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Environmental Forensics 2023
Instructor Biographies

All instructors are from NEWFIELDS - ENVIRONMENTAL FORENSICS PRACTICE, LLC
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Stephen D. Emsbo-Mattingly, M.S.

Mr. Emsbo-Mattingly is an environmental chemist who specializes in the diagnostic measurement of petroleum, tar, combustion byproducts, preservatives, solvents, polychlorinated biphenyls (PCBs), heavy metals, and anthropogenic contaminants in solid, liquid, gas, and biological matrices. He offers extensive experience in oil spills, manufactured gas plants, chemical plants, wood treating facilities, tar and petroleum refineries, petroleum storage facilities, chlorinated solvent industries, chemical manufacturing facilities, and urban background. Over his more than 30 years in the environmental industry, Mr. Emsbo-Mattingly helped pioneer forensic methods for the identification and delineation of oil spills, tar releases, solvent plumes, PCB impacts, vapor intrusion, heavy metals, technologically enhanced naturally occurring radioactive matter (TENORM), and anthropogenic particulates. These projects often include detailed reviews of historical field and laboratory data, data quality assessment, statistical trend analysis, and plume deconvolution for site assessment, contaminant recovery, and liability management. He has published more than 100 articles, guidance documents, and textbook chapters and serves as reviewer for multiple journals and textbooks.

Mark J. Benotti, Ph.D.

Dr. Mark J. Benotti is a multidisciplinary environmental chemist with 20 years of experience pertaining to projects focused on the occurrence, fate and transport, source attribution, impacts, and treatment strategies of/for environmental contaminants in the environment. He has managed or served as a technical advisor on projects in the United States and abroad involving per- and polyfluoroalkyl substances (PFAS), petroleum hydrocarbons, polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), dioxins, chlorinated solvents, 1,4-dioxane, and perchlorate. His work has included study design and characterization of sites impacted by industrial activities, firefighting training practices, wastewater and/or combined sewer overflows (CSOs), water reuse facilities/settings, sediment remediation sites, and other investigations of contaminated waters and sediments in complex, urbanized and/or industrialized environments. He has worked closely with risk assessors and toxicologists to incorporate aspects of environmental or human risk into interpretations of contaminant chemistry and behavior and with engineers to determine most appropriate water treatment strategies. As a scientist who has spent almost two decades working in environmental analytical chemistry laboratories, Dr. Benotti possesses a “cradle-to-grave” understanding of how to generate and interpret defensible data, and he has published over 30 peer-reviewed manuscripts, book chapters, and reports pertaining his research and project work.

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Eric R. Litman, M.S.

Mr. Litman has more than 20 years of experience in the field of environmental science, with a specialization in applied environmental chemistry. Since 2010 he has been a consulting scientist at NewFields working in support of industrial clients, state agencies and the federal government. During this time, he has conducted a variety of environmental site investigations focused on the chemical characterization of petroleum hydrocarbons, fuel distillates, coal tar, PCBs, dioxins, heavy metals, chlorinated solvents, and poly fluorinated alkyl substances (PFAS). From 2010 through 2015 he served as a laboratory program manager for NOAA's Deepwater Horizon NRDA. Mr. Litman also consults on CERCLA cases with a focus on designing cost allocation models and assessing the liabilities of cost allocation participants. He has worked in a variety of laboratory settings as both an analytical chemist specializing in hydrocarbon chemistry and as a laboratory manager. His research interests include environmental policy, the history of industrial chemistry, the optimization of analytical techniques and the development of novel methods to measure emerging contaminants.

Katherine L. Flanders-DeMille, Ph.D.

Dr. Flanders-DeMille is a chemist with 15 years of experience in the field of environmental chemistry. She specializes in the characterization of sources and fate of contaminants in the environment, which in many instances requires an understanding of industry-specific, process chemistry to evaluate the potential nexus between historical and/or current operations and contaminants of potential concern (COPCs) such as PAHs, PCBs, metals, PCDD/Fs, CVOCs, and PFAS. Dr. Flanders-DeMille is an expert in the reconstruction of such chemical processes including industrial operations at petrochemical plants, dye manufacturers, paper mills, pharmaceutical manufacturing facilities, and inorganic chemical manufacturing facilities. In addition, Dr. Flanders utilizes her advanced background in analytical chemistry and expertise in fundamental physical chemistry to elucidate the behavior and transformation of COPCs in air, water, soil, and sediments to better assess their source(s) and impact on the environment. She has provided technical consulting services to clients involved in the cost allocation process at Superfund Sites and has also participated in dozens of forensics investigations in support of liability management.