

National Incident Command's Flow Rate Technical Group

Membership List as of 6.7.10

Member Bios from the Federal Government:

Marcia McNutt, Chair of the National Incident Command's Flow Rate Technical Group, is Director of the Department of the Interior's U.S. Geological Survey. USGS is the nation's largest water, earth, biological science and civilian mapping agency. A distinguished scientist and administrator, Dr. McNutt previously served as president and chief executive officer of the Monterey Bay Aquarium Research Institute in California. Dr. McNutt has participated in 15 major oceanographic expeditions and published 90 peer-reviewed scientific articles. She is a member of the National Academy of Sciences and the American Academy of Arts and Sciences. Dr. McNutt received a PhD in Earth Sciences from Scripps Institution of Oceanography.

Roger Aines, Department of Energy is a member of the Earth and Environmental Sciences Division at Lawrence Livermore National Laboratory. He is Project Leader for the Dynamic Underground Stripping Project, a demonstration of innovative new thermal and imaging technologies to greatly speed cleanup of underground organic solvents and fuels.

Richard Brannon is a Lieutenant Commander with the U.S. Coast Guard 8th District Gulf Strike Team. During the response to Hurricane Katrina, he was credited with the successful staging of food and supplies to critical areas, coordinating the multi-agency response to over 500 sunken or grounded vessels, and saving the federal government over \$1 million by adroitly negotiating service contracts.

Grant Bromhal has been the Research Group Leader of the Sequestration, Hydrocarbons, and Related Projects group at the Department of Energy's National Energy Technology Laboratory for the past five years. Part of NETL's Geosciences Division, this group is focused on modeling, experiments, and field research related to carbon sequestration and hydrocarbon recovery. After receiving a PhD from Carnegie Mellon in Environmental Engineering in 2000, Dr. Bromhal worked at NETL in Morgantown, WV, as a National Research Council post-doc for two years. He has worked for DOE at NETL, located in Morgantown, WV, since 2003, where he was the 2007 recipient of the Hugh Guthrie Award for Innovation.

Roger N. Clark of the U.S. Geological Survey is the lead scientist for the Mass Balance Team of the Flow Rate Technical Group. Dr. Clark is an internationally recognized physical scientist, having participated in the NASA Cassini Saturn, the NASA Mars Moon Mapper, and the Indian Chandrayaan-1 moon orbiter missions. He also led the USGS environmental assessment of the 9/11 attacks on the World Trade Center. Clark received his PhD in Planetary Science from MIT in 1980.

Gerald Crawford is a Petroleum Engineer with the MMS Gulf of Mexico regional office. He serves as Lead Engineer for the Reserves Section in resolving issues related to reservoir analyses, reserves inventory, and assignments of new producible leases to fields. He has also authored a report on oil and gas reserves in the Gulf.

Austin Gould is the Chief of the Office of Research, Development, Test, and Evaluation for the United States Coast Guard. In this role he manages the Coast Guard's Research and Development program, including their Research and Development Center.

George Guthrie is the focus area leader for geological and environmental systems at U.S. DOE's National Energy Technology Laboratory. As such, he leads research activities across a range of fossil-energy related challenges largely associated with the flow of fluids in geologic systems.

David Hetrick of the Department of Energy is the Group Leader of the Modeling and Simulation Group in the Computational Sciences and Engineering Division at Oak Ridge National Laboratory. In research, Hetrick has worked on a variety of computational problems, including pollutant transport via environmental models in all media (air, water, soil), pharmacokinetics modeling in the human body.

Todd M. Hoefen is a Research Geophysicist with the U.S. Geological Survey. His experience includes remote sensing, geophysical, geochemical and geologic expertise. Using the imaging spectrometer tool, he analyzes satellite and aerial data.

Raymond Kokaly is a Research Geophysicist with the U.S. Geological Survey in Denver, Colorado, and has great experience with imaging spectrometer data, particularly in defining the biochemical state of vegetation. He also created software and methods involved with the imaging spectrometer data covering Afghanistan.

William (Bill) J. Lehr is currently Senior Scientist at the Office of Response and Restoration of the National Oceanic and Atmospheric Administration (NOAA). He was previously Spill Response Group Leader for the same organization, technical analyst with NASA Jet Propulsion Laboratory and held a joint appointment with the Research Institute and Mathematical Science Department at the University of Petroleum and Minerals. Dr. Lehr has also served as an adjunct professor for the World Maritime University and oil spill consultant for UNESCO. Dr. Lehr is a world recognized expert in the field of hazardous chemical spill modeling and remote sensing of oil spills.

Victor F. Labson is the Director of the U.S. Geological Survey's (USGS) Crustal Geophysics and Geochemistry Science Center in Denver, Colorado. This Science Center employs more than 100 geophysicists, geochemists, and related technical and professional staff in earth science research. Dr. Labson's 30-year career with the USGS has been focused on the application of ground and airborne geophysical methods to quantitative imaging of the Earth. His most recent focus has been on the relationship of the chemical and physical properties of the Earth to resultant geophysical phenomena.

Eric Livo is a geologist with the U.S. Geological Survey, specializing in remotely sensed applications related to geology and the material sciences. For the past 24 years, he has been a member of the imaging spectroscopy group with the USGS at Denver, conducting investigations of surface materials related to mineral deposits, mineral/material identification, and national emergency response. He and Gregg Swayze were instrumental in using NASA's AVIRIS to map the current oil spill after their work with AVIRIS data following Hurricane Katrina.

Don Maclay is a Petroleum Engineer currently on the staff of the Regional Supervisor of the Office of Production and Development, MMS Gulf of Mexico Region.. He provides technical support to the Regional Supervisor in the evaluation of requests relating to the efficient recovery of hydrocarbon resources in the Federal OCS. **(Not for Public Distribution)**

Gregory Meeker is a research geologist at the U.S. Geological Survey in Denver, Colorado. Meeker specializes in microscopy and microanalysis, and is very involved in asbestos research. He was a principal investigator in the USGS study of the dust that resulted from the World Trade Center's collapse, and has also studied sedimentary materials deposited as a result of Hurricane Katrina.

Darren Mollot is the Senior Technical Adviser in the Office of Planning and Environmental Analysis at the Department of Energy (DOE). The Office of Planning and Environmental Analysis is housed at the National Energy Technology Laboratory and is tasked with leading the development of the technology performance metrics and forecasting the benefits based on the projected metrics and goals.

Bryan Morreale is with the National Energy Technology Laboratory, Department of Energy.

Curt Oldenburg is a Staff Scientist and Program Leader for the Geologic Carbon Sequestration Program at Lawrence Berkeley National Laboratory. For the past ten years, Curt Oldenburg has worked in two main areas of geologic carbon sequestration: CO₂ injection for enhanced gas recovery, and near-surface leakage and seepage processes, monitoring, detection, and impacts including risk-based frameworks for site selection and certification.

Rajesh Pawar is with the Department of Energy at Los Alamos National Laboratory.

Geoffrey S. Plumlee is a research geochemist with the U.S. Geological Survey specializing in environmental and human health research. Dr. Plumlee has helped lead interdisciplinary teams that assess environmental and health characteristics of materials produced by disasters, such as dusts generated by the 9/11/2001 World Trade Center collapse, flood sediments left in New Orleans by 2005 hurricanes Katrina and Rita, and ash from 2007-2009 southern California wildfires. He received a Ph.D. from Harvard University in 1989.

Michael H. Powers is a research geophysicist with the U.S. Geological Survey, working in Denver for 18 years. His specialty is the use of multiple shallow imaging techniques applied to environmental and engineering problems. He holds an MSc and PhD in Geophysics from the Colorado School of Mines,

William Reese is the Principal Associate Director for Global Security at Los Alamos National Laboratory. Rees' recent assignments include the Science and Technology Policy Institute in Washington, D.C., where he was a fellow and deputy under secretary of defense for Department of Defense (DoD) Laboratories and Basic Sciences, DUSD (LABS).

Franklin Shaffer is a Senior Research Engineer with DOE National Energy Technology Laboratory. For 25 years he has led the development of new high speed particle image

velocimetry (PIV) tools to study particle flow dynamics of energy processes. He has received numerous national and international awards for development of new high speed imaging tools, including the R&D 100 Award and the Federal Laboratory Award for Excellence in Technology Transfer.

Mark Sogge is the Chief of Staff for the U.S. Geological Survey's Western Regional Director and is based in Flagstaff, Arizona. He currently is serving as USGS Director Marcia McNutt's Deputy in the Gulf of Mexico. Mark has extensive science management experience in multiple federal agencies. His scientific background is in terrestrial ecology, with a focus on threatened and endangered birds. He received his M.A. in Zoology from the University of California, Davis in 1988.

Gregg A. Swayze is a research geophysicist with the U.S. Geological Survey, whose work focuses on the use of imaging spectroscopy to map materials of environmental concern, such as naturally occurring asbestos and the dust generated by the collapse of the World Trade Center towers. He and Eric Livo were instrumental in using NASA's AVIRIS to map the current oil spill after their work with AVIRIS data following Hurricane Katrina. He received his Ph.D. in geology from the University of Colorado in 1997.

Jud Virden is a scientist and manager of Automotive and Transportation Technology at Pacific Northwest National Laboratory. He was recently named the Energy Sector Manager for the Energy and Environment Directorate. The sector includes more than \$120 million of advanced energy research in technology areas for the DOE offices of Energy Efficiency and Renewable Energy, Fossil Energy, Nuclear Energy, and Electricity Delivery and Energy Reliability.

Member Bios from Academia

Alberto Aliseda is an Assistant Professor of Mechanical Engineering at the University of Washington. His research and teaching focuses on fluid mechanics with applications to Energy, Environmental and Bio-medical Flow.

Paul Bommer is a Senior Lecturer in Petroleum and Geosystems Engineering at the University of Texas at Austin. He teaches courses in drilling, production, artificial lift, and facilities. He also spent twenty-five years in private practice, specializing in drilling and production operations and oil and gas appraisals.

Peter C. Cornillon is a Professor of Physical Oceanography at the University of Rhode Island. His areas of interest range from the large-scale, e.g., subtropical gyre circulation, to the small-scale, e.g., frontal dynamics in the open ocean and on the continental shelf. He has also been working as a satellite oceanographer since 1981.

Pedro Espina is a Scientific Advisor for the National Institute of Standards and Technology.

Juan C. Lasheras is a Professor in the Department of Mechanical and Aerospace Engineering at the University of California at San Diego. His research interests include turbulent flows, two-phase flows, and bio-medical fluid mechanics, and biomechanics.

Ira Leifer is an Associate Researcher at the University of California at Santa Barbara. His research projects include a simulation of a subsurface oil spill by a hydrocarbon seep, and an estimate of the release points of oil slicks in the ocean using the natural laboratory of the Santa Barbara Channel.

James J. Riley is a Professor of Mechanical Engineering at the University of Washington. He is a pioneer in the development and application of direct numerical simulation to transitioning and turbulent flows. His current research emphasizes turbulent, chemically-reacting flows, as well as waves and turbulence in density-stratified flows and rotating flows.

Omer Savas is a Professor with the Department of Mechanical Engineering at the University of California at Berkeley. His research interests include fluid mechanics, aircraft wake vortices, biofluid mechanics, boundary layers, instrumentation, rotating flows, transient aerodynamics, turbulent flows, and vortex dynamics.

Steven Wereley is an Associate Professor of Mechanical Engineering at Purdue University. His research interests include biological flows at the cellular level, and electrical and optical manipulation of particles and fluids.

Poojitha D. Yapa is a Professor of Civil and Environmental Engineering at Clarkson University. His research interests include modeling of deep water oil and gas jets and plumes, modeling of the fate of oil spills and related oil spill processes, and oil shoreline interaction.

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