



Environmental Protection Operations Directorate
Prairie & Northern Region
5019 52nd Street, 4th Floor
P.O. Box 2310
Yellowknife, NT X1A 2P7

ECCC File: 6100 000 043/004
NWB File: 2BE-FER1823

February 2, 2022

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: 2BE-FER1823 – Canadian North Resources Inc. – Ferguson Lake Project –
Proponent's Responses to ECCC Comments on Water Licence Amendment Application**

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

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. Incinerator Ash

Reference(s)

- Spill Contingency Plan (August 2021)
- 220124 2BE-FER1823 CNRD 2BE-FER1823 Responses to Application for Ammendment Comments-IMLE

Comments:

The response to ECCC-1 states that "samples of the ash from the incinerator will be collected to be set aside to be analyzed with other dirt samples prior to removal and disposal at a landfill". ECCC acknowledges the response, and requests clarification



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regarding incinerator ash characterization and associated landfill disposal criteria, therefore has provided further recommendations below.

ECCC Recommendation(s)

ECCC recommends the Proponent:

- Specify landfill disposal criteria for acceptable ash content analysis;
- Collect representative samples of incinerator ash for leachate toxicity testing. Consult the Technical Document for Batch Waste (Environment Canada, January 2010), including Section 3.5.1 (Residue Handling Practices), for information regarding sampling and analysis of incinerator ash;
- Incorporate field and laboratory quality assurance/quality control, including replicate testing, for ash sampling and analysis; and
- Identify alternative disposal option(s) to manage any incinerator ash that does not meet criteria for disposal at a municipal landfill. If the incinerator ash is deemed to be a hazardous waste (based on laboratory testing), it should be transported to a licenced hazardous waste disposal facility.

2. Contact Water Management

Reference(s)

- ERM memo "Ferguson Lake: 2021 Fuel Containment Area, Waste Storage Area and Drill Staging Area Water and Soil Sampling" (November 12, 2021)
- 220124 2BE-FER1823 CNRD 2BE-FER1823 Responses to Application for Ammendment Comments-IMLE

Comments:

The response to ECCC-4 states the following:

"As discussed in Recommendation R-02, contact water drained from the drums in the secondary containment berm will be pumped through a charcoal oil water separator into a separate container beside the berm for the which the water will be tested (for example with sample FLW-15 in Appendix A, Table A.1 in the ERM sampling memo) to confirm it is uncontaminated prior to the decision to dispose on-site.

The analytical results from the water and soil sampling memo are compared to CCME Guidelines, however, below are the Effluent discharge quality limits from item 12. Part D of the NWB Renewal Water License 2BE-FER1823.

Parameter and Maximum Concentration of any Grab Sample

- pH 6 to 9 (pH units)
- Oil and Grease (mg/L) 15 and no visible sheen
- Lead ($\mu\text{g}/\text{L}$) 1
- Benzene ($\mu\text{g}/\text{L}$) 370
- Toluene ($\mu\text{g}/\text{L}$) 2

- Ethylbenzene ($\mu\text{g}/\text{L}$) 90

Based upon the above Water License limits, sample FLW-7, the water sample in the FCA that exceeds the CCME guideline is considered acceptable for discharge without further treatment. This suggests the CCME guideline is a conservative measure."

ECCC acknowledges the response, and is providing further clarification.

ECCC Recommendation(s)

ECCC recommends that where there are non-regulated parameters in measurable concentrations, relevant guidelines (e.g., CCME) be considered such that any releases are not harmful to the environment.

If you need more information, please contact Stephinie Mallon at Stephinie.Mallon@ec.gc.ca.

Sincerely,

[original signed by]

Stephinie Mallon
Environmental Assessment Officer
Environmental Protection Operations Directorate, Prairie Northern Region

cc: Jody Small, Acting Head, Environmental Assessment North (NT and NU)
Environmental Protection Operations Directorate, Prairie Northern Region