

Environmental Protection Operations Directorate
Prairie & Northern Region
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P.O. Box 2310
Yellowknife, NT X1A 2P7

ECCC File: 6100 000 001/012
NWB File: 3AM-IAQ1626



September 25, 2020

via email at: licensing@nwb-oen.ca

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

Dear Richard Dwyer

**RE: Licence No. 3AM-IAQ-1626– City of Iqaluit– Solid Waste – Application for
Amendment to Construct and Operate New Solid Waste Disposal Facilities**

Environment and Climate Change Canada (ECCC) attended the Pre-Hearing Conference for the above-noted project on September 21, 2020, wherein a *Draft List of Commitments* by the Project Proponents and Intervenors was shared. ECCC is providing the following information to the Nunavut Water Board in response to Commitment #40, which requested ECCC to:

“Provide regulatory advice [to the NWB] on the applicable regulation or guideline, including limits/parameters that could be included within the licence with respect to the potential discharge of treated effluent (treated leachate) into the environment.

Provide regulatory advice [to the NWB] on the applicable regulation or guideline including limits/parameters that could be included within the licence and/or used to compare groundwater monitoring results to (referred to in ECCC Comment 12).”

ECCC’s specialist advice based on our mandate pursuant to the *Canadian Environmental Protection Act* and the pollution prevention provisions of the *Fisheries Act*.

1. Regulatory guidelines for potential discharge of treated effluent

With respect to discharges that may reach surface waters, section 36(3) of the *Fisheries Act* prohibits the deposit of all deleterious substances into water frequented by fish, or to any place, under any conditions, where it may enter water frequented by fish. There are no applicable federal regulations for groundwater quality, but applicable guidelines to



consider could include the CCME soil quality guidelines, or the Federal Interim Groundwater Quality Guidelines.

Without knowing the quality of the effluent that would be discharged, it may not be feasible at this time for the NWB to identify limits/parameters that might be regulated. Until the lagoons are operational, the Proponent will not know what parameters may need to be treated; once the leachate is characterized, the Proponent will be able to identify treatment objectives.

Therefore, development of discharge limits may be best approached subsequent to operation of the lagoons, once leachate quality and volumes could be characterized.

2. Regulatory guidelines for groundwater monitoring

The intent of ECCC's recommendation in Comment 12 is to ensure the City of Iqaluit has a benchmark identified by which they can recognise contaminant migration in groundwater, which should also include a threshold that would trigger mitigation.

ECCC respectfully suggests that this may be achieved by establishing action levels in the operational management plan (Facility Monitoring Plan).

Objectives could be established at a level set relative to baseline, or parameter concentrations could be compared to the Federal Interim Groundwater Quality Guidelines (Appendix A of

<https://esdat.net/Environmental%20Standards/Canada/Fed/Fed%20Interim%20GW%20En14-91-2013-eng.pdf>).

ECCC notes that migration of contaminants from the solid waste site into the active layer groundwater could result in movement of contaminants into surface waters. There are no applicable regulations for groundwater quality, but section 36(3) of the *Fisheries Act* prohibits the deposit of all deleterious substances into water frequented by fish, or to any place, under any conditions, where they may enter water frequented by fish, so avoiding migration of contaminants to surface water from groundwater or the active layer is important.

If you need more information, please contact Jody Small at 780-217-8269 or jody.small@canada.ca

Sincerely,

[original signed by]

Jody Small,
Unit Head, Environmental Assessment South PNR

cc: Brian Asher, Acting Head, Environmental Assessment North (NT and NU)
Trish Auser, Project Water Quality Officer