

**Kamran K. Abdollahi** is a Professor and Department Head for the Urban Forestry Program at SU in Baton Rouge, LA. Dr. Kamran is recognized as one of the pioneer urban forestry faculty in the U.S. He has been instrumental in the establishment of the first urban forestry B.S. degree granting program in the nation. He has served as an advisor to the United States Secretary of Agriculture on the National Urban Forestry Advisory Council (NUCFAC). He is currently serving as an executive board member of the National Association of State Colleges and Land-Grant Universities, Ecology Section. He is also serving as the Editorial Board Member for the *Journal of Arboriculture and Urban Forestry*. He was recently invited to the Oxford University in England where he received a Certificate of Achievement for his contribution to the Climate Change Roundtable. Dr. Kamran has provided leadership in Urban Forestry for the Society of American foresters (SAF) by serving as Chair-elect and Chair for more than 6 years. He has served as co-director for the Gulf Coast Regional Climate Change Assessment Program and published several books on the subject. Dr. Kamran's research focus on urban forest tree species contribution to air, water and soil quality. He has directed more than 15 research projects including 5 national and 2 regional research projects. He has published more than 50 scientific papers in urban forestry, forest eco-physiology, and climate change areas. Currently, Dr. Kamran is leading the urban sprawl research focus for the NASA-University Center for Coastal Zone Assessment and Remote Sensing at SU. Dr. Kamran has an Agricultural Engineering degree (1983) from The Pennsylvania State University, M.S. in Soil Sciences, and Ph.D. in Forest Ecophysiology from the Arthur Temple College of Forestry at S.F. Austin State University (1991). In addition he has been trained as an urban forester through the University of Florida Urban Forestry Institute, the ISA, Davey Tree Institute, and the Arbor Master, Inc.

**George Alther** has a MSC in Geology from the University of Toledo. He has manufactured organoclay for twenty years, in Michigan. He is sole owner of Biomin Inc, and manufactures in Michigan. He owns 7 patents and has published over 110 technical and scientific articles.

**Gary Andersen** is the Group Leader for Molecular Microbial Ecology within the Earth Sciences Division of Lawrence Berkeley National Laboratory. His expertise is in microbial ecology with an emphasis on the natural distribution of bacteria in the environment, comparative genomics, and biotechnology. He has worked on developing high-density microarray systems for the detection and characterization of microbial communities and natural distribution of pathogens in the environment. With over 40 peer-reviewed articles in high impact scientific journals, Dr. Andersen is an international expert on the use of microarray technology for microbial applications. He has designed and developed microarray systems for the comprehensive identification of all known bacteria and archaea from environmental samples, bacterial expression (including *Caulobacter* spp. and *Dehalococcoides* spp.) and for forensic applications. He has also created the Greengenes database and online tools applications for comprehensive 16S rRNA gene sequence alignment for browsing, BLASTing, probing, and downloading (<http://greengenes.lbl.gov>). Current research projects include the characterization of background organisms from subsurface sediments, hydrocarbon reservoirs, pathogen surveillance systems as well as microbial source tracking for California beaches.

**Y. Meriah Arias-Thode**, has 4 years as a Senior Environmental Microbiologist with the US Navy at the Spawar Systems Center, Pacific, located in San Diego, CA. Additionally, she has served over 20 years in the US Army Reserve as both a Medical Laboratory Technician and for the last 8 years, as a Research Microbiologist (CPT). As an environmental microbiologist, she has worked on a variety of projects to include determination of toxicity of various sediment amendments to micro and macro benthic estuarine communities, microbial forensics, and marine microbial fuel cell research projects. She has also served as a consultant at SPAWAR for projects related to far-term chemical and biological defense systems for US soldiers. Due to her varying experience, she serves on the scientific advisory board for the Association of Environmental Health and Science (AEHS). She has a BS in Biology from the University of TX at San Antonio and a PhD in Marine Biology (Environmental Microbiology) from the University of California San Diego, Scripps Institution of Oceanography.

**Anju Arora** is a senior scientist with Indian Council of Agricultural Research, posted at Indian Agricultural Research Institute, N. Delhi India. She is a microbiologist and her areas of interest are applied and environmental microbiology. She has earned her Bachelor of Science in 1986 and Master of Science in

Microbiology in 1988 from Panjab University, Chandigarh., India. At IARI, her main research interest is production of quality biofertiliser and microbial inoculants. She has worked on production of commercial enzymes and on agroresidues management through composting. She has published 30 research papers in peer reviewed journals. The present presentation is on PAH degradation from one of the ongoing projects.

**Walter Bahm**, P.E. currently works for CAL/EPA's State Water Resources Control Board, Underground Storage Tank Cleanup Fund in the 5-year review unit. The 5-year review unit reviews and tracks petroleum-UST remediation projects to identify if additional corrective action or case closure is appropriate. Past work has included writing RCRA Facility Assessments (Phase I reviews) and overseeing the remediation of sites with metals, dioxin, PCB and chlorinated solvent contamination.

**Adrienne Barnes** is a Project Manager for Sullivan International Group Inc. (Sullivan). Adrienne has a BS in Biology from Seattle University and has extensive experience in the alternative fuel and environmental industries. Adrienne's environmental experience was gained while working for Weston Solutions, Inc. (Weston) in Seattle, WA and Honolulu, HI. She worked on a variety of commercial, State, and Federal contracts with focus on site investigations and remediation, Brownfields assessments and clean-up, emergency response, and environmental permitting and compliance. Strategic clients included the US Environmental Protection Agency (EPA) and the Air Force Center for Engineering and the Environment (AFCEE). Prior to joining Sullivan, she was owner and principal for a biofuel consulting and brokering firm called Sustainable Systems. Adrienne formerly worked for Imperium Renewables Inc. where she was the Hawaii-region sales and business development manager. Imperium Renewables is a biodiesel company that currently has a processing facility in Washington State with plans to build a facility on the leeward coast of Oahu in Hawaii. Adrienne managed the permitting of the 100-million gallon transesterification processing plant to be built in Hawaii.

**Yanina Barrera** is an Associate at ENVIRON focusing on air quality management, health risk assessment, and sustainable remediation. Since joining ENVIRON, Ms. Barrera has worked to prepare Title V permit applications and health risk assessments with local air agencies in the States of California and Washington. She has prepared South Coast Air Quality Management District (SCAQMD) Annual Emissions Reports (AERs), compliance reports, and permit renewals for Title V facilities, including aerospace facilities, power plant parts manufacturing, plastic foam manufacturing, lithographic printing shops, and a distributor of nitrogen vaporizers. She has also composed a technical document to support AB-32 on issues concerning leakage within the California cement industry, performed assessments for Proposition 65, and supervised projects including but not limited to in-situ chemical oxidation (ISCO) remediation, installation of a 500-foot monitoring well, and soil capping at a former landfill. While performing personal and area industrial hygiene (IH) air monitoring at industrial facilities, as well as ground water and soil sampling, Ms. Barrera communicates fluently in Spanish with facility workers and staff. She is California-certified Engineer-In-Training and holds a Bachelors of Science in Chemical Engineering from the University of California, Irvine.

**G. D. Beckett** is a principal hydrogeologist at AQUI-VER, INC., providing specialized remediation design, environmental consulting and strategic technical review services to industrial, governmental and legal support clients. He was previously a research associate and instructed at San Diego State University where he investigated various aspects of multiphase contaminant hydrogeology. That work has extended to participation in the EPA RTDF NAPL alliance, the ASTM LNAPL decision guide (work group chair), and development of technical tools for the API and others. His research interests focus on multiphase flow as it pertains to contaminant transport, risk, and remediation. He has provided technical training workshops on LNAPL principles to industry and regulatory agencies, and is a registered geologist and hydrogeologist in California.

**David Bertrand** is a hydrogeologist and has worked at Geosyntec Consultants for the past 10 years. David has specific experience in the oversight and management of large vapor intrusion investigations, community relations, and the installation and monitoring of residential and industrial/commercial sub-slab depressurization systems. David continues to develop and refine Geosyntec's soil gas sampling

protocols and to provide education and training for other stakeholders on the collection of legally defensible vapor intrusion data.

**Paul Black** is one of the co-founders, and the current CEO, of Neptune and Company. Paul is a decision analyst and statistician with more than 20 years experience applying decision analysis and statistics concepts to a wide range of environmental projects, including many that involve evaluation of radionuclide concentrations. Paul earned a Ph.D. in statistics in 1996 and a M.S. in statistics in 1984 from Carnegie Mellon University, and a Bachelor of Science in Statistics from the University of Lancaster, U.K., in 1981.

**Fred W. Blicke, P.E.** - Mr. Blicke is a Principal with CRA with over 25 years experience in the environmental field. Mr. Blicke is an expert in the area of site remediation, remedial technologies and decommissioning. Mr. Blicke has been advising clients in the area of RCRA TSDF permitting, generator status, and HSWA corrective action since the mid-1980s. He has also directed numerous state and federal superfund site projects for private sector clients where he spearheaded contamination evaluation and design/implementation of cost-effective remedies. Mr. Blicke has worked with most major manufacturers in the Midwest who have experienced downsizing and facility divestiture over the last 10 years, and has worked to minimize costs and maximize returns by properly addressing environmental liabilities and other business issues associated with cessation of business operations. He also has extensive experience in litigation support.

**Mark Bowland**, Senior Consultant, is an REA II with 17 years experience in complex, multi-pathway deterministic/probabilistic risk assessments, risk based remedial action objectives development, 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., U.K., Europe and Hong Kong. His role in application of strategic sampling, tiered/advanced risk assessment tools integrating geostatistical applications has resulted in cleanup levels significantly reducing soil volumes requiring mitigation while achieving regulatory health protection standards.

**Jose Cabezas** is a Ph.D. candidate in Environmental Engineering at Texas A&M University-Kingsville. He also has M.S. degree in Natural Gas Engineering and a B.S. in Petroleum Engineering. He has over two decades of experience as a petroleum engineer for Petroproduccion in Ecuador. Finally, he has been a member of the faculty at Escuela Superior Politecnica del Litoral since 1980.

**Alice Campbell** is a Senior Engineering Geologist working for the California Department of Toxic Substances Control out of their Chatsworth office. Her specialty is hydrogeology and geochemistry with an emphasis on modeling, both in the saturated and the vadose zone. She has worked in the environmental field for the last 35 years, both in consulting and for the State, with a substantial part of that time working with landfills and landfill gas problems. She has a Bachelor of Science in Geology from UCLA and a Master of Science from Cal State Los Angeles. She taught hydrogeology and groundwater modeling at Cal State Los Angeles and Northridge back in the early 1990s. She is a Registered Professional Geologist in California and Arizona, as well as a California Certified Engineering Geologist and Certified Hydrogeologist.

**Thomas A. Campbell** is an attorney with 20 years of experience in the environmental field. He is currently a partner in the Houston office of Pillsbury Winthrop Shaw Pittman LLP, where he counsels U.S. and multinational corporations regarding the management of their most complex environmental liability challenges. From 1995 to 2005, Mr. Campbell was a partner at Campbell, George and Strong, where he pioneered the development and use of habitat equivalency analysis (HEA) and net environmental benefits analysis (NEBA). Mr. Campbell also served as the General Counsel of the National Oceanic and Atmospheric Administration (NOAA). During Mr. Campbell's tenure at NOAA, he led the federal assessment and negotiation of the NRD claim for the Exxon *Valdez* oil spill and was a signatory to the \$1 billion settlement. During Mr. Campbell's three years at NOAA, the agency entered into \$120 million of settlements for ecological restoration projects, up from just \$500,000 in the years prior to his joining NOAA. Mr. Campbell is a graduate of Brigham Young University and received his juris doctor degree from

Baylor Law School. He is a member of the United States District Courts for the Southern, Northern, Eastern and Western Districts of Texas, the United States District Court for the District of Columbia, the United States Court of Appeals for the Fourth Circuit, the United States Court of Appeals for the Ninth Circuit, and the United States Supreme Court.

**Daniel B. Carr**, P.E., P.G. is a Principal and Vice President of Sanborn, Head & Associates, Inc. He holds a M.S. degree from the Groundwater Program in the department of Civil and Environmental Engineering of Colorado State University. He has over 25 years of experience in groundwater engineering including multiple vapor intrusion projects in involving sampling and mitigation of hundreds of residential, commercial, and industrial buildings. He was the lead technical consultant for the Endicott Groundwater Vapor Project in Endicott New York. He has also been responsible for development of protocols for design, construction, and performance testing of mitigation systems.

**Dan Carroll**, PE is a Principal Engineer at Kleinfelder's San Diego, California office. He is a registered professional engineer in California with 25 years of experience in environmental engineering and remediation of soil and groundwater at private sector sites, municipal and state-funded sites, RCRA and CERCLA sites. Mr. Carroll has been with Kleinfelder for 18 years, where he has led the investigation and remediation of many diverse project sites and a broad range of contaminants. He graduated from the University of California Berkeley with a Bachelor of Science in Chemical Engineering. He also holds a Masters of Business Administration degree. He is a member of ITRC's Green and Sustainable Remediation team.

**Rich Cartwright** PE, CHMM\*, CPIM\* is a Senior Vice President at M-E-C-X, a service-disabled, veteran-owned small business. He has an MBA from Indiana University, BES in Chemical Engineering from Brigham Young University, and Professional Certificate in Project Management from SUNY Buffalo. Mr. Cartwright is an internationally recognized motivational platform speaker.

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**Ning-Wu Chang** is a Senior Hazardous Substances Engineer with the Department of Toxic Substances Control of California Environmental Protection Agency. He is a licensed Civil Engineer in California and is currently the team leader for the ITRC's Remediation Risk Management Team. He received his Ph.D. degree in environmental engineering from the University of North Carolina at Chapel Hill. Prior to joining the State, Dr. Chang has worked for private consultant companies for more than 15 years on various projects involved with soil and groundwater remedial investigation/remediation system evaluation and design, landfill leachate treatment system evaluation and design, municipal and industrial water and wastewater treatment system evaluation and design, industrial waste minimization, and permitting and compliance.

**Joel Coffman** is an Environmental Scientist with US EPA Region 9. He has worked on California leaking underground storage tank (LUST) issues and projects for over 20 years as a site remediation manager for consulting firms and as a regulator. From 2000 to 2008, Joel was the PG in charge of cleanups for the Napa County Local Oversight Program, where he oversaw the assessment and remediation of petroleum contaminated sites. He joined EPA Region 9 in early 2008, where he works in the Waste Division, UST Office in San Francisco. His duties there include working with the State of California on acceleration of LUST case cleanups, revision of the California LUFT Manual and assisting agencies in reconciling their in-house caseload databases with the State's GeoTracker database. He is also assisting in evaluation of various sustainability of remediation models, which are currently being developed. He has a BS in Geological Sciences from the University of Texas in Austin, is a PG in California and Texas and Certified Environmental Manager for Nevada.

**M. Anthony Collins** is a board-certified industrial and environmental toxicologist, with 22 years of experience in human health, environmental epidemiology and ecological risk assessment, ecotoxicology and occupational health. Dr. Collins attended NYU Robert F. Wagner Graduate School of Public Service and earned his doctorate degree from SWU, with a focus in environmental toxicology and risk management. He is currently Principal Risk Analyst and CEO of Bereans Environmental Epidemiological Services, LLC, a consulting firm specializing in human and ecological risk assessments and risk analysis

of USDoD sites, Brownfield sites, agrochemical analysis, pathogen prevalence and etiology analysis, oil and gas sites, industrial metal processing facilities, landfills, energy facilities, aerospace facilities, airport sites, USDOE/NRC sites, and pharmaceutical related chemicals, their isomers, congeners, and radionuclide materials. Dr. Collins is also responsible for supporting environmental health related projects in Australia, Canada, China, France, Kenya, Africa, Mexico, Spain, and Vietnam.

**John A. Collins** is General Manager and COO of AquaBlok, Ltd. Mr. Collins is responsible for all day to day activities of the company, which include; technology development, manufacturing and marketing. The company developed, patented and manufactures a wide range of products using their unique technology in not only the environmental remediation markets, but also in phosphorous reduction, annular sealants, pond/canal liners, and other segments as well.

Mr. Collins has over 20 years experience in a range of engineering and environmental related businesses, managing research, product development, technology licensing, capital goods manufacturing and venture capital investments. He has been with AquaBlok for four years and has guided the development of several new products and managed two major remediation projects.

**Robert H. Craig**, 47, received a BBA and a MBA from The University of Houston. Mr. Craig's prior oilfield experience includes 2 years working in the field for an independent electric wire-line service as well as 2 years as a field foreman with Pipeline Rehabilitation Company, both in Texas.

From 1997 to 2002 he was employed by JP Morgan Chase bank in Houston, Texas. Mr. Craig was a Vice President with JP Morgan Chase Bank managing a business development group intent on increasing both market share and revenue within the commercial Business Banking group. Prior to holding this position with the bank, Mr. Craig was involved in providing capital to commercial businesses, including traditional bank financing as well as arranging mezzanine financing and private placements.

Since leaving the bank, Mr. Craig helped form a Coalbed Methane Development company in Wyoming that is now under the control of members of a separate Wyoming Corporation. Upon leaving that company, Mr. Craig Co-founded WYTEX Ventures, LLC and has been involved in all aspects of the company since 2003, including land acquisitions, field operations with respect to bringing a shut-in field back to production and the drilling of 28 new CBM wells. Mr. Craig has also worked on the securing of contracts with transportation providers as well as surface use agreements and new leases.

In 2009, Mr. Craig Co-Founded Alternative Energy & Environmental Solutions, LLC and has been working to develop the company since that time.

**Gary Cronk**, P.E, CHMM 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 35 ISCO projects in California and other states. To date, Mr. Cronk has been successful in attaining No Further Action requirements for five sites using ISCO technology. Mr. Cronk is a California Registered Professional Engineer, a California Certified Hazardous Substances Removal and Remedial Actions Contractor (A-HAZ), a Class A General Engineering Contractor, and a Certified Hazardous Materials Manager (CHMM). He holds a Masters degree in Biological Sciences from Cal State Fullerton. He is a frequent speaker at conferences and seminars on in-situ chemical oxidation and other in-situ technologies.

**Robin Davis** is a Licensed Professional Geologist and Project Manager with the Utah 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 and data acquisition and analysis, most recently for the vapor-intrusion exposure pathway.

**Manny Dekermenjian**, PhD, PE is a principal at ENVIRON specializing in the engineering analysis of chemical processes, characterization of chemical releases, and investigation of thermal and combustion related failures, including fires and explosions. He also performs sampling and evaluation of indoor air quality and atmospheric air pollution including particulates, odors, smoke and carbon monoxide. He has evaluated consumer products including appliances, air cleaners and electronics. He has expertise in the

evaluation of the physical and chemical properties of substances. Manny has conducted environmental chamber experiments. In addition, he conducts engineering analysis and experimental testing involving chemistry, heat transfer, thermodynamics, and fluid dynamics.

**Stephanie Dobyns** is currently the Marketing Manager for Regenesis. Ms. Dobyns' past work experience at an environmental consulting firm included oversee and execution of on-site groundwater and soil sampling and monitoring well installation. Her current projects include site analysis and presentation of in-situ bioremediation and chemical oxidation sites. She's co-authored multiple presentations discussing the successful application of in-situ remediation technologies worldwide. Ms. Dobyns attended the University of California, San Diego where she earned her B.S. in Earth Science.

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

**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.

**Mark Duffy** is a geologist with Tetra Tech, Inc. in San Francisco, California. He has 5 years experience working on soil and groundwater contaminant investigations throughout the United States. Mr. Duffy received a Bachelor of Science degree in Geology from the State University of New York at Cortland in 2003. Currently, Mr. Duffy specializes in delineating chlorinated solvent, petroleum hydrocarbon, and perchlorate contamination in groundwater and soil. Mr. Duffy is interested in, and currently pursuing work related to soil gas contamination and vapor intrusion issues.

**Elizabeth H. Erickson** holds degrees in Geology from UCLA and the California Institute of Technology, where she specialized in field and quaternary geology. Her second Masters Degree is from the Claremont School of Theology where she studied environmental ethics. She has worked for the State of California on water quality issues in surface and groundwater since 1998, where she helped establish Total Maximum Daily Loads for pollutants and the Agricultural Waiver Policy for Los Angeles and Ventura Counties. Most recently, she was a member of an interdisciplinary team which developed the Regional Board's policy to prohibit septic systems within ten years in the coastal Malibu Valley groundwater basin.

A related publication with Don Duke in 2003 was on salt management in Calleguas Creek in Water Environment Research.

**Elsy A. Escobar**, is currently a Ph.D. student of Civil and Environmental Engineering at Arizona State University. Her research emphasis is on petroleum hydrocarbon vapor intrusion. She has a BS on Chemical Engineering from Central America University (UCA), El Salvador and a MS in Environmental Engineering from Marquette University at Milwaukee, Wisconsin. During her master's degree, she worked on the enhancement of anaerobic waste and wastewater treatment, performed biochemical methane potential and anaerobic treatment assays on anaerobic sludge, and worked with United Waters, Milwaukee, WI on a phosphorus removal from municipal wastewater project. In addition, she is a volunteer member of Engineers Without Borders, currently serving as the state of Arizona representative.

**Herbert H. P. Fang**, Chair Professor of Environmental Engineering at the University of Hong Kong is an expert in environmental biotechnologies, including anaerobic degradation, nutrient removal, membrane separation, biofilm, bioremediation, etc. He has published over 160 journal articles, and is the Editorial Board Member of *Reviews in Environmental Science and Biotechnology* (Springer), and a former Editorial Board Member of *Chemosphere* (Elsevier), *Biofilms* (Cambridge), *Advances in Environmental Research* (Elsevier) and *World Journal of Microbiology and Biotechnology* (Kluwer). Professor Fang is also a visiting Professor of 13 universities in China and Taiwan.

**Manoochehr Fathi-Moghadam**

B. Sc., 1972, Soil and Water Engineering, Shahid Chamran University, Ahvaz, Iran

M. Sc., 1980, Engineering Sciences, University of Arkansas, USA

Ph.D., 1996, Civil Engineering (Water Resources), University of Waterloo, Waterloo, Canada

Author for more than 30 reviewed journal papers and 90 conference papers

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**Terry Feng** is Principal Technologist with CH2M HILL. He also serves as CH2M HILL's *Site Remediation Service Area Leader* and is a core member of firm's *Remediation Technology Task Force* responsible for development and successful implementation of both proven and innovative technologies on major programs/projects.

Terry has a B.S. degree in Engineering Geology and Hydrogeology and a Ph.D. in Civil Engineering. He is a California Certified Hydrogeologist and Engineering Geologist and a Registered Civil Engineer in California and Oregon. Started as a groundwater modeler in late 1980s, Terry's interest and technical expertise extend over a wide range of environmental fields including comprehensive site characterization, fate and transport evaluation, risk assessment, vapor intrusion assessment, feasibility study, development of site closure strategies, and application of innovative and remedial technologies under various regulatory programs including RCRA, CERCLA, CLEAN, VCA, and Brownfields. In the last decade, Terry has dedicated his effort in remediation and revitalization of contaminated properties.

**Jude T. Francis**, PhD PE, has 17 years experience in environmental consulting with emphasis in the field of soil and groundwater remediation. Experience includes remedial investigation, feasibility studies, green remediation, risk assessments and implementation of remedies. Implementation experience includes managing, designing, planning of soil and groundwater remediation projects for a wide range of industrial and municipal sectors. Remediation technology experience includes innovative technologies such as in-situ chemical oxidation, in-situ chemical reduction, and in-situ thermal technologies and conventional technologies such as soil vapor extraction, bioventing, air sparging, multiphase extraction and groundwater pump and treat. Contaminant experience includes petroleum hydrocarbons (dissolved and LNAPL), metals Cr(VI), VOCs (benzene, TCE, PCE), PAHs, PCBs and phthalates. Has significant amount of experience with Superfund and working with US EPA. Other areas of expertise include permitting, environmental litigation support, regulatory compliance (CAA, CERCLA, RCRA), institutional controls and negotiation with regulatory agencies.

**Stephanie E. Gillaspy**, EIT, is a project engineer with Provost & Pritchard Consulting Group in Fresno, California. She has a Bachelor of Science in Environmental Engineering from University of California, Riverside and a Master of Business Administration from University of Phoenix. She works as a Project Manager/Engineer on several remediation projects including petroleum hydrocarbons and chlorinated solvents in the central San Joaquin Valley. She is currently the project engineer on a co-mingled TPH plume extending ½ mile in a highly impacted commercial area in Merced. Ms Gillaspy is also responsible for the implementation of remediation systems at several former and active dry cleaner operations using combinations of SVE and ozone sparge systems. She has worked on Brownfield grant projects. She also works with many dairies and food processors on regulatory compliance with the Regional Water Quality Control Board and various Counties.

**Tal Golan**, M.Sc., is a PhD student at the Faculty of Agriculture, The Hebrew University. Her research concerns the understanding of the extraction mechanism of hazardous heavy metals and organic pollutants from sediments and sludge, by using critical solution mixtures.

**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.

**Rashmi Gurram** has her Ph.D. in Chemistry from Dayalbagh Educational Institute (DEI), Agra, India. Her research work is based on heavy metal accumulation and phytoremediation. She received the Senior Research Fellowship award in 2002 from the Council of Scientific and Industrial Research (CSIR) Delhi India. She has published her work in numerous reputed journals. Dr. Rashmi has presented her work at many national and international conferences. She also received a best paper presentation award at the World Herbo conference India in 2003. She is a life member of the Indian Science Congress. She has teaching experience as well. She taught chemistry as a lecturer at the GLA Institute of Technology, India. Dr. Rashmi has a Bachelors and a Masters Degree in Chemistry from DEI Agra India.

**Paul Hadley** is a Senior Hazardous Substances Engineer with the California Department of Toxic Substances Control. He has published numerous reports on topics related to risk and remediation. For the last fifteen years he has been actively involved with the Interstate Technology & Regulatory Council (ITRC), and lately has turned his attention to the topic of green and sustainable remediation.

**Thomas A. Harp, P.G., P.E.**, is a Principal and Director of Technical Operations with LT Environmental, Inc. in Denver, Colorado. Mr. Harp has over 30 years of experience in the interpretation and implementation of environmental regulations, remedial system design and installation, pollution prevention, conduct and management of site investigations, and environmental assessments. He has served as the program manager for large, indefinite delivery contracts for the federal government, and oil and gas, mining, and other private industrial clients. Mr. Harp has provided technical direction and regulatory negotiations for the development of remedial solutions associated with chlorinated solvent, hydrocarbon and metal contamination in groundwater and soil throughout the United States, Canada and Europe. He holds a Master of Science degree in civil engineering (groundwater hydraulics and chemical transport) from Colorado State University, a Master of Business Administration degree in finance and management from the University of Missouri and a Bachelor of Science degree in geology from Tulane University.

**Blayne Hartman** received his Ph.D. in geochemistry from the University of Southern California. Since entering private industry, he has worked extensively with surface geochemical methods for environmental & exploration applications. He co- founded H&P Mobile GeoChemistry, a business partnership offering on-site laboratory analysis, direct push environmental sampling, soil vapor surveys, and vapor intrusion services, and is currently an independent consultant offering vapor intrusion and soil gas support.

Dr. Hartman is a nationally recognized expert on soil vapor sampling, soil vapor analysis, and vapor intrusion. He has provided training on soil gas methods and vapor intrusion to County and State

regulatory agencies in over 30 states, many of the EPA regions, the DOD, and numerous stakeholder groups and consultants. He has written numerous articles on the collection, analysis, and interpretation of soil vapor data, including chapters in four textbooks. He has participated in technical workgroups on soil vapor methods for EPA, CA-EPA, CA Regional Water Boards, County of San Diego, ITRC & ASTM and has reviewed/edited instructional manuals for the EPA OUST and Superfund groups. Over the past four years, Dr. Hartman has been a contributing author/editor to vapor intrusion and soil gas guidance documents to federal EPA, CA-EPA, San Diego County, ITRC, DOD, API, and more than 20 individual State documents. He is currently a trainer in the EPA-OUST, ITRC, ASTM, and API vapor intrusion courses.

**Jill H. Hedgecock** is a senior ecological risk assessor with URS Corporation in San Francisco, CA with over 24 years of experience in environmental toxicology. Ms. Hedgecock has a BS degree in biological sciences from the University of California, Davis and an MS from the University of San Francisco. She was a co-author on the 2009 paper entitled: *PCBs in Sediment and Soil: Issues with Use of Aroclor and Congener Data*, Proceedings of the Fifth International Conference on Remediation of Contaminated Sediments. She has served as task leader for multi-phased ecological risk assessments involving PCB sediment and tissue characterization on a freshwater creek system in California, as well as evaluated PCB exposure to birds and wildlife on Amchitka Island, Alaska.

**Gorm Heron, Ph.D.**, received a M.Sc. in Civil Engineering and a Ph.D. in Environmental Science and Technology from Technical University of Denmark (1990, 1994). He spent 3 years researching thermal remediation mechanisms at the EPA research lab in Ada, OK, and 1.5 years at UC Berkeley as a research engineer. From 1999 to 2004, he was the lead engineer for SteamTech, designing and implementing 8 steam enhanced extraction projects. He joined TerraTherm in 2004, and is the company's Chief Technology Officer and technical lead for thermal remediation projects. He designs and oversees thermal projects in the US and internationally.

**John Hills** is the Director of Water Quality and Regulatory Compliance for the Irvine Ranch Water District. At IRWD, he is responsible for monitoring the quality of the District's waste water, potable water, recycled water and urban runoff systems and ensuring that the District operates in full compliance with all regulatory requirements. Prior to joining IRWD, John was the Environmental Services Manager for the City of Anaheim. At Anaheim, he was responsible for ensuring the City's facilities and water and electric utility operations complied with all environmental regulatory requirements. John obtained his Bachelor's degree in chemistry from the California State University at Long Beach and an MBA from Chapman University in Orange.

**Brian R. Hitchens, PG., CHG**, is a senior 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 10 years where he has been involved with many diverse projects with responsibilities including project management, litigation support, well installation and sampling, geophysical investigations, data analysis, data visualization, risk assessment, reporting, and negotiation with regulatory agencies. He specializes in applied in-situ remedial technologies, sediment remediation, bioremediation, data management, and data visualization.

**Karen Holman** oversees the storm water management program for the San Diego Unified Port District. Ms. Holman has 13 years of experience in water quality and has managed and conducted large water quality and regional monitoring programs. Ms Holman graduated from the University of North Carolina at Wilmington with a degree in Marine Biology. She moved to the west coast 15 years ago to pursue biological consulting work and became familiar with the local water quality problems and how they impact the marine benthic communities and fish.

More recently, Ms. Holman has become involved with storm water. She developed the Port's stormwater program to meet NPDES Permit requirements. Currently, this involves coordinating Best Management Practices and inspections with the over 200 tenant business operating on Port tidelands. Ms Holman's program has incorporated some innovative strategies to outreach to tenants, and has also put together an

extensive tracking database for inspections and BMP assessments. Ms Holman has also been instrumental in the development and re-evaluation of watershed programs based upon her knowledge of watershed sources and water quality data. She currently leads the other (10) watershed agencies in setting watershed priorities, developing and implementing watershed pollutant reduction activities, and evaluating monitoring data.

**James A. Jacobs, P.G., C.H.G., REA II** is the Chief Hydrogeologist with EBS and is a certified hydrogeologist in California. He is a Fulbright Scholar, winning 3 awards in environmental engineering. His expertise is in-situ remediation of hydrocarbons, solvents and heavy metals. He has worked on dozens of in-situ chemical oxidation projects. He has a BA and MA in geology and has been a director on several professional society boards. Mr. Jacobs has published over 100 technical articles and co-authored two CRC Press books: MTBE: Effects on Soil and Groundwater Resources (2000) and The Chromium 6 Handbook (2005).

**Alan Jeffrey** is Senior Geochemist at DPRA/Zymax Forensics in Escondido, California. Dr. Jeffrey received his PhD in Chemical Oceanography from Texas A&M University for research using stable isotope ratios to determine the origin of natural gas. He has over 20 years of U.S. and international experience in environmental and petroleum geochemistry. Much of his work has focused on the use of geochemical and stable isotope techniques to solve environmental problems, including sources of spilled hydrocarbon fuels and chlorinated solvents, and fugitive methane seeps.

**Song Jin** received his Ph.D. in environmental microbiology from the University of Wyoming. Song is the Research Director at Ciris Energy, located in Denver Colorado. He is also an adjunct professor at the University of Wyoming and distinguished professor at Hefei University of Technology in China. Prior to that Song was a Principal Scientist and Program Manager at Western Research Institute. His expertise focuses on environmental remediation, including using microbial fuel cell in enhanced anaerobic biodegradation, biological source treatment for acid mine drainage, electrically induced reduction of chlorinated compounds, and biogenic methane production from coal and oil shale. He holds more than a dozen patents, and has published more than 100 scientific papers.

**Ashok Kalyal** is Principal Engineer and President of Resources & Systems International, Inc. Ashok received his Ph.D. in Engineering Science from Washington State University. He is recognized as an expert in surface-groundwater interaction, multiphase flow, watershed management, sustainable development, and climate change. He is an author of BIOSLURP, MOVER, MOFAT, SVE3D, BIOFT3D, and several more software programs currently used in the environmental industry in this country and abroad. Ashok has been consultant to several national and multinational companies, and government agencies.

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

Dr. Kerfoot holds numerous patents in processes and equipment currently used in groundwater retrieval, flow measurement, and remediation. Dr. Kerfoot has recently developed remediation technologies based upon oxidative microbubble reactions and has authored over fifty scientific publications.

**Stephen S. Koenigsberg**, Ph.D. is a Principal in the Irvine, California office of ENVIRON. He has 20 years of environmental remediation experience and is a recognized developer of widely used remediation

products and technologies. He specializes in and helps define the emergent field of expedited site closure. This practice integrates best treatment protocols with novel uses of molecular biology, analytical chemistry, geophysics, fate and transport modeling, and risk assessment to optimize remedial design and management, limit costly active treatment, and obtain monitored natural attenuation (MNA) or equivalent outcomes as a final remedy. Koenigsberg was a founding principal of Regenesys, an internationally recognized environmental remediation products company where he co-invented and developed the company's foundation bioremediation products including ORC® and HRC®. He also directed the development of the abiotic treatment products RegenOx® for chemical oxidation and MRC® for metals complexation (recipient of a 2004 *Wall Street Journal* Technology Innovation Award). He has published over 150 technical articles focusing on bioremediation and environmental biotechnology. Koenigsberg received his M.S. and Ph.D from Cornell University and is an adjunct professor at several institutions, including The California State University at Fullerton where he also serves as Chairman of the Dean's Advisory Council.

**Rosa Krajmalnik-Brown** is an Assistant Professor at the School of Sustainable Engineering and The Built Environment at Arizona State University. She received her bachelor's degree in Industrial Biochemical Engineering from the Universidad Autonoma Metropolitana (UAM) in Mexico City in 1996. She worked for a year at IBTech, an Environmental Engineering consulting firm and in 1997 she was awarded a Fulbright scholarship which she used to get her master's degree at Georgia Tech. She completed her Ph.D. in Environmental Engineering at Georgia Tech in August of 2005. After graduating from Georgia Tech, she worked as a post-doctoral researcher at the Center for Environmental Biotechnology in the Biodesign Institute at Arizona State University. She is author of a patent, several peer-reviewed publications and has presented numerous talks and posters at national and international conferences. She has worked on Biotransformation and fate of environmental contaminants with an emphasis on environmental applications of molecular microbial ecology. Other areas of interest include bioremediation of soil, sediments, and groundwater and the use of microbial systems for bioenergy production.

**Mark Kram** is a Chief Scientist for Groundswell Technologies, Inc., a group specializing in automated monitoring and modeling of environmental and homeland security sensor networks. Dr. Kram earned his Ph.D. in Environmental Science and Management from the University of California at Santa Barbara, an M.S. degree in Geology from San Diego State University, and his B.S. degree in Chemistry from the University of California at Santa Barbara. He has over 25 years of experience using innovative environmental assessment techniques and has authored papers, national standards, articles and book chapters on the subject. Dr. Kram has been instrumental in the areas of sensor development and implementation, innovative GIS applications, dense non-aqueous phase liquid (DNAPL) site characterization, chemical field screening and monitoring well design, and holds several patents for hydrogeologic and chemical characterization tools and automated environmental monitoring approaches. Dr. Kram is also an active member of NGWA, ASTM (Subcommittee D18.21), and ITRC (SCM and Bio-DNAPL Teams), and is currently preparing national guidance for expedited characterization and mass flux.

**Lorraine M. LaFreniere** (PhD, Geology, University of Wisconsin at Madison, 1977) has over 25 years of experience as a geologist, both in the private sector and under federal funding. She has extensive experience with field geology, specializing in carbonate reservoirs, Quaternary glaciofluvial and glaciolacustrine stratigraphy, paleoenvironmental reconstruction, and application of innovative technologies. In the last 10 years at Argonne, she has led in the development of cone penetrometer technology for environmental characterization, winning patents for new devices for this application. She currently manages the Applied Geosciences and Environmental Management Section of Argonne's

**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 where he has focused on vapor intrusion. Matt now manages the Soil and Groundwater R&D Programme for Shell Global Solutions. Matt concurrently serves as an Associated Editor for the Ground Water Monitoring and Remediation Journal.

Environmental Science Division and leads all aspects of the section's extensive environmental characterization programs for the U.S. Department of Agriculture.

**Laurie T. Lapat-Polasko**, Ph.D., GEP has more than 27 years of experience as a technical consultant and Project Manager for efforts involving groundwater and soil remediation and wastewater treatment. Combining her knowledge of microbiology with a background in civil engineering, Dr. Lapat-polasko has focused on remediation and natural attenuation of groundwater affected by organic and inorganic compounds. She has performed numerous remedial investigation/feasibility study (ri/fs) efforts for complex problems associated with surface waters, groundwater, and discharges from sewer systems. She has dealt with contaminants ranging from fluoride and arsenic to chlorinated solvents, explosives and fuel compounds. Dr. Lapat-Polasko has developed, designed, and implemented remediation plans for water and soil systems. She has field- and laboratory-tested aerobic and anaerobic methods for treating contaminated groundwater and soil and has studied the treatment role of various microbial communities. She has taught several graduate courses in water and soil remediation at Arizona State University.

**Yan Li** is a postdoctor in School of Earth and Space Sciences in Peking University. She received her Ph.D. in Peking University for her work developing natural mineral-based photocatalysts to treat wastewater. Currently, she is a team leader involving in a sub-subject of "973" project program: "Mechanisms of Environmental Response to Biomineralization", which is one of the most prestigious research programs supported by the Chinese Ministry of Science and Technology. The sub-subject of she devoted to is about the fundamental understanding of how semiconducting minerals and microorganisms collaborate to strengthen each environmental function.

**Heather M. Loso** is a Senior Risk Assessor with URS Corporation in Oakland, CA with over 14 years of experience in environmental remediation. Ms. Loso has a BS degree in Environmental Policy and Behavior from the University of Michigan in Ann Arbor. She was a co-author on the 2009 paper entitled: *PCBs in Sediment and Soil: Issues with Use of Aroclor and Congener Data*, Proceedings of the Fifth International Conference on Remediation of Contaminated Sediments. She has led multi-phased ecological risk assessments in support of risk-based remediations for PCB sites in California and Oregon, including those associated with freshwater, marine, estuarine, and terrestrial ecosystems. Characterization of some of these sites involved collection of soil or sediment and tissue analyzed for PCB congeners and Aroclors. She has implemented the TEQ methodology at many of these sites, as well as for a DTSC-orphaned site in a desert ecosystem.

**Dave Ludwig** is a systems ecologist by training and a risk assessor and restorationist by trade. He has a Bachelor's of Environmental Science from Rutgers (Cum Laude despite flunking freshman chemistry twice and Approaches to Human Communications once), a Master's from the Virginia Institute of Marine Sciences, and a doctorate from the Institute of Ecology at the University of Georgia. He taught the premier course in Ecological Risk Assessment at the University of Maryland College Park in 2009, and presently publishes on the complexities of environmental management decision-making in the modern world.

**Steve Luis** is a Senior Manager with ENVIRON International Corp. in Irvine, CA. He received a BS in Civil Engineering from Loyola Marymount University and MS and CE degrees in Civil and Environmental Engineering from the Massachusetts Institute of Technology. He has more than 18 years of experience in environmental consulting with an emphasis on performing contaminant fate and transport analyses and human health risk assessments, interpreting environmental data and developing site characterization and remediation strategies, providing litigation support, and conducting independent third-party review and oversight.

**Haiping Luo**, currently works at the Department of Civil Engineering in University of Colorado Denver, with the post-doctoral fellowship. Ms. Luo has her Ph.D. in Environmental Science from the Sun Yat-sen University in China. She has worked on wastewater treatment and power generation using microbial fuel cells technology, and groundwater bioremediation.

**Richard G. Mach Jr.** is the Director of Environmental Compliance and Restoration Policy in the Office of the Deputy Assistant Secretary of the Navy, Environmental, and has over 17 years of environmental experience working for the Navy. He has held his current position since April 2006, acting as a principal policy advisor for the Navy and Marine Corps on environmental programs, including compliance with environmental laws and regulations, cleanup of contaminated sites, and programs for pollution prevention and sustainability.

Mr. Mach began his Federal Civil Service for the Navy in 1992 at Naval Facilities Engineering Command (NAVFAC), Southwest Division. There he was a remedial project manager in charge of cleanup and compliance projects for various Navy bases in southern California. His next assignment was as the Base Realignment and Closure (BRAC) Environmental Coordinator (BEC) for Hunters Point Shipyard. As the BEC, Mr. Mach was responsible for the \$60M/year cleanup program at the base to support eventual transfer to the City of San Francisco. After two years, Mr. Mach was selected to become the Cleanup Program and Munitions Response Program Manager for NAVFAC Headquarters. In this position, he led several NAVFAC workgroups to develop and implement improved environmental policy, guidance, and strategies to optimized the Navy's cleanup program and implement better technologies Navy-wide. After four successful years in this position, Mr. Mach was selected for his current position.

**Susan J. MacMillan** is a Senior Risk Assessor with URS Corporation in Portland, OR with over 22 years of experience in ecological and human health risk assessment and environmental remediation. Ms. MacMillan has a BS degree in Biology from Hiram College in Hiram, Ohio and an MS degree in Biology from Kent State University in Kent, Ohio. She was the presenter of and primary author on the 2009 paper entitled: *PCBs in Sediment and Soil: Issues with Use of Aroclor and Congener Data*, in the Proceedings of the Fifth International Conference on Remediation of Contaminated Sediments. She leads a multi-phased ecological risk assessment of PCB contamination at a California site adjacent to the marine environment, including assessment of freshwater and marine sediments and biota, and of soil and terrestrial biota. Site media were analyzed for Aroclors and congeners, the TEQ methodology was applied to dioxin-like congeners, and correlation of Aroclors versus congeners was performed to support basing future remediation efforts on Aroclor analysis (faster and cheaper than congener analysis) alone.

**Sriram Madabhushi** became a consultant in 2008 with Booz Allen Hamilton after 16 years of service as a state regulator. He currently divides his time supporting the Air Force in their optimization efforts and as a program advisor to the Interstate Technology Regulatory Council's Remediation Risk Management and Green and Sustainable Remediation teams. Previously, he was a hydrogeologist in the Bureau of Land and Waste Management, South Carolina Department of Health and Environmental Control (SCDHEC) in Columbia, South Carolina. Sriram worked for three years in the Federal Facilities Agreement - Superfund Section reviewing the site rehabilitation activities at the Savannah River site and three years in the RCRA section providing technical review of project documents related to Shaw and Charleston Air Force Bases. Sriram worked the first eight years of his career with the SCDHEC in the Underground Storage Tank Program. He was integral in the implementation of the risk-based corrective action and performance-based management processes in the UST Program. He has strong interests in statistical decision making techniques in remedy selection, optimization of remediation technologies, groundwater fate and transport modeling, application of innovative technologies in site investigations and rehabilitation, etc. During 2004-2008, Sriram was the co-leader of the ITRC Remediation Process Optimization (RPO) and RRM teams. He was an instructor on the team's advanced RPO training course and Performance-based Environmental Management course. He earned a bachelor's degree in physics from Andhra University, Waltair, India in 1981 and a master's degree in exploration geophysics from Indian Institute of Technology, Kharagpur in 1984. Sriram is a certified Professional Geologist in the state of South Carolina.

**Michael J Mann**, PE, DEE, is a consultant working with Stuyvesant Environmental Contracting Inc on the development and performance of contaminated sediment projects in the US. Stuyvesant is the US branch of Boskalis Dolman, the processing division of Royal Boskalis Westminster of the Netherlands. Mike has more than 30 years experience in power, water, and environmental projects. He graduated from West Point, and obtained MS degrees in Chemical and Environmental Engineering from RPI, and an MBA from SUNY-Albany.

**Kevin C. Mayer** is a partner and civil trial attorney in the Los Angeles office of Liner Grode Stein Yankelevitz Sunshine Regenstreif & Taylor LLP and co-chair of the SGMA Legal Task Force. Kevin's practice focuses on complex commercial and mass tort litigation, toxic tort, OSHA, environmental and products liability litigation. Kevin's trial docket includes individual, multi-party and class action cases involving allegations of fraud, unfair and deceptive business practices and products liability. He has represented numerous clients in the sporting goods, oil and chemical, mining, manufacturing, construction, and financial industries in a variety of federal and state courts and government agencies. Kevin has been annually designated as one of the "Best Lawyers in America" and included on the Southern California *Super Lawyers* list. He is a 2006 recipient of the Burton Award for Legal Achievement.

**Kris McFadden** is a Deputy Director in the City of San Diego's Storm Water Department. Before joining the City 2 years ago, Kris was the Environmental Manager for the City of Fort Lauderdale, where he lead the City's environmental compliance programs for water, waste water, and storm water. He also worked as an environmental regulator with the Florida Department of Environmental Protection. Kris has a Bachelor's degree in Biology, a Master's degree in Marine Biology, and a Master's degree in Coastal Zone Management.

**Thomas McHugh**, Ph.D.: Dr. McHugh is a Vice President with GSI Environmental Inc., in Houston, Texas. He is a Diplomate of the American Board of Toxicology and has over 18 years of experience in the environmental industry with academic research and private consulting organizations. He received a B.A. in Biochemistry and Environmental Science from Rice University (1990), an M.S. in Environmental Engineering from Stanford University (1993), and a Ph.D. in Toxicology from the University of Washington (1997). Dr. McHugh has worked on a number of projects related to vapor intrusion including field investigations and model development. He is the principal investigator (PI) for two vapor intrusion research projects funded by the Department of Defense through their Environmental Security Technology Certification Program (ESTCP) research program. Through these projects, he has developed improved methods for building-specific vapor intrusion investigations based on control and measurement of pressure gradients. He is the lead author on several peer-reviewed journal articles, peer-reviewed conference proceedings, and technical documents on vapor intrusion. Dr. McHugh has developed training classes on a number of topics including vapor intrusion.

**Stephen Mezyk**, Ph.D., is a Professor in the Department of Chemistry and Biochemistry at California State University, Long Beach where he has worked since 2001. He received his original degree from the University of Melbourne, Australia in 1990. His current research interests include the use of particle accelerators to elucidate the absolute reaction kinetics and mechanisms of radical chemistry in the treatment chemically contaminated waters by Advanced Oxidation Process technologies. He has been working in the water remediation field for over 10 years now, with nearly 60 journal and conference papers in this particular area. He is currently an Associate Editor of the Journal of Advanced Oxidation Technologies in 2009, and remains deeply committed to undergraduate education in Chemistry, with the view that research is the best teaching tool as it allows students to apply their learnt knowledge in the real world.

**Ben Mork** earned his B.S. degree in chemistry from the University of California at Davis and a Ph.D. in inorganic chemistry from the University of California at Berkeley, where he investigated structural, reactivity, and catalytic properties of transition metal-silicon compounds. His industrial research experience has spanned the fields of petrochemical catalysis, high-throughput experimentation, nanotechnology, and environmental chemistry. He is a coauthor of over 20 papers and patent applications on diverse topics in chemistry, catalysis, and materials science. He joined Regenesis in 2006, where he currently manages product development research.

**Jonathan Myers** has a Ph.D. in Geochemistry plus 27 years of environmental consulting experience. He currently works for Shaw Environmental, Inc. in Albuquerque, New Mexico. His specialties include geochemical modeling, environmental forensics, natural attenuation investigations, and the use of geochemical evaluations to distinguish between contamination versus naturally high background

concentrations of elements in groundwater, surface water, sediment, and soil. Dr. Myers has authored over 30 peer-reviewed research papers and book chapters, and has taught short courses on geochemical and environmental forensic techniques.

**A Nagaraju:** I have worked in the field of Environmental Geochemistry involving soils, plants and ground water in the mica and barite mining areas with a main focus on biogeochemistry. Biogeochemical cycling of elements in fluorine affected areas of Andhra Pradesh, India has also been undertaken. Further, biogeochemical characteristics, primarily involving the interaction of uranium, and certain other associated trace elements, in banana (*Musa sapientum*), are compared between the uranium mineralized Tummalapalle area in the Cuddapah District and non-mineralized Tirupati area in Andhra Pradesh. I have visited Japan and attended IHP Training Course on Limnology in 1999 at the Institute for Hydrospheric-Atmospheric Sciences, Nagoya University. I have received Commonwealth Fellowship during Sep. 2003 – Mar. 2004 and Royal Society Visiting Fellowship during Oct 2004 – Jan 2005 and visited University of Aberdeen and University of London, United Kingdom. I have visited Hungary under Indo-Hungarian Cultural and Educational Program during Oct – Nov 2008. I have worked on Bioremediation with Prof. Ken Killham who is leader in this field of science in UK. Further, I have visited Germany, USA and China with regard to various academic assignments. I have received Research Grants from University Grants Commission and Council of Scientific and Industrial Research, New Delhi to conduct research at the Sree Venkateswara University, Tirupati, India. I have presented/attended 18 International and 6 National conferences and published 36 research papers in both International and National Journals. I have written 8 technical reports. I am guiding for PhD and MPhil research degrees and successfully awarded two PhD and two MPhil Degrees.

**Ryoji Naito**, Ph.D. student, Research Center for Environmental Quality Management, Graduate School of Engineering Kyoto University. Researcher, Port and Airport Research Institute, Coastal and Estuarine Environment Research Group. Research Interests include Management of port and harbor sediments polluted by hazardous chemicals (Dioxins, PAHs, Heavy Metal), development of sediment quality guideline, and beneficial use of dredged material.

**Kenda Neil** is a graduate student at CSU Northridge and will be obtaining her M.S. in Geology in 2010. She holds a B.S in Environmental Science with a minor in Geology from UC Santa Barbara. Ms. Neil's studies at CSUN include hydrostratigraphy and hydrogeology, and her master's thesis analyzes the hydrostratigraphy of the South Las Posas Groundwater basin in Ventura County, California. She has received over \$15,000 in funding from various water agencies CSU Northridge in support of her research, most of which was awarded via Metropolitan Water District of Southern California's World Water Forum college competition. Ms. Neil is a member of the American Association for Petroleum Geologists (AAPG) and Geological Society of America (GSA) and is also active in the CSUN Geology Club. Ms. Neil works full time for the Naval Facilities Engineering Command Engineering Service Center (NAVFAC ESC) at Naval Base Ventura County, Port Hueneme, California.

**Hieu Nguyen** is the Technical Engineer for CETCO Remediation Technologies, based in Santa Ana, California. He is a graduate from University of Idaho with Chemical Engineering background and joined CETCO company in 2007. Hieu has 3 years prior experience with manufacturing processes, product quality control and chemical reaction analysis.

**Joseph P. Nicolette** has over 26 years of experience in the environmental consulting field. He provides strategic advice and oversight for projects related to natural resource damage assessment, site cleanup, reuse, and land asset management. His experience includes strategies in the use of natural resource economic valuation models for estimating the environmental impacts and/or benefits associated with site contamination, proposed remediation, land development, and restoration. He has made demonstrated contributions nationwide in developing what is known as a net environmental benefits analysis (NEBA) approach. He is an expert in NEBA and NRDA and has worked to incorporate NEBA concepts into regulatory considerations. The overall purpose of a NEBA is to support the development and selection of remedial strategies that provide the greatest net environmental benefit to the public while managing site risks (i.e., maintaining protection of the environment). The NEBA concept is presented in a paper that he recently co-authored with Oak Ridge National Laboratory (Rebecca Efrogmson) and the USEPA (Glenn

Suter) entitled "A Framework for Net Environmental Benefit Analysis for Remediation or Restoration of Contaminated Sites." The paper was published in Environmental Management in August 2004. Mr. Nicolette has been coordinating with EPA HQ on pilot studies regarding the use of NEBA to assist in demonstrating the benefits of the superfund program.

**Steffen Griepke Nielsen** has a master degree in environmental engineering from the University of Aalborg, Denmark and has been working for the Danish consultant NIRAS since 2001. His main work field is thermal remediation and has been involved in three thermal remediations conducted in Denmark the past 3 years. Since 2008 Steffen has been with TerraTherm and he is working out of their California office.

**Zhu Hua Ning** has been a professor of urban forestry at Southern University, Baton Rouge, LA, USA since 1994, where she played an instrumental role in the establishment of the nation's first Urban Forestry B.S. degree granting program and the subsequent M. S. and Ph.D. programs. She has published 8 books and more than 100 research publications in global climate change, eco-physiology, urban forestry, arboriculture and more. She is currently directing three research laboratories, coastal change research of NASA University Center for Coastal Zone Assessment and Remote Sensing, and several research and education projects.

As the Director of the Gulf Coast Regional Climate Change Assessment, which encompassed five U.S. states along the Gulf of Mexico, she successfully led the region in contributing to the U.S. National Assessment on climate change from 1997 to 2003 and received a merit award by the White House Office of Science and Technology Policy. She served as the Chair-elect and Chair of the Society of American Foresters (SAF) Urban and Community Forestry Working Group from 2003 to 2007. She has led the working group to two SAF Working Group Merit Awards for the contribution to forest science and technology both in 2005 and 2006. She served on the Board of Directors of Seventh American Forests Congress Communities Committee since 2001. In addition, she chaired the SAF National Committee on Cultural Diversity, and is the Chair of the SAF International Forestry Working Group. She has won many merit awards including USDA Forest Service Distinguished Leadership Award in Minority Education and Outreach in Urban Forestry, USDOJ National Park Service Merit Award, etc.

Dr. Ning has been involved with the USDA-Forest Service research stations and centers, US Environmental Protection Agency, US Global Change Research Program, USGS National Wetlands Research Center, and many institutions of higher education. Dr. Ning has been involved with the White House Initiative on Cooperative Conservation, the Alliance of Community Trees, and Sustainable Urban Forestry Coalition. She also serves as a national advisory committee member to the TreeLink. She has provided inputs on many state, regional and national research and educational initiatives.

Dr. Ning's international experiences includes serving as an invited expert for the China State Forestry Administration on national natural forest protection, research team leader for the urban forest ecological study of the Chinese Academy of Sciences, expert for the National Science Foundation's Egypt water related environmental problem research team, expert for the Jamaica national forest management plan roundtable, etc.

**Billa C. Nkem**, is currently a postgraduate student undertaking an Mphil in Environmental Policy, Planning and Regulation, at Roskilde University, Denmark. He is also a holder of an MSc in Ecotoxicology/Ecological Risk Assessment, from Malardalen University, Sweden. Mr Billa has earlier in 1999, received a BSc (Hons) in Geology and Earth Sciences from the University of Dschang, Cameroon. His research interests are focused on soil contamination most specifically within heavy metals, hydrocarbons, pesticides and fertilizers. As well as having been a geology lecturer, he also has been involved in research as a field expert within environmental conservation and protection, with NGOs, consultancies like URS Nordic and the Cameroonian Ministry of Scientific and Technical Research. His recently accomplished projects have dwelt on leaching parameters and stabilization of cadmium and arsenic which has received platform presentations in Liverpool, UK and Sydney, Australia, and also on regulatory and risk assessment insufficiencies towards cadmium within the Danish landscape. He is also the winner of the best student poster presentation award at the 2007 West Coast Conference.

**Kanan Patel-Coleman** is a Principal Risk Assessor with URS Corporation in Los Angeles, CA with over 24 years of experience in human exposure and health risk assessments, laboratory analyses, and program management. Dr. Patel-Coleman has a D.Env. in Environmental Science and Engineering and a MPH in Environmental Health Sciences from UCLA. She has performed numerous human health evaluations of PCBs in soil, sediment, and marine biota at California sites using various analytical approaches.

**Mehmet Pehlivan, P.G., C.H.G.**, is the Principal Remediation Hydrogeologist, Bays Environmental Remediation Management, a division of Bays Investment, Inc., Ladera Ranch, California and is a California Professional Geologist and Certified Hydrogeologist. He is co-inventor of a two-phase extraction method. He has developed numerous innovative approaches for two-phase, multi-phase and soil vapor extraction field implementations, in-well stripping and vacuum enhanced re-circulation method (VacCirc™). He has over 30 years of experience as a remediation hydrogeologist and a petroleum reservoir geologist performing and managing environmental assessment, remediation and oil exploration and development projects. He has prepared and instructed several two-phase extraction classes, training sessions, workshops and demonstrations throughout USA.

**Dan Pellissier**, Governor Schwarzenegger's Deputy Cabinet Secretary for Energy and Environment, is a public affairs professional with more than 25 years of legislative, regulatory and media relations experience in both the public and private sectors.

As Deputy Cabinet Secretary, Dan is responsible for advising the Governor on energy and environmental policy issues, advancing his policy agenda and overseeing the operations of the Natural Resources Agency, Cal/EPA, the Public Utilities Commission and the Independent System Operator.

Prior to joining Governor Schwarzenegger's Cabinet, Dan served as Deputy Secretary for Energy Policy at Cal/EPA, where he worked on renewable energy, climate change and infrastructure issues. Dan also served as Chief of Staff to California Assemblyman Keith Richman, where he worked on energy, health care, political reform and state fiscal policy. Dan also served as Assembly Republican Leader Scott Baugh's energy advisor during the first year of California's energy crisis and led Republican staff efforts to address the crisis during 2001.

In the campaign world, Dan has managed and supported statewide initiative campaigns on energy regulation, infrastructure financing, tribal gaming and pension reform issues. He has worked for candidates for US President, California Governor, US Senator, State Treasurer, US Congress and many legislative seats.

Dan gained a broad insight into energy and environmental issues during five years in the Southern California Gas Company's public affairs department and for three years as Assistant Secretary in the California Environmental Protection Agency under Governor Pete Wilson.

Dan earned a Bachelor's degree in Development Studies from the UC Berkeley Institute of International Studies.

**Ioana Petrisor** is an environmental biochemist with 17 years of experience (both in academia and industry). She is currently Senior Scientist at Haley & Aldrich, a consulting firm promoting environmental sustainability. Dr. Petrisor specializes in environmental forensics/litigation support using up-to-date fingerprinting methods to track the source and age of contaminants. She is developing and applying emerging forensic methods such as dendroecology which uses tree rings to age-date contamination and characterize the releases to soil and water. Dr. Petrisor is also currently conducting innovative research work related to development of active capping for aquatic sediment remediation through SERDP program. She is Editor-in-Chief of the peer-reviewed Environmental Forensics Journal and she is co-author at 1 invention patent, 4 book chapters, and more than 70 scientific publications.

She 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 340 articles and books and has lectured extensively on petroleum and environmental geochemistry in SE Asia, South America, Europe and Africa.

**Barry A. Poling** serves as the Central Region Technical Manager for Regenesys & Land Science Technologies. In this capacity, Mr. Poling manages the design and implementation of remedial solutions throughout the Central U.S. using various innovative bioremediation, chemical oxidation and gas vapor barrier strategies. Barry is a Certified Hazardous Materials Manager (CHMM) and holds a B.S. in Environmental Management from Indiana University. His past experience includes project management leadership for an environmental consulting firm in Louisville, Kentucky where he was routinely involved in the assessment, characterization and remediation of volatile organic compounds and metals contaminated properties.

**Vladimir M. Prilepin** is a California Professional Geologist and is a senior hydrogeologist at Tetra Tech's Sacramento, California office. He has over 20 years of experience performing groundwater evaluations and groundwater modeling, designing hydrogeologic field investigation programs and evaluating contaminant fate and transport in both vadose and saturated zones. Dr. Prilepin has worked on a wide variety of sites including former naval and military installations, industrial facilities, landfills, and abandoned mines. He developed and applied a variety of analytical and numerical groundwater models for complex hydrogeologic settings, conducted long-term groundwater monitoring optimization, aquifer tests, environmental background analyses, and natural attenuation studies. He received his Ph.D. in hydrogeology from Moscow State University.

**Andrzej Przepiora** is a senior hydrogeologist with EnviroMetal Technologies Inc. (ETI), a division of the Adventus Group, in Waterloo, Ontario, Canada. He's been with ETI since 1999 and his main responsibilities include initial data evaluation from potential remediation sites, development of field designs, chemical and groundwater modeling, onsite field installation support and performance monitoring data review. He received his M.Sc. in Geology from the Department of Geology and Geophysics at Texas A&M University, College Station, Texas.

**Behnaz Razavi** is a PhD candidate in the department of Civil and Environmental Engineering at the University of California, Irvine. She is currently working under the supervision of Dr. William J. Cooper. Behnaz's research focuses on online continuous process monitoring of statin pharmaceuticals such as atorvastatin (also known as lipitor) in water intended for reuse using Fluorescence. Behnaz received her master degree in physical and environmental chemistry from the California state University, Long Beach in 2006 and her bachelor degree in chemistry from the University of British Columbia in 2003.

**Heather Rectanus** is an Environmental Engineer in the Environmental Restoration Section of Battelle where she manages environmental projects and serves as a bioremediation technical specialist. Prior to joining Battelle, she was a post-doctoral researcher at Virginia Tech where she investigated the impacts of bioavailable organic carbon on the sustainability of MNA in chlorinated solvent plumes and instructed the Introduction to Fluid Mechanics course. She holds a B.S. in Nuclear Engineering, an M.S. in Civil Engineering with a Geoenvironmental Engineering emphasis, and a Ph.D. in Civil Engineering. Her doctoral research involved developing a method for quantifying bioavailable organic carbon within aquifer

and sediment systems. Over the last 10 years, she has worked on biobarrier installation, biosparging designs, MNA utilization, and DNAPL remediation strategies.

**Cvetka Ribarič Lasnik** has 24 years of experience in the field of the environment protection in scientific and economic sphere. She has a successful carrier as a director, a head of research group and as a successful manager. For more than 10 years she is working as a permanent court expert in the area of ecology, preservation of the environment, nature and natural heritage in the Republic of Slovenia (from 6.6.1998, nr. 756-23/98 at the Ministry for law Republic of Slovenia). She has worked as a coordinator of the national project *Integral arrangement of Dravinja's river basin* that include 13 municipalities since 2006. Currently she is a director of an Institute of the Environment and Spatial Planning and head of its researching group with the academic title assistant professor in the field of Plant ecology (Environmental protection at University of Ljubljana, Biotechnical faculty, Department of agronomy, Chair for applicative botanic and physiology of plants). Dr. Ribarič Lasnik is currently coordinating experts which are preparing the law for the remediation of Celje basin. She has more than 80 scientific publications.

She has a Bachelor in Biology awarded in 1987, Master degree title in Biology awarded in 1991 and Ph.D. title in Biology awarded in 1996 from Slovenian Academy of Sciences. In 1998 she worked as a reviewer-evaluator in INCO COPERNICUS international projects for the area of environmental protection in Brussels. Between 1999 and 2006 (two mandates) she worked as an expert of the Republic of Slovenia in configurations of suitable organs and committees that were established by European Commission for watching over and execution of 5th and 6th framework programmes for sub programme "Sustainable development, global changes and ecosystems" (decision by Ministry of Education, Science and Sport of the Republic of Slovenia).

**Kimberly Rickman** is a Senior in the department of Biological Sciences at California State University, Long Beach, CA pursuing her B.S. degree in Biology with an option in Cell and Molecular Biology and minor in Chemistry after graduating from Antelope Valley Community College with an A.S degree in Biological Studies. Her involvement in undergraduate research have been focused on the kinetics and mechanisms of radical reactions with b-lactam antibiotics and their metabolites, anti-tuberculosis drugs and estrogenic steroids in waters, and her ultimate goal is to obtain a position as a physician-scientist performing medical research after completing her PhD-MD degree.

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**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. He has completed a large number of soil gas surveys initially in support of exploration activities and subsequently for environmental applications. As a result of these field experiences a number of case studies and lessons learned have been prepared for use in short courses on vapor intrusion. His current position is the environmental technology coordinator for BP in the Western United States.

**Issis Rivadineyra** is an Environmental Engineer for Naval Facilities Engineering Service Center at Ventura County Navy Base Located in Port Hueneme, Ca. She is part of the Navy Optimization work group which is developing strategies for applying Green and Sustainable Remediation (GSR) to the remediation process at Navy sites. Current efforts include developing guidance, training, and information to educate Navy Remedial Project Managers on GSR

**Atul M. Salhotra** is an internationally recognized expert in the development and application of risk based decision making programs for the management of chemically impacted sites. He is the lead author,

project manager, and developer of Risk Based Corrective Action (RBCA) Programs for several states including Oklahoma, Texas, New-Mexico, Kansas, Nebraska, Missouri, Tennessee, Alabama, North Carolina, Idaho, Washington DC, New York, and USEPA (Indian Countries). As one of the original nine ASTM approved trainers for RBCA, he has conducted training courses in over 25 states and 10 countries. Over 6000 individuals have attended his courses. In 2006, he developed a risk based Decision Support System for the US Air Force for managing contaminated sites in Europe.

Dr. Salhotra is well versed in the site-specific application of risk assessment, evaluation of indoor vapor intrusion, natural attenuation, and fate and transport modeling for the cost effective management of sites. He has supervised over 150 risk assessments involving hydrocarbons, metals and solvents and successfully defended the results with regulatory agencies across the country.

Dr. Salhotra has provided litigation support on numerous high-profile projects related to the migration of plumes under people's homes, the allegation of adverse health effects due to vapor intrusion, and diminution of property values. Several of these projects involved public meetings, risk communication presentations, and media coverage.

Dr. Salhotra's applied research work has involved the development and application of exposure and risk assessment methodologies for environmental decision making. These include contaminant fate and transport modeling, statistical analysis, monte-carlo simulation, data interpretation, and regulatory interaction and negotiations. Dr. Salhotra was responsible for the development of the EPACML (EPA's Composite Model for Landfills), EPAMMM (EPA's Multi-Med Model), and APIDSS (American Petroleum Institute's Decision Support System for Exposure and Risk Assessment). These models and software are currently used across the nation to conduct risk assessments and to estimate site-specific clean-up levels.

**Javier Santillan** is a Member of the Engineering Science Division at the Air Force Center of Environmental Excellence (AFCEE). His area of expertise includes Analytical Chemistry, Geochemistry, Environmental Engineering, Streamlined Site Characterization, and Environmental Restoration Program - Optimization. Dr. Santillan joined AFCEE in 1993, served as Chemistry Group leader in 1995. Dr. Santillan is currently the AFCEE Environmental Restoration Subject Matter Expert. His current focus area is Environmental Restoration Program – Optimization, which includes investigation process optimization as well as remediation process optimization.

Dr. Santillan holds a BS in Chemistry (University of Arizona-1968), M.S. in Agricultural Chemistry (University of Arizona-1971), and a Ph.D. in Soils Chemistry and Irrigation Engineering (Utah State University-1974).

**Muriel Saulais** is a Ph.D. student coming from France. She is an engineer and civil servant of the Ministry of Ecology, Energy, Sustainable Development and the Sea. She works at the Laboratory of Environmental Sciences in an engineering school in Lyon. The main research themes of the laboratory focus on "the evaluation of the impact on ecosystems of pollutions related to urban developments and transport infrastructures". She belongs to the team that studies the transfer of pollutants in soils, thanks to biogeochemical characterization and metals mobility studies. She precisely works on the role of plants, colonizing spontaneously infiltration basins, on the geochemical properties of the surface soil.

**Alan G. Seech** has 20 years experience in soil chemistry and environmental microbiology with a focus on remediation of soil, sediment, and groundwater. He is the inventor of Adventus' patented DARAMEND<sup>®</sup>, EHC<sup>®</sup> and EHC-O<sup>®</sup> products for soil and groundwater remediation. In 2002, working with a group of private investors, he led the acquisition of Grace Bioremediation Technologies from W.R. Grace & Co. and currently serves as CEO and Director of Technology for its successor, Adventus. DARAMEND<sup>®</sup> has been successfully applied to more than 7,000,000 tons of soil, sediment, and other wastes containing recalcitrant organic compounds including a variety of hydrocarbons, pesticides, chlorinated solvents, and organic explosive compounds. EHC<sup>®</sup> is increasingly being employed as part of effective in-situ biochemical reduction projects. Alan has conducted remediation projects at more than 100 soil and groundwater sites throughout the world and holds 6 US patents. He has published numerous articles on bioremediation and biodegradation of organic contaminants in soil, and presented more than thirty papers at international conferences on bioremediation. He also serves as an Associate Graduate Faculty at the Department of Environmental Biology, University of Guelph, near

Toronto Canada and has served as a guest lecturer in undergraduate or graduate courses in environmental microbiology at the University of Guelph and the University of Illinois at Chicago.

**Włodzimierz A. Sokół** (D.Sc.Eng.) is Director of the National Contact Point for Eco-efficient Technologies and Management Systems in Central Mining Institute (GIG) in Poland. He has over 35 years experience in conducting and implementing R&D ordered by power engineering, nuclear engineering, chemical and mining industry, the Ministry of Environment, the local governments and others. Between 2001-2008 Dr Sokół has worked as Vice-President with the Voivodeship Fund for Environmental Protection and Water Management in Katowice and priorly as Vice-Director for Environmental Engineering with Central Mining Institute in Katowice, as General Director with Central Boiler Design Office in Tarnowskie Gory and as the Member of the Board of Supervisors with a few Small and Medium Enterprises. For few years he has managed as well its own R&D company. Dr Sokół completed management trainings in Belgium and Japan related waste and production management and between 1996-2001 has managed in Poland the National Cleaner Production Programme. Since 2009 he manage the international ACT CLEAN project "Access to technologies and Know-how in Cleaner Production in Central Europe" co-funded by Central Europe Programme. Between 2002-2005 Dr Sokół has managed in Poland international research programmes MASURIN and RESCUE related sustainable revitalization of brownfields being funded from EU Fifth Framework Programme. Dr Sokół works as an expert of Ministry of Environment with the Working Group for evaluation of projects implemented in framework of National Operational Programme Infrastructure and Environment being co-funded from EU Cohesion Fund. Dr Sokół serves as the Member of Technical Committee for Environmental Management for Polish Committee for Standardization since 1996 so is experienced in preparation of ISO 14000 standards and has got competence as EMAS verifier. He is the author or co-author for over 120 publications related: programming of regional sustainable development, waste management, environmental management systems, Cleaner Production, safety of nuclear power plants and chemical installations, pro-ecological modernization of equipment for power plants, sustainable revitalization of brownfields in urban and mining areas and others.

**Alina Stingu** is a Ph.D. student in Natural and Synthetic Polymers Department of Faculty of Chemical Engineering and Environmental Protection at "Gheorghe. Asachi" Technical University of Iasi, Romania. She is currently studying the influence of heavy metal stress along with polyphenolic extracts treatment obtained from different renewable raw material (spruce bark, chestnuts shell, grape seeds, *Asclepias syriaca* plant) using different techniques/tests such as Atomic Absorption Spectrophotometry, FTIR and UV-Spectroscopy/ germination tests, hydroponic culture, in vitro plant tissues culture, vegetative pots experiments. Ms. Stingu received a Bachelor of Science Degree in Environmental Engineering from Gheorghe Asachi Technical University of Iasi, Romania in 2006. In 2007, Alina Stingu received a Master of Science Degree in Environmental Management from Gheorghe Asachi Technical University of Iasi, Romania.

**Darko Strajin** completed University of Belgrade in Serbia Faculty of Mining and Geology and graduated in 1988. Darko immigrated to Canada in 1993 and since then has been employed by several consulting companies. Darko is a licensed Professional Engineer in the Province of Ontario and is currently a Regional Manager for Environmental Services at Trow Associates Inc. overseeing environmental consulting business in Ontario. He has over 20 years of consulting experience in environmental and geotechnical fields. Areas of expertise include environmental site assessments and design and implementation of innovative, in-situ remediation systems for impacted soil and groundwater. His focus has been remediation of Brownfield sites in Toronto in particular in-situ remediation of groundwater impacted with chlorinated solvents. His work involves extensive client contact always providing clients with value added and cost effective and unique solutions.

**Hans Stroo** received a Ph.D. in Soil Microbiology from Cornell University in 1985, and has worked for over 20 years on remediation of contaminated soils and groundwaters. He worked for 18 years for RETEC, where he served as a national expert on bioremediation and innovative technology development, and has been a Principal Technical Advisor with HGL since 2006. Dr. Stroo has worked for over 10 years providing technical advice and technology transfer support for the SERDP/ESTCP programs. He is currently serving as an editor for four SERDP-sponsored books on environmental restoration

technologies.

**James E. Studer** is President and CEO of ChemRem International LLC, as well as founder or investor in other environmental and energy related service companies. ChemRem is a manufacturer representative for companies that manufacture products for soils and water treatment in support of regulatory-driven remediation projects as well as property-transfers and property redevelopment projects. ChemRem's flagship partner is FMC Corporation and key products include bioremediation and chemical oxidation products such as PermeOx® Plus and Klozur® CR. Mr. Studer's 25-year professional career has focused on development and delivery of solutions involving advanced technology applications for cost-effective remediation of soil and groundwater. Technologies successfully applied include advanced subsurface characterization technologies, in-situ and ex-situ chemical oxidation, surfactant-enhanced subsurface remediation, and advanced aerobic and anaerobic bioremediation technologies. Mr. Studer earned bachelors and masters of science degrees in geological engineering from the University of Missouri-Rolla (Missouri S&T) and is a registered professional engineer in numerous states within the United States.

**Karen Thorbjornsen** holds B.S. and M.S. degrees in Geology and is a registered Professional Geologist. She has thirteen years of environmental consulting experience with Shaw Environmental, Inc. in Knoxville, Tennessee. She has performed background studies for metals and PAHs in environmental media and statistical analyses of environmental data at numerous sites across the United States. She specializes in geochemical evaluations of metals — a technique used to distinguish natural concentrations from site-related contamination in soil, groundwater, surface water, and sediment. Her geochemical evaluations are performed to delineate the extent of contamination, refine lists of chemicals of concern, optimize long-term monitoring programs, confirm the success of soil removal actions, and characterize background distributions. Ms. Thorbjornsen has authored several papers on geochemical evaluations of metals and teaches short courses on the technique.

**Jake Torrens**, LEED AP, is a Senior Scientist with AMEC Geomatrix and has over 10 years of experience designing and implementing site characterization, investigation, and remediation programs to address soil, groundwater, and soil vapor issues for a variety of projects involving property transactions, redevelopment, risk assessment, and remediation. Since 2008, Mr. Torrens has been an active participant in the Sustainable Remediation Forum (SuRF), which promotes the use of Green and Sustainable Remediation (GSR) practices on cleanup projects. Mr. Torrens currently advises on GSR practices internally for the AMEC Geomatrix Oakland office. He has a B.S. in Environmental Science and a M.S. in Soil and Water Science from the University of Arizona.

**Usha Vedagiri** is a Principal Risk Assessor with URS Corporation in Oakland, CA with over 20 years of experience in environmental toxicology and risk assessment. Dr. Vedagiri has a Ph.D degree in Environmental Sciences from Rutgers University in New Brunswick, New Jersey. She was a co-author on the 2009 paper regarding the Collection and Evaluation of PCB data in Sediments and Tissues, presented at the Fifth International Battelle Conference on Remediation of Contaminated Sediments. She is active in tracking developments regarding evaluation of PCBs in the regulatory and technical arenas. She has served as task leader for multi-phased human health and ecological risk assessments involving PCB sediment, water and tissue characterization for an award-winning "Toxic Hot Spot" site in the San Francisco Bay Area, California, as well as other large PCB-contaminated sites in the Columbia River and other locations.

**Christopher J. Watt** is an engineering geologist navigating the regulatory process for institutions, municipalities and small business to cost effectively resolve their environmental liabilities. As a principal at LACO ASSOCIATES, he continues a legacy of bringing UST sites to closure using traditional and innovative methods. Over the last 20 years, LACO has negotiated the closure of over 150 UST cases in California. Mr. Watt currently oversees a \$7M portfolio of cleanup projects located in Northern California.

**Ian A. Webster**, Sc.D. is founder and president of Project Navigator, Ltd. (PNL). PNL has a nationwide practice in the management of complex environmental projects such as CERCLA and sediment sites. PNL facilitates and enables project solutions via the use of GIS and visual engineering techniques. Ian is especially interested in the use of site conceptual models to promote client project understanding, remedy

design and regulatory approvals. Ian has a doctorate in chemical engineering from MIT (1984) and worked for Unocal Corporation before founding PNL in 1997.

**Raymond K. Will, P.E., D.WRE** is a Principal Engineer with Todd Engineers (2490 Mariner Square Loop, Suite 215, Alameda, California 94501) He received a Bachelor and Master of Science degree in Mining Engineering from the University of Texas and Colorado School of Mines respectively. He is a registered engineer in Arizona, California, and Colorado. Mr. Will has over 35 years of experience including management of surface water and ground water investigations and remediation of hazardous waste. Previous experience includes geologic exploration, environmental evaluation, design, construction, operation and reclamation of domestic and international mining and construction projects. He has specific experience in matters involving surface water/ground water relationships, including stormwater recharge, seepage, flooding, and drainage issues. His experience also includes water rights and litigation support as an expert witness in numerous hearings, mediations and trials.

**Anna Willett** is the Director of the Interstate Technology & Regulatory Council (ITRC). ITRC is a public-private coalition working to eliminate barriers to the use of innovative environmental technologies and approaches, so that compliance costs are reduced and clean up efficacy is maximized. ITRC produces documents and training that broaden and deepen technical knowledge and expedite quality regulatory decision-making, while protecting human health and the environment. With private and public sector members from all 50 states and the District of Columbia, ITRC truly provides a national perspective. Anna has been involved with ITRC since 2003 in a variety of roles, including serving on the ITRC Board of Advisors from 2005-2007 and on the Bioremediation of DNAPLs and In Situ Bioremediation ITRC Teams from 2003-2005.

Anna came to ITRC from Comprehensive Environmental Utility Services, LLC (CEUS), where she was a Senior Vice President and Partner. Prior to CEUS, she was a Senior Engineer, concentrating in remediation engineering and project management, with Haley & Aldrich, Inc., a national environmental engineering firm. Earlier in her career, Anna was responsible for the design, implementation and evaluation of pilot- and full-scale in-situ remediation projects as a Research and Development Manager for Regenesys, a specialty chemical company that serves the remediation industry. Over the course of her career, Anna has evaluated a wide-range of contaminated sites to determine technical and cost effective remedial strategies for specific site conditions. She has contributed to over 60 presentations and publications on remediation, has presented at a wide range of national and international conferences She holds an M.S. in chemical engineering from Northwestern University and a B.S. in biological engineering from Cornell University.

**Sam Williams, PG, CHG, CEM** is a principal hydrogeologist for Geosyntec Consultants. He has over 25 years of professional environmental consulting experience and is the manager of Geosyntec's San Diego operations. For the last several years he has been involved in the implementation of several in-situ bioremediation and green remediation projects at sites with complex hydrogeologic conditions.

Mr. Sam Williams 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.

Current professional responsibilities include supervision of hydrogeologists and engineers in the performance of environmental assessments, remedial investigations/feasibility studies, and remedial design; and characterization and remediation of State and Federal Superfund sites and former aerospace manufacturing facilities. Areas of specialization include assessment of groundwater conditions at landfills, development and implementation of innovative remedial technologies, vapor intrusion assessments and mitigation, risk-based corrective action, and litigation support.

**Kimberly Wilson** is a Senior Hydrogeologist at the South Carolina Department of Health and Environmental Control (SC DHEC) in Columbia, South Carolina. Kimberly started working for SC DHEC

in 1988. She currently oversees environmental remediation activities at nuclear waste disposal and post-closure RCRA sites. Previously, she oversaw environmental activities at the Department of Energy's Savannah River Site and in the Department's Underground Storage Tank Program. She has presented at conferences and has acted as an instructor for a past ITRC classroom training course. Kimberly has been active in ITRC since 2003. She is the co-Team Leader for the Enhanced Attenuation: Chlorinated Organics team and the PRB: Technology Update team. She earned her bachelor's degree in earth sciences from the University of North Carolina in Charlotte, North Carolina in 1981 and her master's in earth resources management from the University of South Carolina in Columbia, South Carolina in 1992. She is a registered Professional Geologist in South Carolina.

**Ryan Wymore** is an environmental engineer with CDM in Denver, CO, where he serves as a national resource for evaluation, selection, and implementation of remediation strategies. He has spent the last twelve 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 five technical teams, and currently serves on the ITRC's Board of Advisors as the industry representative. He holds a B.S. in Biological Systems Engineering from the University of Nebraska-Lincoln, and an M.S. in Civil/Environmental Engineering from the University of Idaho. He is a registered professional engineer in Colorado and Idaho.

**Zhong (John) Xiong** is a project engineer with AMEC Geomatrix at Newport Beach, California office. He is a registered professional engineer in California. His research and work interests involve the development and application of innovative processes for groundwater and soil remediation, especially nano-scale materials. He has ongoing research projects developing nanomaterials for contaminated site remediation and investigating the fate and transport of nanomaterial in the environment. He is currently leading a research project as the principal investigator demonstrating the effectiveness of using nano-scale zero-valent iron particles for degrading chlorinated solvents in contaminated groundwater and soil. This project is funded by the Air Force Center of Engineering and the Environment. Other areas of interest include innovative site characterization processes, enhanced bioremediation, soil vapor extraction, in situ chemical oxidation, ion exchange for water treatment, landfill leachate treatment, etc. Dr. Xiong received his BS and MS degrees both in Environmental Engineering from Chongqing University in China in 2000 and 2003, respectively, and his Ph.D. degree in Civil Engineering from Auburn University in 2007.

**Dawn 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 formed Zemo & Associates in 2002, and prior to that was a principal hydrogeologist with Geomatrix Consultants, Inc. Ms. Zemo's 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. She has served on the editorial review boards for the journals *Ground Water Monitoring & Remediation* and *Environmental Forensics*. Ms. Zemo can be contacted at Zemo & Associates LLC, web site [www.zemoassociates.com](http://www.zemoassociates.com)