



ASSOCIATION OF ENVIRONMENTAL & ENGINEERING GEOLOGISTS
Southern California Section

"Connecting Professionals, Practice, and the Public."

NEWSLETTER – May 2006

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Meeting Date: **Tuesday, May 9th**

Location: Steven's Steak House, 5332 Stevens Place, Commerce, California

Time: 6:00 p.m.-Social Hour; 7:00 p.m.-Dinner; 7:45 p.m.-Presentation

Cost: \$30 per person with reservations, \$35 at the door, \$15 for students with a valid Student ID

Reservations: Please call (323) 889-5366 or email rmunro@mactec.com

Speaker: Jeffrey R. Keaton

Topic: **Consensus Definition of Earth Fissures and Overview of AEG Shlemon Specialty Conference**

Abstract:

Fissures are fractures or cracks in earth materials along which distinct separations exist. The common image of an earth fissure is a relatively long, curvilinear pattern of discontinuous, relatively narrow, open, steep-sided cracks on gently sloping alluvial ground. Horizontal extension is implied by open cracks, and cracks will form under small tensile stress because earth materials are weak in tension.

Distinctive patterns of ground cracks are not associated with different formation processes, and descriptive classifications should not be expected to lead deductively to determination of earth fissure cause. Classification schemes developed for landslides and rock defects may be useful for earth fissures, particularly with respect to age or time since the most recent rejuvenation of cracking or collapse. From a practical standpoint, the term *Earth Fissure* probably should be reserved for ground cracks on relatively gently sloping topography where certain local processes can be clearly ruled out as the cause. Candidate local processes to be ruled out might be fault rupture during earthquakes, landslides, and collapse into solution cavities and underground mines.

Consensus came with difficulty in the Shlemon Conference, and the agreed upon definition of *Earth Fissure* was: *A crack at or near the ground surface with an opening mode that is predominantly perpendicular to the orientation of the crack, generally occurring in unlithified or geologically unconsolidated earth material (soil in the engineering sense).*

Conference overview: The present state of knowledge of earth fissures was summarized, explored, and debated in El Paso, Texas, on April 1-3, 2004 at the first Shlemon Specialty Conference. Topics included processes leading to earth-fissure formation, problems of classifying earth fissures in the context of causative process and surface features, challenges in predicting where earth fissures will form and how fast they will propagate, and mitigation strategies for protecting facilities from damage. A number of participants displayed poster materials for discussion, whereas the following oral presentations were made:

1. Earth Fissure Formation (Jeffrey R. Keaton, AMEC - now at MACTEC)
2. Earth Fissure Classification (Thomas L. Holzer, US Geological Survey)
3. Earth Fissure Evolution (John W. Bell, Nevada Bureau of Mines & Geology)
4. Role of Characterizing Alluvial Deformation in Defining Subsidence-Induced Earth Fissure Risk (Ralph E. Weeks, AMEC)
5. Prediction of Fissure Growth (Ken Ferguson, AMEC)
6. Mechanical Considerations in the Observation and Interpretation of Earth Fissures and Other Forms of Ground Rupture (William C. Haneberg, Haneberg Geoscience)
7. Subsidence and Ground Fissures in Southern California: An Engineering and Geologic Perspective (Roy J. Shlemon, Consultant)
8. Earth Fissures & Hydraulic Driving Forces (Zhuping Sheng, Texas A&M University)

Holzer described an earth-fissure classification scheme beginning with determination of causative process, and then adding attributes (natural or human-induced cause, surface morphology, length, creeping or stable, subsurface condition, and other distinguishing conditions). Bell summarized 30 years of earth-fissure research, and asked, "Where does all the soil go that is missing from the ground surface?". He noted that 90% of the earth fissures in the Las Vegas valley are within 600 feet of known fault traces.

Interferometric synthetic aperture radar (InSAR) to predict general fissure locations and refraction seismic surveys to detect specific fissure locations were discussed by Weeks and Ferguson. Haneberg noted that analytical maps are prepared at a scale and level of detail sufficient to allow a mechanical interpretation of fissures. Analytical maps are best prepared very shortly after fissuring occurs by someone with an understanding of fracture mechanics concepts and modern structural geology. Shlemon described an area in southern California where earth fissures were caused by ground-water pumping, and then by ground-water rise from irrigation of a golf course.

Two schools emerged regarding the origin of stresses causing horizontal tension large enough to cause ground cracks as a result of presentations by Sheng and Bell. One school argued that hydraulic seepage forces in aquifer formations were a contributing factor, whereas the other school believed that differential subsidence or bending of surficial layers were the causes. Important implications for Darcy's Law come from this debate. The depth that fissures can extend below ground surface was debated, and field conditions and test procedures were discussed for testing the hypothesis. Keaton led a discussion to define Earth Fissure. Holzer led a discussion to review and further refine his classification scheme.

Chair Column

Charles Nestle

On Monday, April 24, Judy Wolen (AEG's Lobbyist) reported that earlier in the day SB 1849 passed through the Assembly Business and Professions Committee by a vote of 4-0. This bill originally had language eliminating the California Specific Exam as a requirement for State licensure as a Geologist, but as a result of extensive lobbying from the three California sections of AEG and others, was amended to reinstate the CSE (all references to amending geologic licensure requirements were stricken). SB 1476 passed 3-0 extending the Board for Geologists and Geophysicists to 1/1/2010 and the Board for Professional Engineers and Land Surveyors to 1/1/2012. Amended language for both of these bills is available at: <http://www.leginfo.ca.gov/bilinfo.html>

It looks like all the paperwork to transfer domain names, etc. for AEG's completely new website is nearing completion and is due to be up and running imminently (it may even be up by the time you read this). Check it out and see what's new (<http://www.aegweb.org/indexf.html>).

Scott Ezell, an engineer who reviewed soils reports for Los Angeles County Dept. of Public Works, Materials Engineering Division from 1991 through 1999, succumbed to his year-long battle with cancer on April 18, three months shy of his 37th birthday. He is survived by his wife, Lily, and two daughters, Brianna (10), and Savannah (5). If you would like to contribute to a scholarship fund that has been established for the girls, you may make checks payable to: *State Farm - Ezell Children College Savings Plan*, and mail them to:

Ezell Children College Fund
349 Appian Way
Ventura, CA 93003

Searching for Past AGI Minority Participation Program Scholars

The American Geological Institute is searching for past scholarship recipients from the AGI Minority Participation Program (MPP) to complete a short survey. The AGI MPP program is the longest running minority program in the geosciences, dating back to 1972. More than 950 MPP scholars have received millions of dollars of scholarships over the past 34 years. Many of our past scholars are currently working as leaders in the geoscience community, and many have gone on to exciting careers in other fields.

We would like to evaluate the AGI MPP Program, in order to improve it for current and future students. The survey will only take 10 minutes, and will be used to track the successes of the program over the past 34 years! If you were an MPP scholar, please take the time to participate!

Please forward this Web address to your membership, newsletters, and listservs to help us find everyone! AGI will publicize the results of this survey once it is completed. Thanks for your help!

Link to the AGI Minority Participation Program survey here: <http://www.agiweb.org/mpp/>

If you have any questions on this survey or the Minority Participation Program please contact Cindy Martinez.

Geology Continuing Education Series: Rules and Regulations for Geological Studies

May 20, 2006

co-sponsored by

Inland Geological Society

Association of Environmental and Engineering Geologists, Inland Empire Chapter

Geosciences 825.C (.6 CEU)

Geological and environmental studies and reports should follow guidelines set by local, state, and federal regulatory agencies. Seven speakers will present their perspectives on the enforcement of rules and regulations as stipulated by various laws. The topics cover engineering sites, land use, mining activities, and groundwater cleanup.

PROGRAM COORDINATOR: TIEN LEE, Ph.D., Professor of Geophysics, UC Riverside

Date/Time: Sat. 9 am-4:15 pm, May 20.

Location: UC RIVERSIDE: Extension Center, 1200 University Ave.

Fee: \$65 / \$60 each for members of the IGS or AEEG / \$10 each for students (includes lunch, materials and parking, 1 meeting)

Reg #054-SCF-F55

AGENDA

- | | |
|----------|--|
| 9 am | Welcome / Introduction |
| 9:10 am | The Significance of Geologic Licensure in California and the Path to Get There
<i>Paul Sweeny, California Board for Geologists and Geophysicists</i> |
| 10:00 am | Geosciences Policy Implementation to Mining and Geologic Hazards in California
<i>Stephen M. Testa, California State Mining and Geology Board</i> |
| 10:50 am | Riverside County's General Plan — Seismic Safety Element
<i>David L. Jones, Riverside County Geology</i> |
| 11:40 am | Lunch – included |
| 12:50 pm | Mining, Geology, and Minerals and Public Lands Administered by the Bureau of Land Management
<i>Steven A. Kupferman, U.S. Bureau of Land Management</i> |
| 1:40 pm | The Role of Geologists in the Department of Toxic Substances Control, a Multi-Media Environmental Agency
<i>Alfredo Zanoria, California Department of Toxic Substances Control</i> |
| 2:30 pm | Water Quality Protection — An Introduction to Regulatory Requirements, Perspective From RWQCB Staff
<i>John Broderick, Santa Ana Regional Water Quality Control Board</i> |
| 3:20 pm | A Summary of Engineering Geology and Seismology Report Guidelines for DSA and OSHPD Reviewed Projects
<i>Janice L. Hernandez, California Geological Survey</i> |
| 4:15 pm | Adjourn |

UNIVERSITY OF CALIFORNIA **Riverside**

Extension
Learn for Life

PROGRAM INFORMATION:
 Phone: (951) 827-5804
 Fax: (951) 827-7374
 E-mail: sciences@ucx.ucr.edu
 Web Site: www.extension.ucr.edu

PARKING AT THE UC RIVERSIDE EXTENSION CENTER, 1200 UNIVERSITY AVE.: Daily until 10 pm, vehicles must display a visitor permit or a quarterly evening/weekend permit. Parking is available in the parking structure south of the Center. **Parking regulations are enforced from 8 am-10 pm daily in the UC Riverside Extension Center parking lot and parking structure.**

TO ENROLL:
By Phone: If you use VISA or MasterCard, you may complete enrollment by calling (951) 827-4105 or toll-free (800) 442-4990.
By Fax: For credit card or purchase order registration, fax completed enrollment form to (951) 827-7273, Attn: Student Services.
By Mail: Enclose your check or VISA/MasterCard authorization and mail to: UC Riverside Extension
 1200 University Avenue
 Riverside, CA 92507-4596
In Person: At the UC Riverside Extension Center, 1200 University Ave., Riverside.

IMPORTANT: We do not accept enrollments by e-mail, as it is not a secure method of communicating personal information.

ENROLLMENT FORM SP06

I wish to enroll in:

Geology Continuing Education Series: Rules and Regulations for Geological Studies

Geosciences 825.C Reg #054-SCF-F55

\$65 \$60 each for members of the IGS or AEEG \$10 each for students

Full Name (please print) Social Security No. (Provide if using tuition for tax credit)

Home Address (street, apt. no.)

City State ZIP Code

Daytime Phone E-mail Address

Are you a U.S. Citizen: Yes No If no: Permanent Resident Type of VISA _____
(International student fees may apply.)

TO PAY BY CHECK: Enclose check made payable to REGENTS-UC in the amount of \$_____ to cover _____ enrollment(s) and parking permit.

TO USE YOUR CREDIT CARD:

VISA/MasterCard No. Expiration Date

Authorizing Signature

PLEASE USE A SEPARATE SHEET FOR ADDITIONAL ENROLLMENTS. THANK YOU.

Chapter Meetings

Inland Empire:

May Meeting: Wednesday, May 17th

Time: 5:00 to 8:45

Location: Pinnacle Peak Steakhouse, Colton

Speaker: Stephen M. Testa, Exec. Officer, California State Mining & Geology Board & Testa Env. Co., Sac., CA
Presentation Topic: "A Brief History of Oil in California"

Please visit the Inland Empire web page at <http://www.aegsc.org/chapters/inlandempire/> for additional meeting information and directions.

Central Coast:

Monthly meetings will take place on the last Wednesday of every month at Rusty's Pizza in Goleta. Social hour begins at 6 pm, the meeting begins at 7pm.

For more information or to be added to the CA Central Coast Chapter email list, please contact Robert Urban via email at robert_urban@urscorp.com.

San Diego:

May Meeting: Tuesday, May 16th

Time:

Location:

Speaker: Dr. Peter Robertson

Presentation Topic: Cone Penetration Testing, Environmental and Geotechnical Applications

For the latest information visit <http://www.aegsc.org/chapters/extremesocal/>

National Business Donation

- **Platinum** - \$1,000
- **Gold** - \$500
- **Silver** - \$250

Company name, address and contact information are presented in AEG News and section receives 10% of donation. A national donation does not yield a line in our local section newsletter.

Company & Employment Advertising Newsletter (includes SoCal website posting)

	<u>Month</u>	<u>Year</u>
▪ Business Card	\$10	\$100
▪ ¼ Page	\$20	\$200
▪ ⅓ Page	\$30	\$300
▪ ½ Page	\$35	\$350
▪ Full Page	\$50	\$500

SoCal website posting only

\$20/month

* The deadline for submitting an advertisement for next month's newsletter is Friday, May 26th.

YEAR 2006 CONTRIBUTORS NEEDED

Contributions from corporations and individual members are greatly appreciated. Contributors will be listed in our newsletter throughout the year and can post their logo or business card in the newsletter if so desired. Please mail contributions made out to **AEG** to our section treasurer, Rosalind Munro.

2006 MEMBERSHIP RENEWAL

For those of you who have not yet renewed **(the deadline was November 1)**, are unsure about your membership status, or did not receive your membership dues statement, please contact AEG Headquarters at www.aegweb.org. You can renew your membership online. Please update your membership if you wish to continue to receive future issues of the newsletter.

EMPLOYMENT OPPORTUNITIES & ADVERTISING



Petra Geotechnical is currently seeking experienced geotechnical engineers, geologists, environmental scientists and soils technicians in our Costa Mesa, Santa Clarita, Murrieta and San Diego offices. We offer competitive salaries and excellent benefits. Please contact Linda Becker, Human Resources Manager, at 714/549-8921 or submit your resume by email to lbecker@petra-inc.com

EUC

Eberhart / United Consultants, a southern California geotechnical consulting firm serving its clients for over 25 years, has the following career opportunities:

PROJECT GEOLOGIST: position requires BS with 3 years experience in public/civil works, commercial and residential projects. Duties include field mapping, subsurface exploration, office analysis, proposal and report preparation, and project management.

SENIOR ENGINEERING GEOLOGIST: position requires CEG registration and 8 years experience in public/civil works, commercial and residential projects. Duties include managing/performing geologic investigations, field mapping, subsurface exploration, office analysis, proposal and report preparation, and project management.

We offer a competitive compensation & benefits package for qualified candidates. For immediate consideration, mail, FAX, or email your resume & salary history to:

Eberhart / United Consultants
1031 Segovia Circle
Placentia, CA 92870
FAX (714) 632-0955
dre@euc-inc.com



PACIFIC SOILS ENGINEERING, INC.

Pacific Soils Engineering, Inc. is seeking all levels of engineering geologists for large land development projects in Los Angeles/Orange/San Diego/San Bernardino/Riverside/Ventura Counties. Knowledge of current grading standards and geologic engineering principles, good verbal communication and writing skills, and leadership skills are helpful. Registration not required. Salary and compensation package commensurate with experience and skills. Please fax resume to (714) 220-9589, or email: info@pacificsoils.com, Attention: Manager of Geotechnical Services.

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**Lawson & Associates
Geotechnical Consulting, Inc.**

Lawson & Associates Geotechnical Consulting, Inc.

2045 Royal Avenue, Ste. 125
Simi Valley, CA 93065
Tele: (805) 579-3434 Fax: (805) 579-3435
Email: kesmond@lgcgeo.com

Website: www.lgcgeo.com

LGC is looking for dynamic individuals to join our team and work on some of Orange, Los Angeles, Ventura, San Bernardino, Santa Barbara and Kern Counties' most interesting and technically challenging projects. If you are an experienced geotechnical professional, or just starting your career, please do not hesitate to contact us. All inquiries will be considered in the utmost confidence. We look forward to hearing from you.



TerraPacific Consultants, Inc. is a San Diego based geotechnical consulting firm working on projects throughout the southwest. We concentrate on forensic engineering, evaluations for new commercial/industrial/custom residential construction, as well as, oversight during foundation repairs. We are seeking motivated engineers and geologists who are interested in finding solutions to challenging geotechnical problems.

Field work and out of town travel will be required on a regular basis throughout California, Nevada, New Mexico, Arizona, and Hawaii. All positions demand an organized self-starter with "hands-on" management ability.

We are looking for an honest, hard working, technically minded professional to perform subsurface investigations, collect field data, perform geotechnical analysis, and write reports. Construction inspections will also be required. Qualified candidates should possess good communication skills. Field work and out of town travel will be required on regular basis. Position demands a motivated, organized, self-starter with the ability to get things done in a timely manner.

We offer the ability to learn and grow your career by working with seasoned professionals. Please visit our web site at www.terrapac.net.

Senior Geotechnical Engineer

Position responsibilities include project management, collecting field data, analysis, report writing, and client communication. Oversight of construction inspections will also be required. Qualified candidates must be a licensed G.E., have a minimum of 8 years experience and good communication skills. At least 2 years experience in geotechnical forensic investigations is preferred. Experience in testifying is a plus.

Project Geotechnical Engineer/Geologist

Position responsibilities include project management, collecting field data, analysis, report writing, and client communication. Oversight of construction inspections will also be required. Qualified candidates must be a licensed PE (GE is a plus), PG or CEG, have a minimum of 5 years experience and good communication skills. At least 2 years experience in geotechnical forensic investigations is preferred.

Staff Geologist/Engineer

We are looking for an honest, hard working, technically minded graduate to perform subsurface investigations, collect field data, perform geotechnical analysis, and write reports. Construction inspections will also be required. Qualified candidates should possess good communication skills. Some experience in geotechnical investigations is preferred but recent graduates will be considered. Field work and out of town travel will be required on regular basis. Position demands a motivated, organized, self-starter with the ability to get things done in a timely manner.

The right, qualified, independent and hard-working individual will be offered an excellent salary (commensurate with their experience), profit sharing/401K plan; company sponsored insurance program, and bonuses. If you are interested in pursuing quality in your life and your career please submit a resume and cover letter to: TerraPacific Consultants, Inc., 12245 World Trade Drive, Suite G, San Diego, CA 92128; or by fax to 858-521-1199; or by e-mail to jimg@terrapac.net.



GEOTECHNICAL ■ ENVIRONMENTAL ■ MATERIALS

Geocon is a full-service, employee-owned firm providing geotechnical, environmental and geologic engineering services, as well as construction observation and materials testing services for a wide variety of public and private clients. To share in our continued growth and success we are seeking qualified professionals for the following fields:

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Senior Staff Geotechnical Engineer with 2 to 4 years experience. BSCE required, MSCE preferred. Registration desirable. Experience in land development a plus.

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Project Geotechnical Engineer with 3 to 5 years experience. BSCE required, MSCE preferred. Registration required. Experience in land development a plus.

ENGINEERING FIELD TECHNICIAN

Engineering Field Technician with 2+ years experience desired but not mandatory. Land development and/or hillside experience a plus.

STAFF ENGINEER/GEOLOGIST

Staff Engineer/Geologist with 2 to 4 years experience. BS required, MS preferred. California registration (PE/PG) desirable. Must have previous experience with Phase I and Phase II environmental site assessments, remediation experience a plus.

PROJECT ENGINEER/GEOLOGIST

Project Engineer/Geologist with 4 to 7 years experience. BS required, MS preferred. CA Registration (PE/PG) required, REA II a plus. Must have previous experience with Phase I and Phase II environmental site assessments, and corrective action.

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3303 N. San Fernando Blvd., Suite 100
Burbank, California 91504
(818) 841-8388 Tel
(818) 841-1704 Fax

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41571 Corning Place, Suite 101
Murrieta, California 92562
(951) 304-2300 Tel
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San Diego, California 92121
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Additional offices in Las Vegas, Reno, Portland, Livermore and Sacramento.
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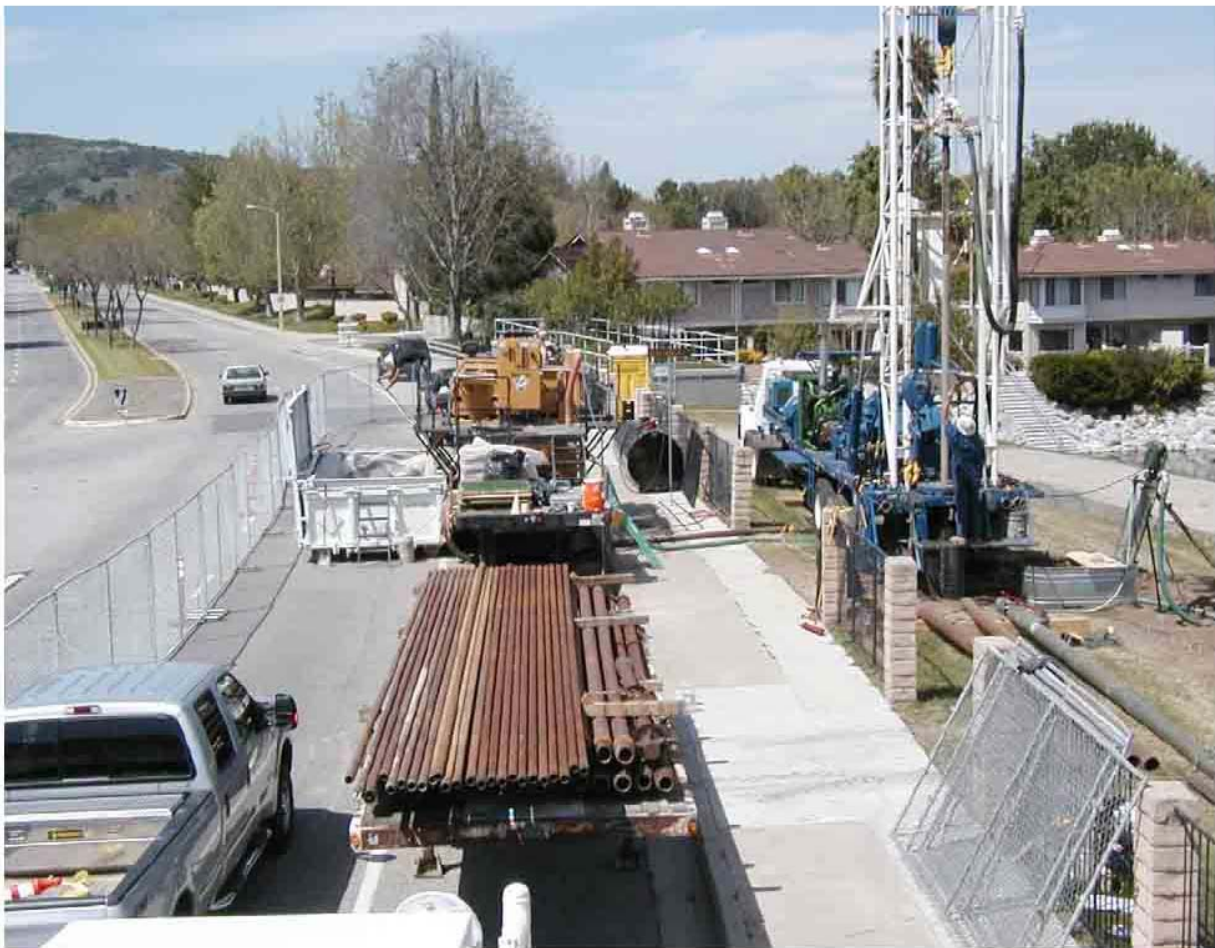


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Join us, we are seeking an Engineer to support cleanup efforts at Navy Installations in the San Francisco Bay Area. Responsibilities include providing senior technical input and execution for RIs, FSs, PPs, and RODs developed under CERCLA. Candidate will manage teams in the execution of field work, acquisition of data, interpretation of data, development of technical recommendations, and preparation of reports. Candidate will be expected to interact daily with clients, meet with regulatory agencies on a frequent basis, manage fixed price budgets, and mentor project staff.

Experience Requirements: Minimum of 5-10 years experience. Project leadership and project management experience commensurate with years of service, with a range of clients from both public and private sector. Experience performing a diversity of projects supporting air quality, due diligence, soil and groundwater remediation, hazardous waste, and CEQA/NEPA projects is desired. CERCLA documentation experience including RIs, FSs, PPs and RODs also desirable. Project Management experience should include large-scale projects under federal cleanup programs such as CERCLA. Experience in groundwater remediation and monitoring, and engineering analyses, cost estimating and value engineering are also desirable. Must demonstrate understanding of current state of environmental practice for environmental assessment, remediation and closure.

Skills Requirements: Strong written and oral communication skills, technical writing, and quality review experience are necessary. Must demonstrate ability to work with an interdisciplinary team environment, to manage fast-paced work effectively, and manage consulting projects under a fixed price. Project management skills including cost estimating, project scheduling, and team staffing are required.

Education Requirements: BS in Engineering required. MS with professional registration (PE) strongly preferred.

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Applied Earth Sciences is a leading geotechnical, environmental and geologic engineering firm in southern California, with a perennially large volume of projects. We are seeking qualified professionals to join our dynamic team of engineers and scientists for our Los Angeles and Fresno offices.

CERTIFIED ENGINEERING GEOLOGIST: Position requires CEG registration and 7-10 years professional experience in residential, commercial, and public works projects. Strong candidate will have demonstrable track record in hillside geology, slope failures/landslides, private disposal system design, environmental, and fault studies. Excellent report writing skills necessary. Supervision of project geologists.

PROJECT GEOLOGIST: BS & 2-5 years experience in commercial/industrial, public/civil works, and residential projects required. Tasks include research, field exploration, analysis & calculations, proposals and client interface, generating reports. Multifaceted work alongside principals. Work towards RG & CEG certification recommended.

GEOTECHNICAL ENGINEER: Position requires Civil Registration and work towards GE Reg. Candidate will have BS/MS and 5-7 years experience in foundation design, slope stability, shoring design, calculations, report writing, and project management.

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