For Immediate Release

Ostara Sees Improved Dewaterability and Reduced Biosolids Production with Waste-activated Sludge Stripping Technology

Adding WASSTRIP® to Ostara's Pearl® process reduces biosolids production by 20% while increasing cake solids by 4%

29 September 2014 - Vancouver, CANADA – A powerful sludge-stripping technology offered by Ostara Nutrient Recovery Technologies is boosting the nutrient recovery capacity of the company's Pearl process while helping wastewater treatment plants that practice biological phosphorus removal reduce overall biosolids production and improve digester performance.

WASSTRIP (Waste-Activated Sludge Stripping to Recover Internal Phosphorus) has been shown to provide a number of benefits including:

- Reduced overall biosolids production by up to 20%
- Improved dewaterability – increased cake solids by up to 4%
- Reduced total phosphorus in remaining biosolids by nearly 10%
- Reduced water-soluble phosphorus in biosolids by 70%
- Decreased dependence on costly coagulants & flocculants
- Reduced struvite formation in digester

WASSTRIP optimizes efficiency in bio-P plants by releasing phosphorus and magnesium before they reach the digester. The nutrients are diverted from the sludge stream and into the thickening liquor – away from anaerobic digestion – and combined with dewatering liquor so they can be recovered for reuse in the Pearl reactor, thus eliminating the buildup of struvite throughout the system.

"WASSTRIP effectively 'turbo-charges' the nutrient recovery capacity of utilities using the Pearl process," said Ahren Britton, Ostara's Chief Technology Officer. "By releasing nutrients before they reach the digester, the process significantly improves dewaterability, enhances digester capacity and performance and reduces overall biosolids volume produced at the plant."

The improved dewaterability and reduction in biosolids production, combined with a reduction in coagulants and flocculants needed, can add up to substantial annual operating cost savings.

"Biological phosphorus removal offers considerable benefits to resource recovery facilities, not the least of which is to ensure discharge limits are met" said Steve Wirtel, Senior VP, Technology Solutions at Ostara. "But the impact on dewaterability and biosolids production can cause operating and maintenance costs to rise and plant reliability to suffer. WASSTRIP helps treatment plants maximize the benefits of their investment in bio-P while maximizing their nutrient recovery ROI."

Due to concerns about nutrient pollution from fertilizer runoff, many jurisdictions limit the amount of total or water soluble phosphorus permitted in land-applied biosolids. Because WASSTRIP reduces the overall phosphorus content in biosolids, it helps municipalities manage this issue by

improving the overall phosphorus-to-nitrogen balance.

Added Wirtel: “By helping municipalities manage the P-to-N ratio of their biosolids, we not only improve the acceptability for land application, but more importantly, enhance the utility’s role as water stewards in the community, and as resource recovery centers. Plus, the additional P recovered results in additional revenue for the municipality.

WASSTRIP technology is currently employed at three of Ostara’s seven operating facilities and is part of the design at three facilities to be launched in the coming 18 months.

To learn more about WASSTRIP visit Ostara at WEFTEC 2014 in New Orleans, Sept. 27 to Oct.1, booth #2811 or go to www.ostara.com.

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About Ostara

Vancouver-based Ostara helps protect precious water resources by changing the way cities around the world manage excess nutrients both in wastewater streams and due to fertilizer runoff. The company's proprietary technology, the Pearl® Process, recovers otherwise polluting nutrients, phosphorus and nitrogen, from municipal and industrial water streams, and transforms them into a slow release, eco-friendly fertilizer marketed as Crystal Green®. The process helps wastewater treatment plants reduce nutrient management costs and meet increasingly stringent discharge limits, while Crystal Green’s innovative Plant-Activated™ mode-of-action improves crop yield and performance, while reducing the risk of nutrient leaching and runoff. Crystal Green (5-28-0 +10% Mg) is a slow-release nitrogen, phosphorus, and magnesium fertilizer that is used in blends by growers primarily throughout North America and the UK. Providing full season nutrient availability to plants and crops, Crystal Green is more efficient and environmentally friendly compared to conventional phosphorus fertilizers. Ostara operates facilities throughout North America and Europe and has a number of projects under construction, design and development, including the largest nutrient recovery facility in the world in partnership with the Metropolitan Water Reclamation District of Greater Chicago. Ostara is also the recipient of numerous awards including a World Economic Forum 2011 Technology Pioneer, the Global Cleantech 100, and Deloitte’s Technology Green 15. For more information please visit www.ostara.com and www.crystalgreen.com.

Images and Media Downloads: http://ostara.com/weftec2014

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