



## For Immediate Release:

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HRSD Treatment Plant to Build Full-Scale Nutrient Recycling Facility Nutrients will be Recycled into 'Green' Commercial Fertilizer

**VIRGINIA BEACH, VA and VANCOUVER, BC — November 9, 2009** — The Hampton Roads Sanitation District (HRSD) Commission has approved the construction of a facility that will implement new technology to recover phosphorus and other nutrients from wastewater and recycle them into a renewable and environmentally-safe, premium-quality fertilizer.

The technology – developed by Ostara Nutrient Recovery Technologies Inc. – will help protect the Chesapeake Bay watershed by cost-effectively removing polluting nutrients such as phosphorus from the liquid wastewater stream.

The facility will be built at HRSD's Nansemond Treatment Plant, which is designed to clean up to 30 million gallons of wastewater per day (MGD). Located in Suffolk, Virginia, the plant also serves Smithfield and Isle of Wight County as well as parts of the cities of Chesapeake and Portsmouth. The plant, which features a seasonal biological nutrient removal process, discharges its treated effluent to the James River, a tributary of the Chesapeake Bay.

HRSD will construct the Nutrient Recycling Facility (employing the PEARL™ Process), which is scheduled to become fully operational in the first quarter of 2010. The PEARL Process was successfully tested in an Ostara pilot-scale facility at the Nansemond Plant from October 2006 to March 2007.

Bill Balzer, manager of the Nansemond Wastewater Treatment Plant, said the PEARL Process provides an environmental and cost-effective solution to ensuring that unwanted polluting nutrients are removed from the plant's wastewater stream, which will ultimately protect the Chesapeake Bay watershed.

"The exciting thing about this partnership is that we are implementing a green, sustainable technology that is recovering a reusable resource – phosphorus – and creating a marketable product. It's a cost-neutral project that will help us solve our nutrient challenges with an environmental benefit," said Balzer.

Phillip Abrary, president of Ostara Nutrient Recovery Technologies, says the partnership with HRSD provides a solution for any wastewater treatment plant faced with excessive nutrient loads. Such challenges can limit treatment capacity and cause struvite scale during the sludge handling processes, coating pipes and valves, reducing flow capacities and increasing maintenance requirements. The Ostara technology will provide the Nansemond plant with a cost-effective means of dealing with these nutrient related problems.

"Ostara's process is complementary to what HRSD has been doing and addresses a missing piece in the biological nutrient removal equation. The process will not only help the plant deal with high phosphorus loads and protect the environmentally sensitive Chesapeake Bay, but will also create value through the production of a premium fertilizer. HRSD will realize savings in chemicals, energy and sludge generation as soon as soon as the facility becomes operational," says Abrary.

Ostara's PEARL process integrates directly into the HRSD treatment system, processes the sludge liquids, and then converts them into a high-quality environmentally-safe fertilizer. During the pilot study, it was found that the PEARL process recovered more than 85 per cent of the phosphorus and 40 per cent of the ammonia that would normally be returned back to the plant from the solids processing.

Implementing the Ostara Nutrient Recycling Facility at the Nansemond Wastewater Treatment Plant will help protect the environmentally-sensitive Chesapeake Bay, and its rivers and streams. The discharge of nutrients, such as nitrogen and phosphorus, into Chesapeake Bay causes algae blooms that choke surrounding marine life and upset the natural ecosystem. It has been identified by the Chesapeake Bay Foundation as one of the most serious problems affecting the Bay.

Through the agreement, Ostara will deliver the PEARL Process and provide ongoing technical support to ensure the treatment performance and fertilizer product quality is maintained. HRSD will construct the facility and then integrate its ongoing operation and maintenance into the Nansemond plant. Ostara will manage the commercial sale of the fertilizer product, Crystal Green®, which is being marketed throughout North America and Europe.

The PEARL process has been operating at a commercial scale since May 2009 at the Clean Water Services' Durham Advanced Wastewater Treatment facility in Tigard, Oregon. The City of York, PA announced earlier this month the construction of an Ostara Nutrient Recovery Facility at their York Wastewater Treatment Plant. The technology is currently being tested at pilot scale at several wastewater treatment facilities throughout North America and Europe.

## **About Hampton Roads Sanitation District**

Since its creation in 1940, HRSD has been dedicated to protecting public health and the waters of Hampton Roads by treating wastewater effectively. The regional utility's service area includes 17 cities and counties of southeast Virginia, an area of over 3,100 square miles with a population of 1.6 million. Wastewater flows through municipal collection systems to HRSD's interceptor system. This network of pipelines and pump stations conveys the flow to 13 treatment plants, which have a combined capacity of 231 million gallons per day (MGD).

The Nansemond Treatment Plant, which began operation in 1983, is a 30 MGD facility that features a season biological nutrient removal process. The plant, located in Suffolk, Virginia, has received national awards for outstanding compliance with its environmental permits for 22 consecutive years. For more information, visit <a href="https://www.hrsd.com">www.hrsd.com</a>.

## **About Ostara**

Ostara Nutrient Recovery Technologies Inc., founded in 2005, is a Vancouver-based company commercializing proprietary technologies that recover resources from wastewater and recycle them into valuable products. Ostara's struvite recovery process, developed at the University of British Columbia, recovers pollutants that would otherwise be released into the environment, helps wastewater treatment plants reduce operating costs and meet environmental regulations, and provides municipalities and utilities with cost savings from the sale of the recovered pollutants that are recycled into environmentally friendly slow-release fertilizer, Crystal Green®. Ostara is backed by VantagePoint Venture Partners in the U.S. and Frog Capital in the UK. For more information: visit www.ostara.com and www.crystalgreen.com.

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