

# SCS FIELD SERVICES



## REMEDIATION SERVICES

### SCS FIELD SERVICES

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## ABOUT OUR COMPANY

SCS is an engineering and construction firm that solves environmental problems. In an age when consolidations, mergers, and public ownership of environmental firms are common, SCS is proud to be one of the oldest and largest firms in the industry still operated like a professional service firm instead of strictly as a business. SCS is completely owned by our employees, and virtually all of our senior managers are licensed professionals in one or more jurisdictions. SCS approaches your environmental problems as if they were our own.

Stearns, Conrad and Schmidt Consulting Engineers, Inc. (SCS) is an independent, employee-owned environmental engineering, construction, and operation and maintenance services firm founded in 1970. SCS's remediation division concentrates on the environmental services industry. The firm has grown to a staff of over 700, with more than 40 offices located throughout the United States. SCS is one of only a few firms in the country that specializes in remediation construction services, and has worked extensively with local governments, governing boards, citizens groups, and regulatory agencies to resolve environmental challenges. The design, permitting, construction, and operation of remediation projects and related environmental systems are fundamental services provided by SCS.

Formed in 1985, SCS Field Services (SCS-FS) was initially created to provide turnkey engineering construction and associated operation, maintenance, and monitoring services for a variety of environmental projects. In response to the demands of an expanding environmental market, SCS-FS provides remediation services to address hazardous substances contamination. SCS-FS provides high-level technical engineering services and practical hands-on construction and operations expertise. This unique combination is generally unavailable from other environmental engineering construction firms and allows SCS-FS to provide clients with cost-effective solutions to difficult environmental problems. SCS-FS operates remediation systems nationwide from its regional centers. SCS-FS's services are utilized by municipalities, private landfill management companies, environmental contractors, diversified energy companies, and engineering firms.

## Environmental Construction Services

- Remediation Construction
- Construction Management
- Construction Estimating and Engineering
- Facility Decommissioning and Demolition
- Stormwater Control Systems
- Earthwork, Soil-cement Stabilization and Erosion Controls
- Soil Treatment Systems
- Groundwater Treat Systems
- Hazardous Waste Management
- Construction Air Monitoring
- Excavation and Grading
- Storm Water and Surface Water Management



### Construction Estimating Services

- Critical path scheduling
- Production rates
- Digital quantity take-offs
- Costing
- Procurement/expediting
- Subcontracting
- Quality Control

### CONSTRUCTION MANAGEMENT

Our construction management offers consolidated estimating, project management, and construction engineering services. Our managers' remediation projects range in size from service station sites to 100-acre chemical plants; from landfills to federal explosive test sites. Project scopes include mine closures and capped landfills, removal or treatment of many thousands of cubic yards of contaminated soil, demolition of chemical plants, and removal of hundreds of underground storage tanks and structures.

SCS-FS Construction has experience obtaining the permits nationwide to help keep your project on track. SCS-FS delivers responsive construction management and field crews to provide a common-sense approach to the implementation of

environmental remediation construction projects. SCS-FS Construction has provided these specialized construction services since 1985. As one of the oldest and largest turn-key environmental consulting and remedial construction firms in the nation, SCS-FS Construction is a Class A – General Engineering Contractor with HAZ – Hazardous Materials Certification. Clients can be confident that their job will be done right.

SCS-FS also offers specialized estimating services to help you respond to your remediation projects. Over the past 25 years, our estimators have successfully estimated countless remediation construction projects nationwide. SCS-FS Construction's long history of experience with remediation projects gives us the ability to offer estimating services for demolition, site remediation, mine closures, and removal of underground structures and storage tanks. We will provide you with the most advantageous approach and accurate numbers.

SCS has demonstrated our ability and depth by simultaneously managing multiple fast-track projects in a highly public environment. Critical path scheduling and budgeting control are supported by our integrated web-based financial and project management systems. These computerized systems are supported by routine face-to-face meetings to assure schedule and budget control.

SCS is committed to providing practical, efficient consulting services. Our strategy for dealing with inquiries and requests from a client is designed to ensure that SCS can be relied upon to provide prompt consistent service. Key elements of our project management approach include kick-off meetings, project schedules, detailed budgets, detailed project scopes, and follow-up meetings.

We are client focused, and our business interests are free of conflict that would affect our judgment in helping clients select and implement the best approach for a given project. SCS receives preferred contractor status from coveted clients by providing construction know-how, a strong safety ethic, risk management, and value.



## DESIGN-CONSTRUCTION ADVANTAGES

SCS Field Services together with SCS Engineers, are able to offer turnkey investigation, design, construction and monitoring of remedial measures in house. This arrangement meets many of our clients' requirements for responsiveness and accountability when facing an environmental emergency or critical deadline.

SCS provides a completely integrated general construction, engineering, and scientific team experienced in solving complex construction and environmental problems. With offices and experience nationwide, our resources and internal network create a base of knowledge that allows us expedited permitting and environmental compliance.

SCS Field Services does construct projects that were designed by others, but clients have found that our combined turn-key solutions offer particular value. When investigation, design, construction and O&M services are consolidated in a single qualified firm, risk management becomes simpler. We manage our projects such that investigation and design tasks are performed by engineers and scientists, while construction and O&M tasks are performed by specialists in those areas who are accustomed to preparing professional construction cost bids.

A critical element of any construction project is to verify that the final product meets the design requirements and complies with drawings, specifications, permit conditions and designer's intent. This is a necessary step for both documentation and certification purposes, and to give the owner and regulators confidence that the work has been completed correctly. SCS provides a full-range of construction engineering and quality assurance services for construction of all elements of municipal and private industry. This is better achieved through a fully integrated team.

SCS has extensive experience with both "traditional" and "cutting edge" remedial technologies. We customize our remediation systems to meet our client's needs. We feel that only after the extent of impact is assessed and a cleanup level established may a remediation system be properly designed and built. Factors which must be considered in any remediation system or project include cost, difficulties of permitting, time of cleanup, and liability.

SCS self-performs most of the field construction work. Select subcontractors will be used for specialty tasks such as drilling, electrical, surveys, etc. Our objectives will be to manage quality, schedule, and cost. SCS-FS is a construction firm with professional integrity and is successful at meeting schedule constraints by promoting open, honest, and direct communication between SCS, the client, and subcontractors. Verbal and written communication will be supplemented by schedule tracking using Microsoft Project. Our construction managers have a keen sense of which activities are on the critical path. This allows management to focus on tasks that must be completed on schedule and that have the most impact on the project.

SCS stands behind our uncompromising commitment to safety. SCS maintains an ongoing health and safety program that consists of medical monitoring, safety training, and health and safety planning. All of our field personnel and most of our professional staff have 40-hour health and safety training under OSHA 29 CFR 1910.120 (hazardous waste operations), and are certified to perform work corresponding to Level B and lower protection. Personnel involved with hazardous waste field investigations and construction attend periodic safety training programs and refreshers. The SCS Health and Safety Program is overseen by our corporate Certified Industrial Hygienist (CIH) and regional Certified Safety Professionals (CSPs).

## Construction Engineering Services

- Construction safety analysis
- Construction quality assurance
- Constructability reviews
- Field design
- Field staking
- Health and safety monitoring
- As-built preparation
- Sampling and analysis
- System start-up and balancing
- Acceptance testing
- Certification



### Earthwork Services

- Earthwork and filling
- Pipeline trenching
- Slope protection
- Erosion control
- Stormwater filtration and runoff collection
- Drainage improvements
- Mass earthwork
- Pesticide excavation
- SVE soil treatment
- PCB soil-cement stabilization
- Deep soil-cement mixing

### REMEDIAL CONSTRUCTION SERVICES

Contaminated and deteriorated soil requires careful remediation. SCS has extensive experience in both the in-situ characterization of contaminated soils and characterizing contaminated soil “on-the-fly” when the unexpected is encountered. SCS self-performs both the remediation excavation and the construction mass excavation.

Earthwork, Erosion Control, and Soil Decontamination:

- Construction of RCRA or TSCA caps over contaminated soils
- Soil cement stabilization
- Implementation of groundwater pump-and-treat systems
- Excavation of contaminated soils and implementation of ex-situ bioremediation
- Implementation of in-situ bioremediation systems and in-situ chemical oxidation
- UST/AST removal
- Construction of soil vapor extraction systems with carbon filtration and/or air sparging
- Implementation of cut-off walls to preclude the flow of contaminated groundwater off-site
- Stormwater BMPs
- Wetlands habitat restoration

We offer a well-trained staff of field engineers and technicians that serve as resident engineers/owner’s representatives, soil and geosynthetics technicians, landfill gas and groundwater well inspectors. Our experience encompasses construction projects of all sizes that include low hydraulic conductivity soil liner and cover systems, granular drainage media, many types of geomembrane liners, geocomposite drainage products, geosynthetic clay liners, general earthwork, concrete, and mechanical and electrical systems.

### Typical Projects

- Remedial action
- Above-ground bioremediation (landfarming), 2,000 cubic yards of diesel impacted soil
- Enhanced in-situ bioremediation treatment system for a fuel hydrocarbon spill
- Surgical removal of hydrocarbon-impacted soil, state superfund site



## FACILITY DECOMMISSIONING AND DEMOLITION

SCS recognizes the time and economic constraints associated with the downsizing and decommissioning of a facility. We offer a full compliment of highly responsive, competent and cost efficient environmental services that mitigate liabilities and can transition your facility into a safe and stable condition that presents no significant threat of release of hazardous substances into the environment and no significant risk to human health.

Facility decommissioning and demolition projects are implemented for many reasons, such as obsolescence, divestiture, down-sizing, compliance with new regulations, and change in location. Managing environmental uncertainty is the biggest challenge for successful decommissioning and demolition projects.

Facility decommissioning and demolition services are offered by SCS-FS as part of our remediation construction services. SCS-FS performs construction and demolition work specifically related to remediation projects. SCS-FS Construction has worked on projects that combined environmental remediation with construction activities, including sites with burn ash, lead, petroleum hydrocarbons, chlorinated hydrocarbons (e.g., PCE/TCE), lead-based paint, and asbestos. Our construction crews are experienced at decommissioning, salvage recovery, decontamination and demolition of warehouses, chemical plants, electronics processing, and steel fabrication facilities. SCS is a full-service licensed and bonded environmental contractor, and we serve clients nationwide.

### Goals for Success:

- Obtain regulatory compliance
- Redevelopment of environmentally-impacted property
- Identify health and safety hazards; protect employees and the public
- Green demolition; recycle and salvage materials to the maximum extent possible
- Reduce environmental uncertainties
- Quantify abatement and demolition costs
- Minimize future liabilities

### Common Contaminants

- Fuel hydrocarbons
- Crude oil
- Organic lead and other metals
- Pesticides
- PCBs and arsenic
- Solvents including TCE, TCA, PCE
- Low level radioactive materials
- Asbestos
- Lead



Because of today's regulatory restrictions, OSHA standards, recycling efforts, and safe hazardous material management practices, the days of simply calling in the wrecking ball are long gone.

### STORMWATER AND EROSION CONTROL MEASURES

Stormwater management is an important consideration for manufacturers, solid waste facility owners, and real estate developers. SCS-FS implements simple, effective and economical approaches to preventing and controlling erosion, sediment, and contaminant discharges from new construction and established facilities.

Specific stormwater management services include:

- Constructed wetland outfalls for stormwater
- Erosion and sediment control
- Groundwater remediation
- Soil remediation
- Stormwater monitoring plan implementation
- Compliance training for client personnel

Specific erosion control services include:

- Culverts and Inlets
- Straw Mulch and Wattles
- Stream Bank Protection
- Silt Fence
- Retention Basins & Check Dams
- Drip Pads
- Dust Control
- Subdrains
- Grading
- Gabions
- Grizzly Trackout Control
- Cover Canopy's
- Seeding Applications
- Soil Reinforcement
- Retaining Walls
- Stormwater BMPs
- Jute Mesh & Excelsior Blankets
- Sediment Ponds

Our experienced construction crews implement the measures for erosion control. From start to finish, SCS corrects your erosion problem. SCS implements the BEST practical, technical and economical solutions to solve your problem; often these solutions come as combinations of new and old technologies.



## HEALTH AND SAFETY

The health and safety of our workers and the general public is a primary concern and goal during any activity performed by SCS. We maintain a Corporate Health and Safety Program and Injury and Illness Prevention Plan which outlines overarching company policies regarding health and safety.

Mr. Gary Pons, CIH, CSP, REA, is SCS's designated Corporate Health and Safety Director. Mr. Pons offers over 16 years of proven Environmental Health and Safety (EH&S) management experience. His effective communication skills, developed over years of construction safety management projects, have given him a keen ability to oversee EH&S activities for large (more than \$100 million) civil and public works projects, including sanitary sewer plant/pumping station, university/public school, restaurant, science and research facility, and sports centers. Mr. Pons is assisted by Office Health and Safety Coordinators (OHSCs) located in each regional center around the country. The OHSCs oversee health and safety issues at the individual offices and provide routine communication to Mr. Pons on incidents, staff recommendations, training updates, and related matters. Training needs are reviewed on a quarterly basis.

As a supplement to the Corporate Health and Safety Program document, and where required by federal, state, or local regulations, SCS prepares a site-specific health and safety plan for every project involving field activities. These plans describe in greater detail project-specific activities and anticipated hazards (e.g., chemical, biological, natural, construction, or excavation related).

SCS holds paramount the health and safety of our employees, our clients, and the public.

### Focus on Health & Safety

- Site Specific Health & Safety Plans
- 40 Hour Hazwoper Certification
- Competent Person Training
- Trench Safety Training
- Hydrogen Sulfide Safety Training
- Confined Space Entry Certification
- DOT Driver Safety Program
- Specialized In-House Developed Landfill Gas Construction Training
- DOT Certified Fusion Technicians
- DOT Operator Qualifications Program
- OSHA Forklift Training
- DOT Flaggers Training
- OSHA Asbestos Training



SCS staff routinely participate in health and safety training, including: OSHA Hazwoper, OSHA general construction, first aid and CPR, confined space, asbestos supervisor, and other related training as required by SCS or specific projects.

### ABOUT OUR STAFF

SCS-FS Construction's team is led by Tom Barham, Senior Vice President. We have two main offices located regionally across the country, while our crews are mobile and able to perform work nationwide.

Remedial construction projects are managed by Lenard Long and his staff. Mr. Long has a 33+ year record of successfully managing environmental, geotechnical, and construction projects for landfills, petroleum, chemical, transportation, utility, governments, and manufacturing industries. Mr. Long has been a licensed contractor with hazardous material handling certification in California for 21 years. During that time, he has designed mine closures and capped landfills, removed or treated many thousands of cubic yards of contaminated soil, demolished chemical plants, and removed hundreds of underground storage tanks and structures. Mr. Long has been responsible for hundreds of geotechnical investigations involving hazards such as landslides, erosion problems, collapsible soil, soft bay mud, liquefaction, stream bank erosion, slope instability and highly expansive soil conditions.

Field work is supervised by one of our eight highly experienced superintendents. SCS-FS maintains crews of experienced craftsmen employed by SCS, including: superintendents, equipment operators, truck drivers, fusion welding technicians, and laborers.

A trained work force is indispensable to providing quality service. Our commitment to training field personnel pays generous dividends to our clients as well. The experience gained by our staff on environmental projects allows us to provide the most cost effective solutions to our clients. In addition to training, our construction field crews are properly equipped to do the job – big or small.

SCS offers a team of professionals, technicians, and support staff who are active leaders in the industry and related professional organizations. Through participation in workshops and conferences, presentations, technical papers, and research, SCS staff are true innovators in the industry.



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## REMEDIATION PROJECT EXPERIENCE

Lawrence Livermore National Laboratory —  
PCB Remediation

Site 300 is a U.S. Department of Energy (DOE)-owned experimental test facility, currently operated as part of Lawrence Livermore National Laboratory (LLNL). The Site is located in the Altamont Hills about 17 miles east-southeast of Livermore, California and 8.5 miles southwest of Tracy, California. Site 300 is used to conduct research, development, and testing of highly explosive materials.

Building 850, located in the northwestern portion of Site 300, was constructed in 1960 to test and develop detonators for nuclear weapons and armor-piercing projectiles. The Building 850 complex includes the firing table, bunker, outdoor storage areas, and driveways/parking areas. Testing and experiments at the Building 850 complex have impacted site soils with PCBs, tritium, trace levels of depleted uranium, beryllium, copper, and high-melting explosives. The project followed CERCLA design procedures with reviews by the DOE, EPA, DTSC, Fish and Wildlife, and Central Valley RWQCB.

Remediation of chemically-impacted soil was required to reduce the potential for exposure to ecological receptors. Remediation consisted of excavation and soil-cement solidification on-site within an engineered containment embankment totaling approximately 29,000 cubic yards. The landfill containment embankment and drainage measures were designed by SCS Engineers' Pleasanton, California office as part of the Design-Build project.

Tyco Electronics —  
Facility Decommissioning and Demolition

SCS was selected as Tyco's environmental remediation engineer and contractor to manage and execute PCB-impacted soil removal, demolition, and decommissioning at the former Raychem Plant in Menlo Park, California (Bay Front Property). This former chemical facility had a Dowtherm boiler that used PCB fluid; significant spills were reported. Notable tasks include:

- Excavation of over 4,500 yd<sup>3</sup> of PCB-impacted soil from multiple Solid Waste Management Units (SWMUs) located in a filled intertidal zone along San Francisco Bay. Much of this work included excavation at the water table.
- Construction monitoring including sampling of excavations using SW-846 protocol, data management and evaluation, and report preparation. Over 350 confirmatory soil samples were collected and analyzed.
- Grading and placement of over 9,000 yd<sup>3</sup> of import soil. Included placement of a multi-layer cap over one SWMU and management of a comprehensive sediment control plan. Excavations located below the water table were stabilized with filter fabric prior to fill placement.
- Decon and demolition of four industrial chemical plant buildings totaling 30,000 ft<sup>2</sup>.
- Regulatory Agency negotiations (California Environmental Protection Agency (Cal-EPA), DTSC and RWQCB) including work plans, sampling and analysis plans, and quality assurance/quality control plans. In addition, odor control was an issue prior to construction because BAAQMD criteria and was handled with water spray techniques.
- Health and Ecological Risk Assessment.



 Lawrence Livermore  
National Laboratory

**Reliance Steel and Aluminum Company — Deep Soil Mixing**

SCS completed environmental remediation services for an industrial site located in Vernon, California on an expedited basis to meet a deadline for property transfer. Remedial activities were completed using a unique, innovative excavation and treatment process referred to as “deep soil mixing.” The deep soil mixing remediation project involved a process in which a large screw-shaped auger, measuring four feet in diameter and equipped with hollow mixing bars, is drilled into the subsurface to a targeted zone of contamination. A cement mixture flows through the mixing bars, creating a concentrated blend of wet cement and contaminated soil. After several days, the mixture solidifies and encapsulates the contaminants in place. It is estimated that the utilization of deep soil mixing decreased the project cost by hundreds of thousands of dollars, in comparison to traditional excavation techniques such as shoring.



**US Pipe — Landfill Cover Design and Closure**

SCS’ client’s facility produces ductile iron pipe, which is used by utilities for distribution of potable water. For over 50 years, industrial solid waste generated during the manufacturing process was disposed of at an approximate 7-acre, on-site landfill. Oversight agencies required that the landfill be closed via final grading and capping. SCS assisted with closure of the on-site landfill at the company’s Union City, California plant. The landfill closure entailed final grading, slope stabilization, placement of final cover and drainage systems, and installation of a surface water detention basin. The landfill closure was in accordance with CCR Title 27 standards and local agency permit conditions.



**Unocal — Multi-Site Remediation**

SCS has managed over a dozen remediation projects for Unocal since 1999. These projects have involved waste management, earthwork, phytoremediation, chemical remediation of in-situ soils, in-situ groundwater bioremediation, construction oversight, and expert witness support at former AgChem sites and former bulk oil terminals located in sensitive farmland areas of Northern California.

- Contaminants remediated included pesticides (DDT, Toxaphene, Malathion, Trifluralin), petroleum hydrocarbons, urea, sulfur compounds, nitrate, and phosphoric acid.
- SCS removed over 1,000 yd<sup>3</sup> of petroleum hydrocarbon-impacted soil from a former bulk oil storage facility near the ecologically sensitive Eel River.





# SCS FIELD SERVICES



Ownership makes a difference.