

SUNY MORRISVILLE

SYSTEMS APPROACH TO STUDYING AND DEMONSTRATING ANAEROBIC DIGESTION

Anaerobic digestion can minimize odors and allow more effective nutrient use by crops. To realize the potential energy, environmental, and cost-saving benefits of anaerobic digestion, farmers need information to evaluate the energy, labor, land, and equipment costs.

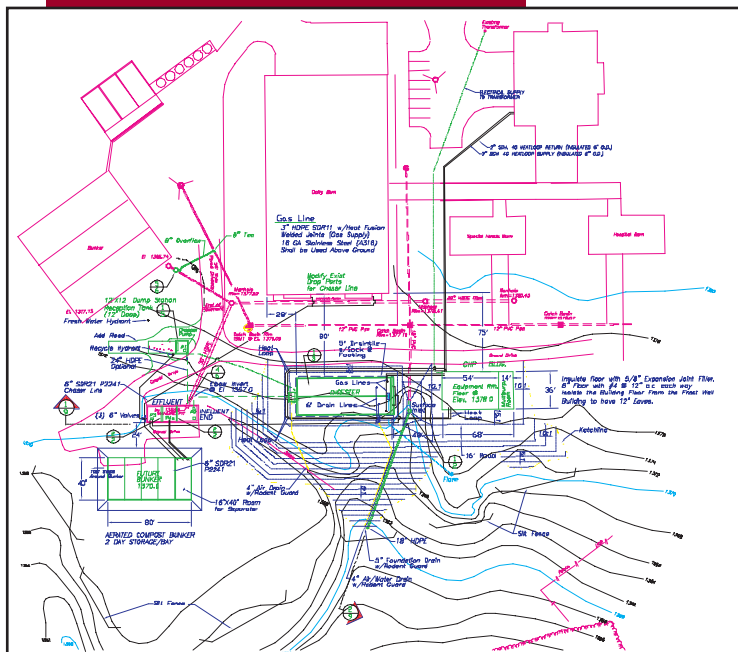
The methane-digester project at SUNY Morrisville (Madison County) involves the design and installation of a heated, hard-top plug-flow anaerobic digester. The digester will biologically treat manure and food waste generated on campus to produce a stable effluent with improved physical, chemical, and biological characteristics. In the system, methane is produced, captured, and combusted to produce heat and

power. The project uses two types of combined heat and power generation systems: a 50kW engine-generator set and a 30kW microturbine that will enable side-by-side comparisons of electric generation. The project also involves a solid-liquid separator. The methane digester system will treat manure from over 350 milking cows and generate about 300,000 kWh per year from the recovered biogas.

This NYSERDA project compares the effectiveness of a microturbine and internal combustion engine for converting biogas to energy; tracks and evaluates project data, costs, and benefits; and uses the digester system in Morrisville's Bachelor of Technology programs to transfer information to others considering anaerobic

digestion systems.

The cost-shared project is being funded by NYSERDA with support from the New York State Department of Agriculture and Markets and the New York State Power Authority. The construction on the project is expected to start in the early spring of 2003.



“We are learning more about tomorrow's technologies and sharing what we learn.”

—James VanRiper
Interim Dean

