



Water and Wastewater Newsletter

"...for the water treatment professional"

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In the News

Reactor Recycles WW Nutrients into Fertilizer



EDMONTON, ALBERTA -- The City of Edmonton's Gold Bar wastewater treatment plant has met a milestone by successfully operating for over six months as the world's first industrial-size nutrient treatment facility to remove phosphorus and other nutrients from municipal biosolids and recycle them into environmentally-safe commercial fertilizer.

The technology, developed by Ostara Nutrient Recovery Technologies Inc. of Vancouver, will help Gold Bar achieve its nutrient removal goals, increase

plant capacity and reduce maintenance costs, while also creating a revenue-producing product in the form of a high value fertilizer.

"Since the Ostara reactor was commissioned last spring, it has extracted more than 80 per cent of the phosphorus on average - achieving the design objective of 75 per cent - and 10 to 15 per cent of the ammonia from a flow of 500,000 liters per day, approximately 20 per cent of the Gold Bar plant's liquid biosolids stream," said Vince Corkery, Director of Wastewater Treatment at the City of Edmonton's Gold Bar treatment facility.

"We have worked closely with Ostara over the past two years toward building this first-of-its kind commercial scale nutrient recovery facility and we are very pleased with the operating results," said Corkery.

"We have supported this technology because it creates a valuable product from phosphorus and other polluting nutrients, which would otherwise clog our pipes and reduce our plant's treatment capacity. We look forward to continued cooperation with Ostara to add reactors capable of treating 100 per cent of our biosolids stream in the future," said Corkery.

Phillip Abrary, President and CEO of Ostara, said, "the Edmonton plant is Ostara's first commercial-size reactor, however several other commercial facilities are already in planning and design stages after successful field trials in 2007 by municipalities, ethanol biofuel plants and food processing plants in the United States and Canada. As many as 400 municipalities and industrial plants in North America and 500 in Europe are potential customers for the Ostara process."

"Many wastewater treatment plants, such as Gold Bar, remove phosphorus and other pollutants from waste waters to reduce their nutrient loading on the receiving water environment. These nutrients are extracted from the processes in the form of biosolids. The biosolids are further dewatered.

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Thanks,
Joe Taylor, Editor
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The nutrient rich liquid extracted from these biosolids can add costs to the system by clogging pipes with a concrete-like scale called struvite the result of phosphorus and ammonia (nitrogen) combining with magnesium and by occupying up to 25 - 50 per cent of the system's capacity. The Ostara process treats these liquids.

"Our reactor integrates into the wastewater treatment system, processes the biosolids liquids to recover phosphorus and other nutrients - and then converts them into a high-quality environmentally-friendly commercial fertilizer that can generate revenue for the municipality," said Abrary.

The Ostara reactor at Gold Bar produces approximately 500 kg of "Crystal Green" fertilizer per day. The product is sorted, dried and bagged on site and is immediately ready for commercial sale. No further processing is required, although for some applications, fertilizer distributors may wish to blend Crystal Green with other fertilizer components to match the agronomic needs of the crop.

More information is available at <http://www.ostara.com/>

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