

Republic Services, Inc. Comments

Site specific comment for Republic Mallard Ridge Landfill:

On December 18, 2006 the WDNR Bureau of Air approved a modification to Mallard Ridge's blower and flare to allow simultaneous operation of this equipment with the engine generators that also process LFG at this facility. Construction of this modification is now completed, and as such: more LFG can be processed at Mallard Ridge Landfill than ever before. Therefore, we anticipate that future LFG extracted will improve. Most of the gas collected at Mallard Ridge Landfill is used to generate electricity.

Site specific comment for Republic Kestrel Hawk Landfill:

The decline of LFG extracted between years 2000 and 2001 occurred because the east compressor was taken out of service in June 2000 and not until October 2003 when the SC Johnson turbine came on-line did LFG extraction resume normal operations. Most of the gas collected at Kestrel Hawk Park Landfill is processed by SC Johnson to create electricity and for boiler fuel.

General Comments comments for both landfills:

The use of landfill gas for energy reduces air emissions because less coal fired power from the utilities is needed to be placed on the power grid.

EPA indicates that 65% to 85% gas collection efficiency is normal therefore the extracted gas is normally below the generated gas. The graphic is not indicative of the amount of emissions going to the air because research has shown that gas is oxidized in the landfill soil cover and in some cases the landfill acts as a sink to actually clean the surrounding air. Some papers that demonstrate this oxidation are as follows:

- "Measuring Landfill Gas Collection Efficiency Using Surface Methane Concentration" – This paper shows that actual landfill gas collection efficiencies of 95% or greater are achieved on soil caps with gas extraction systems based upon comparing gas collected and measure emissions. This method takes into account methane oxidized in the soil cap which the WDNR's method does not. This paper also states that this method is used since it is not possible to model gas generation with any certainty for a particular landfill.
- "Field Measurement of Speciated HAP Emissions From Landfill Cover Soils" – This paper discusses the oxidation of methane and HAPs in cover systems.
- "Character of Methane Flux and Oxidation at a Solid Waste Landfill" – This paper discusses the oxidation of methane in cover systems.
- "Characterization of Methane Flux, Oxidation, and Bioreactive Cover Systems at the Leon County Landfill" – This paper discusses the oxidation of methane and HAPs in cover systems.
- "Evaluation of a Biologically Active Cover for Mitigation of Landfill Gas Emissions" – This paper discusses the oxidation of methane and HAPs in cover systems.