

Virginia Tech
Center for Geotechnical Practice and Research
Annual Lecture Program

Thursday, March 4, 2010

Alumni Assembly Hall
Inn at Virginia Tech and Skelton Conference Center
Blacksburg, Virginia

8:00-8:45

Robert Bachus, Ph.D, P.E., *Geosyntec Consultants*

“Ash Cell Failure at the TVA Kingston Fossil Plant – The Causes and the Effects”

Failure of a 65-ft high, 60-acre ash disposal fill in December 2008 at a TVA power plant released nearly 6,000,000 cubic yards of coal ash into the Emory River. The cost to assess and remedy the problem will exceed a billion dollars, and the cost to the electric power industry will likely be even higher. The presentation will pose these questions: What was the cause of the failure? What role does the geotechnical community play in such events? The audience will have the opportunity to form its own opinions.

9:00-9:45

Jacob Davis P.E., *USACE, Jacksonville District*

“Herbert Hoover Dike: Overview and Rehabilitation”

Herbert Hoover Dike, 143 miles long, was constructed in the 1930s, ringing Florida’s Lake Okeechobee. Erosion has occurred in the embankment and foundation, resulting in increased seepage and piping of foundation materials. The dike is being rehabilitated by constructing a cutoff wall through the embankment into the foundation, to a maximum depth of 80 ft. The lecture will provide a description of three cutoff wall construction methods and contracting procedures.

10:00-10:45

Dr. Ray Martin Ph.D, P.E., *Consulting Engineer, presenting with*
and **Eric Rehwoldt,** *Schnabel Engineering*

“Pervari Turkey RCC Dam and Hydroelectric Project”

The Pervari hydroelectric project includes a 165-m high RCC dam and spillway. Ray Martin will describe the field investigation, in situ and laboratory testing, geologic mapping, and analyses and design recommendations. Eric Rehwoldt will describe the geological engineering studies, and Joe Monroe will discuss the design of the 165 m high RCC dam, a 30 m high RCC cofferdam, and a large weir and cut-and-cover tunnel to divert water from an adjacent river into the reservoir valley.

Keynote Speaker

11:00-12:20

Dr. Charles C. Ladd, Sc.D, P.E. *E. K. Turner Professor Emeritus, MIT*

“Recommended practice for soft ground site characterization”

The lecture will define what is meant by a "soft ground" condition, and will provide an overview of the methodology for site characterization (assessment of the stratigraphy and the relevant engineering properties of cohesive soils). It will then cover, in some detail: *in situ* testing with the field vane and the piezocone, undisturbed sampling and the effects of disturbance, laboratory consolidation testing, and laboratory strength testing as a function of the type of stability analyses.

12:25

The lecturers, CGPR members, Virginia Tech faculty and graduate students are invited to join us for lunch in Latham A

