

Our File: EA1415-01
February 11, 2016

Mr. David Harpley
VP, Environment and Permitting Affairs
Canadian Zinc Corporation
Suite 1710 – 650 West Georgia St
Vancouver, BC V6B 4N9

Dear Mr. Harpley,

RE: January 29th, 2016 letter regarding the Reasons for Decision on the adequacy of the DAR

The Review Board met on February 10th 2016 to discuss Canadian Zinc Corporation (CanZinc)'s January 29th letter¹ regarding the *Reasons for Decision on the adequacy of the Developer's Assessment Report* (RfD).² This letter summarizes the outcomes of this meeting and the Review Board's rationale towards those outcomes. Based on the additional information provided by CanZinc and their consultants in the January 29th letter, the Review Board has determined that, for some of the required adequacy items outlined in the RfD, there is now sufficient information available for parties to begin preparing their information requests. These items, as well as the items for which additional information is still required, are discussed in detail below.

The Review Board issued its RfD on December 21st, 2016. This document outlined the Review Board's conclusion that the information provided by CanZinc in their Developer's Assessment Report (DAR) and DAR addendum was adequate for the environmental assessment (EA) to proceed to information requests, upon condition of receiving several outstanding items. The outstanding items were:

1. effects assessment and description for the Sundog Creek re-alignment
2. detailed characterization of permafrost and karst hazards from km48-59
3. frequency of landslides and avalanches
4. description of terrain from km 160-184
5. effects of potential accidents and malfunctions (Risk Assessment)

Items 1-4 above required additional information from CanZinc. The Review Board determined that the outstanding information for these four items must be provided at least four weeks prior to the technical sessions so that parties have sufficient time to review the materials and prepare questions

¹ See the letter from CanZinc here: http://reviewboard.ca/upload/project_document/EA1415-01_Letter_CZN_to_MVEIRB_re_DAR_Adequacy_RfD_Jan_2016.PDF

² See the report on our public registry here: http://www.reviewboard.ca/upload/project_document/EA1415-01_Reasons_for_Decision_on_the_adequacy_of_the_DAR.PDF



for the technical sessions. Item 5 was resolved by the Board's decision to hire an independent, third party risk assessor.³

On January 29th, 2016 CanZinc submitted a letter to the Review Board outlining its concerns with some of the information requirements in the RfD. The letter stated that, for the most part, CanZinc will provide the required information. It also described several pieces of information which CanZinc believed to be either inappropriate or unnecessary for this stage in the EA process.

CanZinc identified issues with items 1, 2 and 4. A summary of CanZinc's position and the Review Board's response and rationale are described below.

Item 1 - Effects assessment and description for the Sundog Creek realignment

CanZinc objected to only one of the specific information requirements regarding the Sundog Creek realignment in the Review Board's RfD. The particular item of concern required CanZinc to provide "estimated dimensions and quantities of excavation and materials (rough estimates for general understanding will be sufficient)". CanZinc objected to this requirement since it believed it would be difficult to do with "any degree of accuracy at this point".

In the letter, CanZinc indicated that material excavated for the realignment would be incorporated into the road design for that section. If additional material (gravel) is needed for the realignment, it would use defined borrow sources.

The Review Board believes that the additional information regarding the design of the Sundog Creek realignment, as described in the RfD, needs to be submitted and reviewed by parties before specific details regarding volume of materials to be moved can be introduced onto the public record. The Review Board further believes that once this additional information is provided, it will be sufficient for parties and the Review Board to understand the proposed development and ask questions related to the Sundog Creek realignment. Once the Board and parties have a better understanding of the road design in this section, additional information may be required concerning the volume of and impacts on moving materials within Sundog Creek.

Item 2 - Detailed characterization of permafrost and karst hazards

A. Permafrost

The Review Board's *Terms of Reference* and subsequent RfD asked for a characterization of permafrost features from km 48-59. CanZinc indicated that it perceived the level of detail for this requirement as too high, onerous and unnecessary. CanZinc and their consultants, Tetra Tech EBA, identified several reasons to support this position.

³ See notification letter on our public registry here: http://www.reviewboard.ca/upload/project_document/EA1415-01_Third_Party_Risk_Assessor_SOW_and_CVs.PDF



Of these reasons, the Board considers the following to be of key importance when considering adequacy requirements:

- additional and deeper drilling is recommended by Tetra Tech during the detailed design phase (which would occur after the EA),
- the likely low ice content and fine-grained nature of the soils make the geophysics not as valuable as it would be under different conditions, and
- permafrost is not expected to be significant between km 54.2 and 59 because the soils are coarse-grained.

The Review Board considers the characterization of permafrost features from km 48-59 adequate given the additional information provided by CanZinc. In the Review Board's view, there is enough information to move ahead with the EA and allow parties to ask questions related to the permafrost and associated potential impacts in this 11 km section. Therefore, the Review Board invites parties to provide any information requests related to this topic.

The Review Board notes that if, during the course of the EA, site investigations determine that either more permafrost than currently expected could be encountered from km54.2-59 or that geophysics would potentially be valuable to the characterization of permafrost from km48-59, it may require this information from CanZinc.

B. Karst

The Review Board's *Terms of Reference* and subsequent RfD required detailed characterization of karst features from km 48-59. This requirement was based on the need understand the geotechnical stability of the proposed road and how the proposed project could affect karst within the Nahanni National Park Reserve. CanZinc indicated that the requirement for this perceived high level of detail was onerous and unnecessary. CanZinc and their consultants, Tetra Tech EBA, identified several reasons to support this position.

Of these reasons, the Board considers the following to be of key importance when considering adequacy requirements:

- engagement and public review during the EA for the winter road has resulted in significant alterations to the proposed road alignment from km48-59 to avoid areas of high karst potential,
- due to the climate and geology in the region, it is unlikely that there are any karst features in the area, besides the ones currently observed on the surface. It is also unlikely that there are undetected subsurface karst features which could lead to the rapid development of surface features and pose a risk to the road, and



- CanZinc believes there is enough distance between known karst features and other terrain hazards, and the proposed road route to allow for additional alignment adjustments if necessary.

The Review Board considers the characterization of karst features from km 48-59 adequate given the additional rationale described above. In the Review Board's view, there is enough information to move ahead with the EA and allow parties to ask questions related to the karst and associated potential impacts in this 11 km section. Therefore, the Review Board invites parties to prepare and provide any information requests related to this topic.

Item 4 - Description of terrain from km 160-184

Initially, CanZinc indicated that it believed this task would be too onerous to complete at this stage in the EA. However, in a follow up email⁴, it reconsidered this position and agreed to provide the required information.

Summary and Next Steps

In summary of the information above, the Review Board has determined the following with respect to the adequacy items described in the RfD:

1. Effects assessment and description for the Sundog Creek re-alignment
 - All items described in the RfD will be provided by CanZinc with the exception of the 4th bullet under the section titled "Preliminary design for the channel realignment" regarding estimated dimensions and quantities of excavation and materials.
2. Detailed characterization of permafrost and karst hazards from km48-59
 - The information provided by CanZinc to satisfies the requirements for the adequacy stage and provides a basis for parties' information requests on this subject. Parties are encouraged to review the material relevant to this topic on the public record and ask information requests, should they desire.
3. Frequency of landslides and avalanches
 - All items described in the RfD will be provided by CanZinc.
4. Description of terrain from km 160-184
 - All items described in the RfD will be provided by CanZinc.
5. Effects of potential accidents and malfunctions (Risk Assessment)
 - This issue was resolved, since the Review Board has contracted an independent, third party risk assessor.

⁴ See email on our public registry here: http://www.reviewboard.ca/upload/project_document/EA1415-01_CZN_Update_on_Adequacy_items_2-Feb-2016.PDF



The Review Board looks forward to receiving the outstanding information related to items 1, 3, and 4 described above.

With respect to timing, the Review Board has previously indicated that an appropriate submission date for the outstanding adequacy items is February 19th, 2016. If CanZinc is unable to meet this deadline, please let the Review Board know in writing as soon as possible. Technical sessions will be scheduled a minimum of four weeks after the Review Board receives the outstanding adequacy items to that parties have sufficient time to review the materials provided.

The contacts for the Project are Environmental Assessment Officers Sachi De Souza (867) 766-7054; sdesouza@reviewboard.ca and Kate Mansfield (867) 766-7062; kmansfield@reviewboard.ca.

Regards,

JoAnne Deneron
Chairperson