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File: EA0809-002

Alistair MacDonald  
Environmental Assessment Officer  
Mackenzie Valley Environmental Impact Review Board  
PO Box 938, 5102-50th Avenue  
Yellowknife, NT X1A 2N7

By Fax: (867) 766-7074

**Re: Canadian Zinc Corporation Prairie Creek Mine Environmental Assessment Draft  
Terms of Reference and Work Plan Comments**

Dear Mr. MacDonald:

Indian and Northern Affairs Canada (INAC) is pleased to submit the following comments and suggestions regarding the Canadian Zinc Corporation Prairie Creek Mine Environmental Assessment Draft Terms of Reference and Work Plan.

If you have any questions please contact Krystal Thompson at 669-2595 or email at [krystal.thompson@inac.gc.ca](mailto:krystal.thompson@inac.gc.ca).

Sincerely,

David Livingstone  
Director, Renewable Resources and Environment  
Indian and Northern Affairs Canada

cc. INAC Internal Working Group

Attached: Appendix I: INAC's Comments on the Canadian Zinc Corporation Prairie Creek Mine Environmental Assessment Draft Terms of Reference and Work Plan

**Appendix I:  
INAC Comments on the Draft Work Plan and Draft Terms of Reference  
for the Environmental Assessment of  
Canadian Zinc Corporation's Prairie Creek Mine  
EA 0809-002**

**Comments applicable to the Draft Work Plan**

- INAC supports the technical sessions as useful opportunities for all parties to have open discussions with the developer.
- INAC strongly supports the use of face-to-face technical meetings in lieu of, or in addition to, a written Information Request process.

**Comments applicable to the Draft Terms of Reference**

**General**

- There are several references to 'significant adverse impacts' (3.1.2 p. 11), 'reasonable impact' (2.2.1 p.9), 'No potentially significant adverse impacts fully or partially attributable to the Prairie Creek Mine are predicted to occur.' (2.2.2 p.10). Such terms should be defined, as the subjective nature of these terms is open to interpretation, which may lead to issues further in the process. An attempt should be made to more accurately define these terms.
- In several sections the terms of reference request the developer for risk assessments of particular issues and items, however there is little guidance regarding the scope of such exercises which can have a wide range. Guidance for Canadian Zinc regarding what is meant by risk assessment, including examples and templates might be helpful. One reference for the developer to use would be Appendix 4 of Parks Canada's scoping submission regarding this project.

**Section 2.1 Scope of Development**

- Closure and Reclamation – Regarding the removal of all structures, INAC recommends that the developer work with communities and stakeholders to determine closure objectives. Closure and reclamation objectives should follow the principals set out in the "Mine Site Reclamation Policy for the Northwest Territories" and the "Mine Site Reclamation Guidelines for the NWT". Regarding removal of structures these documents state:
  - From the Mine Site Reclamation Policy for the NWT: The removal or stabilization of any structures and workings remaining at the site after closure to ensure that, over time, they remain physically sound and no threat to public safety.
  - From the Mine Site Reclamation Guidelines for the NWT: Any mine component that would remain after mine closure should be constructed or modified at closure to be physically stable such that it does not erode, subside, or move from its intended location under natural extreme events or disruptive forces to which it may be subjected after closure. Mine site

reclamation will not be successful into the long-term unless all physical structures are designed such that they do not pose a hazard to humans, wildlife, or environment health and safety. (p.8)

### **Section 2.2.1 Geographic Scope**

- 4) The geographic scope should include the watershed downstream of the mine and all mine workings. This will allow for the capture and analysis of groundwater flows which may not necessarily follow the Prairie Creek surface drainage patterns. This information would be best represented in a map. Further, at a smaller scale, a map should be presented which includes the detailed drainage patterns for both surface water and groundwater for the mine site and mine workings in relation to the location of the mine components. This type of map will also help determine future locations of water sampling stations. (p. 9)

### **Section 3.1 Considerations**

- The table of contents does not list the individual sections that are listed in the text under section 3.1. I.e. section 3.1.1 Incorporation of Historic Information, section 3.1.2 Issues Prioritization, etc. (p.11)

### **Section 3.1.2 Issues Prioritization**

- This section underlines the importance of water quality and states that this topic should be a stand alone document which includes data and analysis of the Key Line of Inquiry. INAC requests that in addition to the provision of the data, that Canadian Zinc provide a CD to the Board containing any reference documents which could be made available to reviewers upon request. (p.11)

### **Section 3.2.4 Description of the Existing Environment**

- 15 - INAC recommends that the 2006 Draft Final Dehcho Interim Land Use Plan, which can be found at [www.dehcholands.org](http://www.dehcholands.org), be used when fulfilling this requirement. With regards to how this plan treats the study area, the mine and road are existing uses of the land and are therefore excluded from the plan. (p. 16)
- 16 – 18) INAC agrees that the developer has responsibility for mitigating negative impacts caused by or contributed to by the development, and that such mitigation efforts may be part of larger initiatives with other parties. The TOR should clarify the relationship between the developer's responsibilities and government's social and economic mandates with respect to the Prairie Creek development. A number of parties including, but not limited to, the federal, territorial and local governments, Aboriginal groups and other stakeholders, have mandates and responsibilities in these areas and may be better placed to provide this information to the Review Board. (p. 16)

### **Section 3.2.6 Public Engagement (p. 18)**

- Section 35 Crown consultation is an obligation of the Crown to reconcile Aboriginal rights with the exercise of Crown sovereignty. It should be noted that ultimately, Aboriginal Crown consultation will be assessed taking a number of factors/activities into account:
  - INAC takes into account procedural aspects of consultation that occur through the Environmental Assessment process. The Environmental

Assessment process allows Aboriginal groups to raise concerns and also for the Crown and all parties to get a clearer idea of what potential adverse impacts a project may have on established or potential Aboriginal or treaty rights and propose suggestions as to how such effects may be mitigated

- INAC will also take into account engagement activities undertaken by Canadian Zinc with the potentially affected Aboriginal groups
- Finally, with respect to the community closest to the proposed Prairie Creek Mine, INAC has been working closely with the Nahanni Butte Dene Band (NBDB) to undertake Crown consultation over the last four years. This work has included meeting with the community, facilitating meetings with NBDB and Canadian Zinc, as well as funding a traditional knowledge study that would allow the NBDB to participate in this EA process in a more meaningful manner. This will enable NBDB to provide Canadian Zinc with more information regarding its concerns, so that potential mitigation measures may be discussed in a more specific and detailed manner. It should be noted that this traditional knowledge study is the proprietary information of the Nahanni Butte Dene Band and is a confidential document. Information from the study may only be shared with permission from the NBDB.

### **Section 3.3 Impacts on the Biophysical Environment**

- Should permafrost conditions exist, *Section 3.3 Impacts on the Biophysical Environment* should contain a section to discuss the impact, likelihood, as well as any mitigation measures that will be used to mitigate the issues of potential permafrost degradation. Particular attention should be given to the area upslope of the two-cell water storage pond and the area surrounding the waste rock pile. (p. 19)

#### **Section 3.3.2 Key Line of Inquiry: Mine Site Water Quality**

- Item 4) should also list the main parameters expected to be present in the effluent based on current mine water quality, as well as discuss the potential for increase levels of ammonia and BTEX associated with blasting and during full mine operations. (p. 21)
- The paragraph between items 4) and 5) speaks about dilution effects. However it appears that it refers more appropriately to a plume delineation study to determine the dispersion once effluent has been released. INAC feels that any effluent quality criteria should be met at the last point of control and should not necessarily include a dilution factor. (p. 21)
- Item 6) briefly discusses site specific sensitivities in the area. National standards are based on southern aquatic systems which may not accurately portray the northern environment. Considering the quality of the natural environment in the area, INAC is of the opinion that in order to maintain the integrity of the aquatic environment specific to the Prairie Creek mine site, site specific effluent quality criteria are the most appropriate. (p. 22)
- Item 7), the list of water collection systems should include the proposed collection system surrounding the waste rock pile. (p. 22)

- The following comments attached to INAC's original scoping submission (October 14, 2008) have not been entirely addressed in the current TOR.
  - The potential for leachate generation and contaminant transport (pathways and receptors) from the waste rock pile needs to be assessed.
  - Leachate from the temporary DMS rock storage should be better defined.
  - Effect of proposed reagent chemicals on treatment processes and final effluent quality needs to be assessed (eg., organics, nutrients, salts).
  - Completion of a preliminary Mine Closure and Reclamation Plan should be included as part of the Terms of Reference for the Environmental Assessment, as outlined in the Mine Site Reclamation Guidelines (INAC, January 2007). (p.20-22)

#### **Section 3.3.10 Biophysical Environmental Monitoring and Management Plans**

- INAC would like to request that Canadian Zinc provide details of contingency and monitoring plans should a short-term shut down of operations be required. (p.29)

#### **Section 3.4.1 Employment and Business Opportunities**

- INAC agrees that the developer has responsibility for mitigating negative impacts caused by or contributed to by the development, and that such mitigation efforts may be part of larger initiatives with other parties. The TOR should clarify the relationship between the developer's responsibilities and government's social and economic mandates with respect to the Prairie Creek development. A number of parties including, but not limited to, the federal, territorial and local governments, Aboriginal groups and other stakeholders, have mandates and responsibilities in these areas and may be better placed to provide this information to the Review Board. (p.30)

#### **Section 3.4.2 Distribution of Beneficial and Adverse Socio-economic Impacts**

- INAC agrees that the developer has responsibility for mitigating negative impacts caused by or contributed to by the development, and that such mitigation efforts may be part of larger initiatives with other parties. The TOR should clarify the relationship between the developer's responsibilities and government's social and economic mandates with respect to the Prairie Creek development. A number of parties including, but not limited to, the federal, territorial and local governments, Aboriginal groups and other stakeholders, have mandates and responsibilities in these areas and may be better placed to provide this information to the Review Board. (p.31)

#### **Section 3.4.3 Social Impacts**

- INAC agrees that the developer has responsibility for mitigating negative impacts caused by or contributed to by the development, and that such mitigation efforts may be part of larger initiatives with other parties. The TOR should clarify the relationship between the developer's responsibilities and government's social and economic mandates with respect to the Prairie Creek development. A number of parties including, but not limited to, the federal, territorial and local governments, Aboriginal groups and other stakeholders, have mandates and responsibilities in these areas and may be better placed to provide this information to the Review Board. (p.32)

### **3.5 Closure and Reclamation**

- Developer should work with community and other stakeholders to determine closure objectives. (p.35)
- Also, the developer should refer to the Mine Site Reclamation Policy for the NWT, which is on MVEIRB's registry for this file. (p.35)
- The EA phase may be too soon in the process for reclamation costing activities. This will happen during the regulatory phase. The EA needs to be completed in order to have a final mine design to base a reclamation costing estimate on. (p.36)

### **3.6 Cumulative Effects**

- Please clarify what is meant by the Selwyn Howard's Pass Development complex. (p.37)