

JACOB S. GAITHER

Education

BS – Chemical Engineering, University of Virginia, 2019



Training/Certifications

Beyond Basics AutoCAD Certification (40-hour)

AutoCAD Civil 3D Intermediate Class Certification (16-hour)

SCS Drilling Atop Lined Landfill Course (1-hour)

SCS Landfill University Sessions (1-Hour):

- Landfill Interior Slope Failure Evaluation & Remediation
- Pump and Piping Network Design
- Lining System Equivalency Analysis
- Leachate Toe Drain Systems

Professional Experience

Jacob Gaither is a Project Professional in the LFG group at our Reston, Virginia office. His experience includes landfill design, field engineering/O&M support, hydraulic piping and pump station design, and control equipment troubleshooting and calibration. Example projects include the following:

Construction Quality Assurance

Town of Christiansburg, Virginia. Landfill Gas Well CQA. Performed construction quality assurance for the installation of seven new landfill gas wells.

Field Engineering Support/O&M

Town of Christiansburg, Virginia. Landfill Gas Probe Monitoring. Routinely sampled landfill gas perimeter monitoring probes to prepare monthly monitoring report for DEQ.

Town of Christiansburg, Virginia. Landfill Gas Wellfield Balancing. Adjusted wellfield vacuums and system pressures to balance newly installed landfill gas wells and reduce sub-surface gas migration.

Landfill Engineering

Town of Christiansburg, Virginia. Landfill Gas Remediation Plan. Prepared drawings and recommendations for remediating sub-surface gas migration in a phased approach.

Prince George's County, Maryland. Area C Infill Project. Designed 12 new landfill cells and preparation of permit level engineering drawings including existing conditions, top of waste grade, subgrade, and a leachate collection system.

Frederick County, Virginia & Prince George's County, Maryland. Landfill Filling Plans. Designed waste lift plans to optimize airspace, improve stormwater drainage, accommodate existing landfill gas wells, and efficiently route vehicular traffic.

Liquids Management

Montgomery County, Maryland. Covanta Nutrient Reduction Report. Review of P&ID and PFD of waste-to-energy plant's wastewater treatment loop with the goal of locating the source(s) of additional nitrogen loading.

Frederick County, Virginia. Forcemain Analysis and Troubleshooting. Performed head loss calculations and compare designed forcemain operation point to current operating point to pinpoint issues with the leachate pump station and forcemain.

Prince George's County, Maryland. Pump Station Design. Relocated, sized, and designed a new pump station and forcemain system capable of handling additional leachate volume from planned landfill expansion.

Frederick County, Virginia. Permit-40 Work Plan. Performed sampling and analysis of leachate characteristics to determine sources and possible points of infiltration into collection system. Recommended leachate volume reduction, management, and treatment options.

Frederick County, Virginia. Elevated Temperature/Sub-surface Oxidation Investigation. Spearheaded approach to determine extent and severity of sub-surface oxidation using direct-drive geoprobes. Recommended remediation approach based on weekly monitoring of temperature and carbon monoxide concentrations.

Field Engineering Support/O&M

Prince George's County, Maryland & Frederick County, Virginia. Flow Meter Calibration. Performed calibration/verification on pressure transmitters and mass flow meters using pressure calibrator, hand pump, HART communicator, LandGEM-5000, and Pitot tubes.

Prince George's County, Maryland. Leachate and Flare Control System Troubleshooting. Examined issues with the existing SCADA system and performed electrical repairs/upgrades.