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Paul Mercredi, Environmental Assessment Officer  
Mackenzie Valley Environmental Impact Review Board  
200 Scotia Centre  
P.O. Box #938  
Yellowknife, NWT  
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**RE: Avalon response to Draft Terms of Reference regarding the Thor Lake Project.**

Dear Paul,

Avalon appreciates the opportunity to respond to the Draft Terms of Reference (ToR) made available on the public registry Friday, November 26th, 2010. Upon review of the draft ToR, Avalon has several comments and clarifications that should be considered prior to issuing the final ToR.

**ToR: Section 2.1, 2<sup>nd</sup> paragraph**

*Within this document the term "Nechalacho Project" means any and all physical works and activities required to extract, concentrate, further process, store, and transport concentrates or other product out of the Mackenzie Valley, as well as to close and reclaim any and all aspects of the project. Where this document refers to the "Thor Lake mine site", that means the area covered by Avalon's mineral claims and mining leases at, adjacent to, or near Thor Lake. "Pine Point" means the area that Avalon will either use or discharge into at, adjacent to, or near the proposed hydrometallurgical facility in the former Pine Point's mine-site area.*

**Avalon:** For consistency with Avalon's Project Description Report and to not confuse stakeholders and shareholders, please refer to the Project as the "Thor Lake Project". The deposit at Thor Lake is referred to as the "Nechalacho Deposit". The Thor Lake Project (TLP) is made up of two site components, an underground mine and flotation plant

referred to as the “Nechalacho mine site” and the hydrometallurgical plant referred to as the “Hydrometallurgical plant site” at the former Pine Point mine.

**ToR:** Section 2.2.2, bullet #1:

*The minimum geographic scope will include Avalon’s mineral and surface leases and mining claims in the area of the Nechalacho Project Thor Lake mine site, sub-surface workings, and a reasonable impact footprint radius centered on the mine site. The Review Board excludes from this environmental assessment Avalon’s subsurface mineral leases and mining claims for the portion of the Avalon claim block that includes beryllium deposits. However, the Review Board includes surface activities and leases on that same portion of the claim block for the purposes of the Nechalacho Project that do not involve the mining and/or processing of beryllium ore in the geographic scope of assessment.*

**Avalon:** By inclusion of the sub-surface workings, does the Review Board intend to also act as a regulator for the NWT Mine Health and Safety Act and Regulations? Avalon intends to follow the NWT Mine Health and Safety Act and Regulations in the development and design of the underground operations. Can the review board please clarify its position with regard to the NWT Mine Health and Safety Act and Regulations?

**ToR:** Section 2.2.2, bullet #6

*The minimum geographic scope will include the road between Hay River and the Pine Point processing site, as well as the road between Fort Resolution, Fort Smith and the Pine Point Processing Site.*

**Avalon:** Please remove the road to Fort Smith from the ToR as this is not relevant to any portion of the proposed Project.

**ToR:** Section 2.2.2, bullet #7

*The minimum geographic scope will include the following areas:*

*7) The Hay River railhead transfer facility.*

**Avalon:** The Hay River railhead transfer facility is privately owned and operated by CN and will fall under CN's environmental standards of operation. This should not be included in the proposed Project.

**ToR:** Section 2.2.2, bullet #8  
Section 3.3.6, bullet 1, sub-bullet 6

*The minimum geographic scope will include the rail line between the Hay River railhead through Woodland Caribou habitat to the extent of the NWT-Alberta border.*

**Avalon:** This area is a public transportation corridor utilized by many businesses and industries in the North and owned by CN. Avalon does not have control of this rail system, nor can it be held accountable for all other businesses, industries and governments that utilize this system regularly. Will the review board be governing all existing and future use of this established rail system?

**ToR:** Section 2.2.2, bullet #11

*The minimum geographic scope will include the Great Slave Lake related to any potential impacts on water quality, fisheries and the human environment from any project-related activity, for example barging or effluent discharge.*

**Avalon:** There will be no effluent discharge into Great Slave Lake from the Thor Lake Project. This is Not Applicable.

**ToR:** Section 2.2.4, 2<sup>nd</sup> paragraph

*The scope of assessment will also include the various alternative methods for carrying out the proposed development as well as any and all related potential impacts stemming from their construction, operation and closure. This is particularly important in light of several project components still being undefined.*

**Avalon:** It is important that the Review Board understand that all project components have been defined throughout the Scoping Sessions. Please refer to Avalon's scoping session presentations for clarity. The only changes to the scope of the project that differ from the Project Description Report are as follows:

- Elimination of underground ramp-up production from 1,000 tpd in years 1-3 to 2,000 tpd throughout the project life.
- Re-location of hydromet tailings management facility from the existing Cominco tailings containment area to the historic N-38 open pit.

These changes constitute a clearer path for underground production, and represent an environmentally preferable and beneficial strategy that will permit progressive reclamation of past infrastructure that will positively enhance Avalon's proposal.

**ToR:** Section 3.1.4, 2<sup>nd</sup> paragraph

*The developer is encouraged to visually represent both sites of the Nechalacho Project and its surroundings using a diorama-type 3 dimensional landscape model to indicate scale, setting and direct footprint. This model should include the viewscape of the mine site and barge-docking facility from the surface Great Slave Lake.*

**Avalon:** This exercise is not a typical requirement in the review process and furthermore is costly to the Company.

**ToR:** Section 3.3.2, subsection: Pine Point, bullet 4  
Section 3.3.4, subsection: Pine Point, bullet 7  
Section 3.6, bullet 1

*Describe and predict the impacts to both surface water and groundwater quality stemming from Avalon's proposed alternative of a geothermal electric power plant, given that Avalon would have to drill through the Presquile Aquifer to reach economic heats and discharge any effluent from this operation. Also indicate how the quantity of water used in this case would affect surface water and groundwater quality.*

**Avalon:** The Geothermal electric power plant is NOT applicable to this Project. Avalon does not intend to be a power supplier. Any geothermal power plant will undergo its own process and will be driven by an independent company that specializes in this alternative energy technique. Please remove all reference to geothermal power plants from the ToR.

**ToR:** Section 3.3.2, subsection: Both sites, bullet b  
Section 3.3.8, bullet 3

*at Pine Point, effects of runoff from the coal storage area. Avalon will provide an analysis on the range of water quality that can come from the use of varying 'grades' of coal, from poor to high. Also predict and describe runoff from the sulphur storage area.*

**Avalon:** The investigation of varying grades of coal is not necessary as Avalon will only be using high quality coal and will include this in its commitments.

**ToR:** Section 3.4, bullet 7

*Predict potential impacts to public safety due to project-related open or thin-ice areas downstream of both project sites.*

**Avalon:** This is not applicable as there will be no open or thin-ice areas downstream from the project sites that don't already naturally occur in nature.

**ToR:** Section 3.4, bullet 12

*Describe the specific hazards to employees as well as to public safety and health from project-related radiation or other hazards that may arise from Nechalacho Project operations.*

**Avalon:** As described during the scoping sessions and supported by third party experts (Senes Consulting) in an August 26<sup>th</sup> email submission to the MVEiRB, there will be no hazards to employees or the environment with regard to the low levels of radiation anticipated to be associated with the Thor Lake Project.

**ToR:** Section 3.6, 1<sup>st</sup> paragraph, 3<sup>rd</sup> sentence

*The developer must also present the various ways that such alternatives may impact any valued component of the surrounding environment and suggested mitigations to prevent significant adverse impacts to those components. For example:*

**Avalon:** The wording in this sentence suggests that the Review Board has predetermined that there will be significant adverse impacts. This would not seem to be an appropriate conclusion for the Review Board to reach before the review process has been completed.

Avalon would appreciate the Review Board modifying these types of statements in the Terms of Reference so as not to give the impression that it has predetermined an outcome for the Thor Lake Project.

**ToR:** Section 3.6, bullet 2

*Avalon has also suggested utilizing wind generators to supplement power needs. Avalon must predict impacts to migrating birds from the wind generation sites or other impacts.*

**Avalon:** Avalon's wind investigation is currently being conducted in partnership with the Yellowknives Dene First Nation. Avalon has made no absolute statement about the inclusion of supplemental wind power at the Nechalacho mine. If this were to occur, this would be subject to a separate permitting process. Please remove this from these ToR and this environmental assessment.

**ToR:** Appendix D, bullet #1

*Predict potential impacts of the Nechalacho Project on fish and wildlife in combination with impacts from past or present pollution from contaminated sites in the area, with particular emphasis on the former Pine Point mine site and the reasonably foreseeable progression of Tamerlane's Pine Point Pilot Project.*

**Avalon:** Based on this comment, is the Review Board stating that it believes the former Pine Point mine site to be contaminated? Avalon would encourage the Review Board to use less accusatory, inflammatory and technically incorrect statements such as this one, and others of a similar nature in other sections of the draft Terms of Reference.

Thank you for your consideration



David Swisher  
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Avalon Rare Metals