Environmental Protection Operations Directorate
Prairie & Northern Region
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Iqaluit, NU X0H 0H0

ECCC File: 6100 000 186/003
NWB File: 1BR-SWT

April 25, 2019

Via email at: 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: 1BR-SWT – Nunavut Excavating 2007 Inc. – Soil and Water Treatment Facility – Cambridge Bay – Type B Water Licence Application

Environment and Climate Change Canada (ECCC) has reviewed the information submitted to the Nunavut Water Board (NWB) regarding the above-mentioned water licence application and is submitting comments via email. ECCC's specialist advice is provided based on our mandate, in the context of the *Canadian Environmental Protection Act* and the pollution prevention provisions of the *Fisheries Act.*
The following comments are provided:

1. Quality Assurance and Quality Control Program

Reference(s)

- Nunavut Excavating 2007 Inc. Baseline Conditions Assessment - Environmental Monitoring, Reclamation and Post-Closure Plan, Cambridge Bay Soil and Water Treatment Facility. Section 3.5. Quality Assurance and Quality Control. March 2019.

Comment(s)

The Quality Assurance and Quality Control (QA/QC) program described on page 6 in the Environmental Monitoring Plan includes blind duplicates for soil, groundwater, and surface water quality sampling at a rate of 1 per year or once every 10 samples, whichever is greater. However, while duplicates in a QA/QC program account for

precision of the tests and environmental heterogeneity, duplicates do not account for any potential contamination that has occurred during sampling.

In order to account for contamination from sampling containers or from contamination during sampling, trip and field blanks are often used to ensure a robust QA/QC program for water samples. For soil samples, split samples or compound-specific sample blanks (e.g. Volatile Organic Compounds if those are being tested) should be used to evaluate the effectiveness of sample handling techniques. The sample program proposed by the Proponent does not include any blanks in the QA/QC Program.

ECCC Recommendation(s)

ECCC recommends that the Proponent update the QA/QC program to include media-specific QA/QC samples which will demonstrate accuracy and precision for sample collection and handling, and lab analyses.

2. Location of Treated Water Discharge

Reference(s)

- Nunavut Excavating 2007 Inc. Project Description. April 2019.
- Nunavut Excavating 2007 Inc. Waste Management Plan - Cambridge Bay Soil and Water Treatment Facility. Section 3.a. Purpose and Scope Project Description, Section 5. Waste Types, Table 3. Waste Streams, Source of Generation and Characteristics, Cambridge Bay STF, and Section 6.c. – Reuse and Disposal. June 2018.
- Nunavut Excavating 2007 Inc. Environmental Protection Plan - Cambridge Bay Soil and Water Treatment Facility. Section 3.a. Purpose & Scope – Project Description, and Section 5.c. Environmental Effects – Aquatic Environment. July 2018.
- Nunavut Excavating 2007 Inc. Baseline Conditions Assessment - Environmental Monitoring, Reclamation and Post-Closure Plan - Cambridge Bay Soil and Water Treatment Facility. Section 3.4 – Water Treatment Plant Discharge, and Figure A.1. March 2019.

Comment(s)

Various management plans for the Soil and Water Treatment Facility discuss that treated water from the Water Treatment Plant will be stored in an aboveground storage tank and will be: 1) used for moisture amendment for the soil treatment facility, 2) used for dust suppression, or 3) released to the environment. In the various reports there are no details provided on the specifics of the proposed release to the environment except that is will be “adjacent to the facility” and will “flow overland to natural drainage.” Figure A.1 of the Environmental Monitoring Plan provides depictions of the surface water sampling locations and groundwater

sampling locations. However, no details on the point of discharge or the assumed flow path for the aboveground storage water tank.

ECCC Recommendation(s)

ECCC recommends that the Proponent provide details on the proposed discharge location from the treated water storage tank and flow path (including distance) to surface water.

Should you require further information, please do not hesitate to contact me at (867) 975-4981 or Richard.Bingley@Canada.ca.

Sincerely,

[original signed by]

Richard Bingley
Environmental Assessment Coordinator

cc: Georgina Williston, Head, Environmental Assessment North (NT and NU)