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**RE:** Canadian Zinc Corporation Land Use Permit Application MV2000C0030

Dear Mr. Azzolini,

Please accept this letter as comments of the Northwest Territories Chapter of the Canadian Parks and Wilderness Society (CPAWS-NWT) on the permit application listed above. CPAWS is a national non-profit conservation organization, dedicated to protecting Canada's wilderness.

**Context**

The Prairie Creek mine site is located in an area of globally significant wilderness values and natural features, which are recognized and protected by several national and international conservation designations. It is because of the wilderness values and designations of this area that CPAWS is opposing this land use permit application. We believe mining activity from Prairie Creek (and other mining initiatives which may occur in the area) will put these values at risk, and therefore is not an appropriate land use in the area.

The conservation designations in the area are the Nahanni National Park Reserve (NNPR), which is also a UNESCO World Heritage Site; the South Nahanni river within the Park Reserve is a Canadian Heritage River, and the entire South Nahanni watershed is a candidate protected area, as it has been identified for protection by the Deh Cho First Nations.

National Park Reserve

National Parks are widely understood and acknowledged as places meant to protect Canada's natural heritage. The recently revised National Parks Act declares that the "maintenance of ecological integrity through the protection of natural resources shall be the first priority of the Minister in the consideration of park zoning and visitor use" (section 8(2)). This purpose of National Parks is echoed by the report of the Panel on the Ecological Integrity of Canada's National Parks, which stated that "conserving, restoring and maintaining ecological integrity is the core of Parks Canada's mandate" (page 1-2).

The South Nahanni Watershed (SNW) is a large wild area, approximately 33,000 km<sup>2</sup> in size, which contains the Nahanni National Park Reserve (NNPR) within its boundaries. In the case of NNPR, the area of immediate area of concern when protecting the ecological integrity of the Park Reserve, as identified by Parks Canada, is the entire South Nahanni Watershed and a small portion of the Liard River basin adjacent to the confluence with the South Nahanni River. Parks Canada has named this area the Greater Nahanni Ecosystem. A submission by officials from the Nahanni National Park Reserve clearly state the role of the watershed in protecting the ecological integrity of the NNPR:

Among the most obvious examples of the importance of watershed protection to the ecological integrity of Nahanni National Park Reserve are water quality and woodland caribou. As the park covers only one-seventh of the South Nahanni watershed, the majority of the waters flowing through the park originate outside its borders, and any upstream activities do have the potential to impact water quality in the park" (Ecological Integrity [Buffer Zones], page 4).

Obviously then, the NNPR will be impacted by what occurs in the Greater Nahanni Ecosystem, whether or not occurs within the current Park Reserve boundaries.

#### World Heritage Site

The NNPR is also internationally recognized as a United Nations Educational, Scientific and Cultural Organization natural World Heritage Site for its globally significant natural features and wilderness values on par with other Sites such as the Great Barrier Reef, the Galapagos Islands and the Grand Canyon. Nahanni was designated under two different criteria; as "an outstanding example representing significant ongoing ecological processes or biological evolution" and for its "superlative natural phenomena, formations or features or areas of outstanding natural beauty" (<http://www.unesco.org/whc/opgutoc.htm#debut>).

In the United States, Yellowstone National Park's World Heritage Site designation was recently put on the 'in danger' list because of a proposed gold mine immediately upstream from the park boundary (Parks – The international journal for protected area managers, Vol 7, No. 2, June 1997, pages 27-31).

#### Canadian Heritage River

A Canadian Heritage River designation is meant to ensure that rivers of outstanding natural, historic or recreational value are recognized and managed in a manner which conserves their distinctive values, while allowing for public use and enjoyment of the rivers. The South Nahanni river was designated to recognize its natural and recreational resources, as the river "provides a wilderness river experience which is unique in Canada, in a setting of world-class, natural beauty" (<http://voyageur.carleton.ca/chrs/nahanni1.html>).

#### Candidate Protected Area

Another aspect of the unique context of this application is the Deh Cho First Nations stated intention to protect the South Nahanni Watershed through the Deh Cho Process. Negotiations for protection, through the issuance of an interim land withdrawal, are scheduled to begin upon the imminent signing of the Interim Measures Agreement.

In order to respect this negotiation process and protect the ecological integrity of this proposed protected area, we submit that while negotiations are ongoing, no further land use permits be granted in the South Nahanni Watershed without the written consent of the Deh Cho First Nations.

Furthermore, as a candidate protected area, the SNW and Nahanni Karst (a proposed expansion area for the Park Reserve) are deserving of interim protection. Use of interim protection is supported by the Whitehorse Mining Initiative Land Access Issue Group which recommends "Governments should consider what interim protection management measures for protected area

candidate sites, if any, would be appropriate, to ensure that these sites are not compromised by development” (Page 20, Land Access Issue Group Final Report).

It is also recognized that interim protection measures are not limited to land withdrawals, they can be used within the land use permitting process in order to protect the cultural and ecological values of an area. The Panel on the Ecological Integrity of Canada’s National Parks recommends that Parks Canada:

reach agreement with the provinces, territories and other federal departments to use their legislative powers to withdraw candidate national park sites from development as early as possible to preserve their ecological integrity during the planning process. For example, with respect to the boreal forest, ***urge the responsible governments not to issue timber or other development permits in candidate park sites on federal lands*** (as recommended by the Senate Subcommittee on the Boreal Forest in *Competing Realities: The Boreal Forest at Risk*, 1999) (Unimpaired for Future Generations?, page 8-9) emphasis added.

### Context Summary

The importance of protecting the world class wilderness values of the watershed and NNPR, as well as the status of the South Nahanni Watershed as a proposed protected area to be negotiated through the Deh Cho Process, are the basis of CPAWS-NWT arguments that the land use permit application for the mineral exploration drilling program be denied, and that the fuel cache be removed in a safe, timely and environmentally responsible manner, using a method other than the re-establishment of the access road.

It is within this context of globally significant ecological values and protective designations which an assessment of this application must be based. Section 117 (2) (e) allows the Board to take the unique natural and political context in which this application is set into consideration when making a recommendation to the Minister.

### **Environmental Impacts of Mining Activity**

The company claims on page 18 of the Fuel Cache Retrieval EA report that developing and operating the Prairie Creek mine “will not have significant adverse environmental effects on the ecological integrity of the South Nahanni River or the Nahanni National Park Reserve” and that operating the mine and protecting the watershed and Park Reserve are compatible land uses. They have provided no supporting evidence to make such a claim. On the contrary, ample evidence exists that mining activity generally, and in the South Nahanni watershed specifically, has the potential to result in significant environmental impacts. Outlined below is evidence from a water quality report, several literature reviews of the effects of roads on ecological integrity, and other reports which identify and document the various adverse environmental impacts which either have or are likely to result from mining activity in the SNW, contradict the company’s assertion.

### Water Quality

The potential for mining activity to degrade water quality in the SNW led to the implementation of a water quality monitoring study in the NNPR. The resulting report ‘*Protecting the Waters of Nahanni National Park Reserve, N.W.T.*’ by Environment Canada, Conservation and Protection, and Canadian Parks Service, December 1991 states “the cumulative impact of the mining activities [in the SNW] could be considerable” (page 9), and that mining activity has “*the*

*potential to adversely affect the water quality of the basin and disrupt the life processes which depend on it*" (page 19, emphasis added), and recommended that "water quality monitoring be significantly expanded if exploration and development activities in the basin proceed" (page 51).

We therefore submit that the Board examine and implement the recommendations in the 1991 water quality report prior to any permitting of exploration or development activity, and subject permits to relevant conditions contained in the report in order to maintain the present high level of water quality in the SNW. The best way to maintain that water quality is not to permit activities which are widely acknowledged to put it at risk.

### Impact of Roads

Literature reviews of studies assessing the ecological effects of roads have found that roads have multiple, long term cumulative environmental impacts. In 'The Ecological Effects of Roads, conservation biologist Reed Noss states:

Nothing is worse for sensitive wildlife than a road. Over the last few decades, studies in a variety of terrestrial and aquatic ecosystems have demonstrated that many of the most pervasive threats to biological diversity - habitat destruction and fragmentation, edge effects, exotic species invasions, pollution, and overhunting - are aggravated by roads. Roads have been implicated as mortality sinks for animals ranging from snakes to wolves, as displacement factors affecting animal distribution and movement patterns, as population fragmenting factors, as sources of sediments that clog streams and destroy fisheries, as sources of deleterious edge effects, and as access corridors that encourage development, logging, and poaching of rare plants and animals.

***Road-building in National Forests and other public lands threatens the existence of de facto wilderness and species that depend on wilderness*** (emphasis added)

(<http://home.pacbell.net/mjvande/roads1.htm>).

In their article published in the peer reviewed journal *Conservation Biology*, 'Review of the Ecological Effects of Roads' Stephen Trombulak and Christopher Frissell present several relevant findings:

We reviewed the scientific literature on the ecological effects of roads and found support for the general conclusions that they are associated with negative effects on biotic integrity in both terrestrial and aquatic ecosystems.

Roads exert ecological effects on terrestrial and aquatic ecosystems in seven general ways: (1) direct mortality from road construction, (2) direct mortality from collisions with vehicles (i.e., roadkill), (3) modification of animal behavior, (4) alteration of the physical environment, (5) alteration of the chemical environment, (6) spread of exotic species, and (7) increased intensity or spatial extent of human use and alteration of habitats.

Recognition of the tremendous diversity of causal mechanisms by which roads can affect aquatic and terrestrial biota should help put in perspective the disproportionately high value of remaining roadless or near-roadless areas for conservation of biodiversity and other values of natural ecosystems.

***We caution that it appears highly unlikely that many of the ecological effects of roads can be successfully mitigated, whether through improvements in design, construction, or remediation. This reality points to the central importance of maintaining the few remaining roadless and near-roadless portions of the landscape in the natural state.*** Watersheds presently encompassing few roads, for example, are ideal candidates for ecological restoration, given that with the obliteration or decommissioning of a few road segments, a large area of natural habitat can be secured for a wide variety of species (emphasis added). (*Conservation Biology*, Vol. 14, February 2000, <http://www.pacrivers.org/roadless/roadsreview.html>),

<http://conbio.net/scb/Publications/ConsBio/Contents/2-00toc.cfm>).

An extensive literature review on the impacts of roads by the Natural Resources Defense Council in the United States, 'End of the Road - The Adverse Ecological Impacts of Roads and Logging: A Compilation of Independently Reviewed Research' contains similar findings and conclusions (<http://www.nrdc.org/land/forests/roads/eotrinx.asp>).

#### Threats to Ecological Integrity

The July 2000 NNPR Fact Sheet identifies mining activity as the "single greatest threat" to the Park Reserve and watershed (page 9). The fact sheet lists heavy metals, solid waste and road access as sources of potential direct and indirect impacts. Additionally, the report of the Panel on the Ecological Integrity of Canada's National Parks lists mining and transportation adjacent to National Parks as ecological stresses which significantly affect most parks (page 1-11).

A more detailed description of the negative impacts of mining is found in the report "Mining in Remote Areas" by the Environmental Mining Council of British Columbia (<http://www.emcbc.miningwatch.org/emcbc/index.htm>). The report describes impacts from exploration activity, including pollution from fluid spills and waste rock drainage, sedimentation from clearing vegetation for right of ways and test drilling sites; multiple impacts from the development and use of roads, and from other activities associated with mining. This report also addresses impacts on communities, health and safety issues, and environmental assessment concerns relating to mining activity. The overall message is that there are many serious environmental concerns associated with mining activity.

The information above illustrates the Canadian Zinc assertion that mining activity and ecological integrity can happily co-exist is strongly contradicted by existing evidence. Clearly then a recommendation by the Board to approve this application would be recommending that the Minister knowingly pursue two mutually incompatible courses of action simultaneously within the watershed; industrial development and environmental protection.

#### **Fuel Cache Removal**

CPAWS-NWT supports removal of the fuel cache from the Cat Camp. We recommend consideration also be given to removing of the Grainger fuel cache, since it evidently contains a similar amount of fuel and has been in place for the same number of years as the Cat camp fuel cache. Removal by air or winter road would safely remove the fuel without introducing the harmful cumulative effects of re-establishing the access road. Avoiding the re-establishment of the access road to essentially all-weather quality is paramount, in order to avoid the ecological effects outlined in the previous section above; the damage that could occur to the Karst landscape as described in the Parks Canada technical submission; and the cumulative impacts of leaving the road open after the fuel cache is retrieved. As others have pointed out, Canadian Zinc has asserted that "the sole purpose of this program is to mitigate a known potential environmental risk" (page 4), therefore it would stand to reason that the least environmentally intrusive method of removal be used. Using this measurement, removal by air is preferable to use of the winter road option, which is preferable to the road re-establishment option.

It is our understanding that fuel is frequently moved by air in the NWT, can be transported in a safe and timely manner, and that use of this option would result in the least environmental impact of the options available. Removing the fuel by air has several advantages. It is low impact, can be done at almost any time of year, and would not require any type of road, therefore avoiding potential impacts such as erosion and sedimentation of streams from road construction, as identified by RWED and Environment Canada.

In the EA report, the company discussion of the air removal alternative does not provide an option for removing the fuel from the Cat camp *to the mine site* by air, and provides no reasons as to why this would not be possible. Potentially they could remove the fuel by air and still make use of it at the mine site. The company also points out that air removal would not remove the other structures at the Cat camp. However, it is the leaky fuel cache which presents the most serious environmental risk and needs to be removed. As far as we are aware, the trailers and other materials provide no immediate risk. The proposal to re-establish the access road, and to keep it open indefinitely "in support of future operations" (page 29), has the potential to result in more harmful and cumulative impacts than does leaving the trailers at the Cat camp at this time.

The company's argument that the winter road option is not a safe or viable alternative is adequately contradicted by the RWED and NNPR technical reports. However, CPAWS is concerned with the state of the fuel cache. Since the delay in the EA process has removed the winter road option for this year, CPAWS would only support leaving the fuel cache where it is until winter 2002 if the results of the DIAND March 2, 2001 inspection can assure the integrity of the tanks. Otherwise, we strongly support the air removal method.

Another reason CPAWS does not support the access road re-establishment option is related to the permitting process. Once opened to remove the fuel cache, the company states in their EA report that this road will remain open. The company has also stated on its web site and in other documents that they intend to re-establish the entire access road to all weather standards, as it is essential to their plans to operate the mine. Permitting only a section of the access road, with a limited scope in the terms of reference as under the present application, would be splitting the assessment of the road into more than one sections without assessing the full cumulative impacts, which may occur as a result. The impacts of the entire road should be considered together at one time. This position is supported by concerns over permitting of the access road expressed in the DFO technical submission (pages 2-3).

### **Public Concern**

Over 60 letters opposing this application were received from the public when it was initially submitted to the Mackenzie Valley Land and Water Board. Further letters have been received by the Board, from both within and outside of the NWT, also opposing the application. These letters were partially a result of CPAWS-NWT attempting to publicize the application. Our Action Alert describes the context of this application and CPAWS-NWT concerns, as well as providing links to both the company's web site and the MVEIRB web page, in order that interested readers could find information and judge the merits of the application for themselves.

Submissions by members of the public to the Mackenzie Valley Land and Water Board in relation to this permit application illustrate the public support for protecting the South Nahanni watershed, and the amount of opposition to further development in the watershed, especially while negotiations concerning protection of the area are ongoing under the Deh Cho Process.

### **Cumulative Effects of Mining in the Watershed**

As is stated in the MVRMA, section 117 (2)(a), every environmental assessment shall include consideration of "...any cumulative impact that is likely to result from the development..." Canadian Zinc openly states that their intention is to bring the Prairie Creek mine into production, which clearly has the potential for long term significant cumulative impacts to the watershed and Park Reserve.

There are two mine sites and three other sites with high potential that CPAWS is aware of in the watershed. These are Copper Ridge Exploration's Howard Pass lead, zinc and silver placer mining project, the Union Carbide project at Lened Creek, the Mactung and Cantung tungsten mines owned by North American tungsten, and the Prairie Creek mine. With all of these potential projects existing in the same watershed, there is high potential for significant adverse and cumulative environmental impacts.

We therefore submit that a watershed scale environmental impact review in conjunction with CEAA as set out under section 130 (1) (c) of the MVRMA should be conducted if and when an application to begin operating any single mine in the SNW is received, in order to determine if mining, given its potential environmental risks, is an acceptable land use in the watershed.

Additionally, CPAWS takes the position that the access road to Prairie Creek mine is linked and interdependent to the operation of the mine itself, and that an application to re-establish the road would be tantamount to operating the mine and would therefore require a full environmental impact review.

### **Conclusion**

Due to the ecological context in which the proposed activities would occur, and the high potential for significant adverse cumulative environmental impacts from mining activity as described earlier in this letter, industrial development is inappropriate in the South Nahanni watershed and should be excluded.

Furthermore, we submit that the approval of new land use permits in the South Nahanni watershed would prejudice the Deh Cho Process negotiations regarding the watershed. Therefore no new permits should be granted without the consent of the Deh Cho First Nations.

Sincerely,

Greg Yeoman  
Conservation Director  
CPAWS-NWT