ADA COUNTY LANDFILL GAS HYDROGEN SULFIDE REDUCTION

OVERVIEW

As material decomposes in a landfill it creates landfill gas (LFG). LFG is about 50-55% methane and 40-45% carbon dioxide. The balance is made up of many other compounds including nitrogen, oxygen, and a small percentage of Hydrogen Sulfide (H2S). While methane and carbon dioxide are odorless, H2S is not. Consequently, H2S is considered a major source of landfill odor because the human nose can detect it in very small concentrations.

The project includes the purchase and installation of a system to remove or “scrub” H2S from the landfill gas stream. Reducing H2S will help reduce odors and allowing more gas to be drawn for destruction. More gas increases the amount of renewable electricity that is generated.

MAIN FEATURES

- The Ada County Landfill has an extensive underground gas collection system that draws LFG to help control odors and reduce greenhouse gas emissions
- Some of the LFG collected is run through engines to produce 3.2 MW of renewable electricity
- Excess LFG is burned in enclosed utility flares
- The volume of LFG collected and destroyed is determined by an air permit that limits sulfur oxide emissions
- Installing a system to remove H2S from the gas, allows more gas to be collected

PROJECT BENEFITS

- Reduces the fugitive gas and related H2S odors from escaping through the landfill
- Increases the amount of gas available to generate renewable electricity
- Improves Ada County’s ability to better manage the LFG collection system

HIGHLIGHTS

Location: Ada County Landfill
10300 N Seaman’s Gulch Road
Boise, ID 83714

Design/Build Contractor: SCS Engineers

Completion Date: November 2014

Project Cost: $3,200,000

INFO CONTACT

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Learn more at adacountylandfill.com