

JEFFREY T. SIEG, PG

## Education

BS – Geological Sciences, California State University, Long Beach, 2005

## Professional Licenses

California Professional Geologist (PG) (No. 9523)



## Specialty Certifications

40-Hour Occupational Safety and Health Administration (OSHA) Hazardous Waste Operations Emergency Response (HAZWOPER) Training and 8-Hour Annual Refresher

## Professional Experience

Mr. Sieg has a background in geology and extensive experience in the collection of storm water, groundwater, and soil samples; soil classification and identification of soil properties; interpretation of contaminant distribution and migration; and stratigraphic and hydrogeologic analysis. He often participates in investigations of hazardous chemicals in soil, soil vapor, surface water, and groundwater. This includes environmental site assessments (ESAs) of properties prior to real estate transfer, site investigation activities involving work plan preparation, soil gas surveys, installation of soil borings and subsequent sampling, groundwater well installation and sampling, precision mapping of sites, and evaluation of applicable remedial alternatives. He has experience with, and practical knowledge of, various remedial action alternatives, such as soil vapor extraction (SVE) systems, soil excavation, in situ chemical oxidation, and groundwater remediation, as well as evaluation of contaminants in surface water and groundwater in accordance with regulatory requirements or generally accepted guidelines. Mr. Sieg has also evaluated facilities, submitted recommendations related to OSHA and U.S. Environmental Protection Agency (EPA) compliance, and supervised numerous site remediation and construction projects in Southern California, including installation of landfill gas (LFG) control systems.

## Environmental Management

Mr. Sieg has assisted in the preparation of numerous Phase I ESAs in accordance with current standards. Activities included evaluating current and past on- and off-site operations, compiling historical property use information and developing conclusions with respect to potential environmental concerns and the presence of Recognized Environmental Conditions (RECs). As needed, conclusions were used to determine additional due diligence investigations warranted to assist clients with understanding potential risks associated with the transfer of contaminated property.

He has been involved with numerous subsurface investigations of known or suspected hazardous waste sites to identify and characterize contamination of soil, soil vapor, and groundwater in accordance with regulatory requirements. Activities included the development of the scope of work and preparation of work plans; sampling and preservation of environmental media for various chemicals of concern, such as hydrocarbon products, solvents, heavy metals, polychlorinated

biphenyls (PCBs), and pesticides; and data interpretation and analysis to evaluate potential remediation alternatives.

He has provided assistance with investigation projects for evaluation and oversight of drilling and sampling technologies such as direct-push, membrane intrusion probe (MIP), hydraulic profile tool (HPT), cone penetration testing (CPT), hollow stem auger, air and mud rotary, dual-percussion, and sonic methods necessary to achieve project objectives for investigations and installation of SVE, groundwater, and vapor monitoring wells.

Mr. Sieg has also been involved with numerous soil gas surveys to evaluate the presence and extent of volatile organic compounds (VOCs) associated with contaminated soils, methane associated with landfills and oil fields, and naturally decaying organic matter. Results of the investigations were used to evaluate potential human health risks associated with vapor intrusion of carcinogenic VOCs and potential explosion hazards associated with methane infiltration into on-site structures.

Mr. Sieg assisted in design engineering on several projects for methane mitigation controls and countermeasures. Activities included ESAs and investigations, data interpretation, and design methods to meet local regulatory requirements for methane zones located in the cities of Los Angeles, Santa Fe Springs, Brea, Signal Hill, and Long Beach.

He provided construction quality assurance (CQA) and oversight for numerous projects throughout Southern California involving the installation of LFG mitigation and monitoring systems.

He has conducted the planning, coordination, and oversight of several remedial action projects. Activities included the development of remedial action plans (RAPs) and implementation of remediation strategies such as excavation and disposal (“dig and haul”), SVE (including both carbon and thermal treatment), air sparging, in situ chemical oxidation, and burial/capping contaminants in accordance with applicable regulatory guidance. His project experience includes:

**Characterization and Remedial Activities for Former Manufacturing Facility, Northridge, CA.** After preliminary investigations to evaluate potential releases from past manufacturing activities, SCS was contracted to conduct several investigations and assessments to evaluate potential vapor intrusion issues and indoor air quality, and to characterize the full extent of subsurface impacts from past chemical use. As Project Manager, Mr. Sieg conducted investigative activities to identify several degreasing agents, such as tetrachloroethene (PCE), trichloroethene (TCE), 1,1-dichloroethene (1,1-DCE), and Freons, in subsurface soil and soil vapor throughout an area of approximately 10 acres to depths of 130 feet. In order to address these concerns, Mr. Sieg and SCS developed a RAP that incorporated over 53 SVE and monitoring wells with conveyance piping (both above and below grade) tied into a carbon treatment vapor extraction system (VES). He worked closely with design engineers and on-site personnel to minimize facility disruptions during construction, as well as developing innovative designs for monitoring well heads to minimize impacts to facility operations and to optimize maintenance and monitoring during routine facility visits.

**Groundwater Contamination Characterization for Former Manufacturing Facility, Los Angeles, CA.** After years of monitoring groundwater for chlorinated solvents, using low-flow sampling technology, the Los Angeles Regional Water Quality Control Board (LARWQCB) requested the installation of multi-nested wells to evaluate contaminant distribution throughout the water column. As Field Supervisor, Mr. Sieg collaborated with the SCS team of hydrogeologists to develop and implement sampling protocols using passive diffusion bag (PDB) sampling devices within the existing groundwater wells. The data acquired was used to evaluate contaminant distribution and stratification within the aquifer beneath the site. Ultimately, the LARWQCB agreed that the installation of multi-nested groundwater wells beneath the site was not necessary.

**Site Characterization for Metal Recycling Facility, Ontario, CA.** As Project Manager, Mr. Sieg assisted in the preparation of a current conditions report for a 16.61-acre parcel used for metal recycling/scrap yard. This included the review and compilation of data collected from numerous investigations conducted over a period of 30 years. Several areas of soil contamination from petroleum hydrocarbons (PHCs), VOCs, and heavy metals were identified. It was determined that soil was contaminated with lead in the most prevalent and widespread contaminant. In order to evaluate the extent of lead contamination and determine if the soils would be considered hazardous for disposal purposes, SCS conducted an additional soil investigation. Based on the results of the investigation, it was determined that, given the extent and volume of contamination, excavation and transport to a disposal facility would be cost prohibitive. SCS worked with the client and the Department of Toxic Substances Control (DTSC) to develop an alternative remediation strategy to consolidate the lead-contaminated soil and bury and cap the material beneath the proposed warehouse building. The method of remediation was within the budget for the proposed redevelopment of the property.

**Project Manager for Site Investigation and Remedial Activities of Former Metal Refinery, Los Angeles, CA.** As Project Manager, Mr. Sieg conducted soil, soil vapor, and groundwater investigations to assess the potential for releases of heavy metals and VOCs based on historical operations and as a follow-up to a previous Phase I ESA on the property. Investigation activities identified elevated concentrations of cadmium and mercury in subsurface soils exceeding regulatory limits. Under the oversight and approval of the Los Angeles County Fire Department (LAoFD) Site Mitigation Unit (SMU), SCS conducted remedial actions which included focused excavation of soil in the areas of concern and transport of material to an appropriate disposal facility. Following remedial activities and sampling to confirm that cleanup goals had been met, the site received a No Further Action–Closure letter from the SMU.