



Mackenzie Valley Land and Water Board
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APPLICATION FOR A NEW WATER LICENCE, AMENDMENT OF LICENCE, OR RENEWAL OF LICENCE.

Mackenzie Valley Land and Water Board

File

APR 26 2010

Application/Licence No:
 (amendment or renewal only)

Application No: **MY2010L2-0005**
 Copied To: **JM/Reg.**

<p>1. Name and Mailing Address of Applicant</p> <p>Avalon Rare Metals Inc. 6165 Highway 17, unit 330 Delta, BC V4K 5B8</p> <p>Telephone: 604-940-3800 Fax: 604-940-3808</p>	<p>2. Address of Head Office in Canada if Incorporate</p> <p>Avalon Rare Metals Inc. 130 Adelaide Street West, Suite 1901 Toronto, Ontario M5H 3P5</p> <p>Telephone: 416-364-4938 Fax: 416-364-5162</p>
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3. Location of Undertaking (describe and attach a map, indicating watercourses and location of any proposed waste deposits).

Thor Lake Latitude 62° 06' 30"N **Longitude** 112° 45' 30" W
HydroMet Latitude **Longitude**

4. Description of Undertaking (describe and attach plans)

Avalon Rare Metals Inc. ('Avalon') is a publicly traded company engaged in the exploration and development of rare metal deposits in Canada. Avalon proposes to mine, mill and produce a number of rare earth metals including, niobium, zirconium, tantalum and possibly gallium from the Nechalacho deposit, located on its Thor Lake Property. The proposed project is referred to as the Thor Lake Project (TLP).

The TLP has two proposed site components: an underground mine and flotation plant (Nechalacho Mine and Flotation Plant site), to be located at the Thor Lake Property, and a hydrometallurgical plant (Hydrometallurgical Plant site) to be located at the existing brownfields site of the former Pine Point Mine.

The Nechalacho Mine and Flotation Plant will have an operating life of approximately 14 years. The initial expected daily mill throughput is approximately 1,000 tpd. Mill throughput is planned to ramp up to 2,000 tpd by year 4. Camp facilities will be constructed and operated at the site for the life of the Thor Lake Project. The rare metals concentrate produced at the Nechalacho Mine and Flotation Plant will be barged across Great Slave Lake for further processing at the Hydrometallurgical Plant. No permanent camp facilities will be needed at the Hydrometallurgical Plant site.

Avalon has produced a Project Description Report (PDR) to support its application for a Water License and Land Use Permit for the development of the Thor Lake Project. The application is in the name of Avalon Rare Metals Inc., which will also be the Project operator. The Project Description Report is divided into the following six sections:

- Introduction
- Project Description
- Public Engagement and Communications

- Environmental Overview
- Potential Environmental Effects and Mitigation Measures
- Closure and Reclamation

This report provides the information required for the technical review of the Thor Lake Project. Avalon Rare Metals Inc. was assisted by EBA Engineering Consultants Ltd. (their lead consultant). The report identifies the technical aspects and environmental interactions the Project may have during the design, construction and operation phases of the Project. It also delineates the mitigation measures proposed to effectively address these matters. The appendices provide the technical information collected to support the report.

5. Type of Undertaking.

- | | | | |
|-----------------------|-------|------------------|-------|
| 1. Industrial | _____ | 5. Agriculture | _____ |
| 2. Mining and Milling | X | 6. Conservation | _____ |
| 3. Municipal | _____ | 7. Recreation | _____ |
| 4. Power | _____ | 8. Miscellaneous | _____ |

6. Water Use

- | | | | |
|--|-------|--------------------------------------|-------|
| To obtain water | _____ | Flood control | _____ |
| To cross a watercourse | _____ | To divert water | _____ |
| To modify the bed or bank of a watercourse | _____ | To alter the flow of, or store water | _____ |

Other (describe): The use of water is required for the Thor Lake Project Flotation Process and Hydrometallurgical secondary processing as described in the accompanying Project Description Report.

7. Quantity of water involved (litres per second, litres per day or cubic meter per year), including both quantity to be used and quality to be returned to source.

As described in section 2.7.5 of the Project Description Report, The Nechalacho Mine will incorporate a closed-loop water system as identified in water balance Table 2.7-7. The Hydrometallurgical plant describes its water balance in section 2.8.4 of the Project Description Report and a diagram is available in Table 2.8-7. All water consumed or discharged will be in compliance with anticipated MVLWB Water License criteria.

8. Waste deposited (quantity, quality, treatment and disposal)

All waste management details are described for the Nechalacho Mine and Hydrometallurgical Plant in sections 2.7.4 and 2.8.3 of the Project Description Report.

9. Other persons or properties affected by this Undertaking (give name, mailing address and location). Attach a list if necessary.

Section 3.1 of the Project Description Report identifies all communities involved in the Thor Lake project and more specifically, Table 3.1-1.

10. Predicted environmental impacts of Undertaking and proposed mitigation.

For the duration of the Thor Lake Project and Hydrometallurgical Plant, all anticipated environmental impacts will be of a highly localized, generally short-term, reversible nature. No significant impacts are predicted. Detailed environmental effects and mitigation measures can be found in section 5.0 of the Project Description Report.

11. Contractors and sub-contractors (names, addresses and functions). Attach a list if necessary.

Avalon will be utilizing many professional consultants and contractors during the development of the Thor Lake Project and Hydrometallurgical Plant. Avalon is unable to

provide contractor and subcontractor information as we are still in the process of pursuing firm estimations, quotations and agreements. As soon as this information becomes available, Avalon will communicate to the Mackenzie Valley Land and Water Board.

12. Studies undertaken to date. Attach a list if necessary.

Avalon has conducted over two years of environmental studies to date which include:

- Climate & Hydrology baseline studies;
- Hydrogeology studies;
- Aquatics and Fisheries studies;
- Terrain, Soils, & Permafrost studies;
- Vegetation Resource studies;
- Wildlife Resource studies; and
- Hydrometallurgical Plant Environmental Considerations.

These studies are far from inclusive and many more technical analysis and reports will be available upon completion of Avalon's prefeasibility study.

13. Proposed time schedule.

Start date: 1st Quarter 2013 Completion date: >2030

Name (print): David Swisher

Signature: 

Title (print): VP Operations

Date: April 23rd, 2010

Please make all cheques payable to "Receiver General of Canada"

FOR OFFICE USE ONLY

Application Fee Amount: \$30.00 Receipt No: _____

Water Use Deposit Amount: \$17,080 Receipt No: _____