

Press Release

CR&R Anaerobic Digestion Facility Underway

Perris Renewable Natural Gas Facility Coming out of the Ground

Stanton, California, June 30, 2014: Southern California based CR&R Environmental Services has entered the construction phase of its anaerobic digestion facility in Perris, California. The project's first phase will convert over 80,000 tons per year of municipal organic wastes into Renewable Natural Gas (RNG). The project is fully permitted for 3 additional phases that will convert over 320,000 tons of organic wastes into RNG and generate the energy equivalent of 4 million diesel gallons, making it the largest project of its kind in the U.S. at full build-out.

"We are excited to get construction for phase 1 in full swing," says Mike Silva, Civil Engineer and Project Manager for CR&R. "After five years of careful planning it's nice to see the steel finally coming out of the ground." CR&R's process entails the collection of curbside "green material" and food scraps from their municipal waste collection customers in Southern California. This source separated material will go through a proprietary sorting process to provide conditioned organic material to feed the anaerobic digester which converts the material into biogas. The gas is upgraded to produce RNG which can be used in CR&R's natural gas collection vehicles.

The RNG generated from the first phase of the project will fuel about 70 collection vehicles. Subsequent phases will enable CR&R to inject RNG into the Southern California Gas pipeline. "Even though it will be challenging, we are confident that we can get our biogas cleaned to the stringent California pipeline standards," says Silva. "We will be one of the first in the state to accomplish this."

Other added benefits of the Perris facility include the generation of nutrient rich co-products that can be used as soil amendments and fertilizers. These materials can be processed to generate organic compost and other products that are widely used in agriculture, nurseries, and the home-gardening industry.

CR&R anticipates completion of Phase 1 in the first quarter of 2015. The timeline for the development of future phases is largely dependent on the outcome of state grants that CR&R has applied for says Paul Relis, Senior Vice President at CR&R. "These types of projects are very

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capital intensive,” says Relis. “Grant funds allow the state to seed projects that will ensure the success of California’s ambitious organic waste diversion goals.” CR&R has received grants from the California Energy Commission (CEC) and South Coast Air Quality Management District (SCAQMD) which enabled them to move forward with the project’s first phase.

The core of the technology for the Perris facility comes from German company Eisenmann, which has installed over 90 biogas plants worldwide. Their High Solids Anaerobic Digestion system employs a continuously fed, horizontal plug flow design which allows for maximum biogas production, a high degree of consistency and full automation. The gas clean-up system is supplied by Greenlane Biogas, based in New Zealand. This system will use water scrubbing and other advanced technologies to clean raw biogas to required specifications for vehicle fuel or pipeline injection. “The combination of these two world-class technologies will enable a high volume and quality of gas to be delivered,” says Silva.

Other key construction team members include J.R. Miller & Associates for architecture and engineering services, and W.M. Lyles for construction management services. Both Miller and Lyles have extensive relevant experience in biogas projects, although the Perris project will be the first of its kind in the U.S.

For additional information and full resolution project images, please contact Michael Silva at michaels@crrmail.com.

About CR&R Incorporated

CR&R Environmental Services is one of Southern California’s most innovative and successful recycling and waste collection companies, serving more than 2.5 million people and 50,000 businesses throughout Orange, Riverside, Los Angeles, San Bernardino, and Imperial counties. Thanks to groundbreaking technologies and pioneering reclamation programs, CR&R is able to recycle over 500,000 tons of materials each year, creating cleaner communities, reducing air and water pollution, conserving landfill space, and extending our natural resources. To learn about CR&R, please visit their website at www.crrwasteservices.com.

About Eisenmann Corporation

Eisenmann is a leading international supplier for environmental, renewable energy and manufacturing systems. Providing industrial engineered anaerobic digestion solutions for a wide range of feedstocks and biogas projects, Eisenmann delivers proven technologies based on over 37 years of experience in designing, building, commissioning and servicing systems in North America. Eisenmann’s U.S. headquarters is in Crystal Lake, IL
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