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June 30, 2020

MV2019L2-0006

David Harpley  
Canadian Zinc Corporation  
SUITE 1710-650 West Georgia Street  
Vancouver BC V6B 4N9

Sent via Email

Dear David Harpley:

**Effluent Treatment Plan Version 2 – Approved**  
**Minewater Treatment Contingency Plan Version 2 – Approved**  
**Canadian Zinc Corporation – Prairie Creek All Season Road Project**

The Mackenzie Valley Land and Water Board (MVLWB or the Board) met on June 25, 2020 to review Canadian Zinc Corporation's (CZN's) Effluent Treatment Plan Version 2 and Minewater Treatment Contingency Plan Version 2, which were submitted under Water Licence MV2019L2-0006, Part E, Condition 4 and 5, respectively.

Version 2 of the Effluent Treatment Plan and the Mine Water Treatment Contingency Plan are considered to be approved at this time.

CZN is required to submit an Effluent Treatment Plan Version 3 and Minewater Treatment Contingency Plan Version 3 by **October 25, 2020**, for Board approval. The Board requires that CZN submit the Effluent Treatment Plan Version 3 and Minewater Treatment Contingency Plan Version 3 in accordance with comments made during this review, as summarized in Table 1 and 2, respectively (attached). Please include a conformity table in these Plans. If a comment is no longer relevant due to changes to effluent treatment or minewater treatment contingency options, CZN should explain this in the conformity table. The Plans should also include any additional updates as required, and these should be noted in the revision table to show where the changes were made.

The Board would also like to remind CZN of the following:

- CZN's water management should be in accordance with the Board's Policy of minimizing waste to the environment, as opposed to a "pollute-up-to" method.
- The fact that the downstream water quality is lower than the most recent CCME Guidelines does not have bearing on CZN's obligation to comply with its currently approved EQC as per Licence MV2019L2-0006. Meeting EQC is required, regardless of downstream impacts.
- Ensure that future Surveillance Network Program Reports submitted to the Board include the correct unit for total petroleum hydrocarbons (TPH).

If you have any questions or concerns, please contact Kim Murray at (867) 766 7458 or [kmurray@mvlwb.com](mailto:kmurray@mvlwb.com) or Jacqueline Ho at (867) 766 7455 or email [jho@mvlwb.com](mailto:jho@mvlwb.com).

Yours sincerely,



Mavis Cli-Michaud  
MVLWB, Chair

Copied to: Distribution List

Attached: Table 1: Board Directives from the review of the Effluent Treatment Plan  
Table 2: Board Directives from the review of the Minewater Treatment Contingency Plan

**Table 1: Board Directives from the review of the Effluent Treatment Plan**

<b>Item</b>	<b>Outstanding items requiring updating</b>	<b>Review comment reference</b>
1.	Update the ETP to discuss toxicity results from SNP 3-4 and any associated implications.	ECCC-3
2.	Update section 3.5 Reporting to indicate that a revised Effluent Treatment Plan would be revised and resubmitted to the MVLWB for approval.	MVLWB-9
3.	Update the order of Appendix A and Appendix B so that the references in text are correct.	MVLWB-10

**Table 2: Board Directives from the review of the Minewater Treatment Contingency Plan**

Item	Outstanding items requiring updating	Review comment reference
1.	Update the MTCP to include a section that discusses contingency options that could be employed during primary treatment. This could include a discussion of how the portal culvert overflow event and clogging of treatment chemical delivery lines were mitigated in 2019.	ADKFN-1
2.	Update with details on how CZN will be more proactive in seeking additional treatment enhancements if initial results are not promising (i.e. not waiting two months).	ENR-4
3.	Update based on the understanding that conversion to lime treatment will not occur in 2020, but an evaluation of treatment plant changes will occur, along with collecting data to possibly support a future application to change the zinc EQC from total to dissolved.	ECCC-1; ENR-5
4.	Update to correctly reference the Effluent Treatment Plan.	MVLWB-3
5.	Update section 3.2 Water Quality to indicate that a revised Effluent Treatment Plan would be revised and submitted to the MVLWB for approval if conversion to a lime-based treatment system is to occur.	MVLWB-6
6.	Update to include details of biweekly sampling at SNP station 3-11 for pH, hardness, dissolved organic carbon, dissolved zinc, and total zinc during the discharge season.	Racher-5