



Environment Environnement  
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Our file: 4705 037 NANI

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*Via Facsimile*

**RE: NWB1NAN0208 – Underground Mine Solid Waste Disposal Plan**

On behalf of Environment Canada (EC), I have reviewed the information submitted with the above-mentioned application. The following specialist advice has been provided pursuant to Environment Canada's mandated responsibilities for the enforcement of the *Canadian Environmental Protection Act*, Section 36(3) of the *Fisheries Act*, the *Migratory Birds Convention Act*, and the *Species at Risk Act*.

Nanisivik Mine has submitted their Underground Mine Solid Waste Disposal Plan to the Nunavut Water Board, as per item G16 of their water license. The purpose of the plan is to identify and classify the waste, and provide information on how and where the waste will be disposed of. Overall, the Underground Solid Waste Disposal plan lacks a considerable amount of detail required in order to assess the potential impacts that this plan may have on the environment. If the information is to be presented in the final Abandonment and Reclamation Plan, EC recommends that CanZinco indicate as such in the plan. In order to help facilitate the improvement of the plan, EC offers the following comments and recommendations for your consideration.

- Environment Canada recommends that CanZinco Ltd. maintain photo documentation of the materials that are being disposed of underground or in the open pits.
- Environment Canada requests clarification regarding when the hazardous items such as antifreeze and batteries will be shipped off site. What other hazardous items besides batteries and antifreeze will be sent south for treatment/disposal?
- The current Waste Disposal Plan provides only general locations where items will be disposed of (i.e. fencing from the propane enclosure will be disposed of "underground"). Environment Canada requests that CanZinco provide more detailed locations where all of the items will be disposed of, such as the block area number, pit name, or portal number. It would be helpful if the maps included at the end of the Waste Disposal Plan be updated to indicate which of the areas identified will be used for the disposal of contaminated materials, and which will be used for non-hazardous disposal.
- Environment Canada requests that CanZinco provide information regarding why the various disposal locations were chosen. This includes a detailed explanation based on geotechnical criteria why certain areas have been designated for hazardous or non-hazardous waste disposal. It is recommended that CanZinco provide the criteria and rationale for choosing the selected areas for waste disposal, and omitting other areas.

- The Waste Disposal Plan indicates that vehicles/equipment and the fuel pipeline are to be emptied of fluids. Environment Canada requests details regarding how this is to be accomplished.
- Environment Canada recommends that tires that cannot be salvaged be shredded prior to their placement in the west end of the mine in order to minimize the amount of space required, and to prevent the potential for them to rise to the surface post closure.
- The tables in the Waste Disposal plan should indicate the units in which the amounts of demolition debris to be generated are being measured.
- The summary of the waste volumes for the Industrial Complex given under Section iv (page 8) indicate a total volume of demolition debris that will be generated during the demolition of the cold and warm storage buildings. However, it is unclear as to whether these amounts include the concrete foundations, as they may be removed to facilitate contouring. It is recommended that CanZinco clarify this point to clearly indicate the complete total of all waste to be disposed of.
- Environment Canada recommends that the proponent ensure that the final contours of the waste disposal areas are sufficient to prevent erosion and pooling of water.
- The plan indicates that the amount of contaminated soil that is to be disposed of underground is to be determined during the Phase III Environmental Site Assessment. Environment Canada recommends that CanZinco make estimations of the amount of soil that is contaminated in order to facilitate the planning of space requirements for underground storage.
- The Summary of Waste volumes for the dock area indicate a total of 3757 m<sup>3</sup> of material. However, additional values given result in a total of 3770. Some of the volumes given in the summary of the waste volumes for the Warehouse yard also do not match the volumes given in the text. There are also discrepancies between the numbers in the tables and the text in the Town Site section. Environment Canada recommends that CanZinco double check the figures located in the plan.
- The Placement Methods section of the Waste Disposal Plan indicates that in most cases "no further handling will be required" after the trucks dump the material into the allotted storage space. Environment Canada recommends that, if possible, the waste be compacted in order to minimize void spaces.

If there are any changes in the proposed project, EC should be notified, as further review may be necessary. Please do not hesitate to contact me with any questions or comments with regards to the foregoing at (867) 975-4639 or by email at [colette.meloche@ec.gc.ca](mailto:colette.meloche@ec.gc.ca).

Yours truly,

Colette Meloche  
Environmental Assessment Specialist

cc: (Mike Fournier, Northern Environmental Assessment Coordinator, Environment Canada, Yellowknife)