



September 22, 2022

Mavis Cli-Michaud
Chair
Mackenzie Valley Land and Water Board
7TH FLOOR, 4922 48TH STREET
PO BOX 2130
YELLOWKNIFE NT X1A 2P6

Dear Ms. Cli-Michaud:

Canadian Zinc Corporation, Prairie Creek, NT – Type A Water Licence Renewal– MV2021L2-0004

Thank you for your letter dated August 10, 2022 regarding Canadian Zinc Corporation’s (CZN) Water Licence Renewal MV2021L2-0004 for Mineral Exploration and Mining and Milling Prairie Creek Mine, NT.

Firstly, I would like to note that I am in overall agreement with the Mackenzie Valley Land and Water Board’s (the Board) interpretation of ss. 27(5) of the *Waters Act*. The Board’s interpretation appears to be consistent with the interpretation I set out in my August 19, 2022 letter to the Wek’èezhù Land and Water Board:

“Section 27(5) of the *Waters Act* gives a land and water board discretion to opt not to regulate a parameter set out in the Metal and Diamond Mining Effluent Regulations (MDMER) if, based on a reasonable assessment of evidence related to the application, including that under s. 5 of the *Waters Regulations*, the land and water board concludes that the parameter has no potential to exceed the limit under MDMER. If it is apparent based on the evidence related to the application that there is the potential for an exceedance of the limit under MDMER, that parameter must be regulated by the applicable land and water board through an effluent quality criterion in the body of the licence (not in a schedule the board could amend at some future date without ministerial approval).”

I note that the Board was very diligent in obtaining evidence throughout this proceeding to assist in informing the Board and other parties in this regard. Specifically, I note the following evidence was obtained throughout the proceeding:

- CZN provided an Effluent Quality Criteria (EQC) Report with their water licence application;
- Several Information Requests (IRs) related to EQC were directed at the proponent following the technical sessions; and
- Several undertakings were directed at the proponent and other parties during the December 2021 public hearing regarding EQC and water quality.

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Further, I note that the Board determined that additional evidence was still required beyond the information received by this point and additional information requests were directed to CZN. It was noted in a February 09, 2022 e-mail from Board staff to CZN that Board staff had reviewed the evidence pertaining to the proceeding for CZN's mineral exploration and mining and milling applications (MV2021L2-0004 and MV2021D0005) and determined that additional information was required to assist with developing the draft EQC for the Licence, and to establish security for the authorizations.

I commend the Board and their staff for their efforts to obtain the evidence necessary to support their decisions in this regard. However, upon review of the Reasons for Decision (RFD) issued by the Mackenzie Valley Land and Water Board (Board), I am concerned about the lack of an EQC for total zinc in Part F Condition 32.

Given the proximity of the dissolved zinc EQC in some scenarios in the water licence to the total zinc limit in the MDMER, effluent related to this undertaking may ultimately violate MDMER total zinc limits. Specifically, the 8 m summer and 6 m winter trench width have a corresponding EQC of a maximum average concentration of dissolved zinc of 0.260 mg/ and a maximum grab concentration of dissolved zinc of 0.52 mg/L which is 65% of the total zinc concentration allowable under MDMER of 0.4 mg/L maximum average and 0.8 mg/L maximum grab. I do note that, although it has been removed from the previous draft WL as an EQC, total zinc monitoring is still a requirement of the Surveillance Network Program. As such, if there are issues with exceedances of these limits in the future, ENR may request that the water licence be amended in the public interest to ensure conformity with ss. 27(5) of the *Waters Act*.

Despite the concern noted above, I wish to inform you that I have approved the Water Licence as recommended by the Mackenzie Valley Land and Water Board.

Sincerely,



Shane Thompson
Minister
Environment and Natural Resources

Enclosure

c. Dr. Shelagh Montgomery
Executive Director
Mackenzie Valley Land and Water Board

Dr. Erin Kelly
Deputy Minister
Environment and Natural Resources

Meghan Beveridge
A/Director, Water Management and Monitoring Division
Environment and Natural Resources