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NUNAVUT WATER BOARD
NUNAVUT IMALIRIYIN KATIMAYINGI
OFFICE DES EAUX DU NUNAVUT

Annex A -
U23957/G13607

File No: 3AM-IQA1626 / Amendment No. 5

March 15, 2021

Amy Elgersma
Chief Administrative Officer
City of Iqaluit
Box 460, Iqaluit, NU X0A 0H0

Email: cao@city.iqaluit.nu.ca

Subject: Licence No: 3AM-IQA1626 – City of Iqaluit; Amendment No. 5 – New Solid Waste Management Facility and Additional Water Source

Dear Ms. Elgersma:

Please find attached Amendment No. 5 to Type "A" Water Licence No: 3AM-IQA1626 along with the associated Reasons for Decision, duly issued by the Nunavut Water Board (NWB or Board) (**Motion No.: 2020-24-P6-05**) to the City of Iqaluit (City or Licensee), pursuant to the Board's 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)* and the *Nunavut Waters and Nunavut Surface Rights Tribunal Act*, S.C. 2002, c. 10 (*NWNSRTA*).

Amendment No. 5 addresses changes to terms and conditions pertaining to the use of Water and deposit of Waste and associated monitoring, contained in Licence No: 3AM-IQA1626, to allow for the construction and operation of new solid waste management facilities, and water use from a new source, Imiqtarviviniq Lake (known commonly as Dead Dog Lake), for the remaining term of the Licence (expiring in 2026). The terms and conditions of the original Licence related to the use of Water and deposit of Waste remain an integral part of this approval. Please note that before the amendments to the terms and conditions of Licence No: 3AM-IQA1626 included in Amendment No. 5 take effect, the amendments must be approved by the Minister of Northern Affairs (Minister) pursuant to s. 56 of the *NWNSRTA*.

The NWB recommends that the Licensee consult the accompanying Reasons for Decision, including Record of Proceedings and all comments on the Application (dated April 9, 2020) received by the NWB from interested persons during the licensing process.

The Board is providing Amendment No. 5 and the accompanying Reasons for Decision to the Minister for his consideration under a separate cover.

Sincerely,

Lootie Toomasie
Nunavut Water Board, Chair

LT/dd/rqd

Enclosure: **Water Licence No: 3AM-IQA1626 - Amendment No. 5**
Cc: **Iqaluit Distribution List**

DECISION

WATER LICENCE 3AM-IQA1626 - AMENDMENT NO. 5

Licensee:	The City of Iqaluit
Licence No:	3AM-IQA1626 Type "A"
Licence Issued:	June 17, 2016
Licence Expiry:	June 16, 2026
Amendment 5 Effective:	March 15, 2021

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)* and the *Nunavut Waters and Nunavut Surface Rights Tribunal Act (NWNSTRA or Act)*, with respect to the Application for an amendment to the Licence noted above, dated April 9, 2020, provided by the City of Iqaluit, the Nunavut Water Board (NWB or Board) hereby grants the following licence amendments (Amendment No. 5).



NUNAVUT WATER BOARD
WATER LICENCE 3AM-IQA1626 - AMENDMENT NO. 5

AMENDMENT NO. 5

Amend Page 3:

Quantity of Water not to be exceeded to read:

2,000,000 CUBIC METERS ANNUALLY FROM LAKE GERALDINE RESERVOIR, 500,000 CUBIC METERS ANNUALLY FROM NIAQUNGUK RIVER (APEX RIVER) FOR TRANSFER TO LAKE GERALDINE RESERVOIR, AND 2,500 CUBIC METRES ANNUALLY FROM IMIQTARVIVINIQ (DEAD DOG LAKE).

PART A: SCOPE, DEFINITIONS, AND ENFORCEMENT

1. SCOPE

The scope of activities, works, and undertakings authorized in accordance with the terms and conditions of the amended Licence include the following:

Insert Item 1. 1.:

Construction and operation of the new solid waste management facilities, including the Waste Transfer Station, the New North Landfill, and associated infrastructure.

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

Amend Item 1 to Read:

The Licensee is authorized to withdraw, from the Lake Geraldine Reservoir at Monitoring Station No. IQA-01, up to 2,000,000 cubic metres of Water annually for the relevant activities, works, and undertakings authorized under the scope of this Licence.

The Licensee is authorized to withdraw, from the Niaqunguk River (Apex River) at Monitoring Station No. IQA-10, up to a total of 500,000 cubic metres of Water annually for the supplementation of Water levels in the Lake Geraldine Reservoir.

The Licensee is authorized to withdraw, from Imiqtarviviniq (Dead Dog Lake) at

Monitoring Station No. IQA-14, up to a total of 2,500 cubic metres of Water annually for dust suppression and general municipal purposes.

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

Amend Item 11 to Read:

The Licensee shall dispose of and contain all municipal solid waste generated by the City at the West 40 Landfill or the Solid Waste Disposal Facilities and associated site(s) authorized under this Licence or as otherwise approved by the Board in writing.

Insert Item 20:

The Board has approved under this Licence No: 3AM-IQA1626, Amendment No. 5, the Plan entitled "*City of Iqaluit Operations and Maintenance Manual Landfill and Waste Transfer Station*," dated October, 2020. The Licensee shall submit to the Board for review, within sixty (60) days of approval of Amendment No. 5, an updated Manual, as referred to above, that addresses interveners' comments and recommendations provided during the review of the Application dated April 9, 2020.

Insert Item 21:

The Licensee shall collect and contain all leachate and runoff generated by the New North Landfill and Waste Transfer Station within the facility collection ponds/sumps.

Insert Item 22:

The Licensee shall characterize leachate chemistry from the New North Landfill and Waste Transfer Station, prior to discharge to the Waste Water Treatment Facilities.

Insert Item 23:

The Licensee shall submit to the Board for approval, at least six (6) months prior to commissioning of the New North Landfill or within one (1) year of approval of the Amendment No. 5, whichever comes first, a *Leachate Characterization and Management Plan* that includes methods for characterization of leachate and contingency measures for discharge that incorporate appropriate mitigations, including, if necessary, leachate treatment, to avoid adverse effects in the receiving environment.

Insert Item 24:

The Licensee shall monitor and report on the leachate before the leachate collection ponds become full, and implement any treatment methodologies within one year of making a decision that treatment of the leachate in the ponds is as per the *Leachate Characterization and Management Plan* required under Part E, Item 23.

Insert Item 25:

The Licensee shall inspect the leachate collection system on a daily basis during periods of flow as per the “*City of Iqaluit Operations and Maintenance Manual Landfill and Waste Transfer Station*,” dated October, 2020.

Insert Item 26:

The Licensee shall add additional ground cover at the landfill, if disturbance occurs due to nuisances’ wildlife or other causes.

PART F: CONDITIONS APPLYING TO CONSTRUCTION

Amend Item 3 to Read:

The Licensee shall use fill material for Construction only from approved sources that have been demonstrated, by appropriate geochemical analyses, to not produce Acid Rock Drainage and to be Non-Metal Leaching, and free of contaminants.

Insert Item 9:

The Board has approved under this Licence No: 3AM-IQA1626, Amendment No. 5, the Plan entitled “*City of Iqaluit Environmental Protection Plan Construction Phase, Landfill and Waste Transfer Station*,” dated December, 2020. The Licensee shall submit to the Board for review, within sixty (60) days of approval of Amendment No. 5, an updated Plan, as referred to above, that addresses interveners’ comments and recommendations provided during the review of the Application dated April 9, 2020.

Insert Item 10:

The Board has approved under this Licence No: 3AM-IQA1626, Amendment No. 5, the Plan entitled “*City of Iqaluit Environmental Protection Plan - Operations, Closure and Post-Closure Phases, Landfill and Waste Transfer Station*,” dated October, 2020. The Licensee shall submit to the Board for review, within sixty (60) days of approval of Amendment No. 5, an updated Plan, as referred to above, that addresses interveners’ comments and recommendations provided during the review of the Application dated April 9, 2020.

Insert Item 11:

The Board has approved under this Licence No: 3AM-IQA1626, Amendment No. 5, the Plan entitled "*City of Iqaluit Erosion and Sediment Control Plan, Landfill and Waste Transfer Station,*" dated October, 2020. The Licensee shall submit to the Board for review, within sixty (60) days of approval of Amendment No. 5, an updated Plan, as referred to above, that addresses interveners' comments and recommendations provided during the review of the Application dated April 9, 2020.

Insert Item 12:

The Licensee shall, submit to the Board for review, at least six (6) months prior to commencing construction of the New North Landfill facility, a *Heat Generation and Permafrost Mitigation Plan* that addresses comments and recommendations provided during the review of the Application dated April 9, 2020.

Insert Item 13:

The Licensee shall, submit to the Board for review, at least sixty (60) days prior to commencing construction of the New North Landfill facility, the proposed cut methodology for mitigating permafrost degradation.

PART I: CONDITIONS APPLYING TO MONITORING

Insert Item 14:

The Licensee shall monitor water uptake from Imiqtarviviniq (Dead Dog Lake) in accordance with requirements included under Schedule I.

Insert Item 15:

The Licensee shall implement the Plan entitled "*Facility Monitoring Plan, Landfill and Waste Transfer Station,*" dated December 2020 that was submitted within the Application and approved by the Board with the issuance of Licence No: 3AM-IQA1626, Amendment No. 5.

PART J: CONDITIONS APPLYING TO CLOSURE AND RECLAMATION

Insert Item 5:

The Licensee shall provide to the Board for review, the final closure design report, including details pertaining to site drainage, within one year of closure of the West 40 Landfill and one year prior to undertaking West 40 Landfill reclamation work.

SCHEDULE A: DEFINITIONS

Amend Item:

“Solid Waste Facility”

To Read:

“Solid Waste Disposal Facilities” means the New North Landfill, Waste Transfer Station, West 40 Landfill, Sludge Management Facility and all other facilities identified in the Application dated April 9, 2020 that are designed and constructed to manage solid waste generated by the City of Iqaluit;

Insert Items:

“Imiqtarviviniq (Dead Dog Lake)” means the water body located within the City’s boundaries and identified in the Application dated April 9, 2020 for use as a water source for dust suppression and general municipal activities, as described in that Application.

“New North Landfill” means the solid waste management facility located approximately 6 km north of the City, functioning as a landfill to receive waste from the Waste Transfer station, and other sources, as described in the Application dated April 9, 2020.

“Waste Transfer Station (WTS)” means the solid waste management/transfer facility located within the City’s industrial area, functioning to receive, compact, and bale municipal waste prior to transferring to the New North Landfill, as described in the Application dated April 9, 2020.

SCHEDULE B: ANNUAL REPORT REQUIREMENTS

Insert the following Items:

- r. The monthly and annual quantities in cubic metres of fresh Water withdrawn from Imiqtarviviniq (Dead Dog Lake) at Monitoring Station No. IQA-14.
- s. The monthly and annual quantities, and general types of Wastes brought to the Waste Transfer Station and disposed of at the New North Landfill.
- t. A review of procedures for packaging, storage, and shipment of harmful hazardous waste.
- u. An update on the capacity of the landfill cell currently in use, including the installation timing calculation (inputs and result), including discussion on the required actions/schedule for the design and installation of the next lined disposal area in the sequence.

SCHEDULE I: CONDITIONS APPLYING TO MONITORING

Amend Table 1 to include:

Test Group	Analytical Parameters	Units
Field	pH, temperature, conductivity, Dissolved Oxygen (DO), and turbidity.	pH units °C uS/cm mg/L NTU
Laboratory	PHCs Fractions F1 to F4, including BTEX; Total metals; Dissolved metals; PFAS (WTS only) PAHs; and, Dissolved major ions (including alkalinity), hardness, total dissolved solids and total suspended solids.	mg/L

Amend Table 2 to include:

Station ID	Description	Status	Parameter	Testing/ Measurement Frequency	Reporting Frequency
IQA-14	Withdrawal from Imiqtarviviniq (Dead Dog Lake) for dust suppression.	Active	F	Daily when withdrawals occurring at this station.	Annually
IQA-15	Waste Transfer Station Runoff/Leachate Discharge Point	Active	B, E, N, ICP, F, LS	Daily flow measurements; once prior to discharge; once during discharge; and once prior to the completion of discharge.	Annually
IQA-16 (WS-103)	Landfill Runoff/Leachate Discharge Point	Active	B, E, N, ICP, F, LS	Daily flow measurements; once prior to discharge; once during discharge; and once prior to the	Annually

Station ID	Description	Status	Parameter	Testing/ Measurement Frequency	Reporting Frequency
				completion of discharge.	
SW1	Waste Transfer Station surface water monitoring	Active	Field Laboratory	Monthly Twice per year	Annually
SW2	Waste Transfer Station surface water monitoring	Active	Field Laboratory	Monthly Twice per year	Annually
SW3	Waste Transfer Station surface water monitoring	Active	Field Laboratory	Monthly Twice per year	Annually
WS-100	New North Landfill surface water monitoring	Active	Field Laboratory	Monthly Twice per year	Annually
WS-101	New North Landfill surface water monitoring	Active	Field Laboratory	Monthly Twice per year	Annually
WS-102	New North Landfill surface water monitoring	Active	Field Laboratory	Monthly Twice per year	Annually
19MW-01	Waste Transfer Station ground water monitoring	Active	Field Laboratory	Monthly Twice per year	Annually
19MW-02	Waste Transfer Station ground water monitoring	Active	Field Laboratory	Monthly Twice per year	Annually
19MW-03	Waste Transfer Station ground water monitoring	Active	Field Laboratory	Monthly Twice per year	Annually
19MW-04	Waste Transfer Station ground water monitoring	Active	Field Laboratory	Monthly Twice per year	Annually
19MW-05	Waste Transfer Station ground water monitoring	Active	Field Laboratory	Monthly Twice per year	Annually
W-107	New North Landfill ground water monitoring	Active	Field Laboratory	Monthly Twice per year	Annually
W-108	New North Landfill ground water monitoring	Active	Field Laboratory	Monthly Twice per year	Annually
W-109	New North Landfill ground water monitoring	Active	Field Laboratory	Monthly Twice per year	Annually
W-110	New North Landfill ground water monitoring	Active	Field Laboratory	Monthly Twice per year	Annually

Station ID	Description	Status	Parameter	Testing/ Measurement Frequency	Reporting Frequency
W-111	New North Landfill ground water monitoring	Active	Field	Monthly	Annually
			Laboratory	Twice per year	

All remaining terms and conditions of Type "A" Water Licence 3AM-IQA1626 dated June 17, 2016, and Amendment No. 4, dated September 4, 2019, still apply.

This Licence Amendment No. 5 issued and recorded at Gjoa Haven, NU on March 15, 2021.

APPROVED BY:



Lootie Toomasie
Chairperson,
Nunavut Water Board



Daniel Vandal
Minister of Northern Affairs

DATE:

APR 22 2021