Landfill Gas Management

The control of landfill gas (LFG) and leachate presents a number of operational and management challenges—controlling liabilities, protecting human health and the environment, and successfully managing explosive or toxic gases and leachate—all of which can significantly impact site operations.

Landfill gas and leachate management systems design require an understanding of waste-specific gas generation, potential migration pathways, landfill dynamics that may result in leachate build-up, client and regulatory concerns, and the latest in control and energy recovery technologies. With over 30 years in the LFG arena, TRC’s experienced staff understand these issues.

TRC’s LFG management services include:
- Site investigations
- Monitoring programs
- Emergency response to explosive LFG hazards
- Feasibility studies
- Energy recovery
- System design
- Construction services
- Operations and maintenance
- Landfill emissions and air permitting

Traditionally, for smaller to mid-size facilities, LFG has been a liability and a nuisance for landfill owners. However, with the more recent focus to identify alternative energy sources (i.e., biofuels), it may actually represent a potential source of revenue. LFG collection systems (LFGCSs) may generate carbon credits that can provide a source of revenue that offsets the investment in the LFGCS. In particular, smaller, active landfills stand to benefit from leveraging their LFG resource since the longevity of LFG generation makes smaller projects more economically viable. Advancements in smaller energy development equipment and government economic incentives have improved the potential for smaller projects to be successful.

TRC promotes the use of leachate recirculation to increase the stabilization of the organics within a municipal solid waste landfill and to improve LFG generation. This approach, which can be permitted concurrently with the LFGCS and LFG-to-energy system (LFGTES), can improve the rate of return for a beneficial use project, lower leachate disposal costs, and may also reduce long-term care costs for the landfill.
About TRC

A pioneer in groundbreaking scientific and engineering developments since the 1960s, TRC is a national engineering, consulting and construction management firm providing integrated services to the power, oil and gas, environmental and infrastructure markets. We serve a broad range of clients in government and industry, implementing complex projects from initial concept to operations. TRC delivers results that enable clients to achieve success in a complex and changing world.

TRC includes over 4,000 technical professionals and support personnel in more than 120 offices throughout the U.S. Our clients depend on TRC’s multidisciplinary teams to design solutions to their toughest business challenges.

Why TRC:

• TRC has a long history as expert problem solvers.
• We excel in constructing creative options to find the optimal solution for our clients.
• We are dedicated to helping our clients reach their ultimate goals.

Representative Clients

• Boone County
• City of Algoma
• City of Altoona
• City of Madison
• City of West Bend
• Dane County
• Fond du Lac County
• Delton Family Medical Center
• Mallard North Landfill
• Republic Services
• Sauk County
• Veolia ES
• Waste Management

TRC’s LFG management services include monitoring programs.

TRC can perform permitting, waste excavation, and design-build construction of LFG management systems for a lump sum cost.

TRC offers operation and maintenance services.

LFGCSs may generate carbon credits that can be sold through applicable markets to provide a source of revenue that offsets the initial investment.

For more information, please contact:
Curtis Madsen at 608.826.3640 or CMadsen@trcsolutions.com
Doug Genthe at 608.826.3624 or DGenthe@trcsolutions.com

www.trcsolutions.com