



April 16, 2024

Avalon Advanced Materials Announces Commencement of Preliminary Economic Assessment (“PEA”) for Avalon’s Thunder Bay Lithium Conversion Facility

TORONTO, ON - [Avalon Advanced Materials Inc.](#) (TSX: [AVL](#) and OTCQB: [AVLNF](#)) (“Avalon” or the “Company”) is pleased to announce that it has engaged DRA Americas Inc., a 100% owned subsidiary of DRA Global (“DRA”) to commence a Preliminary Economic Assessment (“PEA”) of a lithium hydroxide conversion facility.

The Project will be administered under AVL’s wholly owned subsidiary Lake Superior Lithium Inc. The PEA will consider feed sourcing of high-grade lithium concentrates from various sources. The lithium conversion facility will feature the environmentally friendly Metso lithium conversion technology. This study will include lithium concentrate reagent receiving and storage, processing, and site infrastructure as well as shipping/handling of product and byproduct off site.

The Metso lithium conversion technology is being deployed globally with two currently under construction and expected to be operational from 2025. The Metso innovative technology is an acid-free lithium conversion approach that eliminates the use of hazardous reagents and produces a byproduct that is a mixture of sand and limestone. The byproduct material can be used in the production of construction materials.

In June of 2023, Avalon purchased “a crown jewel” brown field industrial site within Canada located at 965 Strathcona Avenue in the heart of Thunder Bay, Ontario. The 100% owned site is a 383 Acre site and has direct access to all infrastructure needs including access to 80-100 MW of electrical power, natural gas, town water and sewer, rail and two on site rail spurs, road access near the Trans Canada Highway, and an open water port on the shore of Lake Superior.

The proposed production level of the facility would be based on similarly designed units and is anticipated to be in the order of 30,000 tonne per year lithium hydroxide (LiOH) production with an operating life of over 20-years. The facility would be designed to produce both lithium hydroxide and lithium carbonate to address demand for the down stream consumers.

Avalon has engaged DRA as the lead consultant to work closely with the Company, its technology partner Metso and all subcontractors and concentrate supply partners. DRA will provide overall coordination of the PEA pulling together and integrating all aspects of the project.

Avalon Chief Executive Officer Scott Monteith commented, he is pleased to see the PEA kick off. “The forecasted battery manufacturing capacity is expected to increase over the coming years as world EV and battery utilization becomes more mainstream. The decision to pursue production of battery grade lithium hydroxide and lithium carbonate is driven by continued strength in lithium battery demand and North American supply chain needs for high quality product produced in North America.”

About DRA Global

DRA Global Limited is an international multi-disciplinary engineering, project delivery and operations management group, predominantly focused on the mining, minerals, and metals industry.

The Group has an extensive track record spanning almost four decades across a wide range of commodities. Our teams have deep expertise in the mining, minerals, and metals processing industries, as well as related non-process infrastructure such as, water, and energy solutions.

DRA covers all major mining centres with offices across Africa and the Middle East, North and South America, and the Asia-Pacific.

About Avalon Advanced Materials Inc.

Avalon Advanced Materials Inc. is a Canadian advanced manufacturing company focused on vertically integrating the Ontario lithium supply chain. The Company, through its joint venture with SCR-Sibelco NV, is currently developing its Separation Rapids lithium deposit near Kenora, ON, while also continuing to advance the Snowbank lithium and Lilypad lithium-caesium projects. Avalon is also working to develop its Nechalacho rare earths and zirconium project located in the Northwest Territories. This deposit contains critical minerals for use in advanced technologies in the communications and defense industries among other sectors.

In addition to these upstream activities, Avalon is executing on a key initiative to develop Ontario’s first midstream lithium hydroxide processing facility in Thunder Bay, ON, a vital link bridging the lithium resources of the north with the downstream EV battery manufacturing base in the south.

For more information and media inquiries, contact Zeeshan Syed, President, Avalon Advanced Materials Inc., at 416-364-4938 or IR@AvalonAM.com.

Forward-Looking Information

This news release contains “forward-looking information” within the meaning of applicable Canadian securities legislation. Forward-looking information includes, but is not limited to statements related to the PEA timing, administration and content, that the proposed production level of the facility would be based on similarly designed units and is anticipated to be in the order of 30,000 tonne per year lithium hydroxide (LiOH) production with an operating life of over 20-years, that the facility would be designed to produce both lithium hydroxide and lithium carbonate, and completion of the Company’s business objectives, and the timing, costs, and benefits thereof. Generally, forward-looking information can be identified by the use of forward-looking terminology such as “add” or “additional”, “advancing”, “anticipates” or “does not anticipate”, “appears”, “believes”, “can be”, “conceptual”, “confidence”, “continue”, “convert” or “conversion”, “deliver”, “demonstrating”, “estimates”, “encouraging”, “expand” or “expanding” or “expansion”, “expect” or “expectations”, “forecasts”, “forward”, “goal”, “improves”,

“increase”, “intends”, “justification”, “plans”, “potential” or “potentially”, “promise”, “prospective”, “prioritize”, “reflects”, “robust”, “scheduled”, “suggesting”, “support”, “top-tier”, “updating”, “upside”, “will be” or “will consider”, “work towards”, or variations of such words and phrases or state that certain actions, events or results “may”, “could”, “would”, “might”, or “will be taken”, “occur”, or “be achieved”. Forward-looking information is subject to known and unknown risks, uncertainties and other factors that may cause the actual results, level of activity, performance or achievements of the Company to be materially different from those expressed or implied by such forward-looking information, including risks associated with mineral exploration and development operations such as: environmental hazards and economic factors as they affect the cost and success of the Company’s capital expenditures, the ability of the Company to obtain required permits and approvals, the ability of the Company to obtain financing, uncertainty in the estimation of mineral resources, uncertainty with respect to the ability to successfully construct and develop the Company’s lithium processing facility, the price of lithium, no operating history, no operating revenue and negative cash flow, land title risk, the market price of the Company’s securities, the economic feasibility of the Company’s mineral resources and the Company’s commercial viability, inflation and uncertain global economic conditions, uncertain geo-political shifts and risks, successful collaboration with indigenous communities, changes in technology and advancements in innovation may impact the development of the Company’s technology innovation centre and its lithium hydroxide processing facility, future pandemics and other health crises, dependence on management and other highly skilled personnel, title to the Company’s mineral properties, the ongoing war in Ukraine and Israel, extensive government and environmental regulation, reliance on artificial intelligence technology to influence mining operations, volatility in the financial markets, uninsured risks, climate change, threat of legal proceedings, as well as those risk factors discussed or referred to in the annual information form of the Company dated November 28, 2023 (the “AIF”) under the heading “Description of the Business – Risk Factors”. Forward-looking information is based on the reasonable assumptions, estimates, analysis and opinions of management made in light of its experience and perception of trends, current conditions and expected developments, as well as other factors that management believes to be relevant and reasonable in the circumstances at the date that such statements are made, but which may prove to be incorrect. Although the Company believes that the assumptions and expectations reflected in such forward-looking information are reasonable, undue reliance should not be placed on forward-looking information because the Company can give no assurance that such expectations will prove to be correct. In addition to other factors and assumptions identified in the AIF, assumptions have been made regarding, among other things: management of certain of the Company’s assets by other companies or joint venture partners, the Company’s ability to carry on its exploration and development activities without undue delays or unbudgeted costs, the ability of the Company to obtain sufficient qualified personnel, equipment and services in a timely and cost effective manner, the ability of the Company to operate in a safe, efficient and effective manner, the ability of the Company to obtain all necessary financing on acceptable terms and when needed, the accuracy of the Company’s resource estimates and geological, operational and price assumptions on which these are based and the continuance of the regulatory framework regarding environmental matters. Readers are cautioned that the foregoing list is not exhaustive of all factors and assumptions that may have been used. Although the Company has attempted to identify important factors that could cause actual results to differ materially from those contained in forward-looking information, there may be other factors that cause results not to be as anticipated, estimated or intended. There can be no assurance that such information will prove to be accurate, as actual results and future events could differ materially from those anticipated in such information. Accordingly, readers should not place undue reliance on forward-looking information. The Company does not undertake to update any forward-looking information, except in accordance with applicable securities laws.