**Isaac Aboulafia** is a registered professional engineer with over 20 years experience in the environmental remediation and consulting field. He specializes in feasibility evaluation, design, cost-estimating, implementation and construction oversight of soil and groundwater assessment and 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, hydraulic removal/control and complicated engineered excavations. He has performed scores of due diligence and compliance assessments to identify and quantify environmental liabilities at sites including chemical manufacturing facilities, manufacturing plants, commercial shopping centers/restaurants/offices, multi-family residential properties and vacant land. He has an expert at designing and implementing site characterization projects to quantify the extent of contaminated soil and groundwater. Mr. Aboulafia is well-versed at negotiating environmental issues with regulators and within the business community in support of rapid assessment and remediation of projects necessitated by real estate/business transactions. Mr. Aboulafia serves as MECX’s Chief Operations Officer (COO) and manages MECX’s Remediation and Engineering Operations and staff. He also serves as the technical director for remediation services within MECX, in which role he is responsible for evaluating/implementing new and emerging remedial technologies for the remediation of hazardous waste sites across the country.

**Richard F. Abrams** is President and CEO of Bisco Environmental in Taunton Massachusetts. In this position, he is responsible for the day-to-day operations as well as for new business/product development. Prior to Bisco, he was Vice President – Renewable Energy at Babcock Power (BPI) in Worcester, Massachusetts. In this role, he was responsible for BPI’s renewables products including biomass boilers, emissions control systems, and solar boilers. Mr. Abrams has been involved in the design, development, and business development for environmental systems throughout his career. These systems have been used for air pollution control, hazardous waste destruction, and radioactive waste management. He has a BS in Chemical Engineering from Worcester Polytechnic Institute, has presented many technical papers, and holds seven patents.

**Roger A. Acey** is Professor of Biochemistry at California State University, Long Beach, CA. His current areas of interest are metal binding proteins, stem cell differentiation, and drug development. He also has extensive experience in Molecular Biology, Immunology, and Toxicology. Dr. Acey has served as a consultant to a number of biotechnology companies. He is currently an advisor to the CSULB California Institute for Regenerative Medicine and serves on the Board of the California Academy of Math and Science. Dr. Acey is also the President and Founder of MGP Biotechnologies, LLC, an early stage biotechnology company. The focus of the company is on heavy metal removal and recovery. The technology is based on a novel metal binding protein Dr. Acey identified and cloned from brine shrimp. The protein, known as metallothionein, and has unique ability to selectively bind toxic heavy metals, e.g., arsenic, cadmium, and lead. It also binds precious heavy metal such as gold, silver, and platinum. Four US and three International patents have been issued describing the technology. Dr. Acey is also working to develop a class of cholinesterase inhibitors for the treatment of Alzheimer’s disease (patent pending).

**Naji Akladiss, P.E.** is a project manager with the Maine Department of Environmental Protection, Bureau of Remediation in Augusta. He has worked for the Department since 1989. He has experience in environmental technologies and Superfund remediation. Naji is the leader of the Interstate Technology and Regulatory Council (ITRC) Integrated DNAPLs Site Strategy Team. He has also served as the ITRC state Point of Contact from Maine. He is a professional engineer in the State of Maine.

**Saud S. AL-Oud** has a Ph.D. in Soil Environmental Chemistry. He is Associate Professor in the Soil Sciences Department, King Saud University. His main research interest includes: Phases and components of the soil-water-plant stem, behavior of elements added to soils from wastes and contaminants, and treatment techniques for the remediation of heavy metal contaminated soils. He works as an environmental consultant for mining firms in Saudi Arabia and as consulante for the water municipal of Qassim region of Saudi Arabia.

**Brent Alspach** holds both Bachelor and Master of Science degrees in Civil and Environmental Engineering from Cornell University in Ithaca, NY. Brent joined Malcolm Pirnie / ARCADIS in 1997 and currently serves as a Senior Environmental Engineer specializing in potable water quality and treatment.
Mr. Alspach is an internationally recognized authority on membrane processes, with over 60 publications and presentations covering subjects ranging from applications and technology to economics. He is a primary author of the USEPA's *Membrane Filtration Guidance Manual* and a co-author of both the American Water Works Association (AWWA) *Manual of Practice for Microfiltration and Ultrafiltration* and its newly revised *Manual of Practice for Reverse Osmosis and Nanofiltration*. He also serves as the Chair of the AWWA Membrane Processes Committee. Mr. Alspach works out of the Malcolm Pirnie / ARCADIS office in Carlsbad, CA, many hundreds of miles from the snowy winters of upstate NY.

Y. Meriah Arias-Thode is a Senior Environmental Microbiologist with the US Navy at the SPawar Systems Center, Pacific, located in San Diego, CA. Additionally, she has served over 22 years in the US Army Reserve as a Medical Laboratory Technician and as a Research Microbiologist (CPT). As an environmental microbiologist, she has worked on a variety of projects to include determination of toxicity of various sediment amendments to micro and macro benthic estuarine communities, microbial forensics, and marine microbial fuel cell research projects. She has also served as a consultant at SPAWAR for projects related to far-term chemical and biological defense systems for US soldiers. Due to her varying experience, she serves on the scientific advisory board for the Association of Environmental Health and Science (AEHS). She has a BS in Biology from the University of TX at San Antonio and a PhD in Marine Biology (Environmental Microbiology) from the University of California San Diego, Scripps Institution of Oceanography.

Samira Omar Asem has more than 37 years experience in management and leadership in R&D at the Kuwait Institute for Scientific Research (KISR) related to biodiversity conservation agriculture and environment. Dr. Omar Asem attained her Ph.D in Wild land Resource Sciences from the University of California, Berkeley in 1990, M.Sc in Range Management from the University of California, Berkeley, and B.Sc in Botany and Chemistry from Kuwait University. Currently, she is a Principal Research Scientist working as the Director of Food Resources and Marine Sciences Division and Program Director of "Management and Supervision of Kuwait Environmental Remediation Program". She has research experience in monitoring and assessment of desert ecosystems, inventory of natural resources, desertification control, rehabilitation of degraded lands, wildlife conservation and management, revegetation of aridlands, protected areas, aerial livestock census, and sustainable land-use planning. During her career as Director for the “Food Resources and Marine Sciences Division” at KISR she has been responsible for six programs namely: Aridland Agriculture Production; Biodiversity for Terrestrial Ecosystem; Food and Nutrition Production; Ecosystem Based Management for Marine; Aquaculture; and Biotechnology. The main activities of the programs are related to the following areas of research: fisheries, aquaculture, oceanography, biotechnology, tissue culture, genetic engineering, soil remediation, food safety, food nutrition, and production of livestock, poultry and crop plants, soil science, natural renewable resource management and environmental greenery. Dr. Omar Asem is the technical Program Director of the Kuwait Environmental Remediation Program awarded by the United Nations Compensation Commission (UNCC). She is responsible for supervising the implementation of the program at the government level to ensure proper and transparent implementation of the program according to the UNCC decisions. The program included remediation and restoration of war-damaged terrestrial, coastal and marine ecosystems. Dr. Omar has national, regional and international recognitions and has been affiliated to many local and international organizations. She published about 30 refereed journal papers; 101 books, proceedings and 103 technical reports. Dr. Omar Asem participated in 102 local, regional and international conferences, and provided consultations to local, regional and international organizations. Dr. Omar Asem has been an active member in IUCN and provided support to the IUCN program at the local and regional levels. Currently she is involved in assessing climate change on biodiversity in Kuwait in collaboration with MIT. Dr. Omar Asem also participated in preparation of Chapters 6, 7 and 9 in the Fourth Global Environment Outlook Report (GEO-4)/UNDP published by UNEP. Dr. Samira Omar is interested in taking more active role in IUCN by participating at the Regional Councilor level. With support from the IUCN members and IUCN Commission Chairs Dr. Omar will be able to further contribute to conservation and sustanaible use of biological diversity of the WESCANA region.

Chris Balouet, PhD, born 1956, principal scientist, Environment International, France. Dr Balouet, jcbalouet@aol.com, serves intergovernmental organizations, industries, law firms, insurance companies, engineering firms worldwide as consultant and environmental forensics expert. He has developed
dendrochemical applications over the past 12 years, currently leads PIT (Pollution Investigation by Trees), an international program sponsored by the French ADEME (Agence de l'Environnement et de la Maîtrise de l'Energie), contributed by 26 senior scientists. He is author of > 100 scientific, peer reviewed articles and 42 books. He serves the Journal of the International Society of Environmental Forensics as Associate Editor and is president of the 2012 Environmental Forensics conference in Paris.

Marcelo Antonio Lomeli Banda is a civil engineer graduated from the Universidad Autónoma de Baja California (UABC). Currently is completing their studies on Masters in environmental engineering focused on the management of water resources at the Instituto de Ingeniería, UABC. For three and a half years has been working with the group Ciencias de la Tierra (Earth Sciences) in the same institution carrying out several research activities with geographic information systems and field environmental parameter monitoring for the conservation of the Colorado River Delta, in conjunction with the University of Arizona and the Sonoran Institute. This year he founded together with some researchers in the environment area the Red Ambiental de las Californias (RAMCAL) a network of scientific and technological dissemination.

David L. Barnes, Ph.D, is a professor in the Department of Civil and Environmental Engineering and the Water and Environmental Research Center as well as the Department Chair of Civil and Environmental Engineering at the University of Alaska Fairbanks. Dr. Barnes teaches and performs research in the area of environmental engineering specifically as the topic pertains to contaminated soil and ground water. Over the last thirteen years he focused his research on protection of human health and environmental quality in cold regions.

Christopher Berka is an environmental attorney in the Palo Alto office of the law firm of Bingham McCutchen LLP. A graduate of Stanford University and the University of Michigan Law School, he has specialized in environmental law since 1983. He has handled more than 200 environmental cases, including matters involving contaminated soil and groundwater, oil spills, air emissions, and surface water pollution.

Brad Bessinger, Ph.D., R.G., is a vice-president and senior geochemist with S.S. Papadopulos & Associates in Portland, Oregon. Dr. Bessinger specializes in environmental geochemistry and the fate and transport of metals and organic compounds in the environment. His expertise includes obtaining and interpreting geochemical and isotopic data, developing reactive transport models for sediment, soil, and groundwater, evaluating site remedial options, and identifying the sources of contaminants for litigation, insurance claims, and Natural Resource Damage Assessments (NRDA). Dr. Bessinger is the author of peer-reviewed publications on arsenic and mercury thermodynamics, fate and transport, and environmental forensics. He received his Ph.D. in geochemistry and M.S. in rock mechanics from the University of California at Berkeley. He also received a B.S. degree in engineering geology from Stanford University.

Rebecca Bourdon is a Hydrogeologist in the Petroleum Remediation Program of the Minnesota Pollution Control Agency (MPCA). In her roll at the MPCA, she performs technical reviews of petroleum release investigations, corrective actions and brownfields redevelopment projects. She is the Green and Sustainable Remediation and Redevelopment (GSR²) Coordinator for the MPCA’s Remediation Division. In this roll, she has teamed with internal colleagues in developing division-wide GSR guidance for state and federal funded cleanups, GSR language for state contracts, and brownfields redevelopment GSR integration. She is the Co-Leader of the ITRC GSR Team and a member of the ASTM International Standard Guide for Greener and More Sustainable Cleanup (GAMSC) Task Group and the EPA Region V Greener Cleanups Work Group. She earned a Bachelor’s degree in Geology from North Dakota State University in 1998 and spent 9 years in the environmental consulting industry in Colorado and Minnesota until joining the MPCA in 2007. Rebecca is a licensed Professional Geologist in the state of Minnesota.

Mark Bowland is an REA II with 19 years’ experience in complex, multi-pathway deterministic/probabilistic risk assessments/risk based remedial action objectives, site investigation, risk communication, toxicology, fate/transport modeling, litigation support and regulatory support to public, private and military clients. His hazardous constituents experience includes metals, VOCs, SVOCs, PCBs, dioxins, PAHs, pesticides, radionuclides, asbestos, and petroleum at CERCLA, private, schools,
Brownfields, Voluntary Cleanup & RCRA sites in the U.S., Columbia, U.K., Europe, India, China, Japan and Hong Kong. His role in application of strategic sampling, tiered/advanced risk assessment tools integrating geostatistical applications as well as alternative background evaluations has resulted in cleanup levels significantly reducing soil volumes requiring mitigation while achieving regulatory health protection standards.

Orianna Bretschger is an Assistant Professor in the Department of Microbial and Environmental Genomics at the J. Craig Venter Institute (JCVI), San Diego. She earned her B.S. in physics and astronomy from Northern Arizona University, and Ph.D. in Materials Science from the University of Southern California. Dr. Bretschger has been active in bioelectrochemical research for over 7 years and has been studying electron transfer mechanisms in pure cultures and mixed communities. As a part of her research, Dr. Bretschger has developed experimental strategies and specialized equipment for the analysis of biological catalysts and is currently the principal investigator for multiple projects involving the selection and characterization of electrochemically active microbial communities from several different environments. Her work with microbial fuel cells and wastewater remediation has demonstrated that these systems can remove nearly all of the biological oxygen demand from recalcitrant waste streams at rates that are significantly faster than conventional anaerobic treatment methods.

Sam Brock is the Air Force Subject Matter Expert for environmental risk assessment and toxicology, responsible for developing implementing guidance for technical problem resolution concerning environmental risk assessment. He represents the Air Force in developing National and DOD technical guidance on remediation risk management, vapor intrusion and bioavailability of contaminants in soil and sediments. He coordinates Environmental Security Technology Certification Program projects developing electronic sensors for vapor in air, passive soil vapor sampling and biological treatment of N-Nitrosodimethylamine as well as Air Force Restoration Program technical interface with the DoD Materials of Emerging Regulatory Interest (MERIT) program.

Afrachanna D. Butler, Ph.D., is employed as a Research Physical Scientist with the US Army Engineer Research and Development Center (ERDC)-Environmental Laboratory (EL) in Vicksburg, MS. She has been working on research projects using plant technologies for managing and remediating military training range contaminated soils. Her research areas include the fate and transport of heavy metals (i.e., lead) and energetic (i.e., RDX and TNT) munitions constituents (MCs) by using terrestrial plants to manage and/or stabilize MCs in range soils. Dr. Butler graduated with a Bachelor of Science Degree in Biology from Jackson State University (JSU) (Jackson, MS) in 2000. In addition, she received a Master of Science Degree in Biology from JSU in 2002 and a Doctorate of Philosophy Degree from JSU in Environmental Science in 2009. Dr. Butler has authored and co-authored peer reviewed journal articles, conference proceedings, as well as delivered platform and poster presentations at numerous professional meetings. The present presentation is on the effects of RDX on plants is from one of the ongoing projects.

Katherine Butler specializes in health risk assessments, toxicology and epidemiology. For private and public sector clients, Ms. Butler characterizes health risks from exposure to chemical agents in workplaces, products, pharmaceuticals and the environment. She evaluates health risks and disease clusters for an array of environmental exposures, including those from arsenic, lead, petroleum-related chemicals, pesticides, and perfluorochemicals. To facilitate risk-based decision making, Ms. Butler uses a statistical toolbox of open-source software programs to develop effective and defensible sampling plans. Prior to working for McDaniel Lambert Inc., Ms Butler completed a Masters of Science in Public Health at the University of Michigan and a Bachelors in Science at the University of Notre Dame. She is fluent in Spanish.

Chris Carleo is a Vice President and Senior Program Manager at AECOM with more than 25 years experience focusing on the investigation and remediation of complex sites as well as sustainability and environmental metrics. Mr. Carleo has been actively involved in the development of Green and Sustainable Remediation (GSR) approaches as a participant on the Interstate Technology Research Council (ITRC) GSR team since 2009 and serving as the team’s Program Advisor in 2010 and 2011. He has extensive experience addressing complex environmental and sustainability issues for the gas and
Jeff Carnahan is a Senior Project Manager at Environmental Forensic Investigations, Inc. (EnviroForensics) working out of their Indianapolis, Indiana office. Jeff holds an MS in geology and is a licensed professional geologist with over 14 years of environmental consulting experience. For the past several years, his project work has focused primarily on subsurface releases of chlorinated solvents at dry cleaners and industrial manufacturing facilities. Vapor intrusion issues are at the forefront of his practice and he serves as lead technical coordinator for VI assessments at EnviroForensics. EnviroForensics is an environmental consulting and engineering firm providing services nationwide with offices in Indiana, Wisconsin, Illinois and California.

Dan Carroll is a Senior Principal Engineer at Kleinfelder in San Diego, California. He is a registered engineer in California with over 25 years of experience in environmental engineering and remediation of soil and groundwater at private sector sites, municipal and state-funded sites, RCRA and CERCLA sites. Mr. Carroll has been with Kleinfelder for 20 years, leading the investigation and remediation of over a hundred diverse sites with a wide range of contaminants and media. He specializes in the development of sustainable remediation strategies including feasibility analysis, pilot testing, design, implementation, and optimization. He graduated from the University of California Berkeley in Chemical Engineering, and holds a Masters of Business Administration degree. He is an active member of ITRC’s Green and Sustainable Remediation team.

Gary Casuccio is a Vice President at RJ Lee Group with more than 30 years experience in environmental sampling and particle characterization. Mr. Casuccio specializes in applying environmental forensics using electron microscopy. Mr. Casuccio has also been instrumental in the development of computer controlled scanning electron microscopy (CCSEM) for environmental applications. He serves as an advisor and consultant to the U.S. Environmental Protection Agency on the analysis and apportionment of particulate matter using electron microscopy techniques and is currently working with the EPA in the development of a next-generation CCSEM system for automated measurement of ultra-fine particles. Gary has also been progressive in the development of analytical methodologies based on microscopy techniques and served as the group leader in the development of ASTM standards related to the sampling and analysis protocols of single-crystal ceramic whiskers. Gary is currently working with industry, several national laboratories, and governmental organizations including the DOE, EPA, NIST, USAF and NIOSH in the evaluation of nanoparticles from an industrial hygiene and environmental perspective.

Jeffery L. Caufield, Caufield & James LLP. Jeffery L. Caufield is a foundation partner of Caufield & James LLP, a Southern California law firm specializing in environmental litigation and compliance issues. Prior to becoming an attorney, Mr. Caufield worked as an environmental consultant and received his undergraduate degree in Environmental Studies from the University of California, Santa Barbara. Mr. Caufield frequently lectures on environmental issues nationally and internationally.

Bart Chadwick currently heads the U.S Navy's Environmental Sciences Branch, SPAWAR Systems Center Pacific. He has extensive experience in oceanography, engineering, technology development, measurement and modeling of the marine environment. His research spans areas of environmental assessment, climate change vulnerability, and energy harvesting. Dr. Chadwick manages a portfolio of emerging environmental projects, and has been principal investigator of a number of high visibility research projects at SSC-PAC. The focus of these projects include the fate and transport of heavy metals in harbors, the processes that control the fate and transport of contaminants in sediments, groundwater surface water interaction assessment tools, sea level rise vulnerability, and sediment microbial fuel cells.

John D. Coates is a Professor of Microbiology at University of California, Berkeley. He also holds a joint appointment as a Geological Scientist Faculty in the Earth Sciences Division at the Lawrence Berkeley National Laboratories and is director of the Energy Biosciences Institute Microbial Enhanced Hydrocarbon.
Recovery (MEHR) program. He is co-founder and Board Member of Biolnsite LLC a company geared towards the use of microorganisms for solutions to environmental contaminant problems. He obtained an Honors B.Sc. in Biotechnology in 1986 from Dublin City University, Ireland and his Ph.D. in Microbiology in 1991 from University College Galway, Ireland. His major area of interest is geomicrobiology applied to environmental problems. Specific interests include diverse forms of anaerobic microbial metabolism such as microbial perchlorate reduction, microbial iron oxidation and reduction, and microbial humic substances redox cycles. Other interests include alternative renewable energies, bioremediation of toxic metals, radionuclides, and organics. He has won several awards for research and mentorship including the 1998 Oak Ridge Ralph E. Powe Young Faculty Enhancement Award, the 2001 DOD SERDP Program Project of the Year award, and the 2002 SIUC College of Science Researcher of the Year Award. He has given more than 100 invited presentations at national and international meetings. He has authored and co-authored more than 100 peer-reviewed publications and book chapters. He has published one book and has 12 patent submissions based on technologies developed in his lab several of which are in commercial application. He sits on the editorial boards of the journals Frontiers in Microbiology, and was a past editor of Applied and Environmental Microbiology, and Applied Microbiology and Biotechnology. He is an editorial scientist for the Faculty 1000 review database and is a member of the American Society for Microbiology, the American Chemical Society, the American Geophysical Union, and the International Humic Substances Society. In addition to his traditional teaching at UC Berkeley, Dr. Coates is continuously involved in various outreach programs supporting education of high school and community college students. He has mentored several high school students and science projects in his laboratory and was the recent recipient of the University of California Berkeley Summer Research Opportunity Program Recognition award for mentorship.

Helder Costa holds a B.A. in Chemistry from Boston University and an M.S. in Chemistry from San Diego State University. He has more than 25 years professional experience in environmental investigation, including forensic interpretation. He has applied innovative approaches involving compositional analysis of petroleum hydrocarbons, PAHs, and PCBs on many remedial investigations for manufactured gas plant, creosote wood-treating, PCB, and petroleum sites. He is a Vice President and Sediment Practice Leader with Haley and Aldrich, based in Boston, Massachusetts.

Lansana Coulibaly is a licensed Professional Engineer in California and works as a contracted Technical Manager with Salient Federal Solutions at the Navy Base Realignment and Closure Program Management Office. Dr. Coulibaly has over 13 years of experience in the environmental field, primarily on CERCLA investigation, and remedial design projects at various west coast naval facilities. He received his Ph.D. in Civil Engineering from New Jersey Institute of Technology in 2000.

Mark Craig is the president and senior environmental specialist with EnviroSupply & Service, Inc. He has over 20 years of environmental industry experience working on more than 500 environmental projects nationwide. His background includes the engineering and manufacturing of various remediation systems from groundwater treatment to High Vacuum vapor extraction, Thermal/Catalytic Oxidizers, application and use of remediation products, to integrated project management services. His unique background has provided him with a foundation to develop sustainable cost effective and remediating strategies for complex remediation sites.

Gerald H. Cresap, Jr., PE is a regional engineering manager for Groundwater & Environmental Services, Inc. (GES). Gerald has over 20 years of experience in groundwater and soil remediation, and his experience includes site investigations; feasibility studies; implementation, management, and oversight of remedial action plans; and construction management. Gerald has extensive experience designing soil and groundwater remediation systems including soil vapor extraction, air sparging, in-situ chemical oxidation, and groundwater recovery technologies at various sites throughout the US. He has also managed operation and maintenance (O&M) activities for treatment systems using air stripping, granular activated carbon adsorption, ultraviolet oxidation, thermal and catalytic oxidation, biological mineralization, and metals precipitation.

Gary Cronk is the President of JAG Consulting Group, Inc., a small company in Santa Ana, CA that specializes in providing services for the design and implementation of in-situ chemical oxidation (ISCO).
Mr. Cronk has experience in design and implementation of over 50 ISCO projects in California and other states. To date, Mr. Cronk has been successful in attaining No Further Action requirements for five sites using ISCO technology. Mr. Cronk is a California Registered Professional Engineer, a California Certified Hazardous Substances Removal and Remedial Actions Contractor (A-HAZ), a Class A General Engineering Contractor, and a Certified Hazardous Materials Manager (CHMM). He is a frequent speaker at conferences and seminars on in-situ chemical oxidation and other in-situ technologies.

Robin Davis is a Licensed Professional Geologist and Project Manager with the Utah DEQ, Underground Storage Tank program. Robin has over 30 years of professional experience and specializes in fate and transport of petroleum hydrocarbons, risk assessment, and data acquisition and analysis, most recently for the petroleum vapor-intrusion exposure pathway.

Phil Dennis is a Senior Manager at SiREM where he has been employed for the past 11 years. SiREM is an industry leader that provides products and testing services for bioremediation of contaminated sites. Phil holds a Masters of Applied Science in Civil Engineering from the University of Toronto and a Bachelors degree in Molecular Biology and Genetics from the University of Guelph. Phil’s current focus at SiREM is research and development related to bioaugmentation culture development and molecular genetic testing and technical marketing and sales.

George Devaull, PhD is a Senior Consultant 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.

Bill Doucette is a professor at Utah State University with appointments in the Department of Civil and Environmental Engineering and Utah Water Research Laboratory. He has BS and MS degrees in chemistry and a PhD in Aquatic Chemistry from the University of Wisconsin-Madison. Bill has been an Environmental Chemistry Editor for the Journal of Environmental Toxicology and Chemistry since 1999. He has also worked as an environmental chemist for Eli Lilly in Greenfield, IN and at the US EPA’s Environmental Research Laboratory in Duluth, MN. His research has focused on the fate and behavior of organic contaminants in the environment, with emphasis on phytoremediation, the uptake of industrial chemicals into edible plants, the measurement and prediction physical-chemical properties using Quantitative Structure Property Relationships (QSPRs), volatile organics in indoor air, and the environmental fate of pharmaceuticals.

Hanan El-Mayas is a Senior Lecturer in the Department of Biology at Georgia State University (GSU) in Atlanta GA. She teaches various courses of Microbiology that are associated with public health. Dr. El-Mayas worked for five years 1991-1997 as a project manager in land reclamation at the Soil Conservation Service in Iceland. Her research interest encompasses various aspects of restoration ecology with emphasis on the use of symbiotic microorganisms, including rhizobia, and arbuscular mycorrhizal fungi (AMF). Her current interest at GSU is in phytoremediation of lead contaminated soil combining the assessment of AMF in the process.

Elsy A. Escobar, is currently a Ph.D. candidate of Civil and Environmental Engineering at Arizona State University. Her research emphasis is on petroleum hydrocarbon vapor intrusion. She has a BS on Chemical Engineering from Central America University (UCA), El Salvador and a MS in Environmental Engineering from Marquette University at Milwaukee, Wisconsin. Her master’s degree focus was on anaerobic treatment of water and wastewater.

Akbar Esmaeili organic chemistry (phytochemistry) is Associate Prof. Department Chemical Engineering at the North Tehran Branch,Islamic Azad University. He has received his Ph.D. from the Islamic Azad University, Tehran, Iran in 2005. His current research interests center around phytochemistry, environmental, control pollution, waste water use of nano in phytochemistry and waste water. Much of the current research activity in the area of natural product involves the use of waste water for the purposes of adsorption in the environment. He has authored or co-authored over 80 articles and books and has lectured extensively on natural product, nano and environmental waste water.
Robert Ettinger is an Associate in Geosyntec’s Santa Barbara office, and provides technical support on risk based decision making, corrective action implementation, and subsurface fate and transport modeling. He has been studying subsurface vapor transport phenomena for environmental corrective action planning for over 20 years. The areas of his work include the development of models to predict migration of subsurface vapors to structures and the implementation of field monitoring studies to evaluate this transport pathway. Mr. Ettinger has authored key papers discussing modeling vapor migration to indoor air and the evaluation of aerobic biodegradation in the vadose zone. Additionally, he has consulted on various investigation and modeling studies for gasoline retail, refinery, manufacturing, and Superfund sites.

Richard Evans is the GES director of engineering with over 10 years of experience pilot testing, designing, and implementing, and operating soil and groundwater remedies. He earned a BS in chemical engineering from the University of Pennsylvania and is a licensed engineer in 10 states. Mr. Evans has provided start-to-finish engineering for numerous site clean-ups, implementing both traditional approaches (e.g., soil vapor extraction, air sparging, groundwater recovery, and excavation remedies) as well as innovative approaches (e.g., in- and ex-situ chemical oxidation, in situ chemical reduction, enhanced bioremediation, and stabilization). These projects have included petroleum, chlorinated, and inorganic contaminants. He also provides remedy optimization and implementation of sustainable practices for site remedies. Mr. Evans has written technical engineering and remediation standards for multiple clients that establish minimum engineering and remediation standards and practices commensurate with the clients’ business objectives and compliant with codes, regulations, and industry best practices.

Herbert H.P. Fang, Chair Professor of Environmental Engineering at the University of Hong Kong, received his BSc (1965) from National Taiwan University, and MSc (1968) and PhD (1972) from University of Rochester, NY, all in Chemical Engineering. After three years of post-doctoral research at University of Illinois (Urbana-Champaign) and twelve years of process development in industry in the US, he has taught at HKU since 1987. Professor Fang is an expert in environmental biotechnologies, including renewable bioenergy production from wastes and wastewater, biofilm, bioremediation, nutrient removal, membrane separation, etc. He has published over 170 journal articles with more than 4400 citations and an H-index of 35. Professor Fang is the recipient of several research awards, including China’s State Scientific and Technological Progress Award (2008), Scientific Technology Award (Guangdong Province), Technology Advancement Award (Ministry of Education), Hong Kong’s Croucher Award, among other. He is the Editorial Board Member of Reviews in Environmental Science and Biotechnology (Springer), International Journal of Anaerobic Digestion and Renewable Energy (Serials Publications), and a former Editorial Board Member of Chemosphere (Elsevier), Biofilms (Cambridge), Advances in Environmental Research (Elsevier) and World Journal of Microbiology and Biotechnology (Kluwer). He is also a visiting Professor of eleven universities in China and Taiwan.

Jim Finegan, PhD, PG, CHg, is a Principal Hydrogeologist with Kleinfelder, Inc., in Riverside, California. He has a bachelor’s degree in geology from Occidental College (Los Angeles) and a PhD in hydrogeology from the University of Melbourne (Australia), where he specialized in flow and transport in fractured rocks. Jim has over 20 years of experience in environmental consulting, working on a diverse range of sites including landfills (municipal and hazardous waste), chemical plants, natural gas transfer and compressor stations, petroleum product tank farms, gas stations, and many others. He has also worked as a laboratory analyst, testing water and soil samples for organic and inorganic analytes. He has extensive field experience and has avoided exposure to all manner of toxic chemicals while collecting and testing samples. He has provided expert testimony in hydrogeology and is an experienced numerical modeler.

Mike Flinn is a Senior Environmental Scientist with Booz Allen Hamilton in San Antonio, Texas where he supports the Air Force Center for Engineering and the Environment (AFCEE). He has over 25 years of professional environmental experience, primarily providing third party quality assurance oversight to Federal clients. In that capacity, he has supported the Environmental Protection Agency’s Hazard Ranking System, the Army’s Chemical Demilitarization Program, and the AFCEE’s Environmental Restoration Program – Optimization activities. He is currently assisting with the reorganization of
AFCEE’s environmental program to address the requirements of the Air Force Civil Engineering Transformation effort. Dr. Flinn holds a BS in Biology from the Virginia Military Institute, an MS in Environmental Science from the University of Texas at San Antonio, and a Ph.D. in Biological Oceanography from Texas A&M University.

Dave Folkes is the President of EnviroGroup and a civil engineer with over 30 years of experience as an environmental consultant in the US and Canada. He has worked on over 100 vapor intrusion projects across North America and overseas, including management of the Redfield Site in Colorado, and has served as an expert witness for several vapor intrusion lawsuits. He was a member of the team that developed the ITRC vapor intrusion guidance, and was an instructor for the ITRC vapor intrusion class for the past three years. He also served as a co-chair of working group that helped develop the ASTM E2600 Standard Practice for assessment of vapor intrusion during real estate transactions. His current research focuses on the use of aerated floors for passive and sustainable mitigation.

Erin Frankson is student at St. Olaf College who is studying biology and environmental science. She has experience working with maize breeding, plant genomics, international agriculture, and soil microbial ecology. Her work for this conference was conducted at Iowa State University under Professor Kirsten Hofmockel, and was part of the Biogeosciences REU Program. After graduating from St. Olaf College next year, Erin plans on pursuing a career in international sustainable agriculture.

Christopher Gale, PG, is a Geologist for Geosyntec Consultants with over 7 years of experience. Mr. Gale has specific experience overseeing and managing site characterization and remediation projects at a wide variety of sites throughout Southern California. Mr. Gale earned his MS in Geological Sciences from San Diego State University in San Diego, California and his BS in Geology from Colorado College in Colorado Springs, Colorado.

Margaret Gentile, PhD, PE is a Senior Environmental Engineer with ARCADIS, US, Inc. She holds a PhD from Stanford University, Department of Civil and Environmental Engineering, where she conducted research on the microbial ecology of engineered denitrifying treatment systems and in-situ uranium reduction. With ARCADIS, she supports multidisciplinary teams in design and implementation of innovative remedial strategies for inorganic and organic groundwater contaminants. In particular, she is focused on the treatment of inorganics in groundwater and mining settings.

Bruce Godfrey is President and Laboratory Director of Curtis and Tompkins Labs, the West Coast’s leading commercial analytical laboratory in Berkeley CA. He is a nationally recognized leader in the commercial laboratory industry with expertise in computer assisted legally and technically defensible chemical measurements in biological and environmental matrices. He holds BA and Ph.D. degrees in Biochemistry from the University of California. His training and experience are frequently applied to solve problems in site remediation, industrial hygiene, waste treatment, food safety, biokinetics, and radiochemistry. He is sought after as a speaker and consultant on environmental testing, issues affecting the commercial laboratory industry, and the development & design of instrumental systems for chemical measurements. As an analytical chemist with more than 30 years of experience, Dr. Godfrey has worked on a wide variety of environmental projects with commercial clients, the US Departments of Defense and Energy, US-EPA and state and local governments in site investigations and remedial process development. Dr. Godfrey is a three time recipient of the ACIL’s Preston Millar award for outstanding service to the Nation’s trade association for commercial scientific and technical organizations.

Sigurdur Greipsson is an associate professor at Kennesaw State University, GA. He has BS degree in biology from University of Iceland, Reykjavik, MS degrees in biology from Queen’s University, Kingston, Canada and a PhD from University of East Anglia, Norwich, UK. He worked at the Soil Conservation Service of Iceland between 1991-1997. He has published more than fifty papers and his current research is in the field of phytoremediation with particular interest in the role of arbuscular mycorrhizal fungi in phytoextraction of lead (Pb). He has authored one college textbook Restoration Ecology that was published in 2010.
Richard Haimann, PE, D.WRE, CPSWQ, CEPSC, QSD is the HDR’s national stormwater technical advisor. He has over 21 years of experience in environmental and water resources engineering and has been specializing in stormwater quality compliance for the past decade. He has helped cities, counties, and industrial clients comply with stormwater and wastewater regulations in numerous locations. He has helped clients with legacy contamination issues develop solutions to comply with stormwater runoff regulations. He has a B.S. in civil engineering, an M.S. in environmental engineering and an M.B.A. in technology management.

Blayne Hartman received his Ph.D. in geochemistry from the University of Southern California. He co-founded H&P Mobile GeoChemistry, a business partnership offering on-site laboratory analysis, direct push environmental sampling, soil vapor surveys, and vapor intrusion services, and is currently an independent consultant offering vapor intrusion and soil gas support. Dr. Hartman is a nationally recognized expert on soil vapor sampling, soil vapor analysis, and vapor intrusion. He has provided training on soil gas methods and vapor intrusion to County and State regulatory agencies in over 30 states, many of the EPA regions, the DOD, and numerous stakeholder groups and consultants. He has written numerous articles on the collection, analysis, and interpretation of soil vapor data, including chapters in four textbooks. He has participated in technical workgroups on soil vapor methods for EPA, CA-EPA, CA Regional Water Boards, County of San Diego, ITRC & ASTM and has reviewed/edited instructional manuals for the EPA OUST and Superfund groups. Over the past four years, Dr. Hartman has been a contributing author/editor to vapor intrusion and soil gas guidance documents to federal EPA, CA-EPA, San Diego County, ITRC, DOD, API, and more than 25 individual State documents. He is currently a trainer in the EPA-OUST, ITRC, ASTM, and API vapor intrusion courses.

Ian Hers, P.Eng., Ph.D., is a senior consultant and Principal of Golder Associates located in Vancouver, B.C., Canada, with 23 years professional experience, and is the global vapour practice leader for Golder Associates. Much of his work over the past decade has focused on the evaluation of soil vapor fate and transport, vadose zone processes, and the prediction, measurement and mitigation of soil vapour intrusion into buildings. He is highly familiar with soil gas and indoor air characterization techniques, appropriate methods to obtain high quality, defensible data, and regulatory guidance and analytical and numerical models for this pathway. He has developed guidance for numerous regulatory agencies including U.S. EPA, Health Canada, UK Environmental Agency, the Science Advisory Board for Contaminated Sites (SABCS) in British Columbia, and several provinces and states in Canada and the U.S. Currently, he is supporting the U.S. EPA in the development of their Petroleum Vapor Intrusion (PVI) guidance through database analysis and development of screening approaches for incorporating aerobic biodegradation in guidance. He is the principal investigator for several applied research projects including field-based research for Shell Global and Electric Power Research Institute, and research on biofuel and methane impacts for the American Petroleum Institute. Dr. Hers holds a Ph.D. in Civil Engineering (University of British Columbia), is on the Board of Directors of the SABCS, and is a member of the roster of professional experts in British Columbia.

Alan R. Hirsch, M.D., F.A.C.P., a Neurologist and Psychiatrist specializing in the treatment of smell and taste loss, is the Neurological Director of the Smell& Taste Treatment and Research Foundation in Chicago. He is a Faculty Member in the Department of Medicine at Mercy Hospital and Medical Center, and Assistant Professor in the Departments of Neurology and Psychiatry at Rush University Medical Center. Dr. Hirsch is certified by the American Board of Neurology and Psychiatry in Neurology, Psychiatry, Pain Medicine, Geriatric Psychiatry, and Addiction Psychiatry. Dr. Hirsch conducts in depth studies of the chemosensory system and its relation to all aspects of life. Some examples include studies observing the effects of aromas on behavior, emotions, mood, and interactions between individuals. An inventor and investigative researcher in the areas of smell and taste, Dr. Hirsch frequently lectures across the country and has extensively published many of his studies’ findings. He has served as an expert on smell and taste for CNN, Good Morning America, Dateline, 20/20, The Oprah Winfrey Show, CBS Early Show, and Extra. Additionally, Dr. Hirsch is a member of numerous professional organizations, including the American Academy of Neurology, American College of Physicians, the American Medical Association, the Association of Chemosensory Sciences, the National Association for Holistic Aromatherapy, and Editorial Committee of The International Journal of Essential Oil Therapeutics. He has served on the Editorial Advisory Board of The International Journal of Aromatherapy, Associate Editor of Neurology
Healthcare USA, the Advisory Board of the National Academy of Sports Medicine, the Medical Advisory Board of Chronic Fatigue Syndrome Society of Illinois, and on the Editorial Advisory Board of the Professional Journal of Sports Fitness/CPT News. Dr. Hirsch received both his B.A. and M.D. degrees from the University of Michigan in Ann Arbor and completed his residencies in both Neurology and Psychiatry at Rush University Medical Center in Chicago. Also a prolific author, Dr. Hirsch has written several books, Dr. Hirsch’s Guide To Scentsational Weight Loss, Scentsational Sex, What Flavor Is Your Personality?, Life’s A Smelling Success, What Your Doctor May Not Tell You About Sinusitis, What’s Your Food Sign?, Sensa Weight Loss Program, and How To Tell If Your Teenager Is Lying.

Brian R. Hitchens, PG., CHG, is an Associate Hydrogeologist with Geosyntec Consultants in San Diego, California. Mr. Hitchens received a Bachelor of Arts degree in Geology from the College of Wooster in 1997 and a Master of Science degree in Structural Geology from the University of Wyoming in 1999. Mr. Hitchens has been with Geosyntec for the past 12 years where he has been involved with many diverse projects with responsibilities including project management, litigation support, well installation and sampling, geophysical investigations, data analysis, data visualization, risk assessment, reporting, and negotiation with regulatory agencies. He specializes in applied in-situ remedial technologies, sediment remediation, bioremediation, data management, and data visualization.

Karin Holland is a Senior Sustainability Specialist at Haley & Aldrich, Inc. in San Diego, California. Since 2007, she has been responsible for leading the application of sustainability thinking to Haley & Aldrich’s remediation services and has assisted multiple clients with sustainable remediation projects, throughout the remediation lifecycle. This work has included preparing sustainable remediation guidance for clients in the private and public sector. She has also worked on projects involving environmental management systems, greenhouse gas inventories, sustainability appraisals and sustainability training since 2004. Karin is an active member of the ITRC Green and Sustainable Remediation Team and the ASTM Green and Sustainable Site Assessment and Cleanup Committee. She is also the Sustainable Remediation Forum (SURF) President and chairs SURF’s Technical Initiatives Committee. Karin earned a bachelor’s degree in Natural Sciences from the University of Cambridge, United Kingdom in 2002 and a master’s degree in Law and Environmental Science from the University of Nottingham, United Kingdom in 2003. She is a LEED-Accredited Professional and a Registered Lead ISO14001 Auditor.

Chase W. Holton is a Ph.D. candidate in Environmental Engineering at Arizona State University. Chase’s research work involves the long-term study of the groundwater to indoor air pathway at a chlorinated solvent-impacted site in Utah.

Kelly Houston, P.E. is a principal remediation engineer with ARCADIS based out of San Francisco, California. He has over 12 years’ experience developing innovative soil and groundwater remedial strategies for petroleum hydrocarbons, organics, and metals. He is a national practice leader of in situ remediation with chemical treatment at ARCADIS. Mr. Houston has BS and MS degrees in environmental engineering from the New Mexico Institute of Mining and Technology.

Mike Iwanyshyn is an Environmental Technical Specialist with the Natural Resources Conservation Board in Alberta, Canada. Dr. Iwanyshyn obtained a Ph.D. in Civil Engineering (specializing in the Environment) from the University of Calgary and a B.Sc. in Renewable Resources (Land Reclamation and Remediation) from the University of Alberta.

James Jacobs is a certified hydrogeologist and professional geologist with Environmental Bio-Systems. He has 25+ years of experience and teaches a class on Sustainable Remediation of Soils and Water for the University of California at Berkeley, Extension Program. He is a Fulbright Scholar with four teaching awards, most recently in India. He has written over one hundred articles on various geoscience subjects related to environmental assessment and in-situ remediation and co-authored two CRC Press books. As an elected official, he is on the local sewer board and community services district.

Glenn Johnson’s expertise is in the area of environmental forensics, with a particular focus on multivariate statistical methods and sources, fate and transport of PCBs, dioxins and furans. He spent seven years in environmental consulting with Roux Associates, Inc. (West Deptford, New Jersey) and McLaren/Hart Environmental Engineering, Corp (Philadelphia, PA). He has been at the Energy &
Geoscience Institute (EGI) at the University of Utah since 1995, where he has a faculty appointment in the Department of Civil and Environmental Engineering. Dr. Johnson frequently consults, and has served as an expert witness in a number of environmental litigation matters involving multivariate statistics and environmental chemistry.

**Jill Johnston** is a Ph.D. candidate in Environmental Sciences and Engineering at in School of Public Health at the University of North Carolina in Chapel Hill. Jill’s research focuses in probabilistic modeling of vapor intrusion at contaminated sites in Texas and evaluation of spatial and temporal variability in indoor air concentrations of chlorinated solvents. She has extensive experience in environmental justice and community-based participatory research. Jill earned an M.S. in environmental sciences and engineering from UNC in 2010 and holds a B.A. in geology and environmental science from Wesleyan University.

**Steven Jones** is an Analytical Chemist with over 40 years’ experience. Since 1984, he has been active in the environmental chemistry field. Over the past 40 years he has testified several hundred times in court and given depositions as an Expert in several states. Because of his forensic background, his expertise is widely used by environmental consultants, attorneys and engineering firms. Throughout his career, Dr. Jones has been active both in the laboratory and in laboratory management. He has spent several years as the Manager/Technical Director of several large and small environmental testing laboratories and does extensive data auditing and review of other laboratory’s reports. He is well versed and specializes in oil field operations, fuel hydrocarbon identification and the associated testing procedures that accompany these activities. He has spent more than 34 years as a bench chemist and is well versed in GC/MS, GC, IR, AA, ICP, wet chemistry methods, as well as extraction techniques. Currently, Dr. Jones manages his own analytical testing firm which provides consultation, lectures, fuel fingerprinting, simulated distillation, fuel aging and many other chemistry-related services. He has also headed the building, setup, and operation of four analytical testing laboratories. For the past 27 years he has served as a reference for lab personnel and clients who have questions about testing procedures related to environmental and analytical chemistry areas. Aside from managing his analytical testing firm, Dr. Jones has taught "Sampling and Analytical Methods for the Characterization of Hazardous Waste" and "Organic Chemistry of Hazardous Waste" at the University of California's Extension Service in Irvine, California. Dr. Jones has given numerous presentations related to the environmental testing field and has expertise with most EPA methods including soil gas methodologies and applications.

**Tomasz Kalinowski** is 4th year doctoral student and PhD Candidate in the Biological Design program in the Swette Center for Environmental Biotechnology at Arizona State University’s Biodesign Institute. Tomasz has several years of hands-on experience in remediation feasibility studies in both lab and field. For the past three years he has been working on predicting and understanding the performance of in situ remediation technologies at state and federal priority cleanup sites. His work has focused primarily on chloroethylene, hexavalent chromium and perchlorate contamination and on the use of a nascent remediation assessment tool, the in situ microcosm array. Tomasz received his Bachelors of Science degree in Cellular and Molecular Biology from SUNY-Binghamton.

**Sami Khanal** is a PhD candidate in Environment and Resources program in Nelson Institute at the University of Wisconsin, Madison. Her research focuses on identifying the influences of ethanol plants and animal feeding operations on land use change, estimating nitrogen balance in cropping systems and examining changes in hydrologic cycle under “Billion Ton” biofuel feedstock production scenario. Some of her research interests include use of remote sensing and GIS in understanding land atmospheric interaction, climate change, biofuels and spatial modeling.

**William B. Kerfoot** is president of Kerfoot Technologies, Inc. (formerly K-V Associates, Inc.), located in Mashpee, Massachusetts. He is a Licensed Site Professional (hazardous waste) in the Commonwealth of Massachusetts and has over 25 years’ experience in site assessment and remediation. He has over 10 years’ experience in the design and implementation of subsurface ozone treatment systems. Site regions range from local drycleaner facilities or gasoline retail outlets to multiple block region plumes in major urban city regions. Dr. Kerfoot has conducted training workshops for AEHS and NGWA on in-situ chemical oxidation and contaminated soils, sediments, and water. He serves on the Scientific Advisory
Board for the AEHS West Coast Conference. He also sits on the board of directors of the International Ozone Association, PAG, specializing in groundwater and soil applications. He was technical lead for ozone technology for both Letterkenny Army Depot and Paducah Workplan. Dr. Kerfoot holds numerous patents in processes and equipment currently used in groundwater retrieval, flow measurement, and remediation. Dr. Kerfoot has recently developed remediation technologies based upon oxidative microbubble reactions and has authored over fifty scientific publications.

Mark Kram is the Founder and Chief Scientist for Groundswell Technologies, Inc., a group specializing in automated monitoring and modeling of environmental and homeland security sensor networks. Dr. Kram earned his Ph.D. in Environmental Science and Management from the University of California at Santa Barbara, an M.S. degree in Geology from San Diego State University, and his B.S. degree in Chemistry from the University of California at Santa Barbara. He has over 29 years of experience using and developing innovative environmental assessment techniques and has authored papers, national standards, articles and book chapters on the subject. Dr. Kram has been instrumental in the areas of sensor development and implementation, innovative GIS applications, dense non-aqueous phase liquid (DNAPL) site characterization, chemical field screening and monitoring well design, mass flux based remediation design and performance monitoring, expedited site assessment, and holds several patents for hydrogeologic and chemical characterization tools and automated environmental monitoring approaches. Dr. Kram is also an active member of NGWA, ASTM (Subcommittee D18.21), ITRC, and is currently assisting with national guidance for vapor intrusion applications. Dr. Kram is the recipient of the NGWA’s prestigious 2011 Technology Award.

Matthew Lahvis began his career at the New Jersey District of the U.S. Geological Survey in 1989 where his research focused on quantifying the fate and transport of petroleum compounds in the unsaturated zone. Matt also served as an adjunct professor in the Civil Engineering Department at Drexel University from 1995-1999. In 2000, Matt joined Shell Projects and Technology where he manages the Soil and Groundwater R&D Program and serves as a business focal point on vapor intrusion issues. Matt has published extensively on vapor transport in the unsaturated zone and has served as an Associate Editor for the Ground Water Monitoring and Remediation Journal since 2005.

Charles Lambert, PhD, DABT, is an assistant clinical professor in the Division of Occupational and Environmental Medicine at the University of California, Irvine. He is also principal toxicologist for McDaniel Lambert, Inc. He has a PhD in Pharmacology and Toxicology from the University of California, Irvine, and is a diplomat of the American Board of Toxicology. He has extensively published and conducted research on the lanthanides and has been involved in the development of safe human exposure levels for these compounds.

James Lape is a Principal at Integral Consulting with more than 20 years of experience in the health and environmental science fields. He is active in all aspects of quantitative human health risk assessments, including fate and transport modeling, exposure assessment, risk characterization, and uncertainty analysis. During his career, he has worked on Superfund and Brownfield sites, supported permitting activities, and provided expert testimony and litigation support. His specialty is in the field of air toxics. Mr. Lape has been active in the investigation of vapor intrusion and indoor air quality, having conducted modeling of emission sources and indoor air using existing or customized models, developed and reviewed soil gas and indoor air monitoring programs, and conducted human health risk evaluations.

Dan Leigh is a Principal Scientist for the Western US and Pacific Region, and is recognized as a Distinguished Technical Leader, for Shaw Environmental and Infrastructure, Inc., in Concord, CA. He has over 27 years experience as a professional geologist and is currently registered as a California Professional Geologist and Certified Hydrogeologist. He has conducted assessments and remediation of organic and inorganic contaminants across the United States and internationally. For the past 20 years his primary focus has been on natural attenuation and in situ bioremediation and biogeochemical degradation of chlorinated organics, groundwater modeling, and atoll island hydrogeology.

Minjing Li received her Ph.D. in environmental science from Wuhan University. Li has worked in China University of Geosciences (Wuhan) since 2007. Her research involves phytoremediation of polluted
environment, recycling of reclaimed water, the application of mineral materials in wastewater treatment, etc.

**Hui Liu** is a professor at China University of Geosciences (Wuhan) with appointments in the School of Environmental Studies and State Key Laboratory of Biogeology and Environmental Geology. She has MS degrees in Plant Nutrition from Huazhong Agriculture University and PhD degree in Environment Science from Wuhan University. She had been in the department of Civil and Environment Engineering, University of Pittsburgh, as a visiting professor from 2007-2008. She is the Editorial Board Member of *Carbohydrate Polymers* (Elsevier). Her research has focused on the fate and behavior of organic pollutants in soil and groundwater, such as distribution, biodegradation, absorption, and also remediation. She is recently interested in, and conducting a program about, the stable isotopic diffraction of organic pollutants in different processes.

**Derek Lovley** is a Distinguished Professor in the Department of Microbiology at the University of Massachusetts and Director of the Environmental Biotechnology Center. Research in his laboratory focuses on: anaerobic microbial processes that impact the natural cycling of carbon and metals in soils and sediments; bioremediation of hydrocarbon and metal contamination; conversion of organic wastes to methane; and novel bioenergy strategies that involve microbe-electrode interactions. These topics are addressed with a systems biology approach that incorporates genome-scale metabolic modeling, functional genomics, biochemistry, physiology, genetic engineering, and environmental meta-omic studies.

**Jun Lu** has a bachelor and master degree in geology and Ph.D in geochemistry. He is a California professional geologist, certified Hydrogeologist and certified Engineering Geologist. Over 27 years of his professional career, he has been involved with geology and various environmentally-related disciplines. For the past ten years, his focus has been environmental forensics and site characterization. Due to his diverse educational background and experience, he is in a unique position to most effectively integrate the multiple key disciplines for site characterization and forensic investigation. He has provided technical support for legal teams for environmental liability related projects and also served as a “Subject Matter Expert” of groundwater hydrogeology for the State of California Board of Professional Engineers and Land Surveyors. The sites on which he has worked include petroleum refineries, terminals and pipelines, underground storage tanks, oil fields, MGPs, chlorinated solvents and various other industrial facilities. Currently, he is a Principal Technical Specialist with AECOM, a global professional service provider.

**Paul Lundegard** has been an independent environmental consultant for six years and is located in Fullerton, California. He previously worked 21 years for Union Oil of California as a research and consulting scientist. Paul is a registered professional geologist in the State of California and has a Ph.D. in geochemistry from the University of Texas at Austin. His current consulting work is focused on the resolution of cross contamination claims.

**Hong Luo** (Emma) graduated with her Ph.D in environmental engineering from ASU in 2009. She is currently working as a research assistant professor ASU. Her research interest is the fate and transport of contaminants in the environment, with a focus on vapor intrusion processes. She has been a key individual in developing our understanding of the spatial and temporal variability of soil gas concentrations at petroleum hydrocarbon sites. She has also modified the Abreu-Johnson vapor intrusion model (v2005) to enhance its transient capabilities. Currently, she is the manager and one of the tech leaders for a SERDP-funded project that integrates field-, lab- and modeling components to improve our ability to assess the groundwater to indoor air pathway at chlorinated solvent-impacted sites. She is also working on the practical application of the modified model and supervising graduate students at ASU.

**Tamzen Macbeth**, Ph.D., P.E., is a Principal Environmental Engineer with CDM Smith in Pocatello, Idaho and has an interdisciplinary academic and research background in microbiology and engineering. Dr. Macbeth has spent the last 15 years specializing in development, demonstration and application of innovative, cost-effective remedial technologies. Dr. Macbeth is experienced in all aspects of remedies for characterization and remediation of contaminated sites including DNAPLs and LNAPLs, dissolved organic, inorganic, and radioactive contaminants under CERCLA and RCRA regulatory processes. She
has expertise in a variety of remediation techniques, including in situ bioremediation, natural attenuation, in situ chemical oxidation, in situ chemical reduction, and thermal treatment, alone and in combination for cost-effective remediation of complex contaminated sites. Dr. Macbeth has been involved in the development and demonstration of innovative monitoring technologies, including writing an overview document and providing training for the Intrastate Technology Regulatory Council IDSS team on Use and Measurement of Mass Flux and Mass Discharge.

**Steve Machemer** earned a Ph.D. in Geochemistry from the Colorado School of Mines studying the passive wetland treatment of acid mine drainage. Since 1994, Steve has supported civil and criminal environmental enforcement at the U.S. EPA’s National Enforcement Investigations Center (NEIC) in Denver, Colorado. Steve’s enforcement support includes technical studies and expert opinions, depositions, and testimony. Many cases involve the characterization of bulk and individual particles for contaminant source identification, including lead-bearing particle contamination in soils and airborne particulate matter.

**Shaily Mahendra** is an Assistant Professor in the UCLA Department of Civil and Environmental Engineering. She received a Ph.D. from the University of California, Berkeley, and post-doctoral fellowship from Rice University. Her research areas are microbial processes in natural and engineered systems, applications of molecular and isotopic tools in environmental microbiology, environmental impacts of nanomaterials, and biodegradation of emerging groundwater contaminants.

**William (Bill) Mann** is the Western Sales Manager for In-Situ Inc., a manufacturer of water quantity and water quality monitoring instrumentation. Bill has been working in the hydrology and geology fields for the past 30 years. Bill is a member of the American Association of Petroleum Geologists and a member of the Association of Ground Water Scientists and Engineers. He graduated with a B.S. in Geology/Commerce from Rider University in Lawrenceville, New Jersey.

**Barry Marcus** is a 19-year veteran of the Sacramento County Environmental Management Department where he is a Supervising Environmental Specialist. Previous to his tenure with Sacramento County he worked in private-sector consulting for five years. Mr. Marcus received a master’s degree in geology from California State University, Hayward, and is a California Professional Geologist. Mr. Marcus supervises the Local Oversight Program (UST Cleanup), the Liquid Waste Program (septic systems), the Wells Program, and the Abandoned Well Program for Sacramento County.

**Diana Marquez** is an Associate Toxicologist in the Environmental Group with Burns & McDonnell Engineering Company in Kansas City. Her formal education includes a Master’s degree in Toxicology from the University of New Mexico and a Bachelor’s Degree in Biology from Villanova University. She has been actively involved in risk assessment, epidemiology, vapor intrusion, and toxicology for 20 years. She currently serves as the national practice leader for Burns & McDonnell’s risk assessment and vapor intrusion practices for Burns & McDonnell nationwide.

**Kevin C. Mayer** is a partner and civil trial attorney in the Los Angeles office of Crowell & Moring LLP. Kevin’s practice focuses on complex commercial and mass tort litigation, environmental, construction, toxic tort, OSHA, products liability and environmental and products liability litigation. Kevin represents land owners and operators in federal CERCLA, and RCRA, and state statutory and common law administrative proceedings, litigation and trials involving environmental contamination, cost-allocation, leaking underground storage tanks, waste disposal practices, and commercial development. His experience in this area includes solid and liquid waste management, regulatory compliance and enforcement, Superfund, fear of future disease, risk assessment, Brownfields, and soils, air and groundwater contamination investigation and remediation. Kevin has been annually designated in “Best Lawyers in America” and in the Southern California Super Lawyers list. He is a 2006 recipient of the Burton Award for Legal Achievement. In 2011, Kevin was elected a Fellow of The Litigation Counsel of America.

**Kristin McClellan** is currently working towards her Ph.D. in Civil and Environmental Engineering at Arizona State University. She has been working on an ESTCP funded project that involves the design
and implementation of a novel tool for in situ remediation. Kristin has a B.S. and M.S. in Applied Natural Science (2006) from the Technical University in Freiberg, Germany. She has contributed 27 research papers, book chapters, and conference presentations. Her expertise is in groundwater remediation, environmental biotechnology, analytical chemistry and ecotoxicology.

Mary McDaniel is a board-certified occupational and environmental medicine physician, licensed attorney, and risk and crisis communication expert. Dr. McDaniel brings more than 20 years of experience in environmental health assessment, risk communication, risk management, and occupational and environmental medicine to McDaniel Lambert, which she co-founded in 1997. Dr. McDaniel is also involved in developing risk communication and crisis communication strategies for communities, public agencies and companies in the United States and overseas. She is a member of the advisory board of the Southern California NIOSH Education and Research Center and the current president of the Southern California Society of Risk Analysis.

Edmund Merem completed his B.A. and M.E.S. at York University, Toronto and then his M.A. at Pontifical Lateran University, Vatican City. He graduated with a Ph.D. from Jackson State University, Mississippi. Dr. Merem has many years of experience in Global environmental planning and environmental accounting for oil and gas in Canada and the US, and hydro-politics of the Middle East and Africa. Edmund has written several research monographs and papers that have been published in academic journals and major conference proceedings. He worked as an Environmental Analyst in the Environment Bureau of Agriculture and Agric-Food Canada and he also worked briefly as an accounts clerk in the Federal Ministry of National Planning in Lagos Nigeria. He is very fluent in Italian and a number of European and African languages. Dr. Merem is currently an Associate Professor of Environment and Land Use and the PhD Program Coordinator in the Urban and Regional Planning Department at Jackson State University.

Rachel E. Mohler, Ph.D, is a lead research chemist for Chevron Energy Technology Company. Her research interests include the development of portable instrumentation and advanced data processing tools for complex chromatographic data. Her skills in analytical chemistry and chemometric analysis have been repeatedly applied to Chevron's Environmental Forensics data. In addition to the Environmental Forensic arena, Rachel applies chemometric analysis to a variety of applications within Chevron and provides analytical expertise within Chevron for the Environmental Management Company (EMC).

Will Moody has over 10 years of environmental consulting and site remediation experience. For the last eight years, he has been working with Geo-Cleanse’s innovative remedial design and marketing departments. Currently, Mr. Moody is Director of Sales & Marketing and a Project Manager for Geo-Cleanse. Mr. Moody has managed two of the largest in-situ chemical remediation projects ever performed in the U.S., and has been involved with several projects in Europe. His work for Geo-Cleanse also includes field operations, site analysis, and laboratory studies. Mr. Moody has a B.Sc. degree in Environmental Science from Virginia Polytechnic Institute and State University.

Jonathan Myers has a Ph.D. in Geochemistry plus 29 years of environmental consulting experience. His specialties include environmental forensics, geochemical modeling, natural attenuation investigations, background characterization, and the use of geochemical evaluations to distinguish between contamination versus naturally high background concentrations of elements in groundwater, surface water, sediment, soil, and air. Dr. Myers has authored over 30 peer-reviewed research papers and book chapters, and has taught short courses on geochemical and environmental forensic techniques.

Alec Naugle is a Senior Engineering Geologist in the Groundwater Protection Division at the California Regional Water Quality Control Board, San Francisco Bay Region where he has worked since 1999. Alec leads a unit that oversees solvent and petroleum hydrocarbon cleanups at Department of Energy laboratories and closed military bases, many of which are undergoing conversion for civilian use. He has been an active member of the California Groundwater Resources Association since 1998 and the Interstate Technology and Regulatory Council since 2003. Prior to joining the Water Board, Alec worked as a consultant on various military and private sites in California and the Northeast and as a regulator in the UST program. Alec earned a bachelor’s degree in chemistry and geology from Marietta College in
Marietta, Ohio in 1986, and a master’s degree in groundwater hydrology from the University of California at Davis in 2001. Alec is a Professional Geologist in California.

Efrem Neuwirth is a staff toxicologist with the State of California’s Department of Toxic Substances Control. He has been with the DTSC since 2008. Prior to 2008 he did post-doctoral research at UCLA and earned a Ph.D. in environmental toxicology from the University of California Riverside, in 2006. His Ph.D. and post-doctoral research focused upon mechanisms DNA damage, repair and mutation. He also earned Master’s in Public Health in Industrial Hygiene from San Diego State University and a Bachelor’s Degree in Biology from the University of Arizona.

Charles (Chuck) J. Newell, Ph.D., P.E. is a Vice President of GSI Environmental Inc in Houston, Texas and has worked for GSI since 1989. His professional expertise includes site characterization, groundwater modeling, non-aqueous phase liquids, risk assessment, natural attenuation, bioremediation, non-point source studies, software development, and long-term monitoring projects. He is a member of the American Academy of Environmental Engineers, a NGWA Certified Ground Water Professional, and an Adjunct Professor at Rice University. He has co-authored five U.S. EPA publications, eight environmental decision support software systems, numerous technical articles, and two books: Natural Attenuation of Fuels and Chlorinated Solvents and Ground Water Contamination: Transport and Remediation. He has taught graduate level groundwater courses at both the University of Houston and Rice University. He has been awarded the Hanson Excellence of Presentation Award by the American Association of Petroleum Geologists, the Outstanding Presentation Award by the American Institute of Chemical Engineers, and the 2001 Wesley W. Horner Award by the American Society of Civil Engineers (for the paper, “Modeling Natural Attenuation of Fuels with BIOPLUME III”). He was recently cited as the Outstanding Engineering Alumni from Rice University in 2008. He earned a bachelor’s degree in Chemical Engineering in 1978, a master’s degree in Environmental Engineering in 1981, and a Ph.D. in Environmental Engineering in 1989, all from Rice University in Houston Texas. Chuck is a professional engineer registered in Texas.

Hieu Nguyen is the Technical Engineer for CETCO Remediation Technologies, based in Santa Ana, California. He is has a bachelor degree in Chemical Engineering from University of Idaho and joined CETCO company in 2007.

Chris Noland, PG is a Project Geologist at Kleinfelder’s San Diego, California office. He is a registered professional geologist in California and Arizona with more than 12 years of experience in soil and groundwater investigations at private sector sites, municipal and state-funded sites, and CERCLA sites. Mr. Noland has been with Kleinfelder for 11 years, leading investigations on diverse projects with a wide range of contaminants. He graduated from San Diego State University with a Bachelor of Science in Geological Sciences.

Mark R. Norton holds a Bachelors of Science in Civil Engineering form the University of Colorado and a Masters of Public Administration from Brigham Young University. He is a registered civil engineer in California and Colorado and accredited LEED (Leadership in Energy and Environmental Design) professional under the US Green Building Council’s LEED program. Mr. Norton’s background includes 30 years of engineering experience in a broad range of civil engineering projects. Mr. Norton serves as the Water Resources and Planning Manager for the Santa Ana Watershed Project Authority (SAWPA), a joint powers agency organized to support water resources in the Santa Ana River Watershed. Concurrent, with his department management duties, Mr. Norton also serves as the Authority Administrator for the Lake Elsinore and San Jacinto Watersheds Authority (LESJWA), a joint powers agency created to enhance water quality for Lake Elsinore and San Jacinto River Watershed. His titles include Past President of the Inland Empire Council of Engineers and Scientists, Past President of the American Society of Civil Engineers (ASCE) San Bernardino/Riverside Branch and Los Angeles Section, 2004-05 ASCE Civil Engineer of the Year and the currently serves as chair of the ASCE Region 9 Water & Environment Committee.

Jon Pesicka: Through 26 years of engineering and consulting experience, Jon delivers strategic environmental liability management and business-minded remediation solutions to oil and gas industry
clients. Jon provides expertise in the areas of EHS program management, hydrocarbon investigation, regulatory compliance and safety training. Jon also assists attorneys as an expert technical advisor during environmental case depositions and legal proceedings as well as supports counsel with strategy development and information discovery. Jon has provided portfolio management oversight for over 400 petroleum-impacted properties across the United States. Clients value Jon’s technical focus, attention to detail and ability to seamlessly coalesce cross-functional teams to ensure compliance of common policy and procedure throughout an organization. Jon holds a Bachelor of Science degree in Civil Engineering from the South Dakota School of Mines and Technology and is a registered civil engineer in 11 states.

**Ioana Petrisor** in an environmental biochemist with 19 years of experience (both in academia and industry). She is currently Senior Project Scientist at Cardno ENTRIX, an international corporation specializing in a large range of environmental work. Dr. Petrisor specializes in environmental forensics/litigation support using up-to-date fingerprinting methods to track the source and age of contaminants. Dr. Petrisor conducted innovative research work related to development of active capping for aquatic sediment remediation through SERDP program. She is Editor-in-Chief of the Environmental Forensics Journal and she is co-author at 1 invention patent, 4 book chapters, and more than 70 scientific publications. Dr. Petrisor has a PhD in Biology (Environmental Biotechnology) from Romanian Academy of Sciences (awarded in 2000) and a Bachelor in Chemistry (major Biochemistry) from Bucharest University in Romania (awarded in 1992). In 1999 she has completed an UNESCO training program in Plant Molecular Genetics at the University of Queensland, Brisbane, Australia. She is the winner of “The Greatest Award of Successful Careers for Outstanding Scientific Results and Professional Activity” issued by Cosmopolitan Magazine, Romanian Edition (June 2000).

**Paul Philp** is Professor of Petroleum and Environmental Geochemistry at the University of Oklahoma. He received his Ph.D. from the University of Sydney, Australia in 1972 and a D.Sc. from the same University in 1998 on the basis of his research in geochemistry over the past 20 years. Prior to starting at the University of Oklahoma in 1984 Dr. Philp was a Principal Research Scientist, C.S.I.R.O., Sydney, Australia. His current research interests center around petroleum, environmental and forensic geochemistry with an emphasis on molecular and isotopic characterization of oils, gases, rock extracts and contaminants for the purposes of source determination, characterization of depositional environments, maturity, biodegradation and for correlation purposes. Much of the current research activity in the area of forensic geochemistry involves the use of stable isotopes for the purposes of fingerprinting contaminants in the environment for correlation purposes; source determinations and evaluating whether or not natural attenuation is active. This approach is particularly valuable in the case of refined products or single component contaminants when the more traditional GC and GCMS techniques are of little or reduced use. He has authored or co-authored over 380 articles and books and has lectured extensively on petroleum and environmental geochemistry in SE Asia, South America, Europe and Africa.

**Kevin Pope** has 20 plus years of experience in the environmental industry. He is an expert in subsurface sampling methods and provides technical support for a variety of enhanced bioremediation and chemical oxidation remediation methods. As the co-owner of Remediation Shop, he works with a variety of manufacturers. He has a degree in forestry and industrial technology.

**Arturo Riojas**, Ph.D., P.E., is an Associate with Booz Allen Hamilton. Dr. Riojas holds chemical engineering and civil/environmental engineering degrees, is a licensed professional engineer in the State of Texas, and has over 30 years of professional experience in industrial, consulting, and academic settings. He has hands-on experience gained in the petroleum refining and chemical industries. His experience includes process engineering and optimization, water and wastewater engineering, soil and groundwater remediation/restoration, and preparation and review of remediation- and water-related assessments and work plans. He also has experience with solid waste handling and landfill design projects and has contributed to various international flood control and drainage projects. He possesses both design and operating experience at water, municipal wastewater, and industrial wastewater facilities. He has managed remediation projects involving monitoring well installation, soil sampling, contaminant plume delineation, excavation and removal of contaminated media, carbon adsorption system design, air stripping, and groundwater chemistry modeling. He has broad experience with diverse remediation technologies, including permeable reactive barriers, in-situ chemical oxidation, enhanced reductive
Michael Ruby is an environmental chemist with 20 years of experience in human health exposure analysis and risk assessment, site investigation and remediation, litigation support, and regulatory affairs. He specializes in designing and managing site investigations and studies to establish the transport and fate of organic and inorganic compounds in the environment. Mr. Ruby has directed multidisciplinary projects pertaining to soil, solid waste, surface water, and groundwater quality and on developing remedial strategies for such sites. These projects have been conducted under CERCLA, RCRA, and state-led programs. Mr. Ruby is recognized internationally as a leading scientist working on quantifying human exposures to metals and organic compounds in soils and sediments. He has conducted extensive research on bioavailability issues and is widely published in peer-reviewed journals on this topic. Mr. Ruby served on the National Research Council’s Committee on Bioavailability of Contaminants in Soils and Sediments, which published a state-of-the-science review on bioavailability.

Ricot Saint Aimé received his bachelor degree in Agricultural Science and Rural Engineering in 2005 from the State University of Haiti. Mr. Saint Aimé was a Fulbright scholar 2009-2011. He is currently a PhD student in the department of Civil and Engineering at Southern Illinois University, Carbondale where he received his master degree. His work focused on visualization of NAPL wettability in 2-D experiments under the supervision of Dr. Lizette R. Chevalier.

Atul M. Salhotra is an internationally recognized expert in the development and application of risk based decision making programs for the cost-effective management of chemically impacted sites. He is the lead author, project manager, and developer of Risk Based Corrective Action (RBCA) Programs for several states including Oklahoma, Texas, New-Mexico, Kansas, Nebraska, Missouri, Tennessee, Alabama, North Carolina, Idaho, Washington DC, New York, and USEPA (Indian Countries). As one of the original nine ASTM approved trainers for RBCA, he has conducted training courses in over 25 states and 10 countries. Over 6000 individuals have benefited by attending his courses. In 2006, he developed a risk based Decision Support System for the US Air Force for managing contaminated sites in Europe. In 2011, he completed the development of Israel RBCA. Dr. Salhotra is well versed in the site-specific application of risk assessment, evaluation of indoor vapor intrusion, natural attenuation, and fate and transport modeling for the cost effective management of sites. He has supervised over 150 risk assessments involving hydrocarbons, metals and solvents and successfully defended the results with regulatory agencies across the country. Dr. Salhotra has provided litigation support on numerous high-profile projects related to the migration of plumes under people’s homes, the allegation of adverse health effects due to vapor intrusion, and diminution of property values. Several of these projects involved public meetings, risk communication presentations, and media coverage. Dr. Salhotra’s applied research work has involved the development and application of numerous exposure and risk assessment methodologies and tools for robust environmental decision making. These methodologies include contaminant fate and transport models, statistical analysis, monte-carlo simulation, data interpretation, and regulatory interaction and negotiations. Early in his career, Dr. Salhotra was responsible for the development of the EPACML (EPA’s Composite Model for Landfills), EPAMMM (EPA’s Multi-Med Model), and APIDSS (American Petroleum Institute’s Decision Support System for Exposure and Risk Assessment). These models and software are still in use and are the basis of several regulations and guidance documents.

Rezso Schmidt, Professor of soil management at the Faculty of Agricultural and Food Sciences of West Hungarian University in Mosonmagyarovar, Hungary. He graduated as an agronomist at the University of Keszthely Faculty of Agriculture in Mosonmagyarovar. He specialized in soils and plant nutrition at Keszthely University. He has a PhD in plant nutrition. He has been studying the effect of plant nutrition on the chemical composition of plants and on produce quality with special regards to trace elements.
Together with his co-author Pal Szakal, chemist they study the utilization possibilities of secondary raw material plant nutrients. He is the head of the Institute of Plant Production at the Mosonmagyarovar Agricultural Faculty and presently is the dean of the Faculty.

**Henry Schuver** (DrPH, Epidemiology, Johns Hopkins School of Public Health; M.S., Geology, Arizona State University) has been with the USEPA’s Office of Resource Conservation and Recovery (ORCR), Cleanup Programs Branch since 1997. In 1999 he authored the national RCRA Corrective Action Environmental Indicator (EI) guidance which led to a review of all plausible exposure pathways for subsurface contamination including impacts to indoor air. Since then he has led the development of the 2001 RCRA Supplemental Guidance for Vapor Intrusion, supported the development of the OSWER draft 2002 guidance, and has held annual workshops to improve the science and understanding of vapor intrusion. Recently he authored the 2010 review of the Agency’s 2002 draft Vapor Intrusion Guidance in support of the finalization of the Agency guidance (planned 2012). Prior to coming to Washington, he worked in the USEPA regional office in NY (1995-1997), as a private consultant in PA (1989-1995), and with the state of New Jersey (1985-1989).

**Jennifer E. Schwartz**, PE, is an Environmental Engineer with Geosyntec Consultants in San Diego, California. Ms. Schwartz earned a Bachelor of Applied Science degree in Environmental Engineering from the University of Waterloo in Waterloo, Ontario, Canada in 2005. She has been with Geosyntec for the past six years where she has been involved with many diverse projects such as bioremediation of VOCs, in-situ chemical oxidation of TPH and heavy metals, design of soil vapor extraction systems, construction management, building material characterization, landfill and vapor barrier design work, and litigation support.

**Alan G. Seech** is a soil chemist with 21 years of experience in environmental remediation. His focus has been on treatment of soil, sediment, and groundwater containing hard to degrade organics including pesticides and organic explosive compounds. He earned M.Sc. and Ph.D. degrees at the University of Guelph and, while working as a research scientist at W.R. Grace in 1992, discovered that amendment of soil with a combination of metallic reducing agent and biodegradable organic matter sharply increased degradation of chlorinated pesticides. The discovery yielded several US patents and resulted in the start of a soil remediation business known as Grace Bioremediation Technologies (1996-2002), which was sold to a group of investors in 2002. The business continued as Adventus Remediation Technologies Inc. and Adventus Americas Inc. (2002-2011), with Seech as CEO, and was acquired by FMC Corporation in 2011. The two main commercial developments from his work, DARAMEND® soil amendments and EHC® groundwater remediation products, have been successfully applied at hundreds of sites worldwide. Based in Irvine CA, Dr. Seech has published numerous articles on bioremediation of soil and groundwater, presented more than fifty papers at international conferences, and now serves as the Business Manager for FMC’s Adventus Environmental Solutions Team.

**Jianwen She** has worked as Chief of Biochemistry section at the California Department of Public Health and has conducted research on the sources and levels of PBDE, PCB and Dioxin in environmental and biological samples. He holds a Ph.D. in Chemistry from the University of Tuebingen. He found and reported that the PBDE levels in North America are many times higher than those reported from Europe or Japan. The findings stimulated intense research activity in this field in North America. His current research is focused on the analytical method development for biomonitoring of environmental contaminants in human body.

**Alina Stingu** is a Ph.D. student in Chemical Engineering Department at “Gheorghe Asachi” Technical University of Iasi, Faculty of Chemical Engineering and Environment Protection, Iasi, Romania. She is studying the morpho-physiological changes of different plant species under heavy metal stress and polyphenolic extracts treatment obtained from different vegetal raw material (spruce bark, chestnuts shell, grape seeds, *Asclepias syriaca* plant). Based on polyphenolic profile of tested aqueous extracts, she is trying to propose a potential mechanism for naturally polyphenolic compounds modulator aspects in phytoremediation process. Ms. Stingu has a Bachelor in Environmental Engineering from “Gheorghe Asachi” Technical University of Iasi, Romania (awarded in 2006) and a Master of Science Degree in Environmental Management (awarded in 2007) from Iasi University of Iasi, Romania.
Shankar Subramanian is a senior project manager with URS Corporation in Chicago, IL. He is a graduate of Birla Institute of Technology and Sciences, India (B.S. Chemical Engineering) and Pennsylvania State University (M.S. Environmental Engineering). He has been in environmental engineering consulting for over 15 years focusing on remedial investigation, design, implementation and long-term strategic planning for remedial sites.

Eric Suchomel, Ph.D, is a Project Engineer with Geosyntec Consultants in Oakland, California. His work focuses on application of innovative in situ abiotic and biological remediation technologies for treatment of contaminated soil and groundwater. He received his doctoral degree in environmental engineering from the Georgia Institute of Technology. His research involved evaluating the benefits of partial mass depletion of DNAPL source zones. He is a licensed Professional Engineer in the State of California.

Robert E. Sweeney has been a consulting geochemist for last 10 years at Environmental & Petroleum Geochemistry. Graduated from UCLA in 1972 and following taught and set up stable isotope laboratory at UFBa, Salvador, Brasil. Returned to UCLA as research associate until 1980 then joined the Organic Geochemistry Group at Unocal Research Center, Brea, CA. He spent 20 years at Unocal in technical support for petroleum exploration and environmental issues. Main interests include the integration of conceptual and mathematic models with field data to better understand processes occurring at sites with petroleum contamination, and use of temperature monitoring to evaluate the effectiveness of in situ bioremediation.

Rod Thompson is a Regulatory Toxicologist working with the Alliance for Site Closure. He is largely responsible for the current Indiana Vapor Intrusion Draft Program and for developing Indiana’s health protective screening and remedial site closure tables. Rod has over thirty years in the clean-up field and has been involved with Vapor Intrusion from its start in the United States. His publications focus on improving the practical application of national environmental and health policy. He is also focused on efficient, regulatory compliant and cost-effective environmental investigation and site closure. Recognizing the often conflicting perspectives of both the regulators and the regulated, he has developed many innovative and mutually beneficial solutions to site investigations and property transactions.

Karen Thorbjornsen holds Bachelor of Science and Master of Science degrees in Geology and is a registered Professional Geologist. She has 15 years of environmental consulting experience with 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 that distinguishes natural concentrations from site-related contamination in soil, groundwater, sediment, and surface water. Her geochemical evaluations are performed to delineate the extent of contamination, refine lists of chemicals of concern, optimize long-term monitoring programs, confirm the success of soil removal actions, and characterize background distributions. Ms. Thorbjornsen has authored several papers on geochemical evaluations of metals and teaches short courses on the technique.

Asheesh Tiwary is a Toxicologist for Chevron Energy Technology Company. He is a diplomat of the American Board of Toxicology and the American Board of Veterinary Toxicology. After graduating from Veterinary School in India, he moved to the United States to pursue a Masters in Toxicology at Utah State. In 2003, Dr. Tiwary joined the Residency program in Clinical Veterinary Toxicology, followed by a PhD in Pharmacology and Toxicology from the University of California, Davis. He joined Chevron in 2008 and supports projects involving Human Health and Ecological Risk Assessment.

Snejana Toneva is a recent graduate from California State University, Northridge. She has a Master of Science in Geology with an emphasis on Environmental Hydrogeology. Her interests are water quality as related to land use and surface water/groundwater contamination. She uses ArcGIS and its extensions to analyze the extent of water contamination and locate potential sources. She volunteers for non-profit “Mountains Restoration Trust” helping with stream restoration projects, surface water quality sampling and GIS mapping.
Li-Chu Tsai is an associate professor of the Department of Environmental Engineering and Science at Chia-Nan University of Pharmacy and Science, Taiwan since 2001. He has a B.S. degree in Environmental Engineering from the National Chung-Hsiung University, Taichung in 1986 and a M.S. degree in Environmental Engineering from the National Taiwan University, Taipei in 1988. Mr. Tsai focused on the study of heavy metals’ fates, binding speciation and remediation techniques in contaminated soil, ground water, and river sediments since 1996. He currently works on the enhancement of heavy metal ions biosorption from wastewater with chemically modified agricultural waste; dispersion of zero-valent iron nanoparticles in groundwater aquifer and phosphorus speciation in contaminated sediment of river reservoir and ocean.

Michael J. Wade is Principal Scientist of Wade Research, Inc., a small business started in 1992 that provides geochemical consulting services to a variety of government agencies, industrial clients, and law firms. Dr. Wade was educated as an organic geochemist and has 33 years of post-doctoral experience conducting a variety of research programs with special emphasis on organics pollution in the environment. He regularly provides expert testimony services both through the deposition process as well as in court testimony in the areas of petroleum product identification, hydrocarbon fingerprinting techniques, and age-dating of petroleum product releases. Periodically, Dr. Wade publishes research articles in the peer-reviewed technical literature on various aspects of forensic geochemistry.

Stephen Wall, PhD, is the Chief of the Outdoor Air Quality Research Program for the California Department of Public Health, which is located on the Marina Bay Richmond Laboratory Campus. The OAQ Research Program has a staff of nine research scientists, which conduct ground breaking investigations to elucidate the sources and environmental fate of toxic particles, to assess the potential for human exposure. These air environment forensics investigations employ state-of-the-art sampling devices and analytical instrumentation, including micro-scale spectroscopy and electron microscopy. Dr. Wall received his B.S. in Physical Chemistry from the University of California at Davis, and his Ph.D. in Engineering Physics from the University of California at Berkeley. He is the author of more than 50 scientific publications, and has presented over 30 research papers at international conferences on aerosol chemistry and physics.

Yi Wang is Director of ZymaX Forensics Isotope Laboratory, an environmental isotope laboratory serving clients in all 50 states as well as numerous international locations for decades. He has a Ph.D. in Environmental Science from Chinese Academy of Sciences, Beijing, China. He received his training on the state-of-art technology Compound Specific Isotope Analysis (CSIA) at Brown University in Rhode Island and Princeton University in New Jersey. He has over twenty years of experience in environmental research and development on issues related to air, soil, and water contamination. Dr. Wang is an environmental geochemist plus a specialist in the analysis of isotope ratios for carbon, hydrogen, chlorine, nitrogen, oxygen, and sulfur. He has authored over 50 peer-reviewed articles and books on water, soil, and air contamination topics, shared this information via invited lectures throughout the world, and peer-reviewed manuscripts to be published in Journals including “Environmental Science & Technology” and “Environmental Forensics”. He authors the chapter of “Sampling and Analysis” in the Environmental Law Series “Environmental Science Desk Book” published by the West Group annually. Since 2009, Dr. Wang has worked with the U.S. Environmental Protection Agency (EPA) and the State Coalition for Remediation of Drycleaners (SCRD) to give series of CSIA technical trainings: National Meeting and Region 6 in San Antonio, TX; Region 9 in San Francisco, CA; Region 4 in Atlanta, GA; and Region 1 in Boston, MA. He has worked on a few U.S. EPA lead Superfund Sites, where advanced site diagnostic tool CSIA was successfully used to locate source zones, allocate responsibility, assess the viability of in situ remediation, and optimize remediation strategy. Dr. Wang’s CSIA work has been announced in EPA’s Newsletter “Technology News and Trends” in February 2010 and March 2011.

Christopher Watt is an engineering/hydro-geologist navigating the regulatory process for institutions, municipalities and small business to cost effectively resolve their environmental liabilities. As a principal at LACO ASSOCIATES, he continues a legacy of bringing UST sites to closure using traditional and innovative methods. Over the last 20 years, LACO has negotiated the closure of over 160 UST cases in California. Mr. Watt currently oversees a $7M portfolio of cleanup projects located in Northern California.
Lawrence Wayne is a senior research microscopist at Forensic Analytical Laboratories (FALI) in Hayward, California. He received his bachelor’s degree in physics from Michigan Technological University in 1985. Mr. Wayne served 8 years in the United States Air Force as a microscopist, receiving most of his specialized training through the McCRone Research Institute in Chicago. Mr. Wayne is in charge of the Applied Microscopy Laboratory at FALI where he performs analysis on a wide range of projects including criminal casework involving gunshot residue, fiber, paint and glass analysis, and civil case work involving numerous process control and contamination problems. He is principal investigator in charge of combustion product research and frequently speaks at conferences regarding analysis of particulate residues related to wildfires.

Paul Weghorst is the Director of Water Resources at Irvine Ranch Water District (IRWD) in Orange County California. Mr. Weghorst has 30 years' experience in improving the reliability of water supplies provided by agencies throughout the Western United States. He is currently responsible for the development of IRWD's innovative groundwater banking projects in Kern County, California. These projects are intended to improve the reliability of IRWD's water supplies during periods of water supply interruptions and/or severe drought. Prior to joining IRWD, Mr. Weghorst worked for US Bureau of Reclamation where he assisted water agencies in improving supply reliability through the implementation of complex water transfers and in the development of surface and groundwater supply projects.

Jim Wescott is an environmental engineer with Tetra Tech in Chicago, IL. Jim has been with Tetra Tech since 2009. He designed and is currently managing a $45 million sediment remediation project on the West Branch Grand Calumet River. He is also the lead design engineer for the East Branch Grand Calumet River Reaches 4A and 4B sediment remediation project, which has a projected construction cost of $85 million. He has worked for both environmental consulting and construction firms, primarily in the Chicago area. He has a BS in civil engineering from N.C. State University and an MS in environmental engineering from Vanderbilt University, and a MS in environmental management from the Illinois Institute of Technology. In addition to sediment projects, Jim has extensive experience in brownfield redevelopment and radioactive waste management.

Konnie Wescott is an archaeologist at Argonne National Laboratory, a federally funded research and development center near Chicago, Illinois. At Argonne, she has been conducting environmental assessments for energy-related projects for over 20 years. This work has included archaeological surveys, development of cultural resource management plans, and historic building inventories and documentation, but primarily involves preparation of environmental impact statements and supporting National Energy Policy Act and Section 106 activities. Research interests include life-cycle evaluation of alternative energy sources and the use of geographic information systems (GIS) for predicting archaeological site locations, performing impact analyses, and understanding and managing cultural landscapes. She is lead editor of a book entitled "Practical Applications of GIS for Archaeologists," published in 2000, and co-editor of "GIS and Archaeological Site Modeling," published in 2006. She is currently working in support of the Solar Energy Programmatic Environmental Impact Statement for the Bureau of Land Management and the Department of Energy.

Alan Weston, Ph.D. - Dr. Alan Weston is Director of Remedial Technology and heads the Innovative Technology Group at CRA. He has over 20 years of experience in hazardous waste site remediation. In particular, Dr. Weston's experience includes the identification, evaluation, and application of innovative approaches for the remediation of chemical contamination. Dr. Weston performs remedial technology assessments including conceptual designs and preliminary cost estimates for technologies such as enhanced aerobic and anaerobic biodegradation, chemical oxidation, permeable reactive barriers, phytoremediation, and engineered wetlands. Dr. Weston also manages the treatability study laboratory and provides expert opinions to client legal teams on issues related to petroleum hydrocarbon biodegradation and spill dating, chemistry, analysis, QA/QC and statistical analysis of chemicals including dioxins, PCBs, PAH, and mercury in water, soil, sediment, plastic materials, and food ingredients. Previously, he was Director of Remedial Programs for Occidental Chemical Corporation (OxyChem), managing investigation and remediation at all OxyChem's active plant sites, including selection of remedial alternatives and treatability studies.
Raymond K. Will, P.E. has over 37 years of engineering experience. He is a California registered professional engineer (P.E.) and has performed numerous groundwater, surface water, and landslide studies at Todd Engineers. In addition, his experience has included geologic exploration, environmental evaluation, design, construction, operation and reclamation of domestic and international mining and construction projects. In recent years, he has performed litigation projects, several of which were mine related.

Sam Williams is a principal hydrogeologist for Geosyntec Consultants with over 27 years of professional environmental consulting experience. He is the manager of Geosyntec’s San Diego and Phoenix operations. Sam has a B.S. in Geophysics and an M.S. in Hydrogeology from San Diego State University. Mr. Williams is a Certified Hydrogeologist and Professional Geologist in the State of California, and a Certified Environmental Manager in the State of Nevada. For 10 years, Mr. Williams was also an instructor at the University of California at San Diego for the Regulatory Framework of Hazardous Materials and Toxic Substances course. Areas of specialization include assessment of groundwater conditions at landfills, development and implementation of innovative remedial technologies, vapor intrusion assessments and mitigation, risk-based corrective action, and litigation support.

Robert Willis is a Research Physicist with the U.S. EPA’s National Exposure Research Laboratory (NERL) in Research Triangle Park, NC where he manages the Electron Microscopy Laboratory. His research interests include environmental forensics; characterization of airborne particulate matter; source apportionment; air quality non-attainment issues; human exposure and PM-associated health effects; fate and transport of nanomaterials in the environment; and community-based air quality/health studies. Dr. Willis is a leader in the development and application of microscopy-based passive aerosol samplers and computer-controlled SEM techniques to identify and understand the impacts of local pollution sources.

Jeffrey Wong, Ph.D., is the Chief Scientist for the California Department of Toxic Substances Control (DTSC) at the California Environmental Protection Agency in Sacramento, California. For more than 20 years, he has managed DTSC’s efforts in the areas of environmental measurements, biological and exposure monitoring, toxicity and risk assessment, pollution prevention and technologies. Prior to this, Dr. Wong was involved in forensic investigations for law enforcement. Dr. Wong has served on Study Committees for the National Academy of Sciences, the U.S. Environmental Protection Agency and U.S. Department of Energy. He has also worked in areas related to the management and disposal of nuclear materials. Dr. Wong did his graduate work at the University of California, Davis and is currently leading efforts focused on nanotechnologies, emerging contaminants and green chemistry.

Jackie Wright is a Principal/Director of Environmental Risk Sciences and a PhD Research student at Flinders University in Australia. She has over 20 years’ experience in vapour intrusion and human health and environmental risk assessment in Australia. She has been involved in a wide range of projects and issues relating to contaminated land, industrial emissions and regulatory assessment, including the development of national guidelines from 2009 to 2011. Areas of expertise include exposure modeling and assessment, vapour sampling and assessment of vapour intrusion for petroleum, chlorinated and mercury contaminated sites, indoor air quality, toxicological assessment and review, human health and environmental risk assessment.

Ryan A. Wymore, P.E. is a principal environmental engineer with CDM Smith in Denver, CO, where he serves as the company’s environmental remediation market leader. He has spent the last 14 years specializing in innovative groundwater remediation technologies, particularly bioremediation, monitored natural attenuation, and chemical oxidation. He also serves as the administrator for CDM’s Research and Development Program, where he coordinates all of the company’s internally and externally funded research. He joined ITRC in 2002, and has had membership on seven technical teams, and currently serves on the ITRC’s Board of Advisors as the industry representative. He holds a B.S. in Biological Systems Engineering from the University of Nebraska-Lincoln, and an M.S. in Civil/Environmental Engineering from the University of Idaho. He is a registered professional engineer in Colorado and Idaho.

Zhong Xiong is a project engineer with AMEC at its Irvine, California office. He is a registered professional civil engineer in California. Dr. Xiong has over nine years’ experience in environmental
consulting and research focused on contaminated site characterization and remediation. His expertise involves the development and application of innovative processes for groundwater and soil remediation. His research has focused on nano-scale materials for remediation of chlorinated solvents, metals, and emerging contaminants. He is a co-inventor of two environmental remediation technologies (one patent granted and another pending) and an author of numerous papers published on peer-reviewed journals. Dr. Xiong received his BS and MS degrees both in Environmental Engineering from Chongqing University in China, and his Ph.D. degree in Civil Engineering from Auburn University.

Robert R. Yamada is the Water Resources Planning Manager for the San Diego County Water Authority, the regional water agency that provides about 80 percent of all the water used in San Diego County, supporting a $186 billion economy and the quality of life of more than 3.2 million residents. He oversees water supply and facility planning for the Water Authority. His current responsibilities include facility planning for the Carlsbad Desalination Project and project planning for the proposed Camp Pendleton Desalination Project. He also oversees short and long-term water demand and supply forecasting, Urban Water Management Plan preparation as well as water shortage and drought management planning. Mr. Yamada has been with the Authority since 1992. Prior to that, he worked as a civil engineering consultant for 8 years. He holds bachelor’s and masters degrees in civil engineering from San Diego State University, and is a registered civil engineer in California. Mr. Yamada is a past president of the American Membrane Technology Association (AMTA), a national organization dedicated to advancing the use of membrane technology for water treatment.

Dawn A. Zemo received her B.A. in geology from Stephens College in 1980 and her M.S. in geology from Vanderbilt University in 1982. She is a Professional Geologist and a Certified Engineering Geologist in California. Ms. Zemo is principal hydrogeologist of Zemo & Associates, which she formed in 2002. Her professional experience includes petroleum hydrocarbon exploration and development geology, petrophysics, hydrogeology, environmental site characterization and remediation, environmental forensics, and expert witness and confidential litigation consulting. Ms. Zemo serves on the editorial review boards/peer review teams for the international journals *Ground Water Monitoring & Remediation* and *Environmental Forensics*. She is on the technical expert team for the revised California Leaking Underground Fuel Tank (LUFT) Manual guidance document, which is written on behalf of the California State Water Resources Control Board. Ms. Zemo is a nationally recognized expert and published author in the areas of petroleum fate and analysis, site characterization, groundwater monitoring, and the use of environmental forensic chemistry for regulatory or litigation applications. Ms. Zemo can be contacted at Zemo & Associates LLC, 986 Wander Way, Incline Village, NV 89451; telephone/fax 775-831-6179; cell 415-722-0257; email: dazemo@zemoassociates.com; web site: www.zemoassociates.com

Juan Zhang was born in 1985 in China. She studied biology in Harbin Institute of Technology, obtaining a bachelor of engineering in 2007. Since September 2007, she has been taking a successive postgraduate and doctoral program in Shandong University, and she majors in environmental science. During this period, she has mainly participated in the National Basic Research Program of China—Pollution characteristics and spatial/temporal changes of environmental organic pollutants in typical sewage irrigated area at old industrial base in northeast China. Her studies focus on monitoring and source analysis of organic pollutants and microbial ecology in response to soil quality changes.