

**David Adilman**, P.G., is an Associate Hydrogeologist with Geosyntec Consultants in Acton, Massachusetts. He focuses on characterization and remediation of contaminants in soil and groundwater utilizing extraction/ injection-based groundwater remedial systems, including in-situ bioremediation of chlorinated solvents in both unconsolidated and bedrock. He has expertise in the field assessment of hydrogeologic systems, applied groundwater modeling, the fate and transport of contaminants in groundwater, data acquisition and natural attenuation processes. Mr. Adilman has a B.S. in Geology from Miami (Ohio) University, and a M.A. in Energy and Mineral Resources from the University of Texas-Austin.

**Funmi Afelumo** is a second year Master's student in Plant Science and Biotechnology at the Environmental and Forestry Department of the State University of New York College of Environmental Science and Forestry. He is scheduled to graduate in December, 2014. He has 3 years of experience working in a phytoremediation laboratory studying remediation of heavy metal toxicity using plants. His main areas of specialization are environmental remediation, molecular and plant biology, and analytical chemistry.

**Mike Ammann** has over 35 years of experience managing a wide range of environmental issues in both government and industry. While at the San Francisco Bay Regional Water Quality Control Board, Mike worked on Basin Planning, developed the Regional Board's first dredging policy for San Francisco Bay, and managed the Regional Board's involvement during the development of the San Francisco Bay Institute. During his time at Pacific Gas & Electric Company, Mike negotiated and managed power contracts for independent hydropower and wind turbine farms. He also led and managed a utility consortium to develop effective plant growth regulator applications to reduce operating costs associated with tree trimming under electric distribution lines. He also worked on environmental issues while in the Department of Nuclear Power Generation. Mike recently retired from Chevron and is now a consultant with Chevron. During his time with Chevron, he worked on a wide range of environmental issues including endangered species, wetlands, ecological services analysis, habitat conservation planning, emergency response, and site remediation. Mike also led, coordinated, and developed tactics and strategies for technical negotiations with state and federal trustees for claims associated with injuries to natural resources stemming from releases of oil and hazardous wastes.

**Trevre Roys Andrews** has seven years of experience in NAPL site management and closure. He has recently supported the publication of the ASTM methodology, *Standard Guide for Estimation of LNAPL Transmissivity*, providing the cornerstone for LNAPL mobility metrics. Mr. Andrews has applied these LNAPL techniques on over 70 sites across the globe focusing on the development of site conceptual models, remedial goals, practicable technology implementation, and concrete paths towards site closure. These LNAPL sites include retail, rail, refinery, terminal, pipeline, exploration, and utilities. Additionally Mr. Andrews works on Manufactured Gas Plants with DNAPL and innovated chlorinated remedial system design including ISCO with recirculation. Specifically Mr. Andrews has completed technical work in LNAPL distribution and recoverability modeling, contaminant hydrology, pilot study completion, field investigation techniques, techniques used in geophysical exploration related to contaminants, direct sensing, visual modeling, groundwater modeling, mass flux analysis, natural source zone depletion, and sustainable remediation. Mr. Andrews has recently presented on new methodologies for applying Transmissivity as a metric to DNAPL. Mr. Andrews is involved with the implementation of new guidance and regulations related to NAPL contaminated sites in a variety of states including Michigan, Minnesota, Virginia, and Iowa.

**Mary-Luyza Avramescu** is currently a NSERC postdoctoral fellow with Health Canada, Environmental Health Science and Research Bureau, Exposure and Biomonitoring Division, Metal and Airborne PM Laboratory where she is studying the dissolution kinetics of nanoparticles in simulated biological media. She obtained her PhD from University of Ottawa, Canada (2010) with specialization in Chemical and Environmental Toxicology. She earned her MSc in Medicinal and Cosmetic Products from the Faculty of Industrial Chemistry, Polytechnic University of Bucharest, Romania, and her BSc in Chemical Engineering, with specialization in Organic Chemistry Technologies, from the same university.

**Suzy Baird** is an aquatic toxicologist in AECOM's Chelmsford, Massachusetts office with over seven years of environmental consulting experience. Her work includes investigation and analysis of contaminated sediment, surface water, and groundwater. She is a member of AECOM's scientific SCUBA team, and has extensive experience in biological sampling. Ms. Baird has a BS in Environmental Science from the University of Florida and an MS in Toxicology from the University of Georgia. Her graduate research focused on the enantioselective toxicity and bioaccumulation of fipronil in fish during water and sediment exposures.

**Ralph S. Baker** is the Chairman and Chief Scientist of TerraTherm, Inc., a remediation technology firm located in Gardner, Massachusetts. A Certified Soil Scientist with an M.S. in soil chemistry and a Ph.D. in soil physics, he has over 35 years' experience in the evaluation, design and implementation of technologies for in-situ and on-site treatment of wastes in soil and groundwater. Dr. Baker has served as an expert on a wide range of innovative physical, chemical and biological treatment technologies as a consultant to industry and government. Over the past 16 years, and particularly since co-founding TerraTherm, Inc. in 2000, Dr. Baker has focused his attention on application of in-situ thermal remediation of contaminated soils via simultaneous application of heat by thermal conduction and vacuum. He has authored over 70 scientific publications on in-situ/on-site remediation and soil physics.

**Nancy Beck** is currently Senior Director of Regulatory Science Policy at the American Chemistry Council. From 2002 through January 2012, she was a Toxicologist and Science Policy Analyst at the Office of Information and Regulatory Affairs, within the U.S. Office of Management and Budget (OMB). Since 2002, Dr. Beck has been using her public health background and toxicology expertise to review regulations related to health and the environment and to review, inform, and improve many public health and policy decisions made by Federal Agencies. Dr. Beck also loves to share knowledge about the many tools that can be used to improve the scientific underpinnings of important governmental decisions and also has a strong interest in how scientific information is communicated to the public. At OMB, Nancy played a key role in overseeing the implementation of the government wide Information Quality Guidelines, the Information Quality Bulletin on Peer Review and the OMB/OSTP Memorandum on Principles for Risk Analysis. In addition, Dr. Beck was the OMB lead for the US-EU International dialogue on risk assessment, a dialogue that was started in 2007 to encourage cooperation at the scientific and technical level. This dialogue focused strongly on improving the communication of risk information. She was also a lead for coordinating U.S. Regulatory Policies related to nanotechnology. Nancy has also worked as a Toxicologist and Public Health Advisor for the Washington State Department of Health, and as a Microbiologist for the Estee Lauder Companies. She received her doctorate in Toxicology/Environmental Health from University of Washington in 1998 and was a Science and Technology Policy Fellow for the American Association of the Advancement of Science (AAAS) employed at the U.S. EPA, where her work focused on children's health issues, air toxics, and human variability.

**Lila Beckley** is a geologist at GSI Environmental in Austin, Texas. She has worked on vapor intrusion issues from several different perspectives: research and development, regulatory compliance and litigation support, and training and guidance development. She has also co-authored several journal articles on vapor intrusion, including an overview of state regulations and the use of innovative techniques for site characterization. Prior to joining GSI, Lila worked in enforcement and remediation programs at the Texas Commission on Environmental Quality, in various roles ranging from project to program management.

**James Bedison** has over 4 years of diverse experience investigating and remediating distressed and blighted sites in New Jersey and Pennsylvania under various state and federal regulatory programs. He has been involved with investigation and remediation of numerous sites with chlorinated solvent impacts and has been involved with the use of isotopic analysis as forensic site investigation tool. Previously, Dr. Bedison was involved with research exploring the temporal and spatial relationships in carbon and nitrogen cycling in temperate forests of the northeastern US.

**Jim Begley** is a Principal of MT Environmental Restoration and a Licensed Site Professional (LSP) in Massachusetts. He has over 25 years of professional experience in the fields of environmental science and engineering in the United States and abroad. Mr. Begley has managed complex environmental

remediation projects for government and industry with a focus on effective assessments, evaluation of risk management options, remedial design and groundwater related technology development and demonstration. As a former environmental regulator he has extensive experience in project management, negotiation, technical support for legal/enforcement cases, and public involvement activities.

**Scott Blaha** is the Manager of the Environmental Technology Laboratory at General Electric Global Research and was the engineering manager for the Hudson River dredging project. He has worked on remediation, wastewater treatment, and pollution prevention projects and holds a patent for remediation of contaminated soil by *in situ* thermal desorption. Scott received a Bachelor of Science degree from the University of Massachusetts in 1989. He is a licensed professional engineer.

**Karen Bliss** is an Assistant Professor of Mathematics at Quinnipiac University. She earned her PhD in Applied Mathematics at North Carolina State University and has worked on a diverse set of problems from red blood cell dynamics in patients with chronic kidney disease to studying properties of materials used for body and vehicular armor. She is a former officer in the US Navy and is founder of the New Haven County Math Teachers' Circle.

**Bob Bond**, P.G. is a consulting senior hydrogeologist with Langan in Doylestown, PA. He has over 27 years of environmental assessment and remediation experience and holds a B.S. Degree in Geology from Allegheny College and an M.S. Degree in Geology from Lehigh University. Mr. Bond's practice focuses on the hydrogeologic assessment and remediation of aquifers impacted by suites of chlorinated solvents, geochemical forensic methods, commingled plume issues, as well as environmental litigation support and expert witness testimony.

**Sanford (Sandy) Britt** is owner and Principal Hydrogeologist with ProHydro, Inc. He is a Professional Geologist and Certified Hydrogeologist in California. Mr. Britt is a SERDP and ESTCP researcher and developer of the Snap Sampler passive groundwater monitoring method. Previous to his work on the Snap Sampler, Mr. Britt was a regulator with the California Department of Toxic Substances Control and worked in private environmental consulting.

**Thomas Bryce** is a graduate of Wentworth Institute of Technology (WIT) in Boston, Massachusetts. He received his Bachelors in Civil Engineering Technology from WIT in August 2014. While at WIT, Tom was affiliated with the American Society of Civil Engineers (ASCE). In addition, Tom is an avid outdoorsman, canoe trip guide, and golfer. He currently lives in the Boston area while working part time and pursuing his Master's in Environmental and Water Resource Engineering. He can be contacted at [brycet@wit.edu](mailto:brycet@wit.edu).

**Christa Bucior** has worked for Conestoga-Rovers and Associates for 6 years. She is responsible for preparation and setup of the treatability studies on groundwater and soil samples. The treatability studies include chemical oxidation, enhanced bioremediation, and solidification and stabilization. She is also responsible for several analyses including PCR and other Microbiology analyses, UV/Vis spectroscopy, GC and GC/MS spectroscopy, metals analysis via ICP-OES, Kjeldahl nitrogen analysis, pH measurement, and various titration determination methods. Much of this work is in support of the treatability studies that are performed in the laboratory in Niagara Falls. Christa is also responsible for assisting the Niagara Falls Office with the Quality System, including performing biannual internal audits and follow up with any nonconformances related to Quality.

**Matthew Burns** is a practice leader for WSP USA Corp., based in Woburn, Massachusetts, USA. He manages WSP's Advanced Site Closure Program, a specialty services area involving the use of innovative advanced characterization technologies for optimizing the design, management and closure of sites. He has 20 years of professional chemistry and engineering experience and has authored numerous publications and platform presentations. He holds a Bachelor of Science degree in Environmental Science from the University of Massachusetts at Amherst and a Master of Science Degree in Civil/Environmental Engineering from the University of Maryland at College Park.

**Wenjun Cai** is a graduate student of State University of New York-Environmental and Forest Science in the department of Environmental and Forest Biology. Her research is focused on the Nanoparticle's biological impact on plants. The nanoparticles in her research include engineered inorganic nano metals and carbon nano tubes. She studies the difference of biomass and the transpiration after exposure to the inorganic metal nanoparticles. She is also researching the plant's uptake of nanoparticles by analysis with ICP (Inductively Coupled Plasma). She is particularly interested in the changes of gene expression after exposure to nano carbon tubes. She is also developing plant samples viewing under TEM (Transmission electronic microscope) to detect nanoparticle's distribution in plant tissue.

**William Caldicott** is a co-owner and the Director of Business Development for ISOTEC. He has 18 years experience in the environmental field working in consulting and vendor companies. Mr. Caldicott develops new business opportunities and technically reviews sites to determine appropriate remedial alternatives. Additionally, Mr. Caldicott is responsible for finding and evaluating new technologies and services for potential integration into the ISOTEC stable of technologies.

**Stephanie Carr** holds a B.S in Chemical Engineering from Brooklyn Polytechnic Institute (now NYU), Brooklyn, NY. She joined Calgon Carbon, Pittsburgh, Pennsylvania in 1979 as a Carbon Applications Engineer, after working 3 years as an engineer in the petrochemical industry. Stephanie has worked for most of her 35 years at Calgon Carbon out of New Jersey, providing technical sales support for activated carbon to the Eastern US and Canadian Sales Representatives, in the areas of potable water, air and water remediation, wastewater treatment, vapor phase processes and chemical purification. She has also authored technical articles on carbon adsorption in several journals.

**Sean Carroll** is an engineer and hydrologist with a total of seventeen years of experience in environmental consulting, and has been with Haley & Aldrich for fourteen years. He has a B.S. in Civil Engineering from the University of Notre Dame and an M.S. in Hydrology and Water Resources from the University of Arizona in Tucson. He is registered as a Professional Engineer in Massachusetts and is a Licensed Environmental Professional in Connecticut. Much of his work has been in the area of subsurface remedial investigation, with a particular focus on assessment and remediation of manufactured gas plant sites. He has worked in Colorado, Massachusetts, Indiana, and Connecticut, where he currently lives and works in the Hartford Office of Haley & Aldrich.

**Richard T. Cartwright** PE, CHMM\*, CPIM\* is a Senior Business Development Manager at National Response Corporation (NRC). He has an MBA in Operations Management from Indiana University, and a BES in Chemical Engineering from Brigham Young University. Mr. Cartwright is a Past President of the Alliance of Hazardous Materials Professionals. He is a recipient of the prestigious "Pete Cook Founders Award" for distinguished lifetime leadership, dedicated service, and professional achievement within the hazardous materials management profession. He is also a "Fellow" of the Institute of Hazardous Materials Management.

**Liliana Cekan** is a Senior Manager at JM Sorge, Inc. with over 20 years of environmental consulting experience, specializing in risk assessment, analytical and numerical groundwater, vadose zone and air modeling, statistical analysis, site conceptual models and hydrogeological evaluations. Her technical and practical experience, coupled with her management and communication skills have proven to be instrumental in performing remediation, risk assessment, brownfields redevelopment and litigation support. The site conceptual models, analytical and numerical models and data visualizations she created to evaluate complex hydrogeologic conditions, solve site-specific remediation issues, and present complex data to clients, community groups and regulatory agencies, in both reports and presentations, were instrumental for the success of her projects.

**Adam Chen** graduated from University of Connecticut with a master degree in Civil Engineering, is an associate environmental engineer and project manager with Burns & McDonnell Engineering, Inc. in Chicago Office. As a senior engineer in the remediation service department, he is responsible for design, permit, installation, and operation of various ex-situ and *in-situ* remedial systems. Also he is responsible for assessment and development of innovative technologies for remedial application.

**Deborah Chiavelli** holds a BS from Cornell University, an MS from the University of Mississippi, and a PhD from Dartmouth College. Dr. Chiavelli is currently a managing scientist with Anchor QEA, LLC, with 12 years of post-doctoral and consulting experience. Her areas of expertise include contaminated sediment source allocation and forensic analysis, statistical and mechanistic modelling of populations and food webs, aquatic ecology and limnology, nutrient and bacteria water quality, and environmental survival and epidemiology of aquatic pathogenic bacteria. Dr. Chiavelli is the current leader of Anchor QEA's Statistics Technical Group. Her current projects include forensic analysis and source allocation of crude oil, PCBs, PAHs, dioxins, and metals in numerous contaminated sediment sites; a mercury fate and transport investigation in the Penobscot River, Maine; and modelling of oyster populations in Texas bays. Dr. Chiavelli may be contacted at Anchor QEA at [dchiavelli@anchorqea.com](mailto:dchiavelli@anchorqea.com) or (201)-571-0945.

**Andrew Cohen** is a Contaminant Hydrogeologist and founder of Cogent HydroLogic, LLC, an environmental consulting firm that specializes in hydrogeologic data evaluation, development of conceptual and quantitative models of contaminant transport and fate, forensic hydrogeology, and other specialty services. He received his B.S. from SUNY Oneonta (1991, Water Resources) and Ph.D. from UC Berkeley (1999, Civil and Environmental Engineering). Prior to providing consulting services, he was a Senior Research Associate in the Earth Sciences Division at Lawrence Berkeley National Laboratory.

**Andrew Collins**, P.G. has over 20 years of experience in the environmental industry and specializes in soil and groundwater remediation. Mr. Collins is responsible for business development and operations management for the southeastern division of Directional Technologies. He holds a B.S. in Petroleum Geology and M.S. in Hydrogeology from Baylor University and a M.S. in Business from the Georgia Institute of Technology and is a licensed geologist in several states. Mr. Collins has installed and operated remediation systems throughout the United States and in Japan, France, Canada, and Ukraine. Mr. Collins has helped numerous clients close sites using soil vapor extraction, dual phase extraction, air sparging, biosparging, chemical oxidation, steam injection, pneumatic soil fracturing, funnel and gate systems, slurry walls, groundwater pump and treat, and soil excavation. Mr. Collins has designed and installed horizontal wells for use on various remediation projects. He designed and installed a free product recovery system at the MCAS Cherry Point that included three horizontal wells under an active aircraft maintenance facility that was awarded the free product recovery system of the year by the DOD. Mr. Collins is very active in sales for Directional Technologies and ready to help clients plan, design, and install horizontal recovery wells for complex environmental projects.

**Daniel Collins** is a Ph.D. student at the State University of New York's College of Environmental Science and Forestry. He earned a B.A. in Biology from Dowling College in New York, where he did research on soil microbes and the toxicity of nanoparticles. His current research focuses on working with spinal cord injury patients at the Syracuse Veterans Affairs' Medical Center in a horticultural therapy program.

**Fabio Colombo** has 27 years of experience in environmental and human health consulting with special emphasis on expert services, site solutions and ecology and sediment management. Fabio has worked on the majority of the Sites of National Interest throughout Italy, where he has been involved in different areas including the evaluation of chemical fate and transport in the environment, stable isotopes fingerprinting, risk-based site assessment and remediation, contaminated sediment assessment and remediation, ecological risk assessment, Environmental Liability Directive (ELD) and net environmental benefit analysis (NEBA). He has also provided litigation support and acted as an expert witness on a range of matters.

**Janine Commerford**, LSP, currently serves as Principal Regulatory Strategist at Haley & Aldrich, responsible for assisting industrial, commercial, and institutional clients in developing sound regulatory strategies to manage the contaminated properties in their portfolios. Prior to joining Haley & Aldrich, Ms. Commerford held senior regulatory positions within the Massachusetts Department of Environmental Protection, including Assistant Commissioner of the Bureau of Waste Site Cleanup and Chair of the LSP Board. She currently sits on the Board of Trustees of the Boston Groundwater Trust. She holds BS and MS degrees in Earth and Planetary Sciences from MIT.

**Rob Danckert** has served as northeast regional business development manager for Cascade Drilling, LP since 2010. Cascade Drilling, LP specializes in rotasonic and conventional drilling techniques out of 19 offices across the US. Prior to his time at Cascade Drilling, LP, Mr. Danckert was employed for ten years in the environmental consulting field specializing in contaminant flow investigations and remediation system design and construction. Mr. Danckert graduated from the University of Vermont with a BS in Environmental Science/Geology and is licensed as a Professional Geologist in the state of New Hampshire. He is an occasional marathoner, avid "Old Boys" rugby player, and volunteer firefighter in Brookline, NH.

**Robin Davis** is a Licensed Professional Geologist and Project Manager with the Utah Department of Environmental Quality, Leaking Underground Storage Tank program. She has over 30 years of professional experience, and specializes in fate and transport of petroleum hydrocarbons, natural attenuation, and risk assessments. Her most recent work includes acquisition and analysis of petroleum vapor data for the purpose of developing screening criteria for the petroleum vapor intrusion exposure pathway. Robin has most recently served on the EPA OUST Petroleum Vapor Intrusion (PVI) Work Group to develop national guidance, and the Interstate Technology & Regulatory Council to develop a PVI Tech-Reg.

**Carol de Groot Bois, LSP**, founded Bois Consulting Co., Inc. in Framingham, Massachusetts, in 1998. Ms. Bois has managed hazardous waste site investigation and remediation projects internationally (including Superfund, Brownfields, and ASTM Phase 1/Phase 2 due diligence projects) at a variety of manufacturing locations, commercial, and residential properties, as well as projects for non-profit organizations and municipalities for over 25 years. She is a Massachusetts Licensed Site Professional (LSP) and former President of the Massachusetts LSP Association. Ms. Bois has worked in environmental consulting as a project manager since 1988. Prior to that time, Ms. Bois was the Section Chief of the Site Assessment Branch in MassDEP's Central Regional Office in Worcester, Massachusetts. Ms. Bois has a B.A. in Biology from the University of Rochester and an M.P.H. (Environmental Health) from Boston University School of Medicine. She is currently an active member of the LSP Association and is also a member of the Science Advisory Board for the UMass Conference on Soils, Sediments, and Water; the Society for Women Environmental Professionals; and the Women's Environmental Network.

**Nicholas Dempsey** is a graduate of Wentworth Institute of Technology (WIT) in Boston, Massachusetts. He received his Bachelors in Civil Engineering from WIT in August 2014. While at WIT, Nick was a member of several student groups including the American Society of Civil Engineers (ASCE) and the concrete canoe team. He also was the President of the Environmental Club and started the WIT - United States Green Building Council (USGBC) student group. In addition, Nick is an avid wood carver, woodcarver, and skier. He currently lives in the Boston area while working full time and pursuing his Master's in Geoenvironmental Engineering. He can be contacted at [dempsey@wit.edu](mailto:dempsey@wit.edu).

**Elizabeth Denly** is a Senior QA chemist at TRC with over 25 years of experience. Ms. Denly is responsible for providing QA/QC oversight as well as chemistry support in support of a variety of environmental investigations including contaminant ambient air monitoring, delineation, human health and ecological risk assessments, risk-based soil cleanups, and remediation programs. She has provided this oversight under different regulatory programs, including MassDEP, EPA Region I, EPA Region II, NYSDEC, and NJDEP. Ms. Denly has worked closely with MassDEP on several projects. Currently, she is leading the effort, under the direction of MassDEP, to create a VPH by GC/MS method, she is providing support to MassDEP in generating responses to questions received regarding CAM protocols, and she is also providing assistance to MassDEP Audit staff in the generation of audit checklists and training for the evaluation of CAM-generated data. In the past, she has lead the effort in conjunction with NEH and under the direction of MassDEP to update the CAM, create new CAM protocols, and provide training for laboratories. She has been an active member of several Work Groups within MassDEP, including the Work Groups for APH, EPH/VPH Revisions, Data Usability, and the original Data Quality Enhancement Work Group.

**George DeVaul**, PhD, is a Principal Technical Expert at Shell Global Solutions in Houston. His work includes development and application of risk assessment and chemical fate and transport methods applicable in site assessment and remediation.

**Michael DiBara** is a Project Manager at MassDEP, and has over 26 years experience as an environmental manager in both the public and private sectors. Currently, Michael is leading MassDEP's energy-saving efforts at drinking water and wastewater plants across the state. He was a recipient of the Commonwealth of Massachusetts' Fellowship for Excellence in Public Administration at Suffolk University. Michael holds a Master's of Science in Public Administration from Suffolk University in Boston, an Environmental & Regulatory Management Certificate from Northeastern University in Boston, and a Bachelor's of Science in Business Administration from Worcester State University.

**Paul Dombrowski** is a Remediation Technical Leader at AECOM with 11 years of experience who specializes in the design, implementation, and oversight of groundwater and soil remediation projects. His areas of expertise include in-situ remedial technologies, groundwater geochemistry, chlorinated solvent site investigation, and Brownfields assessment and redevelopment. He is the leader of AECOM's Environment Technical Practice Network and is a co-founder of the AECOM Chemical Oxidation Technical Practice Group. He attended Manhattan College in New York City where he earned bachelor's and master's degrees in Environmental Engineering. He is registered as a Professional Engineer in Massachusetts and Connecticut as well as serving on the Scientific Advisory Board for the AEHS East Coast Conference.

**Maureen Dooley** has over twenty eight years experience in many aspects of environmental industry including project management, research and development, senior technical oversight, remedial design and laboratory management. Ms. Dooley's current position is the Northeast Region Manager for Regenesis. She is responsible for managing both sales and technical support associated with Regenesis bioremediation and chemical oxidation products. As part of her responsibilities at Regenesis she has reviewed hundreds of potential projects and provided recommendations for remediation. Ms. Dooley also is responsible for managing key projects for Regenesis. Much of her work over her career has been focused on the development and implementation of bioremediation programs. Over the past several years, however, she has been focused on chemical oxidation applications at petroleum and chlorinated hydrocarbon sites. Ms. Dooley has drafted hundreds of project proposals, evaluations and reports related to the feasibility of using bioremediation. In addition, prior experience includes the completion of numerous treatability studies designed to evaluate the biodegradation of a wide range of chemical constituents that include chlorinated solvents, petroleum hydrocarbons, explosives, aromatic hydrocarbons and pesticides.

Education:

M.S. Biology/Microbiology, University of Dayton, Dayton, OH

B.S. Biology, St. Bonaventure University, St. Bonaventure, NY

**James A. Doucett** is the Director of the Clean Energy Results Program (CERP) at the Massachusetts Department of Environmental Protection. The CERP program was established in 2011 as a unique partnership with the Department of Energy Resources (DOER) and the Massachusetts Clean Energy Center (MassCEC) to advance environmental protection through the development and permitting of renewable energy and energy efficiency projects throughout Massachusetts, resulting in cleaner air, water and land. James was previously the Deputy Director for Regulatory Standards in the Bureau of Waste Prevention focused primarily on regulatory and policy development for solid and hazardous waste. Recently he managed the revisions to the solid waste site assignment and permitting regulations to streamline the regulations and to smooth the way for siting and operation anaerobic digestion facilities and other types of conversion projects. James graduated from Kenyon College with a degree in biology and obtained a Masters in zoology from the Ohio State University.

**Judi L. Durda** is a Vice President at Integral Consulting, a national science and engineering consulting firm. Ms. Durda is an ecologist and toxicologist with more than 25 years of experience in the health and environmental science fields, working on behalf of both government and private clients. She specializes in using science and science-based strategies to address complex technical issues related to the

manufacture, use, or disposal of chemicals, consumer products, pharmaceuticals, and hazardous and nonhazardous wastes. Her specific experience includes risk assessment, toxicological evaluations, forensics analysis, and regulatory compliance support under a variety of federal and state regulatory programs and in related litigation. She has conducted health and safety evaluations of chemicals present in food, beverages, consumer products and medical devices; conducted technical evaluations to support product registration of crop protection chemicals; assessed the potential human health risks from the use of veterinary antibiotics; and initiated research on the effects of consumer product chemicals on children's health. She also has extensive experience with emerging and yet to be regulated chemicals including perfluorinated compounds (PFCs). Ms. Durda practices out of Integral's Annapolis, MD office.

**Latif Elçi** was born in Manisa, Turkey in 1952, and carried out his undergraduate studies at Aegean University in İzmir, in 1974. Elçi pursued graduate studies at Hacettepe University, in Ankara from 1981 to 1986 and received his Ph.D in analytical chemistry in 1986. On September, 1986 he joined as assistant professor the Faculty of Art and Science at Erciyes University, Turkey. Elçi was promoted to Assoc. Professor in 1988 and Professor in 1994. From 1994 to 2000, he directed the Science Institute (graduate school). In June 2000, he moved to his laboratory at Pamukkale University where he was dean of the Faculty of Art and Science until March 2007. Now, he is currently analytical chemistry professor and head of department in chemistry department at Pamukkale University. He carried out postdoctoral researches at Ruhr Uni.(1990-four months) and Munster Uni.(2007-three months) as TÜBİTAK and DAAD Postdoctoral Fellows, and at UMass-Amherst-USA(1995-four months, 2007-six months and 2010-one year) as TÜBİTAK, Fulbright and TÜBİTAK Postdoctoral Fellows, respectively. Elçi's research interests involve extractive preconcentration methods of trace inorganic ions and organic compounds from various samples and their determinations by atomic spectroscopic and chromatographic techniques. His research, described in over 180 scientific papers. Prof.Dr.Elçi has trained more 30 graduate students and postdoctoral researchers in his laboratory.

**Brad Elkins** leads the technical sales and support department at EOS Remediation based in Raleigh NC. He specializes in the application of bioremediation strategies to treat hazardous compounds in soil and groundwater. He earned a Master's degree in Geology from East Carolina University and is a registered professional geologist in NC.

**Stephen Emsbo-Mattingly** is a senior scientist at the NewFields Environmental Forensics Practice in Rockland Massachusetts. He has twenty-five years of environmental chemistry and forensic investigation expertise. Mr. Emsbo-Mattingly specializes in the source identification of PCBs, PAHs, petroleum, tar, and chlorinated solvent products in the environment. This work is typically conducted in support of site investigations, risk assessments, and liability management.

**Noushin Fallahpour** is currently a third year PhD student in Environmental Engineering at the Northeastern University, Boston, MA. She is working as a small part of the PROTECT research group under supervision of Prof. Akram Alshwabkeh. She received my B.Sc in Chemical Engineering (2009) and M.Sc in Environmental Engineering (2011). Her pre-doctoral educational training and professional experience have both been in Iran. She found herself very interested, capable, and focused on research areas related to water and groundwater treatment technologies. Her work focuses on remediating chlorinated solvents and other organic and inorganic contaminants, especially, trichloroethylene in ground water. This research area has also led to publications, which are under review to submit in peer-reviewed journals and presentations at national conferences. Please feel free to contact her with any questions about her experience as a student in the program.

**Gabrielle Fanfan** is pursuing a Master of Science in Plant Biotechnology from State University of New York College of Environmental Science and Forestry. She graduated Magna Cum Laude from SUNY-ESF in 2013 with a degree (BS) in Biotechnology. She currently studies plant-microbe interactions. She is using endophytes, specifically *Enterobacter* sp. 638, to enhance plant growth under stressed conditions. She is also studying the molecular responses of *Solanum lycopersicum* (tomato) to *Enterobacter* sp. 638 using gene-expression analysis.

**Deborah Farnsworth** has twenty-four years of professional experience in hazardous waste site investigation and remediation. Ms. Farnsworth specializes in designing and managing cost-effective environmental programs and in assisting clients in attaining and maintaining federal and state environmental regulatory compliance. She has directed scientists and engineers during all phases of environmental audits and assessments. She has managed and designed many remediation projects including oversight of construction and implementation for bioremediation technologies, and has presented and published some of these case studies. She has also assisted in the preparation of the MA DEP's Standard References for Monitoring Wells, specifically Small Diameter Driven Wells (SDDWs). Ms. Farnsworth provides community relations assistance to public and private clients. She served six years on the Concord, MA Board of Health and also on the 2229 Main Street [Superfund] Committee, for the Town of Concord. In 2005 Ms. Farnsworth was also appointed to the Board of Registration of Hazardous Waste Site Cleanup Professionals for the state of Massachusetts.

**Susan Fessenden** currently serves as the Clean Energy Outreach Training Coordinator in the Bureau of Waste Site Cleanup. In this role, she oversees the development and implementation of MassDEP's training programs for Massachusetts Licensed Site Professionals, environmental consultants and the regulated community for licensure and regulatory compliance. Ms. Fessenden engages with the LSP Association regarding the ongoing advancement of continuing education initiatives and manages MassDEP's training programs for its Bureau of Waste Site Cleanup staff including regulatory, technical and health and safety. In addition, she develops project-specific outreach and education initiatives to support MassDEP's Clean Energy Results Program as well as its clean energy development efforts within its Bureau of Waste Site Cleanup. Ms. Fessenden holds a B.A. from Emmanuel College and a M.P.A. from the University of Massachusetts.

**William Fischer** leads BSTI's environmental consulting group in its corporate headquarters in Cochranville, PA. He specializes in conceptual site model development, environmental policy, risk assessment, and strategic planning. Prior to joining BSTI in 2009, Mr. Fischer served as a Hydrologist and Environmental Engineer for the State of Delaware's DNREC-Tank Management Section for 11 years. During that time, he developed and revised numerous environmental regulations, policies, and guidance documents and participated in many multidisciplinary workgroups within the agency. In addition to these positions, Mr. Fischer served as the co-team lead for ITRC's LNAPL Team and is the Chair for ASTM's subcommittee on Environmental Corrective Action which developed the LNAPL Transmissivity Guide and the LNAPL Conceptual Site Model Guide. He earned his B.S. in Geology from West Chester University and his M.E. in Engineering Science from the Pennsylvania State University.

**John Fitzgerald** received a B.S. and M.S. in civil engineering from the University of Massachusetts at Lowell, and is a Registered Professional Engineer in Massachusetts. He has been employed by the Massachusetts Department of Environmental Protection (DEP) since 1980, where he oversees the assessment and cleanup of sites contaminated by oil and hazardous materials.

**Elizabeth Fitzpatrick** graduated from the University of Connecticut School of Engineering with a BS in Environmental Engineering in 2012. She is a registered engineer in training (EIT) and has worked for environmental consulting and remediation design and contracting firms. Elizabeth is currently an employee at Good Earthkeeping Organization, Inc. where she is a project engineer and specializes in initial project design and reporting for Gas Thermal Remediation Projects internationally.

**Oliver Fringer** is associate professor in the Department of Civil and Environmental Engineering at Stanford University, where he has been since 2003. He received his BSE from Princeton University in Aerospace Engineering and then received an MS in Aeronautics and Astronautics, followed by a PhD in Civil and Environmental Engineering, both from Stanford University. His research focuses on the application of numerical models and parallel computing to the study of laboratory- and field-scale environmental flows to understand the physics of salt and sediment transport in lakes and estuaries, internal waves and mixing, and turbulence in rivers. Dr. Fringer received the ONR Young Investigator award in 2008 and was awarded the Presidential Early Career Award for Scientists and Engineers in 2009.

**Steven Gaito** is a Senior Environmental Specialist with ARCADIS US. He joined ARCADIS in 2007 and has 13 years of environmental consulting experience and specializes in developing LNAPL management strategies. He is contributing to the 2013 update of ASTM LNAPL Guide E 2531-06. His current work focuses on developing LNAPL site conceptual models, mobility and recovery, and the evaluation and application of natural source zone depletion.

**Emanuela Gallo** is 41 years old. She is lawyer, enrolled at Lawyers Institute of Milan, Italy, from 1999; graduated in 1996 with 110 *cum laude* in administrative law at Catholic University of Milan. From 2004 she is working at eni Legal Affairs Office as manager, responsible for HSE matters, having a specific expertise for environmental, health and safety issues at chemicals, refineries and exploration and productions industrial plants both in Italy, Europe and extra-European countries. Before joining eni, Emanuela worked at *Governmental Legal Office*, for public and administrative law issues, at *GOP legal office*, international law firm based in Milan Rome London and New York, as manager for environmental law issues, and at *ERM* in London, at the international development projects office, as senior consultant for environmental law issues. After graduation, Emanuela followed the L.L.M. at *School of Oriental and African Studies (SOAS)* - University of London, in "*International and Comparative Environmental Law, and Sustainable Development*" and published several academic publication on environmental matters.

**Millie Garcia-Serrano** serves as Massachusetts Department of Environmental Protection (MassDEP) Bureau of Waste Site Cleanup's Deputy Regional Director in the Southeast regional office serving 5 cities and 80 towns, including the Cape and islands. In this capacity, Ms Garcia-Serrano oversees all regional Bureau operations including emergency response/notification, risk reduction, brownfields, compliance & enforcement, state & federal site management and audits, thereby ensuring optimal quality of all technical, regulatory and policy work generated by Bureau staff. Ms. Garcia-Serrano has twenty-seven years of demonstrated public and private sector experience with focused expertise in hazardous waste site assessment and cleanup, brownfields redevelopment, compliance & enforcement, regulations & policy development and natural resources damages. In June 2012, Ms. Garcia-Serrano accepted the prestigious New England Environmental Business Council Nicholas Humber Environmental – Energy Award for Outstanding Collaboration on behalf of MassDEP. Ms. Garcia-Serrano has a Bachelor of Science in Biology from University of South Alabama College of Art & Sciences in Mobile, AL and a Master of Public Health from Boston University's School of Medicine in Boston. A member of the AEHS/UMass International Soils Conference's Scientific Advisory Board since 1998, Ms. Garcia-Serrano also serves as the Commonwealth's Trustee Representative on the Bouchard B-120 Natural Resources Trustee Council and is a Brownfields Support Team Leader for the City of Attleboro Downtown Redevelopment and Revitalization Project.

**Bob Glazier** is an Associate with the Geosyntec Consultants, Inc. office in Columbia, Maryland. He has a Bachelor of Science degree in Geology from the University of Maryland, a Master's of Science in Geochemistry and Mineralogy from The Pennsylvania State University, and is a Professional Geologist in the Commonwealth of Pennsylvania. His 30 years of professional experience have largely focused upon environmental remediation, solid waste management, and litigation support. Mr. Glazier's most recent interests include potential soil and water impacts from coal ash management facilities and natural attenuation of metals. Mr. Glazier's remediation experience includes a wide range of project drivers including CERCLA, RCRA, solid waste, and state brownfields/voluntary action regulations. He has particular expertise in remediation of CERCLA landfills as well as the mobility and fate of anthropogenic organic compounds and metals in soil and groundwater. Many of the remediation technologies he has used are based upon manipulation of redox conditions to either limit constituent mobility, or to promote biodegradation of organics. He has used environmental forensics methods including stable isotope analysis throughout his career.

**Bradley A. Green, P.G.**, has over 15 years of experience performing environmental investigation and remediation projects throughout the United States. He has performed and managed numerous studies involving the evaluation of hydrogeological and chemical data, assessment of contaminant transport and fate, assessment of LNAPL and DNAPL occurrence, execution and analysis of aquifer hydraulic testing, vapor intrusion studies, and risk assessments. He has also managed remedial alternative assessments

including CERCLA feasibility studies. Brad has successfully completed projects located throughout the United States, South America, and Europe, and is a licensed professional geologist in three states.

**Will Harms** has over 30 years of experience in environmental restoration focusing on remedial design, implementation, operation & maintenance, performance monitoring and reporting services for chemical plants, petroleum refineries, chemical/fuel distribution terminals, military bases, and other public and private sector clients. He specializes in remediation of chlorinated solvents and is also experienced with remediation of petroleum products, pesticides, terpenes, phthalates, organic-phase liquids, CFCs, PCBs, 1,4 dioxane, and other compounds. Will is knowledgeable in natural and enhanced attenuation of chlorinated solvents, non-chlorinated hydrocarbons, and other pollutants. He is experienced in sampling and analytical techniques, including molecular biological tools (microbial quantitation and speciation) and stable isotope forensics.

**Paul Hatzinger** is a Senior Research Scientist in the Biotechnology Development and Applications Group of CB&I Federal Services. He holds PhD from Cornell University, and has more than 15 years of experience in biodegradation, bioremediation, soil chemistry and groundwater microbiology. His current areas of research and interest include the following: (1) biodegradation and bioremediation of emerging groundwater contaminants, (2) the use of compound-specific stable isotope analysis to determine contaminant sources and fate, and (3) the determination of microbial pathways of pollutant degradation. During the past decade, Dr. Hatzinger's research group has been instrumental in the development and field application of new remedial approaches for several contaminants of concern to the Department of Defense, including perchlorate, methyl tertiary butyl ether (MTBE), nitramine and nitroaromatic explosives (RDX, HMX, TNT), N-nitrosodimethylamine (NDMA), and 1,2-dibromoethane (EDB). In addition to his research, Dr. Hatzinger does extensive consulting on the sources, fate, and remediation of organic and inorganic pollutants.

**Mary Beth Hayes** has twenty-five years of experience in remedial investigation, hazardous waste site cleanup and regulatory compliance. Ms. Hayes is responsible for bringing hazardous waste sites to closure under the Massachusetts Contingency Plan (MCP) and Toxics Substances Control Act (TSCA). She has worked on over 60 TSCA cleanups across the country using self-implementing, performance-based and risk-based cleanups, primarily for industrial clients and utility companies. Hayes also works on industrial facility renovation, decommissioning and demolitions in New England states, which involve the abatement of PCB-impacted building materials under the TSCA and state regulations.

**Rebecca Hoff** is an Environmental Scientist with NOAA's Office of Response and Restoration, and has over 25 years of experience assessing impacts from oil spills and other hazardous contaminants to marine and estuarine environments. She currently works on Natural Resource Damage Assessment, primarily in the Puget Sound region and is the lead for the Lower Duwamish River Trustee Council in Seattle. She has an M. S. degree in Fisheries from the University of Washington, an M. A. degree from Antioch University, Seattle in Organization Systems Renewal and and a degree in biology and environmental science from the University of California, Santa Cruz.

**Jeffrey S. Holden** is a Principal Engineer with ARCADIS located in their Manchester, CT office. He has over 22 years of experience in the investigation and remediation of industrial sites under various regulatory programs including RCRA, TSCA, and the Massachusetts Contingency Plan. He is a registered Professional Engineer in CT and MA, a Licensed Site Professional in MA, and a Licensed Environmental Professional in CT.

**David P. Horowitz** is a degreed mechanical engineer, a registered professional environmental engineer and a certified safety professional. Mr. Horowitz is certified by the Steel Tank Institute to inspect aboveground storage tanks and is a certified by the State of Massachusetts to inspect underground storage tanks. He's also a Class A/B certified Massachusetts UST Operator. Mr. Horowitz has twenty+ years of applicable experience. Mr. Horowitz has presented tank-related information at numerous trade and industry association events, including:

- Caterpillar Dealers National Environmental, Health and Safety Conference, (May 2014)
- Norfolk-Bristol-Middlesex Association technical Session (April 2014)

- Lorman Education Services (September 2012)
- Twin Tiers Society of Petroleum Engineers (April 2012)
- National Registry of Environmental Professionals (October 2012)
- Southeastern Massachusetts Drinking Water Fair (June 2011)
- New England Water Works Association Spring Conference (March 2011)
- Safety Council of Western New England Safety & Health Conference (March 2011)
- American Public Works Association (New England Chapter - May 2010)
- Lorman Education Services (September 2008)
- New England Healthcare Engineers Society Annual Conference (October 2006)
- Caterpillar Dealers National Environmental, Health and Safety Conference, (May 2006)

**Mark Huston** is currently the Deputy Director of the US Department of Interior's Office of Restoration and Damage Assessment in Washington, DC. In this position, Mark assists with all aspects of the damage assessment and restoration program. Prior to joining the Department, Mark provided guidance, technical support, and budget support for the US Fish and Wildlife Service's Oil Spill and Natural Resource Damage Assessment and Restoration Programs. He also managed a national interagency agreement with the US Environmental Protection Agency (EPA) in which the EPA funds Service biologists to provide technical and biological support to the EPA's Superfund Program. Prior to moving to the DC area, Mark worked as a technical liaison to the EPA's Environmental Response Team in Edison, NJ where he participated in planning ecological risk assessments, conducting field studies, and responding to oil and hazardous material spills. Before joining the Service, Mark worked in private industry as an oil spill and emergency response contractor where he provided biological and technical support at oil spills and hazardous waste site incidents and clean ups. He also worked for an aquatic toxicity testing laboratory where he conducted biological tests on invertebrates and fish to evaluate the impact of industrial discharges, drilling fluid discharges, and contaminated sediment and soil to biota. Mark has B.S. in Biology from East Stroudsburg University and a M.S. in Biology from the University of Wisconsin-LaCrosse.

**Don Ivey** holds a B.S. degree in Environmental Science and an M.S. degree in Environmental Engineering from the University of Arkansas. He has more than 25 years of experience in the field of activated carbon treatment technology and activated carbon manufacturing and has held positions in state and municipal government in the water and wastewater field. Don joined Calgon Carbon Corporation in 2004. He is currently the New England sales representative for the Industrial Process and Food Business Unit of Calgon Carbon Corporation. He is a registered professional engineer in 2 states and a past member of the New York Water Environment Association. He resides in Bedminster, Pennsylvania with his wife.

**Daniel Jameson** was born in Hartford, Connecticut on April 25<sup>th</sup>, 1991. He spent his childhood living with his mother and older brother in Windsor CT and attended Windsor High School. Daniel was always fascinated by science and learning. In the 5<sup>th</sup> grade he participated in an Inventors Convention where he was awarded a prize for the development of a motorized clothes line system. Once Daniel reached high school his love for science expanded even further. His favorite subject was Chemistry and he would often assist the teacher at times; helping to present concepts in a way that the other students could easily understand. Daniel was sure that he wanted to be a chemical engineer, but a rough semester in AP chemistry changed that immediately. Intimidated by concepts of organic chemistry, Daniel decided instead of pursuing a degree in Chemical Engineering to do something more in line with his skill for physics. With this, Daniel decided to attend Wentworth Institute of Technology in pursuit of a degree in Civil Engineering. Not knowing how diverse civil engineering was, he figured with this he would become a structural engineer and design large buildings and bridges. However to his surprise chemistry and civil engineering were not as unrelated as he thought. Now Daniel plans to use his knowledge of chemistry and environmental systems to help make the world greener and more efficient place.

**Kenneth Jenkins** has more than 35 years of experience in the field of environmental toxicology. He has given testimony before Congress, and briefed house and congressional staff on technical issues relating to Natural Resource Damages. He has served as a member of the Science Advisory Board (SAB) of the

U.S. Environmental Protection Agency and has participated in numerous SAB panels. He served on a National Academy of Science panel, which evaluated the environmental effects of offshore drilling activities and currently serves as a technical advisor to BP on the Gulf Oil Spill. As a principal toxicologist, Dr. Jenkins has been responsible for the design and implementation of numerous cooperative and litigation driven natural resource damage assessments (NRDAs), ecological risk assessments (ERAs), and water quality and sediment quality evaluations throughout the country.

**Joe Jeray** is a Geoenvironmental Engineer and Project Manager in Geosyntec's Acton, Massachusetts office. He has 5 years of experience in environmental consulting and has worked on a wide range of project types, including site investigation, soil and groundwater remediation, and vapor intrusion mitigation. He has managed projects involving air sparging, in-situ chemical oxidation, and soil vapor extraction systems for treatment of chlorinated solvents and other volatile organic compounds.

**Armand A. Juneau, Jr.**, P.G, Principal at Juneau Geoservices, LLC, has 28 years of experience in conducting soil/groundwater investigations and remediation projects in New England, and throughout the U.S., Canada, and the Caribbean. He was the primary consultant/contractor for the design/construction/operation of fluidized bed bioreactor systems in Bedford and Auburn, New Hampshire. He has also assisted Cardno-ERI in the implementation and operation of bioreactor systems in Maryland, Florida, and California. Mr. Juneau is a licensed Professional Geologist in the State of New Hampshire and a Certified Geologist in the State of Maine.

**Tanya Justham** is an Assistant Project Manager with GZA GeoEnvironmental. She has a BS in geology from St. Lawrence University and an MS in geology from the University of North Dakota with a concentration in geochemistry. Ms. Justham's thesis research involved the geochemical analysis of iron stone fossils in the Hell Creek Formation. Since graduating, Ms. Justham has been involved in numerous site assessment and remediation projects at commercial/industrial facilities throughout New Hampshire, Maine, and Massachusetts.

**Tomasz Kalinowski**, Ph.D., is a scientist at AECOM with 5 years of remediation experience. He has experience in remedial design, with a particular focus on assessing the potential for bioremediation and natural attenuation and designing the accompanying treatability, feasibility, and pilot studies. His doctoral work explored the feasibility and accuracy of lab pilot studies using modern microbiological and genetic assays and analytical chemistry. In the course of his research he conducted numerous lab and field feasibility studies and ultimately developed a novel platform for conducting parallel in situ treatability studies.

**Mary Kawa** is the chemistry and environmental fate manager for SRC, Inc.'s technical support of the U.S. Environmental Protection Agency (EPA) Design for the Environment (DfE) Alternatives Assessment (AA) initiative. In this role, she oversees the development of hazard profiles for Persistence and Bioaccumulation to aid stakeholders in the identification of safer substitutes. These efforts require the use and interpretation of predictive models for chemicals lacking experimental data. Ms. Kawa has also provided chemical technical support for customers such as the EPA, Centers for Disease Control and Prevention (CDC), Food and Drug Administration (FDA), and Department of Defense (DoD), as well as private industry. Ms. Kawa routinely utilizes estimation methods such as the Estimation Programs Interface (EPI) Suite™ and ECOSAR™ and other quantitative structure-activity relationship (QSAR), read-across, or analog approaches to help fill data gaps in hazard assessment. Her work is concentrated in the assessment of chemical characteristics for compounds of concern as well as their analogs. Ms. Kawa earned a Master's degree in chemistry from The Johns Hopkins University and is currently pursuing an environmental engineering degree from Syracuse University. She previously worked as an analytical research and development chemist at Wyeth and Synaptic Pharmaceuticals. Ms. Kawa is a member of the American Chemical Society (ACS) and the Society of Environmental Toxicology and Chemistry (SETAC), and was a principal contributor to a rigorous evaluation on the applicability of a terrestrial food web biomagnification screening model that SRC and EPA scientists presented at the SETAC North American Conference in 2012.

**Russell E. Keenan** is Vice President and Principal Toxicologist at Integral Consulting, Inc., a national science and engineering firm providing multidisciplinary services in the fields of health, environment, technology and sustainability. He has 30 years of experience as a biologist and toxicologist and is regarded as an expert in the risk assessment of PCBs, dioxin, and mercury, and for the development of probabilistic risk assessment methods. Dr. Keenan is noted for his work in evaluating the human health and ecological risks associated with contaminated aquatic environments at many of the major environmental sites in the U.S. He serves on the AEHS Scientific Advisory Board and is also an active member in the Society of Toxicology, the Society for Risk Analysis, and the National Council for Air & Stream Improvement. He holds a B.S. in Biology from Bates College and a Ph.D. in Environmental Biology from Duke University.

**Kathleen Kerigan** is an Environmental Engineer in GZA's Remediation division. Her experience at GZA includes working on a variety of environmental assessment and remediation projects involving the development of conceptual site models, fate and transport and multi-phase fluid flow modeling, remedial system design and data management. Her field experience includes use of high resolution site characterization tools such as laser induced fluorescence (LIF), membrane interface probe (MIP) and mobile laboratory analyses, as well as many other site assessment technologies.

**Karen Kinsella** is a biogeochemist at GZA GeoEnvironmental, Inc. in Glastonbury, Connecticut. She has 40 years' experience in the energy, construction, agricultural, analytical, environmental, and radionuclide sectors. Karen earned a Ph.D. in soil chemistry and microbiology from the University of Connecticut in 2009 and an M.S. in chemistry from Central Connecticut State University in 1996. Her consulting practice focuses on applying biochemical and geochemical processes for active remediation and natural attenuation of groundwater contaminants.

**Todd D. Kirton**, LSP, is Senior Hydrogeologist at Tighe & Bond of Westfield, Massachusetts. Todd has conducted a variety of environmental and hydrogeologic investigations for many sites throughout New England over the past 19 years. A Massachusetts Licensed Site Professional (LSP), his experience includes performing practical and innovative sampling and remediation activities at numerous release sites, EPA Brownfields sites, and municipal landfills, as well as preparing numerous technical reports in accordance with state and Federal regulations. Todd received his Bachelor of Science (Geology) from the University of Massachusetts-Amherst in 1995.

**Mark Kluger** is a graduate of Johns Hopkins University with a focus in chemistry, physics and material sciences. Mark has experience with field analytical and data acquisition instrumentation, site characterization, surface geophysics, multi-phase fluid flow, process optimization, and sediment, soil and groundwater remediation procedures and technologies. In February 2001, Mark founded Dajak<sup>®</sup>, LLC, a company that provides business development services to firms with innovative environmental characterization and remediation technologies. Mark also provides technical guidance to these companies in the areas of marketing, industry trends and remedial solutions. Mark is a member of the Interstate Technology and Regulatory Council and the Sustainable Remediation Forum.

**John LaChance** is the Thermal Remediation Practice Lead for ARCADIS U.S. and is located in their Chelmsford, MA office. Before joining ARCADIS, John worked with TerraTherm, Inc. for 11 years. In total, John offers over 28 years of experience in characterizing and remediating contaminated sites with a focus on the design, implementation and assessment of in situ thermal remediation (ISTR) systems and the management of ISTR projects and research efforts at numerous sites both in the U.S. and overseas. John is a recognized expert in the thermal field, and has worked with all three of the primary thermal remediation technologies: Thermal Conduction Heating (TCH), Steam Enhanced Extraction (SEE), and Electric Resistance Heating (ERH) or Electro-Thermal Dynamic Stripping Process (ET-DSP). His work has also included combining ISTR technologies (e.g., TCH and SEE) to better address challenging site hydrogeologic and contaminant conditions to ensure achievement of the desired remedial outcome. John has also evaluated and worked with newer thermal technologies such as STAR (Self-Sustaining Treatment for Active Remediation or smoldering combustion) and Gas Thermal Remediation (GTR). John works with clients, project teams, and other consultants to: 1) identify the best thermal technology or combination of technologies for a site and the remedial objectives; 2) develop RFPs and bid formats that

allow apples-to-apples comparisons of thermal vendor proposals and selection of the best-value design and approach; 3) negotiate performance specifications, and contract and payment terms that address client's goals, agency requirements, and provide an appropriate balance of risk and cost; 4) oversee and review ISTR designs and cost estimates; 5) oversee well field installation and construction of ISTR systems; 6) review and assist in evaluation of ISTR progress and troubleshooting of system challenges; and 7) report results and guide ISTR projects to shut-down and site closure. Additionally, he has authored many papers and presentations on ISTR and the hydrogeology of DNAPL sites and is a co-founder and presenter of the ISTR workshop that has been presented at the Conference on Soils, Sediments and Water held annually at the University of Massachusetts, Amherst for the past ten years.

**Laurie LaPat-Polasko** has more than 25 years of experience in groundwater and soil remediation and wastewater treatment. She combines her knowledge of microbiology with a background in civil engineering to develop cost-effective remediation solutions for sites impacted by organic and inorganic compounds. Laurie has managed numerous remedial investigations and feasibility studies for complex issues associated with surface water, groundwater and discharges from sewer systems. She has dealt with contaminants ranging from fluoride and arsenic to chlorinated solvents, explosives and fuel compounds. Laurie has been actively involved in numerous Water Quality Assurance Revolving Fund (WQARF) and Superfund (CERCLA) sites. She has taught graduate courses in water and soil remediation at Arizona State University. She has extensive experience working with USEPA and various county and city regulatory agencies across the US.

**Patrick Lewis** is President, Senior Scientist, and co-founder at Defiant Technologies, manufacturer of the FROG-4000. Pat has 24 years of experience in analytical chemistry and application development. He has worked for 18 years in the field of chemical analysis micro systems and holds 10 patents in the area. Pat has developed microsystems for volatile organic compounds, chemical warfare agents, toxic industrial chemicals, explosives, and other applications.

**Eric Litman** is an environmental scientist at the NewFields Environmental Forensics Practice in Rockland Massachusetts. He has fourteen years of environmental chemistry experience specializing in analytical method development, forensic data quality assurance and technical project management. This work is performed in support of forensic site investigations, liability management and natural resource damage assessments.

**Heather Lord** has over 20 years of experience in chemical analysis, new method development and technology evaluation. In her role at Maxxam she collaborates with scientists in industry, government and academia on innovative R&D projects. Under Heather's supervision, the Maxxam research team is currently investigating improved strategies for environmental forensics, evaluating LDPE passive sampler technology for surface water and groundwater monitoring, evaluating SPME technology for water and food analysis, and developing novel strategies to monitor polymer degradation in environmental samples. The group's recently completed projects include the improvement of elemental sulphur analysis in soil and the development of strategies for organic characterization of oil sands produced water. Heather obtained a B.Sc. in Environmental Biology from the University of Guelph and a Ph.D. in Analytical Chemistry from the University of Waterloo. She has delivered over 30 lectures at Canadian and international conferences, edited two books on sample preparation and authored over 50 peer-reviewed papers.

**Victor Maroukian** is an Account Executive Officer with the Environmental Practice Group at The Travelers Companies. His entire career has been dedicated to analyzing recognized, as well as emerging, pollution risks and structuring appropriate insurance solutions for private, public, and government entities. Prior to Travelers, Mr. Maroukian held underwriting and management positions at Zurich Financial Services, American International Group (AIG), and Reliance National. He has a BBA degree in Risk Management and Insurance from The College of Insurance in New York City (currently the School of Risk Management, Insurance and Actuarial Science at St. John's University) and an MBA in Finance/Business Economics and Management Systems, with an International Business Designation, from Fordham University, also in New York, NY.

**Diana Marquez** is an Associate Toxicologist with Burns & McDonnell and serves as the company's National Practice Leader for Risk Assessment Services. She has over twenty years of risk assessment experience and has worked with a wide variety of sites under CERCLA, RCRA, and state-led programs. She has successfully completed work nationwide for both human health risk assessments and the determination of site-specific cleanup levels. She has direct experience working with large PRP groups on complex sites that require careful negotiations with regulators. Through this experience, she has gained in-depth knowledge of state and federal regulations. Ms. Marquez has a bachelor's degree in biology and a master's degree in toxicology; and has authored 15+ publications on risk based corrective actions and vapor intrusion.

**Chris Martin** is a graduate student in the Environmental and Water Resources Engineering program at Tufts University. Previously, he earned his B.E. in environmental engineering from Dartmouth College. He has 3 years of experience in environmental consulting with Geosyntec Consultants in Acton, MA, where he provided support for varied projects with a particular focus on environmental site investigation, vapor intrusion investigation, and the design, implementation, and optimization of in-situ chemical oxidation (ISCO) remedies.

**Gerard Martin** has more than twenty-five years combined consulting and regulatory experience. Mr. Martin has been the Chief in the Bureau of Waste Site Cleanup at the Southeast Regional Office (Lakeville) of the Massachusetts Department of Environmental Protection (MassDEP) since April 1995. In this capacity Mr. Martin provides supervision of the complex sites; oversees the Compliance and Enforcements efforts in the Region; serves as the Region's Technical Brownfields Coordinator; and manages and directs the work associated with the review and issuance of Waste Site Cleanup Permits, management of the risk reduction measures and other selected response actions at the more complex sites. More recently, Gerard has been overseeing the workgroup to develop new Vapor Intrusion Guidance for MassDEP. Prior to working at the DEP, Mr. Martin was a Senior Hydrogeologist at SAIC Engineering, Middleboro, MA and Hydrogeologist at GHR Engineering in Lakeville, MA. In addition Mr. Martin is a visiting lecturer teaching Physical Geology, Environmental Geology, Hydrogeology and Contaminant Hydrogeology at Bridgewater State University.

**Michael E. Martin** is a Project Manager with Tighe & Bond's site assessment and remediation staff and has over 10 years of experience in characterizing and managing soils for municipal, power utility, development and industrial clients. He currently serves as project manager for all of NSTAR and Public Service of New Hampshire (PSNH) soil management projects. As project manager, he is responsible for developing the sampling and analysis programs, evaluating soil management options, preparation of soil management plans and disposal documentation. Additionally, Mr. Martin is currently assisting PSNH with the development of a State wide Soil Management Plan to manage construction soils at their electrical substations throughout New Hampshire. Mr. Martin also serves as project manager for several large development and transportation contractors in the greater metropolitan Boston area, which includes the identifying potential facilities, preparation of soil management plans and permits, and third party review of disposal documentation for acceptance at receiving facilities.

**Mario Maspero** is 42 years old. He's a lawyer and also one of the vice presidents of eni spa. He has developed many years experience in criminal trials in Italy about pollutions, environmental disaster regarding sediments, water and fish, and finally workers diseases. Mario had worked for 10 years at Catholic University of Milan where he had published several academic publication about criminal code and also psychologist responsibility. He had leaded up few lesson at the Graduate School of Lawyer of the Catholic University above. He has been arranging many criminal trials where eni and its representatives have been involved and most of them had closed successfully. Mario has been working on Porto Torres site about his technical and environmental problems since 2004.

**Ben McAlexander** is a contaminant hydrologist for Trihydro Corporation. He is based in Orono, Maine. He received a BS in environmental sciences and engineering from the University of North Carolina and an MS in environmental engineering from the University of Wyoming. He is a member of the American Institute of Hydrology. His work focuses on site characterization and remedial assessment for large petroleum-affected sites.

**Rick McGregor**, M.Sc., CGWP, P.Geo. has over 23 years' experience in groundwater and soil assessment and remediation and has worked in over 30 countries including Canada and the United States. Rick holds a M.Sc. from the University of Waterloo in hydrogeology and geochemistry and is a Certified Ground Water Professional in Canada and the United States. Rick's professional experience includes tenures at the Canadian government's Wastewater Technology Centre as a research hydrogeologist and geochemist followed by time consulting and remedial contracting. Rick has served on numerous Canadian and international technical advisory committees and he has authored over 40 technical papers on the remediation of groundwater.

**Katherine McMahon** is a Research Associate at Matson and Associates (M&A), an environmental consulting firm located in State College, Pennsylvania. She received her B.S. in Environmental Resource Management, specializing in water resources from the Schreyer Honors College at The Pennsylvania State University. Ms. McMahon's research focuses on the legislative and regulatory history of hazardous compounds including PCBs. She is currently finishing a detailed history and analysis of PCBs as regulated by TSCA and RCRA to be submitted for publication. At M&A Katherine also assists in forensic inquiries and historical research covering a variety of industrial sites and a wide range of chemicals and contaminants.

**Nancy E. Milkey**, P.G., LSP is a Senior Project Manager in the Hydrogeology Group at Tighe & Bond, an environmental and engineering consulting firm headquartered in Westfield, Massachusetts. She is the firm's Environmental Technical Practice Leader and specializes in the assessment and remediation of oil and hazardous materials. She has over 20 years of experience working on the assessment of brownfields sites. Ms. Milkey holds a masters degree in hydrogeology from the University of Massachusetts at Amherst and she is a Licensed Professional Geologist in the state of New Hampshire and Licensed Site Professional in Massachusetts.

**Michael E. Miller**, Ph.D. is an environmental chemist who specializes in bioremediation as well as other technologies for remediation of contaminated soil and groundwater; development and evaluation of sustainable remediation approaches; evaluation of the fate and transport of organic and inorganic contaminants in soil, water, and air; vapor intrusion; and environmental statistics. He has been with CDM Smith in Cambridge, Massachusetts since 1990 where he is currently the Remedial Technologies Sub-Discipline Leader. He is an active member of the Sustainable Remediation Forum (SURF), and is the co-chair of SURF's Academic Outreach Initiative. He is also a member of the Scientific Advisory Board of the Association for Environmental Health & Sciences (AEHS) Foundation east coast annual Conference on Soils, Sediments, Water and Energy.

**Will Moody** has nearly 15 years of environmental consulting, project management and site remediation experience. For the last 10 years, he has been working with Geo-Cleanse's innovative remedial design, implementation and marketing departments. Mr. Moody has designed and managed a wide range of in-situ chemical remediation projects, which have addressed a variety of contaminants including chlorinated solvents, petroleum hydrocarbons, MGP constituents, NAPLs and emerging contaminants (e.g., 1,4-dioxane and Freon). Mr. Moody has supervised two of the largest in-situ chemical oxidation projects in the U.S., and has been involved with several projects in Europe. His role at Geo-Cleanse also includes field operations, site analysis, and laboratory studies. Mr. Moody is currently Director of Sales & Marketing and a Project Manager for Geo-Cleanse. Mr. Moody has a Bachelors degree in Environmental Science from Virginia Polytechnic Institute and State University.

**Ibrahim E. Mousa**, PhD is the associated professor of environmental science, Environmental Biotechnology department, Genetic Engineering and Biotechnology Research Institute (GEBRI), University of Sadat city, Egypt. He has BSc. of Biochemistry, Biochemistry Diploma, MSc. of Bioscience and Technology, and PhD of Microbiology. He has over 20 years' experience in the water and water technologies for domestic uses. Dr. Mousa has served as an expert on a wide range of chemical and biological treatment technologies as a consultant to industry sector. Since 2000, Dr. Mousa has focused his attention on environmental education in University of Sadat City. He has many publications in the field of water and wastewater treatment via different technologies.

**Ellen Moyer** is a Professional Engineer with a B.S. in anthropology, an M.S. in environmental engineering, and a Ph.D. in civil engineering. Her 30 years of environmental engineering experience consist primarily of assessing and remediating a wide variety of organic and inorganic compounds in soil and groundwater using physical, chemical, and especially biological treatment technologies. A particular specialty is the assessment and remediation of MTBE, TBA, other fuel oxygenates, and petroleum hydrocarbons. She was lead editor of the *MTBE Remediation Handbook* and co-developed and co-developed more than 100 seminars in the United States, Canada, and Europe about the assessment and remediation of MTBE, TBA, and other volatile organic compounds. She established her own consulting practice, Greenenvironment, LLC, in 2004.

**Kate Munson** is currently a graduate student at Tufts University pursuing a degree in environmental and water resources engineering. She received a B.S. in Civil Engineering from Brigham Young University in 2013.

**Jonathan Myers** has a Ph.D. in Geochemistry plus over 30 years of full-time environmental consulting experience. His specialties include environmental forensics, geochemical modeling, natural attenuation investigations, and the use of geochemical evaluations to distinguish between contamination versus naturally high background concentrations of elements in groundwater, surface water, sediment, and soil. Dr. Myers has authored over 30 peer-reviewed research papers and book chapters, and has taught short courses on geochemical and environmental forensic techniques.

**Steven C. Nadeau**, Coordinating Director of the SMWG and a member of Honigman Miller Schwartz and Cohn LLP's Environmental Practice Group, has a substantial national sediment practice. Mr. Nadeau has been working on sediment issues extensively since 1992. Mr. Nadeau was instrumental in founding the Sediment Management Work Group ("SMWG") in 1998 and has served as its Coordinating Director since that time. Mr. Nadeau also has assisted clients on a number of major sediment sites around the country by providing strategic advice supporting utilization of the risk-based principles set forth in contaminated sediment national policy. Mr. Nadeau is a 1977 cum laude graduate of Boston College Law School and is a 1974 magna cum laude graduate of Boston College. Mr. Nadeau was recently named the Michigan Environmental Professional of the Year in 2011 and Best Environmental Lawyer in Detroit for 2010.

**Roya Nazari** is a third year doctoral student. She graduated from the Azad University of Savadkooh, Iran in 2008 with a B.Sc. in Pedology (Soil Eng.) in Agricultural Engineering. She continued her education and got her M.Sc of Civil and Environmental Engineering-Water Resources at City College of New York. As a masters student she was investigated and monitored lake ice phenology in the Northern Hemisphere to generate long-term series of ice coverage and extract any eventual climate change impact. She is currently doing her Ph.D of Civil and Environmental Engineering at Northeastern University. So far her research focus is on degradation of chlorobenzene and TCE in groundwater, using electrochemical groundwater treatment.

**Steffen Griepke Nielsen** is involved in the front end designs at TerraTherm. He is responsible for the subsurface designs, including the numerical steam and TCH modeling conducted in the early design phase of our projects. In addition, he leads up TerraTherm's data management efforts, and develops tools and systems allowing real time client access for operational data during operation of our thermal projects. Steffen has been a member of TerraTherm's team since 2008.

**Azam Noori** is a postdoctoral associate at State University of New York- College of Environmental Science and Forestry. Her work includes petroleum and heavy metals phytoremediation and nanoparticles toxicity. She is using microorganisms, specifically mycorrhizal colonization, to facilitate the phytoremediation process. She is studying the physiological and molecular responses of plants to environmental stresses. Currently, she is studying nanoparticles uptake mechanism by mycorrhizal plants using molecular analysis.

**Jim Occhialini** is a vice president of technical sales with Alpha Analytical and he serves as the product line manager for the laboratory's ecological/human health risk assessment and dredging project

applications. Jim has over 35 years of environmental analytical and consulting experience working on a wide range of project applications. Jim is very active with a number of regulatory workgroups and industry associations. Prior to joining Alpha, Jim was a principal scientist and laboratory manager for a large environmental engineering firm where he had 20 years of service.

**Bamidele I. Olu-Owolabi** Ph.D, is a Professor of Analytical and Environmental Chemistry at the Department of Chemistry, University of Ibadan, Ibadan-Nigeria. Professor Olu-Owolabi received her Ph.D in Analytical Chemistry from the University of Ibadan, Nigeria. Her research interest covers: Adsorption of contaminants/pollutants by soil and soil phases, fate of contaminants/pollutants in soil, remediation of contaminated/ polluted soil and water using clays and modified clays, exploitation of underutilised legumes and cereals as alternative starch and protein for the industries. She has published over 60 articles in peer-reviewed journals in the broad areas of soil, water and food. Professor Olu-Owolabi is a recipient of the following awards: Research Group Linkage Programme, TWAS-USM Visiting Researcher, Alexander von Humboldt Foundation Return Fellowship, DAAD Visiting Scholar Fellowship, TWAS-CAS Visiting Scholar Fellowship, Alexander von Humboldt Foundation fellowship.

**Tony Palagyi** has over 22 years on experience in environmental project management. Tony has worked extensively on site assessments and remediation activities at retail, bulk distribution, and refining facilities. He has participated in numerous spill events as the NRDA Coordinator on regional, national and international response teams. Mr. Palagyi has provided litigation support as a consulting, fact and expert witness on several NRDA and CERCLA cases. He has managed restoration projects in beach, wetland and aquatic habitats. He has served as technical Working Group Lead for Marine Mammal and Turtle issues. His field experience includes studies on marine mammals, salmonids and avian species.

**Karen Pelto** coordinates the Natural Resource Damages Program at the Massachusetts Department of Environmental Protection and has worked on NRDAR since 2008. She works with teams of technical, policy and legal experts to assess injuries to natural resources stemming from oil spills or releases of hazardous materials and substances and plan and implement restoration projects. A 1988 graduate of Hampshire College, she spent most of her career in the Department of Fish and Game, and, in 1999 created the first interagency program in the country to restore rivers through the selective removal of dams. She is particularly interested in how community, academic, and government institutions react to emerging natural resource issues and has worked throughout her career to facilitate collaborative decision-making and improve public participation in planning and regulatory processes.

**Kurt D. Pennell** is Professor and Chair of the Department of Civil and Environmental Engineering at Tufts University. Dr. Pennell received his Ph.D. from the University of Florida and completed a post-doctoral fellowship at the University of Michigan. Prior to moving to Tufts in 2009, Dr. Pennell was a Professor in the School of Civil and Environmental Engineering at the Georgia Institute of Technology and held an adjunct faculty appointment in the Department of Neurology at the Emory University School of Medicine. His research focuses on remediation technologies, engineered nanomaterials, and environmental toxicology. Dr. Pennell has published over 110 referred journal articles and book chapters, and is a registered Professional Engineer (PE) and a Board Certified Environmental Engineer (BCEE). He has received numerous awards, including the Strategic Environmental Research and Development Program (SERDP) Project of the Year in Environmental Restoration (2006, 2012), and served on the National Research Council (NRC) committee which recently published "Alternatives for Managing the Nation's Complex Contaminated Groundwater Sites".

**Kathy Phillips** completed her Doctorate in Chemical Engineering at the University of Delaware in 2010. Since that time, she has worked for Geosyntec Consultants, developing experience in a wide range of remedial projects focused on groundwater and soil. Dr. Phillips' consulting experience includes investigation; passive risk mitigation; active remedy implementation; remedy operation and monitoring; development of conceptual site models; water, soil, soil gas, and air data analysis; risk assessment; reporting; and remediation site closure. She has worked on both federal and multiple state-regulated sites impacted by chlorinated solvents and other volatile and semi-volatile organic compounds, petroleum hydrocarbons (including non-aqueous phase liquids), metals, polychlorinated biphenyls, and radionuclides. She has also provided extensive support for litigation projects, including reviewing site

information gathered over several decades, evaluating environmental liability, and assisting in the preparation of expert witness reports. When not working as a consultant, Dr. Phillips is often found traveling the world. Since moving to the U.S., she has visited most of the country's national parks and is looking forward to exploring the others.

**Paul Philp** received his Ph.D. in organic chemistry from the University of Sydney (Australia) in 1972 and my D.Sc. degree from the same University in 1998. He then spent one and a half years as a post-doctoral fellow with Professor G. Eglinton at the University of Bristol (England) undertaking research in various aspects of organic geochemistry and the application of analytical techniques such as gas chromatography-mass spectrometry to this area of research. Following this, he spent four years at the University of California, Berkeley, as a research associate, directing the organic geochemistry research group of Professor Melvin Calvin. He returned to Sydney in 1977 to join the CSIRO, Fuel Geoscience Unit, now part of the Division of Fossil Fuels, where he was a principal research scientist studying various aspects of petroleum geochemistry. In June 1984, he joined the faculty at the University of Oklahoma. Recently a large amount of his research has been concerned with environmental studies and particularly investigating the use of stable carbon isotopes as a means of monitoring and tracking pollutants in the environment. Professional activities: associate editor of *I. Environmental Forensics*, and Chairman of the Geochemistry Division of the American Chemical Society, 1993-1995.

**Renée Lagassé Pineo** holds a bachelors in Biology and a master's degree in Environmental Management and Policy. She has four years of experience in the management of the design, construction, operation, sampling, and demobilization of thermal remediation projects and has six years of experience in the management of initial response actions and subsequent remedial activities to hazardous material releases.

**Scott Pittenger** is an environmental remediation manager currently managing projects within the Norfolk Southern Corporation portfolio of site environmental liabilities. Before joining the railroad in 2012, he spent fifteen years as a consultant. His most exciting responsibilities included managing an in-house treatability studies laboratory, acting as the south region Green and Sustainable Remediation (GSR) technical contact, and co-leading a technical practice group within an internal advisory network. Over the course of his career, he has been afforded the opportunity to implement chemical oxidation, bio- and phyto-remediation technologies throughout North America, and has performed bench studies and provided technical guidance and field oversight for project sites in Canada, Mexico, Germany, Italy, and Israel.

**Thomas M. Potter:** With over twenty-two years of experience working in the field of waste site cleanup, Mr. Potter currently serves as the Statewide Clean Energy Development Coordinator for the Bureau of Waste Site Cleanup at the Massachusetts Department of Environmental Protection (MassDEP) in Boston. In conjunction with the Massachusetts Department of Energy Resources (DOER), Mr. Potter ensures project-specific support and coordination of parties seeking to develop renewable energy and energy efficiency projects in Massachusetts; provides for regulatory review and streamlining; develops policies and practices to review and assess clean energy opportunities, and provides broad public education and engagement for clean energy development opportunities in Massachusetts. Prior to this role, Mr. Potter served on the MassDEP's Commissioner's Office Environmental Innovations Team to help advance some of the Commissioner's priorities in the areas of expanding innovation and energy-environmental coordination across MassDEP programs and regions using innovative and efficient approaches to the agencies environmental protection programs. Prior to his help with this Team, Mr. Potter served for ten years as the Statewide Audit Coordinator for MassDEP's Bureau of Waste Site Cleanup Audit Program in Boston. As the Statewide Audit Coordinator, Mr. Potter was responsible for the implementation and operation of the legislatively mandated Audit Program, as well as, the legislatively mandated audit of Activity & Use Limitations by the 1998 Brownfield's Legislation. Prior to joining the MassDEP, Mr. Potter worked throughout New England as an environmental consultant in the private sector for over 5 years, concentrating primarily on sites regulated under the Massachusetts waste site cleanup program. As an Adjunct Professor, Mr. Potter completed a semester of instruction on the Massachusetts waste site cleanup regulations at the University of Massachusetts in Boston. Currently a resident of the City of

Boston, Mr. Potter holds a Bachelor of Science degree in Geography from Arizona State University in Tempe, Arizona.

**Larry Rader** is a professional geologist with over 19 years of experience in environmental remediation and consulting. He specializes in feasibility evaluation, design, cost-estimating, implementation and construction oversight of soil and groundwater remediation projects. He has expertise in soil and groundwater remediation projects utilizing innovative technologies such as in-situ chemical oxidation, bio-enhancements, enhanced soil vapor extraction, and complicated engineered excavations. Mr. Rader serves as MEC<sup>X</sup>'s Director of Remediation Services, operating out of the company's Chicago, Illinois office. In this role, he is responsible for coordination, logistics and execution of remediation projects throughout North America.

**Richard Rago** serves as a Haley & Aldrich Lead Scientist and is based out of their Rocky Hill, CT office. Since joining Haley & Aldrich in 1991, Mr. Rago has long been recognized for contributions to regulatory agencies and professional organizations, including for his original support for Massachusetts Department of Environmental Protection's development and implementation of the VPH and EPH petroleum analytical methods, subsequent participation of the Data Quality Enhancement Program committee, and contributions to numerous other state and federal guidance documents. Mr. Rago has also directed independent research studies in support of improved environmental characterization, including indoor air sampling intervals, soil gas long term temporal stability, indoor air background, false positives in analytical quantitation of metals, and potential bias in petroleum hydrocarbons measurements including VPH methodologies.

**Ljiljana Rajic** has a Doctorate degree in Chemical Sciences from the University of Novi Sad in the Republic of Serbia in 2010. She served as a Research Trainee from November 2007 to May 2009 and a Research Assistant from May 2009 to October 2011 at the University of Novi Sad (Serbia). After being a Research Associate in the Department of Chemistry, Biochemistry and Environmental Protection at the University of Novi Sad (Serbia) from October 2011 to January 2013, Ljiljana continued her research development as Postdoctoral Research Associate at Northeastern University. Currently, Ljiljana is an Associate Research Scientist working on the development of electrochemical groundwater technologies for degradation of chlorinated organic compounds and phthalates, as a part of the efforts of PROTECT project (<http://www.northeastern.edu/protect/>).

**Sibia Ranjbar** is a PhD candidate in the Civil and Environmental Engineering Department at Temple University where she started her PhD in Environmental Engineering in 2011. She completed her Masters and undergrad studies in chemical engineering at Sharif University of Technology, Tehran, Iran. Her research interests lie in the area of environmental biotechnology, specifically focused on biofuel production from microalgae coupled with industrial and wastewater treatment. She uses gene expression analysis techniques to identify the effect of contaminants on growth and lipid accumulation of algae cells. She is also an instructor for the undergraduate course "The Environment" which addresses students' questions about what is happening in the environment today.

**Dick Raymond** is the President of Terra Systems, Inc. which is a bioremediation products and services company that is celebrating its 22 year anniversary. During the past 30 years, he has designed and managed numerous successful in-situ and ex-situ soil and groundwater remediation projects in the United States, Brazil, Japan, and Europe. Dick co-founded Biosystems, Inc., the first environmental bioremediation company in the United States in 1984. The other co-founder is Dick Raymond, Sr. who authored the first in-situ bioremediation patent in the U.S. in 1971. Working together, Dick Raymond Jr. and Sr. proactively commercialized practical aerobic bioremediation technology solutions in the 1980's. Biosystems was later purchased by the DuPont Co. and renamed DuPont Environmental Remediation Services (DERS). During the past two decades, Dick Raymond Jr. has been an active participant in the development of advanced anaerobic bioremediation technology solutions. Dick is a co-founder of the Remediation Partners Consortium, a strategic alliance of complimentary remediation technology solution providers. He is also an affiliate member of the Alliance of Hazardous Materials Management Professionals (formerly the Academy of Certified Hazardous Materials Managers) and is a contributing member for the Sustainability in Remediation Forum (SURF). Dick received his BA/BS degree from American University in Washington, D.C. and an Executive MBA from Temple University in Philadelphia,

PA. As an internationally recognized platform speaker, he is frequently called upon to draw upon his “hands-on” experience to provide innovative and sustainable remediation solutions to recalcitrant remediation problems in soil, groundwater, leachate, sludge and sediment.

**Todd Rettig** serves as the Director of the Office of Land Management for the Illinois Department of Natural Resources. In addition to the administration of 322 State Parks and other sites, the Office of Land Management assesses injuries to natural resources, designs and implements ecological restoration projects, as well as addressing other environmental contaminant issues. Todd worked for the Illinois Environmental Protection Agency from 1991-2004 and has worked for the Illinois Department of Natural Resources since 2004. He received his BA from the University of Illinois (1987) and JD from IIT Chicago-Kent College of Law (1990). Todd has worked on NRDA issues as a trustee representative for the State of Illinois since the mid-1990's.

**David W. Rich** is the President and founder of Geotech Computer Systems, Inc. Dr. Rich has a B.S. in geology from the University of Notre Dame, and an M.S. and Ph.D. in geology from The University of Illinois. He combined his interest in computers and his knowledge of the earth sciences industry in 1986 to found Geotech Computer Systems. He has over 30 years of experience in the petroleum, mining, and environmental industries, having worked for Texaco (now Chevron), Shell, Sabine Corporation, and Grant Environmental/Sciencetech in addition to Geotech. With Geotech, Dr. Rich has worked with well-known corporations, federal, state and local governments, and small businesses and is a recognized expert in the field of earth science computing and environmental database management. In 1982, Dr. Rich co-founded C.O.G.S., the Computer Oriented Geological Society, an early leader in promoting earth science computing. He is the author of the book Relational Management and Display of Site Environmental Data, from CRC Press/Lewis Publishers. He is a member of a number of local and national earth science organizations, and trains and speaks extensively on environmental software technology and other earth science computing topics.

**Dawn Riley** is a MA Licensed Site Professional and former environmental consultant with 20 years of experience in assisting clients with hazardous waste site assessment and cleanup. Currently, Ms. Riley manages the EHS program for a leading international energy and telecom cable system producer by providing sustainable regulatory compliance solutions. Ms. Riley has a Bachelor of Science degree in Environmental Sciences from the University of Massachusetts, Amherst and is currently working towards a master's degree in Sustainability and Environmental Management at Harvard University. Ms. Riley is also a member of the Scientific Advisory Board of the International Conference on Soils, Sediments, Water and Energy (UMASS Soils Conference).

**G. Todd Ririe** has a BA degree in geology from Cornell College, and a PhD degree in geology from the University of Iowa. Todd has over 25 years of experience in applied geology, geologic instruction, and environmental applications of geology. Since 1990, his primary responsibility has been to provide technical support on environmental projects primarily focused on petroleum hydrocarbon site assessment, vapor intrusion, and application of effective remedial approaches to reach closure. He is located in BP's La Palma, CA office.

**Michael Ritorto** is currently a Senior Geologist at Roux Associates. He received his B.S. from the University of Michigan and his M.S. from the University of Florida. Michael's educational background is in quantitative hydrogeology. During his time at Roux Associates, Michael has experience conducting aquifer tests, bail down tests, groundwater modeling and LNAPL volume modeling. Michael has led multiple remedial investigations and has contributed to multiple construction and demolition projects. Michael currently resides in Long Island, New York with his wife Elodie. Outside of work, Michael enjoys the outdoors and is a passionate traveler, with frequent trips to visit his wife's family in France. Michael can be contacted at [mritorto@rouxinc.com](mailto:mritorto@rouxinc.com).

**Violina Angelova Rizova** is a Professor at Department of Chemistry at Agricultural University of Plovdiv, Bulgaria. A Scientist with an M.S. in chemistry and a Ph.D. in agro chemistry, she has over 20 years' experience in the biogeochemistry and speciation of trace metals in soil system, plant analysis, fate of heavy metals in soil-plant system and phytoremediation of heavy metal contaminated soils. Over

the past 5 years, Dr. Rizova has focused her attention of possibilities for growing an industrial crops in contaminated areas, the use of contaminated agricultural products, as well as the opportunities for heavy metal content reduction before their instant consumption or processing. She has authored over 30 scientific publications on uptake, distribution and accumulation of heavy metals in root, oil, fibre, leguminous, wheat, medicinal and aromatic crops and tobacco.

**Matthew Rood** is a senior engineer at AECOM with 9 years of experience who specializes in contaminated site assessment and remediation. He currently works on PCB-impacted facilities and has site assessment experience at former MGP sites as wells as retail petroleum facilities. He attended Northeastern University in Boston where he earned a Bachelor of Science degree in Geology and later received a Master of Science degree in Environmental Engineering from the University of Connecticut.

**Betsy Ruffle** is a Senior Risk Scientist with AECOM's Risk Assessment Technical Practice located in the Chelmsford, Massachusetts office. She has over 25 years of experience providing human health risk assessment consulting services to clients throughout the US and internationally. She regularly applies risk-based techniques to develop health-protective and sustainable solutions to a broad range of environmental exposure issues ranging from simple screening assessments to complex modeling analyses. She has particular expertise is evaluating health risks from exposure to chemicals that bioaccumulate in the foodchain, including fish. She is currently leading the human health risk assessment for the Lower Passaic River Study Area Superfund site in New Jersey. Her work has included design and implementation of a year-long creel/angler survey to understand fishing and consuming behaviors of anglers in the LPRSA. Betsy holds a B.A. in Biology from Vassar College and an M.S. in Environmental Health from Tufts University.

**Brenda Sanders** has more than 30 years of experience in ecotoxicology, sediment management, and stress biology. Her technical expertise focuses on the mechanisms of toxicity, trace metals, and xenobiotics on wildlife, including benthic invertebrates, fishes, birds, and mammals. She has worked in riverine, estuarine, and fresh water and coastal ecosystems throughout the country. Dr. Sanders has been involved in numerous natural resource damage assessments, ecological risk assessments and sediment evaluations. She has served on numerous federal and state panels and committees, was a delegate appointed by the US Department of State to the North Pacific Marine Science Organization, served as the North American Editor of the Ecotoxicology Series published by Chapman and Hall, and was on the editorial board for CRC's Reviews in Aquatic Sciences. Dr. Sanders also served on the Board of Directors for the Society of Environmental Toxicology and Chemistry (SETAC) where she also has chaired numerous sessions and symposia, including a session on NRD Assessments at Hazardous Waste Sites.

**John Schaffer** has over twenty five years of experience as an aquatic ecologist, ecological risk assessor and sediment quality assessment specialist. He holds a Bachelor of Science and Masters of Arts Degree in Biology from the William Paterson University of New Jersey. He is a certified ecologist with the Ecological Society of America (ESA) and Certified Hazardous Materials Manager (CHMM). His professional experience includes assessment of contaminant bioaccumulation/bioconcentration inclusive of PCBs, dioxins, heavy metals, and PAHs within aquatic, marine and terrestrial food chains and sediment quality assessments within freshwater and marine ecosystems in the continental United States, Alaska and the Virgin Islands. Riverine and estuary systems investigated include systems from the Atlantic Slope, Great Lakes, Mississippi and Missouri River basins. Site specific experience includes food chain modeling, baseline ecological risk assessments, pre-remediation planning and restoration goal development, data quality objective identification, preliminary remedial goal development, post remediation recovery monitoring programs for wetland, lacustrine, riverine and estuarine ecosystems. He has remained very active in developing remedial goals for sediments through engagement of trust resource managers and regulating parties for private, state and federally funded project sites.

**Richard Schaffner** is a Senior Consultant/Hydrogeologist with Pennoni Associates in their Methuen, Massachusetts office. With 25 years of experience, his practice includes hydrogeologic investigations and remediation of contaminated sites, with principal focus on applied environmental biotechnology. Mr. Schaffner has worked on intrinsic and enhanced bioremediation projects throughout the United States as

well as the Caribbean, Canada, Japan, India, Saudi Arabia, Australia, and North Africa. With undergraduate and graduate degrees in geology and environmental engineering, respectively, he is registered as a Professional Geologist in New Hampshire and is a Certified Ground Water Professional (CGWP) through the National Ground Water Association. He holds two patents on bioremediation additives, one in the USA and the other in Japan, and moderated the Bioremediation Discussion Group (BioGroup, <http://bioremediationgroup.org>) on the Internet from 1996 to 2011, which facilitated technology transfer on biological remediation and natural attenuation topics.

**Laurel Schaider** is a research scientist at Silent Spring Institute where she leads the Institute's Cape Cod groundwater and drinking water research program. She is also a research associate at the Harvard School of Public Health. Her research interests lie in contaminant fate and transport and links to human exposure and community-based research. Dr. Schaider earned her master's degree and Ph.D. in Environmental Engineering at the University of California, Berkeley, and a bachelor's degree in Environmental Engineering Science from MIT. She has taught ecology and environmental engineering courses at MIT and Northeastern University.

**Jeff Schick** is a Senior Associate and Branch Office Manager for Leggette, Brashears & Graham, Inc. and is based in Columbus, Ohio. Jeff has over thirty-five years of experience as a consulting hydrogeologist, managing environmental and water supply projects. His technical practice areas include site assessment and investigation, soil and groundwater remediation, vapor intrusion and waste management under RCRA, CERCLA and State remediation, UST and voluntary cleanup programs. He serves as client manager of LBG's projects for Eaton Corporation and assists Eaton in managing environmental issues at their current and former sites, including compliance with regulatory programs and supervision of environmental cleanups. Jeff holds a Bachelor's Degree in Geology from Kent State University and is a Registered Professional Geologist in California, Pennsylvania, Kentucky, Missouri and Tennessee and a Registered Site Manager in North Carolina's Registered Environmental Consultant Program.

**Jasmine Schliesmann-Merkle**, CHMM, is an environmental compliance and training specialist with over 25-years' experience supporting both public and private sector clients. She has served as a Program Manager for multiple EPA contracts focused on providing enforcement and compliance support for various regulatory programs including RCRA, CERCLA, SARA, OSHA and TSCA. Jasmine is highly knowledgeable of federal and state regulations and has provided significant permitting, compliance evaluation and regulatory review support to clients. In addition, she has conducted over a hundred site assessment audits and inspections for multiple industries including nuclear and fossil fuel fired power generation; chemical manufacturing; iron, steel and brass foundries; and, oil refining. Jasmine delivers special expertise in regard to training development and presentation. She has created more than 100 technical and regulatory training programs for federal, state, local and tribal regulatory agencies and the regulated communities nationwide. She teaches hazardous materials management courses for the NIOSH Education Research Centers at UCLA and the University of South Florida, for the CDC and most recently at the College & University Hazardous Materials Management Conference.

Ms. Schliesmann-Merkle received a B.S. in Biology and Community Nutrition from Georgia State University in 1989. She received her registration as a dietitian in 1990 from the American Dietetic Association (ADA) and was recertified in 1999. She is currently pursuing her Project Management Professional (PMP) and Regulatory Affairs Certification (RAC)-US certifications.

**Nicky Sheats**, Esq., is currently the director of the Center for the Urban Environment of the John S. Watson Institute for Public Policy at Thomas Edison State College, which provides support for the environmental justice (EJ) community on both a state and national level. Among the issues he is working on are particulate matter air pollution, climate change, cumulative impacts, developing EJ legal strategies and increasing the capacity of the EJ community to address these and other issues. Sheats is a founding member of the NJ EJ Alliance, the EJ Leadership Forum on Climate Change and the EJ and Science Initiative. He has been appointed to the NJ Clean Air Council, EPA's Clean Air Act Advisory Committee and the National EJ Advisory Council. He is also a co-author of the public health chapter of the National Climate Assessment. Sheats holds an undergraduate degree in economics from

Princeton University and a law degree and Ph.D. in Earth and Planetary Sciences from Harvard University. He previously practiced law for almost eight years as a public interest attorney.

**John Selleck**, P.E., is an Oil & Hazardous Materials Responder II for the State of Maine Department of Environmental Protection (MDEP). He has worked as an emergency responder for the past 5 years and as an engineer for 9 years for the MDEP. For over 21 years he has been involved with remediation of contaminated sites in the northeast part of America. He has a Bachelor of Science degree in both Physics and Civil Engineering.

**David Shea**, P.E. has 25 years of experience as an environmental and site remediation engineer, the last 12 of which have included vapor intrusion assessment and mitigation for residential, commercial, and industrial buildings. He is a Principal Engineer with Sanborn, Head & Associates in Concord, New Hampshire, and is responsible for leading vapor intrusion and environmental remediation projects throughout the US and abroad. He holds a B.S. in Civil Engineering from Princeton University and a M.S. in Civil Engineering from M.I.T. He is a licensed professional engineer in 12 states.

**Peter Simon** is a Senior Project Manager for Ann Arbor Technical Services, Inc. and has more than 20 years of experience focusing on contaminated sediment management (RI/FS), hazardous waste remediation, contaminant fate and transport, and restoration. Since 1990, Mr. Simon has been involved at progressive levels, in more than 100 major environmental projects for industry and government throughout the United States and overseas. His experience includes management of complex environmental projects, project planning and documentation, regulatory negotiations, public communications and presentations, large data/GIS systems design and management, field and laboratory sampling/analysis, data analysis, and remedial investigation, design and construction. Mr. Simon has extensive experience in the determination of sampling strategies for environmental media involving organic chemicals, toxicants, pesticides, and fuels. He has considerable experience implementing fluvial geomorphologic principles guided by fate and transport processes to efficiently characterize, assess, and integrate restoration strategies into remedial decision framework. Mr. Simon specializes in leading multi-disciplinary teams that include scientists, engineers, risk assessors, and ecologists to collaboratively identify, evaluate and select options that optimize cleanup goals that achieve the greatest net environmental benefit. Mr. Simon is a co-inventor of "*Geomorphology for Environmental Remediation Processes and Systems*" (U.S. Patent No. 7344337B2, 7758283B2, 7887259; Japanese Patent No. 4621246). This innovative approach consists of a series of environmental tools that address the transport, fate and effects of contaminants in aquatic environments—particularly river, lakes and estuaries. Mr. Simon has been successful in utilizing this process to design, implement, and investigate and achieve closure for contaminated sediment projects in both Federal and State-led programs.

**Philip Simon** is the Director of Chemistry and President of Ann Arbor Technical Services, Inc. and oversees 20 personnel including chemists, scientists, environmental scientists, and environmental technicians, and regulatory compliance specialists. Mr. Simon has over 40 years of experience in the field of environmental science and chemistry specializing in projects involving chemicals or chemical processes, hazardous waste management, remedial investigations, and closure/remediation activities. Since 1970, Mr. Simon has been responsible for hundreds of environmental projects for industry and government throughout the United States and overseas. His responsibilities include principal in charge during investigation, construction, operation, and regulatory negotiations on projects involving solid, hazardous, and industrial wastes, mixed waste contamination clean-ups, and design and implementation of innovative waste treatment technologies. Mr. Simon is a highly qualified expert witness with extensive deposition and trial testimony experience for litigation matters involving environmental contamination, water and wastewater treatment, hazardous and non-hazardous waste management, chemical processes in manufacturing, and chemical aspects of forensic science. He is an inventor of several chemical formulations and chemical processes for manufacturing and environmental control. He is a co-inventor of the *GeoMorph*<sup>TM</sup> process for environmental site investigation and remediation. He holds numerous U.S. and foreign patents for these inventions. Mr. Simon has authored, published, and/or presented more than 50 technical white papers/reports for industry, health councils, scientific journals, and government throughout the United States and overseas. He has extensive experience in the determination of organic chemicals, including toxicants, pesticides, petroleum residues and explosives in multiple matrices. His

method competency includes all forms of chromatography, low and high resolution mass spectrometry, and tandem mass spectrometry. Additionally his expertise includes the determination of metals and inorganic chemicals using separation schemes in combination with mass spectrometry or optical spectroscopy, as used in the speciation of metals.

**Harvinder Singh** has 12 year of diverse technical, and project/ task management experience in the field of civil and environmental engineering. Mr. Singh's experience covers all phases of site investigation/ remediation including remedial investigations, feasibility studies, pilot studies, remedial design, remedial action, and site closeout. Mr. Singh's site investigation experience includes preparation of statistics-based sampling plans, and multiple remedial investigation, preliminary assessment and site inspection reports. Mr. Singh has prepared multiple feasibility studies for complex sites including groundwater contaminated with DNAPL-range concentrations of chlorinated compounds, and soils contaminated with radioactive contaminants. Mr. Singh's remedial design experience includes design of multiple in-situ bioremediation pilot and full-scale systems; and preparation of excavation and grading plans for dig and haul projects. Mr. Singh has worked on various challenging projects requiring complex negotiations with regulatory agencies and development of innovative engineering solutions including technically-defensible approach to attain low remediation goals, and hydraulic fracturing for remediation of perchlorate in the low-permeability bedrock.

**Dave Smith** is a research geochemist with the U.S. Geological Survey in Denver, Colorado. He received a Ph.D. in geochemistry from Colorado School of Mines in 1979 and has worked with the USGS for 38 years. For the past 10 years, he has been leading a project to establish a new soil geochemical and mineralogical database for the conterminous United States (see <http://mrddata.usgs.gov/soilgeochemistry/>) which will be the subject of his oral and poster presentations. Dave is also co-leader of the Task Group on Global Geochemical Baselines, which operates under the auspices of both the International Union of Geological Sciences and the International Association of Geochemistry. He is Secretary of the Association of Applied Geochemists and an Associate Editor of the journal *Applied Geochemistry*.

**C. Mark Smith** is the Deputy Director of the Office of Research and Standards (ORS) at the Massachusetts Department of Environmental Protection (MassDEP) where he has directed a number of the Department's efforts to address priority air, water, solid waste and multimedia issues. At MassDEP, Dr. Smith has lead efforts on mercury, perchlorate, trichloroethylene (TCE), risk assessment guidance, beneficial use determination policies and environmental research. He earned a Ph.D. in the field of Molecular and Cellular Toxicology from Harvard University and a Masters degree in Environmental Management from the Harvard School of Public Health and has published in the areas of environmental policy, molecular toxicology, epidemiology and risk assessment. Dr. Smith was instrumental in developing and implementing the New England Governors and Eastern Canadian Premiers Regional Mercury Action Plan, the MA Zero Mercury Strategy and establishing the Quicksilver Caucus, a coalition of state environmental organizations focused on mercury policy, which he currently Chairs. He also directed ORS efforts addressing TCE developmental risks.

**John Sohl**, President and CEO of COLUMBIA Technologies relies on his 40 years of leadership and business development to direct innovative business solutions fusing technology, geochemistry, and informatics in the growing field of environmental services. John holds a Bachelors of Science degree from the U.S. Naval Academy and served 20 years in the U.S. Navy nuclear submarine force after graduating in 1972. In 1987, John received a Masters in Business Administration from Chaminade University in Honolulu. Upon leaving the service in 1992, John served in senior management positions with several small companies in the environmental industry. In 1999, he co-founded COLUMBIA Technologies with the goal of significantly advancing the state-of-the-art process in data acquisition and delivery for underground site assessments on a global level. John's integral role in providing his clients with remediation focused real-time data has resulted in long-term cost savings for over 1,000 high resolution site characterizations throughout Mexico, Canada, Brazil, and North America including Hawaii. John has supported over 300 customers including 20 of the top 40 environmental design firms, Fortune 500 companies, and state and federal agencies.

**Tamara Sorell** is a toxicologist with a focus on risk management and expertise in human health and ecological risk assessment. She has been responsible for the completion of evaluations at numerous sediment sites and has applied a variety of assessment tools including food chain modeling, in situ pore water measurements, hydrocarbon fingerprinting, macrobenthic surveys, bioassays, and equilibrium partitioning. In her environmental consulting career since 1987, Tamara has been active in numerous professional capacities and has served as Chapter President, Session Chair, and ecological risk assessment Short Course instructor for the Society of Environmental Toxicology and Chemistry. She has been a member of the ITRC Contaminated Sediments teams since 2008 and has been a key author, reviewer, and internet-based trainer supporting both the bioavailability and sediment remediation documents. She received an ITRC Industry Affiliates Program award for her participation on the team. Tamara earned a bachelor's degree in biochemical sciences from Princeton University in Princeton, New Jersey in 1981 and a PhD in Pharmacology from Columbia University in New York, New York in 1988. She serves as an Industry Affiliate with Montclair State University and a reviewer for the Integrated Environmental Assessment and Management Journal.

**Daniele Paolo Susanni** is a Senior Manager at ENVIRON Italy. He has 15 years of experience in environmental consulting with expertise in contaminated site assessment (soil and groundwater characterisation), risk assessment and remediation, expert services and litigation support. His technical responsibilities include the implementation of site investigations to remedial action programs where appropriate, groundwater modelling and treatment plant design. Daniele has worked extensively with industrial and commercial clients in a variety of sectors including petroleum, chemical, pharmaceutical, automotive, metals processing, electronic and manufactured gas plants. He has good expertise in application of in situ remedial technologies. Daniele has a PhD in Engineering Geology from the University of Ferrara and an MSc in Geology from the University of Milano, Italy.

**Danielle Sylvia** is a first year graduate student at Tufts University studying environmental and water resource engineering. She holds a B.S. in environmental engineering from the University of Vermont and a B.A. in engineering from Saint Michaels College.

**Ilisa Tawney** has a B.S.E. degree in Chemical Engineering from University of Maryland Baltimore County and an M.S. in Biological Resources Engineering from University of Maryland College Park and is a registered Professional Engineer in Maryland. During the nearly 10 years with Geosyntec Consultants, Ms. Tawney has worked on numerous impacted sites to conduct site investigations, evaluate remedial alternatives and design and implement remedial technologies including biological enhanced reductive dechlorination (ERD), in-situ chemical oxidation, co-solvent soil flushing, and Monitored Natural Attenuation including sites within State or Federal RCRA or CERCLA programs as well as international sites.

**Christopher M. Teaf** is a Board-certified toxicologist, risk assessor, and public health specialist. He has been Associate Director of the Florida State University Center for Biomedical & Toxicological Research since 1979. Chris has over 3 decades of environmental and public health experience specializing in soil, water and air quality, risk assessment, and environmental health issues including metals, petroleum, pesticides, solvents, particulates, and bacteria/molds. His experience includes power generation facilities, manufactured gas plants, industrial facilities, agricultural sites, waste management facilities, educational institutions, and products in general commerce. Chris has directed research or taught many environmental toxicology and risk assessment courses for the private sector as well as for USEPA, the World Health Organization, NATO, U.S. Air Force, ATSDR and numerous state/local agencies. He presently serves as Senior Human Health Editor for *Human & Ecological Risk Assessment*, an international journal, and has served on Technical Advisory Committees for many environmental symposia in the US, Europe and Central Asia, including this Amherst Conference for over 15 years. Chris has provided toxicology and health testimony for federal and state agencies and state or federal courts for over 25 years.

**Don Thompson** B.Sc. completed his Bachelor of Science (Biology) at Bishop's University with a Minor in Chemistry. He has served on the board of directors for the Canadian Laboratory Suppliers Association. As a Product Manager Don has extensive experience providing formal training in Quality

Control and Environmental Proficiency Standards as well as Environmental Equipment . In his current role, Don manages the Eastern United States for Schlumberger Water Services' (SWS) Diver Groundwater Dataloggers. Utilizing his background with over 20 years of Technical Sales experience along with SWS' expertise in groundwater he provide SWS clients with knowledgeable support.

**Karen Thorbjornsen** holds Bachelor of Science and Master of Science degrees in Geology and is a registered Professional Geologist with licenses in Alabama, Georgia, South Carolina, and Tennessee. She has 18 years of environmental consulting experience with CB&I Federal Services (formerly Shaw Environmental & Infrastructure) in Knoxville, Tennessee. She performs background studies for metals and PAHs in environmental media and statistical analyses of environmental data at numerous sites across the United States. She specializes in geochemical evaluations of metals — a technique to distinguish natural concentrations from site-related contamination in soil, groundwater, sediment, and surface water. Ms. Thorbjornsen performs geochemical evaluations to refine lists of chemicals of concern, delineate the extent of contamination, optimize long-term monitoring programs, confirm the success of soil-removal actions, and characterize background distributions. She has authored several papers on geochemical evaluations of metals and teaches short courses on the technique. Her papers have been published in *Environmental Forensics Journal*, *Journal of Structural Geology*, *Remediation*, and *Soil & Sediment Contamination*.

**Derek W. Tomlinson**, MSc, PE, PEng, has over 18 years of experience specializing in development of strategies for managing sites with non-aqueous phase liquids (NAPLs, both light - LNAPL and dense - DNAPL). He is an environmental engineer with graduate training at the University of Waterloo in contaminant hydrogeology including the characterization and remediation of sites contaminated with NAPLs (chlorinated solvents) and use of high-resolution characterization techniques for understanding multi-phase fluid transport within the subsurface. His technical expertise includes development of innovative site characterization methods for creation of robust conceptual site models which he has used for proper design, implementation, and operation of a range of in situ remediation technologies within both porous media and fractured bedrock geologic settings. He has worked at refineries, waste sites, and other industrial facilities under USEPA CERCLA and RCRA programs, nationally in several state and regional led and voluntary programs, and internationally in Australia, Brazil, Canada, and United Kingdom. Derek leads or is actively involved in development of various standards, guidance documents and providing of training with respect to NAPLs. He was contributing author of the ITRC LNAPL technical guidance and continues as an internet-based and classroom workshop trainer on LNAPL characterization and remediation. He is actively involved in development of ASTM standard guides for LNAPL conceptual site models and evaluating LNAPL transmissivity. He is also one of the principal authors of the UK-based CL:AIRE *an illustrated handbook of LNAPL transport and fate in the subsurface*. Derek is leading a chapter for development of the high-resolution site characterization tools and techniques for the ITRC DNAPL site characterization guidance document, for which he was awarded the ITRC Industry Recognition Award in 2012. He is one of the principal investigators for the EPRI sponsored development of methods for assessing manufactured gas plant (MGP) DNAPL mobility. Derek works for Geosyntec Consultants in their Blue Bell (Philadelphia), Pennsylvania office.

**Stephanie Turkot** has been working with Geo-Cleanse International, Inc. after her time at the New Jersey Department of Environmental Protection. For last four years, Ms. Turkot has been involved with Geo-Cleanse's remedial project design, costing and marketing departments. She has assisted in the design and implementation of several in-situ chemical oxidation and reduction treatment programs. Ms. Turkot has successfully implemented in-situ remediation treatment programs on a wide variety of sites, including multi-acre NAPL-impacted Brownfield and Superfund sites. Ms. Turkot has a Bachelors of Science degree in Environmental Science from William Paterson University.

**Albert J. Valocchi** received his B.S. in Environmental Systems Engineering from Cornell University in 1975 and did his graduate studies at Stanford University in the Department of Civil Engineering, receiving his M.S. in 1976 and Ph.D. in 1981. He has been on the faculty of the Department of Civil and Environmental Engineering at the University of Illinois since 1981, and currently holds the rank of Professor. From 2004 to 2012 he was Associate Head and Director of Graduate Studies. He has led or

participated in college and campus assessments related to graduate education. Dr. Valocchi teaches undergraduate and graduate courses in water resources engineering, groundwater hydrology and contaminant transport, groundwater modeling, and numerical methods. Dr. Valocchi's research focuses upon mathematical modeling of pollutant fate and transport in porous media, with applications to groundwater contamination and remediation. He specializes in the development and application of models that couple physical, geochemical, and microbiological processes over a wide range of spatial and temporal scales. Other recent research interests include geological sequestration of carbon dioxide, parameter estimation, and uncertainty quantification. He has approximately 100 refereed journal papers, and is co-author of the book *In Situ Bioremediation*. Dr. Valocchi is a member of the American Society of Civil Engineers, the American Geophysical Union, the National Ground Water Association, the Association of Environmental Engineering and Science Professors, the Society for Industrial and Applied Mathematics, the American Society for Engineering Education, and Sigma Xi. From 2003 to 2011 he was Editor-in-Chief for the *Journal of Contaminant Hydrology* and is currently Associate Editor for *Advances in Water Resources*. He has also served as a member of the National Research Council Committee on Environmental Remediation at Naval Facilities. Dr. Valocchi has received several awards in recognition of his research and teaching accomplishments. He was a Shell Faculty Career Fellow from 1984 to 1987, and he has been awarded fellowships to lecture and conduct research from NATO and the Danish Research Academy. In 2002 he received the Collins Award for Innovative Teaching from the University of Illinois College of Engineering. In 2003 he was recognized as an Associate in the Center for Advanced Study at the University of Illinois. In 2009 he became a Fellow of the American Geophysical Union, an honor bestowed on no more than 0.1% of society members. In 2011, he was named an Abel Bliss Professor in the College of Engineering at the University of Illinois. In 2013 he was received the Stanley H. Pierce Award from the College of Engineering in recognition of his work toward enhancing the graduate student experience.

**Michael J. Wade**, as Principal Scientist of Wade Research, Inc.<sup>TM</sup>, provides geochemical consulting services to a variety of U.S. government agencies, industrial clients, and law firms. Dr. Wade is an organic geochemist with experience in a variety of research programs with special emphasis on study of organic contamination in the environment. He has refined quantitative field and laboratory investigation approaches designed to establish time frames for the release of gasoline, kerosene, diesel fuel and heavier fuel oils in subsurface petroleum contamination cases. Further, Dr. Wade provides hydrocarbon fingerprinting services for petroleum products as well as chlorinated materials such as dioxins/dibenzofurans and PCBs. Annually Dr. Wade conducts 20 to 30 such research programs. He regularly provides expert forensic geochemical services both through the deposition process as well as testimony in U.S. Federal and State Courts in the areas of environmental contamination, including assessment of sources of contamination, identification of product types, fingerprinting, quantification of weathering effects on products, and age-dating of product releases.

**Anne Wagner**, PhD is an Environmental Scientist with Chevron's Energy Technology Company (ETC) Environmental Unit based in San Ramon, California. With ETC since 2011, she manages the team responsible for providing technical expertise to Chevron for ecological services including biodiversity, natural resources management and facilitation of environmental, social and health impact assessments and reviews for new projects. She continues to provide technical expertise to Chevron in managing Natural Resource Damage Assessment issues, biodiversity and ecosystem services strategy and implementation, as well as site restoration. Prior to transferring to ETC, Anne spent 15 years at Chevron's Questa Mine in northern New Mexico. Her roles included Manager, Environmental and Public Policy, Manager, Environmental and Health Services, and Environmental Coordinator. As Manager, Environmental and Public Policy Anne was a member of the mine's leadership team and responsible for developing and implementing the short and long-term environmental and public policy strategy for the facility. In her role she worked with State and Federal agencies on permitting issues, implementation of an Administrative Order on Consent for a Remedial Investigation/Feasibility Study under the EPA CERCLA program, negotiation of an NRD draft settlement with State and Federal Trustees, as well as management of consulting firms, programs, governmental affairs and regulatory issues for the mine. From 2004 – 2011 Dr. Wagner served as the chair of the NM Mining Association Environmental Committee. Anne received a B.S. Degree in Biology from Fort Hays State University, Hays, Kansas, and a M.S. and PhD in Agronomy and Horticulture from New Mexico State University, Las Cruces, New Mexico. Dr.

Wagner also served 2 years in the Peace Corps in South America following completion of her undergraduate degree.

**Dallas Wait** is a chemistry expert with more than 36 years of experience characterizing consumer products, evaluating the source and fate of chemicals in the environment, designing test method and quality assurance programs, interpreting data, and determining the validity and usability of chemistry measurements and sampling procedures. Dr. Wait directs Gradient's Data Quality Management practice, and his consultations often resolve data quality issues, aid in agency negotiations concerning data usability, and provide pivotal chemistry testimony. More recently, his practice has expanded into the dietary supplement and food industries, resolving product adulteration and testing reliability issues. He is on the editorial board for two peer-reviewed journals, coauthored the second edition of US EPA's SW 846 RCRA Test Method Manual, and has published over 30 journal articles and two book chapters on the topic of data quality. Dr. Wait is a member of numerous scientific work groups and science advisory boards involved in developing and evaluating test methods and quality assurance programs such as US EPA's Environmental Laboratory Advisory Board (ELAB). Before joining Gradient in 1989, he was Technical Director, Vice President, and cofounder of ENSECO's ERCO Laboratory, a nationally prominent environmental laboratory involved, in part, with oil spill research, agency method development studies, aquatic toxicology GLP testing support, consumer product analysis, and site investigations.

**William Walker** has 25 years of professional experience in aqueous geochemistry, chemistry and isotope chemistry. His primary expertise is in the application of geochemical methods for use in the mining industry. He has completed numerous water quality studies and mining/smelter related projects as part of environmental forensic and remediation projects. He has worked for a number of mining clients on acid-rock drainage issues, mine dewatering approaches, water quality improvements to mine related effluents and design of water treatment systems for removal of arsenic, selenium, sulfate, cyanide, nitrate and heavy metals in industrial and mine waters. Dr. Walker also conducts radiation surveys and has worked extensively on uranium mines throughout the southwestern U. S. Dr. Walker is an accomplished mineralogist and has expertise in performing micro-analytical techniques such as scanning electron microscopy, microprobe analysis, and X-ray photoelectron spectroscopy.

**May Wang** is junior at Council Rock High School South in Holland, PA. She was a research scholar at the Teen Research and Education in Environmental Science (TREES) Program at the Center for Excellence in Environmental Toxicology at the University of Pennsylvania. Her research on BPA has been under the mentorship of Professor Jeffrey Field and was supported by an NIH grant for environmental health education. Her project received a Presidential Environmental Youth Award from the Environmental Protection Agency earlier this year.

**Camille Warner:** From the moment Camille was born she was curious about the natural world. She spent her childhood climbing trees and playing outside with her twin sister, Chantal. As she grew older her interests began to become more refined after she took her first biology class. Enthralled by the complexity and beauty she decided to devote her life to plants and their interactions with each other and their environment. She is currently a third-year PhD student at SUNY Environmental Sciences and Forestry pursuing a degree in Plant Science Biotechnology. She spends her free time kayaking, salsa dancing, hiking and rock climbing.

**Harshi Weerasinghe** is a PhD candidate in environmental engineering at the department of civil and environmental engineering, Northeastern University, Boston. She has completed her PhD in Geo sciences (University of Hamburg), MSc in geospatial technologies (University of Münster) and BSc in Agricultural Engineering (University of Peradeniya). She has worked in engineering and water resources research projects with local and international organizations. Her current research focus is to understand the impact of precipitation patterns on surface water quality in highly contaminated karst regions, and adaptation measures. She currently works for The Puerto Rico Testsite for Exploring Contamination Threats (PROTECT) Program at Northeastern university.

**Sarah Weinstein** has been a Deputy Assistant Commissioner in MassDEP's Bureau of Waste Prevention since 1999. She coordinates policy development on a wide variety of pollution control and prevention issues, and oversees Bureau strategic planning, communications, and clean energy work. In previous positions at MassDEP, Ms. Weinstein directed the Division of Planning and Program Development in the MassDE Bureau of Waste Site Cleanup, chaired the Board that licenses "LSPs", private sector experts in site assessment and cleanup, and was a lead author of the Massachusetts Brownfields Law (enacted in 1998). Ms. Weinstein holds a B.A. from the University of Pennsylvania, and has done graduate work in community planning at the University of Rhode Island.

**Richard J. Wenning** is Principal and Global Practice Leader for Ecology & Waterways/Sediment Management services at ENVIRON, an international consulting firm. He has 30 years of consulting experience in ecotoxicology, environmental forensics and both human health and ecological risk assessment. His expertise includes planning and implementation of environmental fate and monitoring studies, ecotoxicology studies, and risk assessments to understand the behavior of endocrine disrupting chemicals (EDCs) and persistent, bioaccumulative organic pollutants (POPs) such as the dioxins, mercury, polychlorinated biphenyls (PCBs), chlorinated pesticides, perfluorinated compounds (PFCs), and brominated flame retardants (BFRs). He has directed interdisciplinary teams of engineers and scientists on several multi-year ecology studies and contaminated waterway assessments in the U.S. and other countries, and served on scientific peer-review panels for regulatory agencies in the U.S. and elsewhere. Mr. Wenning is active on the science advisory boards and organizing committees of several professional organizations. He was the first editor-in-chief of the journal *Environmental Forensics*. Since 2004, Mr. Wenning serves as editor-in-chief of the Society of Environmental Toxicology and Chemistry (SETAC) peer-review journal *Integrated Environmental Assessment and Management*.

**Daniel Williams** has more than 10 years experience in analytical testing, with expertise in environmental chemistry, laboratory operations, and quality assurance/control programs. His primary responsibilities at Gradient include laboratory data review and interpretation. He has applied his analytical chemistry knowledge in projects involving hydrocarbon fingerprinting and characterization, PCBs in the environment, and review of quality assurance programs. Dan is knowledgeable in organic and inorganic laboratory testing methodologies and quality control/assurance programs from US EPA, ISO, and ASTM. Prior to Gradient, he consulted with clients in environmental engineering, wastewater engineering, and other disciplines concerned with federal and state regulatory compliance. Additionally, Dan served in the United States Navy submarine service and as a hospital corpsman.

**Jonah Williams** is currently a freshman at Rutgers University in New Brunswick, New Jersey studying chemical engineering with a concentration in sustainable fuels and biochemical pathways. He completed most of his work on algal biofuels independently while at Columbia Senior High School in Maplewood, New Jersey, and has participated in various science competitions, including the North Jersey Intel Science and Engineering Fair where he won top awards in Sustainability, Molecular Biology, Microbiology, and Innovation (March 2014). Jonah's principal investigation involves a novel method of stimulating biomass degradation in algae that is safer, cleaner, and theoretically more efficient in closed-state photobioreactors. His research interests chiefly include algal biofuel synthesis, cyanobacterial plasmid manipulation, phycolgical metabolic engineering, and endosymbiotic paleontology. Jonah has done research in orthopedics at New York University's Hospital for Joint Diseases and in paleoecology at the Lamont-Doherty Earth Observatory in conjoint with NASA and Columbia University; both experiences of which he attributes much of his developed interest for scientific research. Additionally, Jonah is passionate about issues such as climate change, destruction of biodiversity, pollution, and wildlife management, and hopes that one day his research will have a significant impact in these areas.

**Eric S. Wood** is a Principal Consultant at ENVIRON with more than 30 years of experience helping clients integrate environmental solutions with their short-term and long-term business objectives. His experience includes contaminated site investigation and remediation, due diligence, litigation support, expert testimony, insurance support, environmental liability valuation, remedial cost estimation, and environmental compliance. His assignments have been conducted nationally and internationally. His work in the U.S. has been conducted under CERCLA, RCRA, EPCRA, TSCA, and several state-lead

programs. Eric is a nationally certified Professional Hydrogeologist, a Professional Geologist, and a Licensed Site Professional in Massachusetts.

**Steven Woodard** is the President and co-founder of ECT (Emerging Compounds Treatment Technologies). His focus is on commercializing synthetic media technology for the treatment of 1,4-dioxane, perfluorinated compounds, and other emerging compounds. He received his Ph.D. in Environmental Engineering from Purdue University in 1992.

**Peter Woodman** has forty-four years of experience in researching, conducting and managing toxicological, pharmacological, medicinal chemistry and ecological programs to assess and control the effects of chemicals and radionuclides on human health and the environment, including probabilistic risk assessments of climatic changes on coastal habitats and their preservation and restoration. For public and private sector clients, has conducted numerous deterministic and probabilistic risk assessments and air monitoring programs, including indoor air forensic investigations, to evaluate the impact of hazardous chemicals and radionuclides on human health, public welfare, and the environment under CERCLA/SARA, RCRA, RBCA, Brownfields, the MCP, CTDEEP RSRs, and regulations promulgated by NHDES, NYSDEC, Maryland, Rhode Island, New Jersey and other state programs, using innovative approaches to develop site-specific risk-based cleanup strategies and goals that are protective of human health and the environment. In addition, for private sector clients, provides "Expert Witness" services for Toxic Tort, Wrongful Death and Qui Tam (Whistleblower) suits in the field of toxicological assessment of the impact of pharmaceuticals and hazardous chemicals on human health in residential, commercial and industrial settings, indoor air forensic investigations, and use of chemical oil dispersants in marine environments.

**Dave Woodward** is a Vice President and Corporate Director of Remediation Technology with AECOM. He has over 30 years of experience focused on developing innovative in situ and ex situ remediation technologies, especially for difficult to remediate, recalcitrant and emerging compounds including Methyl Tert-butyl Ether (MTBE), 1,4 Dioxane (1,4-D), Ethanol, and more recently Perfluorinated Compounds (PFCs). He is currently serving as an Advisor to AECOM's Global PFC Working Group and is actively conducting PFC research for the U.S. Air Force and American Petroleum Institute. He is also currently serving as a Technical Advisor on numerous PFC related projects throughout the U.S. and Australia.

**Jessica Yeager** is a licensed environmental engineer in Massachusetts with an SB from Harvard and an MEng from MIT in environmental engineering. She has worked as a remediation engineer at GZA for 5 years. Her experience at GZA includes environmental assessment and remediation projects for Fortune 100 companies around the country involving the development of conceptual site models, hot soil and soil vapor sampling, fate and transport modeling, remedial design, and data management.

**Xue Yu** is currently a postdoctoral associate under the supervision of Dr. Akram Alshwabkeh in the Department of Civil and Environmental Engineering at Northeastern University since February 2013. He obtained his Ph.D. degree in Civil Engineering at Dec 17 2012 at the Department of Civil and Environmental Engineering of Syracuse University. His Ph.D. advisor is Dr. Charles T. Driscoll. He is Ph.D. research is focused on the spatial patterns of mercury bioaccumulation in the Adirondack Park of New York State. Currently, he is conducting research on the hydrogeology of groundwater in the karst systems in Puerto Rico.

**Luciano M. Zaninetta**, Chem. Eng. (Politecnico di Milano, 1982), worked in the early years in Montedison Corporate Research (Donegani Institute) in the field of Unit Operations of Chemical Industry, Biotechnology and Ceramic Materials. After an experience in the packaging industry as product manager of co-extruded thermoplastic polymers, in 1990 he joined EniChem, Corporate Research, working in the recycling of plastic materials. Since 1994 in EniChem (today Syndial), he has 20 years of experience in soil and groundwater assessment and remediation of contaminated sites by coordinating the activities of characterization and design of remedial projects, participating in several working groups, national and international. He received in 2011 the title of Knowledge Owner Eni for environmental issues and since 2011, always in Syndial, he is responsible for R&D activities within the Department of Environmental

Remediation. He is the author of several speeches in national and international conferences on topics related to remedial activities.

**He Zhang** obtained her B.Eng in environmental engineering from South China University of Technology in 2009. She joined the master of environmental systems engineering and management (MESEM) program at Memorial University of Newfoundland (MUN) and graduate in 2011. In January 2012, she started pursuing her M.Eng degree at MUN under the supervision of Dr. Helen Zhang. He Zhang has a solid background in environmental engineering and analysis. Currently, He Zhang is working on integrating the nano technology with a biosurfactants-enhanced soil washing system to better cleanup the PCB contaminated sites and developing advanced analytic methods for PCBs.

**Gunars Zikmanis** has been a State Government Environmental Professional for over fifteen years. He currently is a project coordinator providing oversight of investigations and cleanup at many major remedial response, brownfield, and VAP projects and has experience conducting hazardous waste inspections within the Northeast Ohio. Gunars has held the position of laboratory and quality control coordinator and has written and conducted training on data verification and validation, quality assurance, and field standard operating procedures. He has experience in drafting guidance, policy, and rules for regulatory programs. Gunars has testified as an expert witness and provided public information on environmental projects. Prior to regulatory work, Gunars was a laboratory analyst, manager, and director for various environmental laboratories in Cleveland, Ohio for over 20 years. Gunars has a Bachelor of Science degree in Chemistry. He is a Certified Hazardous Materials Manager and holds membership in the Environmental Committee and task groups for the American Society for Testing & Materials (ASTM) which develops national and international guidance on industrial standards. Gunars is a member of AEHS.

**Nancy Zikmanis** has been a State Government Environmental Professional for over twenty four years. She currently supervises staff working on Federal Facility projects, Remedial projects, Site Assessment projects, Brownfield projects, and Voluntary Action Program (VAP) projects and also has experience with grant funding and environmental insurance. Prior to become a supervisor, she was a project coordinator for over twenty years providing oversight of investigations and cleanup at many major remedial response, brownfield, and VAP projects and conducted hazardous waste inspections within the Northeast Ohio. Nancy has held the position of sampling and quality control coordinator and has written and conducted trainings on data verification, quality assurance project plans, and quality management plans. She has experience in drafting guidance, policy, programs, and rules for brownfield redevelopment, as well as, providing training and presentations on remedial and brownfield subjects. Nancy has testified as an expert witness and provided media relations on environmental projects. Prior to regulatory work, Nancy was a laboratory analyst for an environmental laboratory in Cleveland, Ohio. Nancy has an MBA in Sustainability and a Bachelor of Science degree in Biology with a minor in Chemistry. She is a Certified Hazardous Materials Manager and a Certified Public Administrator. Nancy holds membership in the Environmental and Sustainability committees and task groups for the American Society for Testing & Materials (ASTM) which develops national and international guidance on industrial standards; NEO Green Building Council, and has been a member of local sustainability groups working on sustainable brownfield redevelopment projects. Recently, Nancy has authored a book as part of her Master's thesis called, "*Utopian Designing – Developing a Community Strategic Plan for You and Future Generations*", which is focused on community sustainable planning and implementation.