



SAN FRANCISCO SECTION NEWSLETTER



Meeting Details:

- **Tuesday, December 12th**
- Spenger's, Berkeley
- 6:00pm – Cocktail Hour
- 7:00pm – Dinner
- 8:00pm – Speaker
- \$35 pre-registered member,
\$40 pre-registered non-member,
\$45 walk-ins*, \$15 students

* Please make a reservation.

**Reservations Due By NOON,
FRIDAY, December 8th!**

SECTION OFFICERS - 2005-2006

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secretary@aegsf.org

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CCGO Liaison

Seena Hoose
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DECEMBER 2006 PROGRAM

AEG Meeting - TUESDAY – December 12, 2006 - Spenger's - 6 pm

Christopher D. Engler, P.E.

Vapor Intrusion- An Emerging Environmental Focus

The rules of the game are changing. In the past, environmental cleanup efforts for chemical releases were generally limited to the environmental media (i.e., soil or ground water) that was contaminated. Now, there is significant attention being placed on the possibility that contaminant vapors from soil and ground water will migrate and “intrude” into nearby homes and businesses, potentially creating a health risk. Increased regulatory attention to this vapor intrusion (VI) issue is having a dramatic impact on entities performing environmental cleanups. The California Environmental Protection Agencies Department of Toxic Substances Control (DTSC) released its interim final VI guidance document in December 2004 (revised 2/7/05) and is actively applying these principles to existing site investigations involving volatile organic compound (VOC) contamination. In many instances, the cleanup levels proposed by a regulatory agency for a site may be extremely low, resulting in increased cleanup costs. Parties responsible for environmental contamination may also be exposed to toxic tort lawsuits by individuals claiming they were harmed by the contaminant vapors.

You will hear from the O'Brien & Gere Project Engineering Manager who just completed work at the largest VI project in the nation, which involved the investigation and mitigation of over 500 residential and commercial properties. The discussion will include the new DTSC Draft Guidance Document, lessons learned on earlier projects, and scientific advancements in the field.

Speaker Biography:

Christopher D. Engler graduated from Lehigh University in 1986 with a Bachelors of Science in Mechanical Engineering. Mr. Engler is presently a Senior Managing Engineer with O'Brien & Gere, and has more than 20 years of professional engineering experience, currently specializing in facilities engineering, providing design packages for industrial and environmental projects.

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- [Employment Opportunities](#)

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The AEG San Francisco Section Newsletter is a monthly publication of the San Francisco Section of the AEG.

For more information, visit www.aegsf.org.

Submittals:

Deadline is the 20th of each month for the following issue. Contact Janine Weber by email (secretary@aegsf.org) for submittal. All submittals are subject to editing for space considerations. Employment notices are free if brief.

Address changes:

Please submit to Section Vice-chair, Janine Weber (vice-chair@aegsf.org).

Advertisements:

The newsletter's circulation is about 360 within northern California.

Use these low rates to expand your market:

business card:	\$15 / month
	\$110/year
1/4 page:	\$30 / month
1/2 page:	\$60 / month
full page:	\$120/month

CHAIR'S MESSAGE

Hello All:

Happy Holidays. I hope you all will have some time off from your normal practice to enjoy time with family and friends, or perhaps take a field trip.

A lot has happened in the last month, in particular the Annual Meeting in Boston and our Joint meeting with the ASCE Geotechnical Group. The Annual Meeting was very well attended (preliminary total of 380) and the weather was excellent. A lot of new business was tackled during the board of directors meeting including approval of new revisions to the Strategic Plan, new Committees and Procedures, audits by of our books by JDS and continued funding for GeoScience. Terry West, our new AEG president outlined his 7 "points of light", which he will share during his visit to our section next year. There was good representation by the Sections (only 3 no-shows) including a group of 8 students from Fairbanks Alaska!!

We had a huge turnout at Spenger's on November 9th to hear a presentation by both an engineering geologist and an engineer. See the meeting report on page 4 in this newsletter.

On the local front our current section membership is 252. I would like to set a goal of 300 by the time we meet in LA. Please get out the message to your colleagues and most importantly young members who are looking for a way to network and enrich their geologic experience.

Regards,

Bill

This month's newsletter was compiled by Marina Mascorro, Janine Weber (Section Secretary) and Sachiko Tanikawa (Section Treasurer). If you would like to pitch in by volunteering as newsletter editor, or even as a newsletter assistant, please let us know. Hopefully, we can keep these newsletters alive – member participation will be a key for this section's success. Thanks!

AEG San Francisco Section

December Section Meeting Details – December 12th

Speaker: Christopher D. Engler, P.E.

The meeting will be held at Spenger's Fresh Fish Grotto & Restaurant, 1919 4th Street, Berkeley, CA.

Venue phone number (510) 845- 7771 (not a reservation line)

Driving Directions: From the northbound 80 Freeway, exit at University Avenue. Continue north on the off-ramp and turn right (east) onto Hearst Avenue. Cross the railroad tracks and turn right (south) onto Fourth Street. Spenger's is on the east side of Fourth Street.

Parking: You may park in the lot in front of the restaurant (sometimes it's free).

FAX or e-mail your reservation to Sachiko Tanikawa (510.268.5099 treasurer@aegsf.org).

Reservation Form Located on the Last Page of the Newsletter.

Please make reservations by noon FRIDAY, DECEMBER 8; availability cannot be guaranteed after Friday.

****Walk-ins are not guaranteed!****

No-shows and late cancellations will be charged.

SPONSORSHIP

Sponsor a Section Meeting or become a Section Corporate Sponsor! Donate to the Section and receive free advertisement each month, recognition at Section Meetings, and more! Contact Patrick Drumm at chair@aegsf.org for more information on sponsorship.

SOIL TECTONICS

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NOVEMBER SECTION MEETING NOTES

November 2006 Joint ASCE/AEG Meeting Talk:

Todd Crampton of Geomatrix and Mike McRae of Jacobs Engineering presented a talk about the engineering geology and preliminary design of the proposed fourth bore of the Caldecott Tunnel. With the recent election results, we will see this project actually get built. The original two bores of the tunnel were constructed in 1937. The third bore was completed in 1964. As anyone who has waited in the queue to pack down into two lanes for a tunnel crossing knows, this is a high-profile project whose time has come.

The new tunnel bore will be constructed partly by cut and cover and mostly by tunnel boring machine (TBM) on the north side of the existing bores. The tunnel is several hundred feet east of the Hayward Fault. In preparation for understanding the potential issues associated with the excavation and tunneling, the geotechnical team reviewed the experiences of the previous construction episodes. Some of the historical difficulties included general instability of bedrock at the West Portal, running ground in the central portion, potential threat of flammable gas in the rocks, irregular distribution of rotten rock. During construction of bores 1 and 2, there were two cave-ins and three fatalities. No good as-built map was ever made and there was never an attempt to quantify rock strength data.

In an effort to better characterize the subsurface conditions at the proposed 4th bore site, the geotechnical team engaged in an ambitious exploration program that included geological mapping, 18 test pits, 200 ft of trench, 4088 ft of borings (some sub-horizontal), in situ borehole tests, downhole geophysical tests and field point load tests. These data were used to generate a new map that wound up looking a lot like Ben Page's map from years ago. The major rock formations at the tunnel from west to east are: the Sobrante, the Claremont, and the Orinda. The shale units in the Sobrante are some of the worst rocks at the site, being

thoroughly broken and crushed. The sandstone units in the Claremont have some good rock with fewer fractures. However, the Claremont also has diabase sills and sandstone dikes that show up in unpredictable places, as well as weak, fractured chert beds. The Orinda Formation had better recovery and fewer fractures than most of the other units. Again, the sandstone units had the best RQD, shale and mixed thin-bedded units had the worst.

The units are all steeply dipping. At the West Portal, the Sobrante dips northeast; at the East Portal the Orinda dips southwest. Several ancient faults and shear zones cut the units and all the major formation boundaries coincide with faults. Fortunately, all the major structures strike perpendicular to the tunnel orientation. The geotechnical team devised a method by which they could compare Rock Mass Type and Properties based on degree of fracturing and strength. They defined "ground classes" 1-4, 1 being the best and 4 being the worst. These classifications will be used to design the tunnel construction methods.

The final construction methods are being developed now. If the final design is a 3-lane bore, it will be constructed in two side-by-side passes of a TBM; if it is a 2-lane bore, it will be constructed in two passes of a TBM the second below the first. The main support element will be shotcrete and lattice girder, with rock dowels. The density of rock dowels will depend on the quality of the rock. In areas of rotten rock, pre-support pins will be placed ahead of the TBM to help support the face of the excavation.

Because this 4th bore will be adjacent the 3rd bore, the geotechnical team did numerical modeling to look at stresses and loads on the existing bore. Even with all the rotten rock, the modeling indicated there should be no impact on the existing bore.

What was most impressive about the work the team had done was the oddball, non-standard sideways drilling. Todd's photos of the drill sites were awe-inspiring: drill rigs were jacked up at strange angles and perched on steep slopes. For some sites, the rigs were lowered with a crane to an otherwise inaccessible location. I will never again complain about having a difficult drill site since seeing what Todd and Mike accomplished.

Janine Weber
Vice-Chair, AEG San Francisco Section

MEMBER UPDATES AND OTHER NEWS

CCGO ANNOUNCEMENTS

There are no CCGO Announcements this month.

NEWSLETTER ENTRIES

We welcome your suggestions for content of future newsletters. These include announcements (of a geoscience nature), job postings, legislation or current events (again of a geoscience nature), or an occasional good (but clean) joke or comic. Please send to Marina Mascorro [marina@uppggeo.com].

	
ENGINEERS · GEOLOGISTS · ENVIRONMENTAL CONSULTANTS	
<ul style="list-style-type: none"> ● Geologic & Soils Investigations ● Geotechnical Engineering ● Fault Hazard Investigations ● Environmental Services 	
David N. Lindberg C.E.G.	
21 West 4th Street Eureka, CA 95501	phone:707-443-5054 phone:800-515-5054 fax:707-443-0553

FUN WITH GEOSCIENCE TRIVIA

(from GSA Connection)

1. What term is given to fault overturned folds?
2. What mineral is often referred to as Peacock Ore?
3. In what state is Dinosaur Ridge?

Answers on Page 7.

OTHER MEETING ANNOUNCEMENTS

SECTION HISTORY SUBMITTAL

In anticipation of the upcoming 50th anniversary meeting to be held in Los Angeles in 2007, AEG is requesting historical information on each section. The San Francisco section arguably has more history than any other and there is a wealth of information out there to collect. If you can gather old photos, newsletters, field trip notes and the like we can put this together into a good summary. Tentative deadline to submit to AEG is August 1st. Contact Bill Godwin for more information.

SPEAKER OF THE YEAR AWARD

It is almost the time of the year for AEG San Francisco members to cast their ballots for the Speaker of the Year Award. Please remember that attendance at each meeting is not required to vote for your favorite presentation of the past year. I will have the ballots ready soon, and they should be available through the website and at the December meeting. There were some excellent presentations this past year, so please cast your vote for your favorite. And don't forget to join us at the January meeting for our annual awards program prior to the presentation. Thank you.

Keil Albert

Awards Chair, AEG San Francisco Section

NORTHERN CALIFORNIA GEOLOGICAL SOCIETY

The NCGS typically meets the last Wednesday of each month in Orinda at the Masonic Center, 9 Altarinda Road. There is a social period at 6:30 pm, and at 7:00 pm a talk (no dinner). To reserve, leave your name and phone number at 925-424-3669 or danday94@pacbell.net. Cost is \$5 per regular member; \$1 per student member.

SHORT COURSES

EARTHQUAKE GROUND-MOTION MAPPING WORKSHOP

The Third Applied Technology Council (ATC) and the US Geological Survey (USGS) will be conducting a workshop on Earthquake Ground-Motion Mapping on December 7-8th. Complete the attached registration form on page 8 and fax to 650/593-2320.

For Short Course information and submittals, please contact:

Ernest Solomon

Short Course Chair, AEG San Francisco Section

FIELD TRIPS

PGS Guidebooks

The Peninsula Geological Society has posted guidebooks from their recent field trips, including Carrizo Plain (2005), Panoche and Tumey Hills (2004), White-Inyo Range (2002), Mount Shasta and the Klamath Mountains (2001), Big Sur (2000), and the Northern Sierra Nevada (1982). The guidebooks can be downloaded from www.diggles.com/pgs/.

There are no announcements for field trips this month.

For Field Trip information and submittals, please contact:

Phil Johnson

Field Trip Chair, AEG San Francisco Section

**AEG San Francisco Section Thanks our
Academic Sponsor!**

San Jose State University

San Jose, California

EMPLOYMENT OPPORTUNITIES

Please note: AEG provides the following employment notices as a courtesy but does not necessarily endorse these services or companies nor does it take responsibility for actions pursuant to these notices.

You can also see other employment opportunities on our website at aegsf.org.

William Lettis & Associates

A small and dynamic earth science consulting firm has immediate openings for senior engineering geologists and staff geologists. Please visit our website <http://www.lettis.com/> to find out more about who we are and what we do.

SENIOR ENGINEERING GEOLOGIST (Multiple Locations)

Master's or Ph.D. degree in geology or earth sciences required. 8+ years experience in engineering geologic and/or seismic hazard site assessments related to critical facilities and infrastructure. C.E.G. and P.G. license required, or out-of-state equivalent.

STAFF GEOLOGIST (Multiple Locations)

Master's degree in geology or earth science is preferred, Bachelor's degree considered. 0-3+ years work experience performing drilling, sampling, and analysis of test data is preferred.

All interested candidates, please reply by e-mail or fax, include a cover letter, resume and salary requirements. Email to: HR@lettis.com or fax to: 925-256-6076.

SENIOR STAFF LEVEL REMEDIATION ENGINEER (Civil / Environmental)

We are seeking a Civil Engineer to work out of the San Jose California office as a Senior Staff Level Environmental Remediation Engineer (project manager).

4+ years experience in CERCLA and RCRA investigations, remediation, and closures within SF Bay Area. Abilities to perform and manage technical project work, write reports, give presentations, attend regulatory meetings, and supervise technical staff on turnkey environmental projects from (site investigations through site closure).

Requires a BS in Civil, Environmental Engineering or Geology. MS preferred. Registration as a California EIT or PE desired.

For consideration please forward resume or contact directly:

Sequence Systems
Attn: Michael DeSafey
2008 Opportunity Drive #150
Roseville, Ca 95678
Phone: 916-782-6900 x202
Fax: 916-782-6307
Email: mdesafey@sequencestaffing.com

www.sequencestaffing.com

**SENIOR PROJECT/PRINCIPAL
GEOLOGIST/ENGINEER OPPORTUNITY**

WEISS ASSOCIATES, a premier San Francisco Bay Area environmental, engineering and hydrogeological consulting firm, has an exceptional opportunity for a Senior Project or Principal Geologist or Engineer to oversee and manage an established office of professionals in the southern San Francisco Bay Area. This position manages several large, complex ground water monitoring and remediation projects. In addition, this position has company ownership potential.

Requirements: 8 to 15 years of experience in environmental site cleanup/closure and/or regulatory compliance, including 3 to 5 years of CERCLA/RCRA experience; BS in geology, hydrogeology or engineering and registration as a California PG/CHg or PE; a Master's degree or higher is strongly preferred. 3 to 5 years experience successfully managing projects for large private and/or government clients is required.

To apply, submit resume to jobs@weiss.com, and refer to job SrPr081806MV.

EXPERIENCED ENGINEERING GEOLOGIST

Experienced Engineering Geologist sought - Pacific Geotechnical Engineering's team in Morgan Hill needs a CEG with a range of skills from field work to project management. Our small size allows project managers to stay familiar with field aspects of projects. Strong skills in field work, air photo interpretation, and writing/communication are a must; come tell us your other talents, and business areas you'd like to move into. We focus on geologically challenging sites that require a good understanding of site geology for our geotechnical engineering to be successful. Compensation commensurate with qualifications.

Contact Peter Anderson or Reid Fisher: (408) 778-2818; info@pacific-geotechnical.com; 16055-D Caputo Drive, Morgan Hill, CA 95037.

EMPLOYMENT OPPORTUNITIES (CONTINUED)

SENIOR ENGINEERING GEOLOGIST

Immediate opening for a Senior level Geologist to join a growing, top-tier geotechnical/geological consulting firm in the San Jose area office. Alternate positions are also open for senior level candidates in several other offices throughout California.

Looking for minimum of 8-10 years of experience (especially with slope stabilization and landslide/earthquake/other seismic investigations). Current CEG license is required. The ability & interest in supervising and mentoring of staff geologists is required. Most of the projects involve geological/geotechnical work for residential, commercial, and other site developments.

Please send resumes and/or inquiries to Jon Chang, Executive Search Consultant, at jon.chang@nextechps.com. *

PROJECT GEOTECHNICAL ENGINEERS

Immediate openings for experienced Project Geotechnical Engineers to join a growing, top-tier geotechnical/geological consulting firm in the following locations: Hollister, San Jose, and Indio. Alternate positions are also open for senior level candidates in several other offices throughout California.

Looking for minimum of 5-10 years of experience (especially with slope stabilization and landslide/earthquake/other seismic investigations). Current California PE/CE/GE license is required. Most of the projects involve geological/geotechnical work for residential, commercial, and other site developments.

Please send resumes and/or inquiries to Jon Chang, Executive Search Consultant, at jon.chang@nextechps.com. *

Phone inquiries: 800-850-7020 ext. 218

*NexTech Professional Services has been hired for this Executive Search assignment by the Senior Management of the client company. All communication and resumes will be treated as highly confidential & privileged. No information will be released to any company, without specific approval from the candidates. There are never any fees charged to candidates.

SENIOR GEOTECHNICAL ENGINEER SENIOR GEOLOGIST

This organization is currently seeking a Senior Geotechnical Engineer/Project Manager as well as a Senior Geologist/Project Manager to join their legacy of success in Southern California. These positions are open due to growth.

- Five-15 years experience in the California sector
- An understanding of structural geology and how it relates to commercial development
- California certification (CEG)
- Four year degree in geology or civil engineering is preferred.

Interested applicants, please submit your resume via email to Betsy Carroll at betsy@jbnassociates.com.

If you would like to list your employment opportunity in this newsletter, please submit a brief description to Marina Mascorro (secretary@aegsf.org). For posting on our website, contact Craig Reid (webmaster@aegsf.org).

ANSWERS TO GEOSCIENCE TRIVIA

1. Nappe
2. Bornite
3. Colorado

THIRD ATC-35/USGS NATIONAL EARTHQUAKE GROUND-MOTION MAPPING WORKSHOP REGISTRATION FORM

NAME(S) _____
 ORGANIZATION _____
 ADDRESS _____
 CITY/STATE/ZIP CODE _____
 BUSINESS PHONE AND FAX NUMBERS _____
 E-MAIL ADDRESS _____
 Seminar Registration Fee: \$190 per registrant (\$170 per ATC subscriber) \$ _____
 Please enroll me as an ATC subscriber (\$35 per year, individual domestic rate) \$ _____
 Late Registration Fee: add \$25 per registrant (if postmarked or faxed after December 1, 2006) \$ _____
 TOTAL ENCLOSED \$ _____

Payment may be made by check or credit card (MasterCard or VISA). If paying by credit card, please provide the following information: MasterCard VISA # _____ Exp: ____/____/____
 Cardholder's signature _____

Checks should be made payable to ATC. Please mail or fax your completed form with the appropriate payment to:
Applied Technology Council, 201 Redwood Shores Pkwy, Suite 240, Redwood City, CA 94065 FAX: 650/593-2320

**THIRD ATC-35/USGS
 NATIONAL
 EARTHQUAKE
 GROUND-MOTION
 MAPPING WORKSHOP**

San Mateo, California
 December 7-8, 2006



Sponsored by the
Applied Technology Council
 and the
U.S. Geological Survey

*Conducted under the auspices of the
 ATC-35 Program to "Transfer U.S.
 Geological Survey Earth Science Research
 Results into Engineering Design Practice."*

*Program and
 Registration Information*

**Monthly Section Meeting – Tuesday, December 12th
Spenger's Fresh Fish Grotto and Restaurant– Berkeley**
CHECK OUT THE AEG SF SECTION WEBSITE AT WWW.AEGSF.ORG!

RESERVATION FORM

AEG San Francisco Section Meeting • Tuesday December 12th, 2006 • 6:00 pm • Spenger's Fresh Fish Grotto and Restaurant, Berkeley

Reservation Deadline: 12:00 PM, FRIDAY, December 8th

SEND RESERVATION FORM TO **SACHIKO TANIKAWA**
FAX: **510-268-5099** or E-MAIL: **TREASURER@AEGSF.ORG**

*Please include "AEG SF Reservation" in subject line • **Include entrée choice!***

Do not send payment – check or cash at the door – make checks payable to AEG SF SECTION

Dinner and Meeting Cost: \$35 – members, \$40 – non-members, \$15 – students

No shows and late cancellations will be charged!

NAME	COMPANY		
TELEPHONE NO.	NO. OF PEOPLE		
PLEASE CHOOSE ENTRÉE(S):	Chicken <input type="checkbox"/>	Salmon <input type="checkbox"/>	Vegetarian <input type="checkbox"/>

PERMANENT RESERVATION FORM

AEG San Francisco Section monthly dinner meetings are typically the 2nd Tuesday of each month.

I will attend and make payment for each meeting. If I am unable to attend, I agree to fax or mail a cancellation notice to Sachiko Tanikawa by NOON the Friday before the meeting or I will be charged for the meeting.

NAME	COMPANY	
TELEPHONE NO.	NO. OF PEOPLE	
BILLING ADDRESS		
SIGNATURE	DATE	ENTRÉE(S)
