

August 15, 2008

Ms. Valerie Meeres  
Regulatory Officer  
Mackenzie Valley Land and Water Board  
7<sup>th</sup> Floor-4910 50<sup>th</sup> Avenue,  
Yellowknife, NT  
XIA 2P6

By email: [permits@mvlwb.com](mailto:permits@mvlwb.com)

**Re: Canadian Zinc Corporation Water License and Land Use Permit Applications for Prairie Creek Mine (MV2008L2-0002, MV2008D0014, MV2008T0012, MV2008T0013)**

Dear Ms. Meeres:

I am writing on behalf of the Canadian Parks and Wilderness Society (CPAWS) – both the national organization and the Northwest Territories Chapter (CPAWS-NWT). CPAWS is a national non-profit conservation organization dedicated to protecting Canada's wilderness. We have 13 Chapters across Canada plus a national office, including a Chapter in the NWT. CPAWS NWT Chapter has participated in regulatory and environmental assessment processes regarding the Prairie Creek exploration and mine proposal since 2000. CPAWS' nationwide organization has had an interest in protecting the Nahanni watershed since the early 1970s when we were involved in the original efforts to establish Nahanni National Park Reserve and World Heritage Site. More recently, we have been working in collaboration with the Dehcho First Nations and others to protect the entire South Nahanni Watershed in an expanded national park for close to a decade.

As we have expressed in previous regulatory and environmental assessment reviews related to the proposed Prairie Creek mine, CPAWS believes that the entire South Nahanni watershed should be protected from industrial development because of the globally significant natural and cultural values of the region, and we remain extremely concerned about the potential impacts of the proposed Prairie Creek mine on these values.

CPAWS fully supports sending Canadian Zinc's land use permit and water license applications **MV2008L2-0002, MV2008D0014, MV2008T0012, and MV2008T0013** to environmental assessment as per INAC's letter of August 8<sup>th</sup> referring the permit applications to the MVEIRB for environmental assessment on its behalf and on behalf of Nahanni Butte Dene Band. We would like to reiterate several points made by INAC in their referral letter and add several more for the record.

Please note that we had requested and were granted a one week extension to the August 8<sup>th</sup> deadline for comments on the preliminary screening of these permit applications.

Conservation values:

The Nahanni watershed is of global significance. The proposed Prairie Creek mine is located 32 km upstream from the Nahanni National Park Reserve and World Heritage Site, and flows into the South Nahanni River, which is designated a Canadian Heritage River. The Government of Canada has both national statutory requirements and international obligations to protect this region and ensure that the proposed mine (and any proposed activity) does not negatively impact on the national park and World Heritage Site downstream.

In addition, Parks Canada and the Dehcho First Nations are currently working to expand Nahanni National Park Reserve with the area of interest for the expansion identified as the Greater Nahanni Ecosystem (South Nahanni Watershed and Nahanni North karst). There are strong indications that the expanded park will encircle the proposed Prairie Creek mine site.

Under the Canada National Parks Act, Canada has a statutory requirement to prioritize the maintenance and restoration of ecological integrity of the Nahanni National Park Reserve.<sup>1</sup>

Nahanni National Park Reserve's status as a UNESCO World Heritage Site is also an important consideration. Canada has agreed to international law obligations under the *International Convention Concerning the Protection of the World Cultural and Natural Heritage*<sup>2</sup>.

As a signatory to the Convention, Canada has a responsibility to do all it can to protect the World Heritage on its territory on behalf of the world community. A key principle under this Convention is that World Heritage Sites are considered to belong to "*all the peoples of the world, irrespective of the territory on which they are located*"<sup>3</sup>. The Convention confers responsibility on the State Party (Canada) on whose territory a World Heritage Site is located, to do all it can to protect, conserve, present and transmit to future generations the world heritage within its territory.

In a 2006 decision specific to Nahanni National Park Reserve, the international World Heritage Committee expressed concern "that the various mining, mineral, oil and gas exploration activities around the property could have major adverse cumulative impacts on the integrity of the property"<sup>4</sup>

The proximity of the proposed Prairie Creek mine to the Nahanni National Park Reserve and World Heritage Site confers a special responsibility on Canada to apply the highest and most

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<sup>1</sup> [Canada National Parks Act, s.8 and 39](#)

<sup>2</sup> <http://whc.unesco.org/?cid=175>

<sup>3</sup> <http://whc.unesco.org/en/about/>

<sup>4</sup> 30<sup>th</sup> Session of the World Heritage Committee, Decision 30 COM 7B.22, 2006.

rigorous standards of protection, which we submit includes the most thorough review possible of the potential impacts of all proposed industrial activities.

Significant Alterations:

As noted in the INAC referral letter of August 8<sup>th</sup>, the current application by Canadian Zinc to operate the Prairie Creek mine includes a number of significant alterations when compared to what was permitted in 1980 and 1982. These alterations include, but are not limited to:

1. Tailings disposal methods (new paste backfill proposal, temporary storage of filtered tailings in water storage pond (former tailings facility));
2. Disposal of development and waste rock in engineered surface waste rock pile;
3. Use of the former tailings pond for water management and temporary storage of tailings;
4. Sewage treatment and power plant upgrades;
5. Concentrate storage at newly constructed transfer facilities along the winter road allowance;
6. Change in concentrates produced
7. Increased size and different type of ore reserves (stratabound massive sulphides in addition to vein type mineralization);
8. significantly longer proposed life span of mine (approximately 14 years as opposed to approximately 6)<sup>5</sup>
9. Increased amount of capital investment required to open and operate
10. Evidence of contamination of concentrates by “impurities” (mercury, antimony and arsenic) as identified in Cdn Zinc’s 2001 Scoping Study<sup>6</sup>, but not considered in the original environmental evaluation report.

Since the 1980s the body of knowledge relevant to assessing the proposed project and its potential impacts, as well as the legal and policy framework, have changed substantially. In addition, new risks have emerged, like climate change and its current and forecasted impacts on permafrost and weather patterns. An up-to-date environmental assessment of the entire project is necessary to ensure that current knowledge and science is applied in assessing the risks of this project.

The Applicant submits that the proposed alterations to the project are improvements that will be environmentally beneficial. CPAWS believes this is an oversimplification, and that the Applicant has not provided evidence to support this assertion in their submission.

For example, the Applicant claims that a paste backfill tailing and waste rock disposal system will be environmentally beneficial in that it will restrict the potential for the ingress of water. Paste backfill is a relatively new technology and there is a great deal of uncertainty about the effectiveness of this approach in mitigating impacts on water quality. For example, a Natural

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<sup>5</sup> Environmental Evaluation for Cadillac Explorations Ltd. Prairie Creek Project, NWT, File No. 1561, October 1980, Ker Preistman and Associates

<sup>6</sup> Canadian Zinc Corporation. 2001. Prairie Creek Mine, Northwest Territories, Scoping Study, p. 70.

Resources Canada review of the influence of paste backfill on water quality highlights that “*little information on the influence of paste backfill on mine water quality appears to have been developed*”<sup>7</sup>. It also points out that while “*The general theories associated with paste backfill characteristics and geochemical reactivity appear sound, but there does not appear to be much field validation on the actual influence of key parameters.*”

#### Precautionary Approach:

We submit that the precautionary principle should be applied to the regulatory review of this proposed mining project. The precautionary approach is now widely recognized both domestically (for example in the *Species at Risk Act* and the *Oceans Act*) and internationally (for example the *1992 Rio Declaration on Environment and Development*). Consideration of society’s desired level of protection against risk is a recognized principle of the precautionary approach<sup>8</sup>. In the case of the Prairie Creek mine, the conservation designations of national park reserve (and proposed expansion), World Heritage Site, Canadian Heritage River, and proposed conservation zone in the Dehcho Land Use Plan are evidence of society’s (in the north, across Canada, and internationally) high desire for protection of the natural and cultural values of the Nahanni watershed. This high degree of societal value should be considered in the assessment of risk to those values from the proposed Prairie Creek mine.

#### Scope of the EA:

Canadian Zinc has split its applications into 3 land use permits plus a water license. CPAWS submits that this is not a justification for project splitting and that these are all part of one project, which should be assessed together to properly consider the potential impacts of the project as a whole.

In addition, we submit that the proposal to build and use transfer facilities when transporting concentrates should be considered a significant alteration from the permitted winter road re-development, and that the transfer facilities and winter road should be considered as part of one Prairie Creek mine project. CPAWS submits that the mining and milling, transfer stations, winter access road and use thereof, are all one project, and should be considered as such in the regulatory and environmental assessment process.

#### Public Concern:

S125(1)(a) of the Mackenzie Valley Resource Management Act requires that, if it is determined in the preliminary screening that a proposal might be a cause of public concern it is to be referred to environmental assessment. We submit that there is significant public concern about the potential impacts of the proposed Prairie Creek mine.

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<sup>7</sup> <http://www.nrcan.gc.ca/mms/canmet-mtb/mmsl-lmsm/mend/reports/exSumm102-e.htm>

<sup>8</sup> Canadian Perspective on the Precautionary Approach, 2001, [http://www.ec.gc.ca/econom/booklet\\_e.htm](http://www.ec.gc.ca/econom/booklet_e.htm)

CPAWS represents approximately 20,000 members and supporters across Canada. CPAWS NWT Chapter has approximately 180 members. During the previous environmental assessment and regulatory processes related to Prairie Creek there was significant public concern expressed both in the NWT and across Canada about the potential impacts of the proposed Prairie Creek mine on the National Park Reserve and World Heritage Site downstream.

In September 2007, a public opinion poll in the NWT found that 51% of residents opposed allowing the Prairie Creek mine to proceed<sup>9</sup>

In May 2008 a nationwide public opinion poll found that 64% of Canadians felt the entire South Nahanni Watershed should be protected in a national park, while only 22% felt that parts of the watershed should be left out of the park for future mining development.<sup>10</sup>

Over the past five years thousands of Canadians have sent letters and postcards to federal politicians and signed petitions expressing their concern about mining in the South Nahanni Watershed and requesting that the watershed be protected.<sup>11</sup>

There have been numerous media reports in the NWT and across Canada about the potential threats to the Nahanni from mining activity.<sup>12</sup>

Most recently, during the fall of 2007, Parks Canada and the Dehcho First Nations held public consultations on the proposed expansion of Nahanni National Park Reserve. They received approximately 2500 comments, many of which expressed concern about the potential impacts of mining in the Nahanni watershed.

There has been significant and long-standing public concern expressed about the potential impacts of mining within the South Nahanni watershed, and specifically about the proposed Prairie Creek mine.

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<sup>9</sup> <http://www.newswire.ca/en/releases/archive/September2007/24/c3943.html>

<sup>10</sup> McAllister Opinion Research, May 2008

<sup>11</sup> For example see <http://cpaws.org/news/archive/2007/05/cpaws-presents-3500-nahanni-po.php>

<sup>12</sup> See as examples of the extensive media coverage across Canada:

July 18, 08, Globe and Mail.com Ottawa urged to firm up National Park's boundaries

<http://www.theglobeandmail.com/servlet/story/RTGAM.20080718.wnahanni0718/BNStory/National/home>

May 06, 2007, Mining Road approved on land set for park, Canadian Press

April 12, 2005, Halifax Daily News, Magical Park in Territories Needs your Help.

October 30, 2005, Edmonton Journal, The Standoff at Prairie Creek,

April 06, 2002, National Post, World Heritage Site's Fate Rests with Ottawa. Robert Remington



### Potential significant adverse environmental impacts

Mining activity has the potential to have significant adverse impacts on the environment. There are many examples of mines that have resulted in long term and irreversible damage to the environment<sup>13</sup>. The proposed Prairie Creek mine is in an area of enormous conservation value, and also in an area prone to natural hazards such as earthquakes and landslides.<sup>14</sup> The following list is not intended to outline all the potential significant impacts on the environment, but to highlight some key concerns, which include:

1. The potential for acid mine drainage or neutral mine drainage that could negatively impact on water quality. This issue needs further examination and peer review by experts in the field, particularly in the context of the proposal for paste backfill and the potential for karst features;
2. The impact of the mine operation on wildlife, including species at risk such as grizzly bears;
3. The risk from the engineered waste rock pile and the long term effectiveness of the proposed clay cover;
4. Risk of sedimentation in Prairie Creek and other waterways, particularly as it relates to bull trout and other sensitive fish species;
5. Erosion from surface activities;
6. The risk of landslides in the mine site area, particularly in an era of climate change and melting permafrost;
7. The risk posed from seismic activity. Since 1980, earthquakes of magnitude 6.6 and 6.9 have occurred in the region, and triggered one of the biggest bedrock landslides ever recorded in Canada<sup>15</sup>. Expertise on seismic activity is needed to assess this risk;
8. The concentrates contain mercury, antimony and arsenic. Further assessment is needed to determine the risk to environment and human health during the mining, milling and transport of these products;
9. Environmental risks of explosive use;
10. Risk of transporting and storing bags of concentrates that are potentially acid generating along the winter road and at the transfer facilities.

In conclusion, we believe there is ample reason to conclude that the project might cause significant adverse environmental impacts and that it should be subject to environmental assessment. In an area of such high conservation value, the most stringent environmental assessment should be conducted to ensure that the natural and cultural values of the Nahanni region are protected.

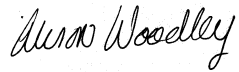
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<sup>13</sup> The Boreal Below: Mining Issues and Activities in Canada's boreal Forest, May 2008, Northwatch and MiningWatch Canada.

<sup>14</sup> Greater Nahanni Ecosystem Atlas, Parks Canada, October 2007 (includes maps of seismic and landslide activity)

<sup>15</sup> Horner, Lamontagne and Wetmiller, 1987. Rock and Roll in the NWT: The 1985 Nahanni Earthquakes, GEOS, Vol 16, no 2.

Sincerely,



Alison Woodley  
Manager, National Protected Areas Program  
CPAWS

cc. \_ Alistair MacDonald, Mackenzie Valley Environmental Impact Review Board  
Grand Chief Gerry Antoine, Dehcho First Nations  
Chief Fred Tesou, Nahanni Butte Dene Band