Atlanta Geological Society Newsletter

The August 27 AGS meeting starts at 6:30 pm at the Fernbank Museum of Natural History located at 767 Clifton Road NE, Atlanta GA. 30307

Atlanta Geological Society August Speaker

"Why is Applied Geology Important for Nuclear Power Plant Siting?"

Speaker Mr. Dave Fenster's Bio:

Dave retired as a general consulting engineering geologist in January 2018 after a 44-year career working primarily for large consulting firms. After starting at the City College of the City University of New York (CUNY) as an engineering major, he was graduated with a BA in History in 1967. He received an MA in history from the University of Illinois in 1968. Dave started taking geology courses at Queens College of CUNY while teaching in the South Bronx. He was awarded a teaching assistantship (Lecturer Part-time) and received a Masters in Geology in 1975. He is a Licensed Professional Geologist (PG) in California; Certified Professional Geologist in Virginia and was previously certified in Indiana and Missouri.

As an engineering geologist, Dave applied geologic principals to investigate sites for: geologic and seismic hazards assessments; critical facility site selection; radioactive and hazardous waste management; nuclear facility licensing, LNG facility permitting and certification; and NEPA compliance. His project experience includes: site investigations; report preparation; project management; and business development. Many projects have included Federal, state, and local regulatory compliance; permit acquisition and nuclear facility licensing. Prior to retiring, he had been a Principal Geologist and the Engineering Geology Supervisor and was recognized as an Elite Technical Specialist for Bechtel Power Corporation in Fredrick, MD and Reston, VA. (2006-2018). Most of his work for Bechtel included site investigations and report preparation for the current generation of commercial nuclear power plants. Dave began his career as a geologist with Dames & Moore in 1974 investigating sites for nuclear power plants, working on foundation and groundwater investigations and other aspects of applied geology. His experience with geologic field mapping led to interpretations of surface and subsurface data to develop the regional and site geology sections of Safety Analysis Reports filed with the US Nuclear Regulatory Commission in support of nuclear power plant licensing. As this work declined, Dave conducted environmental geologic investigations to characterize site groundwater and soil conditions and to determine whether clients were in compliance with environmental regulations. After leaving Dames Moore, Dave worked on the geologic isolation of high-level radioactive wastes while with Argonne National Laboratory (1982-1985), Roy F. Weston Inc. (1985-1991) and with Woodward Clyde/URS (1991-2006). At URS he supported FEMA while working on the Pre-Disaster Hazard Mitigation Program and other geology-related programs.

Dave joined the North-Central Section of AEG in 1982. He served as North-Central Section Program Chairman (1982-1984) and Secretary (1984-1985). He was appointed as Chairman of the Committee on Rock Mechanics and AEG's representative to the U.S. National Committee on Rock Mechanics (1984-1989). He was Chairman of the Committee on Radioactive Waste Management (1989-1991) and Chairman

of the Committee on High-Level Radioactive Waste Management (1991-1994). Dave served as Chairman of the Baltimore-Washington-Harrisburg Section (current DC-Maryland-Virginia Chapter) (2002-2004). He was an initial member of the Section Chapter Support Committee. He served on the Board of Directors of the AEG Foundation from 2006-2016 as Secretary for two years and as President for 2015. Dave was appointed as interim Vice President of AEG in 2017 and was elected as Vice President/President-elect for 2017-2018.

Dave has served as a peer reviewer for AEG's Environmental & Engineering Geology Journal. His term as Overseas Reviewer of the Quarterly Journal of Engineering Geology and Hydrogeology (Geological Society of London) expired in 2018.

Abstract:

Nuclear power plants are critical facilities in more ways than one. Initial siting and detailed site characterization require the input of experienced engineering geologists. The U.S. Nuclear Regulatory Commission (NRC) is charged with protecting the health and welfare of the public and the environment. As consultants working for industry, we are charged with obtaining geologic data from the region within which the site is located. We need to obtain even more detailed data from the site and surrounding area. Our careful documentation of geomorphic processes, stratigraphy, geologic and tectonic history, seismicity, the hydrologic setting and groundwater modeling, geologic hazards, and soil and rock properties are essential to providing the NRC with the data they need to make a finding, with reasonable assurance, that the site is suitable for the safe construction and operation of a nuclear power plant. Detailed site investigations are necessary to define in our understanding of uncertainties regarding site characteristics. Ages of faulting in the site vicinity or at the site, the age and extent of karst and the presence of other geologic hazards are key aspects of determining site suitability.