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**TECHNICAL REVIEW OF THE ENVIRONMENTAL  
ASSESSMENT REPORT FOR CANADIAN ZINC CAT  
CAMP FUEL CACHE RECOVERY PROGRAM, PRAIRIE  
CREEK MINE**

**Submission to:**

**Mackenzie Valley Environmental Impact Review Board  
Yellowknife, NT**

**Submitted by:**

**Government of the Northwest Territories**

**MARCH 12, 2001**

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MACKENZIE VALLEY  
ENVIRONMENTAL IMPACT  
REVIEW # 114

## **Introduction**

The Department of Resources, Wildlife and Economic Development (RWED), on behalf of the the Government of the Northwest Territories, has conducted a technical review of the Environmental Assessment Report submitted by Canadian Zinc Corporation for a proposal to construct approximately 40 km of all weather road over an existing right of way from the Prairie Creek mine site to a fuel cache known as Cat Camp. The purpose of the project is to recover approximately 153,000 – 174,000 litres of diesel fuel from the fuel cache and transport it to the mine site, where the fuel will be used for a planned exploration program and possibly for future mine operations. Subsequent to the removal of the fuel, all structures and materials at Cat Camp would also be removed from the site.

The proposal was referred to the Mackenzie Valley Environmental Impact Review Board (MVEIRB) for an environmental assessment on October 4, 2000. The Government of the Northwest Territories (GNWT) participates in environmental assessments in order to fulfill its mandate to enhance the socio-economic well being of the people of the NWT, and the mandate shared with the federal government for the management and protection of the environment. The Government of the Northwest Territories also participates in environmental assessment through the provision of expert advice on areas within its mandate. The Environmental Assessment Report has therefore been reviewed where project impacts have the potential to directly impact areas of GNWT responsibility, or where expert advice is available from GNWT staff. Accordingly, the following line items of the Terms of Reference issued by the MVEIRB on December 22, 2000 have been reviewed by the GNWT.

- 4.1.1 Air quality and climate
- 4.1.2 Terrain
- 4.1.3 Vegetation and plant communities
- 4.1.4 Water quality and quantity
- 4.1.5 General water
- 4.1.7 Wildlife and habitat
- 4.1.8 Culture and heritage resources
- 4.1.9 Land and resources use
- 4.1.10 Economy
- 4.1.11 Noise
- 4.2.5 Accidents and malfunctions
- 4.2.7 Alternatives
- 4.2.8 Closure and reclamation

The GNWT recognizes that this project is intended to reduce the environmental

risks associated with the storage of large quantities of fuel at a remote site, and commends the proponent's proactive approach to eliminating this risk. However, care must be taken to ensure that the recovery program is carried out in such a manner that potential impacts on the environment and risks due to relocating the fuel are reduced or eliminated.

The following technical report will discuss the adequacy of the proponent's Environmental Assessment Report, including their responses to information requests that were submitted on February 6, 2001. Although the Government of the Northwest Territories has reviewed all the terms of reference noted above, the technical review discusses only those items where the GNWT wishes to provide comment. Where no comments are provided, the Mackenzie Valley Environmental Impact Review Board may conclude that the GNWT is satisfied that the information provided by the proponent is sufficient to support their conclusions regarding environmental impacts. As a result of our technical review, the GNWT has concluded that the project is not likely to cause significant adverse economic or environmental impacts with the implementation of effective mitigation measures.

### ***Vegetation and Plant Communities***

Section 4.1.3 of the Terms of Reference directed the proponent to discuss impacts on vegetation and plant communities, and long term direct and indirect habitat loss or alteration. The proponent concludes that the construction of the all-weather road will result in negligible alteration of vegetation communities (p.10). This conclusion is supported by a statement to the effect that all construction will occur over a previously disturbed right of way. Therefore, minimal additional clearing of vegetation will be required.

RWED concurs with the proponent that the development of the all-weather road should not cause significant impacts on vegetation. However, the proponent does not provide a detailed account of borrow quantities or locations. Therefore, in absence of more detailed site specific information, RWED recommends that in areas where access to borrow materials requires the clearing of vegetation, areas of high erosion potential be scarified and re-seeded with local species to promote soil stability and revegetation.

### ***Wildlife and Wildlife Habitat***

Section 4.1.7 of the Terms of Reference required a discussion of direct and indirect impacts on wildlife and their habitat. The proponent concludes that the construction of the all-weather road will result in negligible loss of wildlife habitat (p.12). The proponent also predicts that due to the short duration of the

construction phase (4 weeks) and subsequent removal of the fuel, wildlife disturbance in the area will be minimized.

The proponent cites the extensive studies of the impacts on wildlife of road development conducted in 1981 by Beak Consultants. It should be noted that these studies refer to the construction and operation of a winter road, not to an all-weather road. From the perspective of disturbance to wildlife, a winter operation is preferred over the proposed late summer operation. RWED agrees with the Environmental Evaluation of the Prairie Creek Project (1981) that wildlife and habitat impacts from a winter road operation are expected to be minimal.

The proponent indicates that a winter recovery alternative was considered and rejected due to concerns over increased costs, increased risks to workers, and decreased ability to respond to a spill emergency. However, the proponent also notes that a winter recovery would minimize risks to waterbodies from any fuel spill (p.28). RWED notes that oil and gas operation occur during winter in terrain similar to that encountered by the proponent, and does not agree that risks to workers or the environment would become unacceptable with a winter operation. RWED believes that given the reduced impacts on wildlife and the reduced impacts that would result from a spill, a winter recovery would be the preferred alternative for removing the fuel.

Nevertheless, a winter operation would require a delay in recovering the fuel until sometime in early 2002. RWED believes that the risk of further fuel leaks and contamination outweigh the risks of increased wildlife disturbance. Although a winter operation would minimize wildlife disturbance, RWED agrees with the proponent that due to the short duration of the disturbance and the fact that activity is confined to an existing right of way, impacts on wildlife and wildlife habitat should not be significant. RWED is prepared to participate in a preliminary site reconnaissance for the proposed road alignment prior to the commencement of operations to assist in the evaluation of wildlife presence and response to disturbance.

It must be stressed, however, that this conclusion applies only to the rehabilitation of the 41 km of road between the mine site and the fuel cache, and relates only to the proposed recovery of the fuel cache. This must not be interpreted as implying approval for any additional lengths of all-weather road. Should the proponent decide to apply to bring the mine into production, a full environmental assessment of the impacts on wildlife of hauling product over an all-weather road will be conducted by RWED at that time.

### ***Accidents and Malfunctions***

The Terms of Reference, section 4.2.5 directs the proponent to discuss the

probability and magnitude of an accident or malfunction, including a fuel spill. The EAR provided by the proponent discussed these issues with respect to a spill of fuel during either the transfer of fuel from the cache to transport trucks, or during the transportation itself. The proponent did not discuss the safety and integrity of the existing tank farm at the Prairie Creek Mine (p.24).

RWED sought further information from the proponent to confirm that the recipient tanks, which are now twenty years old, are sufficiently secure and in conformity with accepted standards. In their February 26 response to RWED's information request, the proponent acknowledged that the existing tank farm is not in conformity with either the CCME Environmental Code of Practice for Above Ground Storage Tank Systems Containing Petroleum Products or the updated National Fire Code of Canada, which is in force in the NWT. Further, no non-destructive testing of tank integrity has been performed due to cost.

The proponent correctly points out the existing tanks at the mine do not have to be brought into compliance with the CCME guidelines until 2009. The proponent further asserts that the existing tanks are subject to routine care and maintenance at the mine, and exhibit no signs of leakage or other structural problems. Addition of the Cat Camp fuel represents an addition of only 10 per cent of the contained volume at the tank farm and does not approach the limit of available capacity. At such time as the mine is brought into production, the proponent commits to having non-destructive testing carried out and to upgrade the tank farm to meet existing requirements.

In light of the fact that the existing tank farms are not in compliance with either the CCME Guidelines or the National Fire Code of Canada, RWED recommends that the proponent be required to either:

1. Allow DIAND and the NWT Fire Marshall to conduct an audit of the above ground tanks to ensure that they meet National Fire Code standards; or
2. Purchase new Enviro-Tanks to store the entire amount of the fuel transferred from Cat Camp at the mine site until such time as the proponent completes the required upgrading of the existing tank farm as per DIAND and the Fire Marshall's recommendations.

Either of these alternatives are acceptable to RWED. Each would provide assurance that the fuel transferred from Cat Camp would be stored in an environmentally sound manner.

As part of the information request response submitted to the MVEIRB on February 26, the proponent supplied a copy of the Prairie Creek Emergency Spill Response Plan for 2000-2001. RWED has reviewed a copy of that plan and

notes the following deficiencies with respect to the requirements of the NWT Environmental Protection Plan, Sections 4 (2) c, d, e, f and j.

- 4(2)c. A description of the facility including the location, size and storage capacity.
- 4(2)d. A description of the type and amount of contaminants normally stored at the location described in paragraph (c).
- 4(2)e. A site map of the location described in paragraph (c).
- 4(2)f. The steps to be taken to report, contain, clean up and dispose of contaminants in the case of a spill.
- 4(2)j. The date the contingency plan was prepared.

RWED recommends that the proponent be required to rectify these deficiencies, and supply an updated version of the Emergency Spill Response Plan to DIAND and the Environmental Protection Services, RWED.

### ***Conclusion and Summary of Recommendations***

RWED has confined its technical review of the proposed project to areas that are within the mandate of the GNWT, or areas in which RWED staff are able to provide expert advice. Upon review of the proponent's Environmental Assessment Report and responses to Information Requests, the GNWT is satisfied that the proposed road construction and fuel recovery project will not result in significant adverse impacts on the environment, provided that the recommendations for mitigation summarized below are implemented.

1. RWED recommends that in areas where access to borrow materials requires the clearing of vegetation, areas of high erosion potential be scarified and re-seeded with local species to promote soil stability and revegetation.
2. RWED recommends that the proponent be required to either:
  - a) Allow DIAND and the NWT Fire Marshall to conduct an audit of the above ground tanks to ensure that they meet National Fire Code standards; or
  - b) Purchase new Enviro-Tanks to store the entire amount of the fuel transferred from Cat Camp at the mine site until such time as the proponent completes the required upgrading of the existing tank farm as per DIAND and the Fire Marshall's recommendations.
3. RWED recommends that the proponent be required to rectify the deficiencies identified in the Emergency Spill Response Plan and supply an updated version of the plan to DIAND and Environmental Protection Services, RWED.

Finally, RWED wishes to re-iterate its position that the conclusions reached in this technical review are without prejudice to any future determinations of the environmental suitability of constructing an all-weather road to support the operation of the Prairie Creek Mine.