

NAWTEC Speaker Abstract

The eco/Tech Sludge Recycling System: New Waste Streams, New Revenues

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The eco/Technologies Sludge Recycling System (eco/Tech SRS) is an important new patented and commercially proven technology that provides resource recovery facilities with a new revenue source *and* the potential for reduced oxides of nitrogen emissions. The eco/Tech SRS offers an environmentally sound, cost-effective disposal option for sludge producers, while ensuring significant increased net revenue potential for municipal waste combustor facilities. As the wastewater treatment industry faces increasing regulatory scrutiny that will result in more expensive sludge disposal practices, the resource recovery industry, which has already met the regulatory challenge and has taken the lead in compliance and corporate citizenship, can provide the answer.

From the disastrous sludge incinerators of the 1950s and 1960s to today's fossil-fuel-dependent sludge dryers, a sludge co-combustion system has never achieved both commercial economic viability and environmentally sound application. By focusing on both the limitations of past practice and ideal integration with municipal waste combustors, EnergyAnswers established the following design objectives:

- Provide a flexible and efficient sludge receiving and processing system that handles sludge with a wide range of characteristics, including variable solids content; delivers a consistent flow of sludge to the injection system; and eliminates odor control problems typical of other sludge management systems
- Allow continuity of MSW combustor throughput by balancing sludge heating value with heat losses presented by moisture in the sludge
- Avoid the material handling difficulties typically encountered with sludge having solids content greater than 15% by adding waste liquids and agitating to produce a mixture of flowable sludge for ease of control and high operating reliability
- Minimize sludge particle size to achieve no impact on ash quality and air emissions
- Inject sludge at a ratio up to 5% by weight of dry sludge solids to as-fired MSW
- Design the system in modular components for application in multiples to future projects of any size

- Achieve complete integration with the combustion control system for automatic and safe operation of the SRS and the entire facility
- Keep system cost to a minimum to achieve disposal savings for sludge generator and new revenues for the WTE facility owner

The flagship eco/Tech SRS has now been installed and is operating commercially at EnergyAnswers' Pioneer Valley Resource Recovery Facility. It is ready for commercial application worldwide. eco/Technologies, a wholly-owned subsidiary of EnergyAnswers dedicated to developing sludge recycling projects, provides a full range of project development services to assist in implementing new co-combustion projects.

This technology has become successful in part because the Massachusetts Department of Environmental Protection was willing to look beyond the traditional, mutually exclusive regulatory categories of air, water, and solid waste, to an integrated, sustainable solution. Their foresight allowed the permit for initial testing of the SRS concept and now two permits for commercial design and construction of systems in western Massachusetts. Similarly, our industry can look beyond itself and offer the wastewater treatment industry a local solution for its sludge disposal challenges. Start by visiting the Pioneer Valley Resource Recovery Facility in Agawam, Massachusetts, and see how this technology can improve the bottom line for your facility while reducing emissions and reducing the cost of sludge disposal in your community.

Larry Beaumont is Senior Vice President of EAC Operations, Inc., and General Manager of eco/Technologies, LLC. He is the principal inventor of the eco/Tech SRS and has been a member of ASME for 27 years. Mr. Beaumont is a graduate of Michigan State University and resides in Littleton, Colorado. Prior to joining EnergyAnswers Corporation, he was a partner, co-founder, and national director of R. W. Beck's solid waste management group.