

## Appendix E-2

---

### All West Geoscience Inc.

- Qualifications and Experience
- Small Business Certification
- Disabled Veteran Business Enterprise Certification



RESPONSE TO: REQUEST FOR QUALIFICATIONS  
CONSTRUCTION MANAGEMENT AND RESEARCH IN  
CIVIL ENGINEERING APPLICATIONS USING TIRE DERIVED AGGREGATE  
IWM05058  
CALIFORNIA INTEGRATED WASTE MANAGEMENT BOARD

---

**INTRODUCTION OF ALLWEST GEOSCIENCE, INC.**

---

Allwest Geoscience, Inc., is a multi-disciplinary earth sciences firm specializing in providing high quality and cost-effective geotechnical engineering, engineering geology, soil and construction materials testing services throughout California and the Southwestern United States. With full service offices in Orange, Riverside, Santa Clara, and Contra Costa Counties, Allwest Geoscience has strategically placed our offices to minimize travel time between project sites to ensure that all project and client needs are fulfilled in a timely and responsive manner.

Allwest is currently certified by the State of California Department of General Services Office of Small Business and Resources as a Certified Disabled Veteran Business Enterprise (DVBE) and a Small Business Enterprise (SBE). Since our inception in 1992, Allwest has earned a reputation as a highly qualified and experienced consulting firm capable of meeting the diverse and expanding needs of an extensive client base.

As a professional consulting firm, Allwest supports a highly specialized and qualified staff of civil engineers, geotechnical engineers, engineering geologists, geologists, and soil and laboratory technicians. Through this staff of experienced and registered professionals, coupled with the overall experience of the firm, Allwest has continuously displayed the technical expertise and quality of work product necessary to provide quality services in a responsive and effective manner, regardless of a project's complexity or size.

At Allwest, client satisfaction is our number one goal. We understand that in order to achieve this goal, we need to provide our services in the most reliable means possible. Allwest accomplishes each project with the dependability and consistency that our clients have come to expect from our firm. Our professionals are committed to honoring commitments, meeting deadlines, exercising sound judgment, and standing behind the professional recommendations they provide.

Allwest is fully committed to providing unequalled service to each and every client for all projects undertaken. Our past and current achievements have assisted both private and public sector clients in achieving a feasible balance between the progress of mankind and the earth's limited resources.

RESPONSE TO: REQUEST FOR QUALIFICATIONS  
 CONSTRUCTION MANAGEMENT AND RESEARCH IN  
 CIVIL ENGINEERING APPLICATIONS USING TIRE DERIVED AGGREGATE  
 IWM05058  
 CALIFORNIA INTEGRATED WASTE MANAGEMENT BOARD

**KEY PERSONNEL**

The professional and registered staff members selected for our project team are highly qualified and experienced in their specific disciplines and have working knowledge of all required documents and standards.

**Table 1 - Professional Staff**

TEAM MEMBERS	FUNCTION	EDUCATION	REGISTRATION/CERTIFICATION	YRS/EXP
John R. Gery	Principal Geotechnical Engineer	Bachelor of Science in Engineering, 1971	California RCE 1000, 1988 Registered Civil Engineer, RCE 2473, 1975 Registered Civil Engineer, RCE 04951, 1975 Registered Civil Engineer, RCE 1225, 1975	15
Adel Kasim, Ph.D.	Principal Engineer	Ph.D. Civil Engineering, 1978 Master of Science, Environmental Engineering, 1981 Bachelor of Science, Civil Engineering, 1971	Registered Civil Engineer, RCE 10231, 1988 Registered Civil Engineer, RCE 11128	27
Scott M. Bell	Principal Engineer	Master of Science, Geological Engineering, 1981 Bachelor of Science, Civil Engineering, 1978	Registered Geotechnical Engineer, California GE 2067 Registered Civil Engineer, RCE 0445	26
Robert C. Wilson, III	Principal Engineer	Bachelor of Science, Earth Science, 1978	Registered Civil Engineer, California RCE 10231, 1988 Civil Engineer, California CE 10231, 1988	27
Romeo Balboa	Senior Engineer	Bachelor of Science, Civil Engineering, 1975	Registered Civil Engineer, California RCE 0445 National Society of Professional Engineers, Distinguished Graduate	26
David Cohen	Senior Engineer	Master of Science, Civil Engineering Bachelor of Science, Civil Engineering	California Hazardous Waste Cleanup and Emergency Response Training, OSHA 29 CFR	15

## PERSONNEL DUTIES

---

***Principal-In-Charge, Technical Advisor:*** Responsible for the management of all contractual matters with the Department of Water Resources. In support of this role, the Principal-In-Charge will serve as a Technical Advisor for all professionals assigned to this project team. He is responsible for ensuring that the Project Managers and Principals have the full support of all resources needed to successfully staff and manage needs of this contract. The Principal-In-Charge will be readily available as the District corporate-level point of contact.

***Project Manager:*** The designated Project Managers, with the full support of the ***Principal Engineers and Geologists***, will be responsible for the supervision/direction of all geotechnical consulting services and assigned project team personnel. Responsibilities also include the supervision/direction of geologic reconnaissance functions; field exploration and testing services; laboratory testing services; geologic and seismic hazard evaluations; geotechnical analysis and the review/preparation of associated recommendations; and other miscellaneous services. Specific duties include, but are not limited to: geotechnical assessments, investigations, and analysis; data compilation and analysis; preparation of soils and foundation reports and specifications; soil and groundwater investigations; geotechnical engineering studies; site remediation; and permitting.

***Geotechnical Services Team (Staff Geologists & Engineers, Field & Laboratory Technicians):*** Geotechnical and geologic personnel assigned to the project team will be responsible for the coordination of project activities and project scheduling with the designated Project Manager. The Project Manager will schedule all field and laboratory activities and each activity will be assigned to the most qualified project team member. The project team will support the designated geotechnical services team consisting of professional level staff, laboratory technicians, and field geologists/technicians.

## POLICIES AND PROCEDURES

---

***Project Management and Coordination Policies:*** Allwest believes that effective project management and quality is achieved through the continual and consistent application of Quality Control (QC) Programs. As a policy readily enforced for each project undertaken, all Allwest personnel are directed to adhere to the policies and standards established therein. A primary focus of our programs is the assignment of Quality Control individuals to effectively monitor the QC Programs with respect to work and work ethics for every project endeavor. Additionally, with Principal-In-Charge overseeing the progress, we have established a centralized document control system and a paper trail for all controlled documents. Our policy as a professional consulting firm is to maintain, at all times, professional standards, in all aspects of project tasks and management.

***Emergency Response and Special Circumstances:*** Allwest supports registered and certified professionals, as well as qualified field personnel. Allwest has extensive experience and knowledge directly relevant to the work categories presented in the RFQ documents. Our strengths lie in the quality and diversity of our assigned project team members, compounded with the personal involvement of designated Senior Level Staff members. Allwest has always responded to emergency situations with competency of deliverables and the performance of services for a variety of project types.

RESPONSE TO: REQUEST FOR QUALIFICATIONS  
CONSTRUCTION MANAGEMENT AND RESEARCH IN  
CIVIL ENGINEERING APPLICATIONS USING TIRE DERIVED AGGREGATE  
IWM05058  
CALIFORNIA INTEGRATED WASTE MANAGEMENT BOARD

---

## REFERENCES

---

### **Clark Construction**

1525 'N' Street, Suite 200  
Sacramento, California 95814  
Mr. Elmer Lantis  
916.341.7525

*Services Performed:* Geotechnical Engineering, Construction Monitoring Services

### **State of California, Department of General Services**

Professional Services Branch, Real Property Services Section/Special Properties  
707 3<sup>rd</sup> Street, 5<sup>th</sup> Floor  
West Sacramento, CA 95605  
Mr. Bob Sleppy  
916.801.2899

*Services Performed:* Geotechnical Engineering, Materials Testing, Phase I/Phase II Environmental Studies

### **Department of the Air Force**

Air Mobility Command  
60<sup>TH</sup> CONS  
350 Hangar Avenue, Bldg. 549  
Travis Air Force CA 94535  
Sergeant Handell Malone  
707) 424-7743

*Services Performed:* Geotechnical Engineering, Materials Testing, Construction Monitoring Services

### **San Manuel Band of Mission Indians**

Economic Development Department  
26569 Community Center Drive, 2<sup>ND</sup> Floor  
Highland, CA 92346  
Manuel Ruiz  
(909) 864-8933

*Services Performed:* Geotechnical Engineering, Geologic Hazard Studies, Materials Testing

### **DMC Design Group**

170 North Maple Street, Suite 101  
Corona, CA 92880  
David Cospers  
(951) 549-8100

*Services Performed:* Geotechnical Engineering, Materials Testing

## **AVAILABILITY**

---

Allwest Geoscience, Inc., provides services within a reasonable time frame in accordance with project schedules and specifications with our client's best interests as a primary focus. We have performed many projects where response times for various phases were critical. As deemed necessary, Allwest Geoscience has demonstrated competency in the acceleration of deliverables and the performance of services.

Each project incorporates a time schedule and work plan. Our knowledge of investigation and test procedures, management methods, and liaison with government agencies allows projects to be completed within reasonable time constraints. Project managers maintain an open line of communication with the client, design team, and government officials. At Allwest Geoscience, Inc., we hold our commitment for the provision of timely and cost-effective services to each client in the highest regard. We maintain a workload at a level such that our deliverables scheduling is not compromised.

## **RELEVANT PROJECT EXPERIENCE**

---

Allwest Geoscience, Inc. is well versed in applicable specifications: California State Department of Education, the Division of the State Architect (DSA), the California Building Code (CBC), the State of California Department of Mines and Geology (CDMG), the State of California Guidelines for Environmental Hazards Reports, the California Department of Toxic Substance Control (DTSC), and the American Society for Testing and Materials (ASTM Practice E 1527). Additionally, throughout our years of providing professional consulting services, Allwest Geoscience has provided our highly specialized areas of expertise for several state, municipal, and private parks and recreational facilities.

### **CAPITAL AREA EAST END PROJECT**

Sacramento, CA

*Client:* Clark Construction Group

*Fees:* \$344,000

*Completed:* 2004

The Capital Area East End Complex is being utilized by the California Integrated Waste Management Board (CIWMB) as a Case Study to develop a construction site waste management system for the purpose of diverting 75% by weight of the total project demolition and new construction materials from being disposed of in landfills. Allwest Geoscience was retained by the Clark Construction Group to serve as "Waste Program Coordinator" and assisted in the development and coordination of procedures for the Waste Management Plan. Specific areas of service included the facilitation of separating materials for potential reuse, salvage, recycling, and possible return. Additional responsibilities included maintenance of waste bin areas to ensure orderliness to avoid potential co-mingling of waste materials, and separate hazardous waste materials to be stored and disposed of in accordance with all applicable regulations. Also responsible for contracting waste removal and recycling firms, as well as the proper maintenance of daily records and quarterly performance reports.

RESPONSE TO: REQUEST FOR QUALIFICATIONS  
CONSTRUCTION MANAGEMENT AND RESEARCH IN  
CIVIL ENGINEERING APPLICATIONS USING TIRE DERIVED AGGREGATE  
IWM05058  
CALIFORNIA INTEGRATED WASTE MANAGEMENT BOARD

---

**CALIFORNIA INTEGRATED WASTE MANAGEMENT BOARD**

IWM04047 – Environmental and Engineering Services Contract

*Client:* Dana N. Humphrey, Ph.D., P.E.

*Fees:*

*Completed:* ongoing

This contract is to promote the use of waste tires in various civil engineering applications. Services include providing construction oversight on projects in which shredded tires are used as lightweight fill, vibration attenuation layers, erosion control and other civil engineering applications. Our firm is responsible for performing geotechnical engineering and quality control, on-site construction observation, as well as obtaining samples for laboratory testing.

**ADDITIONAL INFORMATION**

---

***Insurance Coverage:*** As responsible consulting firm, Allwest retains Professional Liability, General Liability, Worker's Compensation, and Automobile Liability insurance. A certificate of insurance illustrating our complete coverage is provided in *Appendix C*.

***Quality Control Programs:*** Allwest adheres to pre-defined quality assurance/quality control programs. These programs are enforced for all services we provide. These programs facilitate compliance with project performance standards, schedules, and budgets. Our comprehensive quality assurance plans utilize management approach procedural manuals that delineate the interrelationship between management and design team components and describe quality control procedures to be utilized. The programs address data generation, management, and quality assessment guidelines for sampling and analysis procedures, as well as methods of corrective action.

***Equal Employment Opportunity:*** Allwest is committed to a policy of equal opportunity for applicants and employees in all areas of the employer-applicant and employer-employee relationships. This policy is enforced regardless of race, creed, color, national origin, age, sex, or physical handicap, where the later does not affect job performance or safety. Allwest Geoscience, Inc. has a written Affirmative Action Statement regarding discrimination. This statement is available for review upon request.

***Safety Policy:*** Allwest Geoscience, Inc., provides a safe and healthy place of employment, and complies with the laws, rules and regulations of federal, state and local governments regarding safe practices. Accident prevention is a high priority. We provide 40-Hour Hazardous Waste Operations and Emergency Response Training per OSHA 29 CFR 1910.120 for our geotechnical and environmental staff.

As a professional consulting firm, Allwest Geoscience, Inc. is committed to providing our employees with the proper training. Safety protocols are fully disclosed in a written Safety Handbook presented to each employee to which they must agree before employment is finalized. Each employee is directed to adhere to the policies and standards disclosed within the Safety Handbook in the performance of all aspects of project tasks and management.

***Drug-Free Workplace:*** Allwest Geoscience, Inc., complies with Government Code Section 8355 in matters relating to providing a drug-free work place. Allwest Geoscience supports our employees and promotes an open communication policy.



# PROCUREMENT DIVISION

Office of Small Business and DVBE Certification

707 Third Street, 1st Floor, Room 400 \* PO Box 989052

West Sacramento, California 95796-9052 \* (800) 559-5529

SB APP 20041207

December 7, 2004

REF# 0000114  
ALLWEST GEOSCIENCE INC  
3981 E MIRALOMA AVE  
ANAHEIM CA 92806-1822

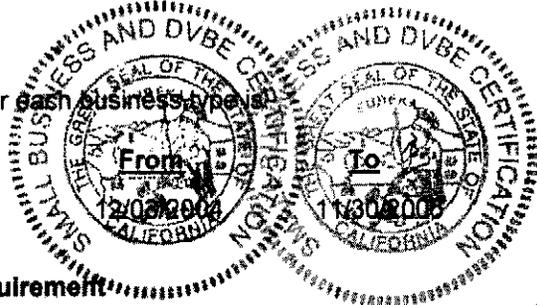
Dear Business Person:

Congratulations on your certified small business status with the State of California. Your certification entitles you to benefits under the state's Small Business Participation Program within state contracting, including a five percent bidding preference and special provisions under the Prompt Payment Act.

### Certification period

Your certification period for cash business is:

Industry  
SERVICE



**IWM05058**  
**Construction Management & Research in Civil**  
**Engineering Applications Using**  
**Aggregate**  
Allwest Reference: 02-3171GP

### Annual Submission Requirement

To maintain your certified status, you must annually submit to the Office of Small Business and DVBE Certification (OSDC), proof of annual receipts and proof of employees for your firm and each of your affiliates (if any).

### Proof of Annual Receipts

Submit to OSDC, a copy of your firm's and any affiliate firm's ENTIRE federal tax return each year following your certification. Include ALL accompanying schedules, forms, statements, and any other support documents filed with that specific tax return.

If you request a tax filing extension with the Internal Revenue Service, submit to our office a copy of the extension form. When your tax returns are filed, submit a copy of the entire federal tax return to our office.

### Proof of Employees

If you have employees whose taxable wages are reported to the California Employment Development Department (EDD) on a quarterly basis, you must annually submit to our office along with your proof of annual receipts, proof of employees for your firm and any affiliates.

We will accept a copy of the EDD's "Quarterly Wage and Withholding Report" (Form DE6) or other format accepted by the EDD. Your employee documents must cover the same four quarters as the tax return you submit for your proof of annual receipts.

If you have out-of-state employees, submit the employee documentation comparable to EDD's "Quarterly Wage and Withholding Report" for the same four-quarter period.

### Maintain Your Online Certified Firm Profile



**PROCUREMENT DIVISION**

**Office of Small Business and DVBE Certification**

707 Third Street, 1st Floor, Room 400 \* PO Box 989052

West Sacramento, California 95798-9052 \* (800) 559-5529

DVBE APP 20041207

December 7, 2004

REF# 0000114  
ALLWEST GEOSCIENCE INC  
3981 E MIRALOMA AVE  
ANAHEIM CA 92806-1822

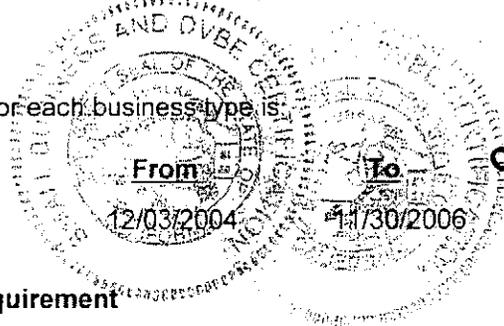
Dear Business Person:

Congratulations on your certified disabled veteran business enterprise (DVBE) status with the State of California. Your certification entitles you to benefits under the state's DVBE Participation Program with state contracting, including the three percent DVBE participation goal for overall state contract dollars.

**Certification period**

Your certification period for each business type is:

Industry  
SERVICE



**IWM05058**  
**Construction Management & Research in**  
**Civil Engineering Applications Using**  
**Tire Derived Aggregate**  
Allwest Reference: 02-3171GP

**Annual Submission Requirement**

All DVBEs must submit to the Office of Small Business and DVBE Certification (OSDC) each postcertification tax year, a complete copy of your business' federal income tax return, including extensions, within 90 days of the tax return's filing due date. If your business is a partnership, each partner must also submit a complete copy of his or her individual tax return. Additionally, if you are a DVBE that is not a sole proprietorship and your firm rents equipment to the state, you must also include in your submittal a complete copy of the personal federal income tax returns for each of your disabled veteran owners, including extensions, and within 90 days of the individual's tax return filing due date. Failure to comply will result in the suspension of your DVBE status and possible decertification, and it shall prohibit your business from participating in any state contract until all requirements are met.

**Maintained Your Online Certified Firm Profile**

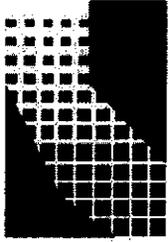
A secure access feature on our website enables you to maintain certain company profile information, including customizable keywords to best describe your business specialties with. Details about the Certified Firm Profile and your secure logon information are available on the final page of this letter. Please keep your logon information page in a secure place and DO NOT share it with anyone or include it with any of your bid documents or submittals.

**Reporting Business Changes**

You must notify OSDCA of all business changes or your certification status will be subject to revocation. The enclosed "Certification Information Change" form identifies specific items that may be reported using the change form and it identifies other changes that require a new certification application submittal.

**Proof of Eligibility**

Maintain this original certification letter for future business needs. To demonstrate your firm's DVBE eligibility,



## Appendix E-3

---

### Diaz-Yourman & Associates

- Qualifications and Experience
- Resumes
- Small Business Certification



**DIAZ-YOURMAN**  
• ASSOCIATES  
*Geotechnical Services*

## **FIRM PROFILE**

Diaz-Yourman & Associates (DYA) is a privately-held geotechnical consulting services corporation, founded in December 1992. We have grown in size, capacity, and breadth of services and currently have 25 employees, including 16 engineers with graduate level degrees in geotechnical engineering. Our engineers are supported by a staff of technicians, word processors, and drafters (AutoCAD and Intergraph), as well as an extensive technical library. Our Southern California office is located at 1616 East 17th Street, Santa Ana, California 92705; telephone number (714) 245-2920; fax number (714) 245-2950.

DYA provides geotechnical design and construction services for a wide array of project types, including transportation, infrastructure, industrial, commercial, institutional, airports, ports and harbors, and environmental. More than 100 years of combined geotechnical engineering experience by our principals and a history of translating the latest technologies to innovative, sound, and practical solutions have resulted in notably successful projects and satisfied clients. Our working environment fosters technical excellence and dedication to your needs. Our commitment is to provide service, quality, experience, innovation, and value, resulting the in the successful completion of your project.

DYA has been recognized by our peers for innovation and technical excellence. We have received Outstanding Project Awards in four of the last eight years from the California Geotechnical Engineers Association (CGEA), as well as awards from the American Society of Civil Engineers (ASCE), Orange County Engineering Council (OCEC), and Consulting Engineers and Land Surveyors of California (CELSOC).

DYA is certified as a minority business enterprise and disadvantaged business enterprise (MBE/DBE) through the Orange County Transportation Authority (OCTA) under the California Unified Certification Program (CUCP), and we are certified as a Small Disadvantaged Business (SDB) by the Small Business Administration (SBA). DYA is also registered as a small or community business with several agencies, such as the Metropolitan Water District, City of Los Angeles, and Port of Long Beach.



### Emphasis

- Pavements
- Constructability
- Project Management

### Professional Registration

1987/Geotechnical Engineer,  
CA – No. 269  
1963/Professional Engineer,  
CA – No. 13932

### Education

1979/MCE/Geotechnical  
Engineering/University of  
Houston  
1959/BS/Civil Engineering/New  
Mexico State University

### Professional Overview

Mr. Diaz has over 45 years of broad geotechnical and geo-environmental engineering experience. While most of his experience has been throughout California, he has completed projects across the United States and overseas. His project experience includes ports and harbors, dams, bridge structures, commercial and industrial facilities, high-rise buildings, roads and highways, rail, elevated and depressed roadways, mass grading, landslides, ground improvement and liquefaction mitigation, and contaminated site remediation. He has directed multi-disciplined soil, foundation, and geologic studies for various types of projects.

### PROJECT EXPERIENCE

**Atlantic Avenue Improvements, Los Angeles County, California** – Geotechnical principal for an investigation of a 1-mile long segment of an existing major arterial street (2 lanes in each direction) for pavement rehabilitation. Surface conditions were surveyed to characterize the existing pavement using non-destructive testing (road rater) and with pavement borings and cores. Designs for both a pavement overlay and for complete removal and reconstruction (new pavements) in accordance with County of Los Angeles standards were provided. Pavement overlays were designed with asphalt rubber hot mix (ARHM). Mr. Diaz oversaw the project and provided recommendations to the final report.

**Eastman Avenue, et al. Improvements, Los Angeles County, California** – Geotechnical principal for an investigation for the pavement rehabilitation of 3 miles of various different existing commercial and residential streets. The streets varied in width from 1 to 2 lanes in each direction, with some located on steep, winding roads. Existing pavement and subgrade conditions were surveyed and surface conditions were investigated for structural support using pavement borings and cores. Designs for both a pavement overlay and for complete removal and reconstruction (new pavements) in accordance with County of Los Angeles standards were provided. Pavement overlays were designed with asphalt rubber hot mix (ARHM). Mr. Diaz oversaw the project and provided recommendations to the final report.

**Hicks Avenue, et al. Improvements, Los Angeles County, California** – Geotechnical principal for an investigation for the pavement rehabilitation of approximately 2 miles of 10 different existing commercial and residential streets. The streets varied in width from 1 to 2 lanes in each direction, with some located on steep winding roads. Existing pavement and subgrade conditions were surveyed and surface conditions were investigated for structural support using pavement borings and cores. Designs for both a pavement overlay and for complete removal and reconstruction (new pavements) in accordance with County of Los Angeles standards were provided. Pavement overlays were designed with asphalt rubber hot mix (ARHM). Mr. Diaz oversaw the project and provided recommendations to the final report.

**La Palma Avenue Storm Drain Pipeline, Anaheim, California** – Geotechnical principal for an investigation for a 1-mile long storm drain pipeline in a developed city. The project required traffic control to perform the field investigation. Geotechnical issues included shoring types and pavement thickness designs. The pavement designs included both new construction and overlay of existing pavements using both conventional and rubberized asphalt. Mr. Diaz provided project oversight and assisted in coordination of agencies.

***John Wayne Airport Pavements, Orange County, California*** – Geotechnical principal for the design and implementation of an airport pavement management system. Existing conditions included both rigid and flexible pavements in varying stages of use and conditions. Both airfield and landward pavements using a falling weight deflectometer (FWD) were evaluated. Areas with unknown pavement thicknesses were cored and evaluated using ground penetrating radar. Pavement condition surveys were performed for all pavements, including landslide pavements, and results were recorded. Mr. Diaz provided project oversight and QA/QC for the project.

***Transportation Corridor, Orange County, California*** – Geotechnical director for the design of new pavements for 65 miles of new tollway. Services included review of preliminary geotechnical reports, characterization of subsurface conditions, laboratory testing, and engineering and financial analyses. Traffic levels were analyzed and input into four different pavement thickness design methods (Caltrans, AASHTO, Portland Cement Association, and The Asphalt Institute). Both flexible (asphalt concrete) and rigid (Portland cement concrete) pavements were evaluated. Both flexible and rigid permeable bases. Rubberized asphalt was also considered as an alternate pavement material. Mr. Diaz oversaw the project and provided recommendations.



## RELEVANT PROJECT EXPERIENCE

### **Transportation Corridor, Orange County, California**

Principals Allen Yourman and Gerald Diaz provided the geotechnical investigation for the design of new pavements for 65 miles of new tollway. Services included reviewing of preliminary geotechnical reports, characterization of subsurface conditions, laboratory testing, and engineering and financial analyses. Traffic levels were analyzed and input into four different pavement thickness design methods (Caltrans, AASHTO, Portland Cement Association, and The Asphalt Institute). Both flexible (asphalt concrete) and rigid (Portland cement concrete) pavements were evaluated. Both flexible and rigid permeable bases were evaluated and rubberized asphalt was considered as an alternate pavement material.

Key Personnel: Allen M. Yourman, Jr. P.E., G.E. – Geotechnical Manager  
Gerald M. Diaz, P.E., G.E. – Geotechnical Principal

**Owner & Client:**

Transportation Corridor Agencies  
Mr. Jim Gunraj  
125 Pacifica, Suite 100  
Irvine, CA 92618  
949-754-3428

**Completion Date:** January 2001

**Fees:** \$175,000

---

### **La Palma Avenue Storm Drain Pipeline, Anaheim, California**

DYA provided a geotechnical investigation for a 1-mile long storm drain pipeline in a developed city. The project required traffic control to perform the field investigation. Geotechnical issues included shoring types and pavement thickness design evaluations. The pavement designs included both new construction and overlay of existing pavements using both conventional and rubberized asphalt. The geotechnical investigation was completed on time within the six-week schedule and within budget.

Key Personnel: Allen M. Yourman, Jr. P.E., G.E. – Geotechnical Manager  
Gerald M. Diaz, P.E., G.E. – Geotechnical Principal

**Owner:**

City of Anaheim  
200 S. Anaheim Blvd.  
Anaheim, CA 92805  
714-765-5100

**Client:**

IWA Engineers, Inc.  
Ms. Kelly Nolan (now with KFM Engineering)  
26632 Towne Centre Dr., Suite 240  
Foothill Ranch, CA 92610  
949-580-3838

**Completion Date:** June 1996  
(Geotechnical Services)

**DYA Fees:** \$500

---

### **Atlantic Avenue Improvements, Los Angeles County, California**

Diaz-Yourman & Associates (DYA) provided the geotechnical investigation for a 1-mile long segment of an existing major arterial street (2 lanes in each direction) for pavement rehabilitation. Surface conditions were surveyed to characterize the existing pavement using non-destructive testing (road rater) and with pavement borings and cores. Designs for both a pavement overlay and for complete removal and reconstruction (new pavements) in accordance with County of Los Angeles standards were provided. Pavement overlays were designed with asphalt rubber hot mix (ARHM). The project was completed on-time and within the budget.

Key Personnel: Allen M. Yourman, Jr., P.E., G.E. – Geotechnical Manager  
Gerald M. Diaz, P.E., G.E. – Geotechnical Principal

**Owner:**

County of Los Angeles  
Department of Public Works  
900 South Fremont Avenue  
Alhambra, CA 91803  
626-458-5100

**Client:**

Tetra Tech, Inc.  
Mr. Dan Novak  
3475 East Foothill Boulevard  
Pasadena, CA 91107  
626-351-4664

**Completion Date:** November 1999  
(Geotechnical Services)

**DYA Fees:** \$20,000



**DIAZ-YOURMAN**  
• ASSOCIATES  
*Geotechnical Services*

## **ALLEN M. YOURMAN, JR., P.E., G.E.**

### **GEOTECHNICAL PROJECT PRINCIPAL**

#### **Emphasis**

- Pavements
- Street & Highway Rehabilitation
- Project Management

#### **Professional Registration**

1987/Geotechnical Engineer,  
CA – No. 925  
1980/Professional Engineer,  
CA – No. 32364

#### **Education**

1984/MBA/Pepperdine  
1978/MS/Engineering/UCLA  
1976/BS/Engineering/UCLA

#### **Professional Overview**

Mr. Yourman is a registered geotechnical engineer in California and has over 25 years of experience with projects, including grade separations, rail lines, highways, streets, and other transportation projects. He has participated in numerous projects involving environmental assessment including aerially deposited lead (ADL) studies. He has practical experience in all aspects of geotechnical engineering, including site selection, site investigation, engineering analysis, construction observation and testing, and project management.

#### **PROJECT EXPERIENCE**

**Atlantic Avenue Improvements, Los Angeles County, California** – Geotechnical manager for an investigation of a 1-mile long segment of an existing major arterial street (2 lanes in each direction) for pavement rehabilitation. Surface conditions were surveyed to characterize the existing pavement using non-destructive testing (road rater) and with pavement borings and cores. Mr. Yourman provided designs for both a pavement overlay and for complete removal and reconstruction (new pavements) in accordance with County of Los Angeles standards. Pavement overlays were designed with asphalt rubber hot mix (ARHM).

**Eastman Avenue, et al. Improvements, Los Angeles County, California** – Geotechnical manager for an investigation for the pavement rehabilitation of 3 miles of various different existing commercial and residential streets. The streets varied in width from 1 to 2 lanes in each direction, with some located on steep, winding roads. Existing pavement and subgrade conditions were surveyed and surface conditions were investigated for structural support using pavement borings and cores. Mr. Yourman provided designs for both a pavement overlay and for complete removal and reconstruction (new pavements) in accordance with County of Los Angeles standards. Pavement overlays were designed with asphalt rubber hot mix (ARHM).

**Hicks Avenue, et al. Improvements, Los Angeles County, California** – Geotechnical manager for an investigation for the pavement rehabilitation of approximately 2 miles of 10 different existing commercial and residential streets. The streets varied in width from 1 to 2 lanes in each direction, with some located on steep, winding roads. Existing pavement and subgrade conditions were surveyed and surface conditions were investigated for structural support using pavement borings and cores. Mr. Yourman provided designs for both a pavement overlay and for complete removal and reconstruction (new pavements) in accordance with County of Los Angeles standards. Pavement overlays were designed with asphalt rubber hot mix (ARHM).

**La Palma Avenue Storm Drain Pipeline, Anaheim, California** – Geotechnical manager for an investigation for a 1-mile long storm drain pipeline in a developed city. The project required traffic control to perform the field investigation. Geotechnical issues included shoring types and pavement thickness designs, which Mr. Yourman evaluated. The pavement designs included both new construction and overlay of existing pavements using both conventional and rubberized asphalt.

**John Wayne Airport Pavements, Orange County, California** – Geotechnical manager for the design and implementation of an airport pavement management system. Existing conditions included both rigid and flexible pavements in varying stages of use and conditions. Mr. Yourman evaluated both airfield and landward pavements using a falling weight deflectometer (FWD). Areas with unknown pavement thicknesses were cored and evaluated using

ground penetrating radar. Pavement condition surveys were performed for all pavements, including landslide pavements, and results were recorded.

***Transportation Corridor, Orange County, California*** – Geotechnical manager for the design of new pavements for 65 miles of new tollway. Services included reviewing of preliminary geotechnical reports, characterization of subsurface conditions, laboratory testing, and engineering and financial analyses. Traffic levels were analyzed and input into four different pavement thickness design methods (Caltrans, AASHTO, Portland Cement Association, and The Asphalt Institute). Both flexible (asphalt concrete) and rigid (Portland cement concrete) pavements were evaluated. Mr. Yourman evaluated both flexible and rigid permeable bases. Rubberized asphalt was also considered as an alternate pavement material.



# CALIFORNIA UNIFIED CERTIFICATION PROGRAM (CUCP)



**AFFILIATED AGENCIES**

*Orange County  
Transit District*

*Local Transportation  
Authority*

*Service Authority for  
Freeway Emergencies*

*Consolidated Transportation  
Service Agency*

*Congestion Management  
Agency*

*Service Authority for  
Abandoned Vehicles*

December 15, 2005

Christopher Diaz  
DIAZ YOURMAN & ASSOC  
1616 East 17<sup>th</sup> Street  
Santa Ana CA 92705-8509

File No. **OCTA 20160**  
**CUCP20075**

**RE: Three-Year Disadvantaged Business Enterprise Certification**

Dear Mr. Diaz:

We are pleased to advise you that after careful review of your application and supporting documentation, the Orange County Transportation Authority has determined that your firm meets the eligibility standards to be certified as a Disadvantaged Business Enterprise (DBE) as required under the U.S. Department of Transportation (U.S. DOT) Regulation 49 CFR Part 26, as amended.

The DBE certification will be honored by all U.S. DOT recipients in California, and your firm will be listed in the California Unified Certification Program (UCP) database of certified DBEs under the following specific areas of expertise that you have identified on your supplemental questionnaire:

NAICS Codes	Description
<b>541330</b>	<b>Engineering Service</b>

Your DBE certification is good for three years from the date of this letter and applies only for the above codes. You may review your firm's information in the California UCP DBE Database which can be accessed at the California Department of Transportation's website at [www.dot.ca.gov/hq/bep/](http://www.dot.ca.gov/hq/bep/). Any additions and revisions must be submitted to the District for approval.

After the three-year certification period, your entire file will be reviewed in order to ascertain continued DBE certification status. You will be notified of the pending DBE status review and any documentation updates necessary prior to the expiration date.

The Regulations also require annual updates during this three-year period. In order to assure continuing DBE status, you must submit annually a DBE Declaration with supporting documentation, in the format which will be sent to you. Based on your annual submission that no change in ownership and control has occurred, or if changes have occurred, they do not affect your firm's DBE standing, the DBE certification of your firm will continue until the three-year certification has expired.

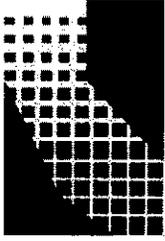
Also, should any changes occur that could affect your certification status prior to receipt of the DBE Declaration, such as changes in your firm's name, business/ mailing address, ownership, management or control, or failure to meet the applicable business size standards or personal net worth standard, please notify me immediately. DBE certification is subject to review at any time. Failure to submit forms and/or change of information will be deemed as failure to cooperate under Section 26.109 of the Regulations.

Congratulations, and thank you for your continued interest in participating in the California UCP. I wish you every business success and look forward to hearing from you if I may be of any assistance to you in this regard.

Sincerely,

A handwritten signature in cursive script that reads "Tina Giles-Potter".

Tina Giles-Potter  
Small Business Program Administrator



## Appendix F

---

# Full Resumes – SCS Team

## **AMBROSE A. MCCREADY, P.E.**

### **Education and Special Training**

B.S. - California State University, Sacramento, 1972  
Civil Engineering

### **Professional Registrations**

Registered Civil Engineer - California, Colorado, Washington State

### **Professional Affiliations**

American Society of Civil Engineers  
Solid Waste Association of North America

### **Professional Experience / Major Projects**

Mr. McCready has over 33 years of engineering design and construction experience. Throughout his career he has specialized in the planning, design and construction management of solid and hazardous waste landfills and earth structures including dams, embankments, waste holding and evaporation ponds. He is also experienced in the investigation, characterization, and remediation of burn dumps. He has provided engineering services to clients throughout the United States and several foreign countries. His experience in these areas is summarized below.

#### **Civil/Landfill Engineering and Construction Management--**

Mr. McCready is recognized for his expertise in the design and construction management of solid and hazardous waste landfills. During his career, he has provided technical guidance for the use of geotextiles, geomembranes, and clay liners, as well as supervision and quality control/quality assurance testing during construction. He has also served as project director and project manager for landfill projects involving a full range of services including landfill closure investigation, permitting, design, and construction. Work under his direction has entailed:

- Project manager for preparation of design plans and specifications (construction documents) for a new 10-acre waste disposal cell at the Potrero Hills Landfill, Suisun City, California. The cell design included provisions for a dual-composite liner and leachate collection and removal system (LCRS). Design elements included a soil excavation/grading plan, groundwater underdrain system, earthen stability embankment, surface water drainage plan, clay and HDPE liner system details, and use of a traditional soil operations layer.
- Project manager for preparation of design plans and specifications for closure of Lewis Road Landfill, Monterey County, California. Work included engineering design (construction documents), permit approvals with the San Luis Obispo RWQCB, and construction engineering.
- Project manager for the closure of a burn dump at El Portal, California. Services included



**AMBROSE A. MCCREADY, P.E. (continued)**

preparation of a final closure plan, plans and specifications, engineer's estimate, and CQA observation and testing during construction. The final cover system included consolidation of waste within a reduced footprint, an HDPE barrier placed over smooth graded waste and soil, a geotextile, an aggregate layer, and an asphalt surface. Performed CQA during construction and prepared construction CQA report. The finished cover is used as a maintenance yard for Yosemite National Park.

- Burn dump closure EIR, Chico, California. Provided technical support during preparation of the EIR for closure of the Chico Burn Dump. Reviewed the project scope and prepared project description sections for the closure. Provided technical consultation to the EIR consultant regarding impacts of consolidation of wastes, infiltration through the final cover, slope stability of the wastes, and shallow groundwater.
- Solid waste landfill closure, Riverside County, California. Served as Project Manager for closure of Tequesquite Landfill. The project entailed a detailed hydrogeologic and treatability studies for groundwater, flood protection evaluation, groundwater sampling and analysis, and design of a final cover system. The site location near the Santa Ana River raised major concerns regarding potential flooding and degradation of surface/ground water quality.
- Landfill closure plans and specifications, Monterey County, California. Evaluated existing closure and post closure maintenance documents and prepared final closure plans and specifications for a 14.5-acre landfill located in Monterey County, California. The final cover system will consist of a 1-foot foundation layer, a geosynthetic clay liner, and a 2-foot vegetative layer. The closure documents will be revised according to the final cover design. This project was constructed in 2003.
- Fill sequencing and drainage master plan, Stanislaus County, California. Prepared detailed fill sequencing and development plans for operation of the Fink Road Landfill. Performed 20 project assignments related to the site.
- Landfill closure and post closure maintenance plan, Eureka, California. Project manager for preparation of a preliminary closure and post closure maintenance plan for a 32-acre solid waste landfill in a wet climate. Prepared fill sequencing and final grading plans, computed annual site life and remaining capacity for three consecutive years of operation. Responded to agency comments and prepared cost estimates for closure and post closure maintenance.
- Landfill closure documents, plans and specifications, Union City, California. Services include geotechnical investigation and testing of soils, slope stability analysis, closure and post closure maintenance plans, cost estimates, construction plans and specifications. Oversaw construction quality assurance activities during closure in 2002.



**AMBROSE A. MCCREADY, P.E. (continued)**

- Solid waste landfill closure, San Mateo County, California. Prepared final closure and postclosure maintenance plans for 31-acre landfill located along San Francisco Bay. Design challenges included necessary reconstruction to correct erosion of the shoreline and exposure of refuse.
- Solid waste partial final closure, Butte County, California. Project Manager for the partial final closure documents and preparation of plans, specifications, and estimates for the final closure of Modules 1 and 3 at the Neal Road Landfill. Closure construction will be performed in 2004.
- Solid waste landfill closure, Stanislaus County, California. Served as project manager for the design of a final closure cover for the 18-acre LF-1 unit at Fink Road Landfill. Services included preparation of construction drawings, specifications, engineer's estimate and bid support in selecting a contractor to construct the cover. Performed CQA during construction and prepared the construction certification report.
- Solid waste landfill closure, Contra Costa County, California. Technical consultant to the Judicial Arbitration Mediation Services (JAMS) for obtaining contractor bids and selection of a contractor to implement the closure of the Acme Landfill. Developed contractor bid forms and rating criteria for selection. Prepared bid comparison summaries and looked at specific parts of the bids, such as insurance and landfill gas, in detail. Recommended contractor to JAMS for bid in the range of \$35 to \$40 million.
- Solid waste landfill permit, Novato, California. Prepared Report of Disposal Site Information, Report of Waste Discharge, and Preliminary Closure and Postclosure Maintenance Plan for a 420-acre MSW disposal site. Managed geotechnical, groundwater and storm water monitoring programs at the site. Provided technical support during CEQA review process through EIR certification and application for a revised solid waste facility permit.

**Grading, Drainage and Earthworks--**

Mr. McCready has been involved in the evaluation, design and construction of clay and geosynthetic liner systems for a variety of applications including sludge drying basins, evaporation ponds, acid-retention basins, mining waste leach pads, holding ponds, and tailings impoundments, embankments and recreational lakes.

Notable projects include:

- Wastewater holding pond, Ivanpah Valley, California. Prepared design plans and specifications for lined 5-acre wastewater holding pond in accordance with CCR Title 23 regulations.
- Mining leach pads, tailings impoundments, Gabbs, Nevada. Reviewed geomembrane design and directed field quality control for installation of HDPE membrane liner component of leach pads and holding ponds. Prepared synthetic liner plans and specifications for 60- and 110-acre gold mill tailings impoundments.



**AMBROSE A. MCCREADY, P.E. (continued)**

- Uranium mill evaporation ponds, Gallup, New Mexico. Prepared earthworks, grading, drainage and liner system details and specifications for 20-acre evaporation ponds at uranium mill site.
- Liner design and construction, Sunnymead, California. Investigated, designed, and consulted during construction of 33-acre recreational lake. Special design features were included using geotextile to separate and filter foundation soils and geogrid reinforcement to strengthen foundation soils.
- Leach pads and holding ponds, Stibnite, Idaho. Prepared lining system details and specifications for heap leach pads and holding ponds and mining facility. Conducted field QA/QC program during liner installation.



## **JOSEPH J. MILLER, P.E.**

### **Education and Special Training**

B.S. - California Polytechnic State University, San Luis Obispo,  
Environmental Engineering

Certificate in Business Administration, University of California Berkeley

OSHA 40-Hour Safety Training and 8-Hour Supervisory Training

### **Professional Registrations**

Registered Civil Engineer - California (C 042598)

### **Professional Affiliations**

Solid Waste Association of North America (SWANA)

### **Professional Experience / Major Projects**

Mr. Miller provides SCS with a strong background in environmental engineering with emphasis in solid and hazardous waste management. He currently serves as Director of SCS's Bay Area office in Pleasanton. Since joining SCS in the early 1980's, he has been involved with several hundred projects entailing virtually all aspects of the municipal waste field including landfill engineering, environmental monitoring and site investigations at active, inactive and closed landfills, landfill gas (LFG) control/recovery, and landfill air emissions projects. His experience in these topic areas is summarized below.

#### **Landfill/Civil Engineering--**

Throughout his career Mr. Miller has participated in landfill projects involving a full range of engineering/design services including site selection, permitting, site development and closure, preparation of construction documents, and construction observation/CQA. Notable projects include:

- Project Director for preparation of plans, specifications and cost estimates (construction documents) for development of a new 6.4 acre cell, Potrero Hills Landfill, Fairfield. The new cell featured a composite base liner and leachate collection system, and was designed in accordance with CCR Title 27 and federal Subtitle D regulations. Construction is scheduled for summer, 2005.
- Project Director for closure of an industrial waste landfill, Union City California. Work included in-situ waste sampling and characterization, combustible gas migration testing, preparation of a complete Closure and Post-Closure Maintenance Plan document, engineering cost estimates, and design plans and specifications for closure. The closure bid documents included plans and details



**JOSEPH J. MILLER, P.E. (continued)**

for final grading and drainage, placement of an HDPE liner and soil cap, and construction of a surface water detention basin. SCS provided health and safety air monitoring during closure construction.

- Project Manager/Director for scoping studies to determine required closure actions, environmental compliance requirements and costs for active, inactive and closed disposal sites. Work was performed for the Altamont and Tri-Cities landfills, Alameda County; Auburn Landfill, Placer County; Southwest Conservation, BKK and Valley Land Development Landfills, Los Angeles County; Tajiguas, New Cuyama, and Foxen Canyon Landfills, Santa Barbara County; Cummings Road Landfill, Humboldt County; and Acme Landfill, Contra Costa County.
- Project Director during preparation of landfill fill sequencing plans and site life capacity estimates, Fink Road Landfill, Stanislaus County, and Cummings Road Landfill, Eureka.
- Project Director for the siting, engineering and permitting of a proposed 560-acre landfill expansion, Fink Road Landfill, Stanislaus County. Work included field geotechnical and hydrologic investigations, preparation of preliminary grading, drainage, final cover, LFG control and LCRS systems, and preparation of an Environmental Impact Report in accordance with CEQA requirements.
- Project Director - construction observation and oversight for development of new 17-acre waste disposal cell at the Vasco Road Landfill, Livermore, California. The project involved excavation of 900,000 cubic yards of native soil materials; installation of a groundwater intercept/underdrain system; placement of a composite base liner system consisting of low-permeability compacted clay, geocomposite clay liner and HDPE membrane materials; installation of a leachate collection and recovery system; and construction of earthen fill embankments.
- Senior engineer for preparation of final closure plans, specifications and cost estimates – Neal Road Landfill, Butte County.
- Project Engineer or Manager for preparation of Environmental Impact Reports for landfill development, expansion and closure projects throughout California. He has been involved in virtually all aspects of these projects, including planning, development of engineering plans, preparation of technical portions of the text, overall document review, and presentations at the public hearing processes. Notable projects include those at the Fink Road Landfill, Stanislaus County; Burbank Landfill, Los Angeles County; Chico Burn Dump, Butte County; Simi Valley Landfill, Ventura County; and proposed Eagle Mountain Landfill, Riverside County.



**JOSEPH J. MILLER, P.E. (continued)**

- Technical and regulatory support for evaluation of disposal capacity needs, and landfill rate increase/funding negotiations. He assisted the City of San Francisco in negotiating rates for disposal at the Altamont Landfill. He also provided litigation support in developing closure construction and long-term maintenance costs at the Acme Landfill, Contra Costa County.

**Site Investigations, Environmental Engineering and Monitoring--**

Mr. Miller has served as key technical manager for assessment of environmental impacts on or near former landfill sites and other solid waste facilities. These investigations typically focus on combustible gas and leachate generation, soil contamination, worker/public safety and water quality issues. Recent projects include:

- Project Director for water quality monitoring, sampling and reporting at Waste Management's Altamont, Tri-Cities and Redwood Landfills in the San Francisco Bay Area.
- Groundwater and leachate monitoring and hydrogeologic assessment, private landfill, Yuba County. The work involved "fingerprinting" to confirm the source of trace VOCs detected in underlying groundwater – i.e., gas or leachate.
- Groundwater, soil and subsurface gas monitoring and sampling and preparation of a health risk screening assessment in support of proposed residential development, Turk Island Landfill, Alameda County.
- Landfill settlement and slope stability monitoring, Sunnyvale Landfill, Santa Clara County.
- Groundwater and leachate monitoring and sampling, landfill cover inspections and maintenance, implementation of landfill cover and drainage repairs, Berkeley Landfill, Alameda County.
- Groundwater, surface water and leachate monitoring and sampling, Brisbane Landfill, San Mateo County.
- Comprehensive post-closure monitoring and maintenance program, Burlingame Landfill, San Mateo County
- Principal in-charge for Phase I and Phase II investigations at several dozen commercial, industrial and military facilities with known or suspected soil/groundwater contamination from waste placement, leaking fuel tanks, agricultural chemicals, and industrial releases.



---

**JOSEPH J. MILLER, P.E. (continued)**

**Solid Waste Planning**

Involvement in various recycling and resource recovery programs has played an important part in Mr. Miller's career in the solid waste management industry. Typical project activities have included:

- Technical and economic evaluation of residential curbside and green waste recycling programs in Alameda, Santa Clara, Solano and Santa Barbara Counties in California.
- Assessment and implementation of recycling programs at commercial/industrial establishments, including office buildings.
- Evaluation of refuse collection franchise agreements with subsequent recommendations for revisions to incorporate expanded recycling services.
- Development of integrated waste management plans for communities, including provisions for recycling, composting, source reduction, and house hold hazardous waste management. Much of this work has been in response to the California's AB 939 legislation.
- Participation in a long-range strategic solid waste management plan for the County of Sonoma, California. SCS evaluated options to handle the County's disposal needs for the period 2015 through 2050. Alternatives considered included land disposal, organics processing (anaerobic digestion and biorefining), green waste composting, and various policies to reduce disposal requirements (mandatory recycling and flow control agreements).
- Performance evaluations of solid waste transfer stations and materials recovery facilities.
- Review of plans and specifications and construction oversight during expansion of the City of Berkeley municipal recycling center/transfer station.

Mr. Miller has played a key role in numerous refuse transfer and materials recovery facility (MRF) projects. These have included facility siting, permitting, technical/economic evaluations, assessment of equipment needs, performance audits, concept design and plans and specifications. Notable projects include performance/cost audits of transfer/MRF operations at facilities in Pleasanton (Pleasanton Garbage Service), Santa Clara County (Green Valley Disposal), Sanitary Fill Company Facility in San Francisco, and the West Contra Costa Integrated Waste Management Facility in Richmond. He recently served as Project Director for preparation of civil design plans for site improvements at the Lake County Transfer Station in Lakeport, California and the El Cerrito Recycling Center. He is currently serving as lead engineer for design, permitting and development of the new Santa Rosa Recycling Center, a 1,500 tpd MRF and regional waste management facility.



## **MARK J. ERICKSON, E.I.T.**

### **Education**

B.S. – California Polytechnic University, San Luis Obispo, Environmental Engineering

### **Professional Licenses**

Approved for California Professional Engineering Exam (E.I.T. Certified)

### **Professional Affiliations**

Solid Waste Association of North America (SWANA)

### **Professional Experience / Major Project**

Mr. Erickson has over 5 years of environmental project experience, with particular emphasis in civil design for landfill grading and drainage projects, and various water resources projects. Mr. Erickson's general civil design project experience includes design of regulatory prescribed landfill covers for 3 sites in California, determining earthwork volume calculations and final grading and drainage systems for projects in excess of 100 million dollars. In addition to design work, Mr. Erickson has provided Construction Quality Assurance (CQA) monitoring for landfill projects. Monitoring included correspondence with clients, construction groups and documentation of field activities. Further, Mr. Erickson has provided specifications for landfill design projects.

Mr. Erickson also has experience in design and selection of erosion control best management practices (BMPs) for a 5-mile section of a 40-mile pipeline used to recharge a geothermal reservoir in Northern California. As part of this work, he has provided oversight to implement BMPs that provide erosion control for pre and post construction activities. Aside from designing, Mr. Erickson has performed GPS surveying on many sites using GPS techniques at over 30 UST sites and landfills within California. He also has direct experience responding to client's needs and working with various regulators, including the Department of Toxic Substances Control (DTSC) personnel on Removal Action Work Plans.

On many occasions, Mr. Erickson has also provided construction oversight of various sub-contractor activities associated with environmental projects, including performing investigations for different environmental cleanup operations with particular emphasis on using environmentally friendly design solutions with recycling and reuse of products. These projects include taking dredge material from shipping channels and combining it with products to create an aggregate base which was resold for roadway applications.



**MARK J. ERICKSON, E.I.T. (continued)**

**Civil Design and Construction Projects--**

- Landfill cover designs at 3 sites within California. Grading determinations were primarily based on slope stability analysis. As part of landfill design, drainage determinations were made to determine culvert sizing and other drainage structures, such as v-ditches, and Arizona crossings. Additionally, a roadway for tractor trailers was designed for a landfill capping project in Richmond, California.
- Construction Quality Assurance monitoring for landfill cap and development projects, including coordination of general contractors, documentation of construction activities, scheduling and prioritizing work, and coordinating and reviewing soil testing and results for materials used in prescribed landfill covers. Review and writing of final CQA reports for landfill sites and other construction projects.
- Sampling and Analysis Plans (SAP) for multi-million dollar Caltran's highway widening projects in Northern California. Recommendations and investigation of projects, including determination of sampling areas to assure that highway construction activities do not affect receiving waters.
- Stormwater Pollution Prevention Plans (SWPPP) for over 10 sites in California. His duties included working directly with contractors to plan and implement BMPs, including diversion berms, silt fence, velocity dissipation devices, and fiber roll placement for excavation on steeply sloped terrain. BMPs were also established for construction staging areas to address soil stockpile and other materials issues to assure that receiving waters are not impacted by construction activities. Work has mainly been performed for various sites in the San Francisco Bay Area.
- Surveying of land and monitoring well locations and elevations for landfills and UST sites using GPS techniques and differential leveling, as well as, reporting in Electronic Data Format (EDF) to the State Water Resources Control Board (SWRCB) under the AB2886 program.



**MICHAEL D. GEYER, P.E., C.I.H., C.S.P.**

**Education and Special Training**

- B.S. - California Polytechnic State University, San Luis Obispo, 1985  
Agricultural Engineering
- B.S. - California Polytechnic State University, San Luis Obispo, 1985  
Soil Science
- 40-Hour EPA-Approved Hazardous Waste Operations Trained (Since 1988)
- EPA-Accredited AHERA Inspector/Management Planner/Project Designer (Since 1985)
- OSHA Supervisor/Competent Person and Confined Space Entry Trained (Since 1989)
- 24-Hour Explosives Safety Trained (Since 2000)

**Professional Registrations**

- Registered Civil Engineer (PE) - California, 1990 (No. C-45718)
- Registered Civil Engineer (PE) - Mississippi, 1998 (No. 13842)
- Certified Industrial Hygienist (CIH), 1995 (No. 6770)
- Certified Safety Professional (CSP), 1995 (No. 13587)
- California Licensed Contractor - General Engineering-A & HAZ, 1997 (No. 743043)
- California Certified Asbestos Consultant (CAC), 1992 (No. 92-0089)
- Florida Certified Asbestos Consultant (CAC), 1998 (No. 98021291)
- California Registered Environmental Assessor (REA), 1994 (No. REA-05845)

**Professional Affiliations**

- American Industrial Hygiene Association (AIHA)
- American Conference of Governmental Industrial Hygienists (ACGIH)
- American Society of Safety Engineers (ASSE)
- National Institute of Building Sciences (NIBS)
- Building Environment and Thermal Envelope Council (BETEC)
- Kern County Solid Waste Management Advisory Committee; Kern County, California

**Professional Experience / Major Projects**

Mr. Geyer brings to SCS expertise in both engineering and earth sciences. For SCS, Mr. Geyer has worked on a variety of solid waste investigations, including:

- **Air Quality Testing.** Mr. Geyer has designed and developed procedures and equipment to sample and analyze LFG, particulates, and biological organisms in ambient air at numerous solid waste facilities. His work has involved interpreting EPA and OSHA regulations, field testing, sample verification, assessment of laboratory data, and conducting hazard/risk assessments for both occupational and environmental exposure.



**MICHAEL D. GEYER, P.E., C.I.H., C.S.P. (continued)**

- **Subsurface Fires.** Mr. Geyer has conducted numerous investigations of subsurface fires in solid waste landfills throughout the United States and abroad. This work has included both invasive and non-invasive techniques for assessing the extent and volume of the subsurface pyrolysis in an effort to mitigate the smoldering refuse. He has designed and supervised extinguishment efforts that included excavation, use of fire-suppressing foams, injection of liquid nitrogen and/or carbon dioxide, slurry walls, and suffocation utilizing low-permeability cover soil caps.
- **Methane Gas.** Mr. Geyer has performed numerous investigations assessing the migration and movement of methane through soil and designed mitigation systems to protect structures from vapor intrusion and gas accumulation. Designs have included sub-foundation membranes passive vents, slurry trenches, cut-off walls, monitoring and detection equipment including alarm systems and active mechanical ventilation.
- **Landfill Closure Design and Assessment.** Mr. Geyer has assessed geology and designed soil cover caps for landfill closure, including supervision of projects for revegetating and landscaping closed landfills. Work was performed using field studies, computer models of water balance and flow, incorporating local climatological data, generating site-specific data, and specifying native drought-tolerant plants.
- **Solid Waste Characterization Studies.** For the Los Angeles County Sanitation District and several other California cities, Mr. Geyer was the field engineer in charge of arranging for and conducting on-site sorting programs, including developing a Code of Safe Work Practices for sorters. Municipal solid wastes were manually separated by hand into multiple categories, and weighed to determine percent composition over multiple-week and multiple-season sampling periods.
- **Landfill Gas and Condensate Characterization Generation.** Mr. Geyer has determined LFG and condensate generation rates using computer models with input data from field studies, landfill records and decomposition data developed by SCS. Work has involved characterizing LFG and leachate for compliance purposes, carbon adsorption design, and flare design. His work has also projected the technical and economic feasibility of recovering LFG for energy production.
- **Environmental Impact Reports (EIRs).** Mr. Geyer has authored sections of EIRs regarding landfill use and landfill expansion, control of surface and subsurface fires, surface drainage, and public health and safety elements.
- **Health and Safety.** Mr. Geyer has written health and safety plans and developed protocols for safe work practices at solid waste facilities, provided guidance to SWANA, contractors, and other soil waste-related organizations on safe work practices in solid waste, and has spoken at national conventions regarding health and safety, and bloodborne pathogens, in solid waste.



**MICHAEL D. GEYER, P.E., C.I.H., C.S.P. (continued)**

Mr. Geyer has completed a certified health and safety program in compliance with OSHA Standard 29 CFR 1910.120. He is knowledgeable in incident response operations, team functions, personnel safety, confined space entry, and field equipment. Mr. Geyer is able to recognize and evaluate potential chemical and physical hazards and associated risks in field operations; to specify personal protective equipment, including respiratory protection and protective clothing; to use and interpret direct-reading field instrumentation; and to examine and establish Standard Operating Safety Guidelines to ensure safe and effective response operations. Mr. Geyer coordinates the Long Beach office's health and safety program, is the principal trainer for in-house HAZWOPER training refreshers, and is a participant in SCS corporate-wide health and safety programs for employees.

Mr. Geyer has been involved in numerous SCS projects related to solid waste and hazardous substance characterization and management. He has extensive experience in site assessment studies for airborne hazardous materials, landfill fire investigations and their associated remediation, air toxic monitoring programs and risk evaluations, and site characterization studies for environmental compliance. His work experience includes all project phases from development of cost estimates for various site assessment and cleanup programs, to air monitoring and materials sampling, to preparation of final reports and interfacing with regulatory agencies. His work also includes assisting legal counsel with environmental litigation by providing expert review of documents and depositions.

**Publications and Presentations**

Dong, T., and M. Geyer. Real Estate Acquisition Liability. The Risk Management Letter (Publication of Warren, McVeigh, and Griffin, Inc.). January/February 1987.

Geyer, M. Asbestos and Lead Issues. Proceedings From the Long Beach Local Development Corporation's Environmental Liability Avoidance Seminar. June 1990.

Geyer, M. Control and Prevention of Landfill Fires. Proceedings From the Third Annual Arizona Landfill Seminar. May 1993.

Geyer M. Bloodborne Pathogens in Solid Waste. Solid Waste Association of North American (SWANA) 32nd Annual Solid Waste Exposition, San Antonio, Texas. August 1994.

Geyer, M., and R. Marsh. The Hazard Communication Act and Redevelopment Agencies. Redevelopment Journal. October/November 1994.

Geyer M. Health and Safety Hazards at Solid Waste Facilities. California Environmental Health Association, Los Angeles, California. April 1997.

Geyer, M. Benefits of Dry Heat to Clean Structures of Biological Contamination and Improve Indoor Air Quality - Six Case Studies. American Industrial Hygiene Conference and Exposition, San Diego, California. June 3, 2002.



**MICHAEL D. GEYER, P.E., C.I.H., C.S.P. (continued)**

Geyer, M. Mold Is Not the Problem. Bank Notes - A Publication of the Environmental Bankers Association (EBA). May/June 2002.

Geyer, M. Moisture Control, Mold and the Science Within the Building Envelope - A Four-Hour Class to Industrial Hygienists. American Industrial Hygiene Conference and Exposition, Atlanta Georgia. May 9, 2004.

Geyer, M. Methane Mitigation at Olinda Ranch - A Case Study of Mitigating Vapor Intrusion at a 600-Home Residential Development in California. American Industrial Hygiene Conference and Exposition, Atlanta, Georgia. May 12, 2004.

Geyer, M. Indoor Air Quality and Toxic Mold. American Society of Safety Professionals National Conference and Exposition, Las Vegas, Nevada. June 10, 2004.



## DINO P. GONIS

### Training

OSHA 40 hour Hazardous Waste Operator Training

Confined Space Entry Supervisor Training

OSHA 8 hour Supervisor Training

CPR and First Aid Certified

### Professional Experience / Major Projects

Mr. Gonis has over 25 years of experience in environmental construction and estimating. He manages the site construction activities which include directing field crews, overseeing subcontractors, and coordinating with client and regulatory representatives for various projects such as removal and disposal of hazardous and non-hazardous soil, debris and waste, underground storage tank (UST) removals, demolition of facilities, and installation of aboveground storage tanks (ASTs), USTs, and monitoring wells. He ensures that construction activities are performed in accordance with project specifications and in strict adherence to health and safety plans. He has extensive experience interfacing with federal and regulatory agencies such as ROICC, BOR, AFCEE, and EPA.

Key projects that Mr. Gonis performed site supervision include:

- Industrial Waste Landfill, Union City, California. Supervised closure of 9-acre landfill that included 65,000 cu yd waste relocation, placement of soil cover and HDPE liner systems, drainage system and detention basin, and site restoration via hydroseeding.
- Final cap repairs, Auburn Landfill. Supervised placement of 5,000 cu yd soil cover re-grading and hydroseeding of closed waste disposal site.
- Berkeley Landfill, Berkeley, California. Constructed a new road, cover and drainage system improvements at closed landfill that has been re-developed as a municipal park.
- Oakland Army Base, California - Excavation of 15,000 cubic yards of contaminated soil, removal of 40 USTs, and site restoration.
- Demolition and removal of approximately 3000 tons of concrete and soil, in Rancho Bernardo, California.
- Excavated approximately 5,000 tons of petroleum fuel contaminated soil, backfill and compaction at a site in Petaluma, California.



**DINO GONIS (continued)**

- Rough and Ready Island, California - Excavation of 20,000 cubic yards of contaminated soil, and site restoration.
- Moffett Field, California - Installed eighteen double walled USTs and removed 25 USTs and associated contaminated soils. Managed the construction activities for an excavation and treatment of hydrocarbon contaminated soil project at a fire testing area. The work also included the removal of a sump pump, catch basin, storm sewer lines, concrete and masonry, ASTs, associated tank supports, piping in and around the excavation site.
- Presidio of San Francisco, California - Supervised the removal of 700 USTs and their associated piping.



**MICHAEL L. LEONARD, Sr., P.E., R.E.A.**

**Education and Special Training**

B.S. - University of Illinois (Full Scholarship, Honors Graduate), Civil Engineering, 1972

M.S. - University of Illinois, Civil Engineering, 1974

Graduate Course in Technical Management, California Institute of Technology, 1986

Hazardous Materials Certificate Course, Chemistry of Hazardous Materials, University of California, Irvine, 1994

OSHA 40-Hour Hazardous Waste Worker Training Certificate, 1984

**Professional Registrations**

Construction Quality Management Certificate, U.S. Army Corps of Engineers, 2003

Registered Civil Engineer - California (No. 31181), Utah, Texas, Illinois, Arizona, Hawaii

Registered Environmental Assessor - California (No. 1960)

**Professional Experience / Major Projects**

Mr. Leonard has more than 30 years of technical engineering experience combined with over 15 years of experience in landfill projects. For major private and public solid waste entities engaged in numerous engineering projects, he has served as the Design Engineer of Record, Project Manager, CQA Officer, and Construction Manager. His experience includes many closed landfill projects in Southern California, including the evaluation of 15 sites previously operated by Orange County, a burn dump site in San Diego County, and ongoing projects involving redevelopment of several closed sites for beneficial use. He has prepared plans and cost estimates for "clean closure" of landfills, designed closure caps, and managed the construction of landfill closures. Mr. Leonard's unique experience of both designing landfill closures and serving as a Construction Manager for landfill projects gives him a valuable perspective on cost effective and doable solutions.

Relevant experience, including burn dump and landfill closure projects, is as follows:

- Project Manager for preparation of the redevelopment plans for the La Habra landfill/Vista Grande Park site.
- Design Engineer for the closure cap and re-use of the former Grijalva Landfill as a park and recreational center by the City of Orange.
- Environmental Site Assessment (EA) for transfer of Julian Burn Dump site from BLM to San Diego County on contract with San Diego County Solid Waste including presentation of recommendations for modifications to the facility to provide appropriate protections to the buried burn materials.



**MICHAEL L. LEONARD, Sr., P.E., R.E.A. (continued)**

- For the Waste Disposal, Inc. (WDI) Superfund site located in Santa Fe Springs, California, Mr. Leonard was Engineer-of-Record for the closure plan preparation. Closure included site grading, cap construction, drainage facilities and monitoring systems.
- Design and construction QA of base liner and closure cap for contaminated soil cell (5-acre) constructed for onsite storage/disposal of PCB containing soil at the Koppers Co. (wood treatment operations) site located very near the Feather River in Oroville, California.
- Providing technical support the development of the Los Angeles County Sheriff Departments development of facilities located on and adjacent to the abandoned Blanchard Landfill.
- Primary author of the Post-Closure maintenance plan prepared by SCS for the Rancho San Joaquin Golf Course/former Lane Road landfill located in Irvine, California.
- Evaluation of existing LFG controls and recommendations for upgrades to improve LFG recovery at Chiquita Canyon Landfill for a proposed LFGTE plant (SCS).
- On subcontract to Techlaw/EPA Region 9, responsible for technical review of the plans for clean closure of several small dump sites located on the Lawrence Livermore site in northern California including development of alternatives to hauling the material to Utah preparation of cost estimates for the various alternatives.
- Preparation of the Preliminary Closure and Post-Closure Maintenance Plan and Cost Estimates for the original 94-acre El Sobrante landfill, Riverside County, California.
- Lead Engineer during review of Closure and Post-Closure Maintenance Plans and Cost Estimates for all Riverside County Landfills as part of an assessment of potential financial liabilities for the County. The client was Waste Management, Inc. (previously USA Waste).
- At OII Landfill in Monterey Park, California, Mr. Leonard served as QA/QC officer reviewing the preliminary closure plans, including various cap, gas control, and groundwater remediation systems.
- On the proposed Mesquite Regional waste-by-rail project, Mr. Leonard served as Senior Technical Reviewer of the RDSI, which included Preliminary Closure and Post-Closure LFG projects.
- Project Manager and Responsible Engineer during design upgrades to bring the El Sobrante LFG system to operating status. Also, served as overall PM during construction, startup, operation and monitoring of the system for 5 years (TRC).
- Preliminary design of LFG collection systems for expansions of the Toland Road Landfill for VRSD and Tajiguas Landfill for Santa Barbara County.



**MICHAEL L. LEONARD, Sr., P.E., R.E.A. (continued)**

- Construction Manager for three years (1997 to 2000) at the Olinda Alpha Landfill in Orange County. Over \$15 million of infrastructure improvements and major planning documents were completed. Responsible for review and update of the site Master Plan and input to the updates of the RDSI and ROWD. The client was Orange County Integrated Waste Management Department.
- Senior Technical Lead during permitting, design and construction support for the first modern lined landfill built in South America, i.e., the Gran Santiago Regional Landfill located 50 miles outside of the capitol of Chile. Tasks included preparation of excavation, liner/LCARS, and fill plans as well as Construction Sequence Plans. Environmental Monitoring Plans and Closure and Post-Closure Maintenance Plans and cost estimates were prepared under his supervision.
- Senior Technical Manager for conceptual design of the major expansion to the Tajiguas Landfill located in Santa Barbara County, California. Responsible for preparation of excavation, lining/LCARS and fill plans and Construction Sequencing as well as cost estimates for build-out of the landfill, closure and post-closure maintenance. The client was Santa Barbara County Department of Public Works, Solid Waste Services Division.
- Senior Technical Manager for conceptual design of the major expansion to the Toland Road Landfill located in Ventura County, California. Responsible for preparation of excavation, lining/LCARS and fill plans, slope stability, drainage controls, LFG system planning, and all other aspects of landfill design (at concept level) required by CCR Title 27. The client was the Ventura Regional Sanitation District.
- Project Manager for performance of the Geotechnical Investigation and recommendations for design of Phase V of the Sycamore Landfill (located in San Diego County and operated by a subsidiary of Allied Waste, Inc.) build-out as well as for the proposed major expansion, which was subsequently approved. The client was initially San Diego County Solid Waste Management Department and changed to Allied Waste after their purchase of the landfill. The reviewing agencies included the County of San Diego LEA and the RWQCB.



## **LENARD D. LONG, P.E., G.E.**

### **Education and Special Training**

B.S. - California State University, Chico, Civil Engineering, 1976

Postgraduate Studies, California State University, San Jose, Soil Engineering, 1978-79

### **Professional Registrations**

Civil Engineer; California

Geotechnical Engineer; California

General Engineering Contractor (Class A) with HazMat Handling Certification

### **Professional Affiliations**

American Society of Civil Engineers (ASCE)

### **Professional Experience / Major Projects**

Mr. Long has a 28-year record of successfully managing civil, environmental, geotechnical, and construction projects for the government, petroleum, chemical, transportation, utility, and manufacturing industries. His experience includes the management of multidisciplined technical staff for regulatory compliance issues, investigations, feasibility studies, systems design, operations, and maintenance. His experience also includes monitoring and remedial construction for projects ranging in size up to \$20 million.

### **Contractor and/or Construction Management—**

Mr. Long is a licensed contractor with hazardous material handling certification in California for 18 years. During that time, he has removed or treated many thousands of cubic yards of contaminated soil and dozens of underground storage tanks and structures. He is the contractor for the decommissioning and demolition of many facilities, from Agchem warehouses to chemical plants. A few notable projects are as follows:

- Responsible contractor for the 9-acre steel slag waste landfill project that included mass earth moving and grading of 65,000 cubic yards of material, including off-site disposal of hazardous materials encountered during grading. The landfill was capped with a multi-layered liner (soil, geotextile, and HDPE membrane), including installation of erosion control measures. Mr. Long was Construction Manager for the \$2.2 million landfill closure. He was responsible for safety monitoring, crew productivity, budget, permit compliance, subcontractor management, and agency contacts.
- Responsible contractor for landfill cover, drainage and landscape enhancements, Auburn Landfill, Placer County.



**LENARD D. LONG, P.E. (continued)**

- Responsible project engineer and remediation contractor for a multi-million-dollar environmental remediation project for a client who owns a 45-acre chemical plant and electronics facility in Menlo Park, California. The property is being cleaned up for future commercial redevelopment, and the facility is under a State of California DTSC Consent Agreement for RCRA facility closure. The agreement includes performing investigations, risk assessment, correctives measures studies, and remediation of site contaminants, which include PCBs, dioxins, solvent compounds, and metals. Aside from investigations, workplans, permits, and reports, SCS completed four phases of interim remedial measures. These included building decontamination and demolition, above-ground storage tank removals, and excavation and disposal of chemically impacted soil from four Solid Waste Management Units. SCS is currently working on the corrective measures study and implementation plans for the site.
- Designed and constructed a 50-foot deep excavation for the Los Angeles Center development removing 50,000 cubic yards of soil, of which 2,000 cubic yards were fuel-impacted, in downtown Los Angeles. The work involved many meetings with multi-party disciplines (regulatory, legal, technical), on a very visual and sensitive site subject to development of a skyscraper. The impacted soil was landfarmed onsite and then removed.
- Designed and performed above ground bioremediation (landfarming) of 2,000 cubic yards of diesel impacted soil, Catellus Corp., Huron, California. The treatment included irrigation management, nutrient addition, and periodic soil mixing.
- Designed and construction management of a dioxin plume encapsulation system, consisting of a 35-foot-deep slurry trench with HDPE barrier liner and multimedia cap at a State Superfund site, Port of Oakland, California. Mr. Long came in late on the project and changed the initial feasibility study design to one that was more practical and constructable, thus saving the client over \$1/2 million.
- Designed and constructed an enhanced in situ bioremediation treatment system for a fuel hydrocarbon spill. The system consisted of groundwater extraction and re-injection using hydrogen peroxide as the oxygen source for a redevelopment site in San Jose and another hydrogen peroxide injection site in Visalia, CA.
- Performed the surgical removal of hydrocarbon-impacted soil, which was located from 60 to 80 feet below ground, using large-diameter augers for Ace Oil State Superfund site, Galt, California. Using large-diameter drilling techniques to remove the impacted soil allowed removal without massive excavation and shoring, thereby saving hundreds of thousands of dollars.
- Mr. Long has significant hands-on experience and training in kinetics and chemistry of explosives, recognition/classification, safe handling/remote removal procedures and remediation (destruction, chemical stabilization and bioremediation). He was the responsible engineer and contractor on a \$2 million removal of 2,000 DNT and TNT barrels and drums located in solid waste landfill at an explosive site in the State of Washington. He also provided consultation for the assessment of a 1,000-acre explosive manufacturing site in Colorado that



**LENARD D. LONG, P.E. (continued)**

contained acid spills, nitroglycerin, PETN, black powder, etc. Mr. Long has been involved with State Superfund and RCRA remedial investigation, feasibility studies, and corrective actions in the States of Montana, Colorado, and Washington.

- Contractor for a mile-long Bunker C fuel pipeline removal and decontamination project, DuPont, Washington.

**Environmental Engineering—**

- Managed a \$2 million multi-chemical groundwater treatment system design along with its construction on a 100-acre Chemical Plant in Antioch, California. The system included commingling plumes, 20 cluster wells, 200-gpm air stripping tower with aqueous-phase carbon polishing and vapor-phase carbon off-gas treatment. Using plant steam, the vapor-phase carbon unit was designed for on-site regeneration.
- Managed the groundwater and vapor extraction systems Operation and Maintenance Program, (\$1 million annual budget), for Southern Pacific Railroad in Sacramento, California. This program included multi-phase extraction systems, catalytic off-gas treatment, off-gas scrubbing, and groundwater air stripping and carbon treatment.
- At numerous sites throughout California, Mr. Long has managed underground storage tank remediation programs for Unocal and Conoco Oil Companies. The multi-million-dollar programs included setting strategy, agency negotiation, site investigations, feasibility studies, remedial action plans, treatment system implementation, operation and maintenance, and quarterly monitoring. Remediation included pump-and-treat, vacuum extraction, sparging, bioremediation, dig and haul, etc.
- Mr. Long is the lead remediation engineer and contractor at several AgChem sites throughout the Central Valley. The former Puregrow sites have remediation programs that include pesticide removal, tank removals, and phytoremediation at two sites with high nitrates. As the remediation engineer and contractor, his responsibilities include design of systems, workplan preparation, and implementation of the remedy.
- Mr. Long is the engineering consultant for assessment, feasibility studies, design, and implementation of a 50-gpm water treatment system in Morgan Hill to remove MTBE and other gasoline compounds resulting from a fuel spill. Evaluations include working with hydrogeologists to model the plume using 3D Modflow techniques. The system consists of dual-phase water and vapor extraction, air stripping, catalytic oxidation of the air stripper off-gas, and final carbon polishing.
- Principal Civil and Construction Engineer for an engineering efficiency review of a multi-million dollar, low-level radioactive soil removal (250,000-cubic-yard) project, State and National Superfund Site, in West Chicago, Illinois. This third-party review involved the evaluation of subcontracts, costing and productivity of materials handling and rail car loading. The result of the review increased client awareness of actual costs, provided tighter



---

**LENARD D. LONG, P.E. (continued)**

control of subcontractor's costs, and confirmed that the owner had diligent personnel attached to the \$200 million project.

- Environmental Engineer involved in planning and strategy sessions for the redevelopment of the Sacramento Rail Yard. This project includes critical path scheduling and costing for remediation of multiple contaminated sites, geotechnical consideration for the construction of a 1/2-million-cubic-yard Class II landfill, and materials handling planning.
- Remediation projects range from service station sites to 100-acre chemical plants. Types of contaminants encountered typically range from gasoline to crude oil, organic lead, mercury, and arsenic to TCE, TCA, PCE, and other solvents. He was responsible for the design and construction of a \$2.5 million pump-and-treat system for a major chemical plant in California. The systems include air stripping, off-gas air treatment with vapor phase carbon and aqueous phase liquid carbon polishing to remove organic lead.

**Geotechnical Engineering--**

Mr. Long has been responsible for hundreds of geotechnical investigation involving hazards such as landslides, erosion problems, collapsible soil, soft bay mud, liquefaction, and highly expansive soil conditions. A few notable projects are identified below:

- Geotechnical Consultant on the Federal Courthouse excavation-dewatering project for Southern Pacific Railroad located in Sacramento, California. This project included groundwater modeling, flow characteristics, and predictive impact of local chemicals in groundwater. He developed groundwater treatment scenarios for contingency implementation if the events that impacted groundwater chemicals were beyond discharge requirements.
- As the Geotechnical Engineer for the project, he designed an erosion control and countermeasures for a 50,000-cubic-yard earth flow at Camp San Luis Obispo. The studies included hydraulic and slope stability calculations, sediment retention basin and earth structure's design. In addition, he is the erosion control consultant for four mine reclamation projects at the Camp. The mines have both adverse erosion and metals impacts to nearby streams. Mr. Long was the technical consultant to the U.S. Army Corps of Engineers and the California National Guard.
- Geotechnical and construction consultant for the design and installation of a 60-foot-deep soil mixing chemical barrier wall installed by GeoCon at the Sacramento rail yard. Included in the project were design drawings, specification, contracting, permitting, and construction performance monitoring.
- Responsible engineer for hundreds of geotechnical investigations, landfill slope stability studies, foundation designs and earthwork construction. Geotechnical projects varied from retaining walls to nine-story hotels to 1 million-cubic-yard slope stability studies and mass grading, moving millions of cubic yards of earth.



**LENARD D. LONG, P.E. (continued)**

- Geotechnical Engineer for corrective measures on the Pittman Canal landslide and erosion from storm damage of 1985. Landslide damage included 1 million cubic yards of earth flow materials. Corrective measures included regrading, gabion wall construction, subdrainage, and slope flattening.
- Mr. Long was the Geotechnical Engineer for PG&E's Drum Reservoir sediment removal project. A reservoir sediment removal study was completed which lead to the design of a 50-foot-high earthen sediment retention dam. The study involved off-shore sediment drilling, sampling, gold assay and economic evaluations, 300,000 cubic yards of sediment removal, retention dam construction, area drainage improvement and construction monitoring.
- Mr. Long served as expert witness for a drainage problem associated with a poorly designed trapezoidal channel that caused flooding of private property.



**ROBERT T. QUARLES, P.E.**

**Education and Special Training**

2002--Present, San Diego State University: M.S., Civil and Environmental Engineering

2001, Georgia Institute of Technology: B.S., Civil and Environmental Engineering

**Professional Registrations**

Registered Professional Engineer (Civil), State of California No. C66426

**Professional Affiliations**

American Society of Civil Engineers

American Society of Environmental Engineers

National Groundwater Association

**Professional Experience / Major Projects**

Mr. Quarles' experience in civil and environmental engineering practice and construction includes technical contributions to a variety of projects including design, construction, implementation and operations of remediation systems; hydrological assessments of river basins in Georgia; construction quality assurance; and geotechnical evaluation of foundations for large-scale building construction. Mr. Quarles currently has 4 years of post-graduate professional experience on a variety of environmental engineering projects in addition to several years of cooperative experience with a variety of civil engineering projects throughout the southeast. Mr. Quarles has extensive experience with permitting, design, construction, and operation of a variety of remediation projects including petroleum contamination and chlorinated solvent plumes. Mr. Quarles' experience with design and operation of remediation systems and technologies include pump and treat, soil vapor extraction (SVE), dual phase extraction (DPE), bioremediation, and advanced oxidation techniques. Mr. Quarles also has experience with storm water drainage design, hydrological assessment, geotechnical evaluation and construction management. Major projects he has worked on are summarized below.

- **Thomas Ranch Superfund Site, Engineering Design; The Companies; Corona, California.** This project involved the design of final cover and gas control systems for the containment of liquid waste filled ponds. The cover system consisted of geosynthetic clay liner, high density polyethylene geomembrane, and drainage composite. The gas control systems consisted of both a vertical gas extraction system and a horizontal gas extraction system installed beneath the cover system. Mr. Quarles assisted in the preliminary technical design and specification preparation for the vertical and horizontal gas control systems. Mr. Quarles is also responsible for detailed equipment design, procurement, installation, operation and final design for the gas control system. The proposed system will use SVE blower technology with activated carbon for emissions control of subsurface gases containing VOCs, mercaptans, and sulfide compounds.

**ROBERT T. QUARLES, P.E. (continued)**

- **Soil Vapor Extraction (SVE) and Dual Phase Extraction (DPE) Remediation System Design –Confidential Client, Burbank, California.** This project involves the design, construction oversight, and operation of the following: a 55 feet deep, 3,000 feet long soil bentonite slurry wall; a shallow soil vapor extraction system (SVE); a deep SVE system, a deep dual phase extraction system (DPE); and granular activated carbon treatment for both vapor and liquid phases from multiple effluent sources. Mr. Quarles assisted in the preliminary design phase including construction drawing preparation/review and specification preparation. Mr. Quarles also provided technical guidance during construction regarding remediation system components and has worked to ensure that the remediation system is delivered by the subcontractor according to the specifications.
- **Vadose Zone Soil Remediation via SVE and Bioventing - General Electric Aircraft Engine Services, Ontario, California.** This project involves the optimization, operation and maintenance of an existing SVE system to remediate soils contaminated with both jet fuel and chlorinated solvents. Mr. Quarles began managing field operations on this system in March 2003. Diligent management and operation of the system by Mr. Quarles and appurtenant field staff have resulted in an 80% decrease in soil vapor concentrations, greater than 90% run time efficiency, and no violations of the Title V air quality permit. Mr. Quarles has been responsible for daily operations and interfacing with all players on the project including the client, vendors, upper level GeoSyntec management, and the California Department of Toxic Substances Control (lead agency on the project). The project is currently moving into a closure phase as of November 2004.
- **Groundwater Pump and Treat System Design - General Electric Aircraft Engine Services, Ontario, California.** This project involves the design, construction, and operation of a pump and treat system designed to pump approximately 150 gallons per minute and mitigate impacted groundwater in the vicinity of Ontario California. Mr. Quarles has managed the civil design portion of this treatment system including structural, electrical, and various system details requiring preparation of plans and specifications. Mr. Quarles has been responsible for interfacing with the client and various other players regarding system implementation as well as coordinating construction schedules and activities. Mr. Quarles will also manage the installation of this system as well as on-going operations once it is complete.
- **Industrial Facility Remediation using Dual Phase Extraction – Confidential Client, San Diego, California.** This project involves a preliminary site assessment and subsequent design, construction, operation, maintenance, and monitoring of dual phase extraction system to treat chlorinated solvent contaminants found in both the vadose zone and groundwater. Assessment and design for this project required determination of the extent of contamination as well as the optimum spacing for extraction wells based on an assumed radius of influence. Mr. Quarles closely managed DPE system construction and implementation and was responsible for continual system oversight and regulatory compliance. Mr. Quarles has been responsible for daily operations and interfacing with all major players on the project including the client, on-site personnel, vendors, GeoSyntec management, and the San Diego Department of Environmental Health (SD DEH - lead agency on the project). Remediation efforts were deemed successful by



**ROBERT T. QUARLES, P.E. (continued)**

the San Diego DEH in early 2004 and site closure will occur in May 2004. Closure granted after less than two years of operations and the project was completed approximately \$50,000 under the initial proposed budget.

- **Environmental Site Assessment and Remediation using Soil Vapor Extraction – Confidential Client, San Diego, California.** This project involves the design, construction, and operation of a soil vapor extraction system consisting of one extraction well and a granular activated carbon vapor treatment system. Mr. Quarles conducted the initial analysis of subsurface conditions, system design and regulatory permitting for installation of the system. Mr. Quarles also coordinated and assisted with the installation and continuing operations of the remediation system designed for source control of subsurface chlorinated solvents at the site. In addition, Mr. Quarles will be involved with pending expansion of the system to include additional soil vapor extraction and exploration of the feasibility to perform in-situ chemical oxidation using permanganate solution for the remediation of groundwater at the site.
- **Groundwater Remediation and System Operations & Maintenance – San Marcos II Landfill, San Marcos, California.** This project involves the assessment of an existing corrective action pumping system, preparation of a revised operation and maintenance manual, and modifications to the corrective action system pumps and piping. In addition, leachate production modeling was performed, using the computer software HELP, to verify quantity of leachate effluent from lined portion of the landfill. Mr. Quarles was responsible for oversight during pump replacement operations, the preparation of a revised O&M manual, and maintaining communications with the client, the County of San Diego Department of Solid Waste Management. Mr. Quarles also completed design and implementation of a granular activated carbon treatment system to remove VOCs from the groundwater waste stream prior to discharge into the local surface water source. Mr. Quarles is currently the acting project manager for this site and oversees operation and maintenance of the groundwater and underdrain systems for the landfill.
- **Vadose Zone Soil Remediation via Soil Vapor Extraction – Confidential Client, Los Angeles, California.** This project involves the design, construction, and operation of a soil remediation system consisting of a soil vapor extraction system consisting of one extraction well and a granular activated carbon vapor treatment system. Mr. Quarles coordinated and managed all field work related to system construction activities and assisted with the installation and continuing operations of the remediation system designed for source control of subsurface chlorinated solvents at the site.
- **Municipal Solid Waste Landfill Design – Los Reales Landfill, Tucson, Arizona.** This project involved the design and construction of a composite bottom liner system, consisting of geosynthetic clay liner, HDPE geomembrane, cushion geotextile, and natural soil and aggregate materials. As a member of the design team, Mr. Quarles was responsible for cost estimating and design review.



**ROBERT T. QUARLES, P.E. (continued)**

- **Site Assessment and Groundwater Monitoring - Bonsall Landfill, San Diego, California.** This project involves the investigation and assessment of groundwater in the vicinity of the Bonsall Landfill. Mr. Quarles supervised drilling operations and down hole video logging of boreholes at the site.
- **Anomalous Groundwater Hydrogeological Investigation - Encinitas and Hillsborough Landfills, San Diego, California.** This project involved a hydrogeological assessment of two closed landfills in San Diego County due to anomalous groundwater conditions. A continual rise in groundwater levels was noted over several years. Mr. Quarles conducted site assessments and utility assessments in order to identify any potential municipal sources of water that could be entering the aquifer. Mr. Quarles also performed analysis based on rainfall and groundwater levels in order to further identify possible reasons for the anomalous condition and predict when the groundwater could potentially impact waste in the landfill.
- **Corrective Action System Implementation – Palomar Airport Landfill, San Diego, California.** This project involved assessment and mitigation of an underground seep emitting groundwater near the base of the closed landfill. The seep was found to contain low levels of chlorinated VOCs and required immediate mitigation as a non-permitted surface discharge. Mr. Quarles was responsible for analysis of the seep and feasibility study for solutions to the problem. Mr. Quarles was also responsible for designing and implementing the ultimate remedial alternative. The solution to this problem involved design and construction of a creative capture, treatment, and infiltration system utilizing a wastewater treatment system and infiltration gallery. Mr. Quarles coordinated and managed construction of the collection sump, pumps, pipe work, electrical work, treatment system and initial infiltration gallery. Mr. Quarles was also responsible for operations and maintenance of the treatment system and regulatory compliance. Mr. Quarles also performed the feasibility study to assess mitigation measures to address the overall impacts to local groundwater due to the closed landfill.
- **Litigation Support and Aquifer Testing - Los Angeles Municipal Water District, Los Angeles, California.** This project involved litigation support for the Los Angeles Municipal Water District related to the construction of a new reservoir in the area. Mr. Quarles participated in groundwater pump testing on-site in order to assess the current production rate of a residential well in the vicinity of the new reservoir. Mr. Quarles also performed an engineering analysis and assessment of the on-site groundwater pumping, storage and distribution system. Mr. Quarles assisted in coordination of field activities including scheduling, equipment procurement, and geophysical testing.
- **Geotechnical Analysis and Construction Quality Assurance – Various Clients, Atlanta, Georgia.** These projects involved geotechnical stability testing and analysis for a variety of construction projects throughout Georgia. Mr. Quarles also performed construction inspection and quality assurance for a number of construction projects including several high rise projects in Atlanta, GA. Mr. Quarles was responsible for concrete and soil testing, construction quality control, and interfacing with clients and contractors to ensure that project goals and specifications were met or exceeded.



**ROBERT T. QUARLES, P.E. (continued)**

- **GUST Fund Underground Storage Tank Remediation – Various Clients, Atlanta, Georgia.** This project involved a variety of environmental assessment and remediation work for a number of contaminated sites throughout Georgia. Mr. Quarles was responsible for conducting operations, maintenance, and troubleshooting for a variety of remediation systems including soil vapor extraction, pump and treat, air sparging, and bioremediation. Mr. Quarles conducted data collection and analysis, groundwater sample collection, data management, and vapor testing to ensure compliance with regulatory standards. Mr. Quarles was also involved with several large scale environmental site assessments for U.S. Army bases including Fort Gordon, GA and Fort Griffin, GA. Mr. Quarles also participated in design and installation of several remediation systems for BTEX contaminated sites including soil vapor extraction and pump & treat systems.
- **Hydrological Evaluation and Watershed Analysis – U.S. Geological Survey, Atlanta, Georgia.** This project involved continual hydrological assessment of watersheds throughout Georgia. Mr. Quarles performed stream measurements as well as data collection and analysis in order to generate hydrographs and flood assessments for various watersheds throughout the state. Additional surface water hydrology work included sampling and lab analysis of surface water runoff in Gwinnett County, Georgia to assess the effects of bacterial contamination to the local surface water supply.

**List of Publications**

Quarles, R., Corcoran, G., Williams, S., McCune, T. (2004) “Application of Dual Phase Extraction for Remediation of Chlorinated Solvents at a Former Industrial Site in San Diego, CA” (2004), National Groundwater Association, 2004 Remediation Conference, New Orleans, Louisiana.

Reynolds, S., Findlay, E., Quarles, R., Buyuksonmez, F. (2004) “Electronics and Metal Finishing and Processing”, Water Environment Research Federation.



**TED M. SISON****Education and Special Training**

B.S. - Plant Science, Fresno State University, Fresno, CA, 1998

OSHA 40-Hour Hazardous Waste Operator Training

**Professional Experience / Major Projects**

Mr. Sison brings to SCS Engineers (SCS) a diverse background in soil and agricultural science. Since joining the firm five years ago he has successfully conducting numerous environmental investigations to identify and characterize contaminants in soil and groundwater and has been involved with several remediation construction projects. He is highly experienced in most subsurface investigation and remediation methods and techniques.

Contaminants of concern have included a variety of fuel-related hydrocarbons, chlorinated solvents, heavy metals, PCBs, pesticides, dioxins and furans, and fertilizers. Investigation environments have varied from residential neighborhoods, to landfills, to hazardous waste sites. He is a project team member in soil excavation and construction/remediation projects, including confirmation soil sampling, health and safety monitoring, QA/QC inspection, and heavy equipment operation.

Last year he conducted an incinerator investigation at the Camp Parks Military Training Site (CPTS) in Dublin, CA where 30 test pits to fifteen feet were excavated over approximately 10 acres, logged, and sampled. Groundwater samples and stockpiled soil samples were also collected. Analytical data was evaluated from the nearly 200 soil samples to give CPTS an estimation of buried Navy Era debris and contaminate concentrations for possible future remedial actions. Approximately 21,000 cu/yds of material has been identified.

Over the last five years he has been involved with most of the investigative and remedial efforts conducted at the Tyco electronics facility (formerly Raychem) a 32-acre industrial manufacturing facility in Menlo Park, CA. His project responsibilities have included QA/QC inspections and oversight of demolition, grading, and storm water/erosion control improvements, data analysis, and technical report preparation.

He has conducted several investigations for the San Jose Redevelopment Agency (SJRDA) helping them clean-up contaminated sites to be converted to either residential land or for city development.

**Additional Experience Includes:**

- Served as staff/field scientist on an erosion control project at a former mine site in San Luis Obispo County. Work included oversight of grading, installation of numerous engineered erosion controls, re-vegetating, culvert construction, etc.



**TED M. SISON (continued)**

- Construction Quality Assurance (CQA) Monitoring for landfill closure construction at industrial waste landfill, Union City, California. Closure included excavation/re-grading of waste mass, installation of final cover and drainage system, storm water detention basin, outfall culverts and groundwater/gas monitoring wells. Provided health and safety air monitoring during waste removal.
- Groundwater monitoring at the Waste Management Redwood Landfill, Marin County. Helped with initial planning and sampling strategy. Was present during SCS's first monitoring episode at the landfill to meet with the client and identify well locations. Also instructed field personnel in Micropurge sampling equipment operation and protocol.
- Oversight of groundwater monitoring program at Altamont Landfill, Alameda County. This includes well installations, monitoring and sampling, data analysis, report preparation and client/agency liaison. Also, Mr. Sison conducts all non-routine sampling and well maintenance.
- Storm water management at the Waste Management Altamont Landfill. Conducts all on-site inspections with regards to storm water pollution prevention and collects all storm water run-off samples.
- Extensive knowledge of groundwater well installations and sampling protocol including Micropurge sampling equipment and protocol.
- Has over seen the installation of numerous landfill wells throughout Northern California. The purpose of these wells included groundwater monitoring and landfill gas monitoring and extraction. Specific examples include Pacheco Pass Landfill, Foothill Landfill, L and D Landfill, Fink Road Landfill, Kiefer Landfill, Fairmead Landfill, and Western Regional Sanitary Landfill.
- Post-closure monitoring and maintenance, Berkeley Marina Landfill, Berkeley California. Reviewed and analyzed site inspection and groundwater monitoring data. Produced quarterly self-monitoring reports for submittal to RWQCB, indicating landfill condition and necessary maintenance activities.
- Performed New Source Performance Standards (NSPS) Tier 2 LFG sampling and analysis. This involved using direct push methods to extract and evaluate subsurface landfill gases. Gases were evaluated using both field instruments and summa canister collection for laboratory analysis.
- Combustible gas assessments. Mr. Sison performed a study to assess potential for gaseous releases from near-surface materials at a Bay Area industrial waste landfill. Equipment used included a bar-punch, RKI Eagle combustible gas meter, Landtec GEM 500, and Dräger Tubes.



**TED M. SISON (continued)**

- Landfill subsurface fire assessment. Direct push methods were used to install temporary landfill gas sampling points at a Central California landfill. Methane, oxygen, and carbon monoxide measurements were used to assess the potential and existence of subsurface fires.
- Environmental assessments of properties adjacent to landfills. Mr. Sison has evaluated subsurface landfill gas levels to assess the potential for off-site impacts associated with residential development adjacent to Fresno's Pinedale Landfill, and was involved with designing potential solutions to the gas migration.
- Landfill gas flare source testing at the 28<sup>th</sup> Street Landfill in Sacramento. This included overseeing personnel who were testing the flare emissions and communicating between landfill management and the overseeing regulatory agency.
- Planning, permitting, and installation of perimeter subsurface gas monitoring probes at industrial waste landfill, Union City, California
- Extensive experience with direct push, hollow stem auger, air rotary, and mud rotary drilling systems and methods for monitoring well construction and destructions. This includes working at Corral Hollow Landfill in Tracy, CA supervising and logging the drilling and construction of multiple monitoring wells. These wells were drilled up to 500 feet through gravelly/cobbled soils requiring mud rotary drilling methods and complicated constructions.
- Environmental assessments of properties. This involves evaluating past on-site operations, identifying potentially contaminated sites and record searches of files maintained by regulatory agencies both for the subject and adjacent properties.

Mr. Sison has participated in a certified health and safety program in compliance with OSHA Standard 29 CFR 1910.120. He is knowledgeable of incident response operations, team functions, personnel safety, and a wide array of field and monitoring equipment. He is able to recognize and evaluate potential chemical and physical hazards and associated risks in operations; discuss and interpret direct reading instruments; and examine and establish Standard Operating Safety Guidelines to ensure safe and effective response operations.



## **TRACY THOMPSON**

### **Education**

San Diego State University, San Diego, CA, Bachelor of Science in Environmental Engineering  
(in progress)  
San Diego City College, San Diego, CA, General Education  
Erie County Vocational Technical School, Erie, Pa., Mechanical Drafting  
United States Navy A School, Orlando FL, Quartermaster

### **Professional Trainings / Certifications**

40-Hour Hazardous Waste (HAZWOP)-Trained  
C++ Programming.  
Pro Engineer (in progress)  
Technical Writing Certification (in progress)  
Watershed Analysis  
Soil Analysis and Classification

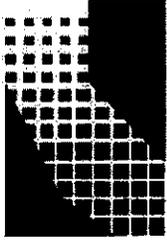
### **Professional Experience**

Mr. Thompson is a valuable resource to SCS Engineers and conducts a wide range of project work that includes:

- Proper field sampling technique.
- Sample preparation and delivery.
- Chain-of-custody field representative.
- Groundwater well installation and monitoring.
- Shallow soil sampling.
- Groundwater sampling.
- Storm water sampling.
- Soil stockpile sampling.
- Nonhazardous soil disposal.
- Managing soil transportation.
- Hazardous materials manifest management and tracking.
- Excavation oversight and vapor monitoring.
- Hydrostatic test water discharge monitoring to N.P.D.E.S. standards.
- Geotracker project uploading.

Mr. Thompson facilitates the excavation, temporary stockpiling, disposal and/or handling of potentially contaminated soil. He performs soil management and control measures consistent with County of San Diego Department of Environmental Health (DEH) guidelines while minimizing potential environmental impacts from fugitive dusts, leachate, or storm water runoff that could occur if soils are not properly handled. Soil management and stockpiling is based on field observations and laboratory screening prior to soil excavation and remediation.





## Appendix G

---

# Evidence of Professional Registration (PE)





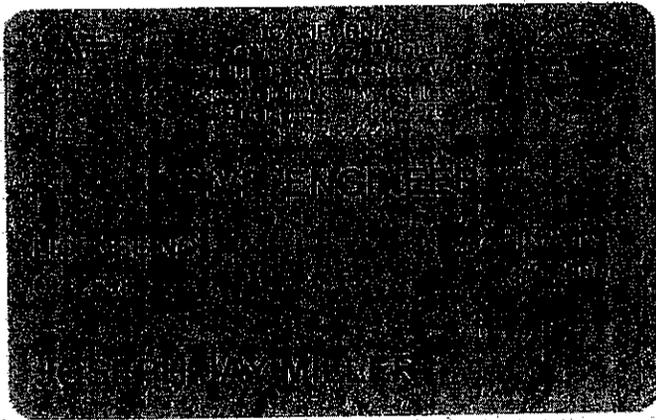
State Board of Professional Engineers  
 & Land Surveyors  
 2535 CAPITOL OAKS DRIVE, SUITE 500  
 SACRAMENTO, CA 95833-1526  
 916 263-2222  
 Consumer Affairs

**CIVIL ENGINEER**

CERTIFICATE NO. **C 25390**  
 EXPIRATION **12/31/07**

**AMBROSE ANTON MC CREADY**  
**201 OAK CANYON WY**  
**FOLSOM CA 95630**

*Ambrose Anton McCreedy*  
 License No. 500076



STATE BOARD OF REGISTRATION  
FOR PROFESSIONAL ENGINEERS



THIS IS TO CERTIFY THAT PURSUANT  
TO THE PROVISIONS OF CHAPTER 7, DIVISION 3 OF THE BUSINESS AND PROFESSIONS CODE

**MICHAEL LYNN LEONARD**  
IS DULY REGISTERED AS A  
**PROFESSIONAL ENGINEER**  
IN  
**CIVIL ENGINEERING**

IN THE STATE OF CALIFORNIA, AND IS ENTITLED TO ALL THE RIGHTS AND  
PRIVILEGES CONFERRED IN SAID CODE

WITNESS OUR HAND AND SEAL

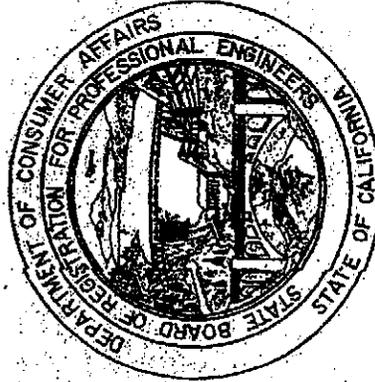
CERTIFICATE **No. 31181**

THIS 9<sup>TH</sup> DAY OF JANUARY 1980

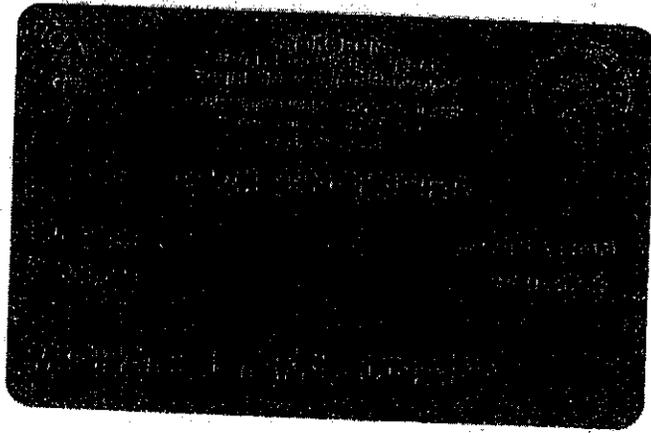
STATE BOARD OF REGISTRATION  
FOR PROFESSIONAL ENGINEERS

*Robert H. Mance*  
SECRETARY

*Don H. Mance*  
PRESIDENT



THIS CERTIFICATE IS THE PROPERTY OF THE STATE OF CALIFORNIA AND IN THE EVENT OF ITS SUSPENSION, REVOCATION OR  
INVALIDATION FOR ANY REASON IT MUST UPON DEMAND BE RETURNED TO THE STATE BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS




 Board for Professional Engineers  
 & Land Surveyors  
 2535 CAPITOL OAKS DRIVE, SUITE 300  
 SACRAMENTO, CA 95833-2928  
 916.263.2222


 State of California  
 Department of  
 Consumer  
 Affairs

**CIVIL ENGINEER**

CERTIFICATE NO. C 30637      EXPIRATION 03/31/06

LENARD DAVID LONG  
 788 PEACHWILLOW DR  
 BRENTWOOD CA 94513

Signature \_\_\_\_\_      RECEIPT NO. 00920637

PPRC 10/31/99      00920637


 Board for Professional Engineers  
 & Land Surveyors  
 2535 CAPITOL OAKS DRIVE, SUITE 300  
 SACRAMENTO, CA 95833-2928  
 916.263.2222


 State of California  
 Department of  
 Consumer  
 Affairs

**GEOTECHNICAL ENGINEER**

CERTIFICATE NO. GE 537      EXPIRATION 03/31/06

LENARD DAVID LONG  
 788 PEACHWILLOW DR  
 BRENTWOOD CA 94513

Signature \_\_\_\_\_      QUALIFIER NO. 00920637

PPRC 10/31/99      RECEIPT NO. 00920637



# BOARD FOR PROFESSIONAL ENGINEERS AND LAND SURVEYORS

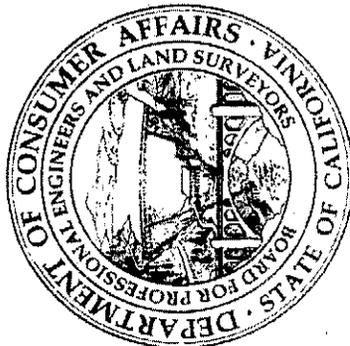


This Is To Certify That Pursuant  
To The Provisions of Chapter 7, Division 3 of The Business and Professions Code

## Robert Taylor Quarles

IS DULY LICENSED AS A  
PROFESSIONAL ENGINEER  
IN  
CIVIL ENGINEERING

In The State of California, and Is Entitled To All The Rights and  
Privileges Conferred In Said Code



WITNESS OUR HAND AND SEAL

Certificate No C 66426

This 30th day of January, 2004, at Sacramento, California.

BOARD FOR PROFESSIONAL  
ENGINEERS AND LAND SURVEYORS

*Cindi Chike*

Executive Officer

*Williecutt*

President