2013 Speaker Biographies

Rick Ahlers is a Principal Engineer with ARCADIS, located in Southern California. He is the lead for ARCADIS NAPL Technical Knowledge and Innovation Subdiscipline and an instructor for ITRC’s LNAPL: Science, Management, and Technology classroom training, as well as an author of ITRC’s Technical/Regulatory Guidance Evaluating LNAPL Remedial Technologies for Achieving Project Goals. Rick provides technical direction for ARCADIS teams managing Oil & Gas sector clients’ NAPL sites. Prior to ARCADIS, he worked at Lawrence Berkeley National Laboratory characterizing vadose zone flow during investigation of Yucca Mountain, Nevada for a high-level nuclear-waste repository. Rick has a master’s degree in Civil Engineering from the University of California, Berkeley and is a California Registered Civil Engineer.

Abdulaziz O. Al-Jasser is an Associate Professor of Environmental Engineering. He is currently serving as Counsellor and Director of Development and Quality Department, General Directorate of Private Higher Education, Ministry of Higher Education. In addition he is a teaching staff at Civil Engineering Department, College of Engineering, King Saud University, Riyadh, Saudi Arabia. Dr. Al-jasser’s research interests focus on Drinking Water Treatment, and Contamination Control in Transmission and Distribution Systems, Water Quality Monitoring and Control, Physical, chemical, and Biological Treatment of Wastewater Solid Wastes Management, Greywater Treatment and Reuse, Sludge Settling Enhancement in Sewage Treatment Plants. He is a member of different scientific associations. He is a reviewer for national and international scientific journals and reviewer for several national and international scientific conferences.

Saud S. Al-Oud has a Ph.D. in Soil Environmental Chemistry from University of Arizona. He is Professor in soil sciences department, King Saud University. His main research of interest includes: Behavior of elements added to soils from wastes and contaminant, treatment techniques for the Bioremediation of heavy metal contaminated soils. He works as an environmental consultant for mining firms in Saudi Arabia, also consulate for water municipal of Qassim region of Saudi Arabia.

Mohammad Al-Suwaiyan, Ph.D. is a professor of water resources engineering at the civil and environmental engineering department at King Fahd University of Petroleum & Minerals (KFUPM) in Dhahran Saudi Arabia. During the past two decades, Dr. Al-Suwaiyan taught courses in basic level engineering as well as several graduate courses related to groundwater and supervised many master and doctoral students. He conducted basic and applied research and published several papers in scientific journals and international conferences in the field of groundwater and environmental engineering. He obtained his doctoral degree from Colorado State University (CSU) in 1993.

Nick Amini is a Water Resources Control Engineer at the Santa Ana Regional Water Quality Control Board with 15 years of experience in environmental consulting and regulating. With an extensive background in the application of various remediation technologies, he has performed site remedial investigation, feasibility study, engineering evaluation/cost analysis, bench/pilot-scale testing, design, installation, optimization/ troubleshooting, and construction quality management of remedial systems. He is currently putting to use, the experience gained from the consulting arena, in the regulatory world to solve the investigation and cleanup cases that are under the jurisdiction of the Santa Ana Regional Board. He has a bachelor's degree in chemical engineering, a master of science in chemistry, and a doctoral degree in environmental engineering from Southern Methodist University.

Mónica Antilén is an Assistant Professor at the Pontificia Universidad Católica de Chile (PUC). She is a motivated, competent and qualified chemist, with a Ph.D. in Chemistry with experience in soil science and analytical chemistry. With wide-ranging expertise in physical-chemistry behavior of volcanic soils and sewage sludge. Proven ability development extraction-analysis methods for polluted environment samples and, sequential extraction for heavy metals. Also redox properties of humic substances from volcanic soils and conductive polymers in modified electrode has been researched. Currently the grade of interaction between humic acid with antibiotics and its effect on the bioavailability of major residuals of
these drugs present in Chilean agricultural soils are being researched. Her objective is to develop a career as a researcher in Environmental Chemistry in soil-water system.

**Ravi Arulanantham** has more than 20 years of experience in developing public policies surrounding environmental compliance for land use and water quality issues. As the first staff toxicologist for the California Regional Water Quality Control Boards, he provided expertise and leadership in expanding the application of risk assessment and risk management to the areas of policy development, case review, and staff training. From 1993 to present, he has been the principal instructor for Cal-EPA/SWRCB–sponsored training courses on risk-based decision making at petroleum-impacted sites. These courses have attracted more than 2,000 regulators, consultants, and responsible parties throughout the state, significantly affecting the movement of consultants and regulators toward accepting risk based findings as a component of decision making and site closure. Ravi is among the few ASTM-certified national trainers for both the Risk-Based Corrective Action (RBCA) program and the Remediation by Natural Attenuation (RNA) standard and has trained over 1000 regulators, consultants, and responsible parties in more than 20 states. He has given numerous invited lectures on risk-based decision making to a wide range of audiences and is nationally acknowledged as an expert on this subject. Since joining the private sector in 2002, he has been helping his industry clients find cost-effective business solutions to their environmental liabilities. He is very well known in his field for his abilities to develop and implement investigation, remediation, risk management strategies for contaminated properties and negotiate risk-based closures with regulatory agencies to obtain No Further Action letters for his clients. He has served as an expert witness for numerous litigation matters ranging from chlorinated solvent releases and indoor air impacts, human exposure to petroleum releases, adequacy of site investigation and remediation conducted to protect human health, classification and disposal of hazardous waste, proper application of cleanup levels and achieving cleanup levels at contaminated sites. In late 2010 Cal-EPA appointed him to a committee tasked with developing a low-threat petroleum case closure policy. The low-threat policy after going through University of California peer review was adopted and became effective in August 2012. Ravi was primarily responsible for developing the technical justification documents that provided the basis for the low-threat criteria’s adopted by the state. Ravi Arulanantham was a Fulbright scholar at the University of California at Berkeley where he received his masters and doctorate in physiology and biochemistry in 1988.

**DeeAnn Asamoto** is currently a senior year undergraduate student in the department of Chemistry and Biochemistry at California State University, Long Beach. She is graduating in the fall 2013 with a Bachelor’s of Science degree in Chemistry. DeeAnn is a participant of the Research Initiative for Scientific Enhancement Fellowship at CSULB where she receives funding by a grant from the National Institutes of Health (NIH) to carry out her undergraduate research with Dr. Stephen Mezyk. Her current research investigates a proposed method of antibiotic removal from contaminated wastewaters using the Advanced Oxidation Process with sulfate radicals. After graduating, her main goal is to continue on and pursue a PhD degree in the field of Chemistry.

**Harrison Atagana** is a Professor and Director, Institute for Science and Technology Education, University of South Africa. He has BSc (Hons) Botany, MSc and PhD Microbiology. He is a rated scientist of the South African National Research Foundation (NRF). He is a registered Professional Natural Scientist with the South African Council for Natural Scientific Profession and a Fellow of the British Society of Biology. He is actively involved in postgraduate training and research in Environmental Biotechnology and has been lecturing in higher education institutions for 26 years. He is currently involved in a research project on the use of *Chromolaena odorata*, an invasive weed of tropical and subtropical Africa in phytoremediation of soil polluted with organics and metals. His other projects include compost bioremediation of oil sludge from petroleum refineries and biological treatment of wastewaters from the mining and petrochemical industries. He has published most of his research in peer-reviewed international journals and conference proceeding. He currently holds research grants of the National Research Foundation and has three PhD and five MSc students working on these research projects.

**Jamiu Oladipupo Azeez**, Ph.D, is a senior lecturer in the Department of Soil Science and Land Management of the Federal University of Agriculture, Abeokuta. His research interests are in Soil
Chemistry and Fertility, Soil Pollution studies, Environmental impact assessment of Agricultural practices. He had his Doctor of philosophy (Ph.D) in Soil Chemistry (2005), Master of Agriculture in Soil Chemistry (2000), Certificate of National Service (1998), Bachelor of Agriculture (Second Class Upper) in 1997. All Degrees obtained from the Federal University of Agriculture, Abeokuta Nigeria. He has won many prizes and awards including: Federal Government Post graduate Scholarship Award (2003); University Postgraduate Scholarship Award (2000); A.G. Leventis/Egba Scholarship award (1998-2000, 2001-2003); Best Departmental Graduating Student (1997); Overall Best Graduating Student at Secondary School (1989). He has 33 articles in international and local peer reviewed journals, 1 chapter in book and 5 articles in local conferences; he is a member of the Soil Science Society of Nigeria. Dr Azeez is a visiting scientist and lecturer at Tshwane University of Technology Pretoria, South Africa and has supervised over 40 undergraduate and post graduate students both in Nigeria and South Africa.

Isam Bashour is a Professor of Soil Fertility and Plant Nutrition at The American University of Beirut, Lebanon. Obtained PhD in 1977, UCDavis. Provides consultancy to large agricultural farming operations in Saudi Arabia, Egypt and Sudan. Technical consultant for the National Fertilizer Company (NAFCO), Riyadh Saudi Arabia

Charles “Chuck” Blanchard, is the regional engineering manager for GES’ western region and their international group. He has over 22 years of experience designing remediation systems for contaminated water and soil. His remediation projects have ranged from hydrocarbons and metals remediation to pesticides and chlorinated compounds. Key projects include design of a 100 well remediation system at a former refinery which allowed use of that property for residential use within 18 months of system operation and the ongoing remediation of a combined benzene and hexavalent chromium plume. Mr. Blanchard serves in a key technical review role for all chemical oxidation and reductive remediation work performed by GES. He earned a BS in chemical/biomedical engineering from Carnegie Mellon University. He is a professional engineer registered in Arizona, California, Pennsylvania, Oklahoma and Texas.

Nedjima Bouzidi, Ph.D., is a doctor in science and technology at the University of Bejaia in Algeria. She was teacher- researcher in process engineering option chemical engineering for 10 years and currently in mines and geology department. She has over 5 years experience in ceramic and glass industries and 3 years experience with manufacturing processes and product quality control. Currently she works in clays, reject valorizations and materials domains. She was author of several technical and scientific articles in the field of materials and clays.

Craig Bowe, Ph.D., conducts research at the interface of environmental science, chemistry, public health and surface chemistry where he applies analytical techniques to address questions ranging from heavy metal remediation to the detection and removal of persistent chemicals including pharmaceuticals from the environment. His scientific expertise is in two main areas: (1) Heavy Metal Remediation and (2) Detection of trace chemical agents in the environment. Dr. Craig A. Bowe is currently the Chief Public Analyst with the Environmental Monitoring & Risk Assessment Division, Commonwealth of The Bahamas. Dr. Bowe is collaborating on chemical assessment studies and analytical methods that meet the fiscal needs of developing areas while serving the interest of public health. In addition to departmental administrative duties inclusive of chemical hazards, chemical response and environmental testing Dr. Bowe has served on committees involved in environmental education and small island sustainability. Dr. Bowe currently serves as councilor for the International Council for the American Water Works Association. Dr. Bowe has also served his peers as a reviewer for ACS publications in the chemical education, environmental, organic and analytical divisions. Dr. Bowe is co-author on a United States patent, and is a member of Sigma Xi, the American Chemical Society, the Royal Society of Chemistry and SETAC.

Mark Bowland has 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 and Japan. 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.

**Edric Caballero** has been the Int’l Customer Relations Manager for Advanced Technology Laboratories since 2008. Beginning in 2005, Edric spent 3 years learning the inner-workings of the environmental laboratory industry starting from Sample Control and continuing his education in Organic and Inorganic Instrumentation Analyses. Through his extensive one-on-one training program, Mr. Caballero accumulated years of experience-backed knowledge. Due to his 5 years of previous experience in the financial industry as a Managing Director, brokering international transactions with multi-national corporations and managing over $22 Million in client assets, Edric was chosen to represent ATL in international business ventures and domestic customer relations. Mr. Caballero has continued his environmental industry education through various extension courses, including Principals of Environmental Consulting (UCI), Principals of Hydrogeology: Groundwater Contamination (UCI), Laboratory Data Quality and QA/QC (State of Arizona), as well as Marine Remedial Activities as pertains to Sediment and Seawater (CETCO).

**Craig Carlisle**, PG, CEG, is a Senior Engineering Geologist with the San Diego Water Board. He is in charge of the UST program and a variety of other projects, including developing and implementing a strategy for improving water quality in San Diego Bay. Prior to joining the Water Board in 2000, he worked as a consultant on a variety of investigation and remediation projects throughout California. Mr. Carlisle received his M.A. degree in Geological Sciences from the University of California, Santa Barbara.

**Richard T. Cartwright** PE, CHMM*, CPIM* is a Senior Vice President at MECX, LP. He has an MBA in Operations Management from Indiana University, a BES in Chemical Engineering from Brigham Young University, and a Professional Certificate in Project Management from the State University of New York at Buffalo. Mr. Cartwright is a Past President of the Academy of Certified Hazardous Materials Managers (now the Alliance of Hazardous Materials Professionals). He is a recipient of the prestigious “Pete Cook Founders Award” for distinguished lifetime leadership, dedicated service, and professional achievement within the hazardous materials management profession. He is a “Fellow” of the Institute of Hazardous Materials Management.

**Bridget Cavanagh** obtained her B.S. in Civil Engineering from Arizona State University in 2009. She is currently working towards her Ph.D. in Environmental Engineering at Arizona State University under Dr. Paul Johnson. Her research involves studying the diffusion of chemical oxidants into lower permeable material to remediate dissolved and free phase hydrocarbons.

**Adam Chen**, P.E., graduated from University of Connecticut with a master degree in Civil Engineering, is a principal environmental engineer and an associate with Burns & McDonnell Engineering, Inc. in Chicago Office. As a R&D engineer in the remediation service department, he is in charge of assessment and development of innovative remedial technologies and its commercial application. In addition, he has been overseeing the site remediation in design, permit, installation, and operation of various ex-situ and in-situ remedial systems throughout the States.

**Bing Chen** is an Associate Professor in Civil Engineering, Leader of NRPOP Laboratory, and Chair of Environmental Systems Engineering and Management Board of Studies with the Faculty of Engineering and Applied Science at the Memorial University of Newfoundland, Canada. Dr. Chen has acted as PI or Co-PI in 30+ research projects and produced 170+ technical publications including 100+ refereed articles in journals, books and proceedings. His research focus on oil spill responses and remediation, coastal and marine pollution control, small-scale water and wastewater treatment, environmental bio-/nano-technologies, NPS pollutants and POPs transport and fate, resource-oriented waste treatment and management, risk assessment, systems optimization and decision making, and climate change studies. Dr. Chen has been elected to Global Young Academy (GYA) and serving as a Senior Expert of United Nations Development Programme (UNDP), Chair of Canadian Society for Civil Engineering (CSCE) - NL Section, Regional Director (Atlantic) of Canadian Association on Water Quality (CAWQ), Scholarship Committee Chair of Atlantic Canada Water & Wastewater Association (ACWWA), and Technical
Commission Co-Chair of International Society of Environmental Informatics Science (ISEIS). He also serves as an Editorial Board Member or Associate Editor for 3 peer-refereed journals and a keynote speaker, program/session chair and committee member for 40+ conferences and workshops. He is a registered Professional Engineer (PEng) in Canada.

Shonnie Cline has over ten years of experience working with water, wastewater and stormwater utilities. She joined the Water Research Foundation in 2007 where she holds the position of Senior Account Manager, serving as a liaison between the Foundation and drinking water utilities in the southwestern US. Prior to coming to the Foundation, Shonnie worked for a Colorado municipality as an Environmental Manager overseeing stormwater infrastructure, industrial pretreatment, backflow prevention and discharge permits for stormwater and a reverse osmosis water treatment plant. Shonnie holds a Bachelor’s degree in Biology, a Bachelor’s degree in Business Management and a Master’s degree in Organizational Leadership.

John R. Conaway is a Registered Professional Engineer (PE) with 40 years of experience in project supervision, development, evaluation, training, and safety. He has earned a reputation for his expertise in design and inspection of methane mitigation systems and waterproofing for commercial and residential structures. He has worked with solid waste disposal, environmental engineering, managing road and facility maintenance and construction, permitting, project engineering and design in California, Nevada, and North Carolina. John has built strong relationships with communities, regulators, and public works departments and provides methane mitigation peer review services for the County of San Diego, City of Torrance, and City of Newport Beach. He specializes in economical engineering design and project permitting. John has also held several demanding positions throughout the course of his respected career. As Solid Waste Manager for Sonoma County, California John's duties included design, development, operation, close out and the environmental monitoring for several landfills and transfer stations over the course of 7 years.

As County Engineer for Gaston County, North Carolina John's responsibilities included the management of county landfills, county garages, building and grounds for 104 county buildings and park and recreation. As Director of Solid Waste for the Ventura Regional Sanitation District in Ventura, California for over 14 years, his duties included the management of the opening and closing of the Santa Clara, Coastal, Ballard and Toland Landfills as well as the management of the Ojai, Piru and Alexander Valley Transfer Stations. In addition, John has extensive experience with permitting, environmental monitoring, staff development, training, safety, operations, equipment selection and maintenance. Some of the major projects John Conaway has worked on over the years include a major landfill expansion in Ventura County, California, a methane mitigation design for the Playa Vista Development in Los Angeles, a methane design for the LA Live! Entertainment and Hotel Complex in Los Angeles, and a methane mitigation design for the Boulevards Development in Carson, California (the third largest Brownfield remediation project in the U.S.)

Due to his long and exceptional track record, John's has also been involved in the excitement of the initial establishment of the following codes and regulations including: In the early 1970's John sat on the committee that established the very first state wide rules and regulations relative to landfill operating procedures. At the time of John's involvement it was known as Senate Bill 5 (SB-5) and was the responsibility of The California Waste Management Board (CWMB). The CWMB later developed to become known as the California Integrated Cal Recycle. SB-5 took on different names overtime as well--Title 15 being one of them, before settling on the current name of Title 27.Waste Management Board (CIWMB). John played an important role in the establishment of the current City of Los Angeles Methane Code which was enacted in March of 2004. The City of LA Department of Building and Safety (LADBS) asked John to serve on their Methane Advisory Group. In this capacity, John reviewed and commented on the draft methane code documents and advised LADBS on the appropriate action levels for methane mitigation. He also helped to establish an acceptable testing protocol with limits. Having attended the numerous Code Committee and City Council meetings as a consultant to the City of Los Angeles, John provided suggestions for code modifications that are still in use today. It is John Conaway's many years of diverse experience that have helped him to develop his personal philosophy: "Use engineering to economically serve the client."
Bibiana Betancur Corredo graduated with a B. Eng. in chemical engineering in 2008. She is currently taking her graduate studies at the National University of Colombia, in the MSc in Biotechnology program. Her current research interests are mostly about environmental issues. They include remediation of polluted environments, soil and water, specifically with persistent organic pollutants (POP’s). She has experience in advanced oxidation processes, last year she was a visiting scholar at the University of Saskatchewan where she worked in catalytic ozonation of wastewater for removal of POP’s. Her current research is about isolation and identification of microorganisms able to degrade organochlorine pesticides like DDT.

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 Walnut Creek, California.

Craig A. Cox currently serves as President and Principal Scientist for Cox-Colvin & Associates, Inc, and is responsible for providing managerial and technical oversight on major environmental projects conducted by the firm under RCRA, CERCLA, and Brownfield programs. Mr. Cox began his environmental consulting career in 1987 with Geraghty & Miller where he became the firm’s Midwest Regional Manager of CERCLA projects. Mr. Cox is the primary architect of a variety of environmental database applications, including Data Inspector™, and is the patent holder of the Vapor Pin™ a sub-slab soil-gas sampling device. Mr. Cox received his B.S. and M.S. degrees in Geology and Mineralogy from The Ohio State University and a Professional Degree in Hydrogeology from the Colorado School of Mines. Mr. Cox is a Certified Professional under Ohio EPA’s Voluntary Action Program and is a co-author of “Background Metals Concentrations in Ohio Soils” (1996).

Walter Crone is Principal Environmental Geologist for Ninyo & Moore Geotechnical and Environmental Sciences Consultants, in their Irvine, California office. Mr. Crone holds a Master of Science degree in Geology from the Mackay School of Mines, in Reno, Nevada. He is a registered professional geologist in California, Arizona, and Idaho; a Certified Environmental Manager in Nevada; and a Qualified SWPPP Developer/Practitioner in California. He has more than 35 years professional experience, 27 years of which have dealt with soil and groundwater contamination and remediation issues. His environmental expertise is supported by his earlier 8-plus years experience as a gold and uranium exploration geologist/geochemist in the western United States. Currently, Mr. Crone manages Ninyo & Moore’s Irvine environmental consultancy. He provides senior management and technical direction in support of environmental projects for large industrial clients, attorneys, military branches, governmental entities, and regulatory agencies.

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 60 ISCO projects in California and other states. To date, Mr. Cronk has been successful in attaining No Further Action requirements for six 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.

Ruth Custance is a Principal Scientist in the Santa Barbara office of Geosyntec Consultants with over 20 years of experience in risk assessment and risk-based corrective action. Ms. Custance received a BA in Microbiology from UC San Diego and a Masters in Public Health from the University of Michigan. She has been with Geosyntec for over 10 years, specializing in risk assessment, Brownfields redevelopment and program management. Ms. Custance has conducted risk assessments under state and federal superfund programs, RCRA and state voluntary cleanup programs for constituents such as chlorinated
solvents, petroleum hydrocarbons, polynuclear aromatic hydrocarbons, metals, PCBs and dioxins. In addition to her risk assessment practice, Ms. Custance also is actively involved in site assessment and remediation projects, working with clients such as the Los Angeles Unified School District (LAUSD) on site redevelopment initiatives.

**Mark Davidson**, Ph.D. is a project microbiologist for Geosyntec Consultants and has been based out of the Pasadena office for more than five years. He obtained his Ph.D. in microbiology/geochemistry from Princeton University in 2008, after finishing a Bachelors program in his native South Africa. His specialty is the innovative design and implementation of in situ remediation systems addressing a wide range of recalcitrant compounds (e.g., CFC-113), complex chemical mixtures (e.g., mixed solvent plumes), and/or challenging regulatory or hydrogeologic conditions. In addition to his remediation work, Dr. Davidson is a strong proponent for the use of compound specific isotope analysis (CSIA) for qualitative and quantitative assessments (both monitoring biodegradation and source differentiation), and has presented introductory materials on the subject to many clients. He maintains a “Stable Isotopes in Environmental Geochemistry” LinkedIn group that is 150 members strong. Dr. Davidson also provides litigation support for numerous challenging high-profile legal matters addressing a variety of emerging and other contaminants.

**Greg Davis** is a Research Program Leader at CSIRO Division of Land and Water in Perth Western Australia. He has over 30 years research and consulting experience on contaminants in groundwater and soils. He has worked with industry and regulators to develop understanding, modelling and monitoring tools, and remediation and management options for contaminated sites, and has published over 300 papers and reports. He is Adjunct Professor at the University of Western Australia and is Chief Editor of the Journal of Contaminant Hydrology. He chaired the Organising Committee for the 6th IAHS Groundwater Quality conference held in Fremantle Western Australia in December 2007 – the next is in Florida next month!

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

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

**James Dragun**, Ph.D. is a soil chemist with extensive experience dealing with soil investigations and remediation. He has addressed the extent, danger, and/or cleanup of chemicals at sites of national and international concern such as the oil lakes caused by the 1991 Persian Gulf War (Kuwait), VX chemical warfare agent for the U.N. Weapons Inspection Program (Iraq), malfunction of the Three Mile Island Nuclear Power Plant USA), and dioxin in Missouri (USA). Twenty-four nations including Japan, China, Canada, the United Kingdom, Australia, Germany, Switzerland, Italy, France, Spain, Scandinavia, and the Netherlands have utilized his expertise.

He founded and built an environmental engineering-science consulting company. For over 20 years, he has led a team of specialists in chemical engineering, civil engineering, environmental engineering, geotechnical engineering, mechanical engineering, physics, plant engineering, environmental science, geology, hydrogeology, chemistry, biochemistry, toxicology, and biology. Dr. Dragun and his associates have solved environmental issues for major companies and governments in six continents (Africa, Asia, Australia, Europe, North America, and South America).

Dr. Dragun has been a full Professor at the University of Massachusetts and at Wayne State University, Detroit, MI. He has authored two college textbooks and co-authored/edited eight technical books. Also, Dr. Dragun has been the Editor-in-Chief of the International Journal of Soil and Sediment Contamination for over 17 years. His accomplishments are listed in Who's Who in the World, Who's Who in Science and Engineering (world compilation), and Who's Who in America. Dr. Dragun has received several honors and awards for his professional achievements and contributions to the community applicable in site assessment and remediation.
**Nour Sh. El-Gendy** is an Assistant Professor in the field of Environmental Biotechnology field and Head manager of Petroleum Biotechnology Lab, Egyptian Petroleum Research Institute, Cairo, Egypt. She is also lecturer and supervisor for undergraduates research projects at "The British University in Egypt BUE". Nour has Ph.D. Degree in the field of biodesulfurization of petroleum and its fractions, Cairo University, refereed in University of Exeter, England and Gas Technology Institute, USA. MSc Degree in the field of biodesulfurization of petroleum and its fractions, Cairo University, refereed in University of Westminster, England. Bachelor of Science Degree in Chemistry, Cairo University, Honor Roll, Very Good. She has More than fifteen years of experience in areas associated with (1) petroleum industry, (2) oil pollution, (3) bioremediation of oil polluted environment, (4) production of biofuels, (5) macro- and micro-corrosion, (6) biosorption (7) green chemistry, (8) nano-bio-technology and its application in petroleum industry and biofuels. Nour is an author of 47 scientific manuscripts published in international journals and editor for *Energy Sources. Part A: Recovery, Utilization, and Environmental Effects* and 4 more international scientific journals. She participated in twenty four international scientific conferences and seminars. She also participated in eleven international scientific workshops related to biotechnology and petroleum industry. Nour has participated in different research projects in the field of bioremediation, biofuels and biodesulfurization. Nour Supervised 16 MSc and PhD thesis in the field of biofuels, microbial corrosion, bioremediation, waste water treatment and biodesulfurization. She is an expertise in oil testing according to ASTM and IP standard procedures. Have a good scientific and technical background about the equipment and facilities used for these purposes. She is also familiar with different chromatographic and spectrophotometric techniques. In addition to good experience in different microbiological techniques from 1998 up till now. Her biography is recorded in Who’s Who in Science and Engineering ninth edition 2006-2007.

**Brad Elkins**, a field geologist who joined EOS Remediation, LLC in October, 2009 to support field application and development of EOS products. After earning a B.S. and M.S. in Geology, Brad started in the field conducting various geophysical and environmental projects including injection of EOS® products. In 2010 Brad became a key member of the research and development team by co-developing EOS® LS which is now in full production. Currently Brad serves as a Technical Sales Representative for EOS Remediation, LLC assisting clients in their remediation design and execution.

**Elsy A. Escobar**, is currently working at ARCADIS as a Water Resources Engineering. She has a Ph.D. in Civil, Environmental and Sustainable Engineering from Arizona State University at Tempe, Arizona. Her research emphasis was on petroleum hydrocarbon vapor intrusion. She also has a MS in Environmental Engineering with emphasis on water/wastewater treatment from Marquette University at Milwaukee, Wisconsin and a BS on Chemical Engineering from Central America University (UCA), El Salvador.

**Mauricio Escudey** is the former Vice Rector of Research and Development at the Universidad de Santiago de Chile (USACH). He is a well published international scientist with a Ph.D. in chemistry, with specialization in soil chemistry. He held a postdoctoral position at University of California, Riverside being frequently visiting professor at the Department of Soil and Environmental Sciences. He is an expert in environmental impacts and has worked extensively on issues related to copper mining. At the present leads the Environmental Area in the Center for the Development of Nanoscience and Nanotechnology at USACH.

**Herbert H.P. Fang**, Chair Professor of Environmental Engineering at the University of Hong Kong. He received his BSc from National Taiwan University, and MSc and PhD 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 5000 citations and an H-index of 37. Professor Fang is the recipient of several research awards, including China’s most prestigious State Scientific and Technological Advancement Award (2008). He has served at the Editorial Board Member of seven international journals, and is also a visiting Professor of eleven universities in China and Taiwan.
Christopher Gale, PG is a Senior Geologist with Geosyntec Consultants in San Diego, California. Mr. Gale has over 8 years of experience conducting, 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.

Phillip Gedalanga is a postdoctoral scholar at UCLA in the Department of Civil and Environmental Engineering. He received his Ph.D. from University of California, Irvine. His research interests include microbial processes in natural and engineered systems, applications of molecular tools in environmental microbiology, and biodegradation of emerging groundwater contaminants.

Nicholas Godinez, G.I.T. is a Staff Geologist with Geosyntec Consultants. Mr. Godinez has a Bachelor of Science degree in Geology from the State University of New York at Geneseo and a Master of Science degree in Geology from San Diego State University. Mr. Godinez’ recent work experience involves groundwater, soil, and soil vapor investigations and remediation activities.

Kevin Graves is currently the UST Program Manager with the California State Water Resources Control Board, Mr. Graves has over 15 years of experience with groundwater investigation and remediation. He received a Bachelors degree from UC Santa Barbara in mechanical engineering and a Masters degree from California State University Sacramento in civil engineering and is a registered Professional Engineer in both civil and mechanical engineering.

Douglas W. Grosse has a B.A. in English Literature from Ohio University and an M.S. in Environmental Engineering from the University of Cincinnati. He has worked as an Environmental Engineer at the U.S. Environmental Protection Agency (EPA) in Cincinnati, Ohio for the past 32 years. Mr. Grosse is currently working in EPA's National Risk Management Research Laboratory (NRMRL) as a Senior Environmental Engineer. Past experiences have included: in-house research at EPA's pilot plant facilities in wastewater and hazardous waste research; pilot facility manager and project officer (Center Hill Laboratory); Superfund Innovative Technology Evaluation (SITE) Program; RCRA corrective action coordinator and technical assistance in Superfund, RCRA and treatability study assistance, as an aqueous treatment specialist, Acting Branch chief, Technology Transfer Branch, and ETV/AMS Center PO. Currently, Mr. Grosse is working in the Remediation and Redevelopment Branch and Engineering Technical Support Center, as a specialist in site remediation and technology transfer.

Rob Habel is the Chief Deputy, State Oil and Gas Supervisor for the Division where he oversees the three geothermal district offices, and the six oil and gas district offices. He received a bachelor’s of Science degree in geology from San Diego State University and is a registered geologist with the State of California. He has worked in the oil, gas, and geothermal industry for over 30 years. While working for the Division, he has been involved with permitting geothermal power plants, underground injection projects, including gas storage facilities, and permitting the drilling of oil, gas and geothermal wells. His current responsibilities for the Division include working the Underground Injection Control Program, which includes water disposal, enhanced oil recovery, and gas storage wells. He has also worked in Oregon and Washington, for both on and offshore operations. He has extensive experience with permitting and monitoring injection wells and working with US EPA as part of California’s Primacy for Class II injection wells under Section 1425 of the Safe Drinking Water Act.

Paul W. Hadley is a Senior Hazardous Substances Engineer in the Sacramento office of the California Department of Toxic Substances Control. In his 30-plus years of professional experience he has published numerous articles and guidance documents on topics related to risk assessment and remediation at waste sites. He is a founding member of the Sustainable Remediation Forum (SURF), and has expanded his professional interests and activities to include sustainable remediation.

Amanda Haney is a Project Manager with AMEC Environment & Infrastructure, Inc. in Portland Oregon where she specializes in cleanup of military ranges. Her work has focused on investigation and remediation of metals, petroleum hydrocarbons, and explosives contamination in soil and groundwater. Ms. Haney has previously worked as a geologist for the EPA Region 2 Superfund, where she served as
Co-Chair of the Green Remediation Committee and as regional representative to the USEPA OSWER Green Remediation Committee. She holds a Bachelors of Science in Geology from the University at Albany.

Blayne Hartman received his Ph.D. in geochemistry from the University of Southern California. He co-founded & operated H&P Mobile Geochemistry for twenty years, a business partnership offering on-site laboratory analysis, direct push environmental sampling, soil vapor surveys, and vapor intrusion services. He sold H&P in 2008 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 35 states, many of the EPA regions, several foreign countries, and numerous stakeholder groups and consultants as well as beinga trainer in the EPA-OUST, ITRC, ASTM and API vapor intrusion courses. 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 and vapor intrusion for EPA, CA-EPA, CA Regional Water Boards, County of San Diego, ITRC & ASTM. Over the past ten years, Dr. Hartman has been a contributing author/editor to vapor intrusion and soil gas guidance documents to more than 25 individual State documents. He is currently assisting with the preparation of Australia’s vapor intrusion guidance.

Diana Hasegan is an Environmental Engineer with Treadwell and Rollo, A Langan Company from Seattle, WA. Miss Hasegan has over four years of experience with sustainability projects having completed multiple green and sustainable remediation evaluations, life cycle assessments, a sustainability master plan for a sports complex, a neighborhood-wide carbon footprint model, and alternative energy feasibility studies. She has also gained over two years of experience in site investigation, characterization and remediation working on large and complex sites under Superfund, RCRA, and several state jurisdiction. She is an active member of the Green and Sustainable Remediation Working Group of the Interstate Technology and Regulatory Council (ITRC) and co-chair of the Site Rating Technical Committee within the Sustainable Remediation Forum (SuRF). She is a certified ENVISION Sustainability Professional (ENV SP) and is active in the Sustainability Committee of the American Society of Civil Engineers (ASCE).

Heidi Hayes is the Technical Director and Vice President of R&D at Eurofins Air Toxics, Inc. She has a MS in Chemistry from the Colorado School of Mines in Golden, CO and 20 years in the environmental laboratory industry with experience in designing and testing new analytical methods and in analytical instrumentation. She has spent the last 17 years at Air Toxics and currently oversees the testing of new media, protocols, and technology related to air phase analysis. Her current area of research is soil gas and indoor air sampling and analytical protocols to support vapor intrusion investigations.

Ian Hers is a senior consultant and Principal of Golder Associates located in Vancouver, B.C., Canada with 24 years professional experience, and is the 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, and several provinces and states in Canada and the U.S. Most recently, Ian co-authored a review of empirical data and models on petroleum vapor intrusion for U.S. EPA OUST. He is the principal investigator for several current or recently completed applied research projects for the American Petroleum Institute, Shell Global and Electric Power Research Institute. Dr. Hers holds a Ph.D. in Civil Engineering (University of British Columbia), is on the Board of Directors of the Science Advisory Board for Contaminated Sites, and is a member of the Contaminated Sites Approved Professionals in British Columbia.

Kitty Hiortdahl (York-doll) is a recent addition to the EOS Remediation team, conducting R+D and technical sales and support. She received her bachelors of science from Francis Marion University in environmental biology, and performed undergraduate research on biofuels though an NSF grant. Kitty
received her masters in environmental engineering from North Carolina State University this past fall; focusing on bioremediation of PCE DNAPLs. Previously she has worked for the USDA Agricultural Research Service in sustainable wastewater treatment technologies.

**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 13 years where he currently specializes in applied in-situ remedial technologies, sediment remediation, bioremediation, data management, and data visualization.

**Chase Holton** obtained his B.S. in Civil Engineering from Washington State University in 2010. He is currently working towards his Ph.D. in Environmental Engineering at Arizona State University. His research involves studying the groundwater to indoor air pathway of chlorinated solvent-impacted groundwater at a residential house near Hill Air Force base in Layton, Utah.

**Lewis Hsu** is a Naval Surface Warfare Center Postdoctoral Fellow at SPAWAR Systems Center Pacific working on bioelectrochemical systems, with a focus on sediment fuel cells. He received his Ph.D. in Environmental Engineering from USC in 2011. He then worked in developing microbial fuel cell technology for remediation with River Road Research, a start-up environmental remediation company, prior to joining the Energy and Environmental Sciences Branch at SPAWAR Systems Center Pacific.

**Bradley A. Huxol**, P.E. is an environmental engineer for TRC Environmental in Kansas City, MO. Brad received his BS in Geological Engineering from Missouri S&T in 1999. He has extensive experience in environmental remediation of petroleum and chlorinated solvent sites and specializes in the design and construction of remediation systems. Past experience has included design and construction of Subtitle D landfills, comprehensive environmental investigations, and large scale construction management.

**Maryam Lami Ibrahim**, Environmental Microbiologist, graduated from Usmanu Danfodiyo University, Sokoto (UDUS) with a B.Sc and M.Sc in Microbiology and Environmental Microbiology in 1996 and 2008 respectively. She also acquired a postgraduate diploma in the field of Education in 2004. She worked for Usmanu Danfodiyo University Teaching Hospital in 2000, Shehu Shagari College of Education Sokoto 2002-2006 and Usmanu Danfodiyo University Sokoto 2006 to date. Maryam is currently undergoing her Doctoral Studies in Environmental Microbiology and Biotechnology in the Department of Microbiology, UDUS, Nigeria, channeled towards viable research in Petroleum Microbiology. Her current projects are on the phytoremediation of hydrocarbon contaminated soils. In pursuit of her career, she had attended conferences both local and international where she presented papers that emanated from her research works. One of such conferences is the Biotechnologies for improved production of oil and gas in the gulf of Guinea (BIPOG3) in 2009 which earned her an award of library collection in Petroleum Microbiology worth 1000 US Dollars. She has also been awarded best graduating female student in the Department of Biological Sciences, UDUS, Nigeria in 1996.

**Mehmet Isleyen**, Ph.D, is an associate Professor of Environmental Engineering in the College of Engineering at Sakarya University in Turkey. He received his BS in environmental engineering from Ataturk University, Turkey and his M.S. and Ph.D. in environmental engineering from the University of Colorado in Denver. After his graduation, he worked as a post-doctoral associate in the Department of Analytical Chemistry at the Connecticut Agricultural Experiment Station. Dr. Isleyen has been working as an assistant/associate professor of Environmental Engineering at Sakarya University since 2006. His research interests include the Phytoremediation of Persistent Organic Pollutants (POPs), the fate of organic contaminants in soils, sediments, and water, accumulation of weathered DDE/DDT in grafted watermelon, and POPs profiles in agricultural soils. Dr. Isleyen also has expertise in the biodegradation and biostabilization DNAPL-coal tar.

**Chawn Y. (CY) Jeng** is a staff toxicologist with the Department of Toxic Substances Control in California Environmental Protection Agency. He has over 15 years of experience in health risk assessment and application of risk-based approaches to improve site investigation and remediation. Prior to joining the State, he was a senior manager at ENVIRON International Corporation, and also worked for several
major corporations including Amoco and Shell. Dr. Jeng received his Ph.D. from the University of Wisconsin at Madison.

Steve 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 35 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 28 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.

Patrick Keddington is a senior engineer and project manager with Haley & Aldrich in their San Diego office. In his 15 years as an environmental engineer he has endeavored to incorporate sustainability and lean practice into the assessment and remediation of both brownfield and active industrial sites.

Stephen Koenigsberg brings more than three decades of environmental experience to his role as Vice President and Director of Advanced Remediation Technologies for Brown and Caldwell in Irvine, CA. Steve is known for his work in the development and application of innovative in-situ and on site treatment protocols and has authored or co-authored more than 175 technical articles, four books and four international patents focusing on remediation and environmental biotechnology. In 1994 he co-founded Regenesis where he was involved in the formulation and development of several products which have been broadly applied worldwide. Over the last decade, Dr. Koenigsberg has helped define the emerging field of expedited site resolution with conventional and advanced technologies. In 2004 he was the co-recipient of a Wall Street Journal Technology Innovation Award and in 2010 received a Lifetime Achievement Award from the Association for Environmental Health and Sciences Foundation (AEHS). Steve is an Adjunct Professor at the California State University at Fullerton and serves on the Dean’s Advisory Council where he was also Chairman for three terms. He received a B.A. from the City College of New York (CCNY) and an M.S. and Ph.D. from Cornell University.

Ravi Kolhatkar is a Staff Environmental Hydrogeologist with Chevron. He is a member of the API Soil and Groundwater Technical Task Group and has been working on groundwater assessment and remediation, natural and enhanced attenuation and vapor intrusion issues for over 15 years. Ravi has a Ph.D. in Chemical Engineering from the University of Tulsa, Oklahoma and MBA from the Booth School of Business, University of Chicago, Illinois. He can be reached at 3901 Briarpark, BP 416, Houston, TX 77042, 713 954 6082 (phone), 713 954 6133 (fax), kolhatrv@chevron.com

Mark Kram, Ph.D, is the Founder and CTO for Groundswell Technologies, Inc., a group specializing in automated Cloud based monitoring and modeling of environmental 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 innovative environmental assessment techniques, has authored articles, national standards and book chapters on the subject, and has taught graduate level courses on related topics. Dr. Kram is an internationally recognized expert in site characterization and remediation, and has been instrumental in the areas of
sensor development and implementation, innovative GIS applications, DNAPL site characterization, chemical field screening, well design, mass flux/discharge based remediation performance, and groundwater basin yield and storage change assessment, and holds several patents for hydrogeologic and chemical characterization tools and automated environmental monitoring approaches. Patented inventions most relevant to this workshop include his patent for automated sensor based contouring and multivariate analysis, his patent for automatic determination of groundwater basin storage change, and his patent for water sustainability to protect from basin overdraft, seawater intrusion and stream depletion.

Dr. Kram has been featured in Forbes (http://www.forbes.com/sites/michaeltobias/2012/01/31/environmental-security-sensing-the-world-in-4-d/), is an active member of the National Ground Water Association (NGWA), American Society of Testing and Materials (ASTM Subcommittee D18.21), and the Interstate Technology Regulatory Council (ITRC), and is currently preparing national guidance for vapor intrusion and environmental characterization applications. Dr. Kram is also the recipient of the NGWA’s prestigious 2011 Technology Award (http://www.ngwa.org/Media-Center/press/2011/Pages/Kram-wins-2011-Technology-Award-from-the-National-Ground-Water-Association2.aspx).

Jeff Kurtz is a Senior Scientist at EnviroGroup/Geosyntec and has over twenty years experience as a consulting Geologist/Geochemist. Dr. Kurtz is the indoor air testing manager for one of the largest vapor intrusion sites in the country (Redfield), with responsibilities that include evaluating the extent of vapor intrusion impacts and the performance of vapor intrusion controls, and evaluating the contributions of indoor sources and background to indoor air levels of VOCs. He has worked on a number of other vapor intrusion sites in Colorado, California, Kansas, New Jersey, New York, North Carolina, Ohio, Puerto Rico, Utah and Wyoming, and is well known for his research and publications on indoor sources of VOCs, including the use of COC ratios in groundwater and indoor air to separate vapor intrusion from background sources. Dr. Kurtz has worked closely with Dr. Paul Johnson and Robbie Ettinger to publish the first study providing validation of the J&E Model from empirical data.

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 serves as Team Lead for the Soil and Groundwater R&D Program. Matt has published extensively on vapor transport in the unsaturated zone and has been serving as an Associate Editor for the Ground Water Monitoring and Remediation Journal since 2005.

Carl Lenker, P.E., has a BSE in chemical engineering and a MSE in environmental engineering, both from The University of Michigan. He has 10 years of experience as an environmental consultant, preforming a wide-variety of services ranging from performing Phase I ESAs to managing fixed-price remediation projects. Carl is a senior project engineer at Gannett Fleming who is currently focused on remediation design and implementation. He is also committed to incorporating sustainability into the remediation practice and is a member of SURF.

George Losonsky, Ph.D., P.G. has over 30 years of experience as a hydrogeologist solving problems of physical and chemical processes in saturated and unsaturated soils, sediments, and bedrock. He received his academic training at Oberlin College and the University of Cincinnati. In the last 25 years, Dr. Losonsky has worked in research and development for the USEPA, developed horizontal well applications for site remediation with Directional Technologies, Inc., and managed site investigation, remediation and closure at petroleum and chlorinated hydrocarbon impacted sites under RCRA, various state programs, and at commercial redevelopment sites throughout the USA and overseas.

Adam H. Love, Ph.D. is a Principal Scientist at Johnson Wright, Inc. Dr. Love has numerous years of technical experience in the utilization of advanced methods to understand and interpret contaminant characterization, transport, and fate for a range of applications such as environmental forensics and liability allocation. He typically employs analyses that couple field measurements, fate and transport calculations, and historical operations/documents in ways that ensure robust and validated results
through multiple lines of evidence. He has experience in understanding both environmental and engineered systems, a wide range of matrices (i.e. soils, sorbents, air, natural waters, constructed materials, and biological tissue), and at numerous sites where contaminant releases impact proximal water bodies. Dr. Love is also a nationally-recognized subject matter expert in WMD preparedness, characterization, and cleanup. His contributions to this field have resulted in enhancements to our nation’s understanding, detecting, and preparing for chemical, biological, radiological, nuclear, and explosive threats. His ability to understand, develop, and implement a logical comprehensive strategy, as well as detailed element strategy, enables him to bridge the communication gap between decision-makers and technical personnel. As a result, Dr. Love has been a prominent subject matter expert in a range of applications that span potential traditional and non-traditional threats to our environment and has also provided litigation support on numerous complex environmental matters.

Eric Lovenduski is a Geologist and Project Manager with over 13 years of experience as an environmental consultant to industry and government. His expertise is in subsurface contaminant fate and transport investigations with a focus on the vapor intrusion pathway and vapor intrusion mitigation. His experience includes development and implementation of site investigations in accordance with regulatory requirements across the US and overseas, including industrial facilities and commercial properties. Mr. Lovenduski is a National Environmental Health Association (NEHA) certified radon professional and has significant experience in the design and installation of vapor intrusion mitigation systems at several buildings with a focus on large commercial buildings, pre-emptive vapor intrusion mitigation, and sustainable vapor intrusion mitigation. He has been responsible for high level communications with clients and project stakeholders and planning, conducting, and supervising multi-media investigations at a broad array of facilities under a wide variety of regulatory programs. He regularly coordinates and implements all aspects of environmental site investigation activities.

Steve Luis has more than 18 years of experience in environmental science and engineering, focusing on chemical fate and transport analyses, human health risk assessments, soil and groundwater investigation and remediation and independent third-party review and oversight. He has extensive experience providing litigation support on a wide variety of matters involving the origin, distribution and behavior of chemicals in the environment. Widely published on industry topics, Steve is a lecturer in the Department of Civil and Environmental Engineering at Loyola Marymount University and sits on the Editorial Board of the journal Environmental Forensics. Steve is a licensed civil engineer in California and holds MS and CE degrees from the Massachusetts Institute of Technology. He also received a BS in civil engineering from Loyola Marymount University.

Renae Magaw is a Senior Staff Toxicologist with Chevron Energy Technology Company. She has over 30 years experience in the fields of toxicology, human health risk assessment, environmental risk management, risk communication and site remediation. During that time, she has worked in the environmental field in a number of academic research, consulting and industrial capacities. In addition, she has developed and taught environmental risk assessment and risk management courses internally for Chevron and externally for the University of California at Berkeley, American Petroleum Institute, and other organizations. Ms. Magaw currently develops environmental management and remediation strategies for Chevron sites, conducts research to improve the science basis for risk-based decision making, and provides technical support for domestic and international science advocacy and environmental management regulatory program development efforts.

Kevin C. Mayer is a partner and civil trial attorney in the Los Angeles office of Crowell & Morning LLP, with deep experience litigating on behalf of clients in a wide variety of complex commercial and mass tort actions. He counsels clients facing regulatory enforcement at both the state and federal level. He has litigated and tried cases in multiple federal, state, territorial and tribal courts, as well as before government agencies and administrative bodies. He is counsel-of-record in some of the most important appellate decisions assisting the defense in tort litigation over the past 15 years. His clients include members of the oil and chemical, pharmaceutical, medical device, industrial and consumer products, mining, manufacturing, entertainment, construction, and financial industries. In the environmental arena, 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 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 named annually in Best Lawyers in America and in Southern California Super Lawyers.

Rick McGregor is the President of InSitu Remediation Services based in Southern Ontario Canada. Rick holds a B.Sc. and M.Sc. from the University of Waterloo in hydrogeology and geochemistry and has over 22 years-experience in in situ remediation. His experience includes working as a research hydrogeologist with Environment Canada’s Wastewater Technology Centre as well as leading a mid-sized consultant’s remediation group. His company specializes in the design and delivery of various chemical and biological reagents to the subsurface with sites across Canada and internationally. He has served on numerous Canadian and American federal government technical committees and has published several peer-reviewed papers on assessment and remediation.

James Melrose is the Sales Manager for Halliburton’s West Coast district, providing products, services and engineering to the oil, gas and geothermal industries in California and the Western United States. After obtaining a BS in Mechanical Engineering from Colorado School of Mines, James started with Halliburton in 2002 as a fracturing field engineer in Vernal, Utah. He has held various engineering and sales positions in the Rocky Mountain region, and has served in his current role since Spring of 2011. A former Fracturing Product Champion for Halliburton and Chair of the Denver SPE Completion and Production Study Group, James has a strong background in hydraulic fracturing theory and practice.

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. While Dr. Merem is currently under consideration for the rank of a full Professor of Environment and Land Use, for years he worked as the PhD Program Coordinator in the Urban and Regional Planning Department at Jackson State University.

Elizabeth (Liz) Miesner is a Principal with ENVIRON International Corporation in San Francisco, California. She has been with the firm for 18 years and in environmental consulting for over 24 years. Her work has included managing and conducting risk assessments for numerous CERCLA, RCRA and other hazardous waste sites. Ms. Miesner has also conducted risk assessments of air toxic emissions in support of projects conducted under the “Air Toxics Hot Spots” bill (AB2588) and in support of environmental impact reports (EIR) and product evaluations under the Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65). Her recent work has focused on understanding and quantifying project-related health impacts from non-chemical stressors. Ms. Miesner received her M.S. in Environmental Health Science (Environmental Health Management/Air Pollution) from the Harvard School of Public Health and her B.S. in Psychobiology from the University of California, Los Angeles.

Roger Mitchell recently joined the San Diego Regional Water Quality Control Board, after spending four years with the State Water Resources Control Board where he gained a strong understanding of the regulatory concerns and objectives of the State and Regional Water Boards. Roger was the lead staff person tasked with addressing inter-agency issues arising from composting operations and their potential threat to waters of the state. Prior to employment with the Water Boards, Roger spent five years as a hydrogeologic consultant focusing on various groundwater aspects within California. Roger graduated with a B.S. in Geology from California State University, Sacramento.

Michael Miyittah is currently an Assistant Professor at the University of Cape Coast, Ghana. He had his Ph.D. from the University of Florida, Gainesville in Soil & Water Science with Environmental Engineering.
He uses his multi-disciplinary background (agriculture, environmental, soil & water and environmental engineering) skills to evaluate environmental pollution from principles to applications pertaining to the fate of pollutants in environmental media/systems. His ultimate goal is to find a technological solution; either immobilizing the contaminant in soil or removing the pollutant in water and air media. He also had a postdoctoral training at the Center for Environmental & Human Toxicology, University of Florida, where he was one of the technical team for the BP deepwater horizon oil spill disaster (Gulf Oil Spill) as a toxicologist/risk assessor for PAHs (polycyclic aromatic hydrocarbons). He worked on phosphorus and arsenic remediation and currently working on acid mine drainage and cyanide remediation of mining contaminated sites. He also had a degree from Chiba University, Japan.

Renato N. Montagnolli is a doctorate student in Applied Microbiology at Sao Paulo State University, Brazil and is currently conducting his research at University of California at Berkeley as a visiting student on perfluorinated compounds biotransformation along with petroleum hidrocarbon co-contaminants. He has a master degree on Life Sciences and Microbiology. As an environmental microbiologist, he has been conducting his research on petroleum biodegradation kinetics as well as biosurfactant production by Bacillus subtilies for the last 5 years. He had his research sponsored by Petrobras during his Bachelor of Science degree in Biology from Sao Paulo State University, Institute of Life Sciences, Brazil.

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, implementation and marketing departments. Mr. Moody has supervised two of the largest in-situ chemical remediation projects 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 is currently Director of Sales & Marketing and a Project Manager for Geo-Cleanse. Mr. Moody has a B.Sc. degree in Environmental Science from Virginia Polytechnic Institute and State University.

Ben Mork, Ph.D., earned a B.S. in chemistry from the University of California at Davis and a Ph.D. in inorganic chemistry from the University of California at Berkeley. His industrial research experience has spanned the fields of petrochemical catalysis, high-throughput experimentation, nanotechnology, and environmental chemistry. He is a co-author of numerous technical papers and patent applications on aspects of organometallic chemistry, catalysis, materials science, and environmental chemistry. He joined Regenesis in 2006, where he currently serves as Director of Research and Development.

Randall Moran is currently a MSc student in the geological sciences department at California State University Fullerton. His research focus is on hydrogeology of the Hinkley Valley in the Mojave Desert and the effects of agricultural practices on the groundwater. Randall received his BS degree in the geological sciences from California State University San Bernardino. He previously worked for the California Regional Water Quality Control Board – Lahontan Region as a technical student assistant. He is currently employed as an Engineering Geologists in the Underground Injection Control Unit for the California Department of Conservation, Division of Oil, Gas, and Geothermal Resources in Cypress, CA.

Peter Morris is currently the business development manager at Ion Science Ltd. He has 10 years of experience studying environmental systems and developing innovative technologies to overcome the associated monitoring challenges. Recently he co-ordinated the Improved Ground-Gas Risk Prediction by In-Borehole Gas Monitoring (IRP-IGM) project, in which novel in-situ technology was developed to continuously monitor soil gas and risk assessment tools from other disciplines were adopted. He received his PhD in environmental chemistry from the University of Manchester.

Christopher Mulry, P.G., is a Principal Hydrogeologist based out of GES’ Maryland office. He provides technical assistance to project teams across the company. Mr. Mulry has a diverse background in environmental investigations, risk management and the design, operation and maintenance of soil and groundwater remediation and management programs – primarily at petroleum facilities. He has served with GES in various technical and managerial capacities since 1986 and has worked at project sites in the US and internationally. Mr. Mulry has been responsible for completing investigative and remediation programs in a wide range of site settings including fractured rock locations, and has employed a myriad of tools and techniques to perform this work with an emphasis on Conceptual Site Model development. He
also leads an internal group of hydrogeologists at GES that focuses on technical innovation, quality and training. Mr. Mulry is a licensed professional geologist in the states of Delaware, Pennsylvania and Virginia. Mr. Mulry has a BS in Geology from the University of Delaware and an MS in Geology from the University of Maine.

**Jonathan Myers** has a Ph.D. in Geochemistry plus 30 years of environmental consulting experience, and is currently employed by CB&I (formerly Shaw Environmental). His specialties include environmental forensics, geochemical modeling, environmental statistics, radiochemistry, natural attenuation investigations, and the use of geochemical evaluations to distinguish between contamination versus naturally high background concentrations of elements in groundwater, surface water, sediment, 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.

**Suzie Nawikas** attended the University of Wisconsin Eau Claire, graduating with a degree in geology in 2005. She moved to San Diego shortly after college, accepting a position with H&P Mobile Geochemistry Inc, where she currently works as the Lead Project Manager for all field and lab services. H&P offers vapor intrusion sampling and analysis services, collecting an average of 150 soil vapor samples per week. The practical experience gained from managing these projects, along with a knowledge of various regulatory documents and ITRC training, have provided Suzie with a framework for understanding soil vapor sampling techniques.

**Yousef Nazzal**, Ph.D., is a Professor of Environmental Management at King Saud University, Saudi Arabia. Dr. Nazzal is a Canadian national who received a Ph.D in Environmental Geology and M.Sc and B.Sc in Earth Sciences. He has over 10 years of training, research, data collection and paper/report writing experience. He has had over 75 environmental research papers published in well reputed international journals, and is on many journals' editorial boards. He has excellent negotiation and interpersonal skills, successfully negotiating a Memorandum on Understanding in Environment between Yarmouk University with City Of Irbid, Jordanian Geological association, Jordanian Environmental Society, Ministry of Environment/Hashemite Kingdom of Jordan, UNESCO, European Union, Carleton University, and others. He was a Visiting Professor for the Faculty of Engineering and Applied Sciences, University of Ontario Institute of Technology, Canada from Feb 2010 to 2011. He is a member of the Advisory Committee to MCI Bridging to Green Careers at Seneca Collage, which he joined in 2009. His general research interest is in natural resources development, environmental management, water and soil management/integrated water resources management, and land use and city planning.

**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 13 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 12 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.

**Jennifer Nyman**, PhD, PE, is a senior environmental engineer with ARCADIS U.S., Inc., based in Emeryville, CA. She has a Ph.D. in Environmental Engineering and Science from Stanford University, and specializes in the design of in situ remedies and characterizing the biogeochemical reactions responsible for in situ contaminant degradation. Jennifer has worked as the technical lead on all major phases of complex investigation and remediation projects for both public and industrial clients. At ARCADIS, Jennifer leads a group developing best practices for natural attenuation remedies for metal and organic contaminants. She is a course instructor for the Interstate Technology & Regulatory Council.

**Joseph O'Connell**, ScD, PE is a Strategic Director at Cardno ERI. With over 33 years of professional experience he has been the principal engineer for designing, permitting, installing and operating a variety of remediation systems. Prior to entering the environmental field, Dr. O'Connell served in technical and managerial positions for Kaiser Aluminum and Chemical Corporation before leaving to start his own firm. This work involved not only the design and operation of equipment to manufacture HF, chlorine, caustic soda, phosgene and isocyanates, but also negotiations with the EPA regarding a consent decree for the
impoundment of red mud and sulfate residues from chemical operations. More recently Dr. O’Connell has acted as president of FarBest Chemical Corporation, a manufacturer of specialty chemicals. He has been associated with Environmental Resolutions as a founder and principal engineer since co-founding the company in 1990. The environmental systems installed include air sparging, vacuum extraction, pump and treat, shoring and excavation, bioremediation and fixation. Contaminants range from chlorinated hydrocarbons to gasoline-range hydrocarbons to metals. He worked with researchers at UC Davis in California to develop bio-culture, adapt the fluidized bed bioreactor to handle the slow growing biomass, and develop the overall design and control features of the bioreactors. Dr. O’Connell studied at MIT where he received bachelors, masters and doctorate degrees in Chemical engineering.

Robert O’Laskey is a Senior Geologist at ARCADIS-US, Inc. in Emeryville, California, and is a licensed Professional Geologist in California. He received his MS degree in geology from the University of Massachusetts at Amherst. Current professional responsibilities include supervision of hydrogeologists and engineers in the performance of environmental assessments and site characterization projects for government and private clients.

Joseph Abah Olimah is a final year PhD student at the University of Reading, United Kingdom. He is a pioneer academic staff of Kogi State University, Anyigba, Nigeria. He holds a Bachelors degree in Agriculture and a Master’s degree in Soil Science. His research interest includes: soil remediation; environmental fate of contaminants; nutrients and pollutants cycling; chemical and biological management of the soil. His doctoral research focuses on chemical stabilization of arsenic in contaminated soils using mine-generated wastes. He uses a combination of chemical and biological techniques to investigate the biogeochemistry of contaminated soils.

Lauren Olson is currently a senior year undergraduate student in the department of Chemistry and Biochemistry at California State University of Long Beach. She is graduating in the fall 2013 with a Bachelor’s of Science in Chemistry and a minor in Mathematics. Lauren is currently conducting research investigating the removal of mono-iodinated carboxylic acid chemical contaminants in wastewaters using hydroxyl radicals, the basis of Advanced Oxidation Process engineering treatments. Based on her synthesized library of these contaminants, destruction kinetics and mechanisms are being correlated to chemical structure. After graduating Lauren’s main goal is to pursue a PhD degree in the field of Chemistry.

Manoj Stephen Paul is an Associate Professor of Botany in the St. John’s College, Agra, India. Dr Paul has earned his M.S degree in Botany from Agra University and a Ph.D degree in Ecology from University of Jodhpur, Rajasthan, India in the year 1989. Since then he has been teaching both undergraduate and post-graduate classes and supervising students for their Ph.D research. Till date 15 students have been awarded their Ph.D degree in Botany under his supervision and are employed in various organisations. Dr Paul is a recipient of two national level awards for excellence in teaching and research. He has vast experience of research in the fields of Biomolecular interactions amongst the plants in nature and remedial potential of plants for remediation of Heavy metals and Polycyclic aromatic hydrocarbons. He has about 40 international and national research papers to his credit in various journals of repute along with 5 chapters in books and also writes popular scientific reports and articles for spiritual growth.

Ioana Petrisor in an environmental biochemist with 20 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 also holds the position of Instructor with EOS Alliance and AEHS Foundation and is developing an Environmental Forensics certification program. 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).

**R. 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.

**Randy Putnam**, CHMM, QEP, REM, CWP, is a project engineer for EnviroGroup, a Geosyntec Company. He has a BS in Chemical Engineering, an MBA in Information Systems and Operations Management, and is a class A State of Colorado licensed industrial wastewater treatment plant operator. Mr. Putnam has worked in recycled paper mills, for manufacturers of rubber automotive products and carton-sealing tape, and a semi-conductor fabrication facility. He has had extensive experience with hazardous waste regulations, stormwater, industrial wastewater and air permitting and compliance. In the various manufacturing facilities he has been the respirator program manager, radiation safety officer and emergency response team leader and has served on industrial trade group environmental committees. Mr. Putnam has operated a dissolved air flotation system at a recycled paper mill and resolved a wastewater treatment problem involving the discharge of surfactants from an autoclave. As project engineer for Geosyntec, he is the treatment task manager for a site contaminated with 1,4-Dioxane and chlorinated solvents, responsible for the operation of the groundwater treatment system. This system is being upgraded to improve removal efficiency, reduce operational problems and reduce manpower requirements.

**Anthony Rattonetti** graduated with a B.S. from the University of Illinois at Urbana-Champaign in 1969. In 1971 he received an academic research appointment in the University at the Illinois State Water Survey where he was involved with various environmental research projects and managed the laboratory for the Atmospheric Sciences Section. Afterward he was an applications scientist for a manufacturer of scientific instruments. From 1982-2000 he was an independent consultant providing services relating to atomic spectroscopy and quality assurance. Environmental, industrial, and clinical laboratories have utilized his services. He has published and delivered numerous papers relating to atomic spectroscopy, environmental analysis, and quality assurance. Currently, he is the Metals Section supervisor at the Southeast Laboratory San Francisco Public Utilities Commission.

**G. Todd Ririe** has a BA degree in geology from Cornell College, and a PhD degree in geology from the University of Iowa. Todd has over 25 years of experience in applied geology, geologic instruction, and environmental applications of geology. Since 1990, his primary responsibility has been on environmental projects primarily focused on petroleum hydrocarbon site assessment, vapor intrusion, and application of effective remedial approaches to reach closure. He worked many years for Unocal before joining BP in La Palma, CA after the Chevron acquisition of Unocal in 2005.

**Yue Rong** (a.k.a. “Y.R.”) is currently the environmental program manager at the California Regional Water Quality Control Board, Los Angeles Region. He has more than 20 years experience with the Agency in dealing with groundwater contamination problems in the Los Angeles area of California, U.S.A. He is an Associate Editor for the peer-reviewed journal of *Soil and Sediment Contamination* and an Associate Editor for the Journal of *Environmental Forensics*. Dr. Rong was elected in 2006 and re-
elected in 2008 as the president on the board of directors for the Southern California Chinese American Environmental Protection Association (SCCAEPA), serving the local minority community. He is also the Editor-in-Chief for the peer-reviewed SCCAEPA Online Journal. Dr. Rong is the author or co-authors for about 30 peer-reviewed publications, and the editor of the book entitled “Practical Environmental Statistics and Data Analysis.” He was the recipient of the California Regional Water Quality Control Board Outstanding Achievement Award and Supervisory Performance Award. He also received 2011 AEHS Foundation Achievement Award. Dr. Yue Rong has his Ph.D. in Environmental Health Sciences from the University of California at Los Angeles (UCLA), and M.S. in Environmental Sciences from the University of Wisconsin.

Michael Ruby is an environmental chemist with over 20 years of experience in site investigation and remediation, environmental chemistry, exposure analysis, and regulatory affairs. Mr. Ruby is recognized as a leading scientist working on human exposure evaluation for organic and inorganic compounds. He has conducted extensive research on oral bioavailability and dermal absorption 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.

Ahmed I. Rushdi, Ph.D., has been an Associate Professor at King Saud University in Riyadh, Saudi Arabia since 2008. He is the Research Director of the Chair of the Green Energy Research (CGER) at King Saud University. After graduating from Sana’a University in Yemen, he obtained a Ph.D. in 1989 from the College of Oceanography at Oregon State University. From 1989 to 1997 he was with Sana’a University, where he became Head of the Department of Oceanography in 1991. During this time he was involved with several projects to establish research in oceanography and studied the marine environment in Yemen. From 1995 he also held research positions at the University of Michigan and visiting professor at the Scripps Institution of Oceanography in San Diego. Since 1998 he has also been an Associate Professor (Senior Research and courtesy positions) at Oregon State University. He has received several awards, including USAID (1983 to 1989), UNDP (1994 to 1995) and Fulbright (1995 to 1996) scholarships.

Melek Türker Saçan is a Professor for 7 years for the Institute of Environmental Sciences at Bogazici University in Istanbul/Turkey. She has a BSc. in chemistry from Bogazici University and MSc. and PhD. in Environmental Sciences from the same university. She was the developer of novel descriptor (Characteristic Root Index) used in QSAR studies. She has expertise in the prediction of the physical, chemical and biological properties of organic chemicals. The chemical groups she worked with are PCBs, dioxins, furans, phthalate esters, pesticides, diphenylethers, benzene and phenol derivatives, etc. She has also experience on the bioaccumulation of metals by algae, toxicities of industrial effluents and organics to fresh water and marine algae, measurement and modeling the toxicity of metals to nitrifying bacteria, decolorization of textile effluents by algae and monitoring pollution with fish, sediment and water samples in lagoon. She has more than 20 peer-reviewed articles in high impact scientific journals and a book chapter. She was serving as a member of Institute Executive Council for six years. She has given courses on chemistry for environmental science and engineering, ecotoxicology and QSAR Applications in Environmental Science.

John Sankey holds a Bachelor of Science degree in Mechanical Engineering from Queen’s University in Kingston, Ontario, Canada. John is a member of the Groundwater Resources Association of California and the National Ground Water Association. He is also on the executive committee for the British Columbia Chapter of the National Brownfields Association, an organization dedicated to environmental site clean-up for future land development. In addition, Mr. Sankey sits on the steering committee for the High Resolution Site Characterization & Monitoring Symposium, which focuses on monitoring groundwater so that in situ remediation is better planned. He has been in the groundwater environmental industry for more than 15 years and in 2003 started True Blue Technologies, a business dedicated to providing engineering, technical support and business development for technologies in groundwater remediation and characterization.
Tony V. Sawyer has been a hydrogeologist with the County of San Diego, Department of Environmental Health, Land and Water Quality Division, Site Assessment and Mitigation Program since 2000. Prior to that, he was a consultant in private practice in the field of groundwater contamination and groundwater resources for twenty years. He received his B.S in Geophysics from San Diego State University in 1981, and performed post-graduate studies in Hydrogeology, also at SDSU. He is a California Registered Geologist, Certified Hydrogeologist and Certified Engineering Geologist. He is currently the Chairman of the Technical Advisory Committee to the California State Board for Geologists and Geophysicists.

Brian Schumacher is the Branch Chief of the Environmental Chemistry Branch of the United States Environmental Protection Agency’s Office of Research and Development in Las Vegas, NV. Brian was hired by the U.S. EPA in 1991 to take the lead and address ways to improve the sampling and analysis of soils contaminated with volatile organic compounds. This research has led to his natural progression into the arena of vapor intrusion. Dr. Schumacher is currently conducting research in numerous areas related to vapor intrusion including: the improvement/standardization of soil gas sampling methodologies; the spatial and temporal variability of VOCs in the environment (in both subslab and uncovered areas), and passive vapor intrusion sampling. His recent research efforts have been focused on looking at the long-term (>1 year) temporal and spatial variability of VOC and radon concentrations in and around a home in Indianapolis, Indiana. The latest research effort at the Indianapolis house is designed to examine the influence of an installed mitigation system on the fluctuation of VOC and radon concentrations.

Jack Sheldon is a Senior Professional with Antea Group located in West Des Moines, Iowa. He has 30 years of experience in the fields of environmental microbiology and remediation. Jack has a BS in Bacteriology & Public Health and an MS in Environmental/Industrial Microbiology from Wagner College in Staten Island, NY. In his current role, he advises on remediation technology selection, performance, and optimization. His key technology areas are bioremediation and chemical oxidation. Jack has authored numerous papers and posters, and co-authored two best-selling books on bioremediation.

Lenny Siegel has been Executive Director of the Center for Public Environmental Oversight since 1994. He is one of the environmental movement’s leading experts on both military facility contamination and the vapor intrusion pathway, and for his organization he runs two Internet newsgroups: the Military Environmental Forum and the Brownfields Internet Forum. In July 2011 Siegel was awarded U.S. EPA’s Superfund Citizen of the Year award. Siegel serves on numerous advisory and technical committees including the ITRC Munitions Response Classification Work Team, the Moffett Field Restoration Advisory Board, the National Research Council’s Committee to Review the IRIS Process, and the California Brownfield Reuse Advisory Group. Siegel is founder of the Save Hangar One Committee, working to restore and reuse Moffett Field’s landmark dirigible hangar.

Raymond Singer is a Neuropsychologist certified by the American Board of Professional Neuropsychology - with Added Forensic Qualifications - and a Neurobehavioral Toxicologist. He earned a doctorate in Psychology from Washington State University in 1978, and was a Postdoctoral Fellow in Biological Psychiatry at New York University Medical School in 1978. From 1979-1981, he was a National Institute of Environmental Health Sciences Post-Doctoral Fellow in Environmental Epidemiology, Mount Sinai School of Medicine, New York City, and a Department of Community Medicine Fellow (1981-1982) under the direction of Dr. Irving J. Selikoff - one of the most influential public health physicians in the world, who brought asbestos to the world’s attention - where he specialized in applied neurotoxicology. His research has been presented in various venues, including peer-reviewed publications, presentations, and courses at professional seminars. He has been a consultant in neuropsychology and neurotoxicology since 1983, and testified as an expert witness in civil and criminal cases in numerous state and federal courts in matters pertaining to his areas of expertise. A member of the Society of Toxicology (SOT) since 1985, he has served as a Councillor: Ethical, Legal, and Social Issues SOT Specialty Section, 2011-2013; Councilor: Clinical and Translational Toxicology SOT Specialty Section, 2012-2013; and from 1993-1999 as President, Vice-President and Treasurer for the Roundtable of Toxicology Consultations, an SOT affiliate group of professional toxicologists. He has been designated as a Fellow of the American Psychological Association, Association of Psychological Societies, and the National Academy of Neuropsychology for distinguished professional contributions.
Olivia Skance is a Team Lead for the Marketing Claims and Agreements group of Chevron’s Environmental Management Company. She has approximately 15 years of experience in environmental management and remediation. Her current position focuses on managing regulatory and third party negotiations, and minimizing HES and legal liabilities associated with petroleum hydrocarbon releases at terminal and service station sites throughout the Western United States. Prior to joining Chevron in 2006, Olivia managed NEPA and CEQA projects for Environmental Science Associates, assessing associated hazardous materials, geologic, and hydrologic impacts for municipalities, utility and school districts, and the National and State Park Services. She received a B.A. in Geology and Politics from Mount Holyoke College in MA, and is currently pursuing an MBA in Sustainable Management at San Francisco’s Presidio Graduate School.

Heather M Smith (aka Knotek-Smith) received her BS in Chemical Engineering from the University of Washington in 1994 and her PhD in Agricultural and Biological Systems Engineering from the University of Idaho in 2003. Prior to returning to school for her doctorate she worked at the DOE Hanford site located in Richland Washington. There she worked in waste management, water treatment, environmental cleanup and nuclear reactor decommissioning and stabilization. Heather’s graduate work focused on bioremediation and stabilization of toxic elements; she did most of her dissertation work as one of the few engineers in the microbiology lab. After graduation from UofI she worked as a consultant for Knotek Scientific Consulting which supports a wide range of DOE activities. She now lives in Vicksburg Mississippi and works for the United States Army Corps of Engineers. Her focus is still bioremediation and stabilization of water and the environment as it pertains to energetic compounds. She serves on the AEHS Scientific Advisory Board.

Lynn Spence has been an independent consultant for 19 years (Spence Environmental Engineering) located in Pleasanton, California. She has expertise in risk assessment, fate and transport modeling, petroleum hydrocarbons and vapor intrusion risk evaluations. She is the developer of the Risk Integrated Software for Clean-ups, a commercially available risk evaluation tool (RISC, currently on version 5). She also developed two risk assessment software tools for the American Petroleum Institute (API DSS and the RBCE Spreadsheet for Upstream sites). Lynn has taught many short courses on risk assessment and fate and transport modeling for regulatory agencies and private clients. Recently she was one of the technical experts used for both the development of California’s Low Threat Policy for UST Sites and the California Leaking Underground Fuel Tank guidance manual. Lynn is currently contributing to the development of the ITRC technical and regulatory document for petroleum vapor intrusion. She has a total of 27 years of experience as a risk assessor and fate and transport specialist and holds bachelors and masters degrees in Environmental Engineering from Humboldt State University, California, and University of Washington, respectively. She is a licensed Professional Engineer in the State of California.

Mary Stallard is a California professional geologist and certified engineering geologist and hydrogeologist with 25 years of experience in groundwater and environmental projects, including site investigation, risk management, and remediation projects. She has managed complex remedial actions at Superfund and state-lead sites, primarily in California. In addition to hexavalent chromium, she has extensive experience with chlorinated solvent site cleanup. Ms. Stallard holds an MA in geology from UCSB and a BS in geology from Stanford University.

Ben Starr, P.E., is a Managing Engineer with Integral Consulting. As a registered professional engineer in Washington and Alaska, Mr. Starr has more than 13 years of experience in the fields of environmental science and engineering. He has served as project engineer and task manager for remediation, habitat restoration and civil infrastructure projects in upland and marine environments. Mr. Starr has conducted site investigations, engineering analyses and design, and oversight of remedy implementation at sites with impacted sediments, soil, and groundwater.

Chris Stubbs has over 15 years of experience in environmental science and engineering, with special emphasis on groundwater hydrology and chemical fate and transport in the environment. Specific areas of expertise include groundwater modeling, statistical analysis, risk-based site assessment and remediation, exposure analysis and human health risk assessment. He has prepared evaluations of the risk from vapor intrusion into indoor air at numerous sites, including preparing expert reports and giving
deposition testimony as an expert witness. He has developed regional groundwater flow and transport models to evaluate remedial alternatives and to estimate cleanup times. Chris is currently serving on the ITRC project team on groundwater statistics. He is a professional civil engineer in California and has a PhD in hydrology and water resource engineering, an MS in environmental engineering, and an MS in technology and policy, all from the Massachusetts Institute of Technology. He also received a BA in physics from the University of California at Berkeley.

Shankar Subramanian is a Principal Engineer and 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 16 years focusing on remedial investigation, technology development, implementation, optimization, vapor assessment and long-term strategic planning for remedial sites.

Robert E. Sweeney, PhD RG is consultant with Environmental & Petroleum Geochemistry (EPG) out of Etna CA. He has experience in geologic and environmental sciences. Recently, he has been interested in understanding, quantifying and monitoring in situ bioremediation processes. In the area of petroleum vapor intrusion (PVI), his work has been directed at evaluation of field data using biodegradation models and identifying site-specific conditions that need to be addressed. He has also been involved in the development of an approach for using temperature measurements to quantify the rate of biodegradation in the soil due to natural attenuation, bioventing or air sparge remediation. In addition, his studies of biodegradation processes in groundwater have led to procedures for identification and quantification of nitrogen fixation/methanogenesis and transport of methane from groundwater to the vadose zone.

Debra Taylor, Ph.D., is a Staff Toxicologist with the Human and Ecological Risk Office (HERO) Department of Toxic Substances Control (DTSC) in the California Environmental Protection Agency (CalEPA). She has over eleven years of experience reviewing human health evaluations for site assessment and remediation – including exposure assessment and indoor air vapor intrusion. She has had many opportunities for communicating risk at public forums related to her site work. She has participated on several teams for developing guidance for former agricultural sites, for naturally occurring chemicals in background assessment, and for Proven Technologies for Remediation of organochlorine pesticides (OCPs). Areas of research expertise include environmental epidemiology and statistics, pulmonary toxicology, cell and molecular biology, cell culture, and confocal microscopy. Currently, she is expanding her skills in Geographic Information Systems (GIS) and participates on a team that is exploring ways to use GIS to facilitate the site evaluation process - which will enhance the Department’s ability to execute its programs and fulfill its mission. She serves as Project Manager for an EPA National Environmental Information Exchange Network GIS grant. Dr. Taylor has had many years of experience working with Native American tribes as a Veterinarian and post-secondary educator. This experience has led to her interest in conflict resolution as it relates to environmental issues affecting Native American Tribal areas. Dr. Taylor completed Veterinary training (DVM) at Tuskegee University and the Master of Preventive Veterinary Medicine (MPVM) degree at the University of California, Davis – where she also earned a PhD degree in Comparative Pathology as a Pathology Resident and National Institute of Environmental Health Sciences (NIEHS) Environmental Toxicology Fellow.

Rod Thompson is a Regulatory Toxicologist working with the Alliance for Site Closure. He was responsible for developing Indiana’s remedial investigation screening level tables and their site specific closure levels for over fifteen years. Rod was also responsible for Indiana’s initial vapor intrusion program, participated in the development of the ITRC VI guidance and has commented extensively on USEPA Vapor Intrusion Guidance. Rod has over thirty years in the clean-up field and is focused on improving the practical application of national environmental and health policy.

Brian Timmins is the Environmental Services Director of ETEC, LLC located in Portland, Oregon. He has over 13 years of experience in the environmental industry, and has focused the majority of that time on the remediation of fuels and chlorinated solvents using a variety of in situ and ex situ remedial approaches. In particular, he has spent a large part of his career designing remediation systems to utilize and optimize bioremediation processes, and coupling those with chemical oxidation and various
surfactants. He has a M.S. in Environmental Engineering from Oregon State University and a B.S. degree in Environmental Science from the University of Florida.

**Tiona Todoruk** is a senior environmental chemist and risk assessment specialist for WorleyParsons Group Inc in Orange County, California. Prior to transferring to the Orange County office in 2012 to become the practice lead for risk assessment, she worked in the environmental divisions of WorleyParsons in both Vancouver, British Columbia and Calgary, Alberta. She has more than 13 years post-graduate experience in the environmental industry. Her experience has involved project support, management, preparation and execution of a range of projects including contaminated site investigations, risk assessments, environmental impact studies, compliance evaluations and construction management projects. She has worked on various types of commercial and industrial sites including chemical production facilities, ports, refineries, upstream oil and gas fields, mines, drycleaners and service stations. This has given her experience with investigating, assessing and mitigating risks associated with various chemical constituents in soils, groundwater, surface water, sediment and soil gas including hydrocarbons, VOCs, PAHs, metals and trace elements, chlorinated solvents, creosote, PCBs, dioxins and furans, and pesticides to both human and ecological receptors. She has contributed to several regulatory guidance documents, published papers and conference proceedings and chairs the Annual Conference on Contaminated Sites as a member of the board of directors for the Science Advisory Board for Contaminated Sites in British Columbia.

**Priscilla Tomlinson** is a toxicologist with Integral Consulting Inc. She has an M.S. in toxicology from the University of Washington. Ms. Tomlinson has over 25 years of experience in risk assessment, risk management, and site investigation for a diverse array of client throughout the United States, including private industry; city, county, state, and federal agencies; and Native American tribes. She manages complex risk assessment projects, including probabilistic risk assessments, and has particular expertise with petroleum, arsenic, lead, and dioxins/furans. Ms. Tomlinson teaches classes on the Washington State Model Toxics Control Act (MTCA) and has applied her regulatory expertise at numerous sites around the state.

**Yih-Jin Tsai,** Ph.D, is the Dean of College of Leisure Industry and Professor of Tourism Management of Taiwan Shoufu University. Also, Dr. Tsai is an environmental scientist with 18 years of experience. He got a Ph.D. in Resources Engineering in 2001 from National Cheng Kung University. He became visiting professor of Jackson State University and Brown University in 2006 and 2011, respectively. Dr. Tsai has some study and work experiences in estimation of contamination source and physical remediation technology. He is interesting in developing innovative evaluating and remedial technologies. So, he has got some patents in Taiwan and USA.

**Harry Van Den Berg,** P.E., is a principal engineer/regional program manager within AECOM’s remediation practice in southern California. He holds registrations in both chemical and civil engineering and has 32 years of experience in hazardous waste site remediation, sustainability evaluations, feasibility studies/process design, industrial wastewater conveyance/treatment, air pollution control and environmental assessments/permitting. He has been responsible for the management, technical direction, execution and quality control of a wide variety of projects, including private sector industrial site cleanup, federal installation remediation programs, landfills, and guaranteed remediation (at risk) projects. He has been responsible for feasibility/corrective measures studies and remedial action plans that have obtained regulatory approval under CERCLA, RCRA and relevant local regulatory guidance. In addition he has managed several large environmental programs and has provided project management training for AECOM’s West Coast environmental practice.

**Usha Vedagiri** is a principal risk assessor at URS Corporation. She has more than 20 years of experience in conducting human health and ecological risk assessments. She has worked on several projects related to PCB contamination in soils, sediments and biological tissues. She has prepared sampling and analysis plans for collection of Aroclor and congener-level PCB data for ultimate use in risk assessments and for development of remedial goals. She is particularly interested in the relevant and cost-efficient use of PCB data to evaluate risks and make remediation decisions.
**David Voglar** is a PhD student at Biotechnical Faculty at University of Ljubljana, posted at Department of Agronomy. His main research interest is soil remediation technology contaminated with PTMs. He has published 4 research papers in peer reviewed journals and co-owns 1 patent. The present presentation is on pilot-scale washing of metal contaminated garden soil using EDTA.

**Michael J. Wade**, Ph.D, is Principal Scientist of Wade Research, Inc.™, a small business that provides geochemical consulting services to a variety of government agencies, industrial clients, and law firms. Dr. Wade is an organic geochemist with over 35 years post-doctoral experience with an overall total of 41 years of strong technical and project management experience in a variety of research programs with special emphasis on study of organic contamination in the environment. He regularly provides expert forensic services both through deposition process as well as testimony in various U.S. Federal and State Courts in the areas of environmental contamination, including assessment of sources of contamination, identification of petroleum product types, quantification of weathering effects on petroleum products, and age-dating of petroleum product releases. Over the past 22 years working through Wade Research, Inc., Dr. Wade has engaged in the conduct of numerous projects dealing with the various aspects of environmental assessment, including measuring degradation of petroleum hydrocarbons and development of quantitative hydrocarbon fingerprinting techniques that identify sources of subsurface petroleum contamination. Recently, Dr. Wade has devoted an increasing amount of time and effort to increasing the quantitative understanding of petroleum product weathering reactions in the environment. As part of his assignment mix, he has completed numerous assignment that have refined quantitative field and laboratory investigation approaches designed to establish time frames for the release of gasoline, kerosene, diesel fuel and heavier fuel oils in subsurface petroleum contamination cases. Annually, through Wade Research, Inc., Dr. Wade conducts 20 to 30 such programs for clients throughout North America.

**Stephen Wall**, Ph.D, 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, in order 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 55 scientific publications, and has presented over 35 research papers at international conferences on aerosol chemistry and physics.

**Yi Wang** is the Director of ZymaX Forensics Isotope, 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 and Princeton University. Dr. Wang is a Senior Environmental Geochemist applying isotopes such as carbon, hydrogen, chlorine, nitrogen, oxygen, sulfur, boron, chromium, and strontium, etc. He has over twenty years of experience in environmental studies on issues related to air, soil, and water contamination. Authored over 50 peer-reviewed articles and books, shared this information via invited lectures throughout the world, and peer-reviewed manuscripts to be published in the Journals.

**Robert Wellbrock** graduated from UC Berkeley with a B.A. in Environmental Science and the University of San Francisco with an M.S. in Environmental Management. His experience in the environmental analytical field dates back to 2005. Currently, he is working as a chemist in the Metals Section at the Southeast Laboratory San Francisco Public Utilities Commission.

**Susan Welt**, MPH, PE is a senior environmental engineer with EnviroGroup Limited, a Geosyntec Company. She is also a Fellow of the Centers for Disease Control and Prevention Environmental Public Health Leadership Institute. With almost 15 years of experience, Ms. Welt has extensive experience in design engineering, stakeholder negotiations, and management of complex environmental projects. She has participated in the dispute resolution process to ensure that responsible parties implement the
appropriate measures to reduce exposures from the soil vapor intrusion pathway and impacted groundwater. She has also developed and implemented many forums for discussing the status and rationale for environmental work and the associated human health and environmental risks. Ms. Welt is a recognized expert in the field of sub surface vapor intrusion to indoor air, having evaluated and mitigated vapor intrusion at hundreds of major industrial, commercial, and residential sites across the United States and overseas. She is also an experienced manager of soil, groundwater, and sediment investigation and remediation projects at industrial sites, former manufactured gas plants, and Department of Defense sites. Ms. Welt has authored numerous papers and given presentations on a variety of topics including vapor intrusion sampling, assessment, and mitigation techniques; risk based management of contaminated sediments; and in situ remedial methods for contaminated sediments and soils. In addition, she served as a peer reviewer of an Agency for Toxic Substances and Disease Registry draft risk management analysis document regarding leaking munitions.

Alan Weston, Ph.D, 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.

Todd Wetzel is an Environmental Engineering graduate student at Utah State University studying volatile organic compounds in indoor air. Todd graduated with a B.Sc. in Biology with a minor in chemistry in 2010 from Utah State University. In order to support his small family while attending school Todd started a small business, Tropical Ecos, breeding exotic poison dart frogs as well as designing custom tropical environments.

Sam Williams is a principal hydrogeologist for Geosyntec Consultants with over 28 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 in fractured bedrock, development and implementation of innovative remedial technologies, vapor intrusion assessments and mitigation, risk-based corrective action, and litigation support.

Elizabeth Winger is the Air Program Director for Calscience Environmental Laboratories, Inc., located in Garden Grove California. Elizabeth has a wealth of practical experience and knowledge, having more than twenty five years of experience in environmental laboratory testing services. Previous to working at Calscience Elizabeth served, for twelve years, as the Laboratory Director for the air testing services division of a national laboratory network. Previous to that Elizabeth was employed by a major oil company. Elizabeth attended the University of California at Santa Barbara where she earned a degree in Biological Sciences with a minor in Chemistry.

Carol Wood is a partner in and the leader of King & Spalding’s Litigation Practice Group in Houston. She joined the firm in 1989 after spending seven years as a Senior Legislative Aide in the United States House of Representatives in Washington, D.C. Ms. Wood has a broad practice in the areas of environmental and toxic tort litigation and international arbitration and environmental regulatory compliance. She has
extensive experience in defending energy, manufacturing and real estate clients against personal injury, property damage and remediation claim involving groundwater contamination, oilfield contamination, radioactive materials, chlorinated solvents, metals, PCBs and other contaminants. She has also worked with mining interests in South America on environmental disputes.

**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. 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 Wymore** 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 just completed a 3 year term 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.

**Mark Zeko** is a Founding Principal and Vice President of EEC. Mr. Zeko has over 26 years of experience in environmental consulting and is highly regarded as an expert in groundwater assessment, protection, and remediation. Mr. Zeko has performed investigations for several major oil and gas companies and has been retained to evaluate the effect of hydraulic fracturing on human health and the environment including surface water, groundwater and air. Additionally, Mr. Zeko has developed Best Management Plans (BMPs) associated with collection of soil, soil vapor, and groundwater samples; treatment of contaminated soil, soil vapor, and groundwater; and emission control. Mr. Zeko has also addressed hydraulic fracturing at several technical and environmental law conferences in California and Pennsylvania.

**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. Ms. Zemo has practiced in the environmental field since 1988. 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 journals *Ground Water Monitoring & Remediation* and *Environmental Forensics*, and is on the technical expert team for the revised California LUFT Manual.

**Jicheng Zhang** is a PhD student at Xiamen University in China. He has graduated from South-Central University for Nationalities with a B.S. and M.S. in Biotechnology and Molecular biology in 2008 and 2011. His main research interest is Molecular Mechanisms of Heavy Metal Tolerance in Mangrove. The present presentation is on Screening and Cloning the Heavy Metal Pollutants Resistant Genes of *Avicennia marina* by Suppression Subtractive Hybridization.

**Joseph D. Zilles**, P.G. Joseph Zilles is a Principal Geologist at Kleinfelder, Inc. Mr. Zilles has worked as a gas/oil well exploration field geologist throughout California starting in 1997. Mr. Zilles has provided detailed interpretations of subsurface formation depths (as deep as 12,000 feet), monitored drilling rates attained throughout the drilling projects, and recorded natural gas levels using on site gas chromatography methods. Mr. Zilles currently manages/conducts hydrogeologic assessments throughout
the United States. He aids in pre-construction specification preparation, permitting (local, State and Federal), conducts well pumping tests, aquifer analysis (Water Supply Assessments, SB 610/221), and water quality investigations. Mr. Zilles currently resides at the Kleinfelder office in Stockton, California.