Biosketches of Speakers
Performance & Risk Assessment Community of Practice (P&RA CoP)
Technical Exchange Meeting
Las Vegas, NV
December 11-12, 2014

Mr. Bill Levitan
U.S. Department of Energy, Associate Deputy Assistant Secretary for Site Restoration. His training and experience is with environmental regulations and associated risk analysis. The first part of his career was in environmental consulting and for the past 21 years with DOE Office of Environmental Management.

Ming Zhu, Ph.D., PE, PMP
Since 2010 Dr. Ming Zhu has served as the U.S. Department of Energy (DOE) headquarters Senior Site Program Manager/Site Liaison for Richland Operations on Hanford, the largest legacy waste site. In 2012 he also served as Senior Advisor to the Director of Homeland Security Advanced Research Projects Agency (HSARPA) within the Department of Homeland Security. Prior to that, he established and served as the founding DOE Program Manager for the Advanced Simulation Capability for Environmental Management (ASCEM) Initiative; managed natural systems testing and modeling work of Sandia National Laboratories and engineering firms in support of the licensing and construction of the Yucca Mountain repository for high level radioactive waste and nuclear spent fuel in Nevada; and led large-scale modeling efforts on a number of CERCLA and RCRA sites in the U.S. and overseas for URS Dames & Moore. Between 2012 and 2014, he served as Chair of the Interagency Steering Committee on Multimedia Environmental Modeling (ISCMEM). Since 2013, he has led the Interagency Steering Committee on Performance & Risk Assessment Community of Practice (P&RA CoP), and supported Waste Management Symposia as Co-Chair for Track 9 on cross cutting performance and risk assessment issues. A licensed civil engineer, Dr. Zhu was elected Fellow by the American Society of Civil Engineers in 2009. He received the DOE Secretary's Achievement Award in 2012.

Jennifer Heimberg, Ph.D.
Senior Program Officer, National Academy of Sciences
Jennifer (Jenny) Heimberg has been at the National Academy of Sciences since 2011, working for the Nuclear and Radiation Studies Board. Within the NRSB, she has focused on nuclear security, nuclear detection capabilities, and environmental management issues. Dr. Heimberg has directed studies and workshops related to nuclear proliferation, nuclear terrorism, and the management of nuclear wastes. Prior to the NAS, she worked as a program manager at the Johns Hopkins University Applied Physics Laboratory for nearly 10 years. While at APL she established and grew its nuclear security program with the Department of Homeland Security's Domestic Nuclear Detection Office (DNDO). She received a B.S. in physics from Georgetown University, a B.S.E.E. from Catholic University, and a Ph.D. in physics from Northwestern University.

David Kosson, Ph.D.
Dr. David Kosson is Cornelius Vanderbilt Professor of Engineering at Vanderbilt University, where he has appointments as Professor of Civil and Environmental Engineering, Chemical Engineering, and Earth and Environmental Sciences. Professor Kosson also is the Principal Investigator for the multi-university Consortium for Risk Evaluation with Stakeholder Participation, supported by the Department of Energy to improve the risk-informed basis for remediation and management of nuclear waste from former defense materials production and nuclear energy. Dr. Kosson leads the Cementitious Barriers Partnership which is a multi-institution initiative focused on developing advanced tools for predicting the long-term performance of cementitious materials in nuclear applications. Professor Kosson has participated in or led many external technical reviews on nuclear waste processing for the Department of Energy including for tank wastes and a

range of technology approaches at Hanford, Savannah River and Idaho sites. Dr. Kosson served as a member of U.S. DOE Secretary Chu's team to address design challenges associated with the Hanford Waste Treatment Plant. Professor Kosson also has provided expertise and leadership for the National Academies, and as advisory to the Department of Defense, for two decades on demilitarization of chemical weapons in the United States and abroad. He received his Ph.D. in Chemical and Biochemical Engineering from Rutgers University, where he subsequently was Professor of Chemical and Biochemical Engineering.

Rich Bush, Ph.D.
Background in Chemical and Environmental Engineering, Hydrology, Geochemistry.
US Bureau of Mines research on hydrometallurgical processes, acid mine drainage.
U.S. DOE contract management in EM-50 on closure sites cleanup, detection, D&D.
U.S. DOE Legacy Management Uranium Mill tailings sites long term stewardship.

Craig H. Benson, Ph.D., PE, DGE, NAE
Dr. Craig H. Benson is Wisconsin Distinguished Professor and Chair of Geological Engineering at the University of Wisconsin-Madison. He also serves as Director of the Recycled Materials Resource Center (RMRC), a federally funded research center focused on sustainable construction of transportation infrastructure, and the Bioreactor Partnership, an industry-academic partnership on sustainable solid waste management. He is a member of the Management Board of the Consortium for Risk Evaluation with Stakeholder Participation (CRESP). Dr. Benson has a BS from Lehigh University and MSE and PhD degrees from the University of Texas at Austin. Dr. Benson has been conducting experimental and analytical research in geoenvironmental engineering for 27 yr, with the primary focus in environmental containment, beneficial use of industrial byproducts, and sustainable infrastructure. His research has included laboratory studies, large-scale field experiments, and computer modeling. Dr. Benson has received several awards for his work, including the Huber Research Prize, the Alfred Nobel Prize, and the Croes (twice), Middlebrooks, Collingwood, and Casagrande Awards from the American Society of Civil Engineers. He was elected member by the National Academy of Engineering in 2012. Dr. Benson is a member of the ASCE Geo-Institute (GI) and is former Editor-in-Chief of the ASCE/GI Journal of Geotechnical and Geoenvironmental Engineering. He currently serves as Treasurer for the ASCE/GI Board of Governors and is a member of the Executive Committee of ASTM Committee D18 on Soil and Rock. He is a member of the University of Texas Academy of Distinguished Alumni.

Mr. Mark Phifer
Mr. Mark Phifer is an Advisory Engineer at the Savannah River National Laboratory (SRNL) with 33 years of environmental and geotechnical experience. His primary areas of technical focus include groundwater characterization and remediation, waste site closure, radioactive waste disposal, and Performance Assessment and Composite Analysis modeling.

Hope Lee, Ph.D.
Dr. Hope Lee is formally trained in environmental microbiology and oceanography. She has experience in management and technical oversight of multiple DOE and DoD projects, specializing in the development and validation of microbial characterization and monitoring tools for use in environmental remediation. Hope has also been involved in numerous multi-agency teams focused on the characterization, performance evaluation, and optimization of remedial strategies at contaminated sites. She started her post graduate degree at Idaho National Lab in 2002 and moved over to PNNL in 2012. Hope is the PNNL lead for DOE-HQ and DOE-Richland Groundwater and Soil Programs.

Ming Ye, Ph.D.
Dr. Ming Ye is an Associate Professor in the Department of Scientific Computing at the Florida State University. He earned his Ph.D. degree in hydrology from the Department of Hydrology and Water Resources at the University of Arizona in 2002. He worked as a post-doc at the Pacific Northwest National Laboratory and assistant research professor at the Desert Research Institute. He earned in 2012 the DOE

Early Career Award and was elected as a fellow of the Geological Society of America. He is now an associate editor of Water Resources Research and Journal of Hydrology.

Mary C. Hill, Ph.D.
Dr. Mary Hill is a professor in the department of Geology at the University of Kansas. She was a senior research hydrologist with the U.S. Geological Survey for 33 years. She has published over 130 journal articles and reports, including the PCG2 solver and local grid refinement capability of MODFLOW, and a textbook on integrating models and data. She has taught over 30 short and semester courses and is the recipient of the National Ground Water Association Darcy Lectureship and M. King Hubbert Award, the American Society of Civil Engineers Walter L. Huber Research Prize. She is a Fellow of the Geological Society of America. She has focused on the problem of how to best use data to inform numerical models of environmental systems and how to use the models to understand sources and measures of uncertainty and risk, and inform data collection.

Kevin G. Brown, Ph.D.
Dr. Kevin Brown is Senior Research Scientist in the Department of Civil and Environmental Engineering at Vanderbilt University. His research has been supported by the multi-university Consortium for Risk Evaluation with Stakeholder Evaluation (CRESP). Between 1986 and 2002 at the Savannah River Laboratory, he was recognized as a DOE Complex-wide authority in process and product control for high-level waste vitrification. Dr. Brown spent 2002-2003 at the International Institute for Applied Systems Analysis in Laxenburg, Austria. Dr. Brown led the CRESP evaluation of life-cycle risks for the DOE Idaho Site Subsurface Disposal Area. In 2009 Dr. Brown was a member of the External Technical Review Team chartered by DOE-HQ to evaluate the system-level modeling and simulation tools in support of Savannah River Site and Office of River Protection liquid waste processing and disposal. In 2010 and 2011 Dr. Brown participated on the Tank Waste Subcommittee of the DOE Environmental Management Advisory Board charted to provide independent technical reviews of liquid waste capital and operations projects related to DOE-EM's tank waste cleanup program at major DOE Sites. He participated in Construction Project Reviews for the Hanford Tank Waste Treatment and Immobilization Plant and the Savannah River Salt Waste Processing Facility between 2011 and 2013. In 2011 and 2012, Dr. Brown applied the prioritization model developed by CRESP to prioritize remediation and associated projects at DOE sites to Melton Valley, Experimental Molten Salt Reactor Experiment, East Tennessee Technology Park, and Bear Creek Burial Grounds at the Oak Ridge National Laboratory. He holds a BE in Chemical Engineering, an MS in Environmental and Water Resources Engineering, and a PhD in Environmental Engineering all from Vanderbilt University.

Greg Flach, Ph.D.
Dr. Greg Flach is a Senior Fellow Engineer at Savannah River National Laboratory. Over the past 15 years he has performed numerous subsurface flow and contaminant transport simulations for DOE Performance Assessments of waste tank closures, salt waste disposal, and solid radioactive waste disposal. He currently contributes to the DOE-EM sponsored ASCEM and Cementitious Barriers Partnership projects, and supports the Savannah River Saltstone Disposal Facility and tank farm PAs through transport simulations and material degradation analyses.

Mr. Kent Rosenberger
Mr. Rosenberger is the manager of Closure and Disposal Assessment for Savannah River Remediation responsible for the SRS liquid waste facility Performance Assessment Program. He has spent the last 24 years at the Savannah River Site. The first 14 years were within the Radiological Protection Department. He supported new facility design and existing facility health physics technical support including dose rate and shielding calculations primarily in the liquid waste and nuclear materials processing areas. The last ten years have been spent supporting the development of closure and disposal regulatory documents including Performance Assessments and Waste Determinations for SRS tank closures and the Saltstone Disposal Facility. Mr. Rosenberger has a degree in Nuclear Engineering from Penn State University.

Ms. Cynthia Barr
Ms. Cynthia Barr is a Senior Systems Performance Analyst for the US Nuclear Regulatory Commission. Ms. Barr has approximately 15 years of experience in the nuclear environmental field working as both a regulator for US NRC and as a contractor for US DOE. During her career at the NRC, Ms. Barr has performed reactor license renewal environmental reviews, as well as technical reviews of radioactive material transportation risk assessments, decommissioning dose modeling analyses, and review of DOE non-high-level waste determinations. Ms. Barr also serves as a reactor dose assessor in the Emergency Response Organization. While working as a contractor for DOE, Ms. Barr prepared dose assessments and groundwater analyses to assess the risk of contaminated soil and groundwater at DOE facilities. Ms. Barr has developed technical training and guidance related to decommissioning and low level waste disposal dose and performance assessment reviews. Ms. Barr obtained a Master of Science degree in Environmental Engineering from Clemson University, and a Bachelor of Science degree in Mathematics from the College of Charleston.

Mr. Marcel Bergeron
Mr. Marcel P. Bergeron is a Senior Hydrogeologist in the Single-Shell Tank Closure & Interim Measures Group within Washington River Protection Solutions, LLC in Richland, WA. He has 35 years of experience in a wide variety of hydrogeologic investigations and studies at radioactive and hazardous waste sites. Marcel has significant experience in the application to subsurface flow and transport modeling with emphasis on risk and performance assessments supporting closure of hazardous chemical and radioactive waste facilities. At WRPS, Marcel has been using his past experience and expertise in hydrogeologic characterization/interpretation, risk assessment, and performance assessment for tank-related waste management, remediation, and closure issues.

Alaa Aly, Ph.D.
Dr. Alaa Aly is an environmental engineer with 26 years of experience and graduate degrees in irrigation engineering and statistics from Utah State University. His team is responsible for risk and performance assessments in support of major remedial decisions. The team is contractually responsible to the U.S. Department of Energy to integrate human health and ecological risk assessment, vadose zone and groundwater modeling, and performance assessment activities across three major contractors with many subcontractors. In addition to his project management responsibilities, Dr. Aly's experience includes fate and transport modeling, human health risk and ecological assessment, uncertainty analyses, hydrologic and environmental characterization, environmental remediation, and water resources and supply evaluation.

R. Chris Camphouse, Ph.D.
Dr. Camphouse is currently serving as the Acting Manager for the Performance Assessment and Decision Analysis Department (6211) at Sandia National Laboratories. Prior to this role, Dr. Camphouse served as the Technical Lead for the Waste Isolation Pilot Plant (WIPP) Performance Assessment team in the same department. As the Technical lead, he performed simulations and analyses to support the operation of the WIPP. Dr. Camphouse has extensive experience using applied mathematics to develop modeling and design tools for interdisciplinary research applications including statistical modeling of waste repository performance, groundwater flow and transport, critical infrastructure resilience, feedback control of fluid flows, chemical laser beam propagation, and chemical vapor deposition. Dr. Camphouse holds an M.S. and Ph.D. degrees in Mathematics from Virginia Tech, and a B.S. degree, also in Mathematics, from Oregon State University.

Robert Andrews, Ph.D.
Dr. Andrews received his PhD from the University of Illinois at Champaign-Urbana in Hydrogeology. After teaching a few years at the University of Connecticut he joined INTERA where he has worked in a range of radioactive waste site characterization, flow and transport modeling and performance assessment roles. For a number of years he led the Performance Assessment activities for the M&O contractor supporting the Yucca

Mountain Project. He currently is the Technical Integration Manager for the Underground Test Area Corrective Action Investigations at the Nevada National Security Site.

Mr. Gregory J. Shott
Gregory J. Shott is a Senior Scientist with the performance assessment group of National Security Technologies, LLC. He has an MS in Health Physics from Georgia Tech and is a Certified Health Physicist with more than 20 years of experience in waste management and environmental monitoring. He is the lead author of two performance assessments for waste disposal facilities on the Nevada National Security Site. He has participated in the peer review of multiple U.S. Department of Energy performance assessments and in the International Atomic Energy Agency program to Improve Safety Assessment Methods.

Zintars Z. Zadins, Ph.D.
Chenega Global Services, LLC
Dr. Zadins is a DOE Support Services Contractor at the U.S. Department of Energy's West Valley Demonstration Project (WVDP) providing site disposition planning support. Dr. Zadins has supported operations at the WVDP since 1991. While employed by URS Corporation his responsibilities included preparation of detailed site closure designs evaluated in the WVDP Environmental Impact Statement. At Science Applications International Corporation his responsibilities included preparation of the Phase 1 Decommissioning Plan for the WVDP. Prior to working at the WVDP Dr. Zadins was employed by the U.S. Environmental Protection Agency and Oberlin College. Dr. Zadins received his PhD from the University of Rochester.