

**OVERVIEW OF TECHNICAL AND REGULATORY ISSUES ASSOCIATED WITH
IN SITU REMEDIATION TECHNOLOGIES**

Work Group Participants and Presenters

Gail Batchelder, Ph.D., P.G., L.E.P.

Dr. Batchelder is currently the Technical Director - Hydrogeology at Loureiro Engineering Associates, Inc. She is a Licensed Environmental Professional (LEP) in Connecticut, a Professional Geologist in three states, and serves on the Board of Registration for Licensed Site Professionals in Massachusetts. Throughout her career, Dr. Batchelder's professional activities have focused on the technical direction and review of subsurface investigation and remediation projects for a variety of contaminants and hydrogeologic settings, emphasizing the development of conceptual models to explain the distribution of contaminants in the subsurface and serve as the basis for evaluations of remedial alternatives and successful implementation of remedial measures. Dr. Batchelder received her M.S. and Ph.D. degrees in Geology from the University of Massachusetts in Amherst and holds an undergraduate degree in French from Tufts University.

Maria Chrysochoou, Ph.D.

Dr. Chrysochoou is an Assistant Professor of the University of Connecticut. She holds a B.S. degree in Physics, a M.S. and a Ph.D. in Environmental Engineering. Dr. Chrysochoou's current research initiatives involve the investigation in situ treatment of chromium contaminated soils, Brownfield redevelopment policies, application of spectroscopic techniques for metal speciation, and material recycling approaches in geoenvironmental applications. Dr. Chrysochoou's is teaching the graduate remediation course for the Uconn Environmental Engineering program, has offered geochemistry guest lectures for private companies and a geochemistry webinar for the American Society of Civil Engineers and works closely with industrial partners to introduce research into everyday practice.

Kenneth Feathers

Kenneth Feathers has earned degrees in both geology and civil engineering, and taken additional graduate course work in geology, geochemistry, and hydrogeology. He has worked as a Supervising Sanitary Engineer for the Remediation Division of DEP for over 25 years, in a variety of roles dealing with remediation of complex sites. He is also the state point of contact for the Interstate Technical Regulatory Council (ITRC), a group that develops guidance documents to inform regulators and others about new remedial methods, in order to foster early adoption of technologies appropriate for site remediation. Most recently at DEP he has been involved in the development of general permits to allow permitted use of remedial additives for in-situ groundwater remediation.

Donald Gonyea

Mr. Gonyea is an Environmental Analyst with the Connecticut DEP's Water Permitting and Enforcement Division. He has been with the DEP since 1988 and prior to his current job, has worked as an industrial wastewater inspector and as an analyst conducting water quality surveys of Connecticut's lakes and rivers. Current responsibilities include developing new general permits for discharge activities that occur statewide, issuing individual injection control permits associated with in-situ remedial activities, and as technical and regulatory support for DEP staff and the regulated community. Prior to joining DEP, Mr. Gonyea worked in various positions at YWC Consulting as well as entry level through management positions in the lawn care/pesticide industry. He has received a BS in Renewable Natural Resources from the University of Connecticut and an MS in Biology from the University of Bridgeport.

Cristian Schulthess, Ph.D

Dr. Schulthess is a soil and environmental chemist and works for the University of Connecticut as an Associate Professor. His research concentrates on the physical chemical behavior of compounds at the solid-liquid and solid-vapor interface, in particular: (1) the effect of nanopores on the entrapment of organic and inorganic compounds, (2) the enhancement effect of carbon dioxide (CO_2) on the adsorption of anions by soil constituents, (3) the adsorption and desorption of CO_2 on oxides, and its effect on proton adsorption, (4) the effect of temperature and pressure on the volatility of adsorbed organic compounds, (5) the validity of current methods for the determination of proton adsorption isotherms, with particular emphasis on the impact of background electrolytes, and (6) the competitive adsorption behavior of anions (such as SO_4 and SeO_4) and organic compounds on oxide surfaces. Dr. Schulthess has degrees in Chemistry (B.S.), Civil Engineering (M.S.) and Soil Chemistry (Ph.D).

Lisandro Suarez

Mr. Suarez is an Environmental Analyst with the Connecticut Department of Environmental Protection (DEP). Mr. Suarez's responsibilities include overseeing polluted sites regulated by DEP's Remediation and Brownfield programs, some of which, in a conjunction effort with EPA, municipalities and other agencies. He leads the In-Situ Groundwater Remediation workgroup as well as the Well, Design, and Construction workgroup. In 2009, Mr. Suarez was a recipient of the State of Connecticut Green Circle Award. Mr. Suarez holds degrees in Civil Engineering Technology (A.S.), Electrical Engineering (B.S.), Geology/Geophysics (M.S.), and Natural Resources (M.S.). He is presently pursuing a Master's degree in Business Administration.