

Welcome to Resources for Idaho

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UI-developed Water Treatment Technology Finds Marketplace Eager to Learn More

MOSCOW – Commercial demand is growing for a water treatment process developed through University of Idaho research, says the company bringing the product to market.

The patent-pending Vandal-ION process developed by UI environmental chemist Greg Möller and his colleagues shows increasing promise as a cost-effective technology capable of meeting tough new regulations.

Pilot testing shows the process can remove phosphorus from wastewater, as well as arsenic, selenium and heavy metals. The potential applications include treating drinking water and cleaning municipal, industrial and mining wastewaters.

A pilot project last summer at Moscow's wastewater treatment plant produced outstanding results, Möller said, reducing total phosphorus concentrations to 59 from 776 parts per billion, less than half the plant's permitted regulatory limit of 136 ppb.

Initial interest in phosphorus treatment outstrips inquiries for arsenic removal, said John Shovic, president of Coeur d'Alene-based Blue Water Technologies. The company licensed exclusive commercial rights to the process from the Idaho Research Foundation on the UI campus.

A half-dozen Idaho food processing companies and municipalities are actively considering installing the technology, Shovic said, to reduce phosphorus releases.

Blue Water intends to go national with the UI technology-based product in 2004 and is already actively engaged with potential international customers. "This is a worldwide problem," Shovic said.

Food processing companies, particularly those operating potato and cheese plants, show the most enthusiasm for the new process because of tightening federal and state limits on phosphorus releases. Further testing is planned at cheese plants in Idaho and Wisconsin.

Phosphorus promotes the growth of algae and can lead to major water quality problems.

"This is a low-cost solution to the problem," Shovic said. "The people who have the immediate need to improve wastewater treatment are focusing on phosphorus." He anticipates the first commercial use of the process will begin later this year.

Federal regulations strictly limit the total amount of phosphorus released into both surface and groundwater. Wastewater releases by both municipal sewage treatment plants and food processing plants must comply with individual limits set by regulators.

Phosphorus poses particular challenges because it is so commonplace. Sources include laundry detergent and fertilizers used on farmers' fields and suburban lawns.

"We are always trying to find innovative and cost-effective ways to remove or agronomically utilize nutrients from wastewater," said Terry Uhling, J.R. Simplot Co. senior vice president and general counsel. The Boise-based agribusiness is one of Idaho's largest operators of potato-processing plants.

The company is aware of the new treatment process and is watching its development, Uhling said. "We are interested in reviewing new technology that protects the environment and allows us to meet regulatory requirements through reasonable and practical solutions."

The arsenic-removal system successfully passed pilot testing in late 2002 in Fruitland, Idaho. Naturally occurring arsenic levels there are less than current federal drinking water standards but greater than those allowed under new regulations.

An estimated 200 Idaho water systems may need more advanced technology to remove arsenic when the new, stricter regulations take effect.

Shovic said Blue Water also is actively developing the arsenic-removal technology that has also drawn interest from around the world.

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