



## 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 (H<sub>2</sub>S). While methane and carbon dioxide are odorless, H<sub>2</sub>S is not. Consequently, H<sub>2</sub>S 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” H<sub>2</sub>S from the landfill gas stream. It works by taking LFG and running it through large tanks filled with a special media that binds or retains the H<sub>2</sub>S, essentially removing it from the gas stream. Reducing H<sub>2</sub>S will help reduce odors and allow more gas to be drawn from the landfill. Drawing more gas increases the amount of renewable electricity that can be generated, making it a win/win situation for the County and its citizens.



### 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

**Ada County Operations**  
 Dave Logan, Director  
 Andrew Zior, Construction Manager  
 Telephone: (208) 287-7100  
 Email: [azior@adaweb.net](mailto:azior@adaweb.net)

### 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 H<sub>2</sub>S from the gas, allows more gas to be collected

### PROJECT BENEFITS

- Reduces the fugitive gas and related H<sub>2</sub>S 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