MEETING ANNOUNCEMENT

ASSOCIATION OF ENVIRONMENTAL AND ENGINEERING GEOLOGISTS
New York – Philadelphia Section

The Challenges of Reducing Groundwater Impacts from Radioactive Wastes Sites
(You’re Going to Drink That Water?!)

Thursday, April 24, 2014 at the La Quinta Inn in Somerset, New Jersey

Presented by
Gregory L. Hempen, PhD, PE, RG
AEG 2013-2014 Richard H. Jahn Distinguished Lecturer
URS Corporation
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Time: Social Hour 6:00 – 6:45, Dinner 6:45 – 7:45, Presentation at 8:00 pm

Place: La Quinta Inn, Somerset, 60 Cottontail Lane, Somerset, NJ 08873 - (732) 560-9880, http://lq.com

RSVP: End of Business, Monday, April 21, 2014 For reservations contact Curt Schmidt, Treasurer at (862) 207-5900 x 2234, or via email schmidtcas@aol.com; or Rose DeLorenzo, Secretary, at (201) 615-7476 or at rdelorenzo@matrixnewworld.com. No shows will be charged.

Cost: $30 for members; $35 non-members; $5 for students with RSVP. Non-members always welcome! Pay by check or cash only. Make check payable to AEG.

CECs: One professional development hour (pdh) for continuing education credit (CEC) will be awarded for attending the presentation. Please request certificate when you RSVP

LSRP credits pending
ABSTRACT

The hydrogeologic characteristics of, and remedial actions at, the St. Louis, MO Formerly Utilized Sites Remedial Action Program (FUSRAP) sites are discussed. These rad waste investigations and remediations in the eastern US were complex, due to a long waste use history, varied geomorphic locations, major surface water and groundwater impacts, and the prior influence of man.

FUSRAP is a class of remediation projects for typically low-level radioactive wastes. FUSRAP sites remediated before 2000 were generally located in arid, western US locales. These arid western US sites allowed more simplified analyses of the waste source and transport before mitigation, because of their environs and typically little reworking of the waste. The waste sources were often surficial radiologic waste that was dominantly transported by wind with some groundwater and surface-water migration. Most characterization was accomplished before the acceptance of the Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM), which is a statistical assessment of the contaminant density.

Eastern US sites have—more developed depositional and erosional surfaces, higher precipitation (resulting in hydrogeologic complexities), longer use histories and greater anthropogenic site impacts, varied waste placement over differing time intervals, and varied physical placement and environmental transport of the waste.

The site geologic characterization, anthropogenic site modifications, and site contaminant history provide sufficient information to develop the understanding of the possible radiological contaminants’ transport. Radiological contaminants’ transport causes additional uncertainties that require a team of professionals to investigate the contaminant issues. Health physics, chemistry, specialized sampling and geostatistics each have roles in the solution of the transport of radiological contaminants. Radiological contaminants have a broad range of solubility, which may change (for an individual element) with varying water chemistry or in the company of other chemicals. Contaminants may be moved in the subsurface in preferential pathways formed naturally or caused by man.

The advantage of a conservative nonparametric (MARSSIM) approach may be challenged by the possible waste migration along channels or conduits. A linear route of waste migration along a now buried past stream channel or granular backfill of a utility corridor reduces the effectiveness of the surficial sampling. While a conduit truly has three dimensions, the lineation’s areal extent over a surface may be quite small. Adding to the difficulty are low-level wastes. Because of the foregoing issues, St. Louis District relied on historic, air photo, and geologic literature reviews, hydrogeologic assessments, multiple hypotheses for waste transport, and preferential pathway surveys of the final exposed surfaces.

Communication of the risk hazard to the public from residual radioactive constituents may be as difficult as the-actual investigations and remedial actions. Significant effort may be necessary to convince the public that the known and unknown risks are acceptable, and that the resolved remediation is detailed and proper.

SPEAKER BIOGRAPHY

Gregory L. Hempen, PhD, PE, RG, has been named the 2013-2014 Richard H. Jahns Distinguished Lecturer in Applied Geology, awarded jointly by the Geological Society of America (GSA) and the Association of Environmental and Engineering Geologists (AEG) since 1988 to promote student awareness of Applied Geology.

Greg is a Geophysicist / Geological Engineer, consulting for URS Corporation’s St. Louis Office. He specializes in all types of vibration mitigation from earthquakes, blasting and pile driving, and in recommending appropriate geophysical studies for complex sites. His 40+ year career includes a long tenure at, and retirement from, the St. Louis District, Corps of Engineers.

Greg has conducted business for all levels of government, federal, state and local. He had worked closely with consulting firms managing studies on federal projects. He now works in the private sector, but continues
studies for federal and state offices. His duties have included: assessments of dam sites, regional earthquake analyses for federal dam sites, probabilistic and deterministic appraisal of potential earthquake impacts, geophysical studies for application in archeology, environmental transport and rock weakness studies, and his specialty—— mitigation of blasting damage while achieving the blasting goal.

Greg received a B.S. in Geophysical Engineering from St. Louis University, a M.S. in Geo-Engineering from the University of Minnesota, Minneapolis-St. Paul, and a Ph.D. in Geological Engineering from the University of Missouri - Rolla (now Missouri University of Science & Technology). He is a Registered Professional Engineer in Missouri and Registered Professional Geologist in Arkansas and Missouri, and has taught engineering geology classes at all the top-ranking engineering colleges in the St. Louis area.

NOTES FROM THE CHAIR
Loren Lasky PG, NJDEP, Chair New York Philadelphia Section
lorenlasky@verizon.net (609) 558-2483

New York City ESA Tunnel: Remember back in February 2011 when Eric Jordan, Engineering Geologist with Parsons, gave a talk at our AEG dinner meeting about the East Side Access Tunnel he was working on, that would provide an underground link between the west side of Queens with the east side of Manhattan? Well, that tunnel-----and the geologists working on it are featured in a New York Times article on February 18, 2014.

TCE Plume: This year’s AEG NYP field trip, Sunday June 8, 2014, will be led by Pierre Lacombe of the USGS and will focus on the remediation of the TCE Plume at the Naval Air Warfare Center (NAWC) in West Trenton, NJ.

RE3: AEG-NYP’s long-time Section Treasurer Curt Schmidt (H2M), was one of the lucky winners of several prize drawings at the RE3 Remediation conference in Philly this past January, and won a pair of tickets to an upcoming Yankee-Red Sox game, provided by AWT Environmental Services!

EG&G Journal: AEG publishes a scholarly journal, Environmental and Engineering Geology, edited by the wonderful Abdul Shakoor, favorite professor and inspiration for many future geologists at Kent State University. Dr. Shakoor invites all to submit potential articles for this quarterly publication.

Dinosaur Hunting: Paleontologists at the NJ State Museum are leading excavations in Montana and Wyoming this summer. Credits are available for teachers and college students. For more information, call (609) 292-7660, or e-mail: Jason.Schein@sos.state.nj.us.

Visiting Professor: Another AEG favorite, Past President Greg Hempen (1989/1990) will be making the rounds of Philadelphia’s fine colleges and universities when he visits the NYP Section as the 2014 Distinguished Richard H. Jahns Lecturer in April. He will speak with students about careers in Applied Geology and his specialties: Blasting, Seismicity, Geophysics, Site Remediation and US Army Corps of Engineers FUSRAP sites.

We have Greg lined up for an ambitious schedule of talks at Temple, Bryn Mawr, Penn (Graduate and Undergraduate), Widener- and West Chester University. Greg will cap off his week at our AEG dinner meeting, where his topic will be the Radiologic Impact to GW at FUSRAP sites (this announcement).
Succession Planning Meeting:
Join us after work on Thursday April 3rd, at Rose’s office (Matrix) in Florham Park, for pizza and an open discussion of how we run our AEG Section. In other parts of the country, AEG officers rotate through all the posts with a one year or two year residency time. But we have no such formal plan here in NYP; we throw the whole slate of officers open every few years and hope for the best.

We need something a little less open-ended so people know what they are getting in for and so there is an exit strategy for those who do volunteer. We understand that some people may want to help out but don’t want to serve as an officer, or might be willing to serve as secretary, but may not want to become chairman. We are open to any and all suggestions, and will consider models of how other boards operate. Everyone is welcome; please RSVP to Rose to let her know you’re coming——so we order enough pizza.

Free Membership: Students and Young Professionals are eligible for Free Membership in AEG:
http://www.aegweb.org/docs/my-member-documents/student_new_graduate_member_application.pdf

LSRPs: We’re pleased to announce that the LSRP Board has approved several of our recent presentations for Technical Continuing Education Credits, including Horizontal Wells (Feb 2013), LiDAR (March 2013) and Arsenic Spill (December 2013). Contact us at aeg_section_chair@verizon.net to request a certificate.
OTHER MEETINGS & ANNOUNCEMENTS

Groundwater in Fractured Bedrock

The Geology of Rutgers
Saturday, May 10, 2014 - Join Rutgers geologists at Johnson Park in New Brunswick to learn about the geology of the Rutgers campuses. Explore the different processes that formed the Raritan River and the Newark Basin. Registration for all field trip begins on Rutgers Geology Museum website - http://geologymuseum.rutgers.edu/ on 4/1/2014.

SESOIL and AT123D Modeling for LSRPs
Thursday May 29th and Friday May 30th at Rutgers, --- focusing on the development of Site-Specific Impact to Groundwater (IGW) Soil Remediation Standards (SRS) using SESOIL and AT123D. Instructors: Michael Barden (Hydro Geo Chem), Robert Schneiker (Environmental Software Consultants), Paul Sanders (NJDEP) and Liliana Cecan (JM Sorge). Contact Rutgers for registration details (www.cpe.rutgers.edu)

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We love to hear from you........Please contact us with your suggestions.