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 Staff Professional in the LFG group at our Reston, Virginia office. With 2 years of professional experience, Mr. Gaither’s expertise has grown to include landfill design, field engineering/O&M support, hydraulic piping and pump station design, and control equipment troubleshooting and calibration. He has worked on several projects as highlighted below:

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.