

**Interagency Performance & Risk Assessment Community of Practice
2015 Annual Technical Exchange Meeting
Presenters Biographical Sketches**

Jane Hedges

Jane A. Hedges is the Program Manager for the Washington State Department of Ecology's (Ecology) Nuclear Waste Program. In her role with Ecology, Ms Hedges is responsible for managing a program of 70 staff that oversees the cleanup of the Hanford Nuclear Facility in Eastern Washington, regulates other facilities which store, handle or dispose of mixed hazardous and radioactive waste, and supervises the State's program that performs the administrative activities of the Northwest Compact for commercial low-level radioactive waste disposal. Prior to assuming the Program Manager position for Ecology, Ms. Hedges was the manager for regulatory oversight of Hanford's high-level tank waste storage and environmental restoration projects.

Before joining Ecology, Ms. Hedges was a partner in an environmental consulting that provided regulatory assistance and development to state and local government agencies on a variety of issues ranging from water supply and water quality to solid and hazardous waste management. She also worked for over 20 years for a number of local governments with progressive responsibilities for environmental, regulatory, and technical assistance programs.

Ms. Hedges currently serves as the technical representative for the State of Washington on the National Governors Association's Federal Facilities Task Force and the State and Tribal Government Working Group, and is the State of Washington's designated official to the Hanford Advisory Board. She has a B.S. in Bacteriology and Public Health from Washington State University and has completed the Evans School Public Leadership Program at the University of Washington.

Ms. Hedges has been appointed to serve on EMAB to represent the views of the Washington State Department of Ecology and the National Governors Association's Federal Facilities Task Force.

Rob Seifert

Rob Seifert is the Director of the Office of Environmental Compliance for the Department of Energy Environmental Management Program in Washington, D.C. He has been working in DOE environmental management program for over 22 years as both a contractor and a federal employee. Mr. Seifert joined EM as a contractor to DOE at the Paducah Gaseous Diffusion Plant in 1993 implementing the first major remedial investigations. He began his federal service with DOE in 2007 serving in a variety of functions, but primarily as a federal project director of D&D and waste management projects. Mr. Seifert has B.S. degrees in chemistry and biology from Murray State University.

The mission of his current office is to develop policy and guidance on regulatory compliance and to assist sites in establishing and maintaining compliant and risk-informed cleanup strategies and programs. His office is also responsible for conducting analysis and evaluation of regulatory

options for cleanup and compliance with environmental statutes, regulations (e.g., Resource Conservation and Recovery Act - RCRA, Comprehensive Environmental Response, Compensation, and Liability Act - CERCLA), agreements, and DOE Orders (e.g., Radioactive Waste Management). Additionally, his office is responsible for interaction with external regulators and for sharing compliance lessons learned.

Ming Zhu, Ph.D., PE, PMP

Dr. Ming Zhu is currently the Integrated Performance Assessment Lead in the Office of Environmental Compliance within U.S. Department of Energy's Environmental Management (EM) Program. He chairs the Interagency Steering Committee on Performance & Risk Assessment Community of Practice (P&RA CoP) to promote best practices in performance assessments and risk analyses, and co-leads the DOE Low-Level Waste Federal Review Group (LFRG) to support DOE management decisions in self-regulating its on-site nuclear waste disposal facilities. Previously, he established and served as founding Program Manager for the DOE Advanced Scientific Simulation for Environmental Management (ASCEM) Initiative that aims at reducing the \$300B life cycle cost of the EM program; led the Interagency Steering Committees on Multimedia Environmental Modeling (ISCMEM) on collaboration of R&D activities; and advised the International Atomic Energy Agency on the use of mathematical models for assessing remediation of radioactively contaminated sites.

He recently received a DOE Special Act Award for serving as the Acting Budget Director for the DOE Office of Environmental Management. Between 2010 and 2015, he served as the DOE Senior Site Program Manager/Site Liaison for Richland Operations at the Hanford Site, and received the DOE Secretary's Achievement Award in 2012. In 2012 he also served as Senior Advisor to the Homeland Security Advanced Research Projects Agency (HSARPA) Director on strategic planning of the Department of Homeland Security enterprise R&D activities. Prior to joining DOE headquarters in 2009, Dr. Zhu directed science and licensing work of national labs and leading engineering firms on the licensing and construction of the nation's final geologic repository at Yucca Mountain, Nevada, and managed large-scale environmental remediation projects for multi-national engineering corporations.

He earned a Ph.D. in Mineral (Hydrogeological) Engineering from the University of California at Berkeley; graduated from a Senior Executive Service Development Program; and completed the Federal Executive Institute's Leadership for Democratic Society Program. He is a registered civil engineer in California and a certified Project Management Professional, and was elected Fellow by the American Society of Civil Engineers.

Mark Gilbertson

Mr. Mark Gilbertson is currently the Deputy Assistant Secretary (DAS) for Site Restoration within the Office of Environmental Management (EM). He is leading the organization responsible for the remediation of the environmental legacy resulting from five decades of nuclear weapons development and Government-sponsored nuclear energy research. Integral to that responsibility is the need to deactivate and decommission several thousand contaminated facilities no longer needed to support the Department of Energy's (DOE's or Department's) mission, and remediate extensive surface and groundwater contamination. He provides the executive direction for the analyses and development of technical, regulatory, and risk mitigation

strategies integrated across the full spectrum of EM mission activities to inform program management, strategic planning, budget formulation and decision-making. He has held several DAS positions in EM over the last 8 years: Program and Site Support; Engineering and Technology; and Environmental Cleanup and Acceleration. He was presented with a Presidential Rank Award as a Meritorious Executive for sustained superior performance and leadership in the Environmental Management Program by Secretary Chu in March 2010, the Secretary's Appreciation Award in 2011 and a Secretarial Transformational Energy Action Management Program Effectiveness Award in 2008.

From 1996 to 2003, Mr. Gilbertson directed the research activities within the EM Program. The applied program was recognized to be one of the most innovative in the country and received a "Hammer" Award from the Vice President's National Performance Review Team in 1998. In his first years with the EM Program, he was responsible for the development of a national framework for using risk in cleanup decision making. From 1988 to 1994, he worked in DOE's Office of Environment, Safety and Health (ES&H) and was responsible for the identification of ES&H vulnerabilities as a manager of the "Progress Assessment" and "Tiger Team" programs. He was promoted into the Senior Executive Ranks in May of 1992 and received a Silver Medal for Meritorious Service in 1991.

Mr. Gilbertson spent four years at the U.S. Environmental Protection Agency (EPA) from 1984 to 1988. In his last year at EPA, he served as Director of EPA's Hazardous Waste Ground-Water Task Force Investigation Activities, created to investigate the adequacy of ground-water monitoring at facilities that disposed of hazardous waste on land. During his first three years, he supported the development of Resource Conservation and Recovery Act regulations and technical guidance and training in the areas of corrective action, waste management, and environmental monitoring. He received a Bronze Medal for Commendable Service in 1987. After college he worked for three years in the private sector with an environmental engineering consulting firm. He received a B.S. in Chemical Engineering from the University of Wisconsin in 1981.

Dave Esh, Ph.D.

David Esh is a Senior Risk Analyst with the US Nuclear Regulatory Commission. David has been with the NRC for 16 years, working on high- and low-level waste disposal as well as complex decommissioning sites. David has developed complex, probabilistic models for a large number of applications. David received NRC's Meritorious Service Award in 2006. Prior to joining NRC, David worked for Argonne National Laboratory on wasteform development. David has a BS in physics, a BS in nuclear engineering, an MS in nuclear engineering with minors in civil engineering and geoscience, and a PhD in environmental engineering from Penn State University.

Matthew W. Kozak, Ph.D.

PhD, 1988, Chemical Engineering, University of Washington
BS, 1981, Chemical Engineering, Cleveland State University

Dr. Matthew Kozak has more than 30 years of experience in performance assessment radioactive waste repositories. He is the author of over 100 publications on these topics. In the U.S., Dr. Kozak has led projects to support the U.S. Environmental Protection Agency (EPA), Electric Power Research Institute (EPRI), the U.S. Department of Energy (DOE), and the Nuclear Regulatory Commission (NRC) on a wide variety of radioactive waste disposal and contamination issues. In addition to his U.S. work, he has supported a number of national radioactive waste management programs in Europe, Asia, and Africa to site.

Dr. Kozak is the former chair of Scientific Committee 87-3 for the National Council on Radiation Protection (NCRP) on safety assessment of radioactive waste disposal facilities. Dr. Kozak is also a past member of NCRP Umbrella Scientific Committee 87 on Radioactive and Mixed Waste. Dr. Kozak was a member of the National Research Council Committee on Cesium Processing Alternatives for High-Level Waste at the Savannah River Site. He was also on the IAEA's International Peer Review Team for the Australian National Repository for low and intermediate level waste at Woomera South Australia.

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 25 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 11 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.

Paul Black, Ph.D.

Paul Black is Principal and co-founder of Neptune and Company, an environmental consulting company that specializes in the technical disciplines of statistics, decision analysis, risk assessment, ecology, environmental modeling, QA and chemistry. Manager of Neptune and Company's Statistics, Decision Analysis, and Modeling Group. The main focus of the group is to provide consulting services in environmental decision analysis, covering disciplines such as environmental modeling, cost-benefit (economic) analysis, options analysis, statistics, probability, elicitation, earth sciences, and human health and ecological risk assessment. Responsibilities include managing a group of about 10 people who are focused and motivated to efficiently and effectively solve environmental problems, work in a collaborative environment on interesting problems that call for innovative or cutting edge solutions, and managing various projects in which our group is engaged. Responsibilities also include involving our group in professional societies and conferences, Company publications and presentations, and proposals, marketing and business development.

John Tauxe, Ph.D.

John Tauxe has been working in the earth and environmental sciences and engineering since 1981, and has developed expertise in quantitative hydrology and hydrogeology, and in computer

programming, concentrating in the modeling of contaminant fate and transport in the environment.

His earth science experience includes studying the radiogeochemistry of lakes at Canada's Experimental Lakes Area, mapping the sea floor (and vainly searching for the Titanic) using sidescan sonar with Lamont-Doherty Earth Observatory, exploring marine geology on a global scale with the Ocean Drilling Program, and applying hydrologic and hydrogeologic science and theory to environmental problems.

In the realm of environmental and water resources engineering, John has written groundwater contaminant transport software for the Environmental Protection Agency and for the Arc/Info geographic information system (GIS), modeled water resources issues associated with hydropower dam relicensing by the Federal Energy Regulatory Commission, helped to design an Environmental Data Management System for stormwater issues for the Los Angeles County Department of Public Works, and modeled the transport of radionuclides in the environment at Oak Ridge National Laboratory, Los Alamos National Laboratory, the Nevada Test Site, and other Department of Energy sites around the country. He also developed a GIS atlas of watersheds covering 50,000 acres of Southern Appalachian terrain including the Oak Ridge Reservation in East Tennessee.

John earned a Ph.D. in Civil Engineering from the University of Texas at Austin (1994), and a B.A. in Earth Science from Wesleyan University (1984). He is a Registered Professional Engineer in the State of New Mexico (Registration #14525).

Roger Seitz

Roger Seitz is a Senior Advisory Scientist with the Savannah River National Laboratory providing technical and policy support on projects related to radioactive waste management, environmental remediation and facility closure. Roger is currently providing technical and policy support to the US Department of Energy Office of Environmental Management, the International Atomic Energy Agency (IAEA), and for specific projects at multiple sites across the DOE Complex.

His career includes more than 30 years of experience, including positions at the Hanford, Idaho and Savannah River DOE Sites and five years as a Staff Member at the International Atomic Energy Agency (IAEA). He has also served as a consultant/peer reviewer for the U.S. Nuclear Regulatory Commission, IAEA and National Research Council/National Academy of Sciences; served on a Scientific Committee for the National Council on Radiation Protection and Measurements; and provided training and technical consulting for US DOE and State programs, and in more than 15 different countries.

Chris McKenney

BS Nuclear Engineering – Radiation Protection Option from Oregon State University

Chris has been with U.S. Nuclear Regulatory Commission for nearly 25 years, most in the Performance Assessment Branch. Since 2009, Chris has been the Chief of the Performance Assessment Branch. The PA Branch reviews performance assessments and provides guidance for decommissioning, low-level waste, and waste incidental-to-reprocessing. The branch also

provides support to uranium recovery facilities such as hydrogeology or cover design reviews. It also reviews decommissioning financial assurance requirements for material licensees.

Kevin Brown, Ph.D.

Senior Research Scientist, Department of Civil and Environmental Engineering, Vanderbilt University.

Primary Focus: includes safe and responsible management of low-level, high-level and mixed wastes including performance assessment, risk assessment, advanced statistical methods, experimental design, data analysis and modeling, process and product control, and programming and code integration. His research has been supported by the Consortium for Risk Evaluation with Stakeholder Participation (CRESP).

He holds a BE in Chemical Engineering, and MS in Environmental and Water Resources, and a PhD in Environmental Engineering, all from Vanderbilt University.

Bret W. Leslie, Ph.D.

Dr. Bret W. Leslie is senior professional staff at the U.S. Nuclear Waste Technical Review Board. He is responsible for reviewing the management and disposal of U.S. Department of Energy (DOE) spent nuclear fuel. He applies his geological expertise to reviews of the DOE's deep borehole disposal efforts and he helped to develop, and facilitated the logistics of, the Board's deep borehole workshop.

Before joining the Board in April 2013, Bret served in various increasingly responsible positions in the Office of Nuclear Material Safety and Safeguards (NMSS) at the U.S. Nuclear Regulatory Commission (NRC). He began his career at NRC as a geochemist in 1996 working on low-level waste, decommissioning, and high-level waste technical issues. He was a member of the NMSS Risk Task Group. He led NRC staff's Congressionally-mandated review of the regulatory processes of the DOE Hanford Waste Treatment Plant. Bret served as a senior primary advisor, technical coordinator, and primary author for many chapters of NRC's Yucca Mountain license review documents. He served as Agency lead for interagency coordination on actions on recommendations of the Blue Ribbon Commission on America's Nuclear Future.

Before joining NRC, Bret was the sole geologist at the U.S. Environmental Protection Agency (EPA) responsible for developing the safety standard for the repository at Yucca Mountain. Before that, he was a senior scientist at the Institute for Energy and Environmental Research where he conducted radioactive waste and environmental health regulatory reviews of DOE facilities, NRC-licensed facilities, and EPA programs. From 1991-1993, Bret was a research scientist (radiochemist) at the Center for Nuclear Waste Regulatory Analyses. Bret has a Ph.D. in geology and has over 20 peer-reviewed publications on topics including risk-informed decision-making, natural analogs of geologic repositories, coupled chemical-thermal-hydrologic processes, and decay-series disequilibrium.

Geoff Freeze

Geoff Freeze is an Engineer/Hydrogeologist at Sandia National Laboratories in Albuquerque, New Mexico. Mr. Freeze has 30 years of professional experience in radioactive waste disposal, probabilistic risk and safety analyses, groundwater modeling, and site characterization. He has

supported radioactive waste disposal programs in the U.S. (at both Yucca Mountain and WIPP) and internationally. His radioactive waste performance assessment modeling experience includes 4 years as the Yucca Mountain Project Lead for Features, Events, and Processes (FEPs) and 3 years as the DOE-NE Used Fuel Disposition Campaign Technical Lead for Generic Disposal System Analyses (GDSA). He is currently the Project Integration Manager for the DOE-NE Deep Borehole Field Test. Mr. Freeze holds a Master's degree in Agricultural Engineering from Texas A&M University and a Bachelor's degree in Civil Engineering from the University of British Columbia.

Todd Zeitler, Ph.D.

Todd Zeitler is a senior member of the technical staff at Sandia National Laboratories in Carlsbad, NM. He joined the Performance Assessment and Decision Analysis Department at Sandia in 2012 where he is currently the technical lead of the PA group. He is also works as a molecular modeler at Sandia, specializing in materials science and geochemistry applications.

Richard Abitz, Ph.D.

Dr. Abitz is an environmental scientist with over 28 years of work experience at private and government sites contaminated with radioactive and hazardous materials. His technical expertise includes the preparation of regulatory documents that govern the remediation of contaminated soil and groundwater, evaluation of environmental and human-health risk associated with exposure to radioactive and hazardous contaminants, performance assessment of low-level radioactive waste disposal facilities, laboratory testing of soil and water media, and geochemical modeling. He has worked at DOE sites in New Mexico, Idaho, Ohio and South Carolina. Dr. Abitz also worked as a subcontractor for the EPA to evaluate groundwater contamination at numerous uranium mining sites in New Mexico, and he served as a technical expert to the Navajo and Sioux Nations on groundwater pollution issues related to uranium mining. Presently, Dr. Abitz leads the Technical Support Group assigned to the Environmental Remediation Project at the DOE Portsmouth Site.

Gerhard Proehl, Ph.D.

Current Position:

- Unit Head, Assessment and Management of Environmental Releases
Division of Radiation, Transport and Waste Safety
International Atomic Energy Agency, Vienna

Professional Experience:

- Scientist at Helmholtz Zentrum Munich - Research Center for Environmental Health (Name of this institute until 2007: GSF-National Research Center of Environment and Health, Institute of Radiation Protection), 1981 to 2001, Munich, Germany
- Deputy Head of the "Risk Analysis Group", Helmholtz Zentrum Munich - Research Center for Environmental Health Institute of Radiation Protection: 2001-2009, Munich, Germany

Main Areas of Activity:

- Radiation Protection
- Radioecology
- Environmental Modelling
- Waste Management
- Risk Assessment

Memberships:

- Member of ICRP Committee 5: "Protection of the Environment": 2005-2011.
- Member of the German Commission on Radiological Protection, Committee "Radioecology", 2005 – 2009.
- Member of the German Commission on Radiological Protection, Committees Waste Management and Clearance, 1996-2005.

Chris Kemp

Mr. Chris Kemp is the Deputy Federal Project Director for the Hanford Tank Farm tank retrieval and closure mission which is currently focused on Waste Management Area - C, Waste Management Area A/AX, and retrieval of Double Shell Tank AY-102. Chris has a Master's degree in Environmental Science from Washington State University.

Doug Hildebrand

Office of Richland Operations, U.S. Department of Energy, Richland, WA

Alaa Aly, Ph.D.

Sr. Vice President; Principal Environmental Engineer, INTERA

PhD, Irrigation Engineering, Utah State University, 1997

MS, Statistics, Utah State University, 1996

MS, Irrigation Engineering, Utah State University, 1992

BS, Civil Engineering, Cairo University, 1987

Alaa Aly's experience encompasses hydrologic and probabilistic modeling, performance assessment, human health risk assessment, ecological risk assessment, uncertainty analyses, hydrologic and environmental characterization, water resource management, environmental restoration, and water supply evaluation. He is an expert in the application of statistical and optimization techniques and models for engineering, environmental impacts, contaminant remediation, and water resources applications. Alaa has completed projects for local, state, and federal governmental agencies, as well as private industry, involving remedial investigations, feasibility studies, remedial design, performance monitoring, water quality modeling and evaluation of surface reservoirs, trend analyses and detection in hydrologic time series, statistical modeling of hydrologic and water quality data, the application of artificial neural networks (ANNs) for modeling short-term fluctuations of water levels in shallow and deep groundwater monitoring wells, the use of remote sensing techniques to map land cover for large watersheds, and the development and calibration of models. In addition to his technical contributions, Alaa has managed projects with annual budgets of up to \$8 million.

Donna Morgans

Senior Risk Assessment Specialist, INTERA

MS, Environmental Toxicology, Oregon State University, 2003

BS, Microbiology, Oregon State University, 1986

Donna Morgans' professional experience has focused on assessing the potential for adverse human health effects associated with exposure to radiological and non-radiological contaminants in air, soil, water, and animal and plant tissues. In support of restoration efforts to address contamination in a variety of environmental media, she has managed and performed complex risk assessment and data compilation efforts to address a host of federal, state, and local

regulations that include Comprehensive Environmental Response, Compensation, and Liability Act lifecycle decisions. Donna is also proficient in the application of aspects related to CERCLA including the development and review of work plans, remedial investigations, feasibility studies, and proposed plans. She has applied this knowledge to a variety of environmental projects and programs for private industry clients and federal government agencies. She has experience in developing risk assessment products and incorporating the appropriate federal and state regulatory requirements on projects throughout the US. Donna also has experience in the statistical evaluation of analytical data to determine population distributions using ProUCL and modeling the effects from exposure to radiological contaminants in soil using RESRAD.