RIALTO BIOSOLIDS PROCESSING FACILITY

EnerTech Environmental | Rialto, California

Currently land application, landfilling, and incineration are the three primary options for managing the approximately seven million dry tons of biosolids produced each year in the United States, with the majority of biosolids recycled via land application. As population grows and biosolids volumes rise, these existing biosolids management options are facing increasing challenges and costs.

EnerTech's SlurryCarb process is an innovative technology that produces a renewable fuel from biosolids at a significantly lower cost than conventional drying. EnerTech's SlurryCarb process chemically converts biosolids into a high-energy, renewable fuel. Using heat and pressure, the process carbonizes the organic matter in biosolids and ruptures cell walls to release bound water. The resulting slurry dewaters to 50 percent total solids by centrifugation, and is then dried using approximately two-thirds less energy than conventional drying. In addition to producing a marketable end product, the SlurryCarb process produces energy savings that result in an approximately one-third reduction in overall cost compared to traditional drying technologies.

E-Fuel, the end product of the SlurryCarb process, has been certified as a renewable fuel by the California Energy Commission and the Green-e Renewable Electricity Certification Program and can be used as a renewable alternative to fossil fuels.

E-Fuel is an ideal feedstock for cement kilns in particular. The ash content can be incorporated directly into the cement product, reducing the quantity of cement feedstock required. When used in a cement kiln, there is no residual at the end of the process. Complete biosolids recycling is achieved.

The Rialto facility has received strong support from local municipalities seeking long-term, environmentally sound biosolids recycling and beneficial reuse options to replace diminishing land application options. Once operational, it will receive and process biosolids from five area municipalities, providing permanent, complete biosolids recycling and avoiding the environmental concerns associated with agricultural land application. Because of these concerns, the project is on a fast track, using the design-build delivery method.

As the onsite design-builder, HDR coordinated the procurement, delivery and installation of 220 pieces of equipment, over 500 instruments, 700 valves and miles of ducting and piping. HDR wrote manuals for checkout and commissioning, as well as the overall plant operations and maintenance. During startup, HDR led the troubleshooting resolution process and supported EnerTech in ramping up the facility to design capacities.

HDR

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