

DAVID P. HOSTETTER, PE, LEED AP, CEM

Education

B.S. - Engineering, Mechanical Concentration, Messiah College, 2008

Professional Licenses

Professional Engineer: VA, PA

LEED AP

Certified Energy Manager (CEM)

Awards

Waste360 – 40 Under 40 Award

Control Engineering – Engineering Leaders Under 40

Inductive Automation Firebrand Award

Environmental Business Journal Technology Merit Award

SWANA Featured Young Professional – September/October 2016

SAME DC Post – Outstanding Contributions by Young Civilian Member

Professional Experience

Mr. Hostetter is a Business Manager for SCS RMC (Remote Monitoring and Controls). From his Lancaster, PA office, he manages the group's RMC work across the USA and internationally. His project experience includes remote monitoring and control systems engineering, construction, and operation; landfill gas (LFG) blower/flare station engineering; LFG wellfield engineering; leachate and groundwater pumping systems engineering; energy audits; energy modeling; LEED design and documentation; commissioning and retro-commissioning; property condition assessments; and HVAC and plumbing engineering. Notable projects that Mr. Hostetter has been involved in are described below.

Remote Monitoring and Controls Systems

Confidential Client. Designed, furnished, and installed a SCADA system for an LFG H₂S treatment system. The SCADA system allows users to remotely monitor and control the LFG blower/flare station, H₂S treatment system, and condensate pump station. Alarms and automatic reports are transmitted from the system. The SCADA interface is accessible in the control room and remotely via PCs, smartphones, and tablets.

Anne Arundel County, MD, Millersville Landfill. Designed and engineered upgrades to the flare compound control system, compressed air system, and propane gas system. Designed the control system to send available LFG to the LFG to energy plant and to burn the excess LFG in flares. Control system design included a custom data recording package.

Republic Services, PA, Modern Landfill. Managed and coordinated the startup of a complex blower/flare control system, including three blowers, two enclosed flares, and a utility flare. Identified issues with the control system programming and oversaw repairs to the system.

Confidential Client. Designed and implemented a landfill SCADA system. SCADA system included approximately a dozen pneumatic pumps, four electric pumps, five condensate sumps, a leachate tank farm, an air compressor, and an LFG blower/flare station.

Confidential Client. Designed and directed the implementation of a cloud-based SCADA system for two landfills' flare stations in one interface. The system includes a total of six blowers, six flares, and one landfill gas to energy plant. Users can remotely view data from the equipment, analyze the data, operate the equipment, receive alarms, and receive automatic reports of equipment operation.

Confidential Client. Designed and directed the implementation of a cloud-based SCADA system for two landfill's leachate extraction and storage equipment in one interface. The system includes a total of two tanks and ten pump stations. Users can remotely view data from the equipment, analyze the data, receive alarms, and receive automatic reports of equipment operation.

Various Clients. Designed and implemented blower/flare station control systems. Work included control panel design, programming, installation, and startup.

Bedford County, VA, Bedford County Landfill. Designed and installed a remote monitoring system for three pump stations using a wireless radio system. Data points collected and transmitted include liquid levels, pump runtimes, pump statuses, and alarms. The system was designed to be able to be expanded to include future data collection points.

Sussex County Municipal Utilities Authority, NJ, SCMUA Landfill. Designed and installed a remote monitoring system for an LFG blower/flare station. The system allows the client to remotely view their control system, record data, and transmit detailed alarm messages.

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Greater Lebanon Refuse Authority, PA, GLRA Landfill. Retro-commissioned and troubleshot pump station and blower/flare station autodialers. Identified issues with the systems and created recommendations for repairs.

Region 2000, VA, Livestock Road Landfill. Designed and installed a combined remote monitoring and alarm system for a flare station and a leachate storage tank. Used a wireless radio system to communicate data between the two systems.

Confidential Client. Designed and installed a remote monitoring system that uses wireless radios to collect data from a series of six air quality sensors around the perimeter of the site and a weather station. The data is recorded locally and remotely, can be viewed remotely, and is used to create daily air quality reports that are automatically prepared and sent out to users.

Burlington County, NJ, Burlington County Landfill. Designed and implemented a way for the County to be able to remotely monitor and control its blower/flare station.

Prince Georges County, MD, Sandy Hill Landfill. Diagnosed and repaired issues with the blower/flare station control system. Designed and installed a remote monitoring system for two storage tanks and a manhole.

Confidential Client. Troubleshot a malfunctioning methane monitoring system for a solar panel array on top of a landfill. Project manager for quarterly calibrations of the methane monitoring system.

Shenandoah County, VA, Shenandoah Landfill. Designed and installed a new flow meter and a remote monitoring and alarm system. Designed a new condensate trap for an existing condensate drain system. Troubleshoot and repaired a malfunctioning blower/flare station control system.

Various Clients, VA and MD. Calibrated flow meters and pressure sensors. Troubleshoot and repaired blower/flare station control systems.

Confidential Client. Designed an air monitoring system for three pump stations. Monitored constituents include oxygen, hydrogen sulfide, and explosive gasses. Furnished and installed the air monitoring controllers and the centralized alarm system.

Confidential Client. Designed, furnished, and installed a remote monitoring system for over 45 methane sensors in an apartment complex.

Landfill Gas Engineering

Republic Services, PA, Modern Landfill. Project manager for a master-plan to combine the site's existing blower/flare stations into one centralized location. Implemented the first part of the plan through a design-build project which installed a new enclosed flare, a used blower skid, a new centralized control system, and new piping to supply LFG to the new flare and an existing enclosed flare. Designed the overall system to accommodate the future addition of new flares, blowers, and other features. Managed the construction quality assurance services.

Republic Services, PA, Conestoga Landfill. Wrote a construction quality assurance report for the construction of a new blower/flare station.

Confidential Client, PA. Designed and installed a remote monitoring and control system for a blower/flare station. The system enabled the operators to remotely view the status of the blower/flare station and operate it.

Progressive Waste, PA, Bethlehem Landfill. Designed a new piping arrangement for an existing LFG blower system to provide more landfill vacuum and LFG flow. Troubleshoot and repaired a flare data recorder.

UGI Energy Services, PA, Broad Mountain Landfill. Performed LFG piping system headloss calculations for a sulfur treatment system. Identified and recommended piping arrangement changes to reduce LFG headloss and improve LFG flow.

Waste Management, PA, Fairless Landfill. Provided engineering design services for an LFG compression and flare system. Sized LFG piping, selected two air compressors and ancillary equipment, designed pipe support system, sized and selected pipe expansion compensators, and designed a ventilation system for the compressor room.

Waste Management, PA, GROWS Landfill. Sized and selected pipe expansion compensators for a LFG piping system. Performed on-site construction quality assurance services during the installation of a new flare. Designed an HVAC system for a controls building.

Waste Management, PA, Pottstown Landfill. Designed and engineered a blower/flare station. Sized LFG and condensate piping, designed condensate traps, and sized and selected pipe expansion compensators. Managed electrical engineering subcontractor. Provided construction quality assurance services including on-site construction supervision, final report, and record drawings.

County of Frederick, VA, Frederick County Landfill. Conceptually designed a system to recover heat from existing LFG fired gensets and use it to heat on-site buildings. Provided preliminary design drawings, equipment selections, and an engineer's cost estimate.

Confidential Client. Designed and engineered an active subsurface methane ventilation systems for two buildings as a design-build service. Designed the systems to provide an air-barrier under the buildings and exhaust methane from below the buildings to the outdoors. Provided construction quality assurance services.

Confidential Client. Designed a combined air injection and soil gas extraction system to help prevent subsurface methane migration. Provided construction quality assurance services.

Confidential Client. Designed and engineered a blower/flare station for elevated temperature LFG including sizing and selection of LFG coolers, blowers, and flame arresters. Designed the control strategy for the blower/flare station.

Fairfax County, VA, I-95 Landfill. Project Manager for the evaluation and redesign of the LFG collection and control system. Evaluated and redesigned the wellfield, header system, and blower/flare station to lower maintenance costs and improve LFG collection. Designed a new blower/flare station with the capability of controlling the quantity of LFG provided to a third party energy developer.

CERF Shelby, TN, Natural Gas Pipeline. Designed and engineered an interconnect station between a high-BTU LFG compressor station and a natural gas pipeline. The station monitored the quality of the gas, measured its flow rate, and odorized it. Engineering services provided as part of a design-build package.

Prince George's County, MD, Brown Station Road Landfill. Provided engineering services for various projects. Evaluated LFG end uses using pro-forma analyses and provided recommendations to improve profitability. Designed a compressed air system for a new blower/flare station. Designed, installed, and configured a data recording system for the new blower/flare station.

Leachate and Groundwater Pumping Systems Engineering

Fairfax County, VA, I-95 Landfill. Project Manager for a project to evaluate and provide recommendations on how to improve pumping system performance. Created designs to connect the pumping system into the sewer system in a new location and to prevent pump stations from pumping into one another.

Campbell County, VA, Campbell County Landfill. Designed and engineered an expansion to the landfill's groundwater extraction system. Work included new groundwater extraction pumps, force mains, control system, base-mounted pumps, storage tank, and force main tie-in.

Prince George's County, MD, Sandy Hill Landfill. Designed and oversaw the installation of a 1,600-foot long force main from a leachate tank to a manhole. Designed, installed, and configured new controls and data recording system for the landfill's leachate/dewatering system. Items included pressure sensors, flow meters, radios, pneumatic actuators, and data recording equipment.

Page County, VA, Battle Creek Landfill. Wrote specifications for the leachate pumping system control system. Reviewed electrical engineering plans.

Energy Audits and Commissioning/Retro-Commissioning

Veterans Integrated Service Network (VISN) 3 Retro-Commissioning. Site Project Manager of a large retro-commissioning project, of more than 1,500,000 square feet of building space, for two Veterans Affairs campuses in New Jersey. Created plans to evaluate the operating conditions of HVAC systems, managed the execution of these plans, analyzed the results, completed energy calculations, wrote retro-commissioning reports, and gave presentations identifying how the VA can modify these systems to achieve increased energy efficiency and sustainability. A wide variety of buildings were retro-commissioned, ranging from an 800,000 square foot hospital to boiler plants, chillers, office buildings, nursing homes and residences, and other buildings.

East Orange, NJ, VA Hospital Operating Room HVAC System Retro-Commissioning. Analyzed and tested the HVAC systems for six operating rooms to evaluate the root cause of temperature and humidity fluctuations and misting instances. Reviewed the building automation system (BAS) programming for the units and diagnosed potential issues with it. Reported results and potential solutions to the building manager.

Harrisburg, PA, Biosafety Level 3 Lab Facility Commissioning. Evaluated installed systems and equipment against Bid Documents. Identified and reported multiple discrepancies to the Owner.

York, PA, Housing Authority Energy Audit. Project Engineer for an energy audit of a representative sample of over 1,000 housing units and buildings of the York Housing Authority. Reviewed HVAC systems, central plant equipment, and lighting systems to determine energy efficiency and sustainability opportunities. Investigated opportunities to implement renewable energies and energy efficiency rebate opportunities. Compiled and presented investigation findings and recommendations in a final report.

LEED Design and Documentation

HACC Senator John J. Shumaker Public Safety Center Plumbing Design and LEED Services.

Designed the plumbing systems for the \$15 million public safety center using green building design principles. Incorporated water-efficient design features including waterless urinals, low-flush toilets, low-flow sensor-operated lavatories, low-flow faucets, and low-flow showerheads. Provided LEED services for Water Efficiency and Energy and Atmosphere credits, including providing advice on how to achieve these credits and completing the required reporting.

Manheim Township School District, PA, Bucher Elementary School LEED Services. Tasks included completing the reporting for Water Efficiency and Energy and Atmosphere credits. Created an energy model to document overall building energy efficiency claims. Worked with contractors to incorporate required materials and equipment into the construction of the building.

Midd-West School District, PA, Middleburg Elementary School LEED Services. Provided LEED reporting for Energy and Atmosphere and Indoor Environmental Quality credits. Created an energy model to document overall building energy efficiency claims.

Property Condition Assessments

Peter Lawrence of Virginia, Reston, VA. Provided a property condition assessment (PCA) of a two-story 87,000 square foot commercial building. Performed work in general accordance with ASTM E2018-08, *Standard Guide for Property Condition Assessments: Baseline Property Condition Assessment Process*. Work included assessing the following: building exterior, structural

components, mechanical systems, electrical systems, plumbing systems, and life safety/fire protection systems.

C.J. Cross Real Estate Services, Rockville, MD. Provided a PCA of a single story 48,000 square foot office/warehouse building. Performed work in general accordance with ASTM E2018-08, *Standard Guide for Property Condition Assessments: Baseline Property Condition Assessment Process*. Work included assessing the following: building exterior, structural components, mechanical systems, electrical systems, plumbing systems, and life safety/fire protection systems.

Publications and Presentations

Hostetter, D.P., S. Rice, C. Woloszyn, June 2020, “How Innovative Technologies are Improving Landfill Operations” SWANApalooza 2020 Conference.

Hostetter, D.P., A. Khatami, L. Lukacs, December 2020, “Landfills, Technology & the Future” USGBC Florida Chapter.

Hostetter, D.P., July 2020, “Remote Process Control Use Case SCS Engineers” Ignition Community Live.

Meoli, C., D. Dillah, and D. Hostetter, March 2016, “Evaluating and Rehabilitating an Aging Landfill Gas System: I-95 Landfill Case Study” SWANApalooza 2016 Proceedings.

Hostetter, D.P., D. Dillah, and P. Carrillo, April 2017, “Case Studies on the Use of Remote Monitoring and Control Systems to Solve Problems Efficiently” SWANApalooza 2017 Proceedings.

Hostetter, D.P., April 2017, “Case Studies on the Use of Remote Monitoring and Control Systems to Solve Problems Efficiently” SWANApalooza 2017 Conference.

Hostetter, D.P., S. Rice, C. Woloszyn, June 2020, “How Innovative Technologies are Improving Landfill Operations” SWANApalooza 2020 Conference.