

Press release

Plainfield, IL – December 6, 2017

Veolia's HPD[®] Evaporator and Crystallizer Technology Chosen by North American Lithium



Veolia Water Technologies will supply its proprietary [HPD[®] Evaporation and Crystallization](#) technology to recover lithium from a mining waste stream, reducing environmental impact and producing a valuable by-product in sodium sulfate.

North American Lithium Inc. is planning to re-start its hydromet mining operation in La Corne, Quebec, Canada for the production of lithium carbonate (Li_2CO_3). Lithium carbonate is one of the main materials needed to produce lithium ion batteries for electric vehicles, computers and mobile phones.

North American Lithium has turned to Veolia Water Technologies for the installation of the Sodium Sulfate Crystallization Circuit. The primary objective is increased recovery of lithium while producing a sodium sulfate (Na_2SO_4) by-product. In doing so, the project will benefit from recovering two products from what, previously, was a waste stream, thereby reducing the environmental impact and making the project a commercially viable source of valuable lithium carbonate.

"The system design is based on Veolia's vast experience with this form of production coupled with complex mixed salts solubility, energy efficiency, and reliability. This ultimately enabled Veolia to provide the right solution to benefit both North American Lithium and the local environment," commented Klaus Andersen, CEO of Veolia Water Technologies Americas.

A state-of-the-art solution

The multistage process includes MVR Falling Film Evaporation, two-stage crystallization in a HPD[®] Draft Tube Crystallizer and a HPD[®] MVR Crystallizer to produce anhydrous sodium sulfate that is dried for sale. This solution allows the client to recover useful resources in an energy efficient way and ensures a complete and well running lithium carbonate production plant.

About North American Lithium Inc.

North American Lithium Inc. is a Canadian industrial minerals mining company located near Val d'Or in Abitibi, Quebec. This project is under development with commissioning of an open pit lithium carbonate mine and processing plant nearing completion. The mine is expected to produce approximately 23,000 tonnes of battery grade lithium carbonate on an annualized basis. The high-quality product produced from the mine will meet the rapidly growing needs of the portable consumer electronics industry, electric and hybrid-electric vehicles, and grid storage solutions. www.na-lithium.com

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Veolia group is the global leader in optimized resource management. With over 163 000 employees worldwide, the Group designs and provides water, waste and energy management solutions that contribute to the sustainable development of communities and industries. Through its three complementary business activities, Veolia helps to develop access to resources, preserve available resources, and to replenish them.

In 2016, the Veolia group supplied 100 million people with drinking water and 61 million people with wastewater service, produced 54 million megawatt hours of energy and converted 30 million metric tons of waste into new materials and energy. Veolia Environnement (*listed on Paris Euronext: VIE*) recorded consolidated revenue of €24.39 billion in 2016. www.veolia.com

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