

Cogenic llc

HVAC & Refrigeration • Process & Millwright • Sheet Metal

Case Study:

Hyland Landfill Gas to Energy

The Customer's Situation

Hyland Landfill's management had a methane collection system in place which flared off the gas and they were required to pay a pollution permit fee for this discharge. Being aware of the latest advancements in waste technology, they decided to proceed with construction of a power plant to utilize this untapped energy source. A team was put together to design and manage the construction and implementation of the power generating facility and Cogenic llc was hired to lead the complex coordination of multiple mechanical system.

What We Did

Cogenic provided the labor and management required to create a sophisticated process facility which collects the gas and pressurizes it into a piping system, construct a gas process center to filter, dry, chill and purify the gas, and then deliver the prepared gas to the generator sets. The 16 cylinder generators each required the necessary systems that maintain an engine: an antifreeze-filled piping system to remove heat from the

generator core and jacket; an oil lubrication system and waste oil collection system; air cooled radiators to expel the rejected engine heat and cool the oil; ducted and filtered combustion air system to feed the generators; and an insulated exhaust system with sound reduction mufflers to reduce the environmental noise. Ancillary systems included compressed air to operate the generator starters and control valves, heat recovery piping to provide free heat to the process and electrical switch gear rooms in winter, an integrated set of supply and exhaust fans and dampers for the building ventilation system, and an underground condensate collection system for the gas process room.

The Results

The project met the client's demanding schedule despite extreme winter site conditions and job complications. Many field piping suggestions which were made by Cogenic supervisors and implemented resulted in either increased durability of a system, or reduced installation costs. The

mechanical punch list contained three minor items which were reworked the same week. Cogenic performed testing on all mechanical systems and turned over the facility in ready to operate condition.

Further Success

Upon the successful completion Cogenic was asked to prepare estimates on several other pending projects, and continues to carry a relationship with both the developer and the landfill management company.

Cogenic llc reduces consumption of non-renewable resources by designing, installing and servicing mechanical systems for energy use, production and recovery.

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