

Press release

Plainfield, IL – January 18, 2017

Veolia's new Modular Bulldozer Design (MBD™) using HPD® crystallization technology chosen by Osum Oil Sands Corp.

Osum Oil Sands Corp. in Alberta, Canada has awarded Veolia Water Technologies the Orion Phase I Crystallizer system, which reduces costly disposal of evaporator blowdown waste. The system will utilize Veolia's cost-saving [Modular Bulldozer Design \(MBD™\)](#).

The Orion oil field is currently producing approximately 8,000 barrels per day with regulatory approval in hand for expansion to 20,000 barrels per day. The Orion Phase 1 facility required a crystallization system in order to minimize the Evaporator blowdown waste.

Veolia's MBD™ crystallizer will reduce the disposal costs and increase the amount of recovered water as the new system will reduce wastewater disposal by up to 80%, remove 6 trucks per day from the road on average, and recycle up to an additional 90,000 m³ of water annually for reuse to generate steam at the Orion oil field.

Modular design proven to be very cost-effective

The philosophy of the Modular Bulldozer is to minimize fieldwork to the greatest extent possible. It is designed to be relocatable and can be installed and fully commissioned in approximately 4 weeks. Welded connections have been eliminated and ship loose items have been minimized to the greatest extent possible. This highly modularized concept is perfect for rapid deployment remediation. The economics of modular Zero Liquid Discharge (ZLD) installations has proven to be very efficient in remote oil and gas production sites. It has since become apparent that the modularization of ZLD systems is also very cost-effective at non-remote locations.

"The MBD™ system has been designed to meet many of our industrial customers' needs. With this new modular design we are able to fabricate and install the crystallizer system several months faster than with conventional methods, which will allow Osum to effectively reduce waste and remove trucks from local roads. This combined with accelerated OPEX savings is a win-win for Osum," said Klaus Andersen, CEO of Veolia Water Technologies, Inc.

The Technology

The MBD™ system is a crystallizer designed to separate the blowdown into mixed suspension for disposal and distilled water for use as boiler makeup water. It operates as a mixed suspension mixed product removal (MSMPR) crystallizer, operating at steady state with multiple crystalline species precipitating.

About Osum

Established in Alberta in 2005, Osum Oil Sands Corp. is a private, low cost oil sands producer focused on the responsible and environmentally conscious application of in-situ recovery technologies within Canada's oil sands and carbonates. Additional information on the Company is available at www.osumcorp.com.

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Veolia group is the global leader in optimized resource management. With over 174 000 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 2015, the Veolia group supplied 100 million people with drinking water and 63 million people with wastewater service, produced 63 million megawatt hours of energy and converted 42.9 million metric tons of waste into new materials and energy. Veolia Environnement (*listed on Paris Euronext: VIE*) recorded consolidated revenue of \$27.2 billion in 2015. www.veolia.com

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