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Your file *Votre référence*  
EA0809-002

Our file *Notre référence*  
YK-08-00114

September 13<sup>th</sup>, 2011

Mackenzie Valley Environmental Impact Review Board  
#200 Scotia Centre  
5102-50<sup>th</sup> Avenue  
Yellowknife, NT  
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**Via e-mail to:**  
[chubert@reviewboard.ca](mailto:chubert@reviewboard.ca)

**RE: Fisheries and Oceans Canada – Final Comments for Canadian Zinc Corporation's proposed Prairie Creek Mine Project**

Fisheries and Oceans Canada (DFO) would like to thank the Mackenzie Valley Environmental Impact Review Board (MVEIRB) for the opportunity to participate in the environmental assessment for the Prairie Creek Mine project.

Please find attached our final comments for your consideration. Our submission contains a summary of issues raised by DFO in our technical submission, provided to the Board on June 3<sup>rd</sup>, 2011 and presented during the public hearings. This submission outlines the requirement for a *Fisheries Act* authorization and monitoring of the exfiltration trench, the remaining uncertainties with the winter access road and the proposed water storage options, and the implementation of monitoring plans.

We trust that our comments and recommendations will be helpful to the Board in their deliberations. If you have any questions, please do not hesitate to contact Sarah Olivier at (867) 669-4919, or email at [Sarah.Olivier@dfo-mpo.gc.ca](mailto:Sarah.Olivier@dfo-mpo.gc.ca).

Sincerely,

Beverley Ross  
Fisheries and Oceans Canada

cc Julie Dahl, Fisheries and Oceans Canada  
Lorraine Sawdon, Fisheries and Oceans Canada  
Larry Dow, Fisheries and Oceans Canada  
Corrine Gibson, Fisheries and Oceans

**Fisheries and Oceans Canada  
Final Comments  
Mackenzie Valley Review Board  
Canadian Zinc Corporation - Prairie Creek Mine  
September 13<sup>th</sup>, 2011**

Fisheries and Oceans Canada (DFO) is pleased to provide the following comments to the Mackenzie Valley Review Board for the environmental assessment of the Canadian Zinc Corporation's (CZN) Prairie Creek Mine Project.

Below is a summary of issues raised by DFO in our technical submission, provided to the Board on June 3<sup>rd</sup>, 2011 and presented during the public hearings. This submission outlines the requirement for a *Fisheries Act* authorization and monitoring of the exfiltration trench, the remaining uncertainties with the winter access road and the proposed water storage options, and the implementation of monitoring plans. For greater detail please refer to DFO's technical submission and comments provided on August 26<sup>th</sup>, 2011 related to the request for ruling by Parks Canada.

**Fisheries Act subsection 35(2) authorization for the exfiltration trench in Prairie Creek.**

The construction, maintenance and decommissioning of the proposed double-piped exfiltration trench on the bed of Prairie Creek will result in the harmful alteration, disruption and destruction of fish habitat (HADD) and will require an authorization under ss.35(2) of the *Fisheries Act*. Prior to the construction of the exfiltration system, CZN has committed to providing DFO with the following:

- a detailed fish habitat assessment in and around the trench,
- detailed design plans and mitigation measures, and;
- a compensation plan to offset any impacts to fish and fish habitat.

Should the HADD resulting from the exfiltration trench be authorized, DFO will also have monitoring requirements during the construction and will require success criteria to be met for the habitat compensation works.

**Operation of the exfiltration trench in Prairie Creek**

DFO raised concerns with the exfiltration trench and the possibility of it interfering with the movement of Bull Trout, Mountain Whitefish and Arctic Grayling within Prairie Creek. DFO will require that appropriate monitoring be conducted and if necessary, corrective action be taken to ensure that fish movements are not impacted. DFO will include these conditions as part of any *Fisheries Act* authorization associated with the exfiltration trench.

**Winter Access road (crossings, water withdrawals and aggregate sources)**

**Crossings**

With respect to the winter access road, DFO has identified outstanding concerns related to the potential mobilization of sediment through runoff and erosion at stream crossings and/or vulnerable areas (i.e locations with permafrost near creeks and streams). CZN has committed to

following DFO's operational statements for temporary stream crossings, clear-span bridges, ice bridges and snow fills and ensuring that proper mitigation measures are implemented to reduce impacts at stream crossings to fish and fish habitat. CZN has also committed to developing a comprehensive sediment and erosion control plan for the road and crossings to be reviewed by DFO prior to the first year of construction of the road. DFO expects the plan to include mitigation measures for times of increased precipitation (i.e extreme events and freshet), during the annual removal of the ice crossings and closures of the road. The plan is also expected to include a monitoring plan to ensure mitigation measures are properly functioning.

### **Water Withdrawal**

DFO has requested, throughout this environmental assessment, that CZN provide the locations as well as the amounts of water needed at each location to determine the likelihood of impacts to fish habitat through oxygen depletion, loss of overwintering habitat and reduction of littoral habitat. CZN has identified several waterbodies and watercourses as potential water sources for annual construction and maintenance of the winter road and has committed to using DFO's "Protocol for Winter Water withdrawals from Ice-covered waterbodies" to avoid impacts to fish and fish habitat. CZN is aware that the protocol only applies to lakes and that additional information is required if water is withdrawn from streams or rivers. CZN has committed to contacting DFO prior to withdrawing water from any watercourses, and to providing the outstanding information requirements, including final locations and bathymetry of lakes proposed as water sources.

### **Aggregate Sources**

The exact locations and quantities of aggregate sources have not yet been determined by CZN. However, CZN has committed to not taking any materials from below the high water mark of any streams and rivers and has indicated that no additional crossings of streams will be needed to access the sources.

### **Monitoring Plans**

DFO recommends that an aquatic effect monitoring plan and a comprehensive closure and reclamation plan be developed in consultation with DFO and other regulators and parties to the environmental assessment prior to operation.

### **Proposed Water Storage Options**

DFO provided detailed comments to the Review Board on August 26<sup>th</sup>, 2011 on the two proposed water storage options as part of the response to the request for ruling by Parks Canada. DFO understands that CZN will select one of the proposed water storage options during the regulatory phase and at that time will provide more detailed designs to parties. DFO will continue to discuss these options with CZN to ensure that adequate mitigation measures are in place to avoid impacts to fish and fish habitat. Should any of the final designs indicate a potential encroachment or impact to fish and fish habitat, an authorization under the *Fisheries Act* may be required from DFO.