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## GUY F. LEWIS, VICE PRESIDENT

### Certifications

8 Hour Management and Supervisor Training, OSHA 29 CFR 1910.120  
40 Hour Health and Safety Training, OSHA 29 CFR 1910.120  
16 Hour Confined Space Training, OSHA 29 CFR 1910.146  
Certified Competent Person Awareness for Trench/Excavation Safety, OSHA CFR 1926  
Certified Polyethylene Fabrication Specialist  
Submersible Centrifugal Pump Fundamentals  
Multi-Stage Centrifugal Blowers and Exhausters  
Certified Sentry Gas Monitoring System Technician  
Certified Operator for Thermo/Catalytic Oxidizer  
First Aid and CPR

### Professional Experience

Mr. Lewis has been with SCS Field Services for over 28 years and has worked on construction, operation, and repair of environmental pollution control facilities and remediation projects. With SCS he has gone through the ranks from a laborer/technician/equipment operator to a foreman, a superintendent, a regional project manager, and now a vice president. Most of this SCS experience has involved the construction of new and expanded landfill gas (LFG) collection, flaring and utilization systems.

Many projects involve major overhauls and repairs. LFG projects under Mr. Lewis' direction have included landfill gas to energy facilities, compressor stations, off-site landfill gas pipelines for direct use, gas extraction well installations, collection header lines, polyethylene (PE) pipe fusion, polyvinyl chloride (PVC) pipe installation, installation of condensate/leachate containment and collection facilities, installation of blower/flare station mechanical equipment (including concrete pads, blowers, flares, compressors, condensate tanks, pumps, flame arrestors, electrical panels, etc.), repair of landfill cover systems, erosion and sediment controls, and landfill revegetation.

Mr. Lewis' construction experience also includes numerous remediation projects. These projects include underground storage tank (UST) excavation and removal, chemical and petroleum contaminated soil excavation, transportation, and disposal, construction of soil vapor extraction systems (VES), including installation of air monitoring facilities at a state Superfund site, and construction of a combination VES/biotreatment system.

On operation and maintenance projects, Mr. Lewis participated in numerous routine and non-routine activities including monitoring well, extraction well, header line, and blower/flare station data collection; extraction well balancing and adjustment; blower/flare station adjustment and maintenance; and extraction system troubleshooting and repair and emergency call-out response. His experience in construction provides the expertise necessary for subsequent long term maintenance, repair, and troubleshooting to keep these facilities in proper operating condition and in compliance with applicable state and federal performance requirements.

Prior to joining SCS Field Services, Mr. Lewis spent two years in residential construction.

Following are examples of his project experience:

### **Groundwater Pump and Treat Projects**

**Campbell County Landfill, Rustburg, VA.** Managed construction of a groundwater extraction and treatment system at the Campbell County Landfill in Rustburg, VA in three separate phases. The project included 21 new extraction wells and pumps, well vaults, 10,000 feet of groundwater conveyance piping, electrical lines to each of the extraction, a self-contained, enclosed shallow tray air stripper, and installation of 8 new monitoring wells.

### **Leachate Treatment Systems**

**Republic Services, Inc., Oak Grove Landfill, Winder, GA.** Managed the construction of a leachate evaporator system at the Oak Grove Landfill in Winder, GA. The goal of this project was to deliver a system that will process up to 30,000 gallons of leachate per day reducing the residuals to a thickened product capable of being disposed of within the landfill permit. The fuel used to accomplish this is the landfill gas (LFG) at an approximate consumption rate of 13 MM BTU/hr.

### **Landfill Gas to Energy Projects**

**C2i Methane Partners, Landfill Gas to Energy System Installation, Johnston County Landfill, Smithfield, North Carolina.** Managed the installation of one 700 SCFM gas conditioning skid, one 1.6 MW landfill gas fueled power generation engine and associated electrical work. The landfill gas conditioning system included three principal sub-systems: the landfill gas compression system, the landfill gas cooling and filtration system and the gas conditioning system control panel system.

**C2i Methane Partners, Landfill Gas to Energy Facility for Athens-Clarke County Landfill, Winterville, Georgia.** Managed the installation of a landfill gas (LFG) to energy facility at the Athens-Clarke County Landfill. The facility was designed around the CAT G3520 C engine model. A new fuel gas compressor to handle 700 SCFM was installed to collect LFG from the existing wellfield. The treatment system also filters and compresses the LFG to levels suitable for use by the engine. A fan cooler was installed at the discharge of the blowers/compressors to cool the gas to temperatures just above ambient prior to delivery to the engines. Piping to the treatment system connects to the existing blower inlet. The existing blower/flare station serves as backup to the new facility/power plant. The treated LFG is piped to the new containerized engine/generator provided by C2i Methane Management III.

**Frederick County, VA.** Managed the installation of a design build LFGE power plant facility. The facility consist of two Jenbacher 1,050 kW generator sets, gas compression and treatment equipment, walk in switchgear enclosure, and office trailer. Coordinated all local permits, sub contractors and major equipment vendors. The construction of the power plant facility was completed in six months. The project was on completed on budget and three months ahead of the scheduled start up period.

**Catoosa County, GA.** Managed the construction of a facility that efficiently utilizes the available LFG from the Catoosa County Landfill to produce about 633 kW of electric power. A new treatment system was installed to collect LFG from the existing wellfield. An aftercooler was installed at the discharge of the blowers/compressors to cool the gas to temperatures just above ambient prior to delivery to the engines. Installation of piping to the treatment system connects the existing blower inlet. Site preparation included surveying, site grading, gravel application, stone paving, concrete foundations and surface restoration.

**Rockingham County Hospital Pipeline, Rockingham County, VA.** Managed the construction of a landfill gas (LFG) treatment facility and pipeline for transport of the LFG from the Rockingham County landfill to the new Rockingham Memorial Hospital approximately two and a half miles from the landfill. LFG is collected from the existing LFG collection system at the landfill, which consists of landfill gas wells, a collection piping system, and a flare. The existing flare at the landfill was used in conjunction with this system. The LFG is moisture conditioned by refrigeration and is compressed prior to introduction into the pipeline. Directional drilling was required under multiple road crossings.

**Boral Bricks Inc., Union City, OK.** Managed the installation of a design build LFG to energy project, which included a complete LFG collection system, compressor station and a two-mile gas transmission pipeline. Coordinated all permitting which included the following agencies: Oklahoma Department of Environmental Quality (ODEQ) for LFG collection system on OEMA Landfill; horizontal directional drilling permits from Oklahoma Department of Transportation, Canadian County, and Union Pacific Railroad; driveway and construction permit for Boral Processing Facility issued by Canadian County; and Notification to Oklahoma Corporation Commission (OCC) and local utility owners of pipeline installation.

This project was contracted under a Guaranteed Maximum Price (GMP) arrangement. Boral Bricks and SCS shared in the savings between SCS's agreed upon price and the GMP. We have a similar GMP arrangement for the Terre Haute project. Based on the current project status, we expect SCS's final prices may allow for an even larger cost savings (percentage-wise) to share with our clients.

**Boral Bricks Inc., Terre Haute, IN.** Managed the design, permitting and construction of a LFG pre-treatment and compression facility, and a transmission pipeline to send the gas from the landfill to Boral's newly constructed manufacturing facility. The pipeline crosses a lake; mining spoils areas, and public roads. This project includes a flare, and coordination of the system's operations with the landfill owner's separate LFG collection system.

**Dalton-Whitfield Solid Waste Authority (DWSWA), Dalton, GA.** Managed the installation of a LFG pre-treatment facility including compression and chillers, and a pipeline from the landfill to Dow Chemical. Dow will use the LFG in their Dalton facility for manufacturing latex for carpet backing materials. The project includes a LFG system at the DWSWA landfill. The 2-mile transmission pipeline involved road and stream crossings, jack and bore installations, pig stations, and a railroad crossing. The project involved close coordination with Georgia DOT. SCS's experience with cross country transmission pipelines and related DOT requirements was a significant factor in DWSWA's selection of SCS for this project.

## Landfill Gas Projects

**Prince Georges County, Flare Station Expansion, Brown Station Road Landfill, Upper Marlboro, Maryland.** Managed the expansion of the flare station at the Brown Station Road Landfill. This project included grading the station pad and stone, concrete foundations, installation of blower skids, installation of a 3,000 scfm enclosed flare, gas and condensate piping installation and connections, installation of the flare system control panel, flare station electrical installations, installation of a generator and ATS, construction of a 1,000-square foot blower enclosure, start-up and training, as well as final cleaning and restoration.

**Blower/Flare and Landfill Gas Collection System Installation, Leachate System Improvements, Tazewell Landfill, Abingdon, Virginia.** Managed the installation of a blower flare station and LFG collection system. SCS installed a pre-engineered and fully assembled skid mounted landfill gas flare and blowers, landfill gas condensate liquid pump system, and related appurtenances. Additionally, SCS provided the installation of well heads, 4-inch horizontal collectors, 6-inch solid lateral piping, 8-inch header piping, and 1.5-inch condensate line including connection to the blower flare station, and related appurtenances. Additionally, SCS Field Services provided leachate collection system at the Tazewell County Landfill. SCS installed one AP-3 and two AP-2 QED pumps and fittings. SCS suggested three additional pumps that allow leachate to be pumped from each of the 6-inch vertical well casings. After a week of pump operation, SCS completed the project with the startup and balancing.

**UGI Energy Services, Inc., Landfill Gas Sulfur Treatment Technology Evaluation and Design/Build Services, CES Broad Mountain Landfill, Hegins, PA.** The project involved hydrogen sulfide treatment of landfill gas used to fuel two gas turbines owned and operated by UGI. Mr. Lewis managed the construction portion of this project including the construction of foundations, tank installation, all piping and electrical work, compressor skid installation, tie-ins to the existing gas transmission pipeline, coordination with the landfill owner and start up services.

**Dougherty County, Landfill Gas System Expansion at the Fleming/Gaissert Rd Landfill, Albany, Georgia.** Managed the expansion of the landfill gas system at the Fleming/Gaissert Road Landfill. The expansion included erosion and sedimentation control, 2435-feet of vertical of gas wells, 930-feet of horizontal gas wells, 3,365 feet of 12 inch header pipe and associated lateral piping.

**Dabbs-Williams, Landfill Gas Collection and Control System Header Improvements at the Deans Bridge Road Landfill, Blythe, Georgia.** Managed the installation of 2,600 linear feet of 14-inch header, 1945 linear feet of 4x2 dual contained forcemain, 5 large diameter condensate sumps, and connections to existing header.

**Houston Count Board of Commissioners, Landfill Gas Collection and Control System Expansion at the Houston County Municipal Solid Waste Landfill, Kathleen, Georgia.** Managed the landfill gas system expansion including well drilling, installation of 10" header, lateral piping, sumps, valves, and site restoration.

**Berkeley County Water & Sanitation, Design Build Landfill Gas System Construction at the Berkeley County Landfill, Moncks Corner, South Carolina.** Managed modifications and expansion to the landfill gas collection and control system including 45 LFG extraction wells, collection piping, self-draining condensate traps, and a blower flare station. Modifications included relocating the blower flare station, modifying the location and depth of several extraction wells due to topography changes caused by waste placement since the design was originally prepared, and redesigning the piping network in order to route the collected LFG to the new blower flare location.

**Fairfax County Landfill, Lorton, VA.** Serves as project manager on a multi year contract which includes various construction activities, such as well drilling, LFG piping, miscellaneous repair work, condensate traps, and site regarding. Most recently SCS installed a 300 SCFM skid mounted LFG chilling/dehydration/compressor to supply LFG to the maintenance building heaters at the landfill.

**Palm Beach County Solid Waste Authority, Landfill Gas System Expansion at the North County Resource Recovery Facility, West Palm Beach County, Florida.** Managed the drilling and installation of 11 vertical LFG wells with fabricated wellheads; horizontal gas collections with field fabricated wellheads; 12 inch, 8 inch, 6 inch and 4 inch LFG piping and condensate drain pipes; drilling and construction of 20 feet deep vertical borings for horizontal gas collectors; installation of one 12 inch butterfly valve with 8 foot extension; set up of road crossings and completion of tie-ins to existing LFG lines.

**White Street Landfill, Greensboro, NC.** Managed the installation of a design-build LFG collection and control system that included over 40 vertical landfill gas extraction wells and 20,000 feet of LFG piping. The project also included the installation of a 3,000 SCFM skid mounted LFG chilling, dehydration, and booster system designed to remove moisture and increase pressure in the pipeline gas transmission line to the Cone Mills Manufacturing Plant.

### **Landfill Closure Projects**

**Abington Landfill, Harford County, MD.** Served as project manager on a 7 acre design build closure project which included site regrading, stormwater controls, groundwater control devices, and groundwater monitoring wells.

**Northern Virginia Community College, Annandale, VA.** Served as project manager on a design build project, which included the restabilization of side slopes and poor surface drainage around a parking garage facility. The scope of work involved removing vegetation and loose soil from the failing slopes, regrading the slopes to a lesser angle, and regrading the swales to improve drainage. Constructed an additional gravel filled channel to control underseepage and revegetated the slope to minimize future erosion.