

Best Practice: Methane Extraction from Landfill

Jurisdiction: City of Raleigh

Brief Description: The City's Wilders Grove Landfill has a system in place to extract methane gas from the landfill. This system collects the odorless gas and in turn sells to a local corporation, Ajinimoto, Inc. to produce boiler fuel for its operation. The system is owned and operated by Natural Power, Inc., also a locally owned company. The extraction system helps the City stay in compliance with the Clean Air Act permit by keeping emissions well under required limits.

Background/Findings/Goal: Wilders Grove Landfill began experiencing methane gas problems in the mid to late '80's as the gas started moving from one location to another within the landfill. As the danger of the gas moving off-site of the landfill increased, a local company, Natural Power, Inc., approached the City and proposed an answer to the problem. After much discussion Natural Power was given permission to install a methane extraction system. To this day no methane gas has migrated off the landfill property.

Ordinance/Policy: N/A

Implementation Details: In the late '80's Natural Power, Inc. approached the City about a methane gas extraction system for the City's Wilders Grove Landfill. As the City was already experiencing gas problems, the City signed a contract for the system. Over the years the system has been expanded and has become more efficient at removing the methane gas.

Results: The methane extraction system has been expanded over the years, as well as made more efficient. Now the methane is removed and sent to Ajinimoto to be used as boiler fuel. As a result of this system the City has no problems with methane migration, and collects a bonus of \$75,000 per year. The City also collects data from the contract, which assists in complying with the clean air permit from the State of North Carolina.

Next Steps/Future Plans/Collateral Practices: Raleigh plans to continue operating this system in the future. Natural Power, Inc. is currently seeking additional customers to use the excess methane presently being burned off.

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