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June 12, 2009

Alistair MacDonald
Environmental Assessment Officer
Mackenzie Valley Environmental Impact Review Board (Review Board)
By Email: amacdonald@reviewboard.ca

**Re: Comments on Draft Terms of Reference and Work Plan for the
Environmental Assessment (EA) of Canadian Zinc Corporation's
Prairie Creek Mine (EA0809-002)**

Dear Mr. MacDonald:

On behalf of the Northwest Territories Chapter of the Canadian Parks and Wilderness Society (CPAWS-NWT) and the larger CPAWS National Organization, please accept this submission on the aforementioned subject. Overall, CPAWS is pleased with the content of the Draft Terms of Reference (ToR) as it accurately reflects the issues that arose from both the scoping phase and the Request for Ruling.

This submission is organized into the following sections: A. Project Definition; B. Water Quality Impacts; C. Wildlife and Wildlife Habitat Impacts; D. Closure/Reclamation and Temporary Closure/Care and Maintenance; E. Other comments; and F. Recommendation for an Environmental Impact Review.

A. Project Definition

ToR Page 12, section 3.1.3 and section 3.1.4

Both sections reference Section 3.2. CPAWS recommends that **Section 3.3** Impacts on the Biophysical Environment also be referenced in these sections because "Incorporation of Traditional Knowledge" and "Assessing the Impacts of the Environment on the Development" are relevant to not only section 3.2

“General Information Requirements” but also to section 3.3 “Impacts on the Biophysical Environment”.¹

ToR Page 13, section 3.2.2 item 1)

CPAWS recommends that the Review Board require the Developer to also describe its corporate history from an **international** context as well as in Canada and the NWT. For example, recently the Developer has secured interests in the Tuvatu Gold Project in Fiji.²

ToR Page 13, section 3.2.2

CPAWS recommends that the Review Board also require the Developer to describe its **long-term interests** in the bringing the Prairie Creek Mine into production and operating it. While the Developer has undertaken exploration and pilot plant activities, it does not appear to have direct experience in operating a fully functioning mine. It would be beneficial for all to know such things as whether outside capital will be required to bring the proposed mine into production, and whether the Developer has intentions to sell the project to another company at some time in the future.

ToR Page 13, section 3.2.2

In addition to items c and d, CPAWS strongly recommends that the Review Board also require the Developer to **provide a status update on the ‘suggestions’ made by the Review Board during prior EAs**. For example, in the spring of 2006, CPAWS reviewed the status of the recommendations suggestions made by the Review Board in the Phase I and Phase II EAs and found that an extremely limited number of the suggestions were implemented or even considered. As such, the same issues surfaced in subsequent EAs. By requiring the Developer to provide this information as part of the DAR, it will likely assist in streamlining the focus of outstanding concerns (such as unimplemented ‘suggestions’).

ToR Page 17. General Items 3) and 4)

The Developer intends to use several existing infrastructure components. In addition to predicting any changes from its current usage to that during full scale operations, CPAWS recommends that the Developer be required to undertake and report on **additional studies, inspections and/or certifications** to ensure existing infrastructure components are appropriately designed, maintained and/or modified for full scale operations.

¹ For example, section 3.1.4 mentions climate change impacts and seismic events, which could have significant relevance when considering impacts on the biophysical environment.

² As indicated in Canadian Zinc Corporation’s May 19, 2009 press release located at www.canadianzinc.com/docs/NR51909.pdf

As described in our previous submissions³, a number of previous assessments, plans and reports on existing components were developed premised on much smaller projects. Some explicitly stated that new assessments would be required for full scale mine operations or if certain changes were made, and previous comments from other parties noted that some analyses were based on insufficient data or did not incorporate consideration of climate change. As an example, the *Geotechnical Assessment of the Polishing Pond* was premised on the polishing pond only being used for limited exploration and pilot plant activities.

CPAWS recommends that the Developer be required to **re-assess existing infrastructure components as necessary** for use during full-scale mine operations, clearly **explain which of these past assessments, plans and reports it is still relying on** and why they are sufficient for full-scale mine operations, **and address previous comments** on those past assessments, plans and reports it is relying on. This comment applies throughout the ToR, such as in relation to the polishing pond and water storage pond (ToR page 22 item 7), risk assessments (ToR page 22 item 8), etc.

ToR Page 17. General Items 5)

The Department of Justice in its January 14, 2009 submission on page 3 agreed with previous CPAWS and Dehcho First Nations (DFN) submissions that the Developer's current LUP #MV2003F0028 "does not permit CZN to operate and use the winter road in connection with the proposed mining operations. Therefore, if the Developer intends to operate and use the winter road in connection with the proposed mining operations then a new permit application will be required from the Developer in the future." To date, the Developer has not applied for a new permit to use the winter road during full scale mine operations, and presumably is still of the opinion that a new permit is not required. This disagreement over the need for a new permit needs to be resolved. In respect to the ToR, CPAWS recommends that the Developer be required to provide a **status summary** including a **schedule of when the Developer plans to apply for permits, licenses, and other authorizations**.

ToR Page 17 General Items 5) and Page 18 Specific Items 21-24

As noted in section 2 on page 6 of the ToR, the Review Board identified that the Developer's *Project Description Reports* "do not thoroughly describe the annual construction and use of the winter road which is part of the scope of development, as well as the description of its environmental context." CPAWS is pleased to see that the Review Board has requested the Developer to better describe the planned construction and use of the winter road.

The Developer has not mentioned the potential for an all-weather road application in the *Project Description*. Should the Developer subsequently apply

³ See pages 12-15 of Ecojustice's January 14, 2009 submission and pages 5-7 of Ecojustice's January 19, 2009 submission, both made on behalf of CPAWS and Dehcho First Nations (DFN).

for an all-weather road, CPAWS would consider it subject to Part 5 of the MVRMA.

B. Water Quality Impacts

ToR Page 18 item 16)

CPAWS recommends that the phrase “to come out of the mine” be replaced by “to come **from the mine and other components on the mine site or exploration areas**”, to give a better idea of the total volume of potentially contaminated water that will be produced.

ToR Page 18 item 16)

CPAWS recommends that after “released into Harrison Creek”. the following be added: “**and all water courses within the EA Study Area**”, to ensure that all water released to the natural environment is considered (in case some does not go to Harrison Creek).

ToR Pages 20-22 3.2.2

Given that water quality impacts of the Prairie Creek Mine on the Prairie Creek Watershed is the key line of inquiry, CPAWS recommends that this section also require a **flood analysis and assessment of the stability of the flood protection works**. A *Probable Flood Profile Report* (Hayco, 2005) was accepted by the Mackenzie Valley Land and Water Board (MVLWB) as a requirement of MV2001L2-003 for exploration activities only.⁴ A flood analysis was unable to be completed at that time as limited data was available.

ToR Page 22 item 8)

CPAWS recommends that the **potential of earthquake hazards** be explicitly mentioned here given that earthquakes have occurred in the Nahanni region in the 1980s. As noted in CPAWS’ October 20, 2008 submission, a recent review of seismic hazard in northwestern Canada concluded that the earthquake hazard is high.⁵

C. Wildlife and Wildlife Habitat Impacts

ToR Page 15 item 8)

CPAWS recommends that **woodland caribou** also be listed as a key harvested species in addition to moose.

⁴ See the January 14, 2009 submission by Ecojustice on behalf of CPAWS and DFN at pages 12-13.

⁵ Hyndman, R.D., Cassidy, J.F., Adams, J., Rogers, G.C., and S. Mazzotti. Earthquakes and Seismic Hazard in the Yukon, Beaufort and Mackenzie. CSEG Recorder, Geological Survey of Canada. May, 2005.

ToR Page 15 item 9)

The **Northwest Territories Species at Risk Act** (NWT SARA) has had its third and final reading in the NWT Legislature. CPAWS recommends that this section therefore also include a reference to the pending NWT SARA.

ToR Section 3.3.10 Page 30 item 2b

As noted above, past assessments, plans and reports were developed in a different context. For example, as described on page 15 of Ecojustice's January 14, 2009 submission made on behalf of CPAWS and DFN, the *Wildlife Survey*, *Wildlife Management Plan* and *Flight Impact Management Plan* were developed, considered and approved in the context of Phase III drilling operations. Given existing wildlife and wildlife habitat data limitations, CPAWS feels that these existing surveys and management plans will need major revisions following adequate field studies. CPAWS recommends that the Developer be required to provide information on how **new wildlife and wildlife habitat information** (in addition to changing circumstances or advances in best practices) are incorporated into new or revised plans. Of particular concern is the current lack of spatial information on specific wildlife habitat features (such as existing and potential salt licks, lambing areas, migration corridors, rare plant locations, etc.) throughout the EA Study Area.

Work Plan Page 11. Table 2

It has been extremely challenging to evaluate potential impacts to wildlife and wildlife habitat in CZN's previous EAs as the Developer has failed to invest in allocating resources and time to properly document wildlife information. As noted at page 7 of the Ecojustice submission dated January 19, 2009 on behalf of CPAWS and DFN, the territorial government in a March 21, 2007 letter noted "ENR (Environment and Natural Resources) strongly urges CZN to commence baseline wildlife studies along the road corridor and other project areas to support future development and activities at the site."⁶ Also in 2007, in its reasons for issuing MV2003F0028, the MVLWB stated, "The (MVLWB) Board notes the lack of specific wildlife habitat information that is currently available and due to this lack of information is unable to set specific terms and conditions for protection of specific wildlife habitats."⁷

Based on these previous comments concerning the inadequacy of wildlife and wildlife habitat information as well as challenges in CZN previous EAs, CPAWS is concerned that allocating only one summer's field season (in 2009) in the draft Work Plan is unlikely to be adequate for planning and undertaking the new studies necessary to establish current conditions. CPAWS recommends that the Review Board amend the draft Work Plan timeline so that it allows for **at least two field seasons (2009 and 2010) to undertake the necessary field studies and thus collect the necessary information**. Wildlife and wildlife habitat

⁶ R. P. Bailey, Deputy Minister, Environment and Natural Resources. Letter to MVLWB Re: Land Use Permit MV2003F0028 (Winter Road to Prairie Creek Mine Site. March 21, 2007.

⁷ MVLWB, Reasons for Decision for issuing MV2003F0028. April 20, 2007 at page 5.

baseline (or current conditions) information for several other NWT mining projects⁸ have typically required at least two and upwards of three or four field seasons to collect and have been done anticipating the EA process. In these cases, comprehensive baseline data has helped to develop the Terms of Reference and Work Plan. Mitigation strategies and planning for the protection of wildlife cannot be adequately completed prior to the completion of baseline data collection. This should follow the recommended two field seasons and be reflected in the Work Plan.

D. Temporary Closure, Care and Maintenance, Bankruptcy and Closure/Reclamation Planning

ToR Pages 35-36 section 3.5, and Page 31. 3.4.2 1 a and b

CPAWS recommends that the Review Board require in section 3.4.2 the Developer to provide a **range of scenarios for qualitative and quantitative economic estimates** based on a variety of commodity prices. CPAWS is concerned with the “peak and trough” nature of commodity prices and the susceptibility of the potential Prairie Creek Mine. Should metal pricing enter a trough (as it did when the Hunt brothers went into bankruptcy in the 1980s), it is uncertain whether the Developer’s commitments and economic conditions will ensure that the proper funds and personnel will be in place during a temporary closure, a care and maintenance phase, or a bankruptcy.

CPAWS therefore also recommends that the Developer be required in section 3.5 to describe what is required for the mine site, winter road and surrounding areas to be put in a safe state in such an eventuality and what progressive reclamation activities will continue during such a phase. Given such an eventuality could occur sooner rather than later, CPAWS recommends this not be a ‘conceptual’ Closure and Reclamation Plan, but rather **a concrete plan of action including cost estimates and an explanation of how the availability of funds to cover such costs will be ensured**. CPAWS feels it is imperative to identify an appropriate closure and reclamation security bond amount upfront, as part of the EA process rather than at a later stage, such as during the regulatory process.

CPAWS also recommends that the **economic costs (capital, annual operating and post-operating) for implementing the Closure and Reclamation Plan** be included in sections 3.4.2. 1.a and b.

⁸ For example, components of the baseline environmental data collection for the Fortune Minerals- Nico project took up to 4 years of field work. Potential impacts to the environment and issues relevant to the development were identified by review of previous applications and developments such as Snap Lake and through interaction with Federal and Territorial regulators. This was done ahead of the EA with the intention that it could support development of the Terms of Reference. See “Environmental Surveys at Fortune Minerals Limited Nico Deposit 1998-2006” Attachment 3 – Screening Level Environmental Impact Assessment.

E. Other Comments

ToR Page 15 item 9 first bullet.

For consistency, CPAWS recommends that “project area” be replaced with **EA Study Area**.

ToR Page 20 top bullet under 3.3.1

CPAWS recommends that a definition of **adaptive management** be included that recognizes ‘adaptive management’ as a carefully planned management approach with predicted outcomes plus a carefully planned monitoring regime to determine if those outcomes come about, so as to avoid ‘adaptive management’ being misinterpreted as simply ‘trial and error’ or ‘learn as you go’ management as it often is.⁹

ToR Page 21 item 4.c

CPAWS recommends that **bioaccumulation** be explicitly mentioned as it can be an important factor in increasing contaminant concentrations in organisms.

F. Recommendation for an Environmental Impact Review (EIR)

As we have already suggested in previous submissions, CPAWS believes an EIR is appropriate for this proposed project because of the level of public concern already expressed, because this is considered a “major mining project”, and because of the likely environmental impacts already noted. As per the *De Beers Canada Inc. v. Mackenzie Valley Environmental Impact Review Board*, 28 C.E.L.R. (3d) 84, 2007 NWTSC 24 decision, which upheld the decision of Review Board to send the De Beers mining project to EIR shortly after scoping, CPAWS recommends the Review Board consider making a similar decision for the proposed Prairie Creek Mine.

CPAWS would like to thank the Review Board for this opportunity to comment on the ToR and Work Plan. Should you have any questions or require additional information, please do not hesitate to contact me at jennifer@cpaws.org.

Sincerely,

⁹ For an overview of definitions and misconceptions of adaptive management, see “Adaptive Management of Prairie Grouse: How do we get there”, by C. Aldridge et al., Wildlife Society Bulletin 32(1), 2004, at pages 93-95, available at [www.nrel.colostate.edu/~aldrIDGE/_documents/Aldridge_et_al-AM_of_Prairie_Grouse_WSB_\(32\)92-103.pdf](http://www.nrel.colostate.edu/~aldrIDGE/_documents/Aldridge_et_al-AM_of_Prairie_Grouse_WSB_(32)92-103.pdf).

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