPE "A"
Water Management Area:	NORTHERN CUMBERLAND SOUND WATERSHED (51)
Location:	WITHIN HAMLET OF PANGNIRTUNG'S MUNICIPAL BOUNDARIES, QIKIQTANI REGION, NUNAVUT
Classification:	MUNICIPAL UNDERTAKING
Purpose:	USE OF WATERS AND DEPOSIT OF WASTE
Quantity of Water not to be Exceeded:	120,000 CUBIC METRES ANNUALLY
Date Licence Issuance:	MAY 4, 2018
Expiry of Licence:	MAY 3, 2028

This Licence issued (**Motion Number: 2018-05-P18-05**) and recorded at Gjoa Haven, Nunavut, includes and is subject to the annexed conditions.

June 19, 2018

Lootie Tomasie
Chairman
Nunavut Water Board

**APPROVED
BY:**

Minister of Crown-Indigenous
Relations and Northern Affairs
Canada

**APPROVAL
DATE:**

June 19, 2018



PART A: SCOPE, DEFINITIONS, AND ENFORCEMENT

1. SCOPE

1. This Type "A" Water Licence No. 3AM- PAN1828 ("Replacement and Amended Licence" or "Licence") authorizes the Hamlet of Pangnirtung ("Licensee" or the "Hamlet") to use Water and deposit Waste in support of a Municipal undertaking, as classified under Schedule 1 of the Regulations, within the Hamlet's municipal boundaries at the following approximate geographic coordinates:

Undertaking	Latitude	Longitude
Municipal	66° 09' 00" N	65° 40' 34" W

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

- a. Use, management, and protection of the Duval River drainage basin;
 - b. Withdrawal of Water from Duval River to a storage reservoir to support community needs;
 - c. Continued operation of the following municipal facilities:
 - a. Water Treatment and Supply Facility to treat and store water for municipal use;
 - b. Wastewater Treatment Plant to treat and dispose of wastewater and sewage; and
 - c. Solid Waste Management Facility to dispose of solid and hazardous wastes generated within the municipality.
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 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 Municipal Office, Water Treatment and Supply Facility, and the Waste Treatment 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, to the satisfaction of an Inspector, install, operate, and maintain meters, devices or other appropriate methods for measuring the volumes of Water used and Waste Discharged or deposited.
5. The Licensee shall post the necessary signs to identify the stations of the Monitoring Program included under [Schedule H](#) 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 referred to in this Licence as required by changes in operation and/or technology and modify the Plans accordingly. Revisions to any Plan 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 associated with the Undertakings under this Licence, including the Water Treatment Facility and Waste Treatment Facilities, which are reported to or observed by the Licensee.
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) 975-4295
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 is 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 PLANS

1. The Licensee shall withdraw Water for the Municipal Undertaking from the Duval River at Monitoring Station No. PAN-1, using the Water Treatment and Supply Facility, or as otherwise approved by the Board in writing.
2. The annual quantity of Water used for all purposes from the Duval River shall not exceed one hundred and twenty thousand (120,000) cubic metres per annum, or as otherwise approved by the Board in writing.
3. The Licensee shall, within six (6) months of approval of this Licence, install the appropriate flow-metering equipment required to accurately record the quantity of Water withdrawn from the Duval River .
4. The Licensee shall, within six (6) months of approval of this Licence, equip all freshwater intake structures with screens of appropriate mesh size that meet the requirements of Fisheries and Oceans (DFO) Canada’s Freshwater Intake End-of-Pipe Fish Screen Guidelines (1995 or the most current) so as to prevent the entrainment of fish and control Water withdrawal rates such that fish do not become impinged within the screens.



5. The Licensee shall complete and provide to the Board the results of a Hydrological Study of the Duval River within four (4) years of the approval of this Licence by the Minister. The Hydrological Study shall address relevant intervenor's comments and recommendations made during the 2017-2018 licensing process, including, at a minimum, details related to the discharge volume and velocity, erosion, sedimentation, water quality, and variability of discharge into the Duval River.
6. The Licensee shall withdraw Water from the Duval River at a rate that shall not exceed ten per cent (10%) of the instantaneous flow in the river, and shall cease all water withdrawal when the instantaneous flow in the river is below thirty per cent (30%) of the mean annual discharge.
7. The Licensee shall limit the withdrawal of Water from the Duval River to the months of July and August, unless otherwise recommended by the Hydrological Study provided under Part D, Item 5 and approved by the Board in writing.
8. 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.
9. The Licensee shall not cause erosion to the banks of any body of Water and shall provide the necessary controls to prevent such erosion.
10. The Licensee shall implement necessary measures to control sediment and erosion prior to and during operations to prevent entry of sediments into Water.
11. The Licensee shall maintain the Water Treatment and Supply Facility in accordance with applicable guidelines, procedures, and regulations and to the satisfaction of an Inspector.
12. The Licensee shall implement the Water Reservoir Operations and Maintenance Manual dated December 20, 2017 and as approved by the Board.
13. The Licensee shall submit for Board review an updated Water Reservoir Operations and Maintenance Manual with the 2018 Annual Report. The updates shall address intervenor's comments and recommendations made during the 2017-2018 licensing process and public hearing.

PART E: CONDITIONS APPLYING TO THE DEPOSIT OF WASTE AND WASTE MANAGEMENT

1. The Licensee shall direct all Sewage to the Wastewater Treatment Plant, or as otherwise approved by the Board in writing.
2. The Licensee shall establish the relevant monitoring stations for the facilities authorized under this Licence in accordance with [Schedule H](#).



3. All Effluent discharged from the Wastewater Treatment Plant at Monitoring Program Station PAN-3 shall not exceed the following Effluent quality limits:

Parameter	Maximum Average Concentration	Maximum concentration of Any Grab Sample
BOD ₅	120 mg/L	120 mg/L
pH	Between 6 and 9	
Fecal Coliforms	1 x 10 ³ CFU/100 mL	1 x 10 ³ CFU/100 mL
Total Suspended Solids (TSS)	180 mg/L	180 mg/L
Oil and grease	No visible sheen	

4. The Discharge of Effluent from Wastewater Treatment Plant at Monitoring Program Station PAN-3, shall be demonstrated to be Acutely non-Lethal under the following test and as stipulated in [Schedule H](#) of the Licence:
- Acute Lethality of Effluents to Rainbow Trout (as per Environment Canada’s Environmental Protection Series Biological Test Method EPS/1/RM/13 Second Edition December 2000 (with May 2007 amendments).
5. The Licensee shall dispose of and contain all fish processing wastes at the Solid Waste Management Facility, in a pit excavated below the active layer-permafrost interface. Fish wastes deposited at the Solid Waste Management Facility shall be treated with lime, and covered with soil prior to the onset of the annual spring freshet and then weekly thereafter during June, July, August and September.
6. The Licensee shall practice open burning only as a means of last resort when all other reasonable disposal measures have been implemented.
7. The Licensee shall implement measures to prevent hazardous materials and/or leachate from the Solid Waste Management Facility and Metal and Hazardous Waste Storage Area from entering water, and shall control surface runoff from the Solid Waste Management Facility and Metal Storage Area.
8. The Licensee shall erect a fence surrounding the Metal and Hazardous Waste Storage Area within six months of the approval of this Licence by the Minister.
9. The Licensee shall submit to the Board, for approval, a standalone Drainage / Seepage Monitoring and Management Plan with the 2018 Annual Report to address intervenor’s comments and recommendations made during the 2017-2018 licensing process and public hearing, including, at a minimum, a list of parameters of concern, targeted concentrations limits and monitoring details.
10. The Licensee shall implement the following Plans as approved by the Board:
- a. Wastewater Treatment Plant Bypass Contingency Plan dated August 10, 2017;
 - b. Operation and Maintenance Plan for Solid Waste Facilities dated December, 2017; and



- c. Wastewater Treatment Plant Process Operation Manual dated February, 2015.
11. The Licensee shall submit to the Board, for review, an updated Wastewater Treatment Plant Bypass Contingency Plan with the 2018 Annual Report to address intervener's comments and recommendations made during the licensing process.
12. The Licensee shall dispose of, and contain, all municipal solid waste generated by the Hamlet at the Landfill or as otherwise approved by the Board in writing.
13. The Licensee shall maintain the Licensed Facilities to the satisfaction of an Inspector.
14. The Licensee shall remove from the site associated with the undertaking, all Hazardous Wastes, waste oil and non-combustible waste generated through the course of the operation, for disposal at a licensed waste disposal facility.
15. 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 or the Board upon request.

PART F: CONDITIONS APPLYING TO MODIFICATIONS AND CONSTRUCTION

1. The Licensee may, without written consent from the Board, carry out Modifications to the potable Water Treatment and Supply Facility and Waste Treatment 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 are consistent with the NPC Land Use Planning Conformity Determination and the NIRB Screening Decision;
 - c. such Modifications do not place the Licensee in contravention of the Licence or the *Act*;
 - d. the Board has not, during the sixty (60) days following notification of the proposed Modifications, informed the Licensee that review of the proposal will require more than sixty (60) days; and
 - e. The Board has not rejected the proposed Modifications.
2. Modifications for which all of the conditions referred to in Part F, Item 1 have not been met can be carried out only with written approval from the Board.
3. The Licensee shall provide as-built plans and drawings of the Modifications referred to in this Licence within ninety (90) days of completion of the Modifications. These plans and drawings shall be stamped by an Engineer.



PART G: CONDITIONS APPLYING TO SPILL CONTINGENCY PLANNING

1. The Licensee shall implement the Spill Contingency Plan dated August 10, 2017 as approved by the Board.
2. The Licensee shall submit to the Board for review an updated Spill Contingency Plan with the 2018 Annual Report. The updates shall address interveners comments and recommendations made during the licensing process and public hearing, including a topographical map with all infrastructures/facilities included within the scope of this Licence.
3. 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, as required, the approved Spill Contingency Plan;
 - b. Report the incident immediately via the NWT/NU 24-Hour Spill Reporting Line (867) 920-8130 and to the Inspector at (867) 975-4295; and
 - c. For each spill occurrence, submit a detailed report to the Inspector and to NWB, no later than thirty (30) days after initially reporting the event. The report shall include the amount and type of spilled product, the GPS location of the spill, and the measures taken to contain, clean up and restore the spill site.
4. The Licensee shall, in addition to Part H, Item 3, regardless of the quantity of release of a harmful substance, report to the NWT/NU Spill Line if the release is near or into a Water body.

PART H: CONDITIONS APPLYING TO MONITORING

1. The Licensee shall monitor the relevant Water Treatment and Supply Facility and Waste Treatment Facilities authorized under this Licence in accordance with requirements included under [Schedule H](#).
2. The Licensee shall conduct during open water in 2018, a sampling campaign at Monitoring Program Stations PAN-4, PAN-5 and PAN-6 to monitor run-off and leachate quality data within the Drainage / Seepage Monitoring and Management Plan referred to in Part E, Item 9. The campaign shall consist of sampling three times (at the beginning, middle and near the end of discharge/run-off) during the spring freshet and once per every subsequent month until freezing. Additional sampling is required after every rainfall event. Samples shall be analyzed for the parameters listed in [Schedule H](#).
3. The Licensee shall sample monthly at Monitoring Program Stations PAN-4, PAN-5 and



PAN-6. Samples shall be analyzed for the parameters listed in [Schedule H](#) in accordance with Tables 1 and 2.

4. All analyses required under [Schedule H](#) shall be conducted using methods as described in the most recent edition of "*Standard Methods for the Examination of Water and Wastewater*", or by such other methods as approved by the Board in writing.
5. All laboratory analyses shall be performed at a laboratory accredited according to ISO/IEC Standard 17025. The accreditation shall be current and in good standing.
6. The Licensee shall implement the Quality Assurance / Quality Control Plan dated December 19, 2017 as accepted by the Board.
7. The Licensee shall submit to the Board for review, with the 2018 Annual Report, an updated Quality Assurance/Quality Control Plan to address relevant intervenor's comments and recommendations made during the 2017-2018 licensing process and public hearing.
8. The Plan shall be acceptable to an accredited laboratory and include a covering letter from the accredited laboratory confirming acceptance of the Plan for analyses to be performed under the Licence.
9. The Licensee shall include all of the data and information required by the Monitoring Program under [Schedule H](#) within the Annual Report required under Part B, Item 1 of the Licence or as otherwise requested by an Inspector and/or the Board.
10. Additional Monitoring may be requested by the Board and/or the Inspector.
11. The Monitoring Program and compliance dates specified in the Licence may be modified at the discretion of the Board in writing and do not necessarily constitute an Amendment to the Licence as defined in the *Act*.

PART I: CONDITIONS APPLYING TO CLOSURE AND RECLAMATION

1. The Licensee shall submit to the Board for approval in writing, at least six (6) months prior to commencing the decommissioning of a facility, a Final Closure and Reclamation Plan prepared by an Engineer in accordance with industry's best practices and relevant guidelines.
2. The Licensee shall, for the Plan required under Part I, Item 1, include a presentation of data and a discussion of environmental conditions existing before the use of the site by the Licensee, as well as remediation objectives.
3. The Licensee shall notify the Board in writing, at least six months prior to the implementation of final closure, of its intentions to proceed with final closure of any Water use or Waste disposal facilities included within the scope of this Licence, excluding the



Facility under Part I, Item 1.



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 Spill Contingency Planning

[Schedule H:](#) Monitoring

Schedule I: No Schedule for Closure and Reclamation



Schedule A: Definitions

In this Licence 3AM-PAN1828:

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

“**Addendum**” means the supplemental text that is added to a full plan, manual, 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;

“**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 Register opened as a result of the filing of the application to replace and amend expired Water Licence 3BM-PAN1417);

“**Board**” means the Nunavut Water Board established under Article 13 of the *Nunavut Agreement* and under section 14 of the Act;

“**Discharge**” means the release of any Water or Waste to the receiving environment;

“**Effective Date**” means the date on which the Minister of Crown-Indigenous Relations and Northern Affairs Canada approves the Licence;

“**Effluent**” means treated or untreated liquid Waste material that is Discharged into the environment from the site water management facilities 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, designed and approved by a Professional Engineer who is registered with the Association of Professional Engineers, Geologists and Geophysicists of Nunavut;

“**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;



“**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 contaminants categorized as dangerous goods under the *Transportation of Dangerous Good Act* (1992), no longer used for their original purpose and intended for recycling, treatment, disposal or storage at appropriate facilities;

“**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;

“**Landfill**” means the Solid Waste Management Facility that is designed to manage solid waste generated by the Hamlet of Pangnirtung.

“**Licence**” means this Type “A” Water Licence No. 3AM-PAN1828, issued by the Nunavut Water Board to the Hamlet of Pangnirtung in accordance with the Act;

“**Licensee**” means the entity to whom Licence No. 3AM-PAN1828 is issued or assigned;

“**Metal and Hazardous Waste Storage Area**” means the area within the Solid Waste Management Facility where metal and hazardous waste is stored as described in the Water Licence Application dated May 10, 2017;

“**Minister**” means the Minister of Crown-Indigenous Relations and Northern Affairs Canada (CIRNA);

“**Modification**” means an alteration to a physical work that may introduce 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 within calendar month 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);

“**Sewage**” means all toilet wastes and greywater;

“**Solid Waste Management Facility**” means the Landfill and all other facilities identified in the Application that are designed and constructed to manage solid waste generated by the Hamlet of Pangnirtung;

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

“**Undertaking or Undertakings**” means an undertaking or undertakings in respect of which Water is to be used or Waste is to be deposited, as classified in Schedule 1 of the *Regulations*;

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

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

“**Waste Treatment Facilities**” refers to all facilities constructed and operated by the Hamlet of Pangnirtung to manage solid and liquid Waste associated with this licence.

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

“**Wastewater Treatment Facilities**” means the Sewage Lagoon, Wastewater Treatment Plant, and associated facilities authorized under this Licence;

“**Wastewater Treatment Plant**” means the engineered system that is designed for the containment and preliminary treatment of Sewage generated by the Hamlet of Pangnirtung as described in the Application;

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

“**Water Treatment and Supply Facility**” means the engineered facilities and appurtenances designed and constructed for the withdrawal, storage, treatment and distribution of fresh water for domestic purposes, described in the Application.



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 the Duval River at Monitoring Station No. PAN-1;
- b. The monthly and annual quantities in cubic metres of any Discharges to and from the Wastewater Treatment Facilities at Monitoring Stations PAN-2 and PAN-3;
- c. Quality of the runoff from the sludge disposal area, Solid Waste Management Facility, and Metal and Hazardous Waste Storage Area at Monitoring Stations PAN-4, PAN-5, and PAN-6, respectively;
- d. The monthly and annual quantities in cubic metres of sludge removed from the Wastewater Treatment Plant;
- e. The monthly and annual quantities of Wastes disposed of at the landfill;
- f. A summary report which includes all data and information generated under the Monitoring Program, including the QA/QC program, in electronic and printed formats acceptable to the Board;
- g. A summary of modifications and/or major maintenance work carried out on the potable Water Treatment and Supply and Waste 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 brief update on the implementation plan of all facilities within the scope of this Licence including changes projected implementation;
- n. 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
- o. Any other details on the use of Water or Waste disposal requested by the Board by November 1st of the year being reported.



Schedule H: 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)	uS/cm
	Temperature (field)	°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
Acute Lethality (AL)	Based on Environment Canada’s Acute Lethality of Effluents to Rainbow Trout (as per Environment Canada’s Environmental Protection Series Biological Test Method EPS/1/RM/13 Second Edition December 2000 (with May 2007 amendments)	“Pass” / “Fail”
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
PAN-1	Duval River – Raw Water	Active	F	Daily	Annually
PAN-2	Raw Sewage from pump-out truck	Active	F	Daily	Annually
PAN-3	Effluent from Wastewater Treatment Plant	Active	F, E, AL, Me	Monthly	Annually
PAN-4	Run-off from sludge disposal area	Active	F, E, Me	When discharge is observed	Annually
PAN-5	Run-off from solid waste disposal facility	Active	F, E, Me	When discharge is observed	Annually
PAN-6	Run-off from metal and hazardous waste storage area	Active	F, E, Me	When discharge is observed	Annually