

NON-TECHNICAL EXECUTIVE SUMMARY

Sustainable development in Canada's North is a priority for Environment Canada (EC). The Department provides scientific expertise for use in decisions on developments, so that all parties working together can ensure there is minimal impact on the natural environment, and ecosystems are protected. Toward these goals, EC has reviewed the CanZinco Limited (CanZinco) water licence application for the Nanisivik Mine.

Environment Canada's submission focuses on issues related to environmental effects on or related to water quality and water management, contingency planning, monitoring time frames and closure and reclamation. Overall, EC was pleased with the quality of the information provided by CanZinco Limited. Our review has identified several areas needing further work or clarification, as outlined in the following technical comments and recommendations.

Water Quality and Water Management:

EC feels that it is important to monitor for a full suite of parameters at select water monitoring stations to ensure that the decommissioned mine site is not depositing deleterious substances into the receiving environment, and to ensure any trends or unanticipated changes are identified. A full suite of parameters should be analyzed for the Final Discharge Point (159-4), Outlet of Twin Lakes Creek into Strathcona Sound (159-6), Chris Creek Outlet into Strathcona Sound (159-17), and the Landfill (NML-30) for a minimum of the first two years of the Post Closure Monitoring period (2009-2010). The full suite of parameters should include total and dissolved metals (full ICP metals scan), Total Dissolved Solids, major ions (Chloride, Calcium, Magnesium, Sodium, and Sulphate), Total Suspended Solids, conductivity, pH, temperature, and hardness.

After the initial two years of Post-Closure Monitoring, an analysis of monitoring results should be conducted by CanZinco, and reviewed and approved by the NWB, prior to CanZinco moving into the second phase of Post-Closure Monitoring period.

In addition, total petroleum hydrocarbons should be measured at the Outlet of Twin Lakes Creek into Strathcona Sound (159-6) and the Landfill (NML-30), to ensure that reclamation of contaminated areas was effective and no hydrocarbon contaminants are being released into the Strathcona Sound or the receiving environment.

Contingency Planning:

CanZinco has not yet provided a Contingency Plan for the Water Quality Monitoring Program or the Geotechnical Monitoring Program. EC requests CanZinco to provide complete contingency management plans for both water quality, and geotechnical monitoring programs in order to provide adequate response if allowances are exceeded, or abnormal trends are observed in the monitoring results.

Monitoring Time Frames:

CanZinco proposed a four year Post-Closure Monitoring period beginning in 2009 and finishing in 2012. EC feels that a minimum of a five year Post-Closure Monitoring period be conducted to ensure that there is no residual contamination from the mine site affecting the environment. As the field monitoring season begins in spring/summer of 2009, a full five year Post-Closure Monitoring period would be completed in the fall of 2013.

Closure and Reclamation:

It remains unclear if DND and the Canadian Coast Guard will assume ownership of the dock area, including the tank farm facility and the contaminated soils located in the berm of the tank farm facility. EC would like to be kept informed of the ongoing discussions of the transfer of ownership of the dock area, including the tank farm and tank farm facility, between CanZinco, DND and the Canadian Coast Guard.

Conclusion:

Environment Canada would like to thank the Nunavut Water Board for the opportunity to comment on the Nanisivik Mine water licence application, and we hope that these technical comments and recommendations are useful to the Board in their decision-making process. Environment Canada requests the opportunity to submit additional written comments after the public hearings to address any new information brought forward at the hearings.