

# ASSOCIATION OF ENVIRONMENTAL & ENGINEERING GEOLOGISTS Southern California Section

"Connecting Professionals, Practice, and the Public."

## NEWSLETTER – March 2008

#### **Officers**

Chair - Rosalind Munro, <a href="mailto:rmunro@mactec.com">rmunro@mactec.com</a>, 323-889-5366 Vice Chair - Mark Oborne, <a href="mailto:mark.oborne@lacity.org">mark.oborne@lacity.org</a>, 213-847-0524 Treasurer - Peter Thams, <a href="mailto:thams.peter@gmail.com">thams.peter@gmail.com</a>, 805-493-0663 Secretary - Jon Relyea, <a href="mailto:jon@radiusmaps.net">jon@radiusmaps.net</a>, 800-554-3205

Visit the Southern California Section Website: www.aegsc.org

Newsletter Editor - Steve Varnell, svarnell@fugro.com, 805-650-7000

Meeting Date: \*\*\*Wednesday, March 19th\*\*\*

\*\*\*Joint Meeting with ASCE\*\*\*

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

Time: 5:30 p.m.-Social Hour; 6:30 p.m.-Dinner; 7:30 p.m.-Presentation

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

\*\*\*Reservations: Please e-mail J. Adolfo Acosta at <a href="mailto:Jesus.Acosta@lacity.org">Jesus.Acosta@lacity.org</a>.

Speaker: Paul Somerville, Ph.D., Principal Seismologist, URS Corporation

Topic: "BASIN EFFECTS ON STRONG GROUND MOTIONS, AND THEIR

REPRESENTATION IN THE NGA MODELS "

#### Abstract:

The PEER NGA (next generation attenuation) ground motion models have become available (http://peer.berkeley.edu/products/rep\_nga\_models.html). Unlike the previous generation of ground motion models, these models have examined basin response in a detailed manner. The NGA models are based on strong motion recordings, many of which come from sedimentary basins, so in that sense they all include basin effects. Some of the NGA models include additional terms that account for the dependence of basin effects on other parameters. These additional terms include the depth to shear wave velocities of 1 km/sec and 2.5 km/sec, and Vs30 - the shear wave velocity in the top 30 meters. Basin depth be obtained from the SCEC website parameters can (http://www.scec.org:8081/examples/servlet/BasinDepthServlet). In the talk, I review the representation of basin effects in the NGA models. I also review the application of the NGA models to estimating basin effects at a specific site in downtown Los Angeles.

#### Speaker:

Dr Paul Somerville was born in Armidale, NSW and received his B.Sc. degree in Geophysics from the University of New England. After teaching at Brandi High School in Wewak, PNG and the PNG University of Technology in Lae, he went on to get his M.Sc. and Ph.D. in Geophysics at the University of British Columbia in Vancouver, Canada. He spent two years as a Visiting Research Fellow at the Earthquake Research Institute, University of Tokyo, and did research on two major damaging earthquakes that occurred during his stay.

Dr Somerville has worked at URS Corporation and its predecessor organization, Woodward-Clyde Consultants, first in San Francisco and then in Pasadena. He has worked in many aspects of seismic hazards and been involved in the development of innovative seismological methods for specifying seismic design ground motions in earthquake engineering practice. He has applied these in the design and analysis of major buildings, bridges, dams and power generation facilities in many countries, including Australia, New Zealand, the United States and Japan. Dr Somerville has extensive research experience in Japan, where he pioneered the development of commonly used procedures for characterizing earthquake sources for the prediction of strong ground motion.



I look forward to seeing everyone at Wednesday's meeting.

#### Reminders:

The next Board for Geologists and Geophysicists meeting will be held May 9, 2008 at The California Regional Water Quality Control Board, 9174 Sky Park Court, San Diego, CA 92123. The agenda comes out about 10 days before the meeting, and is posted on the board's web site. Go to <a href="http://www.geology.ca.gov/">http://www.geology.ca.gov/</a> for more information.

The Shlemon Conference, "The Geological Assessment of Naturally Occurring Hazardous Substances" will be held June 4-6 in Folsom, CA. Go to <a href="https://www.aegweb.org">www.aegweb.org</a> for more information.

The 2008 AEG Annual Meeting will be held September 15-20 in New Orleans, LA. Abstracts deadline is May 1. Go to <a href="https://www.aegweb.org">www.aegweb.org</a> for more information.

#### February 8, 2008 Meeting of the Board for Geologists and Geophysicists

Peter Thams

The Board for Geologists and Geophysicists (BGG) met in Sacramento on February 8, 2008 and was attended by Peter Thams on behalf of the Southern California Section. A quorum was present although Board President Black and Member Samii were absent.

**Public Forum:** During the Public Forum section, Don Chang Supervising Council for the Department of Consumer Affairs (DCA) announced that Board Council Gary Duke would become Council for the Board for Professional Engineers and Land Surveyors (BPELS) and introduced his replacement Michael Santiago. Mr. Duke's opinions and service to the Board have been valued for over a decade and the change was unwelcome news. Member Husar questioned the decision wondering why BPELS was chosen for Mr. Duke over BGG. Mr. Chang responded that BPELS was a complex Board regulating thirteen branches of engineering, whereas BGG was considered an entry-level board. Mr. Santiago's previous experience with toxic torts was also considered a good fit with BGG. The transition is expected to take place over a six to nine month period and Mr. Duke will be close at hand after the introductory period.

**New Offices and Staff:** Board Staff found new offices away from those previously subleased from BPELS, where a public access was not available and issues with mail delivery, information security, etc., created operational difficulties and conflicts. The new offices are located in the DCA Building at:

Board for Geologists and Geophysicists 1625 North Market Boulevard, N-324 Sacramento, CA 95834

office: 916-574-7749 fax: 916-574-7791

New staff at the Board include Gina Gunter, who will be the public face and Patty Smith, who will provide administrative and logistical support.

Enforcement: Board staff are ramping up enforcement against unlicensed practice in accordance with Business and Professions Code Section 145, which has trebled the cost of disciplinary action over the last six months. Seventy percent of the case load has involved underground storage tank clean up and environmental geology. Of 82 open cases 56% are against unlicensed practice and 44% against licensees. George Dunfield has met with DCA's Division of Investigation to see how they might be used in this effort since there are limits on Mr. Dunfield' powers as an unsworn officer. Board staff have adopted a policy of reducing fines by up to \$500 when the respondent is cooperative in the investigation. Three recent actions against REAs practicing without a license were settled with cooperation and the fines reduced accordingly. As a footnote, Antonette Sorrich of BPELS, who was working with BBG to resolve complaints against engineers practicing without licenses will be leaving to head up the bureau Guide Dogs for the Blind.

**Public Education/Outreach:** BGG members and staff are planning to participate in the week-long California Consumers Affairs and Advocacy Conference to be held in Los Angeles in November 2008. Thirty-seven entities are expected to be represented at this bureaus and boards annual conference. BGG also supports and intends to participate in the United Nations Commission Geology Symposium – GeoSym 08, whose purpose will be to increase communication among geologists who work for government. Cooperative efforts to develop standards and QA/QC methods would help the licensure process to bring higher quality to the public. BGG is issuing a Call for Volunteers to help create task forces to provide a clearinghouse of expertise to respond to emergency situations involving geologic hazards. The effort is expected to be largely an outreach/mentoring program aimed at recent geology

graduates and students at the college and high school level, with an onsite component during natural disasters. Don Chang suggested that there were a number of issues including mandatory training, liability, and deliverables that would need to be resolved before such a program could be implemented.

California Specific Exam: Board Member Cecelia Yu provided an update on AB 1284 (Eng), which will amend BP Section 7847 to disallow the issuance of a certificate of registration as a geologist or geophysicist without written examination. This bill will also require applicants to pay an examination fee of \$450, which is equivalent to the cost to the Board to administer the exam. The billed passed the Assembly on January 29 by a 60 to 7 vote. From the Assembly the bill goes to the Senate. The Republican Caucus has adopted a neutral stance on the bill, because the bill seeks only to recover costs in raising fees.

Also discussed was sequencing the examination so that the California Specific Exam (CSE) cannot be graded (although it can be administered for convenience of the applicant) until the Fundamentals of Geology and the Professional Practice exams are passed. As it is, the requirement is only that all three be passed. Staff would like to impose a sequencing requirement or delinquency period after which the CSE would have to be retaken on completion of the other exams. In Mr. Duke's opinion, it will require at minimum a regulatory change and possibly a statutory change to legally implement the policy. Further study of the issue was directed.

#### **Announcement**

Charles Nestle

The 2008 County of Los Angeles Building Code (Title 26) is expected to be available in technical book stores around the end of March. In the mean time, the new code may be accessed at either of the following links: <a href="http://www.bpcnet.com/codes/lacounty/">http://ordlink.com/codes/lacounty/index.htm</a>. Click on: "Title 26. Building Code."

#### **Public Service Announcement**

Charles Nestle

#### **ZIP-A-DIPs Are Still Available!**

How many of you have given up trying to find replacement for your faded and warped Zip-A-Dips? Zip-A-Dips are available from Don and Jeannine Lamar, who have lived in retirement in Reno for the past six years. Jeannine said that they don't plan on having any more made when they exhaust the present supply of Zip-A-Dips. She said, "It sure is nice to know that some geologists are still using ZADs."

Order your Zip-A-Dip by phone: (775) 322-5344. The price for 1 is \$4.00, or order 2-10 for \$3.50 ea., 11-49 for 3.00 ea., and 50+ for \$2.50 ea.

#### **Short Course Announcement**

AEG Sacramento presents: **Advanced Rock Slope Stability Analysis: Numerical Methods**Short Course is April 17-18. For details, visit the website at <a href="http://www.aegsacto.org/about/workshops/">http://www.aegsacto.org/about/workshops/</a>.



## SHLEMON CONFERENCE SCHEDULED

# The Geological Assessment of Naturally Occurring Hazardous Substances

June 4 - 6, 2008

Folsom, California, USA

Conference Organizers: *David W. Bieber*, Geocon Consultants, Inc, Rancho Cordova, CA, bieber@geoconinc.com

David Sederquist, Youngdahl Consulting Group, Inc., El Dorado Hills, CA, dcs@youngdahl.net

*Jim Brake*, Geocon Consultants, Inc, Rancho Cordova, CA, *brake@geoconinc.com* 

Shlemon Conferences are sponsored by the AEG Foundation and the Association & Environmental Engineering Geologists, and follow procedures typical of the Geological Society of America Penrose Conferences and the American Geophysical Union Chapman The conferences are Conferences. intended to promote and disseminate practice and research results, and to foster improvement the understanding of applied geology.

The third Shlemon Conference will include keynote presentations by invited experts, volunteered poster presentations by conference attendees, a field excursion, and ample time for informal conversations.

Naturally occurring hazardous geologic substances include arsenic, mercury, uranium and other heavy metals, radon, and asbestos. The

conference will focus on the geologic assessment of these substances including the strategies for sampling and problems with the current analytical methods. However, we will also discuss the interactions between the geologic community and the risk assessment and toxicology communities with regards to the collection of data and interprofessional communication. The conference will emphasize principles common to the investigation of naturally occurring hazardous geologic substances in general, using substances listed as examples. Topics covered will also include characteristics and concerns unique to the assessment of naturally occurring particulates, heavy metals, and gases. Examples will be presented from throughout the United States, as well as from other countries. Key-note presenters have been selected based on topic and diversity of experience, and additional presenters will be selected to enhance the conference content.

The field trip held in conjunction with the conference will visit the Motherlode region of the central Sierras in El Dorado and Amador Counties to view and discuss exposures of asbestos-bearing rock; view areas where elevated metals including arsenic, nickel and chromium occur, including the site of a United States Environmental Protection Agency arsenic cleanup action; and visit an area where naturally occurring radon gas associated with regional granitic rocks occur. Sites visited will include areas of historic mining where we will discuss the role of mining in providing a preferential exposure pathway.

Two days of technical sessions are planned. Each session will include invited keynote speakers who will be followed by brief oral abstracts and poster presentations contributed by conference participants. The one-day field excursion will be conducted on the second day of the conference.

Small specialty conferences such as this one depend on volunteered presentations and active participants!

# All attendees are strongly encouraged to contribute to the program by offering a poster presentation.

Conference attendance will be limited to 75 participants. The registration fee of \$325 U.S. will cover technical sessions on Wednesday, June 4, and Friday, June 6, the field trip on Thursday, June 5, lunches on Wednesday and Thursday, and a dinner Thursday. Participants will be responsible for transportation to Folsom, California; transportation from the airport to the hotel: and lodging costs. The conference hotel, Lake Natoma Inn, is in the historic mining town of Folsom, California, located adjacent to the foothills of the Sierra Nevada, and is within convenient walking distance of historic downtown Folsom.

## Registration Payment Due:

April 1, 2008 (form coming soon)

**For detailed information** and the application form, visit *www.aegweb.org* or contact the conference organizers by phone or e-mail.



# **AEG-2008**

# Laissez Les Bon Temps Rouler (Let the Good Times Roll!) New Orleans, Louisiana

New Orleans, Louisiana September 15-20, 2008 ~ JW Marriott Hotel

#### **Technical Program**

- Coastal/Floodplain
- Processes
  Construction
  Geology
- Dams/Levees
- Environmental Geology
- Geology Forensic Geology
- Geophysics
- Geotechnics
- GroundwaterLandslides/SlopeStability
- Professional PracticeRemote Sensing/GIS
- Rock/Soil
- Mechanics
- Seismic Hazard

#### ar ar

- Site Characterization
- Subsidence

#### ■ Tunneling

Good Morning New

River Road Journey

Commander's Palace

Honey Island Swamp -

Antebellum Life Garden District Tour

with Lunch at

Eco Tour

Orleans Walking Tour

CALL FOR PAPERS ABSTRACTS DEADLINE:

MAY 1, 2008

PLEASE SEND TO JULIE KEATON

E-mail: aegjuliek@aol.com Or see www.aegweb.org

**Guest Tours** 

#### **Symposia**

- Hurricane Katrina and Mechanism of Failure
- New Madrid Earthquakes

#### **Field Trips**

- Slope Stability Mississippi River Bluffs
- Hurricane Katrina Devastation Area
- Avery Island Salt Dome & Tabasco Tour

#### **Short Courses**

- GIS
- OSHA 8-hour HAZWOPR Refresher
- Technical Photography

General Chairs: James May (jmay1942@bellsouth.net)
Darrel Schmitz (schmitz@ra.msstate.edu)
Field Trips: Michael J. Wright (mwright@mdot.state.ms.us)
Field Trip Guidebook Editors:

Joel S. Kuszmaul (kuszmaul@olemiss.edu)
Robert M. Holt (mholt@olemiss.edu)
Finance: Darrel Schmitz (schmitz@ra.msstate.edu)
Colin McAneny (mcanenyd@bellsouth.net)
Hospitality / Guest Affairs:

Peggi May (jmay1942@bellsouth.net)

- Coastal Geology and Coastal Hazards
- Environmental Remediation
- Coastal Protection New Orleans
- Tunneling
- Civil War Military Geology –
- Vicksburg Campaign
  Coastal Geology Barrier Islands
- NASA Stennis Space Center

#### **Special Event**

Mardi Gras Parade and Reception through the French Quarter – with the procession led by a traditional N'awlin jazz group.

#### **COMMITTEE CHAIRS**

Local Liaisons:

Tom Westbrook (tmwklf@bellsouth.net) Burton Kemp (kaims@bellsouth.net)

Moderators / Keynote Speaker: Mike Seal (michael.c.seal@usace.army.mil) Outstanding Environmental & Engineering Geologic

Outstanat Proiect:

Evelyn Villanueva (Evelyn.Villanueva@erdc.usace.army.mil) Publicity: Jay Ferris (jferris@earthcon.net) Short Courses: Chris Saucier (csaucier@cee.msstate.edu)
Special Event: Donna Schmitz (donnas@ext.msstate.edu)
Sponsors: Ken Ruckstuhl (kruckstuhl@env-mgt.com)
Student Coordination: Greg Easson (geasson@olemiss.edu)
Synnosia:

Wayne Isphording (wisphord@jaguar1.usouthal.edu)
Technical Program:
Dave Patrick (david\_patrick@comcast.net)

Dave Patrick (david\_patrick@comcast.net)
Don Banks, Vice Chair, donbanks@canufly.net
Meetings Manager / Registration and Exhibitors:
Julie C. Keaton (aegjuliek@aol.com)

#### **Chapter Meetings**

#### **Inland Empire:**

For the latest information and updates, please visit http://www.aegsc.org/chapters/inlandempire/

#### **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 the latest information and updates, please visit <a href="http://www.aegsc.org/chapters/centralcoast/">http://www.aegsc.org/chapters/centralcoast/</a>

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:

For the latest information and updates, please 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
■ 1/4 Page	\$20	\$200
■ 1/3 Page	\$30	\$300
■ ½ Page	\$35	\$350
■ Full Page	\$50	\$500
SoCal website posting only		
\$20/month		

<sup>\*</sup> The deadline for submitting an advertisement for next month's newsletter is Friday, March 28th.

#### YEAR 2008 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, Peter Thams.

#### 2008 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 <a href="https://www.aegweb.org">www.aegweb.org</a>. You can renew your membership online. Please update your membership if you wish to continue to receive future issues of the newsletter.

# \*\*\*NOTICE: Proposed New AEG Publication\*\*\*

WHO'S WHO in SO CALIFORNIA ENGINEERING GEOLOGY
The Evolution of Engineering Geology in Southern California

Have you ever wondered "Whatever happened to\_\_\_\_?" or "I've heard of , who is he?"

The undersigned have decided to try to prepare an internet publication with the above title, which will include biographies of engineering geologists in southern California. We would like you to share your biography (autobiography) with other EGs. If you have worked on an interesting project, others would like to know about it.

If we limit each autobiography to 3 pages of text, plus photos, this publication would be more than 1,000 pages long. Therefore, we plan to utilize a proposed new AEG Foundation internet website, where there is no limit to total pages, and we can use color photos. Also, this new website will be available for no-charge access, worldwide, thus spreading the word on the history and evolution of engineering geology, and southern California's immense contribution.

We suggest (not require) three criteria for inclusion: 1. That you are a CA licensed CEG; 2. That you are now or once were a member of AEG; 3. That you have enough years of professional experience to relate one or more significant projects you have worked on. We believe there are more than 250 such EGs in southern California. This will be an evolving internet site where new autobiographies can be added.

We will also include Memorial biographies of past notable geologists in southern California. So far, we have identified 30, including John Buwalda, Ian Campbell, Tom Dibblee, Rollin Eckis, Perry Ehlig, Richard Jahns, John Mann, F.L. Ransome, Charles Richter, Dottie & Marty Stout, Gene Waggoner. Biographies of 14 of these notable geologists were published for the recent AEG Annual Meeting, in "History of the Association's First 50 Years," available from AEG HQ, contact Julie Keaton or Becky Roland.

Here is a CHECKLIST FOR YOUR AUTOBIOGRAPHY:

Complete NAME, address, phone, email; BIRTH DATE and place; UNIVERSITY(s) attended, major(s), degree(s), year(s); MILITARY service; FIRMS/AGENCIES you worked for; up to 3 significant PROJECTS you worked on; possibly relate a serious or humorous INCIDENT; a MENTOR you may wish to acknowledge; professional SOCIETIES, HONORS, AWARDS; HOBBIES; up to 5 PUBLICTIONS; PHOTOS of yourself and of projects (scanned images preferred).

So, if you wish to be included in this new internet publication, prepare your autobiography and email it with photos to: allen@hatheway.net and in the Subject box, type: So. Cal. Geologist. Or mail it to Allen Hatheway, 10256 Stoltz Dr., Rolla, MO 65401. Please, no more than 3 pages of text, single-spaced, Times New Roman, 12 pt.

Please pass this notice on to those you may know who no longer get this Newsletter.

In the spirit of camaraderie, we thank you,

Richard Proctor Allen Hatheway David Rogers Larry Cann Bob Lynn

#### **EMPLOYMENT OPPORTUNITIES & ADVERTISING**



LGC Valley, 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

Please look to our website for the latest opportunities. All inquiries will be held in the utmost confidence. We look forward to hearing from you.

#### **Immediate Opening for Groundwater Geologist**

Entry level to a few years of experience; Minimum need is BA/BS in Geology; Field & office work on water wells and groundwater resources; local office in Studio City, CA; Computer skills required, including Microsoft office (Excel, Word), MapInfo and GIS experience desired.

#### Please contact:

Richard Slade
Richard C. Slade & Associates LLC
Consulting Groundwater Geologists
(818) 506-0418
or email resume to:
b.georgeson@rcslade.com

# PALEONTOLOGICAL FIELD MANAGER SAN DIEGO NATURAL HISTORY MUSEUM

The San Diego Natural History Museum is run and operated by the San Diego Society of Natural History, a private non-profit scientific organization incorporated in 1874. The Museum's mission is to interpret the natural world through research, education and exhibits; to promote understanding of the evolution and diversity of Southern California and the peninsula of Baja California; and to inspire in all a respect for nature and the environment. Within the Museum, the Department of PaleoServices (DPS) specializes in paleontological resource management. Our focus is on the recognition, recovery, and preservation of the significant and unique paleontological resources that occur in this region. The activities of DPS are helping to preserve significant fossil assemblages and are directly contributing to the growth of the important paleontological research collections at the Museum. We are currently looking to fill the following position

Coordinate paleontological field activities (i.e., supervision of field monitors in prospecting for and collection of fossils and the recording of stratigraphic, taphonomic, geographic, and topographic data) and production of final project reports that summarize the methods and preliminary results of paleontological salvage activities. Other duties include generation of initial discovery letter reports for City, County, and/or State agency managers and generation of paleontological resource assessment technical reports. Opportunities also include paleontological field work in the Southern California region and working with the extensive fossil collections of the San Diego Natural History Museum.

Qualified candidates must have at least a B.S. Degree in Geology or Paleobiology; 2 to 3 years of relevant experience (especially sedimentary geology and paleontology); excellent supervisory/managerial, verbal, written, and interpersonal skills; and a strong work ethic, intense drive, and initiative for quality and customer service. This position is a regular, full-time salaried position with a generous benefits package (e.g., full medical and 401K plan). Compensation will be based on individual qualifications and experience (annual salary range \$40,000 to \$60,000). Please send resumes to Yvonne Kugies (ykugies@sdnhm.org).

**JOIN NINYO & MOORE** 

Los Angeles

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Rancho Cucamonga

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and **Environmental** Consultants

Geotechnical

# **Company Profile**

PPORTUNITI

Since 1986, clients have turned to Ninyo & Moore for complex Denver geotechnical and environmental challenges. As a leading geotechnical El Paso and environmental sciences engineering and consulting firm, Ninyo & Moore provides specialized services including evaluations for airports, bridges, commercial developments, dams, educational facilities, harbor and offshore structures, highways and roadways, hospitals, industrial developments, landfills, light rail transit lines, pipelines, power stations, railroads, residential developments, reservoirs and tanks, transmission lines, tunnels, water and wastewater treatment plants to clients in both the public and private sectors. With offices in Colorado, California, Nevada, Arizona, and Texas, the firm is fully committed to being responsive.

- ✓ DENVER: Project Engineer/Geologist, Senior Environmental Professional, Senior Geotechnical Engineer, Staff Engineer, Staff Environmental Scientist, and Staff Geologist.
- IRVINE: Asbestos & Lead Professional, Environmental Engineer/Scientist-Air Quality Specialist, Environmental Project Manager, Project Engineer/Geologist, Senior Staff Engineer/Geologist, Senior Environmental Engineer, Senior Staff Environmental Scientist, Staff Engineer/Geologist, and Staff Environmental Scientist.
- LAS VEGAS: Asbestos & Lead Professional, Construction Field Technicians & Inspectors, Geotechnical Engineer, Project Engineer/Geologist, Senior Project Engineer, and Staff Engineer/Geologist.
- OAKLAND: Entry-Staff Level-Project Engineer/Geologist/Environmental Specialist, Field Special Inspectors, Environmental Project Manager, Materials Project Manager/Supervisor, Project Environmental Geologist, Scientist or Engineer, Senior Geotechnical Engineer, Senior Project Geotechnical Engineer, and Staff Geotechnical Engineer.
- PHOENIX: Construction Field Technician, Geotechnical Engineer/Engineering Geologist, Project Environmental Scientist, Project Manager-Construction Materials Testing, Senior Environmental Professionals, and Senior Staff Environmental Scientist.
- SAN DIEGO: Construction Field and Laboratory Technicians, Laboratory Manager-Construction Materials Testing, Project Engineer/Geologist, Senior Geotechnical Engineer, Staff Engineer, and Information Systems Specialist.

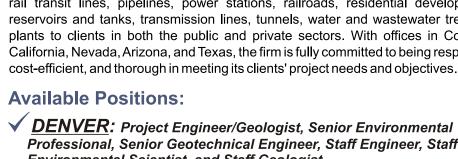


Successful candidates should have a BS or MS degree for staff-level positions and five years or more of experience for project to senior-level positions. The candidates should be detailed oriented and have excellent verbal and written communication skills. Professional Engineer (PE) and/or Professional Geologist (PG) registrations are preferred for project or senior positions.

Ninyo & Moore offers excellent benefits and great opportunities for professional growth. Please visit our website for complete and detailed job descriptions and to submit your resume in confidence at www.ninyoandmoore.com/careers.html or mail to our corporate office at 5710 Ruffin Road, San Diego, CA 92123, Attention: Human Resources. EOE

www.ninyoandmoore.com

Ninyo & Moore is an equal opportunity employer.





Stephen Varnell Fugro West, Inc. 4820 McGrath St., Suite 100 Ventura, CA 93003 805-650-7000 svarnell@fugro.com