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Prairie & Northern Region  
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ECCC File: 6200 000 040/002  
NWB File: 3BM-NAU2126



February 3<sup>rd</sup>, 2023

via email at: [licensing@nwb-oen.ca](mailto:licensing@nwb-oen.ca)

Richard Dwyer  
Manager of Licensing  
Nunavut Water Board  
P.O. Box 119  
Gjoa Haven, NU X0B 1J0

Dear Richard Dwyer:

**RE: 3BM-NAU2126 – Hamlet of Naujaat– Hamlet of Naujaat Water Licence Amendment–  
Water Licence Amendment**

Environment and Climate Change Canada (ECCC) has reviewed the information submitted to the Nunavut Water Board (NWB) regarding the above-mentioned water licence amendment.

ECCC is providing technical, science-based information and knowledge based on our mandate pursuant to the *Canadian Environmental Protection Act* and the pollution prevention provisions of the *Fisheries Act*. These comments are intended to inform the assessment of this project's potential effects in the receiving environment and on valued ecosystem components. Any comments received from ECCC in this context does not relieve the proponent of its obligations to respect all applicable federal legislation.

The following comments are provided:

**1. Topic: Oxygen demand parameter**

Reference(s)

- Executive Summary – Hamlet of Naujaat Water Licence No. 3BM-NAU2126 Water License Application

Comment

Per the Executive Summary, the Licensee is requesting that water licence parameter for 5-day biochemical oxygen demand (BOD<sub>5</sub>) be amended to carbonaceous BOD<sub>5</sub> (CBOD<sub>5</sub>).



#### ECCC Recommendation(s)

ECCC supports the Licensee's request that the parameter for BOD<sub>5</sub> be amended to CBOD<sub>5</sub>. CBOD<sub>5</sub> more closely represents the oxygen demand associated with biodegradation of organic constituents of domestic or industrial wastewaters than does BOD<sub>5</sub>. If biochemical oxygen demand is to be used as both loading and performance parameters when designing for aerobic removal of organic matter in wastewater treatment systems, CBOD<sub>5</sub> is the recommended parameter.

## **2. Topic: Oil and grease parameter**

#### Reference(s)

- Hamlet of Naujaat Water Licence No. 3BM-NAU2126

#### Comment

Part D (Conditions Applying to Waste Disposal), Condition 3 of the existing water licence sets the effluent quality limit for the Oil and Grease parameter as "no visible sheen". Visual perception of a sheen is an important, yet subjective, criterion. The effluent quality limit would be strengthened by adding a concentration limit for oil and grease.

#### ECCC Recommendation(s)

Regarding effluent discharge from the sewage treatment system, ECCC recommends that the effluent quality limit for the Oil and Grease parameter be amended to "5 mg/L and no visible sheen".

## **3. Topic: Water licence condition G-5**

#### Reference(s)

- Plan for Compliance

#### Comment

The Licensee has requested that Condition G-5 be removed from the licence. This condition addresses the reclamation of areas contaminated by hydrocarbons and the use of reclaimed soils. According to the Compliance Plan, CIRNAC has indicated this project will be undertaken by the federal contaminated sites department. Clarification is recommended.

#### ECCC Recommendation(s)

ECCC recommends that the Licensee clarify whether there are any hydrocarbon-contaminated areas that will remain the Hamlet's responsibility. The Licensee may consider retaining the use condition to potentially allow for repurposing of any soils that CIRNAC reclaims.

#### **4. Topic: Wastewater monitoring**

##### Reference(s)

- Operation and Maintenance Plan for Sewage Disposal Facilities (2022)

##### Comment

In order to assess the treatment performance of the sewage disposal system, it is important to monitor the wastewater quality of all system components. This will support tracking of treatment performance for individual components and the system as a whole. Per Section 9.0 (Modifications and Upgrades) of the Operation and Maintenance Plan, the Licensee is planning to add a new lagoon to the current disposal/ treatment system. Given the addition of a new lagoon to the system, the monitoring program should include a new station to monitor the level of treatment provided by the new lagoon.

##### ECCC Recommendation(s)

ECCC recommends monitoring influent quality and monitoring the effluent quality of each component of the wastewater disposal/ treatment system, in order to assess the treatment performance of each system component and the system as a whole. The monitoring program should be updated to include a new station to monitor effluent quality at the pump-out point from the proposed new lagoon to the existing lagoon.

Additionally, ECCC recommends measurement and recording of field parameters (e.g., pH and temperature of effluent) and field notes (e.g., weather conditions, watercourse/waterbody conditions, effluent observations) at the time of sampling for all stations, and use this information to support interpretation of monitoring results.

#### **5. Topic: Secondary containment for hazardous wastes**

##### Reference(s)

- Operation and Maintenance Plan for Solid Waste Disposal Facilities (2022)

##### Comment

Per Section 5.3 (Hazardous Waste Management) of the Operation and Maintenance Plan, the Solid Waste Disposal Facility contains a hazardous waste storage area that is intended to store hazardous wastes for up to five years. However, the plan does not indicate whether secondary containment is provided for hazardous wastes.

##### ECCC Recommendation(s)

ECCC recommends that secondary containment be provided for hazardous wastes, and that the Operation and Maintenance Plan for Solid Waste Disposal Facilities be updated to discuss secondary containment.

## 6. Topic: Open burning

### Reference(s)

- Operation and Maintenance Plan for Solid Waste Disposal Facilities (2022)
- Solid Waste Management for Northern and Remote Communities – Planning and Technical Guidance Document (Environment and Climate Change Canada, March 2017)

### Comment

As described in Section 5.2 (Open Burning) of the Operation and Maintenance Plan, some waste types are managed by open burning. ECCC acknowledges that the use of open burning of appropriately segregated wastes would be in accordance with guidance from the GNWT. However, as described in ECCC's guidance document 'Solid Waste Management for Northern and Remote Communities', open burning is discouraged due to health and safety and environmental concerns.

### ECCC Recommendation(s)

ECCC recommends that the community investigate/consider waste disposal practices that minimize or eliminate the use of open burning to the extent practicable.

If you need more information, please contact Heather Konopski at [Heather.konopski@ec.gc.ca](mailto:Heather.konopski@ec.gc.ca).

Sincerely,

*[original signed by]*

Heather Konopski  
Environmental Assessment Officer

cc: Jody Small, Acting Head, Environmental Assessment North (NT and NU)