

**DRAFT Type B Water Licence G22L3-001**  
**Charter Community of Tsiigehtchic – Municipal Water Licence**

**Table of Contents**

- Part A: Scope and Defined Terms
- Part B: General Conditions
- Part C: Security
- Part D: Water Use
- Part E: Construction
- Part F: Waste and Water Management
- Part G: Aquatic Effects Monitoring
- Part H: Spill Contingency Planning
- Part I: Closure and Reclamation

**Schedules**

- Schedule 1: Annual Water Licence Report (Part B)
- Schedule 2: Structure Description and Construction Plan (Part E)
- Schedule 3: Waste and Water Management (Part F)
- Schedule 3: Facility Specific Closure and Reclamation Plan (Part I)

**Annex A: Surveillance Network Program – Draft SNP carried over from G16L3-001**

**Annex B: Concordance Table of Items Requiring Submission – Not included in Draft**

**Annex C: Table of Revision History – Not included in Draft**

## Part A: Scope and Defined Terms

### Scope:

		Condition Title
1.	<p>This Licence entitles the Licensee to use Water and deposit Waste for municipal undertakings at Tsiigehtchic, NT.</p> <p>The scope of this Licence includes the following:</p> <ul style="list-style-type: none"><li>a) Withdrawal of Water for municipal purposes;</li><li>b) Deposit of Waste to the Solid Waste Disposal Facilities;</li><li>c) Deposit of Waste to the Sewage Disposal Facilities;</li><li>d) Construction, operation, and maintenance of the Solid Waste Disposal Facilities;</li><li>e) Construction, operation, and maintenance of the Sewage Disposal Facilities;</li><li>f) Construction, operation, and maintenance of the Water Treatment Facilities; and</li><li>g) Progressive Reclamation and associated Closure and Reclamation activities.</li></ul>	SCOPE
2.	<p>This Licence is issued subject to the conditions contained herein with respect to the use of Water and the deposit of Waste 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. Any change made to the <i>Waters Act</i> and/or the Waters Regulations that affects licence conditions and defined terms will be deemed to have amended this Licence.</p>	LEGISLATION SUBJECT TO CHANGE
3.	<p>Compliance with this Licence does not relieve the Licensee from responsibility for compliance with the requirements of any applicable federal, territorial, or municipal legislation.</p>	LEGISLATIVE COMPLIANCE

## **Defined Terms**

**Analyst** – an Analyst designated by the Minister under subsection 65(1) of the *Waters Act*.

**Average Concentration** – the arithmetic mean/discrete average of four consecutive analytical results, [or if less than four analytical results, the arithmetic mean/discrete average of the analytical results collected during a batch decant,] as submitted to the Board in accordance with the sampling and analysis requirements specified in the Surveillance Network Program.

**Bagged Toilet Wastes Disposal Facilities** - comprises the area within the Solid Waste Disposal Facility and associated structures designed to contain bagged toilet Wastes (honey bags);

**Board** –Gwich'in Land and Water Board, established under Part 3 of the *Mackenzie Valley Resource Management Act*.

**Closure and Reclamation** – the process and activities that facilitate the return of areas affected by the Project to viable and, wherever practicable, self-sustaining ecosystems that are compatible with a healthy environment and human activities.

**Closure and Reclamation Plan (CRP)** – a document, developed in accordance with this Licence, that clearly describes the Closure and Reclamation for the Project.

**Construction** – any activities undertaken during any phase of the Project to construct or build any structures, facilities or components of, or associated with, the development of the Project.

**Discharge** – a direct or indirect deposit or release of any Water or Waste to the Receiving Environment.

**Effluent** – a Wastewater Discharge.

**Effluent Quality Criteria (EQC)** – numerical or narrative limits on the quality or quantity of the Waste deposited to the Receiving Environment.

**Engagement Plan** – a document, developed in accordance with the MVLWB *Engagement and Consultation Policy* and the *Engagement Guidelines for Applicants and Holders of Water Licences and Land Use Permits*, that clearly describes how, when, and which engagement activities will occur with an affected party during the life of the Project.

**Engineered Structure** – any structure or facility related to Water Use or the deposit of Waste that is designed by a Professional Engineer, including but not limited to the Sewage Disposal Facilities, Solid Waste Disposal Facilities, Water Treatment Facilities associated with the Project.

**Freeboard** – the vertical distance between the Water or Wastewater line and the lowest elevation of the effective Water or Wastewater containment crest on the upstream slope of a containment structure.

**Greywater** – all liquid Waste from showers, baths, sinks, kitchens, and domestic washing facilities, but does not include Toilet Waste.

**Groundwater** – as defined in section 1 of the Waters Regulations: all water in a zone of saturation below the land surface, regardless of its origin.

**Hazardous Waste** - a Waste which, because of its quantity, concentration, or characteristics, may be harmful to human health or the environment when improperly treated, stored, transported, or discharged.

**Inspector** – an Inspector designated by the Minister under subsection 65(1) of the *Waters Act*.

**Licensee** – the holder of this Licence.

**Maximum Average Concentration** – the concentration of a parameter that cannot be exceeded by the running average of any four consecutive analytical results.

**Minister** – the Minister of the Government of the Northwest Territories – Environment and Natural Resources.

**Professional Engineer** – a person registered with the Northwest Territories and Nunavut Association of Professional Engineers and Geoscientists to practice as a Professional Engineer in the Northwest Territories as per the territorial *Engineering and Geoscience Professions Act* and whose professional field of specialization is appropriate to address the components of the Project at hand.

**Progressive Reclamation** – Closure and Reclamation activities conducted during the operating phase of the Project.

**Project** – the undertaking described in Part A, Condition 1.

**Receiving Environment** – the natural environment that, directly or indirectly, receives any deposit of Waste from the Project.

**Remediation** – the removal, reduction, or neutralization of substances, Wastes, or hazardous materials from a site in order to prevent or minimize any adverse effects on the environment and public safety, now or in the future.

**Runoff** – the overland flow of Water or Wastewater that occurs when precipitation, meltwater, or other Water is not absorbed by the land.

**Seepage** – any Water or Waste that drains, passes through, or escapes from any structure designed to contain, withhold, divert, or retain Water or Waste.

**Sewage** – all Toilet Wastes and Greywater.

**Sewage Disposal Facilities (SDF)** – the area(s) and structures designated to contain and treat Sewage.

**Solid Waste Disposal Facilities (SWDF)** – the area(s) and structures designated to contain solid Waste.

**Spill Contingency Plan (SCP)** – a document developed for the Project in accordance with INAC's *Guidelines for Spill Contingency Planning*.

**Surveillance Network Program (SNP)** – a monitoring program required by this Licence and detailed in Annex A.

**Toilet Wastes** – all human excreta and associated products, not including Greywater.

**Traditional Knowledge** – As defined by Gwich'in Tribal Council's *Working with Gwich'in Traditional Knowledge In The Gwich'in Settlement Region*, that body of knowledge, values, beliefs and practices passed from one generation to another by oral means or through learned experience, observation and spiritual teachings, and pertains to the identity, culture and heritage of the Gwich'in. This body of knowledge reflects many millennia of living on the land. It is a system of classification, a set of empirical observations about the local environment, and a system of self-management that governs the use of resources and defines the relationship of living beings with one another and with their environment.

**Unauthorized Discharge** – a Discharge of any Water or Waste not authorized under this Licence

**Waste** – as defined in section 1 of the *Waters Act*:

- a) a substance that, if added to water, would degrade or alter or form part of a process of degradation or alteration of the quality of the water to an extent that is detrimental to its use by people or by an animal, fish or plant, or
- b) water that contains a substance in such a quantity or concentration, or that has been so treated, processed or changed, by heat or other means, that it would, if added to other water, degrade or alter or form part of a process of degradation or alteration of the quality of that water to the extent described in paragraph (a) and includes
- c) a substance or water that, for the purposes of the *Canada Water Act*, is deemed to be waste,
- d) a substance or class of substances prescribed by regulations made under subparagraph 63(1)(b)(i),
- e) water that contains a substance or class of substances in a quantity or concentration that is equal to or greater than a quantity or concentration prescribed in respect of that substance or class of substances by regulations made under subparagraph 63(1)(b)(ii), and
- f) water that has been subjected to a treatment, process or change prescribed by regulations made under subparagraph 63(1)(b)(iii).

**Waste Disposal Facilities** – the area(s) and structures designated for the disposal of Waste, including, but not limited to, the Sewage Disposal Facilities and Solid Waste Disposal Facilities.

**Waste Management Plan (WMP)** – a document, developed in accordance with the MVLWB *Guidelines for Developing a Waste Management Plan*, that describes the methods of Waste management for the Project from Waste generation to final disposal.

**Wastewater** – any Water that is generated by Project activities or originates on-site, and which contains Waste, and may include, but is not limited to, Runoff, Seepage, Sewage, Minewater, and Effluent.

**Wastewater Treatment Facilities** – the area(s) and structures designated for the treatment of Wastewater.

**Water** – as defined in section 1 of the *Waters Act*: water under the administration and control of the Commissioner, whether in a liquid or frozen state, on or below the surface of land.

**Watercourse** – as defined in section 1 of the *Waters Regulations*: a natural watercourse, body of Water or Water supply, whether usually containing Water or not, and includes Groundwater, springs, swamps, and gulches.

**Waters Regulations** – the regulations proclaimed pursuant to section 63 of the *Waters Act*.

**Water Treatment Facilities** – the area(s) and structures designed to collect, treat, and supply Water for the Project.

**Water Use** – as defined in section 1 of the *Waters Act*: a direct or indirect use of any kind, including, but not limited to,

- a) a diversion or obstruction of waters,
- b) an alteration of the flow of waters, and
- c) an alteration of the bed or banks of a river, stream, lake or other body of water, whether or not the body of water is seasonal, but does not include a use connected with shipping activities that are governed by the *Canada Shipping Act, 2001*.

	<b>Condition</b>	<b>Condition Title</b>
	<b>Part B: General Conditions</b>	
1.	The Licensee shall ensure a copy of this Licence is maintained at the municipal office at all times.	<b>COPY OF LICENCE</b>
2.	The Licensee shall take every reasonable precaution to protect the environment.	<b>PRECAUTION TO PROTECT ENVIRONMENT</b>
3.	In conducting its activities under this Licence, the Licensee shall make every reasonable effort to consider and incorporate any scientific information and Traditional Knowledge that is made available to the Licensee.	<b>INCORPORATE SCIENTIFIC INFORMATION AND TRADITIONAL KNOWLEDGE</b>
4.	In each submission required by this Licence or by any directive from the Board, the Licensee shall identify all recommendations based on Traditional Knowledge received, describe how the recommendations were incorporated into the submission, and provide justification for any recommendation not adopted.	<b>IDENTIFY TRADITIONAL KNOWLEDGE</b>
5.	All references to policies, guidelines, codes of practice, statutes, regulations, or other authorities shall be read as a reference to the most recent versions, unless otherwise noted.	<b>REFERENCES</b>
6.	The Licensee shall ensure all submissions to the Board: <ul style="list-style-type: none"> <li>a) Are in accordance with the MVLWB <i>Document Submission Standards</i>;</li> <li>b) Include a conformity statement or table which identifies where the requirements of this Licence, or other directives from the Board, are addressed; and</li> <li>c) Include any additional information requested by the Board.</li> </ul>	<b>SUBMISSION FORMAT AND CONFORMITY</b>
7.	The Licensee shall ensure management plans are submitted to the Board in a format consistent with the MVLWB <i>Standard Outline for Management Plans</i> , unless otherwise specified.	<b>MANAGEMENT PLAN FORMAT</b>
8.	The Licensee shall comply with all plans - including revisions, approved pursuant to the conditions of this Licence.	<b>COMPLY WITH SUBMISSIONS AND REVISIONS</b>

9.	The Licensee shall conduct an annual review of all approved plans and make any revisions necessary to reflect changes in operations, contact information, or other details. No later than <b>[insert date]</b> each year, the Licensee shall send a notification letter to the Board, listing the documents that have been reviewed and do not require revisions.	<b>ANNUAL REVIEW</b>
10.	The Licensee may, at any time, propose changes to any plan by submitting revisions to the Board, for approval, a minimum of 90 days prior to the proposed implementation date for the changes. The Licensee shall not implement the changes until approved by the Board.	<b>REVISIONS</b>
11.	The Licensee shall revise any submission and submit it as per the Board's directive.	<b>REVISE AND SUBMIT</b>
12.	If any date for any submission falls on a weekend or holiday, the Licensee may submit the item on the following business day.	<b>SUBMISSION DATE</b>
13.	The Licensee shall comply with the <b>Schedules</b> , which are annexed to and form part of this Licence, and any updates to the Schedules as may be made by the Board.	<b>COMPLY WITH SCHEDULE(S)</b>
14.	The Licensee shall comply with the <b>Surveillance Network Program</b> , which is annexed to and forms part of this Licence, and any updates to the Surveillance Network Program as may be made by the Board.	<b>COMPLY WITH SURVEILLANCE NETWORK PROGRAM</b>
15.	The Schedules, the Surveillance Network Program, and any compliance dates specified in this Licence may be updated at the discretion of the Board.	<b>UPDATES TO COMPLIANCE DATE(S)</b>
16.	The Licensee shall comply with all directives issued by the Board in respect of the implementation of the conditions of this Licence.	<b>COMPLY WITH BOARD DIRECTIVES</b>
17.	The Licensee shall ensure signs are posted for all active Surveillance Network Program stations. All sign(s) shall be located and maintained to the satisfaction of an Inspector.	<b>POST SURVEILLANCE NETWORK PROGRAM SIGN(S)</b>
18.	The Licensee shall install, operate, and maintain meters, devices, or other such methods for measuring the volumes of Water used and Waste discharged to the satisfaction of an Inspector.	<b>MEASURE WATER USE AND WASTE DISCHARGED</b>



19.	Beginning [enter date, including the year] and no later than every [enter date] thereafter, the Licensee shall submit an <b>Annual Water Licence Report</b> to the Board and an Inspector. The Report shall be in accordance with the requirements of Schedule 1, Condition 1	<b>ANNUAL WATER LICENCE REPORT</b>
20.	Within <b>xx</b> days following the effective date of this Licence, the Licensee shall submit to the Board, for approval, an <b>Engagement Plan</b> . The Licensee shall comply with the <b>Engagement Plan</b> , once approved.	<b>ENGAGEMENT PLAN</b>
21.	The Licensee shall immediately provide written notification to the Board and an Inspector of any non-compliance with the conditions of this Licence.	<b>NOTIFICATION – NON-COMPLIANCE WITH CONDITIONS</b>
22.	The Licensee shall immediately provide written notification to the Board of any non-compliance with a Board directive issued in respect of the implementation of the conditions of this Licence.	<b>NOTIFICATION – NON-COMPLIANCE WITH DIRECTIVES</b>
23.	The Licensee shall ensure that a copy of any written authorization issued to the Licensee by an Inspector is provided to the Board.	<b>COPY – WRITTEN AUTHORIZATION</b>
<b>Part C: Security</b>		
<i>Section Left Intentionally Blank</i>		
<b>Part D: Water Use</b>		
1.	The Licensee shall only obtain Water for the Project from Tso Lake. The Licensee may withdraw up to 20,000 m <sup>3</sup> per year of Water from this source.	<b>WATER SOURCE AND MAXIMUM VOLUME</b>
2.	The Licensee shall only withdraw Water using the Water Treatment Facilities, unless otherwise authorized temporarily in writing by an Inspector.	<b>WATER TREATMENT – FACILITIES</b>
3.	The Licensee shall construct and maintain the Water intake(s) with a screen designed to prevent impingement or entrapment of fish.	<b>WATER INTAKE SCREEN</b>

<b>Part E: Construction</b>		
1.	The Licensee shall ensure that all structures intended to contain, withhold, divert, or retain Water or Waste are designed, constructed, and maintained to minimize the escape of Waste to the Receiving Environment.	<b>OBJECTIVE – CONSTRUCTION</b>
2.	The Licensee shall ensure that all Engineered Structures are constructed and maintained in accordance with the recommendations of the Professional Engineer responsible for the design, including, but not limited to, recommendations regarding field supervision and inspection requirements.	<b>ENGINEERED STRUCTURES – GENERAL</b>
3.	The Licensee shall only use material that is clean and free of contaminants and is from a source that has been authorized in writing by an Inspector.	<b>CONSTRUCTION MATERIAL – SOURCE(S)</b>
4.	The Licensee shall maintain records of Construction materials for all structures and make them available at the request of the Board or an Inspector.	<b>CONSTRUCTION RECORDS</b>
5.	A minimum of 90 days prior to the commencement of Construction of any Engineered Structures, the Licensee shall submit to the Board, for approval, a <b>Design and Construction Plan</b> . The Licensee shall not commence Construction of the Engineered Structure(s) prior to Board approval of the Plan.	<b>DESIGN AND CONSTRUCTION PLAN</b>
6.	A minimum of 90 days prior to the commencement of Construction of any Engineered Structures the Licensee shall submit to the Board, <b>Design Drawings</b> stamped and signed by a Professional Engineer. A minimum of 90 days prior to implementing any proposed changes to the Design Drawings, the Licensee shall submit revised Design Drawings to the Board.	<b>DESIGN DRAWINGS</b>
7.	A minimum of ten days prior to the commencement of Construction of any structure(s) intended to contain, withhold, divert, or retain Water or Wastes, the Licensee shall provide written notification to the Board and an Inspector. Notification shall include the Construction commencement date, and the name and contact information for the individual responsible for overseeing the Construction. Written notification shall be provided to the Board and an Inspector if any changes occur.	<b>NOTIFICATION – CONSTRUCTION</b>
8.	The Licensee shall ensure that all Engineered Structures are constructed in accordance with the <b>Design Drawings</b> and approved <b>Design and Construction Plan</b> .	<b>CONSTRUCT AS DESIGNED – ENGINEERED STRUCTURE(S)</b>

9.	<p>Within 90 days of the completion of the Construction of each Engineered Structure, the Licensee shall submit to the Board, an <b>As-Built Report</b> stamped and signed by a Professional Engineer, which shall include, but not be limited to, the following information:</p> <p>a) final as-built drawings of the Engineered Structure(s), stamped and signed by a Professional Engineer;</p> <p>b) documentation, with rationale, of field decisions that deviate from the <b>Design and Construction Plans</b> and/or <b>Design Drawings</b> and any data used to support these decisions.</p>	<b>AS-BUILT REPORT – ENGINEERED STRUCTURE(S)</b>
<b>Part F: Waste and Water Management</b>		
1.	The Licensee shall manage Waste and Water with the objective of minimizing the impacts of the Project on the quantity and quality of Water in the Receiving Environment through the use of appropriate mitigation measures, monitoring, and follow-up actions.	<b>OBJECTIVE – WASTE AND WATER MANAGEMENT</b>
2.	The Licensee shall operate and maintain the Waste Disposal Facilities to prevent structural failure and to the satisfaction of an Inspector.	<b>PREVENT STRUCTURAL FAILURE</b>
3.	The Licensee shall minimize erosion by implementing suitable erosion control measures that shall be located and maintained to the satisfaction of an Inspector.	<b>EROSION CONTROL</b>
4.	The Licensee shall not accept Sewage and solid Wastes generated by industrial, commercial, and institutional operators working outside of the local government boundaries of The Charter Community of Tsiigehtchic, unless authorized in writing by an Inspector.	<b>OUTSIDE WASTES – MUNICIPAL</b>
5.	The Licensee shall not accept Hazardous Wastes generated by commercial and industrial operators at the Waste Disposal Facilities.	<b>HAZARDOUS WASTES – MUNICIPAL</b>
6.	The Licensee shall not accept hydrocarbon contaminated snow, soil or water at the Waste Disposal Facilities.	<b>HYDROCARBON CONTAMINATED MATERIALS</b>
7.	The Licensee shall comply with the <b>Sewage Disposal Facility Operation and Maintenance Plan</b> , once approved.	<b>SEWAGE DISPOSAL FACILITIES OPERATION AND</b>

		<b>MAINTENANCE PLAN</b>
8.	Within <b>xx</b> days following the effective date of this Licence, the Licensee shall submit to the Board, for approval, a revised <b>Sewage Disposal Facilities Operation and Maintenance Plan</b> . The Plan shall be in accordance with the requirements of Schedule 3, Condition 1.	<b>SEWAGE DISPOSAL FACILITIES OPERATION AND MAINTENANCE PLAN - REVISED</b>
9.	The Licensee shall maintain a Freeboard limit of one metre at the Sewage Disposal Facilities, or as recommended by a Professional Engineer and as approved by the Board.	<b>SEWAGE DISPOSAL FACILITIES – FREEBOARD</b>
10.	The Licensee shall operate and maintain the Sewage Disposal Facilities to prevent structural failure and to the satisfaction of an Inspector.	<b>MAINTAIN SEWAGE DISPOSAL FACILITIES</b>
11.	The Licensee shall conduct Annual inspections of the Sewage Disposal Facilities or as otherwise directed by an Inspector or the Board. Records of these inspections shall be made available to the Board or an Inspector upon request.	<b>ANNUAL INSPECTION OF SEWAGE DISPOSAL FACILITIES</b>
12.	The Licensee shall discharge all Effluent from Sewage Disposal Facilities as described in the approved <b>Sewage Disposal Facilities Operation and Maintenance Plan</b>	<b>EFFLUENT DISCHARGE – SEWAGE DISPOSAL FACILITIES</b>
13.	The Licensee shall ensure that all effluent discharged from the Sewage Disposal Facilities at SNP station 1557-4 <ul style="list-style-type: none"> <li>a) has no visible sheen of oil and grease,</li> <li>b) has a pH value between 6 and 9, and</li> <li>c) meets the following Effluent Quality Criteria (EQC):</li> </ul>	<b>EFFLUENT QUALITY CRITERIA</b> <b>[DRAFT EQC CARRIED OVER FROM G16L3-0010]</b>

	<table border="1"> <thead> <tr> <th>Parameter</th> <th>Maximum Average</th> </tr> </thead> <tbody> <tr> <td>Fecal Coliforms (FC)</td> <td>1 x 10<sup>6</sup> FC/100mL</td> </tr> <tr> <td>BOD<sub>5</sub></td> <td>120 mg/L</td> </tr> <tr> <td>Suspended Solids</td> <td>180 mg/L</td> </tr> </tbody> </table>	Parameter	Maximum Average	Fecal Coliforms (FC)	1 x 10 <sup>6</sup> FC/100mL	BOD <sub>5</sub>	120 mg/L	Suspended Solids	180 mg/L	
Parameter	Maximum Average									
Fecal Coliforms (FC)	1 x 10 <sup>6</sup> FC/100mL									
BOD <sub>5</sub>	120 mg/L									
Suspended Solids	180 mg/L									
14.	The Licensee shall notify an Inspector and the Board at least ten days prior to initiating decant of the Sewage Disposal Facilities.	<b>DECANT NOTIFICATION – SEWAGE DISPOSAL FACILITIES</b>								
15.	In the event that Sewage Sludge and sediments originating in the Sewage Disposal Facilities require removal at any time during the term of this Licence, such material shall be managed in the manner described in the approved <b>Sewage Disposal Facilities Operation and Maintenance Plan</b> , or as otherwise authorized in writing by the Board.	<b>SLUDGE REMOVAL</b>								
16.	The Licensee shall notify the Board and Inspector, in writing, at least ten (10) days prior to initiating sludge removal	<b>NOTIFICATION OF SLUDGE REMOVAL</b>								
17.	All bagged toilet Wastes (honey bags) shall be disposed of at the Bagged Toilet Waste Disposal Facilities to the satisfaction of an Inspector.	<b>HONEY BAG DISPOSAL</b>								
18.	The Licensee shall comply with the <b>Solid Waste Disposal Facilities Operation and Maintenance Plan</b> , once approved.	<b>SOLID WASTE DISPOSAL FACILITIES OPERATION AND MAINTENANCE PLAN</b>								
19.	Within <b>xx</b> days following the effective date of this Licence, the Licensee shall submit to the Board, for approval, a revised the <b>Solid Waste Disposal Facilities Operation and Maintenance Plan</b> . The Plan shall be in accordance with the requirements of Schedule 3, Condition 2.	<b>SOLID DISPOSAL FACILITIES OPERATION AND MAINTENANCE PLAN - REVISED</b>								

20.	The Licensee shall maintain the Solid Waste Disposal Facilities to the satisfaction of an Inspector.	<b>MAINTAIN SOLID WASTE FACILITIES</b>
21.	The Licensee shall undertake measures necessary to prevent the spread of windblown Waste to the areas surrounding the Solid Waste Disposal Facilities.	<b>PREVENT WINDBLOW WASTE</b>
22.	The Licensee shall contain all Hazardous materials in such a manner as to minimize the potential for migration of contaminants into any Waters, to the satisfaction of an Inspector.	<b>CONTAIN HAZARDOUS WASTE</b>
23.	The Licensee shall not openly burn solid or liquid Waste, except in accordance with the guideline “ <i>Municipal Solid Wastes Suitable for Open Burning</i> ”, developed by the Government of Northwest Territories (GNWT) - Department of Environment and Natural Resources.	<b>WASTE BURNING</b>
24.	The Licensee shall inform the Board and Inspector at least 24 hours prior to the burning of any refuse	<b>NOTIFICATION OF WASTE BURNING</b>
25.	The Licensee shall comply with the <b>Water Treatment Facilities Operation and Maintenance Plan</b> , once approved.	<b>WATER TREATMENT] FACILITIES OPERATION AND MAINTENANCE PLAN</b>
26.	Within <b>XX</b> days following the effective date of this Licence, the Licensee shall submit to the Board, for approval, a revised <b>Water Treatment (or Treatment) Facilities Operation and Maintenance Plan</b> . The Plan shall be in accordance with the requirements of Schedule 3 Condition 3.	<b>WATER TREATMENT FACILITIES OPERATION AND MAINTENANCE PLAN - REVISED</b>
	<b>Part G: Aquatic Effects Monitoring</b>	
	<i>Section Left Intentionally Blank</i>	

<b>Part H: Spill Contingency Planning</b>		
1.	The Licensee shall ensure that Unauthorized Discharges associated with the Project do not enter any Waters.	<b>OBJECTIVE – PREVENT WASTE INTO WATER</b>
2.	The Licensee shall comply with the <b>Spill Contingency Plan</b> , once approved.	<b>SPILL CONTINGENCY PLAN</b>
3.	Within <b>XX</b> days following the effective date of this Licence the Licensee shall submit to the Board, for approval, a revised <b>Spill Contingency Plan</b> .	<b>SPILL CONTINGENCY PLAN – REVISED</b>
4.	<p>If a spill or an Unauthorized Discharge occurs or is foreseeable, the Licensee shall:</p> <p>a) Implement the approved Spill Contingency Plan referred to in Part H, Condition x;</p> <p>b) Report it immediately using the NU-NT Spill Report Form by one of the following methods:</p> <ul style="list-style-type: none"> <li>• Telephone: (867) 920-8130</li> <li>• Fax: (867) 873-6924</li> <li>• E-mail: spills@gov.nt.ca</li> <li>• Online: Spill Reporting and Tracking Database</li> </ul> <p>c) Notify the Board and an Inspector immediately; and</p> <p>d) Within 30 days of initially reporting the incident, or within a timeframe authorized by an Inspector, submit a detailed report to the Board and an Inspector, including descriptions of causes, response actions, and any changes to procedures to prevent similar occurrences in the future. Written notification shall be provided to the Board and an Inspector if any changes occur.</p>	<b>REPORT SPILLS</b>
5.	The Licensee shall ensure that spill prevention infrastructure and spill response equipment is in place prior to commencement of the Project.	<b>SPILL PREVENTION AND RESPONSE EQUIPMENT</b>
6.	The Licensee shall restore all areas affected by spills and Unauthorized Discharges to the satisfaction of an Inspector.	<b>CLEAN UP SPILLS</b>

<b>Part I: Closure and Reclamation</b>		
1.	The Licensee shall endeavor to carry out approved Progressive Reclamation as soon as is reasonably practicable.	<b>PROGRESSIVE RECLAMATION</b>
2.	A minimum of six months prior to the closure and reclamation of any specific facility included in the scope of the Licence, the Licensee shall submit to the Board, for approval, a facility-specific <b>Closure and Reclamation Plan</b> . The Plan shall be in accordance with Schedule 3.	<b>FACILITY-SPECIFIC CLOSURE AND RECLAMATION PLAN</b>



## Schedule 1: Annual Water Licence Report

	Condition
1.	The <b>Annual Water Licence Report</b> referred to in Part B, Condition 19 of this Licence shall include, but not be limited to, the following information about activities conducted during the previous calendar year:
	a) The monthly and annual quantities in cubic metres of fresh Water obtained from all sources, as required in Part D, Condition 1 of this Licence;
	b) A summary of the calibration and status of the meters and devices referred to in Part B, Condition 18 of this Licence;
	c) A summary of Construction activities conducted in accordance with Part E of this Licence;
	d) Monthly and annual quantities, in cubic metres, of all Sewage and solid Waste deposited into the Waste Disposal Facilities .
	e) Monthly and annual quantities, in cubic metres, of all Sewage and solid Waste deposited into the Waste Disposal Facilities by commercial and industrial operators working outside the municipal boundaries of Tsiigehtchic.
	f) A summary of sludge management activities, including results of depth and volume measurements, sludge removal, and treatment;
	g) A summary of activities undertaken to install and maintain fencing at the Waste Disposal Facilities;
	h) A summary of activities conducted in accordance with the approved <b>Spill Contingency Plan</b> , referred to in Part H, Condition 2 of this Licence, including: <ul style="list-style-type: none"> <li>i. A list and description for all Unauthorized Discharges, including the date, NWT spill number, volume, location, summary of the circumstances and follow-up actions taken, and status (i.e. open or closed), in accordance with the reporting requirements in Part H, Condition 4 of this Licence; and</li> </ul>

	ii. An outline of any spill training carried out.
	i) A summary of any updates or revisions to the Spill Contingency Plan, Management Plans, and Operation and Maintenance Plans
	j) A summary of any Progressive Closure and Reclamation, referred to in Part I, Condition1;
	k) Tabular summaries of all data and information generated under the SNP annexed to this Licence, in Excel format;
	l) A list of any non-compliance(s) with the conditions of this Licence or any directive from the Board pursuant to the conditions of this Licence;
	m) A summary of results and any action taken as a result of any inspections;
	n) A summary of actions taken to address concerns, non-conformances, or deficiencies in any reports filed by an Inspector;
	o) A summary of any studies requested by the Board that relate to Waste disposal, Water Use or Reclamation, and a brief description of any future studies planned.
	p) Any other details requested by the Board by <span style="background-color: #90EE90;">[enter date]</span> of the year being reported.

**Schedule 2: Design and Construction Plan** Note that Schedule 2 is not part of the Standard Conditions Template, but was developed using recent Municipal Water Licences

	<b>Condition</b>
1	<p>The Design and Construction Plan(s) referred to in Condition DESIGN AND CONSTRUCTION PLAN shall include, but not be limited to, the following:</p> <p>a) Information regarding the design of the facilities:</p> <ul style="list-style-type: none"> <li>i. A description of the facilities to be constructed;</li> <li>ii. The proposed location(s) of the facilities, with GPS coordinates and a map to scale;</li> <li>iii. Relevant background information for the area beneath the footprint of the facilities, as deemed adequate by the Professional Engineer responsible for the design, including, but not limited to: the results and data from geotechnical and geochemical investigations; hydrogeological investigations; and programs to characterize soil, rock, Groundwater, ground ice, and ground temperature conditions to the depth expected to be affected by the facilities;</li> <li>iv. A design alternatives analysis;</li> <li>iv. Design specifications and performance parameters;</li> <li>v. Stability analyses;</li> <li>vi. A description of how the design has been optimized for Closure and Reclamation;</li> </ul>

- vii. A description of how climate change projections and considerations have been incorporated into the design;
- viii. A description of any instrumentation that will be installed as part of the facilities, including locations and rationale; and
- ix. A description of any operations and maintenance requirements associated with the design of the facilities.

b) Information regarding the Construction of the facilities:

- i. A Construction schedule, including sequencing information;
- ii. A description of the materials recommended for Construction, including, but not limited to:
  - a. sources;
  - b. quantities;
  - c. physical characteristics; and
  - d. geochemical characteristics.
- iii. A description of any potential effects on the Receiving Environment associated with Construction of the facilities; and
- iv. A description of any mitigation measures that will be undertaken to minimize the potential impacts identified above.

c) Information regarding monitoring during Construction, including:

- i. A description of any monitoring that will be conducted to detect potential impacts to the Receiving Environment and evaluate the effectiveness of the mitigation measures described above;

d) Information regarding responses to monitoring results during Construction, including:

- i. Definitions, with rationale, for Action Levels applicable to the performance of the mitigation measures; and
- ii. For each Action Level, a description of how exceedances of the Action Level will be assessed and, generally, which types of actions may be taken by the Licensee if the Action Level is exceeded.

e) A Quality Control Plan stamped by a Professional Engineer, a component of which includes a plan for a Professional Engineer to supervise and field check Construction activities.

**Schedule 3: Waste and Water Management** [Note that Schedule 3 is not part of the Standard Conditions Template, but was developed using recent Municipal Water Licences]

	Condition
	<p>1. The <b>Sewage Disposal Facilities (SDF) Operation and Maintenance Plan</b> referred to in Condition SEWAGE DISPOSAL FACILITIES OPERATION AND MAINTENANCE PLAN – REVISED shall include but not be limited to:</p> <ul style="list-style-type: none"> <li>a) Site Description:           <ul style="list-style-type: none"> <li>i. Facility design details, including current figures;</li> <li>ii. Location, including GPS coordinates and map(s);</li> <li>iii. Date of commissioning;</li> <li>iv. Local ground conditions and permafrost considerations;</li> <li>v. Details and frequency of typical operation, maintenance and monitoring activities; and</li> <li>vi. Closure and Reclamation planning and post-closure monitoring;</li> </ul> </li> <li>b) SDF Staff;           <ul style="list-style-type: none"> <li>i. Facility staff contact information; and</li> <li>ii. Staff Training;</li> </ul> </li> <li>c) Security and Control           <ul style="list-style-type: none"> <li>i. Control of public access; and</li> <li>ii. Signage;</li> </ul> </li> </ul>

- d) Wastewater Generation and Conveyance:
  - i. System details, including maps;
  - ii. Volume and frequency of influent deposits; and
  - iii. How unacceptable substances are kept out;
- e) Influent Wastewater Quality;
- f) System Capacity and Design Data:
  - i. System design details, including flow volumes; and
  - ii. Effluent Quality Criteria for which the system was designed;
- g) Effluent Discharge:
  - i. Frequency, rate and timing of discharge;
  - ii. Discharge location and Receiving Environment details; and
  - 3. iii. Discharge notification(s); Frequency, rate and timing of discharge;
- h) Sludge Management:
  - i. Characterization and production rate of sludge;
  - ii. Method of sludge containment and de-watering;
    - a. Site location and maintenance;
    - b. Sludge removal method; and
    - c. Sludge drying;
  - iii. Sludge Disposal;
    - a. Sampling procedure and approvals;
    - b. Planned uses; and
    - c. Disposal location(s) and details;
  - iv. Future desludging events and reporting; and
  - v. Figures showing site features and layout;

	<ul style="list-style-type: none"> <li>i) Surface Water Management;</li> <li>j) Record keeping: <ul style="list-style-type: none"> <li>i. Forms used for Record Keeping;</li> <li>ii. Reporting requirements for all aspects of the SDF; and</li> <li>iii. Locations of records;</li> </ul> </li> <li>k) Water Quality Monitoring/Surveillance Network Program: <ul style="list-style-type: none"> <li>i. Locations;</li> <li>ii. Standard sampling procedures; and</li> <li>iii. Background water quality information;</li> </ul> </li> <li>l) Site inspection templates (daily, weekly, monthly and annual).</li> </ul>
	<p>2. The <b>Solid Waste Disposal Facilities (SWDF) Operation and Maintenance Plan</b> referred to in Condition <b>SOLID WASTE DISPOSAL FACILITIES OPERATION AND MAINTENANCE PLAN – REVISED</b> shall include but not be limited to:</p> <ul style="list-style-type: none"> <li>a) Site Description; <ul style="list-style-type: none"> <li>i. Facility design details, including current figures;</li> <li>ii. Location, including GPS coordinates and map(s);</li> <li>iii. Date of commissioning;</li> <li>iv. Local ground conditions and permafrost considerations;</li> <li>v. Details and frequency of typical operation, maintenance and monitoring activities; and</li> <li>vi. Closure and Reclamation planning and post-closure monitoring;</li> </ul> </li> <li>b) SWDF Staff; <ul style="list-style-type: none"> <li>i. Facility staff contact information; and</li> <li>ii. Staff Training;</li> </ul> </li> <li>c) Security and Control;</li> </ul>

- i. Control of public access; and
- ii. Signage;

d) Facility Operations;

- i. Hours/Days of Operation;
- ii. Weigh Scale;
- iii. Hazardous Waste Reception and Transfer; and
- iv. Heavy Equipment Used;

e) Facility Design;

- i. Drawings; and
- ii. Surface Water/Leachate Design;

f) Accepted Materials;

g) Waste Generation and Site Capacity;

h) Community Waste Collection and Handling;

i) Waste Screening;

j) Unacceptable Wastes;

k) Record-Keeping for Unacceptable Wastes;

l) Landfilling Operations;

- i. Compaction practices and frequencies;
- ii. Intermediate cover sources, practices and frequencies; and
- iii. Final cover sources, practices and frequencies;

m) Litter and Wildlife Control;

- i. Controls; and
- ii. Response plans to wildlife on site;



- n) Surface Water Management;
  - i. Surface Water and ponded water Inspections;
- o) Record-Keeping;
  - i. Forms used for Record Keeping;
  - ii. Reporting requirements for all aspects of the SWDF; and
  - iii. Locations of records;
- p) Inspection and Monitoring;
  - i. Daily/Weekly/Monthly Inspections;
  - ii. Annual Inspections; and
  - iii. Inspection Forms;
- q) Hazardous Waste Management;
  - i. Specific Practices for each Waste Type; and
  - ii. Contact Person;
- r) Tipping Fees;
- s) Closure and Post-Closure Plan;
- t) Surveillance Network Program;
- u) Emergency Planning;
- v) Document References; and
- w) Any other information as directed by the Board

3 The **Water Treatment Plant Operation and Maintenance Plan**, referred to in Condition WATER TREATMENT PLANT OPERATION AND MAINTENANCE PLAN – REVISED of this Licence shall include, but not be limited to:

- a) Site description;
  - i. Location of all facility components, including GPS coordinates and maps;
  - ii. Date of commissioning; and
  - iii. Details and frequency of typical operation, maintenance and monitoring activities;
  
- b) Facility staff contact information;
  
- c) Security and control;
  - i. Control of public access; and
  - ii. Signage;
  
- d) Facility design details, including current figures;
  
- e) Raw water sources;
  - i. Detailed characteristics;
  - ii. Withdrawal flow rates;
  - iii. Reservoir storage details;

**Schedule 4: Closure and Reclamation Plans** Note that Schedule 4 is not part of the Standard Conditions Template, but was developed using recent Municipal Water Licences

	Condition
1.	With regard to Solid Waste Disposal Facilities being closed, the <b>Facility Specific Closure and Reclamation Plan</b> referred to in Part I, Condition 2, shall address the relevant sections of Environment and Climate Change Canada’s <i>Solid Waste Management for Northern and Remote Communities: Planning and Technical Guidance Document</i> .
2.	<p>With regard to Sewage Disposal Facilities being closed, the <b>Facility Specific Closure and Reclamation Plan</b> referred to in Part I, Condition 2, shall include, but not be limited to:</p> <ul style="list-style-type: none"> <li>a) Logistical and financial considerations;</li> <li>b) Intended future use of the land after closure;</li> <li>c) Remediation of contaminated material;</li> <li>d) As-built drawings of the entire wastewater treatment Facilities, including an accurate plot plan,</li> <li>e) Geographic positioning systems coordinates, and permanent location markers;</li> <li>f) Soil testing results from lagoon and wetland areas;</li> <li>g) Contaminated site Remediation, if required, such as removal of contaminated soil from unlined lagoon and wetland;</li> <li>h) Removal of equipment and structures that will not be used during the closure phase;</li> <li>i) Consideration for altered drainage patterns;</li> <li>j) Choice of capping material, and availability;</li> <li>k) Cover monitoring for stability, erosion, and settlement;</li> <li>l) Post-closure monitoring plan of sludges, sediments, surface water, Groundwater, and erosion to ensure that the site does not pose unacceptable risks to human or environmental health;</li> <li>m) Environmental management systems (if necessary) for leachate, Groundwater, and surface water; and</li> <li>n) Signage installation indicating closure in progress, and Facilities no longer accepting wastewater.</li> </ul>

## **Annex A: Surveillance Network Program (SNP) [DRAFT SNP CARRIED OVER FROM G16L3-001]**

### **Table of Contents:**

Part A: Reporting Requirements

Part B: Sampling and Analysis Requirements

Part C: Surveillance Network Program Station Descriptions

### **Part A: Reporting Requirements**

1. The effective date of this Surveillance Network Program (SNP) is **DATE**
2. The Licensee shall include all of the data and information required in Part C of this Annex in the Annual Water Licence Report, as specified in Condition ANNUAL WATER LICENCE REPORT of this Licence.
3. The Licensee shall also provide SNP data at other times, if requested by an Inspector or the Board.

### **Part B: Sampling and Analysis Requirements**

1. More frequent sample collection or provision of data may be required at the request of an Inspector.
2. The location of sampling stations is subject to the approval of an Inspector. The Licensee shall work with an Inspector to determine suitable locations for sampling stations.
3. All sample collection, sample preservation, and analyses shall be conducted in accordance with methods prescribed in the current edition of American Public Health Association's (APHA) Standard Methods for the Examination of Water and Wastewater at the time of analysis, or by other such methods approved by an Analyst.
4. All analyses shall be performed in a laboratory accredited by the Canadian Association for Laboratory Accreditation (CALA) for the specific analyses to be performed or as approved by an Analyst.

**Part C: SNP Station Descriptions and Monitoring Requirements**

SNP station	Location	Coordinates	Sampling Frequency	Sampling Parameters
1557 -3	Raw Water Supply, Ts'oh Vàn Lake		Monthly	The Monthly and Annual quantities withdrawn at SNP Station 1557-3 shall be measured in cubic meters.
1557 - 4	Sewage effluent from "E" Lake (at point of outflow)		Twice annually, after break up and before freeze up.	<ul style="list-style-type: none"> <li>• <b>Ammonia Nitrogen</b></li> <li>• <b>BOD5</b></li> <li>• <b>Fecal Coliform</b></li> <li>• <b>pH</b></li> <li>• <b>Total Suspended Solids</b></li> <li>• <b>Oil and Grease</b></li> <li>• Total Phenols</li> <li>• Total Cadmium</li> <li>• Total Chromium</li> <li>• Total Cobalt</li> <li>• Total Copper</li> <li>• Total Manganese</li> <li>• Total Nickel</li> <li>• Total Lead</li> <li>• Total Iron</li> <li>• Total Zinc</li> <li>• Total Mercury</li> </ul>
1557 - 5	Outflow from wetland "C" into Mackenzie River		Annually, during periods of flow	<ul style="list-style-type: none"> <li>• Ammonia Nitrogen</li> <li>• BOD5</li> <li>• Fecal Coliform</li> <li>• pH</li> <li>• Total Suspended Solids</li> </ul>

				<ul style="list-style-type: none"> <li>• Oil and Grease</li> </ul>
1557 - 6	Run-off from Landfill to "E" Lake during times of overland flow		Monthly, during periods of flow	<ul style="list-style-type: none"> <li>• Ammonia Nitrogen</li> <li>• BOD5</li> <li>• Fecal Coliform</li> <li>• pH</li> <li>• Total Suspended Solids</li> <li>• Oil and Grease</li> <li>• Total Phenols</li> <li>• Total Cadmium</li> <li>• Total Chromium</li> <li>• Total Cobalt</li> <li>• Total Copper</li> <li>• Total Manganese</li> <li>• Total Nickel</li> <li>• Total Lead</li> <li>• Total Iron</li> <li>• Total Zinc</li> <li>• Total Mercury</li> </ul>

Signed on behalf of the Gwich'in Land and Water Board

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Elizabeth Wright, Chair

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Witness