
MICHAEL A. KALISH, PE, LEED AP

Education

B.S. - Environmental and Natural Resource Engineering, State University of New York
College of Environmental Science and Forestry at Syracuse University, 1995

Professional Licenses

Civil Engineer, CA, license no. C62112
Professional Engineer, MD license no. 30002
LEED Accredited Professional

Professional Affiliations

Solid Waste Association of North America (SWANA), Instructor

Professional Experience

As SCS's National Partner for Transfer Stations, Mr. Kalish has been the Project Manager for several major transfer station renovations and expansions in Maryland and the District of Columbia and new transfer stations in Maryland and Virginia. Additionally, he has worked on a variety of engineering projects involving LFG, LFG-to-energy, landfill closure, and sub-slab mitigation design for brownfields remediation. Several recent LFG projects have also included the design and implementation of remote SCADA systems for use at flare stations, LFG beneficial use projects and carbon credit projects. Mr. Kalish is also an instructor for the SWANA Managing Transfer Stations course and is a LEED Accredited Professional. Examples of his project experience include:

Transfer Station/Facilities

District of Columbia:

- **Benning Road Transfer Facility.** Project Engineer for the redesign of the existing Benning Road Transfer Facility. This work involves the coordination of a Surveyor, Structural Engineer, Electrical Engineer, Mechanical Engineer and Architect along with performing civil engineering duties. Tasks include the design of the demolition of electrostatic precipitators and exhaust stacks, partial demolition of the existing structure, the design of an addition onto the facility including tipping floor, load-out pits and scales, remediation of existing bridges, design of a new scalehouse and scales, design of a new citizen's convenience drop-off center and general site improvements. An odor control system was also designed for the facility. Assistance was also provided for permitting and zoning purposes and during construction.
- **Fort Totten Transfer Facility.** Project Engineer for the redesign of the existing Fort Totten Transfer Facility. This work involves the coordination of a Surveyor, Structural Engineer, Electrical Engineer, Mechanical Engineer and Architect along with performing civil engineering duties. Tasks include the design of the existing tipping floor repairs and

resurfacing, partial demolition of the existing structure, the design of an addition onto the facility including tipping floor, load-out pits and scales, design of new scales, design of a new citizen's convenience drop-off center and general site improvements. An odor control system was also designed for the facility. Assistance was also provided for permitting and zoning purposes. Served as construction manager for the District.

Ocean City, MD, Ocean City MSW Transfer and Recycling Facility:

- Project Engineer assisting on the conceptual design of site improvements and facility layout for the redesign of the existing MSW transfer and recycling facility.
- Project Manager for the remodeling of the existing solid waste transfer station and design of a new materials recovery facility in Ocean City. Tasks included an evaluation of the existing waste handling procedures and equipment utilized by the City. Waste handling procedures were optimized by converting to top loading transfer trailers from the existing compactors. A new 25,000 square foot building was built to perform separation and baling of recyclable materials. Upon completion the waste and recyclable handling capabilities have better than doubled. Special care was given to building architecture and odor and dust control because of the presence of residential homes directly adjacent to the transfer station property.

Frederick County, MD, New Transfer Station. Project Manager for the design of a new transfer station to handle all of the County's waste. Tasks included the development of conceptual site plans for four potential properties and a corresponding design criteria memorandum. Upon site selection, plans and specs suitable for construction purposes were developed including requirements for Forest Restoration Ordinance work, geotechnical investigations and an archeological survey for the presence of historical resources. This project involved coordination with a citizen's oversight group and special design for odor control and landscaping to address their concerns. Permitting assistance and construction management are also being performed.

Montgomery County, MD, Shady Grove Transfer Station. Project Manager for the design of an approximately 12,000 square foot addition to the existing transfer station to accommodate mostly hand-unloading vehicles. The design included architectural accenting to complement with the existing building, specialized storm water management, new scales at the scale house, and an expansion to the existing public unloading facility. Served as construction manager on behalf of the County.

Page County, VA, Stanley Landfill. Project Manager for the design of a 200 tpd transfer station. Design included a open-walled, roofed structure and concrete tipping floor for waste processing, new scale for weighing both incoming and outgoing waste vehicles, and new water lines for dust control and cleaning.

Montgomery County, MD, Gude Landfill Yard Trim Facility. Project Manager for the design of a Yard Trim Receiving, Processing and Transfer Facility on top of the closed Gude Landfill. Design includes areas for the grinding and handling of yard trim and wood material, along with future facility expansions to include on-site composting. Design also includes stabilizing the closed MSW landfill to account for the new traffic loads, a new scalehouse and scales, truck tarping station, maintenance shop for site equipment, fueling station, site paving and retaining walls and stormwater design for a wetland pond. Special considerations taken into account

because of the landfill redevelopment for settlement, cap integrity and landfill gas issues for all the site facilities.

Zion Crossroads, VA, Construction and Demolition Debris Recycling and Materials Recovery Facility. Project Manager on the design and permitting for a new C&D Debris Recycling Facility and Materials Recovery Facility. Design includes modifications to existing site buildings to accommodate the new use, a new citizen's recycling center, new scale, storage building for processed material, site paving and stormwater design and obtaining local site and zoning permits and the Virginia State Operating permit for a Materials Recovery Facility. Additionally, the existing site building that was relocated to accommodate the C&D facility has been adapted to accommodate a "dirty MRF" operation.

Prince George's County, MD, New Transfer Station Siting Study. Project Manager for the preparation of a siting study for a new transfer station within the County to replace the at capacity landfill. The project includes the planning and participation in multiple public meetings to obtain public input on siting criteria, development of siting criteria based on public comments and engineer recommendations, application of criteria to develop a list of qualified sites, individual site investigations of qualified sites, and preparation and presentation of final recommendations.

Prince George's County, MD, New Transfer Station. Project Manager and responsible for design aspects as member of a design/build team with a construction contractor for the new transfer station in the County. Project involves a new transfer station capable of 3,000 tons/day, 2-story administration office, scalehouse and scales, citizen drop-off facility, and the facility design will accommodate truck and rail haul of processed materials.

Howard County, MD, Transfer Station Expansion. Project Manager for the design of an expansion to the existing County transfer station. Expansion will be designed to handle the anticipated waste quantities, traffic loads, and minimize impacts to the new residential development adjacent to the transfer station.

Prince William County, VA, HHW Facility. Project Manager for the conceptual design and RFP development for the County to contract with a design/build contractor for a new HHW Facility located at the landfill. Facility is designed to process the HHW brought in by citizen's and small quantity generators for the next 20 years.

Howard County, MD, Compost Facility Design. Project Manager for the design of a new compost facility to be located at the Alpha Ridge Landfill. The facility is being designed to receive and compost yard trim, manure and food waste from residential properties. Design includes primary aerated composting, building to receive all materials, secondary composting and curing pads and storage and load-out area. Design requires specialized stormwater design due to the processing of food waste.

Bedford County, VA, Transfer Station Tipping Floor Remediation. Project Director for the investigation, recommendations and design of the tipping floor at the existing transfer station. Project involves an investigation of the existing floor conditions, development of various options for repair/replacement of the floor, and design of the chosen option.

Landfill Gas/LFGE

Montgomery County, MD, Oaks and Gude Landfills. Project Manager for the design, construction and operation and maintenance of new landfill gas-to-energy facilities at the County's old Oaks and Gude Landfill's. The project includes the design of two facilities including engine-generators, a landfill gas treatment and compression skid, and associated electrical switchgear, obtaining the state operating permit, obtaining all local permits for erosion and sediment control, stormwater management and the building permit.

Berks County, PA, Rolling Hills Landfill. Project Engineer for the installation of new extraction wells and LFG system evaluation on behalf of the energy developer. Tasks include evaluating the existing system to achieve compliance with Title V and NSPS regulations, the design and layout of the new wells to maintain NSPS and Title V compliance, field investigation of the existing LFG collection system and subsequent recommendations to the client for maximizing well field potential and operation oversight of the well field.

Fauquier County, VA, Corral Farms Landfill. Project Engineer for the design of a LFG collection system to be used to provide fuel for a new 1 MW electrical generation plant at the landfill. Tasks include the design of the system, construction oversight, and primary client contact for questions.

Baltimore County, MD, Eastern Landfill. Project Manager for the design of the LFG system expansion for the energy developer. Tasks include the addition of new wells both in active and non-active areas of the landfill. Special consideration was given to ensure the system would not impede landfill operations, and allow for future system expansions.

Howard County, MD, Alpha Ridge Landfill:

- Project Engineer for a LFG to energy feasibility assessment. Tasks include modeling LFG production for an extended period, performing a feasibility assessment and economic analysis, and reporting the results of the study and making recommendations to achieve the outcome of the study.
- Project Manager for Annual Title V compliance reporting and Annual Emissions calculations and Certification.

Prince George's County, MD, Brown Station Road Landfill:

- Project Engineer assisting with construction quality assurance for the construction of a new landfill gas-to-energy facility at the landfill. Other tasks include working with SCS Field Services personnel to operate and maintain the existing LFG system at the landfill to control subsurface methane, maintain Title V and NSPS compliance and supply gas to the on-site and off-site generators
- Project Manager for Annual Title V compliance reporting and Annual Emissions calculations and Certification.

Harford County, MD, various sites.

- Project Manager for a subsurface methane evaluation and recommendations for remediation at the Bush Valley Landfill. This work involves coordinating with the Maryland Department of the Environment and the Environmental Protection Agency as it is a Superfund site. Tasks include the evaluation of the design for the closure of the landfill, the use of a Geoprobe contractor to install monitoring probes adjacent to some residential properties, a pump test and a report outlining recommendations for remediation.
- Project Manager for the design of an active LFG collection and control system at the closed Bush Valley Landfill. The design includes extraction wells in waste and around the perimeter of the landfill designed to “target” areas of highest concern. Special care was given to minimize sight impacts to the surrounding neighbors including the use of an enclosed ground flare, special landscaping, a pavilion to enclose the blowers and panels, and fence blinds. In addition to the LFG system, a condensate treatment system was designed to allow for on-site treatment and eventual discharge to the sanitary sewer.
- Project Manager for environmental monitoring including LFG and groundwater at the Bush Valley Landfill. Monitoring includes subsurface perimeter, and passive vent monitoring of LFG. In addition to gas monitoring, groundwater monitoring is performed. Semi-annual sampling is performed for the groundwater monitoring wells. Semi-annual LFG and groundwater reporting is performed.
- Project Director for an odor investigation and recommendations at the Harford County Waste Disposal Center. Additional services include Title V permitting and compliance and greenhouse gas consulting services.
- Project Director for design modifications to the existing landfill gas collection and control system at the Tollgate Landfill. Modifications are to accommodate the decreased flows of gas at the landfill since the original system was installed 20 years ago.

Pine Grove Sanitary Landfill, PA. Project Engineer for the development of a NSPS design plan of an existing active LFG extraction system at the landfill. Tasks include the analysis of the existing extraction system components and data, development of design criteria, site layout and detail preparation and report generation to be submitted to the State of Pennsylvania.

Cecil County Central Landfill, MD. Project Engineer for an ambient air investigation and remediation at the landfill, as a continuation to previous work. Specific tasks include conducting point and ambient air testing of the landfill and surrounding areas, LFG modeling, investigation into potential off-site odor sources, and developing a report outlining recommendations for remedial action. Additionally a presentation was made at a public meeting to outline the results of the investigation and answer questions from the citizens of a local town.

Millersville Landfill, Anne Arundel County, MD. Project Engineer for the redesign of the existing blower/flare station to make the system more adaptable to existing conditions. Tasks include the preparation of engineering plans and specifications suitable for construction, and coordination with construction personnel on specific requirements for the modification of existing and proposed equipment.

Resh Road Landfill, Washington County, MD. Project Engineer for the design of a LFG system in conjunction with the closure of the landfill. Tasks include the preparation of a design plan for the new LFG system, preparation of engineering plans and specifications, coordination with the landfill closure designer, engineering calculations and permitting assistance.

Carroll County, MD, various sites.

- Project Manager for the investigation and recommendation for remediation of subsurface landfill gas migration from the Northern Landfill. Continued project work included the design, construction and operation of the recommended landfill gas extraction system for migration control. Design utilized horizontal collection trenches to extract landfill gas and direct it to a candlestick flare for combustion.
- Project Manager for the preparation and documentation for a new Title V operating permit at the Northern Landfill.
- Project Manager for the design/build of a comprehensive landfill gas collection and control system at the Northern Landfill. Design includes incorporating existing features and the addition of monitoring equipment to comply with the new Greenhouse Gas Reporting Rule. Additional services include assistance with the development of a greenhouse gas credit project.
- Project Director for the design/build of a landfill gas migration control system at the John Owings Landfill. Project involved a site investigation to determine extent of migration, develop and implement remediation recommendation.

Quarantine Road Landfill, Baltimore City, MD.

- Project Manager for the design of a landfill gas extraction and control system. Design also includes a compression and dehydration system to treat the collected gas where it is then piped to a Coast Guard station where it will be utilized to create electricity.
- Project Manager for the preparation and documentation for a new Title V operating permit at the landfill.

Landfill

Hodges Landfill, Carroll County, MD. Project Manager for the investigation, recommendations and design of repairs to the closed landfill as a result of a slope failure. The project includes site investigation and surveying of the impacted area, determination of cause of slope failure, development of various options for repair and mitigation, and coordination with MDE on recommended solution.

Spencer's East Site Rubble Landfill, Abingdon, MD. Project Manager for the closure design of the rubble landfill. As part of closure, the existing landfill is going to be converted into a public park including picnic pavilion, fenced dog park, turf field, parking and hiking trails. The design includes the closure cap, grading, stormwater benches, inlet structures and downchutes, specially designed ponds because outfall is a Class III trout stream, erosion and sediment control, landfill

gas venting, and park amenities. Additional services include providing full-time construction oversight.

Quarantine Road Landfill, City of Baltimore, MD. Project Manager for environmental monitoring including LFG and groundwater at the landfill. Monitoring includes subsurface perimeter, surface emission, and on-site building monitoring of LFG. Semi-annual sampling is performed for the 22 groundwater monitoring wells and 5 leachate monitoring points. An annual surface runoff storm water sample is taken at 5 outfall locations. Quarterly LFG and integrated semi-annual groundwater reporting is performed.

Abingdon Landfill, Harford County, MD. Project Engineer for landfill site improvements and existing cap repair. Specific tasks include preparation of engineering plans and specifications suitable for bidding purposes, development of Erosion and Sediment Control Plan, Stormwater Management Plan development, and development of final grading plan. Performed construction quality assurance and surveying for as-built plans.

Prince William County Landfill, Manassas, VA. Project Engineer for the design of a new impound lot for the police station on the landfill property. Tasks include preparation of plans and specifications, project stake-out, and assistance during construction.

Other Experience

In his previous work experience, Mr. Kalish served as the Solid Waste Engineer for San Joaquin County in California. His responsibilities involved all aspects of the Solid Waste Industry, including landfill and transfer station operations, environmental monitoring, LFG system operation and maintenance, landfill expansion, and regulatory review.

- **Corral Hollow Sanitary LFG Collection and Control System, Tracy, CA.** Project Manager for the design and construction of LFG collection and control system. Tasks included the development of plans and specifications suitable for bidding, choosing and hiring the construction contractor, construction oversight, and startup of the system.
- **Foothill Sanitary LFG Collection and Control System, Linden, CA.** Project Manager for the design of a LFG collection and control system at the landfill. Tasks included a gas to energy feasibility study, preparation of GCCS design plan because this is an NSPS facility, and preparation of plans and specifications suitable for billing purposes.
- **Foothill Sanitary Landfill Entrance Road Resurfacing, Linden, CA.** Project Manager for the design and construction of a new entrance road for the landfill. Tasks included the development of plans and specifications suitable for bidding and construction oversight. This was a unique project in that Rubberized Asphalt Concrete was utilized, requiring unique design considerations. This was the first project in the County to use Rubberized Asphalt Concrete.
- **North County Recycling Center and Sanitary Landfill, Lodi, CA.** Project Manager for the design and construction of internal road resurfacing at the landfill. Tasks included development of plans and specifications for bidding and construction oversight.

- **Lovelace Materials Recovery Facility and Transfer Station, Manteca, CA.** Project Manager for repair of the landfill tipping floor. Tasks included the development of plans and specifications for bidding and construction oversight. This project was unique due to special concrete design considerations, and the facility was fully operational while work was being performed.
- **Foothill Sanitary Landfill, Linden, CA and North County Sanitary Landfill, Lodi, CA.** Project Manager for the pre-design of new landfill cells. Tasks include surveying and data analysis for site life projections, regulatory review for design parameters, preparation of preliminary design, cell capacity and projected life calculations based on preliminary design, and preparation of RFP to hire engineering firm to prepare final design package. These projects also included investigations into the feasibility of developing bioreactors at the landfills.
- **Harney Lane Sanitary Landfill, Lodi, CA.** Engineer for the operation and maintenance of a LFG collection and control system. Responsible for maintaining environmental compliance for groundwater, post closure maintenance, surface emissions, and subsurface gas migration. Also responsible for operating and maintaining the existing LFG collection and control system. Investigated the feasibility of a gas to energy project at the landfill.

Publications and Presentations

Kalish, M. “Managing Large Quantities of Post-Disaster C&D Debris.” Presented at SWANA/Maryland Recycling Network 2013 annual conference.

Kalish, M. “Considerations for Greening Transfer Stations.” Presented at SWANA/Maryland Recycling Network 2011 annual conference.

Kalish, M. “The Impact of EPA’s Tailoring Rule on Landfills.” Presented at the 2011 Regulatory Training Session, SWANA Old Dominion Chapter.

Kalish, M. “The Application of LEED Design to Solid Waste Transfer Stations.” Presented at the 8th annual Landfill and Landfill Gas Seminar presented by SCS Engineers, Baltimore, MD, April 2010; and 17th annual Landfill and Landfill Gas Seminar presented by SCS Engineers, Richmond and Roanoke, VA, April 2010.

Gornto, M., Kalish, M. “A Healthy Shade of Green.” *Waste Age*, February 2010.

Kalish, M. “A Transfer Station – Soup to Nuts.” SWANA E-Session, May 21, 2008.

Kalish, M. “For Your Consideration.” *Waste Age*, February 2008.

Kalish, M. “Gas Collection and Control Phasing Plans – Avoiding Rebuilding Your System.” Presented at SWANA/Maryland Recycling Coalition 2007 annual conference.

Kalish, M. “Design Comparisons Between New and Remodeled Transfer Stations.” Presented at Waste Expo 2007, Atlanta, GA, May 7, 2007.

Kalish, M. "Transfer Station Design Elements." Presented at the 4th annual Landfill and Landfill Gas Seminar presented by SCS Engineers, Baltimore, MD, May 2006.

Dillah, D., Flick, D., Kalish, M. "Lessons Learned During a Landfill's 10-Year Struggle to Control Landfill Gas Migration." WasteCon 2005 conference proceedings, Austin, TX, September 2005.