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NUNAVUT WATER BOARD  
NUNAVUT IMALIRIYIN KATIMAYINGI  
OFFICE DES EAUX DU NUNAVUT

**File No: 3BM-WHA2126**

March 26, 2021

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**RE: NWB Replacement Water Licence No: 3BM-WHA2126**

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Dear Jeani MacKenzie and Sarah Collins:

Please find attached Licence No: 3BM-WHA2126 issued to the Hamlet of Whale Cove by the Nunavut Water Board (NWB or Board) pursuant to its authority under Article 13 of the *Agreement between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in Right of Canada (Nunavut Agreement)*. The terms and conditions of the attached Licence related to the use of Water and the deposit of Waste are an integral part of this approval.

If the Licensee contemplates the continuing of this Undertaking after the Water Licence expires, it is the responsibility of the Licensee to apply to the NWB for a renewal water licence. The past performance of the Licensee, new documentation and information, and issues raised during a public hearing, if the NWB is required to hold one, will be used to determine the terms and conditions of the renewal Water Licence. Note that if the Licence expires before the NWB issues a new one, then the use of Water and the deposit of Waste must cease, or the Licensee may be in contravention of the *Nunavut Agreement* and the *Nunavut Waters and Nunavut Surface Rights Tribunal Act (NWSRTA)*. However, the expiry or cancellation of a licence does not relieve the holder from any obligations imposed by the licence. The NWB recommends that an application for the renewal of this Licence be filed at least **three (3) months** prior to the Licence expiry date. It should be noted that in accordance with s. 75(1)(a) of the *Nunavut Planning and Project Assessment Act (NuPPAA)*, the Board is not allowed to issue a permit or authorization for any project proposal that has not been submitted to the Nunavut Planning Commission (NPC) in accordance with s. 76 of *NuPPAA*.

If the Licensee contemplates or requires an amendment to this Licence, the NWB may decide, in the public's interest, to hold a public hearing. The Licensee should submit applications for

amendment as soon as possible to give the NWB sufficient time to go through the amendment process. The process and timing may vary depending on the scope of the amendment; however, a minimum of **sixty (60) days** is required from time of acceptance by the NWB. It is the responsibility of the Licensee to ensure that all application materials have been received and are acknowledged by the Manager of Licensing.

The NWB strongly recommends that the Licensee consult the comments received from Crown-Indigenous Relations and Northern Affairs (CIRNA), Environment and Climate Change Canada (ECCC), and Fisheries and Oceans Canada (DFO) on issues identified. This information is attached for your consideration.<sup>1</sup>

Sincerely,

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Lootie Toomasie  
Nunavut Water Board,  
Chair

LT/ak/rqd

Enclosure: Amendment Licence No: 3BM-WHA2126

Comments – CIRNA, ECCC, DFO

Cc: Distribution List – Kivalliq

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<sup>1</sup> Crown-Indigenous Relations and Northern Affairs (CIRNA), January 22, 2021; Environment and Climate Change Canada (ECCC), January 21, 2021; Fisheries and Oceans Canada (DFO), January 11, 2021.

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## DECISION

### LICENCE NUMBER: 3BM-WHA2126

This is the decision of the Nunavut Water Board (NWB) with respect to an application dated September 1, 2020 for a renewal of a Water Licence made by:

#### HAMLET OF WHALE COVE

to allow for the use of Water and the deposit of Waste for a Municipal undertaking at the Hamlet of Whale Cove located within the Kivalliq Region, Nunavut, generally located at the geographical coordinates as follows:

Project Extents:

Latitude: 62° 11' N

Longitude: 92° 35' W

### **DECISION**

After having been satisfied that the Application is for a proposal that is in conformity with the Keewatin Regional Land Use Plan subject to the attached requirements and is exempt from the requirements for screening as described within Schedule 12-1 of the *Nunavut Agreement* as determined by the Nunavut Planning Commission (NPC)<sup>1</sup>, the NWB decided that the application could proceed through the regulatory process. In accordance with s. 55.1 of the *Nunavut Waters and Nunavut Surface Rights Tribunal Act (NWNSRTA or Act)* and Article 13 of the *Nunavut Agreement*, public notice of the Application was given and interested persons were invited to make representations to the NWB.

After reviewing the submission of the Applicant and considering the representations made by interested persons, the NWB, having given due regard to the facts and circumstances, the merits of the submissions made to it and to the purpose, scope and intent of the *Nunavut Agreement* and of the *Act*, waived the requirement to hold a public hearing, and determined that:

**Replacement Water Licence No: 3BM-WHA2126 be issued subject to the terms and conditions contained therein. (Motion #: 2020-B1-033)**

Signed this 26<sup>th</sup> day of March, 2021 at Gjoa Haven, NU.

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Lootie Toomasie  
Nunavut Water Board,  
Chair

LT/ak/rqd

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<sup>1</sup> Nunavut Planning Commission, Conformity Determination, July 29, 2020.

## **I. INTRODUCTION**

The Hamlet of Whale Cove (the Hamlet or the Applicant or the Licensee) is located approximately 72 kilometres south of Rankin Inlet, in the Kivalliq Region of Nunavut. The Hamlet owns and operates several municipal facilities for the purpose of providing relevant services to the members of the community, estimated in 2016 at 435 persons.

The Hamlet's source of freshwater is Fish Lake. The Solid Waste Disposal Facility is located approximately 3 km southwest of the community. The site covers an area of approximately 1.2 hectares and includes a landfill, bulky metals, and a household hazardous waste area. Sewage is trucked to a Sewage Disposal Facility located approximately 450 m to the southwest of the community. The facility is comprised of a truck offload discharge area, a single cell lined lagoon, and a natural wetlands area covering approximately 600 m before discharging into the Hudson Bay.

The most recent NWB licence held by the Hamlet to operate the above-mentioned facilities expired on June 3, 2020.

## **II. PROCEDURAL HISTORY**

The NWB has issued three licences to the Hamlet of Whale Cove in the past. The most recent licence is Water Licence No: 3BM-WHA1520 issued on June 4, 2015, which expired on June 3, 2020. The licence issued before that was Water Licence No: 3BM-WHA0914 expired on May 31, 2014. Both licences allowed water use of up to 30,000 cubic metres annually. The very first licence authorizing the Hamlet its water use and waste deposit was Licence No: NWB3WHA0207 issued on September 1, 2002 and expired on August 31, 2007.

On July 29, 2020, the Nunavut Planning Commission (NPC) indicated that the "project proposal... conforms to the Keewatin Regional Land Use Plan" and "is exempt from screening by the Nunavut Impact Review Board (NIRB)."<sup>1</sup> Following that, a water licence renewal application (Application) was received by the NWB from the Hamlet's representative, Government of Nunavut's Community-Government Services (GN-CGS) on September 16, 2020. The Application was dated September 1, 2020. As a result of NWB's internal review of the Application, several information exchanges took place between the Board and the Applicant, supplemental information was provided by the Applicant within the period of September 21, 2020 to March 18, 2021.

On December 8, 2020, the NWB distributed the Application for a public technical review.

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<sup>1</sup> Goump Djalogue (NPC) to Richard Dwyer (NWB), RE: NPC File # 149386 [3BM-WHA1520 Municipal Water Licence Renewal], dated July 29, 2020.

Crown-Indigenous Relations and Northern Affairs (CIRNA), Environment and Climate Change Canada (ECCC), and Fisheries and Oceans Canada (DFO) provided their comments in the course of the technical review.<sup>2</sup>

### **III. GENERAL CONSIDERATIONS**

Based on the discussions with the Hamlet’s representative GN-CGS, the written materials filed with the Board, and submissions of the parties, the Board has decided to issue a Type “B” Water Licence No: 3BM-WHA2126 (Licence) subject to the terms and conditions set out below. The Licence authorizes the Hamlet of Whale Cove’s continued use of Water and deposit of Waste for a Municipal Undertaking as defined under Schedule 1 of the *Nunavut Waters Regulations* and also contains terms and conditions necessary to protect the freshwater environment and provide appropriate safeguards in respect of the Undertaking in accordance with the Application.

#### **A. Scope, Definitions and Enforcement**

This Licence allows for the use of Water and the deposit of Waste for a Municipal Undertaking as defined under Schedule 1 of the *Nunavut Waters Regulations*. To ensure that Licensee complies with the terms and conditions of the Licence, inspectors, designated and empowered by the Minister of Northern Affairs may inspect or examine works, activities, and undertakings associated with the use of waters and/or the deposit of waste for the purposes of exercising their powers in accordance with the *NWNSRTA*.<sup>3</sup> The Licensee should note that compliance with the terms and conditions of this Licence does not necessarily absolve the Licensee from the responsibility to comply with all other applicable legislation, guidelines, and directives.

#### **B. General Conditions**

Part B of the Licence addresses the general terms and conditions that apply to the Undertaking, such as annual report submission, protocols for handling documents related to the Licence, posting of signage at sites associated with the Undertaking, and more.

#### **C. Water Use**

The Licensee is authorized to obtain water from the water body known as Fish Lake, located approximately 3.5 kilometres north of the community. The total volume of water for all purposes under this Licence shall not exceed thirty thousand (30,000) cubic metres per year at a maximum rate of two hundred and ninety-nine (299) cubic metres per day.

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<sup>2</sup> Crown-Indigenous and Northern Affairs (CIRNA), January 22, 2021; Environment and Climate Change Canada (ECCC), January 21, 2021; Fisheries and Oceans Canada (DFO), January 11, 2021.

<sup>3</sup> Sections 85-88 of the *NWNSRTA*.

## D. Waste Disposal

The Solid Waste Disposal Facility is located approximately 3 km southwest of the community. The site covers an area of approximately 1.2 hectares, including a landfill, bulky metals, and a household hazardous waste area. The Sewage Disposal Facility is located approximately 450 m to the southwest of the community and comprised of a truck offload discharge area, a single cell lined lagoon, and a natural wetlands area covering approximately 600 m before discharging into Hudson Bay. The facility was planned for upgrading as indicated in the water licence application documents dated January 16, 2015 and issued for construction drawings submitted to the Board on May 17, 2016; however, the Hamlet's annual reports indicate that the planned modifications were postponed. On March 18, 2021, GN-CGS provided as-built drawings dated November 22, 2016 and the document entitled *Wastewater Management Facility, Whale Cove Operation and Maintenance Manual* dated September 2016 describing the upgrades to the facility that took place in 2016. In this Licence, the Board adjusted the Sewage Disposal Facility Effluent quality limits to adhere to the *Guidelines for the Discharge of Treated Municipal Wastewater in the Northwest Territories* (1992).

In addition, the Hamlet of Whale Cove stores approximately 150 m<sup>3</sup> of diesel-contaminated soil in an old quarry located at coordinates 62° 11' 22"N 92° 34' 19"W.<sup>4</sup> In 2007, the NWB issued Water Licence No: 3BM-WCL0712 to the Hamlet of Whale Cove to operate a landfarm in order to remediate contaminated soil. The Board noted in its decision:

*The Licensee has indicated that contaminated soil will be placed in appropriately designed engineered Landfarm Facility. The Landfarm Facility shall accept soil contaminated with hydrocarbons in which the primary petroleum product present in the soil, as determined by laboratory analysis, consists of fuel oil and/or diesel fuel and /or gasoline. Soils contaminated by hydrocarbons that are resistant to, or preclude, biological treatment by landfarming shall not be acceptable.*

On August 10, 2009, the Board issued a letter cancelling Water Licence No: 3BM-WCL0712 stating the following:

*At the request of the Hamlet (applicant) and following the Board decision on the renewal, the Municipal Licence No. 3BM-WCL0712 was incorporated into the renewal with all terms and conditions transferred to the Hamlet's municipal Licence. The renewal licence was subsequently issued on June 18, 2008. As an administrative requirement, the Landfarm specific licence has been cancelled through the Board Motion 2009-09-L03, dated August 07, 2009 and the file has now been closed. All reporting requirements for the*

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<sup>4</sup> Kevin Hodgins (FSC Architects & Engineers) to Zhong Liu (NWB), Re: Amendment Application for Whale Cove, dated March 6, 2007.

*previous Landfarm licence now fall under the renewed Licence for the Hamlet, Licence No. 3BM-WHA0914.*

The NWB records and the GN-CGS submissions and information exchange during the 2020-2021 licensing process indicate that the Landfarm was never constructed. The contaminated soil continues to be stored in the old quarry. Therefore, the Board included a requirement in Part D, Item 22 for the Licensee to submit to the Board for review, within six (6) months from the date of issuance of this Licence, a technical memorandum outlining the following information pertaining to the remediation of the contaminated soil:

- a. Results of contaminated soil sampling in comparison to the Treatment Objective;
- b. How the Licensee plans to operate the Contaminated Soil Storage Area and the Landfarm Facility in consideration of the treated soil sampling results; and
- c. If required, revisions to the relevant management plans and a stand-alone Landfarm Management Plan.

Sampling and testing of the stored soil will show whether remediation has occurred and if further activities are required. In case the soil is found to be still contaminated, the Board requires that the Licensee operates the Landfarm and Contaminated Soil Storage Area in accordance with existing regulations and comply with the Part D, Item 17.

#### **E. Operations and Maintenance**

In this Part, the NWB outlines the requirements for inspections of all engineered facilities related to the management of Water and Waste to be carried out by an Engineer annually and before commissioning such facilities. In addition, prior to Licence expiry, an engineering inspection in accordance with the Canadian Dam Safety Guidelines shall take place during the open water season.

In addition, Part E, Items 8 and 9 require the submission of a Solid Waste Disposal Facility Update Report including photographic record, which demonstrates the implementation of measures recommended in the *Solid Waste Management Facility Operations and Maintenance Plan* dated December 2008 and consolidated Operations and Maintenance Manual for the facilities under this Licence.

#### **F. Modifications**

The Licensee may, without written consent from the Board, carry out Modifications to the Water Supply Facility and Waste Disposal Facilities provided that such Modifications are consistent with the terms of this Licence. 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 Modification. These plans and drawings shall be stamped by an Engineer.



## **G. Spill Contingency Planning**

The *Environmental Emergency Contingency Plan* dated December 2008 was approved by the Board with the original licence. In accordance with Licence Part E, Item 9, the Licensee shall submit within sixty (60) days of issuance of the Licence, an update to the Plan referred to in Part G, Item 1, in the format set out by the Consolidation of Spill Contingency Planning and Reporting Regulations R-068-93 where appropriate.

## **H. Abandonment and Restoration**

The Board requires the Licensee to submit to the Board for approval an Abandonment, Restoration and Closure Plan at least six (6) months prior to abandoning any facilities or upon submission of the final design drawings for the construction of new facilities to replace existing ones.

## **I. Monitoring Program**

In Part I, the Board reiterates its previous requirement for the Licensee to submit to the Board for acceptance a Quality Assurance/Quality Control (QA/QC) Plan. The QA/QC Plan shall include a cover letter from the accredited laboratory confirming acceptance of the QA/QC Plan for analyses to be performed under this Licence.



## NUNAVUT WATER BOARD WATER LICENCE

Licence No: 3BM-WHA2126

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

### HAMLET OF WHALE COVE

(Licensee)

**PO BOX 120, WHALE COVE, NU X0C 0J0**

(Mailing Address)

hereinafter called the Licensee, the right to alter, divert or otherwise use water or dispose of Waste for a period subject to restrictions and conditions contained within this Licence Renewal-Amendment:

Licence Number/Type: **3BM-WHA2126 / TYPE "B"**

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

Location: **HAMLET OF WHALE COVE  
KIVALLIQ REGION, NUNAVUT**

Classification: **MUNICIPAL UNDERTAKING**

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

Quantity of Water use not to Exceed: **TWO HUNDRED AND NINETY-NINE (299) CUBIC METRES PER DAY / THIRTY THOUSAND (30,000) CUBIC METRES PER ANNUM**

Date of Licence Issuance: **MARCH 26, 2021**

Expiry of Licence: **MARCH 25, 2026**

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

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

## **PART A: SCOPE, DEFINITIONS AND ENFORCEMENT**

### **1. Scope**

This Licence allows for the use of Water and the deposit of Waste for a Municipal undertaking classified as per Schedule 1 of the *Regulations* at the Hamlet of Whale Cove, located within the Kivalliq Region, Nunavut.

- a. This Licence is issued subject to the conditions contained herein with respect to the taking of Water and the deposit of Waste of any type in any Waters or in any place under any conditions where such Waste or any other Waste that results from the deposits of such Waste may enter any Waters. Whenever new *Regulations* are made or existing *Regulations* are amended by the Governor in Council under the *Nunavut Waters and Nunavut Surface Rights Tribunal Act*, or other statutes imposing more stringent conditions relating to the quantity or type of Waste that may be so deposited or under which any such Waste may be so deposited, this Licence shall be deemed, upon promulgation of such *Regulations*, to be subject to such requirements; and
- b. Compliance with the terms and conditions of this Licence does not absolve the Licensee from responsibility for compliance with the requirements of all applicable Federal, Territorial and Municipal legislation.

### **2. Definitions**

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

“**Addendum**” means the supplemental text that is added to a full plan or report usually included at the end of the document and is not intended to require a full resubmission of the revised report;

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

“**Applicant**” means the Licensee;

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

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

“**Contaminated Soil Storage Area**” means the area where approximately 150 m<sup>3</sup> of contaminated soil was placed at the site of an old quarry at coordinates 62° 11’ 22” N 92°

34' 19" W and as described in correspondence received during the 2006-2007 licensing process for cancelled Water Licence No: 3BM-WCL0712;

**"Effluent"** means treated or untreated liquid Waste material that is discharged into the environment from a structure such as a settling pond, landfarm 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*;

**"Final Discharge Point"** in respect of an effluent means an identifiable discharge point of a facility beyond which the operator of the facility no longer exercises control over the quality of the Effluent;

**"Freeboard"** means the vertical distance between water line and the designed maximum operating height on the crest of a dam or dyke's upstream slope;

**"Greywater"** means all liquid Wastes from showers, baths, sinks, kitchens and domestic washing facilities, but does not include toilet Wastes;

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

**"High Water Mark"** means the usual or average level to which a body of water rises at its highest point and remains for sufficient time so as to change the characteristics of the land (ref. Department of Fisheries and Oceans Canada, Operational Statement: Mineral Exploration Activities);

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

**"Landfarm Facility"** means an area designed to biologically treat Type B soils, as described in the Application for Water Licence filed by the Hamlet of Whale Cove on June 2, 2006 and granted by the NWB as Water Licence No: 3BM-WCL0712 and as described in the renewal and amendment water licence application dated January 16, 2015;

**"Licensee"** means the holder of this Licence;

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

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

**“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;

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

**“Secondary Containment”** means an impermeable structure, external to and separate from primary containment, which prevents unplanned spills of hazardous materials and provides a minimum capacity of 110% of the original vessel. Where multiple vessels are stored within the containment, it must provide a minimum capacity equal to the sum of the largest vessel and 10% of the aggregate volume of all other vessels located in the containment. This structure shall also provide containment and control of hoses and nozzles;

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

**“Sewage Disposal Facility”** comprises the area and engineered lagoon designed to contain Sewage as described in the Application dated September 16, 2020 and outlined in the as-built drawings dated November 22, 2016;

**“Sewage Sludge”** means the semi-solid sewage material, which settles at the bottom of the Sewage lagoon;

**“Solid Waste Disposal Facility”** comprises the area and associated structures designed to contain solid waste (landfill site) as described in the Application dated September 1, 2020;

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

**“Sump or Sumps”** A structure or depression that collects, controls, and filters liquid Waste before it is released to the environment. This structure should be designed to prevent erosion while allowing percolation of liquid Waste;

**“Toilet Wastes”** means all human excreta and associated products, but does not include greywater;

**“Treatment Objective”** means the treatment objective for the Landfarm Facility which is based on the Canadian Council of Ministers of the Environment (CCME), 2001 Canada – Wide Standard for Petroleum Hydrocarbon in Soil, for Industrial land use; or as determined by the Government of Nunavut, Environmental Protection Service based on

the 2002 Environmental Guideline for Site Remediation;

**“Type A Soil”** means soil contaminated with hydrocarbons in which the primary petroleum product present in the soil as determined by laboratory analysis consists of lubricating oil and grease;

**“Type B Soil”** means soil contaminated with hydrocarbons in which the primary petroleum product present in the soil as determined by laboratory analysis consists of fuel oil and/or diesel fuel and /or gasoline;

**“Waste”** means, as defined in s. 4 of the *Act*, any substance that, by itself or in combination with other substances found in water, would have the effect of altering the quality of any water to which the substance is added to an extent that is detrimental to its use by people or by any animal, fish or plant, or any water that would have that effect because of the quantity or concentration of the substances contained in it or because it has been treated or changed, by heat or other means;

**“Waste Disposal Facilities”** means all facilities designated for the disposal of Waste, and includes the Sewage Disposal Facility, Solid Waste Disposal Facility, Contaminated Soil Storage Area, and Landfarm Facility, as described in the Application for Water Licence No: 3BM-WCL0712 filed by the Applicant on June 12, 2006 and as described in the Application for renewal of Water Licence No: 3B-WHA1520 dated September 1, 2020;

**“Water” or “Waters”** means waters as defined in section 4 of the *Act*.

**“Water Supply Facility”** comprises the area and associated intake infrastructure at Water Supply Lake, as described in the Application dated September 1, 2020;

### 3. **Enforcement**

- a. Failure to comply with this Licence will be a violation of the *Act*, subjecting the Licensee to the enforcement measures and the penalties provided for in the *Act*;
- b. All inspection and enforcement services regarding this Licence will be provided by Inspectors appointed under the *Act*; and
- c. For the purpose of enforcing this Licence and with respect to the use of water and deposit or discharge of Waste by the Licensee, Inspectors appointed under the *Act*, hold all powers, privileges and protections that are conferred upon them by the *Act* or by other applicable law.

## **PART B: GENERAL CONDITIONS**

1. The Licensee shall file an Annual Report on the Appurtenant Undertaking with the Board

no later than March 31<sup>st</sup> of the year following the calendar year being reported, containing the following information:

- a. Tabular summaries and a brief written interpretation of all data generated under the “Monitoring Program”;
  - b. A summary report of Water use and Waste disposal activities;
  - c. The monthly and annual quantities in cubic metres of Water obtained at Water Supply Facility;
  - d. The monthly and annual quantities in cubic metres of each and all Waste discharged, including the hazardous and non-hazardous Waste accepted at the Waste Disposal Facilities;
  - e. Quantity of Waste backhauled to approved facility for disposal;
  - f. A summary of modifications and/or major maintenance work and/or investigations carried out on the Water Supply and Waste Disposal Facilities, including all associated structures and facilities;
  - g. A list of unauthorized discharges and a summary of follow-up actions taken;
  - h. A description of all progressive and or final reclamation work undertaken, including photographic records of site conditions before, during and after completion of operations;
  - i. Any updates or revisions for manuals and plans (including Operations and Maintenance Manual/Plans) as required by changes in operation and/or technology;
  - j. 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
  - k. Any other details on Water use or Waste disposal requested by the Board by the 1<sup>st</sup> November of the year being reported.
2. The Licensee shall notify the NWB of any changes in operating plans or conditions associated with this project at least thirty (30) days prior to any such change.
  3. The Licensee shall comply with the Monitoring Program” described in this Licence, and any amendments to the “Monitoring Program” as may be made from time to time, pursuant to the conditions of this Licence.
  4. The Monitoring Program and compliance dates specified in the Licence may be modified at the discretion of the Board.
  5. The Licensee shall install flow meters or other such devices, or implement suitable methods required for the measuring of Water volumes as required under Part I, Item 2.
  6. The Licensee shall, post the necessary signs, where possible, to identify the stations of the Monitoring Program. All signage postings shall be in the Official Languages of Nunavut, and shall be located and maintained to the satisfaction of an Inspector.
  7. The Licensee shall immediately report to the NWT/NU 24-Hour Spill Report Line at (867)

920-8130, any spills of Waste, which are reported to, or observed by the Licensee, within the municipal boundaries or in the areas of the Water Supply or Waste Disposal Facilities.

8. The Licensee shall, for all Plans submitted under this Licence, include a proposed timetable for implementation. Plans submitted, cannot be undertaken without subsequent written Board approval and direction. The Board may alter or modify a Plan if necessary to achieve the legislative objectives and will notify the Licensee in writing of acceptance, rejection or alteration of the Plan.
9. The Licensee shall, for all Plans submitted under this Licence, implement the Plan as approved by the Board in writing.
10. The Licensee shall review the Plans referred to in this Licence, as required by changes in operation and/or technology, and modify the Plan accordingly. Revisions to the Plans shall be submitted in the form of an Addendum to be included with the Annual Report.
11. Every Plan to be carried out pursuant to the terms and conditions of this Licence shall become a part of this Licence, and any additional terms and conditions imposed upon approval of a Plan by the Board become part of this Licence. All terms and conditions of the Licence should be contemplated in the development of a Plan where appropriate.
12. The Licensee shall ensure a copy of this Licence is maintained at the site of operations at all times. Any communication with respect to this Licence shall be made in writing to the attention of:
  - (a) **Manager of Licensing:**  
Nunavut Water Board  
P.O. Box 119  
Gjoa Haven, NU X0B 1J0  
Telephone: (867) 360-6338  
Fax: (867) 360-6369  
Email: [licensing@nwb-oen.ca](mailto:licensing@nwb-oen.ca)
  - (b) **Inspector Contact:**  
Manager of Field Operations, CIRNA  
Nunavut District, Nunavut Region  
P.O. Box 100  
Iqaluit, NU X0A 0H0  
Telephone: (867) 975-4295  
Fax: (867) 979-6445
13. The Licensee shall submit an electronic copy of all reports, studies, and plans to the Board. Reports or studies submitted to the Board by the Licensee shall include a detailed executive summary in Inuktitut.



14. The Licensee shall ensure that all documents or correspondence submitted by the Licensee to the NWB are received and acknowledged by the Manager of Licensing.
15. This Licence is assignable as provided for in Section 44 of the *Act*.
16. The expiry or cancellation of this Licence does not relieve the Licensee from any obligation imposed by the Licence, or any other regulatory requirement.

**PART C: CONDITIONS APPLYING TO WATER USE**

1. The Licensee shall obtain all Water processed by Water Supply Facility and/or for any other uses under this Licence from Fish Lake at the Monitoring Program Station WHA-1. The total volume of Water for all purposes under this Licence shall not exceed thirty thousand (30,000) cubic metres per year at a maximum rate of two hundred and ninety-nine (299) cubic metres per day.
2. 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.
3. The Licensee shall not remove any material from below the ordinary High Water Mark of any water body unless approved by the Board in writing.
4. The Licensee shall not conduct any work below the ordinary High Water Mark of any water body unless approved by the Board in writing.
5. The Licensee shall not cause erosion to the banks of any body of Water and shall provide necessary controls to prevent such erosion.
6. The Licensee shall implement sediment and erosion control measures prior to and maintained during the undertaking to prevent entry of sediment into Water.

**PART D: CONDITIONS APPLYING TO WASTE DISPOSAL**

1. The Licensee shall locate areas designated for Waste disposal at a minimum distance of thirty-one (31) metres from the ordinary High Water Mark of any water body such that the quality, quantity or flow of Water is not impaired, unless otherwise approved by the Board in writing.
2. The Licensee shall direct all Sewage to the Sewage Disposal Facility or as otherwise approved by the Board in writing.
3. All Effluent discharged from the Sewage Disposal Facility at Monitoring Program Station WHA-3, shall not exceed the following Effluent quality limits:

| Parameter Concentration | Maximum Average Concentration |
|-------------------------|-------------------------------|
| Fecal Coliforms         | 1 x 10 <sup>4</sup> CFU/100mL |
| BOD <sub>5</sub>        | 80 mg/L                       |
| Total Suspended Solids  | 100 mg/L                      |
| Oil and grease          | No visible sheen              |
| pH                      | Between 6 and 9               |

4. The Licensee shall maintain at all times, a Freeboard of at least 1.0 metre, or as recommended by a qualified geotechnical engineer and as approved by the Board in writing, for all dams, dykes or other structures intended to contain, withhold, divert or retain Water or Wastes.
5. The Sewage Disposal Facility shall be maintained and operated in such a manner as to prevent structural failure.
6. The Licensee shall dispose of and permanently contain all solid Wastes at the Solid Waste Disposal Facility or as otherwise approved by the Board in writing.
7. The Licensee shall segregate and store all Hazardous materials and/or Hazardous Waste within the Solid Waste Disposal Facility in a manner to prevents the deposit of deleterious substances into any Water, until such a time that the materials have been removed for proper disposal at an approved facility.
8. The Licensee is authorized to dispose of all acceptable food Waste, paper Waste and untreated wood products in an incinerator.
9. The Licensee shall not open burn plastics, wood treated with preservatives, electric wire, Styrofoam, asbestos or painted wood to prevent the deposition of Waste materials of incomplete combustion and/or leachate from contaminated ash residual, from impacting any surrounding Waters, unless otherwise approved by the Board in writing.
10. The Licensee shall backhaul and dispose of all hazardous Wastes, Waste oil and non-combustible Waste generated through the course of the operation at a licensed Waste disposal site.
11. The Licensee shall maintain records of all Waste backhauled and records of confirmation of proper disposal of backhauled Waste. These records shall be made available to an Inspector upon request.
12. The Licensee shall provide at least ten (10) days' notice to an Inspector, of the intent to discharge Effluent from the Sewage Disposal Facility, Contaminated Soil Storage Area, and/or the Landfarm Facility.
13. The Licensee shall implement measures to ensure leachate from the Solid Waste Disposal

Facility does not enter Water.

14. All pump out Water from excavation and borrow pits shall be pumped to an area approved by an Inspector.
15. The Licensee shall ensure that Type B Soil, treated at the Landfarm Facility and/or the Contaminated Soil Storage Area, meets relevant treatment objectives described in documentation submitted to the Board by the Licensee on June 2, 2006 containing supplemental information and any subsequent revisions approved by the Board in writing.
16. All Water from dewatering contaminated soil areas and discharge of Effluent at Monitoring Station WHA-6 at the Landfarm Facility/ Contaminated Soil Storage Area, shall not exceed the following Effluent quality limits:

| <b>Parameter<br/>Concentration</b> | <b>Maximum Concentration of Any Grab<br/>Sample (µg/L)</b> |
|------------------------------------|--|
| pH                                 | 6 to 9 (pH Units)  |
| Oil and Grease                     | 5000   |
| Arsenic (total)                    | 100  |
| Cadmium (dissolved)                | 10   |
| Chromium (dissolved)               | 100  |
| Cobalt (dissolved)                 | 50   |
| Copper (dissolved)                 | 200  |
| Lead (dissolved)                   | 50   |
| Mercury (total)                    | 0.6  |
| Nickel (dissolved)                 | 200  |
| PCB (total)                        | 1000   |
| Phenols                            | 20   |
| Zinc (total)                       | 500  |
| Benzene                            | 370  |
| Toluene                            | 2  |
| Ethylbenzene                       | 90   |

17. If Effluent does not meet the Effluent quality limits of Part D, Item 16 above, it shall be considered Hazardous Waste and disposed off-site at an approved facility or as otherwise approved by the Board in writing.
18. The discharge location for all treated Effluents described in Part D, Items 3 and 16 shall be to the satisfaction of an Inspector and located at a minimum of thirty-one (31) metres from the ordinary High Water Mark of any Water body and where direct or indirect flow into a Water body is not possible and no additional impact is created.
19. The Licensee shall dispose of soils containing contaminants, in excess of Canadian Environmental Protection Act (CEPA) Guidelines, off-site at an approved treatment facility.

20. The Licensee shall, prior to the removal of any treated soil for future use, confirm with the Government of Nunavut, Environmental Protection Service that the soils have been treated so as to meet the legislatively-required Treatment Objective.
21. The Licensee shall not mix or blend soils for the expressed purpose of attaining the specific limits of the relevant quality criteria.
22. The Licensee shall submit to the Board for review, within six (6) months from the date of issuance of this Licence, a technical memorandum outlining the following information pertaining to the Contaminated Soil Storage Area:
  - a. Results of contaminated soil sampling in comparison to the Treatment Objective;
  - b. How the Licensee plans to operate the Landfarm Facility in consideration of the treated soil sampling results; and
  - c. If required, revisions to the relevant management plans and a dedicated Landfarm Management Plan.

**PART E: CONDITIONS APPLYING TO MODIFICATIONS AND CONSTRUCTION**

1. The Licensee may, without written consent from the Board, carry out Modifications to the Water Supply and Waste Disposal Facilities provided that such Modifications are consistent with the terms of this Licence and the following requirements are met:
  - a. the Licensee has notified the Board in writing of such proposed Modifications at least sixty (60) days prior to beginning the Modifications;
  - b. such Modifications do not place the Licensee in contravention of the Licence or the *Act*;
  - c. such Modifications are consistent with the NIRB Screening Decision;
  - 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 G, 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 Modification. These plans and drawings shall be stamped by an Engineer.
4. All activities shall be conducted in such a way as to minimize impacts on surface drainage and the Licensee shall immediately undertake any corrective measures in the event of any impacts on surface drainage.

5. The Licensee shall implement and maintain sediment and erosion control measures prior to and during activities carried out under this Part, to prevent impacts to Water resulting from the release of sediment and to minimize erosion.
6. With respect to earthworks, the deposition of debris or sediment into or onto any water body is prohibited. These materials shall be disposed a distance of at least thirty-one (31) metres from the ordinary High Water Mark in such a fashion that they do not enter the Water.
7. The Licensee shall use material that is free of contaminants for construction, operation, and maintenance activities and that is obtained from approved sources and has been demonstrated not to be potentially acid generating and metal leaching.

#### **PART F: CONDITIONS FOR OPERATIONS AND MAINTENANCE**

1. The Licensee shall submit to the Board for review, within three (3) months following the issuance of the Licence, a Solid Waste Disposal Facilities Update Report including photographic record, which demonstrates the implementation of measures recommended in the *Solid Waste Management Facility Operations and Maintenance Plan* dated December 2008 to improve the existing or current facility.
2. The Licensee shall submit to the Board for approval, within sixty (60) days from the date of issuance of this Licence, a consolidated Operations and Maintenance Manual. The Manual shall be prepared, where appropriate, in accordance with the “*Guidelines for the Preparation of an Operation and Maintenance Manual for Sewage and Solid Waste Disposal Facilities in the Northwest Territories* (1996). In addition, the Manual shall take into consideration the comments received during the Application review process as well as include the following:
  - a. *Environmental Emergency Contingency Plan* dated December 2008 updated to reflect current status;
  - b. Environmental Monitoring Program and Quality Assurance / Quality Control Plan;
  - c. *Sewage Treatment Facility Operation and Maintenance Plan* dated December 2008 updated to reflect current status including sludge management;
  - d. *Solid Waste Management Facility Operation and Maintenance Plan* dated December 2008 updated to reflect current status;
  - e. *Water Supply Facility Operation and Maintenance Plan* dated December 2008 updated to reflect current status; and
  - f. Updated sampling locations, parameters and timing required under the Licence.
3. The Licensee shall review the Operations and Maintenance Manual referred to in Part F, Item 2 as required by changes in operation and/or technology and modify accordingly.

Revisions are to be submitted in the form of Addenda to be included with the Annual Report.

4. An inspection of all engineered facilities related to the management of Water and Waste shall be carried out by an Engineer (Civil, Municipal or Geotechnical) annually and before commissioning any facility. The Engineer's report shall be submitted to the Board within sixty (60) days of the inspection, including a Cover Letter from the Licensee outlining an implementation plan addressing each of the Engineer's recommendations.
5. An inspection of all engineered facilities related to the management of Water and Waste shall be conducted by a Geotechnical Engineer in accordance with the Canadian Dam Safety Guidelines, at least one (1) year prior to the expiry of the Licence, during the open Water period (June/July/August). The Engineer's report shall be submitted to the Board for review within sixty (60) days of the inspection, including a cover letter from the Licensee outlining an implementation plan to address the Engineer's recommendations.
6. The Licensee shall perform more frequent inspections of the engineered facilities at the request of an Inspector.
7. The Licensee shall review the Plans referred to in this Part as required by changes in operation and/or technology and modify the Plans accordingly. Revisions to a Plan are to be submitted in the form of an Addendum to be included with the Annual Report, unless directed otherwise by an Inspector.
8. The Licensee is authorized to use Water or deposit Waste to water with respect to drilling for the purposes of geotechnical testing and groundwater monitoring.

#### **PART G: CONDITIONS APPLYING TO SPILL CONTINGENCY PLANNING**

1. The Licensee shall implement the Plan entitled *Environmental Emergency Contingency Plan* dated December 2008 that was approved with the original licence.
2. In accordance with Licence Part F, Item 2, the Licensee shall submit within sixty (60) days of issuance of the Licence, an update to the Plan referred to in Part G, Item 1, in the format set out by the Consolidation of Spill Contingency Planning and Reporting Regulations R-068-93 where appropriate.
3. The Licensee shall prevent any chemicals, petroleum products or Wastes associated with the project 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.
4. 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.

5. If during the term of this Licence, an unauthorized discharge of Waste occurs, or if such a discharge is foreseeable, the Licensee shall:
  - a. Employ the approved Spill Contingency Plan;
  - b. Report the spill immediately to the NWT/NU 24-Hour Spill Line at (867) 920-8130 and to the Inspector at (867) 975-4295; and
  - c. For each spill occurrence, submit to the Inspector, no later than thirty (30) days after initially reporting the event, a detailed report that will include the amount and type of spilled product, the GPS location of the spill, and the measures taken to contain and clean up the spill site.
6. The Licensee shall, in addition to Part G, Item 5, 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 H: CONDITIONS APPLYING TO ABANDONMENT AND RESTORATION**

1. The Licensee shall submit to the Board for approval an Abandonment and Restoration Plan at least six (6) months prior to abandoning any facilities or upon submission of the final design drawings for the construction of new facilities to replace existing ones.
2. The Licensee shall complete the restoration work within the time schedule specified in the Plan, or as subsequently revised and approved by the Board.
3. The Licensee shall carry out progressive reclamation of any components of the project no longer required for the Licensee's operations.
4. Areas that have been contaminated by hydrocarbons from normal fuel transfer procedures shall be reclaimed to meet objectives as outlined in the Government of Nunavut's Environmental Guideline for Site Remediation, 2010. 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 restore all drill holes and disturbed areas to natural conditions immediately upon completion of the drilling. The restoration of drill holes must include the removal of any drill casing materials and if having encountered artesian flow, the capping of holes with a permanent seal. Where drill casings cannot be removed, the Licensee shall cut off the casings at ground level and identify with signage.
6. All disturbed areas shall be stabilized and re-vegetated as required, upon completion of work, and restored as practically as possible to a pre-disturbed state.

**PART I: CONDITIONS APPLYING TO THE MONITORING PROGRAM**

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

| <b>Monitoring Program Station</b> | <b>Description</b>  | <b>Frequency</b>   | <b>Status</b>                           |
|-----------------------------------|---|--|---|
| WHA-1                             | Raw water intake at the Fish Lake   | Monthly and Annually   | Active (Volume)                         |
| WHA-2                             | Runoff from the Solid Waste Disposal Facility   | Monthly (During periods of observed flow)  | Active (Quality)                        |
| WHA-3                             | Final Discharge Point for effluent from the Sewage Disposal Facility prior to the wetland area                                    | Monthly, Annually (during periods of flow)<br><br>Monthly (During periods of flow) | Active (Volume)<br><br>Active (Quality) |
| WHA-4                             | Effluent outfall area from the wetland area   | Monthly (During periods of observed flow)  | Active (Volume) (Quality)               |
| WHA-5                             | Soil Entering the Landfarm/ Contaminated Soil Storage Area  | Based on operational practices   | Active (Volume, Quality)                |
| WHA-6                             | Effluent discharged from the Landfarm Facility/Contaminated Soil Storage Area containment sump at the controlled point of release | Prior to release to the receiving environment                                      | Active (Quality)                        |
| WHA-7                             | Monitoring well located up gradient of the Landfarm Facility  | Once annually (During summer)  | Active (Quality)                        |
| WHA-8                             | Monitoring well located down gradient of the Landfarm Facility  | Once annually (During summer)  | Active (Quality)                        |

2. The Licensee shall measure and record, in cubic metres, the monthly and annual quantities of Water pumped at Monitoring Program Station WHA-1, for all purposes.
3. The Licensee shall measure and record, in cubic metres, the monthly and annual quantities of Effluent discharged from Monitoring Program Station WHA-3.



4. The Licensee shall sample monthly at Monitoring Program Station WHA-2, WHA-3 and WHA-4 during periods of observed flow and annual discharges, to be analyzed for the following parameters:

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

5. The Licensee shall carry out inspections at Monitoring Program Stations WHA-2, WHA-3, and WHA-4, weekly from May to August inclusively, to determine Effluent or Water flow in order to fulfill the monitoring requirements of Part I, Item 4. A record of inspections shall be retained and made available to an Inspector upon request.
6. The Licensee shall measure and record the volume of all soil, from all sources locations entering the Landfarm Facility at Monitoring Program Station WHA-5.
7. The Licensee shall assess and record the concentration of petroleum hydrocarbon contaminated soil entering the Landfarm Facility (WHA-5) from all sources as per the *CCME Canada-Wide Standard for Petroleum Hydrocarbons in (PHC) in Soil*.
8. The Licensee shall sample prior to discharge at Monitoring Program Station WHA-6, to verify compliance with the Effluent quality limits under Part D, Item 16.
9. The Licensee shall install groundwater monitoring wells at the Landfarm Facility, at least one monitoring well shall be located upstream of the facility for background data collection (WHA-7) and at least one downstream of the facility (WHA-8).
10. The Licensee shall sample at Monitoring Program Stations WHA-7 and WHA-8 once annually in the summer, giving consideration to adequate ground thaw and obtaining representative groundwater samples. Samples shall be analyzed for the following parameters:

|                        |                         |
|------------------------|-------------------------|
| pH                     | Conductivity            |
| Total Suspended Solids | Oil and Grease (visual) |

Nitrate-Nitrite  
Total Phenols  
Total Hardness  
Magnesium  
Sodium  
Total Arsenic  
Total Copper  
Total Iron  
Total Mercury

Ammonia Nitrogen  
Total Alkalinity  
Calcium  
Potassium  
Sulphate  
Total Cadmium  
Total Chromium  
Total Lead  
Total Nickel

TPH (Total Petroleum Hydrocarbons)  
PAH (Polycyclic Aromatic Hydrocarbons)  
BTEX (Benzene, Toluene, Ethylbenzene, Xylene)

11. Additional monitoring stations, sampling and analysis may be requested by an Inspector.
12. The Licensee shall measure and record the annual quantities of Sewage Sludge removed from the Sewage Disposal Facility.
13. The Licensee shall include all of the data and information required by the “Monitoring Program” complete with an interpretation and discussion of the results, in the Licensee's Annual Report, as required under Part B, Item 1, or as requested by an Inspector.
14. Modifications to the Monitoring Program may be made only upon written approval of the Board.
15. 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 in writing.
16. All analyses shall be performed in a laboratory accredited according to ISO/IEC Standard 17025. The accreditation shall be current and in good standing.
17. The Licensee shall submit to the Board for review, within sixty (60) days following the date of issuance of this Licence, a Quality Assurance/Quality Control (QA/QC) Plan. The Plan shall include up-to-date sampling methods to all applicable standards, acceptable to an accredited laboratory as required by Part I, Item 15 and Part I, Item 16. The Plan shall include a cover letter from the accredited laboratory and Analyst, confirming acceptance of the Plan for analyses to be performed under this Licence.
18. The Licensee shall annually review the Quality Assurance/Quality Control Plan in Part I, Item 17 and modify it as necessary. Proposed modifications shall be submitted to the accredited laboratory for approval.