

Project Name

Edison Municipal Landfill Gas Collection and Control System

Client

National Energy Resource Corporation (NERC)

Services Provided

- Design
- Technical Specifications
- Construction Oversight
- Permitting



Project Description

SAI provided engineering and environmental services in the design and construction of the Gas Collection and Control System (GCCS) at the Edison Sanitary Landfill. The Edison Municipal Landfill is a closed and uncapped landfill located in Edison. The landfill currently generates approximately 500 cfm of gas.

Approach

For the design of the GCCS, the landfill was evaluated for its energy generation potential by taking into account its age, type of waste collected, time of closure, existing and proposed environmental controls, and the location. Further information was obtained by performing pump tests, which established the area of influence and the approximate quantity of gas that could be captured from a given area in the landfill.

Design

SAI's design of the Edison GCCS comprised of a series of gas extraction wells, gas collection pipes and trenches, which collect the gas produced by the decomposition of waste and a main header line that transports this gas to a 20 MW power plant located in Sayerville. This power plant also accepts gas from the MCUA Landfill located over the Edgeboro Landfill in East Brunswick and the ILR Landfill in located in Edison. The GCCS was designed to accommodate future environmental controls that would be necessary for the proper closure of the landfill. The system was installed with modified wellheads and a collection system that could be easily sectioned, and quickly dismantled and reassembled without having to shut down the gas collection system.

Technical Specifications and Construction Oversight

SAI also assisted its client with technical specifications for construction materials, methods and testing and performed construction oversight for the project.



Permitting

SAI assisted its client in successfully obtaining the following permits for this project:

- Major Disruption of a Solid Waste Facility Approval
- Soil Erosion and Sediment Control Approval
- Treatment Works Approval for condensate discharge into MCUA sewer system