

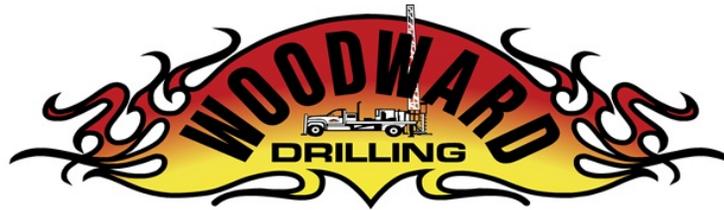
Association of Environmental & Engineering Geologists San Francisco Section

ANNOUNCING THE AEG SAN FRANCISCO SECTION
JUNE 2012 MEETING

BUILDING A DAM WITH NATURALLY OCCURRING ASBESTOS CALAVERAS DAM REPLACEMENT PROJECT: CHALLENGES AND SOLUTIONS

Bradley Erskine, PhD, PG, CEG, CHG, CAC: Kleinfelder
Emma Jack, PhD: Shaw Environmental

This Month's Meeting is Sponsored By:



MEETING DETAILS

Restaurant

Sinbad's
Pier 2 Embarcadero Street
San Francisco, CA

[Map](#)

Date and Time

Tuesday, June 12th, 2012
6:00 pm—Social Hour and Sign-in
7:00 pm—Dinner
8:00 pm—Presentation

Cost: \$45 Members & Members' spouses; \$50 Non-Members, \$20 for Students

Menu

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|---------------------|--------------------|
| 🍷 Salmon Florentine | 🍷 Chicken Picatta |
| 🍷 Snapper | 🍷 Shrimp Louis |
| 🍷 London Broil | 🍷 Vegetarian Pasta |

Reservations*: To RSVP, please fill out the online form at <http://goo.gl/dJY83> by **12 PM, Friday, June 8, 2012**

Driving Directions: From the Bay Bridge, take the Fremont Street Exit and the Folsom Street Ramp. Go left (east) on Folsom Street, then left (north) onto the Embarcadero (Herb Caen Way). The driveway for Sinbad's is on the right, south of the historic Ferry Building. Please watch out for the pedestrians and cyclists when turning into the driveway. Thank you.

BART Directions: Exit the Embarcadero Station; walk up Market Street toward the Ferry Building (less than ½ a mile toward the Bay and to the east). Cross Embarcadero and Sinbad's is located next to the Alameda ferry pier on the south side the historic Ferry Building.

Parking: \$5 valet parking is available or there are meters located on nearby side streets.

*Please RSVP in advance. Walk-ins are welcome, but not guaranteed. No shows will be charged.

See next page for abstract and speaker biographies.

Abstract

Work has just started on the Calaveras Dam Replacement Project (CDRP), a new earthen dam east of Fremont designed to withstand a M 7.1 on the Calaveras fault located on site. The zoned dam will be constructed primarily of on-site materials, many of which contain Naturally Occurring Asbestos (NOA). The upstream shell will be composed of Franciscan complex blueschist which contains sodic amphiboles regulated as asbestos (crocidolite). This material will be blasted and processed from an on-site quarry. The impermeable core of the dam will be constructed of clay-rich alluvium that contains chrysotile asbestos. This material will be excavated from a quarry on the south side of the reservoir and transported several miles to the dam. Prior to construction, approximately 3 million tons of Franciscan complex material, containing chrysotile and fibrous actinolite, riebeckite, winchite, tremolite, and cummingtonite, will be excavated and disposed of within permitted on-site engineered landfills.

This project represents the largest construction project involving NOA in the country. As such, applying regulations that were designed for building materials and routine construction sites, and controlling airborne emissions on such a massive scale, is a major challenge. An additional challenge is the construction of a major dam without impacting threatened and endangered species and other environmental resources at the site.

After a review of the dam history and redesign, Bradley Erskine, geologist from Kleinfelder, will show how the NOA team is managing the field determination of NOA, on-site control measures, personal air monitoring, and perimeter air monitoring to assure that construction is conducted in a safe manner and no offsite exposures to the public occur. Emma Jack, biologist from Shaw Environmental, will review activities regarding mitigation to impacts of several threatened and endangered species on the site, including bald eagles, tiger salamanders, and Alameda Whipsnakes.

Speaker Biographies

Dr. Bradley Erskine is a Principal Geologist with Kleinfelder, having 27 years of experience in managing and supporting a broad spectrum of environmental and environmental engineering projects. He has expertise in soil and groundwater assessment and characterization, hazardous materials investigations, design and implementation of site restoration activities, EIR/EIS's, engineering geology, naturally occurring asbestos, and industrial hygiene/health and safety. He currently is providing geological expertise at the Calaveras Dam Replacement Project, primarily in the capacity of Lead NOA Inspector and special geotechnical inspector of the dam and disposal site foundations.

Dr. Jack is a transplant from the UK but with North American roots. After an undergraduate degree in Environmental Biology at London's South Bank University, Emma moved to Amsterdam for her graduate studies in Ecotoxicology and Ecology of plants. Her PhD focused upon serpentine endemic plant species and their ability to tolerate heavy metals. She has worked in consulting for the past 7 years in California and currently is the Environmental Coordinator for the Calaveras Dam Replacement Project. Emma is an active participant in the Bay area's environmental community and has served on the board of directors for several non-profit organizations.

Thank you for the RSVP! See you on Tuesday, June 12th, 2012