July 2, 2010

VIA EMAIL

Chuck Hubert & Paul Mercredi
Environmental Assessment Officers
Mackenzie Valley Environmental Impact Review Board
#200 Scotia Centre
5102 – 50th Avenue
Yellowknife, NT X1A 2N7

Re: EA0809-002, Prairie Creek Mine, Canadian Zinc Corporation:

Information Requests

The Government of the Northwest Territories is pleased to provide the Mackenzie Valley Environmental Impact Review Board (the Board) with information requests in response to the Developer’s Assessment Report submitted by Canadian Zinc Corporation (CZN).

Please note that we may not have been able to minimize duplication with information requests from other parties.

We look forward to receiving CZN’s responses to the requests as part of the ongoing review of this project.

If you have any questions or concerns, please contact Amy Jenkins at (867) 920-6593 or amy_jenkins@gov.nt.ca.

Sincerely

Gavin More
Manager
Environmental Assessment and Monitoring
Environment and Natural Resources
Subject: Spill Contingency Planning

Preamble
A spill contingency plan is required in order to anticipate, prevent, mitigate and manage conditions associated with a spill that has the potential to adversely impact the environment. ENR is pleased to see a 2010 Fuel Spill Contingency Plan accompanying the DAR that outlines initial response and reporting requirements; however response for all spill scenarios (hazardous substances, chemicals, reagents, and explosives) are not fully addressed. Details on final disposal and treatment should be identified at this stage, the statement “contact the government authority identified by the 24 Hour Spill Reporting Line for approval before undertaking this” is not considered complete. ENR is aware that CZN intends to operate a landfarm for hydrocarbon contaminated soils however the linkage from the Contingency Plan to this proposed facility as a disposal and subsequent treatment option is not clearly made.

ENR supports CZN’s commitment to the use of Environment Canada’s Federal Guidelines for Landfarming Petroleum Hydrocarbon Contaminated Soils for guidance on design consideration, siting, monitoring and decommissioning and recognizes further details on the design and treatment will be carried out in the licensing phase.

Request:

1. Modify the Spill Contingency Plan to address all potential spill scenarios, not only those limited to fuel. Figure 1 included in the Plan should reflect storage locations of all reagents, hazardous substances, chemicals and explosives.

2. Include information on the management of contaminated soil, snow, water and ice from spills and de-icing activities.

3. Identify clear disposal options for all potential spill scenarios.

4. Provide a clear linkage between the Spill Contingency Plan and the proposed landfarm, noting contaminants available for treatment and level of treatment (with considerations for future land use).
5. Describe approach or activities to address remediation of a large scale (e.g. Remedial Action Plan, Environmental Site Assessment).

6. Please provide a clear commitment that contractors will adhere to CZN’s Spill Contingency Plan.
Subject: Draft Closure and Reclamation Plan

Preamble
ENR is pleased to review a Draft Closure and Reclamation Plan as a component of the DAR. ENR encourages CZN to refer to the Land and Water Boards Draft Approach to Closure and Reclamation for Mines to gain further guidance on expectations.

CZN has prepared the Plan with an objectives based approach, identifying options to meet these objectives; however the TOR requests that rationale for various options be included in addition to closure criteria for the various mine components. ENR recognizes this is a living document and details of options and criteria will be developed through operational monitoring, and research initiatives.

Request:

1. The Draft Closure and Reclamation Plan include an outline and timelines for a Reclamation Research Plan identifying the necessary information required to evaluate options and develop measurable closure criteria.

2. Include rationale, where possible on closure options selected (e.g. natural invasion of 20-30 years vs. re-vegetation).

3. Provide timelines for consultation and future revisions/updates to the Plan.
Preamble
General domestic waste (kitchen waste, leftover food including packaging) and oil fabrics (rags, gloves, clothing) are intended for incineration. A new incinerator will be used for operations however, details on the type of incinerator planned for use are lacking. Poor incineration practices, or open burning of waste and produce, increase the release of numerous toxic pollutants to the air, such as dioxins and furans, that lead to direct and indirect hazards to human and environmental health. In accordance with Environment Canada’s Technical Document on Batch Waste Incinerations, batch incinerators must be demonstrated to be appropriate for the intended waste types and volumes, and operated in accordance with the manufacturer’s recommended conditions and procedures to meet the Canada Wide Standards (CWS) for Dioxins and Furans and Mercury Emissions (of which all Territories/Provinces are signatories, with the exception of Quebec, which apply to incineration and contain emission limits for these toxic contaminants).

Request

1. Please provide an outline for an incineration management plan. We recommend this be consistent with Environment Canada’s Technical Document for Batch Waste Incineration (www.ec.gc.ca/drgd-wrmd/default.asp?lang=En&n=82401EC7-1). The management plan outline should include commitments for annual reporting on a number of items, for example:
   - Incineration technology selected;
   - Waste audit -- amount and types of waste incinerated;
   - Operational and maintenance records;
   - Operator training;
   - Emission measurements; and
   - Incineration ash disposal
Subject: Waste Management- Wildlife Attractant

Preamble
The appropriate storage, timely, and appropriate disposal of food and waste attractants is of critical importance in minimizing safety risks associated with wildlife attraction. The DAR identifies that food waste will be incinerated; however mitigative measures of impacts associated with all waste storage and management activities are not provided (e.g. odor proof containers, fencing etc).

Request

1. Provide details on deterrent measures to be implemented in order to minimize animal attraction associated with the solid waste facility, waste transfer area and incinerator activities.
Preamble
CZN plans to use underground paste backfilling as a disposal method for tailings, DMS float, and incinerator ash. It is noted that a series of geochemical characterization tests were conducted on metallurgical samples and paste backfills samples. The tailing samples contain substantial amounts of trace metals, including Cd, Pb and Zn. A proportion of each is present in a readily leachable form, such as carbonates. The DMS float sample also contains notable amounts however lower than the tailings. Humidity cell test work indicates that most of these parameters will quickly level off to concentrations one quarter of initial flush values, with the exception of Cd, Pb and Zn that tend to show a much less dramatic decay in concentrations and rather relatively consistent and elevated release rates. This information provides preliminary data on the leachability of the paste backfill, however the geochemistry of the paste backfill during operations may reflect different composition scenarios, therefore ongoing geochemical characterization and water quality monitoring should continue.

Request

1. Provide information regarding an operational geochemical monitoring and testing program to determine and confirm the geochemistry of the paste backfill and its subsequent impacts to groundwater.
Subject: Archaeological Impact Assessment of Access Road Re-alignments

Preamble
The Prince of Wales Northern Heritage Centre (PWNHC) is responsible for the management of archaeological sites in all areas of the proposed development located outside the boundary of the Nahanni National Park Reserve, including the Prairie Creek Mine and portions of the access road. While the Prairie Creek Mine consists largely of existing infrastructure, Canadian Zinc Corporation (CZN) is proposing major re-alignments to the mine access road. An archaeological impact assessment (AIA) of limited portions of the road was filed with the PWNNHC in 2009; yet, the DAR does not provide an AIA of the entire road re-alignment, and thus it is difficult to assess potential impacts to archaeological sites in relation to development of the access road.

Request

1. Please provide the PWNHC with a timeline for completion of an AIA of the proposed access road re-alignments.
Preamble
Section 3.4.3 of the Terms of Reference requests the developer to consider the impacts to the community of shift-work affecting child-care; addictions; and sexually transmitted diseases.

The Socio-Economic Impact Assessment notes that increased family stress may occur as a result of one parent being away from the home, particularly in terms of care for children and the elderly. Section 3.4.3.1.e of the Terms of Reference requires the developer to give consideration to and discuss potential impacts associated with the development on child care. In this case, it appears the development will likely have a negative effect on existing child care by removing a number of caregivers from the home. Since the developer would be responsible for this impact, the developer should indicate what mitigating steps it will take to reduce this impact.

The Socio-Economic Impact Assessment notes that the developer expects that Sexually Transmitted Infection (STI) rates will likely increase as a result of decreased adult supervision (it notes that the effect of in-migration on STIs is likely to be low as predicted in-migration is expected to be low), and that drug and alcohol use are likely to increase as a result increased income. The developer contends that these impacts will be low moderate over the medium to long term because the participation of Study Area residents in the Project is likely to increase bit-by-bit over time. It will start out small, and as it grows larger over time adaptation will occur, reducing the severity and frequency of the impacts.

The developer places the responsibility for dealing with these impacts almost exclusively on government even though the impacts, if actualized, will result from the Project. The developer does discuss briefly some ways in which it will act to prevent, reduce and address addictions, but no mention was made on mitigations it will introduce to reduce the predicted increase in STIs.

Request

1. Please list what mitigating steps will be taken to reduce the impact of absentee workers on child care in the community.

2. Please list the information, and/or educational materials will be available on site regarding the prevention of STIs.
3. List the measures CZN will take to protect workers from the spread of communicable diseases on site.

4. Please indicate what medical and counselling personnel will be available on site. How many hours a day will they be available? If the medical personnel determine a patient has a reportable or notifiable disease, please ensure the medical professional is aware of his or her duty to report under Part 4 of the Public Health Act to the appropriate authorities.
Subject: Hiring Policy for Northern and Aboriginal Residents of the NWT

Preamble

Section 3.4.1.4 of the Terms of Reference requests that Canadian Zinc Corporation provide information on the developer’s plans, strategies and commitments for maximizing direct employment and retention of Dehcho residents, northern and Aboriginal persons, including elaboration of its “Hire First” Policy for Dehcho communities.

Appendix 30, Human Resources Management Plan, Section 6, Hiring Practices, states that “CZN is an equal opportunity employer with Dene and Northern preference. As part of our responsibility to the Northwest Territory, we are strongly committed to employing and training people who are native to this area and/or are permanent residents. To achieve this, travel assistance will be provided for employees travelling from designated points of hire.”

Appendix 30, Human Resources Management Plan, Appendix A: Socioeconomic Commitments, Section B (3) states, CZN will develop recruitment and hiring policies and procedures that will encourage Dene employment at the Prairie Creek Project. Section B (8) states, CZN will take all reasonable steps to ensure that its Contractors and any Subcontractors adopt a hiring policy consistent with CZN’s policy and hiring commitments as set out in this schedule.

Appendix 19, Section 7.3.1.1, states, “Much of the construction activities will be completed by contractors. These contractors will be encouraged to hire from within the Study Area communities.”

Request

1. To better understand CZN’s commitments for maximizing direct employment and retention of both Northern and Aboriginal Residents in and outside the Dehcho region, describe the hiring practices around Dene and Northern preference. For example: Priority Hire and Order for: Members of Aboriginal Authorities in the Dehcho or Study Area; Aboriginal People residing in the NWT; NWT Residents; Others.

2. Please list the steps will be taken to ensure that CZN contractors and subcontractors adhere to the same hiring policy.
Subject: Training and Employment Plans and Strategies

Preamble
Section 3.4.1.4 of the Terms of Reference requests that Canadian Zinc Corporation provide information on the developer’s plans, strategies and commitments for maximizing direct employment and retention of Dehcho residents, northern and Aboriginal persons, including elaboration of its “Hire First” Policy for Dehcho communities.

Section 3.4.1.5 of Terms of Reference requests the developer should provide “a description of any plans, strategies or other commitments the developer has to support increasing the mine-ready workforce, support career paths in mining, and assist training programs in related support activities. The developer will outline how these strategies will create or contribute to training opportunities for northern and Aboriginal persons in general, and its employees in particular, over the life of the mine. The developer will also identify when any committed-to mitigations will be enacted, keeping in mind the lead time required for job-ready training programs.”

CZN states in its Human Resources Management Plan, Section 2: Employment and Training that “CZN will endeavour to carry out relevant training programs that are offered through cooperation with other agencies in the Territory to support regional education and build up a further educated Territorial workforce. CZN has already participated in such training programs with the Mine Training Society and Aurora College to carry out two Environmental Training Programs which the company hosted at the Prairie Creek site in 2007 and 2008.”

Appendix 30, Human Resources Management Plan, Appendix A: Socioeconomic Commitments, Section C (4), states “CZN recognizes that regardless of the term of the Prairie Creek project, it may have the opportunity to ensure Dene are provided with training as a direct result of the Prairie Creek project. CZN will employ Dene apprentices, if available and if there are qualified tradesmen on site to supervise an apprentice.”

The Socio-Economic Impact Assessment (SEIA) notes that, for the Study Area communities, these concerns will be addressed in a private manner between the company and those communities through Impact Benefit Agreement (IBA) negotiation. However, beyond the scope of the IBAs, very little mention is made of efforts the company will make to maximize employment and retention of northern residents, including Aboriginal residents, from outside the Study Area.
In the SEIA, the developer indicates that it will not be able to meet all of its labour needs with the labour available in the Study Area. Furthermore, the developer makes predictions for likely levels of employment for the NWT as a whole. More information on plans, strategies and commitments for maximizing NWT employment and employee retention is needed to determine the likelihood of whether NWT employment will reach predicted levels.

Request

1. Please describe CZN’s plans and strategies and detail commitments to maximize direct employment and retention for NWT residents outside of the Study Area.

2. Please list the types of training programs (entry level, semi-skilled, skilled, professional, or management) to be delivered by CZN or in partnership with other agencies that could lead to construction or operation employment or advancement within the CZN Prairie Creek Project.

3. Please provide an estimate on the number of Apprenticeship positions to be offered.

4. Does CZN plan to provide summer employment opportunities? If so, please identify the strategy and procedures CZN will undertake to provide student employment.
Preamble

When developing monitoring and management plans for the human environment it is important for developers to be adaptive to changing and unexpected conditions, impacts and effects.

Section 3.4.5.4 of the Terms of Reference requests that the developer indicate what adaptive management systems will be in place to deal with issues identified during monitoring in relation to the human environment.

In Appendix 19: Socio-Economic Impact Assessment, Canadian Zinc Corporation does mention it will monitor and make changes where necessary. However, it is important to have adaptive management to ensure there are clear processes in place to address problematic impacts identified during monitoring. These processes should include mechanisms for gathering and conveying input from the public.

Request

1. Please indicate what adaptive management systems will be put in place to deal with problematic socio-economic impacts identified during monitoring.
Preamble

When a mine has completed its life cycle it is important that the local workforce, local businesses, and the broader community are prepared for a successful transition away from reliance on the mine project once it is closed.

Section 3.4.2.3 of the Terms of Reference requests the developer to discuss plans, strategies or other commitments intended to help potentially-affected communities avoid over-exposure to “boom and bust” economic fluctuations.

Appendix 23: Draft Preliminary Closure and Reclamation Plan of the Developer’s Assessment Report does not identify what efforts will be made by Canadian Zinc Corporation to minimize the possible negative effects of mine closure on local and regional employees, businesses and communities.

Appendix 19: Socio-Economic Impact Assessment (SEIA) discusses other possible development projects in the region that may be in operation at the time of closure. It also notes that the population will be more skilled and educated and in a better financial position at the end of the project, and states that this will put residents in a better position to be able to deal with the prospect of being without a major employer for the first time in 17 years. The SEIA also notes that reclamation activities offer the study area communities an additional year of employment and contracts as they transition into other economic opportunities.

It is important that plans and strategies exist to minimize the possible negative effects of mine closure on the local and regional employees, businesses, and communities during and after reclamation.

Request

1. What steps will the Canadian Zinc Corporation take to mitigate the negative effects of mine closure for local and regional employees, businesses, and communities?
Preamble

Traditional economic pursuits are not only a significant contributor to local economies; they are also a fundamental part of the NWT’s Aboriginal Peoples culture and traditions.

Section 3.4.4.6.c of the Terms of Reference requests that the developer provide information on plans for any ongoing monitoring and adaptive management to mitigate and minimize possible adverse effects on traditional land use and resource harvesting or to compensate for losses that the developer cannot prevent.

In Appendix 19: Socio-Economic Impact Assessment (SEIA), the developer acknowledges there may be impacts to wildlife and harvesting as a result of the increased access along the winter road. The possibility of a monitoring program for non-Aboriginal hunting is discussed in the SEIA. Predictions of the impact the increased access will have on traditional harvesting in the area is needed, along with mitigation measures in order to properly assess the impacts the access road may have on the traditional economic pursuits of the Aboriginal Peoples in the area.

Furthermore, section 3.4.4.5 of the Terms of Reference requests that the developer provide a prediction of the total impact of the Prairie Creek Mine on traditional economic activity in the study area (expressed in dollar terms as well as in terms of reduced or increased harvesting success).

The SEIA did not provide information on the impacts of the project on traditional economic activities. This information is needed in order to fully assess the impacts of the project on the local economy.

Request

1. Please provide a dollar-value estimate of the impact of the mine on traditional economic activity in the study area.

2. Please provide detailed information on monitoring and adaptive management plans to be undertaken to mitigate and minimize possible adverse effects on traditional economic activity in the study area.
NWT Business Contracting and Procurement Opportunities

Preamble

It is important that Aboriginal and Northwest Territories (NWT) businesses have the opportunity to, and can, successfully compete on contracts within the NWT. To facilitate this objective, it is important that developers clearly outline mechanisms to ensure that Aboriginal and NWT-owned and operated business contracts will be maximized.

Section 3.4.1.7 of the Terms of Reference requests that Canadian Zinc Corporation provide an estimate of all contractor and subcontractor goods and services that the Prairie Creek Mine will require, by project phase, as well as an estimate of what percentage of required goods and services can feasibly be sourced from local and regional businesses.

In Appendix 19: Socio-Economic Impact Assessment (SEIA), Canadian Zinc Corporation was able to provide an estimate of the percentage goods and services that could feasibly be sourced from local businesses during the construction phase. An estimate at the NWT level is also needed for the construction phase. Estimates for both local and NWT levels are needed for the operations and reclamation phases, which together comprise 15 years of the project.

The SEIA provides a list of the goods and services required by the mine, for the construction and operations phases, but does not provide such a list for the reclamation phase. The reclamation phase is expected to last for one year, and is noted in the SEIA as being an important transition period for local and regional residents, businesses and communities. A list of the goods and services required during this phase will assist local and regional businesses to build up capacity in advance to meet the needs of the project.

Explicit predictions regarding local and Northwest Territories (NWT) employment, contracting and procurement, are necessary for government to understand the extent to which Proponent’s mitigation measures will benefit communities and NWT residents and protect them from adverse impacts to the NWT’s social, economic or cultural environment over the life of the project.

Section 3.4.1.8 of the Terms of Reference requests that Canadian Zinc Corporation provide the developer’s policies, plans and commitments associated with maximizing contracting to Aboriginal and Northern businesses, with emphasis on assisting business development initiatives and joint ventures with local and regional businesses.
Appendix 30: Human Resources Management Plan, provides some information on how the company will try to engage Dene businesses. However, more information is needed with respect to maximizing contracting to Aboriginal and NWT businesses.

NWT businesses that are informed about available contracts and provided with information sessions on business and procurement opportunities are more likely to participate in contract opportunities and thus it is more likely the benefits of the project will be realized within the NWT. Advanced communication of business opportunities is critical for northern businesses to compete to the best of their abilities.

Contracting and procurement from NWT businesses provides secondary employment opportunities for NWT residents and contributes to the NWT’s economy. It is important that NWT businesses have the opportunity to compete successfully on contracts and procurement opportunities. For these reasons it is important CZN provide a detailed and thorough NWT procurement strategy designed to maximize contracting and procurement with Aboriginal and NWT businesses.

Request

1. How does CZN intend to identify businesses which maximize NWT content?

2. What steps will Canadian Zinc Corporation take to ensure NWT businesses can successfully compete on contract and procurement opportunities (e.g., break contracts down into sizes that make it easier for smaller local businesses to compete)?

3. Please provide additional information on the efforts CZN will make to ensure NWT businesses are aware of business and procurement opportunities.

4. Please provide a table which lists the percentage of expenditures to be spent with NWT businesses during the construction, operations and reclamation phases. Also, please detail how the estimated percentages are calculated.

5. Please provide a list of required contractor and subcontractor goods and services for the Reclamation phase.

6. Will the developer commit to doing a public Request for Qualifications to establish a list of NWT businesses that have the capacity to successfully compete for opportunities related to the Prairie Creek Mine?

7. Please provide a copy of CZN’s NWT Procurement Strategy to the public registry and include details on how commitments in the strategy will be implemented and monitored.
Preamble

The size and rate of change of a jurisdiction’s population can have a significant effect on the quality of life available in that jurisdiction. In the Northwest Territories (NWT), government capacity to provide programs and services is greatly dependent on population size.\(^1\) Development projects can have positive or negative effects on population size and trends for rate of change.

Section 3.4.3.1.a of the Terms of Reference asks the developer to provide information on the potential impacts on population in- and out-migration.

In Appendix 19: Socio-Economic Impact Assessment (SEIA), the developer states that the Project will have positive impacts on population in- and out-migration in a number of respects. However, it also acknowledges that there is the risk that the 3 weeks in/3 weeks out rotation schedule proposed may contribute to population out-migration. It notes that some Study Area residents would relocate elsewhere given the freedoms associated with their new financial wealth and the ability to retain employment regardless of the community of residency. This suggests that the company’s policy on residency may have a negative effect on population out-migration. In addition to having potential negative effects on GNWT fiscal capacity, out-migration can be very hard on communities and families.

The developer states that it considered a one week in/one week out rotation schedule, but rejected it because of severe winter weather may interfere with this schedule. No reference was made in the Developer’s Assessment Report to whether a two weeks in/two weeks out rotation schedule was considered. Shorter rotation schedules encourage greater local participation and discourage out-migration; whereas longer rotation schedules are often more difficult for local people not as accustomed to the wage economy and extended absences from their families to adapt to, and facilitate out-migration.

In the SEIA, the developer notes that “Yellowknife will be added [as an additional pick-up point] should there be enough interest from the labour force there.” Adding Yellowknife as a pick-up point has significant merit beyond the possibility of employing residents of Yellowknife. For one, Yellowknife serves as the transportation hub for the entire NWT, so adding it as a pick-up point would make it much easier for available,

\(^1\) The funding the GNWT receives from the federal government in the form of the Territorial Formula Financing (TFF) grant is provided based in significant part on the size of the NWT population.
interested and qualified residents from other NWT communities to join the Prairie Creek workforce. Furthermore, adding Yellowknife as a pick-up point would also increase the likelihood of non-NWT resident employees moving to the NWT.²

Any population loss resulting from the Project would have a significant impact on GNWT fiscal capability. Additional population enhances GNWT ability to provide much needed programs and services to NWT residents in all regions, including the study area.

Request

1. Will the developer commit to reduce its rotation schedule, to prevent out-migration and maximize local participation?

2. Will the developer commit to add Yellowknife as a pick-up point, to encourage participation from other regions of the NWT and facilitate in-migration?

² Yellowknife is the NWT community most able to house new residents, and it is the main transportation hub for the NWT, the easiest way for new residents to travel to their former communities to visit loved ones.
Preamble

Public reporting on employment, training and business efforts by the developer is important in order to monitor the economic opportunities and efforts the developer is making to bring benefits to the Northwest Territories (NWT).

Section 3.4.5.3 of the Terms of Reference requests that the developer indicate how human environment monitoring results will be evaluated and reported to regulators, responsible authorities and potentially affected communities.

Details are needed on how human monitoring results will be reported and evaluated to ensure annual reports produce meaningful information for communities, regulators, responsible authorities and the public. Some examples of items tracked and reported by developers in the NWT include:

a. *Number and proportion of person years employment according to residency (NWT, NWT Aboriginal and Other Canadian), for each phase of the Project*;
b. *Length of time NWT hires and employees have lived in NWT (e.g.: greater or less than six months)*;
c. *Employment and hiring by community within the NWT*;
d. *Number and proportion of hires according to residency (NWT, NWT Aboriginal and Other Canadian)*;
e. *Participation in and results of training initiatives*;
f. *The gross value of goods and services purchased, by category of purchase, for each phase of the Project*;
g. *The gross value of goods and services purchased, by community; and*
h. *Business forecast for the following calendar year*.

This information allows regulators to assess how much and in which ways NWT residents and businesses are participating in the project. This can be used to assess whether predictions made in the Environmental Assessment are accurate, and whether adaptive management may be required.
Request

1. Please itemize the indicators that will be tracked and publicly reported by Canadian Zinc’s human environment monitoring efforts.

2. Please indicate what criteria will be used to classify a business as an NWT Business or as an Aboriginal Business.

3. Please indicate what criteria will be used to determine NWT residency and Aboriginal ethnicity.

4. Please specify how person years will be calculated and defined for each phase of the project (i.e., how many hours per year will make up a person year).