



# Altamont Pass Landfill Generating Facility

## BACKGROUND

MIS provided complete design and engineering for a 2.4 MW power facility in Livermore, California using recovered landfill gas. MIS provided the following services to design and permit the plant for operation:

- Surveying, grading and soil analysis.
- Civil/Architectural/Structural design and engineering.
- Mechanical design and engineering.
- Electrical design and engineering.
- Field engineering support.

## DISCUSSION

Altamont Pass Generating Station is a 2.4 MW power plant incorporating 2 landfill-gas-fueled engine-generator modules. The plant is designed to be operated remotely and respond quickly to load requirements. The physical structure of the plant consists of two genset modules, each housing a Deutz TBG620 engine-generator set with associated auxiliary and control equipment, landfill gas conditioning units, and a substation.



1.2 MW Genset Module

Each of the gensets produces a gross electric output of approximately 1,200 kW. Approximately 2 MW (net) of electricity is supplied to the landfill facility at full load. The facility design allows power to be supplied in small increments as needed to balance demand or to export to local consumers as needed.

The Generating Station was designed such that each generator lineup or lineups was an exact copy of the other. This technique reduced engineering time and simplified



Landfill Gas Conditioning Units

construction for this and for future expansion and new sites. Incorporating innovative engineering techniques helped expedite the project without sacrificing design integrity.



Generator Substation Showing Switchgear, Transformer, & MCC

## CONCLUSION

Using innovative engineering strategies and working closely with all parties involved, MIS met the client's goal of implementing their "Gas to Energy" environmental program with a simple expandable design to accommodate current and future power requirements.