



Environmental Protection Operations Directorate
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Richard Edjericon, Chairperson
Mackenzie Valley Environmental Impact Review Board
200 Scotia Center
5102-50th Ave
Yellowknife NT X1A 2N7

Via Email: stoogood@reviewboard.ca

Attention: Mr. Edjericon

RE: Environment Canada's Closing Comments – EA1011-001 – Avalon Rare Metals Inc. – Thor Lake Rare Earth Element Project

Please find below Environment Canada's (EC) closing comments regarding the Environmental Assessment (EA) for the Thor Lake Rare Earth Element Project.

EC participated in the review of the proposed Thor Lake Rare Earth Element Project in order to provide specialist advice, information and knowledge to the Mackenzie Valley Environmental Impact Review Board. EC will not be issuing permits or authorizations for the proposed Project, but has regulatory duties and responsibilities under applicable legislation as follows: *Department of the Environment Act*, *Canadian Environmental Protection Act, 1999*, the pollution prevention provisions of the *Fisheries Act*, the *Migratory Birds Convention Act*, and the *Species at Risk Act*. Various regulations, policies and guidelines stem from these statutes.

Following the public hearings held February 18-20th, 2013 in Yellowknife, parties to the EA were given the opportunity to submit in writing closing comments, additional clarifications, as well as any outstanding responses to questions raised during the hearings.

EC provided nine recommendations in its Technical Report of November 29th, 2012. In this final submission, EC would like to reiterate several key concerns.

1. EC raised questions and concerns throughout the EA process regarding a number of proposed Site Specific Water Quality Objectives (SSWQOs). As described at the public hearing, concerns included levels proposed for nutrients, as well as exceedences of proposed values for various parameters such as sulphate, chloride, and some of the rare earth elements. To address these concerns, EC suggests that a condition of any approval granted include a measure requiring further development of the proposed objectives in the regulatory stage, and that objectives be subsequently subject to ongoing validation and improvement.

2. At the Environmental Assessment hearings, Avalon acknowledged uncertainty in the modeled predictions of water quality. EC recommends that the Proponent be required to periodically update and calibrate water quality modeling with operational data, and review and revise predictions during the mine life in order to forecast changes more accurately and inform management response.
3. Monitoring will be a key element in the evaluation of whether the SSWQOs are indeed protective, particularly where the objectives are above background levels. Changes to water and sediment quality, benthic invertebrates, plankton and fish should be tracked, with monitoring results tied in to management actions geared to prevent changes from becoming adverse impacts. EC recommends that there also be pre-defined levels of change in place that trigger mitigation actions by the Proponent.

To conclude, EC would like to thank the Board for the opportunity to present our issues and recommendations. Should you have any questions or wish clarification on any aspect of this letter, please do not hesitate to contact Jane Fitzgerald at (867) 669-4746 or jane.fitzgerald@ec.gc.ca.

Sincerely,



Susanne Forbrich
Manager, Environmental Assessment and Marine Programs

cc: Lisa Lowman (Senior EA Coordinator, EA and marine Programs Division, EC)
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