

December 24, 2002

Malcolm J.A. Swallow  
President and CEO,  
Canadian Zinc Corporation (CZN)  
Suite 1202  
700 West Pender Street  
Vancouver, BC V6C 1G8

Dear Mr. Swallow,

RE: Completion of the CANADIAN ZINC CORPORATION (CZN) ENVIRONMENTAL ASSESSMENT (EA)

Pursuant to subparagraph 130(1)(b)(i) of the *Mackenzie Valley Resource Management Act* (MVRMA) the Minister of Indian and Northern Affairs Canada (Federal Minister) instructed the Review Board to undertake further consideration of significant unresolved issues related to the use and integrity of the tailings facility, and water treatment in general at the proposed Prairie Creek minesite. The Review Board subsequently prepared a work plan which complied with the Minister's instructions and addressed the issues raised by Federal and Responsible Ministers.

The Review Board prepared and issued an Information Request (IR) and received a response from CZN that was subsequently reviewed by the parties to the EA. On December 17, 2002, in accordance with its work plan, the Review Board considered the information provided by the developer in response to the IR and by other parties to the EA, including all information on the CZN EA public registry.

In the opinion of the Review Board, the IR response provided by CZN does not sufficiently address the unresolved EA issues. In fact, officials of the Federal and Responsible Ministers have advised the Review Board of significant outstanding deficiencies respecting CZN's proposed water management and treatment options. As a result of its review of the concerns expressed by officials of the Federal and Responsible Ministers, and upon further consideration of the unresolved issues related to water treatment at the Prairie Creek minesite, the Review Board could, under section 128 of the MVRMA, refer the development to impact review or reject the proposal. However, before proceeding to make such a decision, the Review Board has decided to provide CZN a further opportunity to file information on the public record of sufficient clarity and detail so that the Review Board can take a decision on the EA.

The Review Board instructs CZN to respond to the questions raised by Environment Canada, Parks Canada, the Department of Fisheries and Oceans, and the Department of Indian and Northern Affairs in their review of CZN's IR#1 response dated November 1, 2002. In addition, CZN is also instructed to provide a detailed response to the following questions:

1. Explain how CZN will ensure that minewater from the decline will be of a quality suitable for discharge following settling (as stated on page 4 of the IR response). Please note that a commitment by CZN to meet water licencing requirements is an unsatisfactory response since it provides no factual basis for the Review Board to make a decision on the EA.
2. Explain how CZN will meet CCME guidelines for the protection of freshwater aquatic life given that estimates of decline and portal water quality show zinc to be an order of magnitude higher than previous licence limits, and two orders of magnitude higher than CCME guidelines for the protection of freshwater aquatic life.
3. CZN has provided a brief outline of potential treatment options for ammonia, but has not identified which, if any, would be undertaken for purposes of this development, nor what process would be involved. The Review Board is asking CZN to identify what ammonia treatment option and associated processes will be used for this development.
4. Explain whether CZN intends to develop a site water management system that includes the capture and treatment of all minewater, including that from the 870 m level.
5. CZN's IR response suggests that minewater could be contained in a proposed polishing/treatment pond constructed adjacent to the mill. Please explain if and how CZN will ensure the proposed polishing/treatment pond is impermeable and appropriately sized for treatment.
6. Explain how and when CZN intends to address the issue of untreated mine water discharging from the 870 m portal into the settling pond and then into Harrison Creek in an unmanaged and untreated manner.
7. Provide information regarding the design, location and method of water transfer between the sumps, settling ponds, and polishing pond, including retention times, capacity, flow rates, treatment criteria, expected outcomes, and confirmatory monitoring.
9. CZN has indicated that it is prepared to proceed with its proposed developments without the use of the existing tailings pond. Therefore, the alternative method proposed by CZN in its IR response to the Review Board is in fact, the only water management and treatment method currently under consideration in the EA. CZN is asked to provide alternatives to its current plan to treat and discharge to the surrounding environment. If the alternative is to be on-site containment, CZN is asked to provide sufficient detail so that the alternative can be analysed and assessed.

10. CZN intends to treat mine water using sumps, settling ponds and a polishing pond. CZN is asked to explain its water quality predictions resulting from these treatment methods and to provide its supporting methodology and calculations for purposes of assessing potential discharge quality or impacts on Prairie Creek. Suggesting that CZN will meet Mackenzie Valley Land and Water Board discharge limits is an insufficient response for assessment purposes.
11. Please provide a contingency plan describing how CZN plans to treat mine water should ammonia levels exceed the Mackenzie Valley Land and Water Board established limits.
12. Please provide CZN's contingency plan, exclusive of flooding the decline, in the event discharges from the decline development are higher than accounted for or expected.
13. CZN is asked to provide information on the design of the proposed underground sumps and plans for handling of residual hydrocarbons.

Written answers to the Review Board's questions and to those of DIAND, DFO and Environment Canada, referred to above, must be received by January 31<sup>st</sup>, 2003. These responses must be filed at the Review Board's office no later than 5:00 p.m. MST on that date. The Review Board will then make final consideration of its report of EA and advise the Federal Minister accordingly. If no responses are received, the Review Board will make a decision under section 128 of the MVRMA as required.

If you have any questions about the above, do not hesitate to contact me directly.

Yours truly,



Vern Christensen,  
Executive Director

**FXED**  
Dec 24/02



# Mackenzie Valley Environmental Impact Review Board

Box 938, 5102-50th Avenue, Yellowknife, NT X1A 2N7

**To:** The Honourable Robert Nault P.C., M.P Minister of Indian and Northern Affairs Ottawa

**Fax:** (819) 953-4941 Phone: (819) 997-0002

**Date:** December 24, 2002

**From:** Vern Christensen, Executive Director

**Pages:** 3 including this cover page

**File:** Underground Decline and Metallurgic Plant Operation Test development proposal

**Subject:** Update Regarding The Canadian Zinc Corporation (CZN) Environmental Assessment (EA)

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**FAXED**  
02 24/02

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Mackenzie Valley Environmental Impact Review Board

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From: Louie Azzolini, EOA  
Pages: 6 including this cover  
Date: Tuesday, December 24, 2002  
File: EA01-003 Decline and Metallurgical Pilot Plant

Subject: Update Regarding the Canadian Zinc Corporation Decline and  
Metallurgical Pilot Plant Environmental Assessment

Please see the attached correspondence

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