

Project Role**SCS Engineers Office**

Project Manager – Part 2 Landfill Gas Projects and Part 4
Alternative Technologies

Reston, Virginia

Education**Registration/Certification**

Ph.D. - Civil Engineering; Polytechnic University,
Brooklyn, 1998

Registered Professional Engineer, VA, MD,
and NY

M.S. - Environmental Engineering, Polytechnic
University, Brooklyn, 1995

B.S. - Electrical Engineering, University of Florida, 1988

Experience and Qualifications

- 20 years experience in the solid waste field
- Specialize in landfill gas and groundwater hydrology
- Academic research on flow in unsaturated zones
- Proven project management and technical skills
- Varied experience from design, research, and lecturing to construction oversight and operations and maintenance

Professional Experience

Dr. Dillah heads up the Landfill Gas (LFG) Group in SCS's Reston, Virginia, office and serves as a project director. He has 20 years of experience in the environmental engineering field, including landfill gas (LFG) system and landfill design, lecturing and research, feasibility studies, environmental assessments, economic analysis, construction oversight, health and safety implementation, and operation and maintenance. Dr. Dillah's technical expertise is in LFG (e.g., generation/recovery modeling and subsurface movement/modeling) and groundwater hydrology. Relevant project experience includes:

Prince William County, VA. Project Director for LFG engineering services including NSPS surface emissions monitoring; NSPS reporting; LFG system repairs and expansion due to active landfilling; air emissions consulting, including Title V and air emissions statements; LFG migration control services, including designs of two (1,900 foot and 800 foot) active migration control trenches; and feasibility studies to utilize LFG to heat and power onsite and nearby buildings.

Fairfax County, VA. Project Director for LFG engineering services at the I-66 and I-95 landfills. Services have included LFG collection system design, LFG compressor skid and

treatment system design, air emissions consulting, subsurface LFG control/mitigation, and construction oversight. Designed an innovative system that utilizes LFG to heat the I-95 Landfill maintenance shop. The project was the second of its kind in the US (the Frederick County project was the first) and won the EPA's 2006 community partner award.

Prince George's County, MD:

New LFG-fueled 4.2 Megawatt Power Plant. Project Director for engineering services including construction management; assistance with negotiating interconnect and power sales agreements; NSPS quarterly surface emissions and monthly wellhead monitoring; NSPS reporting; blower/flare maintenance; air emissions consulting, Title V activities including preparation of renewal applications; and LFG migration control services.

Siting a New Rubble Fill. Provided technical support on LFG air emissions and particulate matter for use as expert testimony in a court case.

Anne Arundel County, VA, Millersville Landfill. Quality assurance reviewer for air emissions statement.

Montgomery County, VA. Developed a mathematical model to estimate the pressure profile around an air injection well installed in soil, outside the footprint of landfill waste.

Loudoun County, VA. Prepared an Operations and Maintenance Manual for the LFG Blower/Flare station.

Frederick County, VA:

Leachate Recirculation. Designed a system to recirculate up to 100,000 gallons per day of leachate into a 5 acre portion of their landfill consisting of a pump station, a 3" force main about 4,500 feet long, an injection field, and flow metering equipment. Performed field testing to verify perforation size and spacing for proper distribution along injection trench. Prepared documentation (including HELP model and slope stability calculations) necessary to amend the facility's solid waste permit, and operations and maintenance manual.

Blower/Flare Station and LFG Pipeline. Project Manager for preparation of design and construction documents including assistance during the bidding process, construction oversight, and system start-up.

LFG to Heat Feasibility. Project Manager for evaluating the utilization LFG to heat for the on-site maintenance shop.

LFG fueled, Infrared Heaters. Project Manager for preparing design and construction documents for heater installation in the maintenance shop.

New Cut Landfill Closure: Howard County, MD. Project Director for a soil and ambient air-testing task; Project Manager for a soil gas survey task; designed a 200-foot active extraction trench; worked on LFG cost estimate and specifications; provided QA on LFG design and LFG design report ; managed the electrical design; prepared BGE application for new electrical service and responded to contractor's RFI during construction.

Alpha Ridge Landfill Closure. Prepared CAD drawings; performed construction oversight; performed construction submittal review; evaluated and recommended electrical generator for electrical backup; prepared O&M manual; performed calculations to estimate pressure buildup under the landfill cap; reviewed and commented on draft Title V; and prepared emission reports.

Martone Sanitary Landfill, Barre MA. Project advisor for design of their landfill gas extraction and leachate recirculation systems. Designed

the leachate injection trenches. Developed a mathematical model to estimate the pressure profile around a landfill gas horizontal collector trench.

Chicopee Landfill, MA. Project advisor for the design of a leachate recirculation system.

Crossroads Landfill, ME. Developed mathematical model to investigate how the radius of influence around a vertical landfill gas extraction well is impacted for a range of applied vacuums and for various waste densities and waste permeabilities.

Baltimore County, MD:

Longview Landfill. Project Manager for LFG engineering services including offsite LFG migration investigations and LFG monitoring well data review.

Eastern Landfill. Project Manager for LFG engineering services including include preparation of O&M manuals for the air curtain and extraction systems, assistance during LFG extraction system startup, preparation of annual toxic reports and annual emissions statements, design for LFG system expansion, and preparation of bid documents.

Hernwood and Parkton Landfills. Performed data reviews and maintained LFG databases

Anne Arundel County, MD. Developed a design plan to test the bioreactor concept in a one-acre portion of Cell 8. Assisted the County with preparing an EPA Project XL application that requested regulatory flexibility from Subtitle D regulations and with preparing an Alternate Operating Scenario Addendum (a federally enforceable mechanism through NSPS) that specified the project's LFG requirements. In addition, helped negotiate the Final Project Agreement between the USEPA, the State, and the County.

LFG Energy Recovery Feasibility Report, Cumberland County Landfill, PA. Evaluated energy recovery options, including direct use on-site for sludge drying and use in an engine generator set for generating electric power for on-site purposes. Designed the leachate injection trenches. Prepared LFG recovery projections, life-cycle costs, and cash flow projections.