

U.S. Environmental Protection Agency Science Advisory Board Workgroup on Residue Sampling Plan

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To expedite the development of advice on Hurricane Katrina related issues, the SAB Staff Office did not follow the usual shortlist process. Instead, it convened workgroups of technical experts drawn, as described in 70 FR 54046, from the U.S. EPA SAB, the Clean Air Scientific Advisory Committee, the Advisory Council on Clean Air Compliance Analysis (chartered advisory committees), their standing committees, subcommittees, and advisory panels. Workgroup members were invited to serve based on their scientific and technical expertise, knowledge, and experience; availability and willingness to serve; absence of financial conflicts of interest; and scientific credibility and impartiality.

U.S. Environmental Protection Agency Science Advisory Board Workgroup on Residue Sampling Plan

Dzombak, David

Carnegie-Mellon University

Dr. David A. Dzombak is professor of civil and environmental engineering at Carnegie Mellon University, a registered professional engineer in Pennsylvania, and a diplomate of the American Academy of Environmental Engineers. He holds a Ph.D. in civil-environmental engineering from the Massachusetts Institute of Technology. The emphasis of his research is on water and soil quality engineering, especially the fate and transport of chemicals in subsurface systems and sediments, wastewater treatment, in situ and ex situ soil/sediment treatment, hazardous waste site remediation, and abandoned mine drainage remediation. Dr. Dzombak has served on the National Research Council Committee on Bioavailability of Contaminants in Soils and Sediments and on various research review panels for the Department of Defense, Environmental Protection Agency, National Institute of Environmental Health Sciences, and the National Science Foundation. He has also served on the Board of Directors and as an officer of the Association of Environmental Engineering and Science Professors; as chair of committees for the American Academy of Environmental Engineers, American Society of Civil Engineers, and Water Environment Federation; and on advisory committees for various community and local government organizations and for the Commonwealth of Pennsylvania. Dr. Dzombak was elected a fellow of the American Society of Civil Engineers in 2002. Other recent awards and honors include the Professional Research Award from the Water Environment Association of Pennsylvania in 2002, an Aldo Leopold Leadership Program Fellowship by the Ecological Society of America and the David and Lucile Packard Foundation in 2000, and the Jack Edward McKee Medal from the Water Environment Foundation in 2000.

Gilbert, Richard O.

Battelle Memorial Institute

Dr. Richard O. Gilbert received his Ph.D in Biomathematics from the University of Washington, Seattle, Washington. He is a Staff Scientist in the Statistical and Quantitative Sciences Group at Battelle, Pacific Northwest Division in Richland, Washington. Dr. Gilbert is currently located at the Battelle Washington Office in Washington D.C. He has 32 years experience at Battelle in the statistical design and analysis of environmental studies to assess radionuclide and chemical contamination and cleanup in environmental media, with emphasis on the Nevada Test Site and other Department of Energy sites. He is perhaps most well known for his often-cited reference book *Statistical Methods for Environmental Pollution Monitoring* published in 1987. Dr. Gilbert's recent activities include contributing to the development of EPA guidance documents and teaching short courses on the Data Quality Objectives planning process and environmental statistical design and analysis methods, developing statistical designs for the detection of unexploded ordnance at Department of Defense sites, and assisting with the development of the Visual Sample Plan software that helps environmental professionals determine the right number and location of environmental samples. Dr. Gilbert has also managed and conducted Monte Carlo uncertainty and sensitivity analyses of environmental models, with particular emphasis on reconstructing doses received by the public from Iodine-131 emissions from the Hanford Site in Washington State in the 1945-1963 time period. Dr. Gilbert has served as a consultant to the EPA Science Advisory Board (SAB) on the Drinking Water Committee, the Statistical Consultation Subcommittee of the Environmental Engineering Committee, and Surface Impoundments Subcommittee of the Environmental Engineering Committee. He has also served as a member of the Health Physics Society's N13.31 Working Group that is writing the American National Standards Institute (ANSI) Standard Assessment of Radiation Doses Resulting from Plutonium and Americium from Soil. Dr. Gilbert is a Fellow of the American Statistical Association (ASA) and an elected member of the International Statistics Institute. He was also elected Chair of the Environmental Statistics Section of the ASA in 1995 and was awarded the Distinguished Achievement Award from the Section.

Griffiths, Jeffrey

Tufts University

Dr. Jeffrey Griffiths is currently Director of the Graduate Programs in Public Health, Tufts University School of Medicine. Associate Professor of Family Medicine and Community Health, Medicine, and Biomedical Sciences, Tufts University Schools of Medicine and Veterinary Medicine; Associate Physician, Division of Geographic Medicine and Infectious Diseases, New England Medical Center; Physician, Department of Infectious Diseases, St. Elizabeth's Medical Center, and Consulting Physician, Divisions of Infectious Diseases, Carney Hospital and Quincy Hospital. Dr. Griffiths received his AB in Chemistry in 1977 from Harvard College and a MD from Albert Einstein College of Medicine in 1982. He received a MPH and TM in Tropical Medicine from Tulane University in 1982. Internships occurred at Yale-New Haven Hospital, 1982-84 in Internal Medicine and Pediatrics; Research Fellow in Tropical Public Health at Harvard School of Public Health in 1986-88; Research and Clinical Fellow at Tufts-New England Medical Center from 1988-91 in Geographic Medicine and Infectious Disease; National Board of Medical Examiners certification in 1984. He received a Connecticut Licensure in Medicine, 1985; Massachusetts Licensure in Medicine, 1986; Diplomate, American Board of Internal Medicine (ABIM), 1987; Diplomate, American Board of Pediatrics, 1987; Govt. of Bangladesh Licensure in Medicine, 1989; Diplomate, Sub-specialty Board in Infectious Diseases, ABIM, 1992; and Certificate of Knowledge in Clinical Tropical Medicine and Travelers' Health, 2000. National Committees or Advisory Groups: Member, National Academies' Committee on Drinking Water Contaminants (1999-2001); Member, Public Interest Advisory Forum, American Water Works Association (1999-2001), Public Health Subgroup; Member, National Drinking Water Advisory Council of the EPA (1998-2000; 2001-2003); Federal representative for the National Association of People with AIDS (NAPWA) to the EPA Drinking Water Microbial Disinfection and Byproducts Committee, 1997-current; Member, AIDS Clinical Trials Group (ACTG) Focus Group on Enteric Pathogens, 1998-; Member, AIDS Clinical Trials Group (ACTG) Focus Group on Microsporidiosis and Cryptosporidiosis, 1996-1998; Consultant to ACTG 336, A Phase II/III Placebo-controlled study of Nitazoxanide (NTZ) for persons with AIDS and Cryptosporidiosis. Other Research & Professional Experience: Director of Microbiology and Serology, St. Elizabeth's Medical Center, 1991-1997; Director, Traveler's Clinic, St. Elizabeth's Medical Center, 1991-1997; Consultant, the Applied Diarrheal Diseases Project, Harvard Institute of International Development, 1991-94; represented USAID to the government of Ecuador during the cholera outbreak; experience in Ecuador and Central America; Field work at the International Centre for Diarrheal Diseases Research in Dhaka, Bangladesh 1988-89; Fellow in Tropical Nutrition, Tulane Univ. School of Public Health and Tropical Medicine, New Orleans, LA. July 1981-June 1982; Field work on the north coast of Haiti, 1981.

Hayes, Kim

University of Michigan

Dr. Kim Hayes is Professor and Program Director of the Environmental and Water Resources Engineering Program in the Department of Civil and Environmental Engineering at the University of Michigan. Professor Hayes' research focuses on the effects of interfacial properties on transport and transformation processes of environmental contaminants, with more than 20 years of experience in conducting experiments on the sorption of heavy metal ions and radionuclides to soil and sediment mineral constituents. His recent research activities include surface spectroscopic investigations of metal ion sorption reactions; impact of trace metal sorption processes on organic pollutant transformation rates; reductive dechlorination by reduced mineral surfaces in anaerobic environments, investigation of nanostructured particles for remediation of metal contaminated groundwaters, sequestration of metals in the subsurface through precipitation and sorption processes; and the study of binders and barriers materials for nuclear waste containment. Support for this work has been provided by the Environmental Protection Agency, the National Science Foundation, Department of Energy, and National Institute for Environmental Health Sciences. Professor Hayes is presently serving as a reviewer of a National Research Council report on the "Bioavailability of Contaminants in Soils and Sediments." He recently served as a member of a peer-review panel for the Strategic Environmental Research and Development Program (SERDP) to evaluate proposals on "In-Situ merits of Sequestration Enhancement and Engineered Bioavailability Reduction of Metals in Soils." He has also participated on a variety other workshop and review panels for the Environmental Protection Agency, National Science Foundation, and Department of Energy related to metal ion speciation, sequestration and mobility. Professor Hayes is currently a member of the Board of Director's and an Executive Officer of the Association of Environmental Engineering and Science Professors as well as a member of the Technical Advisory Board of the Great Lakes Protection Fund for the state of Michigan. Professor has more than 100 publications in peer-reviewed manuscripts, book chapters, technical reports, and proceedings detailing work on environmental chemistry and interfacial processes for contaminant remediation. Professor Hayes was awarded a National Science Foundation Presidential Young Investigator Award earlier in his career (1989-1994). His research group has been selected 4 times for American Chemical Society Environmental Chemistry paper awards (1992, 1996, 1997, 1999). Professor Hayes obtained his BS degree in Chemistry (1980), MSE in Environmental Engineering (1980), MSE Chemical Engineering (1982), a Ph.D. in Environmental Engineering (1987), all from Stanford University.

Luoma, Samuel N.

U.S. Geological Survey

Dr. Samuel N. Luoma is a Senior Research Hydrologist with the US Geological Survey and served as the first Lead Scientist for the CALFED Bay-Delta program between August 2000 and November 2003. As Lead Scientist he helped establish peer review, approaches to using scientific experts as advisors, a broad system of new studies relevant to CALFED, and improved the credibility and clarity of the science CALFED uses in its decisions. He is broadly interested in California water issues, ecosystem restoration and in improving uses of science in water policy decisions. His research interests include the effects of pollutants in aquatic environments, with special emphasis on metals. The studies he and his project have conducted are available in leading publications and recognized as among the leaders in fields such as metal bioavailability, dietary exposure of aquatic organisms to metals, determination of metal effects at the individual, population and community level in field studies; evaluation of methods like AVS/SEM for their useful in regulatory arenas; tolerance of aquatic organisms to metals and fundamental aspects of metal effects in nature. He has worked in San Francisco Bay since 1974 and has authored more than 180 peer-reviewed publications. He wrote the textbook, Introduction to Environmental Issues, in 1984. He was editor of Marine Environmental Research from 1996 – 2003 and is an editorial advisor for the Marine Ecology Progress Series. He is a Fellow in the American Association for the Advancement of Science and was awarded the U. S. Department of Interior's Distinguished Service Award in 1986. He has participated nationally and internationally as an expert or advisor, including advising the USEPA's Science Advisory Board on sediment quality criteria and the NAS/National Research Council's Committee on the Bioavailability of Contaminants in Soils and Sediments. He was one of four people who originally designed USGS' successful National Water Quality Monitoring Assessment. He has advised and mentored students and postdoctoral associates from Asia, Europe, Latin America and North America. He is presently serving as a William J. Fulbright Distinguished Scholar studying "International approaches to applying best available science in water pollution issues" in collaboration with colleagues at the Natural History Museum in London.

Maney, John P.

Environmental Measurements Assessment

Dr. John P. Maney received his Ph.D. in Analytical Chemistry from the University of Rhode Island, Kingston, Rhode Island. Dr. Maney has over 30 years experience in analytical chemistry and over 20 years experience in environmental sampling, environmental analysis and data quality issues. He has directed and founded environmental testing laboratories, managed numerous government contracts and subcontracts, which have addressed among other issues, analytical method development, analytical method validation, hazardous waste sampling, and authoring of guidance. Dr. Maney has chaired and participated in the consensus standard process for USEPA/ASTM accelerated standards regarding sampling, subsampling and data quality. For the last 11 years he has been president of Environmental Measurements Assessment (EMA), a consulting company that focuses on sampling, analytical and quality issues.

Pitt, Robert E.

University of Alabama

Robert Pitt is the Cudworth Professor of Urban Water Systems in the Department of Civil and Environmental Engineering at the University of Alabama. He is also Director of the UA interdisciplinary Environmental Institute. He received a B.S. in Engineering Science from Humboldt State University, an M.S. in Civil Engineering from San Jose State University, and was awarded a Ph.D. in Civil and Environmental Engineering by the University of Wisconsin - Madison. From 1971 to 1979 he was a Senior Engineer with URS Research Co. and with Woodward Clyde Consultants; from 1979 to 1987 he was a private consultant and also an Environmental Engineer with the Wisconsin Department of Natural Resources. From 1987 to 2001, he was a Professor and founding Director of the Environmental Health Engineering program at the University of Alabama in Birmingham and had joint appointments with the Schools of Engineering and Public Health. He has been at the Tuscaloosa campus of the University of Alabama since 2001. His teaching and research interests include the fates and effects of hazardous materials lost during transportation accidents and associated contingency planning, analytical methods to detect sources of contaminants in urban drainage systems, development of new analytical methods for the rapid and sensitive detection of toxicants, sources of pathogens in urban areas, modeling of urban infrastructure systems, development of stormwater control technologies, modifications of soil structure due to urbanization, and the integration of hydrology and water quality objectives in drainage design. He has published more than 100 publications, including journal articles, research reports, and several books. He received a Distinguished Service Citation from the University of Wisconsin, was a member of the project team that received a first place national award for a combined sewer project from the Water Environment Federation, and has received several outstanding teacher and volunteer service awards. He is a registered Engineer and a Diplomat of the American Academy of Environmental Engineers. He has also served on numerous professional committees in the U.S. and abroad.

Rose, Joan B.

Michigan State University

Dr. Joan Rose serves as the Homer Nowlin Chair in Water Research of the Michigan State University. Dr. Rose received her B.S., M.S. and Ph.D. in Microbiology from the University of Arizona in 1976, 1980 and 1985, respectively. She served as a Professor in the College of Marine Science, USFL from 1998-2002 and Associate Professor, Department of Marine Science, USFL from 1994-1997. In 1995, Dr. Rose had a Courtesy Appointment, as Associate Professor, Department of Civil Engineering, USFL. From 1989-1994, she was an Assistant Professor, Department of Environmental and Occupational Health, USFL; and from 1986-1989, she served as Research Associate/Lecturer, Department of Microbiology and Immunology, UAZ. Dr. Rose's professional experience includes environmental virology, environmental parasitology, drinking water treatment and disinfection, microbial risk assessment, wastewater treatment and reuse, water pollution microbiology, mycology and food microbiology. Teaching experience and educational activities include virology, food microbiology, environmental and occupational health, biotechnology and public health, analysis of water and wastewater, environmental microbiology, environmental virology, water pollution microbiology and risk assessment. Named as one of the 21 most influential people in Water in the 21st Century by Water Technology Magazine. 2000. Current service on advisory committees include 1) the Science Advisory Board of the International Commission of the Great Lakes, 2003-05, 2) Research Advisory Council for the Water Reuse Foundation, 2003-06, 3) Alan T. Waterman Award Committee, National Science Foundation, 2002-05, 4) Vice-Chair of USA National Committee for the International Water Association, 2002-05, 5) Research Advisory Board, National Water Research Institute, 2002-04, 6) Board of Directors, Association of Environmental Engineering and Science Professors, 2002-04, 7) Council Policy Committee for the American Society of Microbiology, 2001-2004, 8) Appointed to Life Sciences Board of National Academy of Science, National Research Council, 2001-2004 and 9) Appointed to Water Science and Technology Board of National Academy of Science, National Research Council, 1998-2004. Professional society memberships include American Academy of Microbiologists, American Public Health Association, American Society of Microbiology, American Society for Testing and Materials, American Water Works Association (AWWA), Society for Risk Analysis, International Water Assoc. and Water Environment Federation.

Splitstone, Douglas

Splitstone and Associates

Douglas E. Splitstone is Principal of Splitstone & Associates. With Michael Ginevan, he is the author of Statistical Tools for Environmental Quality Measurement - published by CRC Press, in 2004. He has designed data collection programs to investigate potential environmental impacts in air, water, and soil. Mr. Splitstone has conducted statistical analyses of data related to the extent of site contamination and remedial planning, industrial wastewater discharges, and the dispersion of airborne contaminants. Mr. Splitstone has also developed statistical decision criteria for evaluating when acceptable environmental cleanup levels have been achieved. He has successfully employed geostatistical analysis and estimation techniques for mapping the areal extent and total volume of dioxin contaminated soils at the site of a former New Jersey pesticide plant. He has also successfully employed these techniques to map the extent of contamination in the sediments of the Passaic River and design the sampling plan for the collection of data to assess the extent of possible contamination by radioactive material in the environs of Department of Energy's (DOE's) Feed Materials Production Center near Fernald, Ohio. He has served as a member of the Task Group on Epidemiology and Statistical Methodology for the USEPA's Center for Environmental Epidemiology at the University of Pittsburgh's Graduate School of Public Health; and previously consulted with Science Advisory Board's Air Toxics Monitoring Subcommittee, and panels on Quality Management and Secondary Data Use. Mr. Splitstone is a member of the American Statistical Association (ASA) and is a founder and past chairman of that organization's Committee on Statistics and the Environment. He was awarded the Distinguished Achievement Medal by the ASA's Section on Statistics and the Environment in 1993. He was chairman for the Sixth Symposium on Statistics and the Environment that was held at the National Academy of Sciences. Mr. Splitstone received his M.S. in Mathematical Statistics from Iowa State University in 1967. Recent contract support has come from various environmental engineering/consulting firms..

Steinberg, Laura

Tulane University

Dr. Steinberg is Associate Professor in the Civil and Environmental Engineering Department of Tulane University. She holds a B.S.E. in Civil and Urban Engineering from the University of Pennsylvania and an M.S and Ph.D. in Environmental Engineering from Duke University. She is currently on sabbatical leave from Tulane and is a Visiting Associate Professor at the School of the Environment, Duke University. Her research focuses on water quality modeling and natural hazards management. She has recently completed modeling studies of arsenic concentrations in water distribution systems and transport processes in contaminated sediments, and is working on spatial statistical modeling of heavy metals and PCBs in contaminated sediments. During the last several years, she has spent visited Turkey a number of times, investigating the impacts of the devastating earthquake of 1999 on industrial infrastructure and the environment, and evaluating the effectiveness of chemical risk management procedures. Dr. Steinberg is the chair of the American Society of Civil Engineers' National Energy and Environmental Policy Committee, and a past member of the ASCE's National Water Policy Committee. She serves on the Water Environment Federation's Disinfection Committee, and is a fellow of the Institute of Civil Infrastructure Systems and a former member of the Chapel Hill, NC Planning Board. She has consulted to the USEPA's Science Advisory Board on technology diffusion, and the Department of Energy on risk assessment. Prior to her work in academia, Dr. Steinberg was Environmental Engineering Department Head at the planning and engineering firm of Louis Berger International, and Business Development Manager at Geraghty and Miller, an environmental engineering firm. She also had the distinct honor of serving as a US Congressional Page while attending high school.

Swackhamer, Deborah

University of Minnesota

Dr. Deborah Swackhamer is Professor of Environmental Chemistry in the Division of Environmental and Occupational Health, School of Public Health, and also Co-Director of the Water Resources Center, at the University of Minnesota, Minneapolis. Dr. Swackhamer holds an M.S. in Water Chemistry (1982), University of Wisconsin, Madison, Wisconsin. and a Ph.D. in Oceanography and Limnology (1985), University of Wisconsin, Madison, Wisconsin. She joined the faculty of the University of Minnesota in 1987 following postdoctoral experience at Indiana University, Bloomington. Dr. Swackhamer has studied the processes affecting the behavior and fate of persistent organic compounds including PCBs, dioxins, and pesticides in the Great Lakes for the past 20 years, including sediment accumulation, source determinations, water column processes, and food web bioaccumulation. She continues to study the process of bioaccumulation in lower trophic levels, and is the Principal Investigator for the Great Lakes Fish Monitoring Program of the US EPA Great Lakes National Program Office. Currently, her research has expanded to include exposures and impacts of endocrine disruptors in aquatic systems. She also is developing and validating chemical indicators of ecological condition for coastal zones of the Great Lakes. Dr. Swackhamer has been active in numerous professional societies, including the Environmental Division of the American Chemical Society, the Society of Environmental Toxicology and Chemistry, and the International Association of Great Lakes Research. She served as Chair of the Committee on Drinking Water Contaminants for the Water Science and Technology Board, National Research Council, National Academy of Sciences from 1998-2002; Co-Chair, Gordon Research Conference, Environmental Sciences: Water, June 23-28, 2002, New Hampton, NH.; and is currently a Member of the Science Advisory Board of the International Joint Commission of the US and Canada and Chair of the Emerging Issues Work Group. She also is a member and Chair of the Great Lakes Environmental and Molecular Sciences Center Technical Advisory Board, Western Michigan University, Kalamazoo, MI and a member of the Science Advisory Board of the National Undersea Research Program for the North Atlantic and Great Lakes, NOAA.

Thibodeaux, Louis J.

Louisiana State University

Dr. Louis Joseph Thibodeaux is currently the Jesse Coates Professor in the Gordon A. and Mary Cain Department of Chemical Engineering, College of Engineering, Louisiana State University, Baton Rouge, LA. His terminal degree is a Ph.D. in chemical engineering and presently his teaching, research and service is dominated by the field of environmental chemodynamics. Another name is chemical fate and transport in multimedia compartments of the natural environment. Current areas of research expertise include chemical release processes to water from sediment beds and to air from soil-like dredged materials as well as chemical releases to water and air from environmental dredging activities. The key area of educational expertise is the textbook entitled: ENVIRONMENTAL CHEMODYNAMICS in its 2nd Edition, published by J. Wiley (NY) in 1996. It is used by practitioners worldwide and by numerous universities in engineering, environmental chemistry, geosciences and other environment oriented academic departments. Although he is the Emeritus Director of the USEPA funded South and Southwest Hazardous Substance Research Center, head quartered at LSU and Directed by Danny D. Reible. Professor Thibodeaux has served on advisory committees for the USEPA, USACE, DOD, DOE, NRC and the private sector; all being related to environmental chemodynamic issues. He is a member of the Env. Div. of the Amer. Chem. Soc., Society of Env. Tox. and Chemistry and the Env. Div. of the Amer. Inst. Chemical Eng. Professor Thibodeaux is fully employed by LSU doing research and teaching both graduate and undergraduate students. He also serves on the editorial board of several environmental journals and is presently receiving grant and/or contract support on four research projects from the USEPA and the USACE. Through the cooperative agreement USEPA/LSU in the S/SW Haz Res. Ctr., ORD Wash, DC. he receives research project funds. He also receives research funds from the US Army Corp. Engineers; the group is ERDC or Waterway Experiment Station, Vicksburg, MS.

Watson, James E.

University of North Carolina

Dr. James E. Watson, Jr. is a Professor Emeritus in the Department of Environmental Sciences and Engineering at the University of North Carolina at Chapel Hill. His principal research interests relate to environmental radioactivity and radioactive waste management. He has conducted numerous studies of radon, both indoors and in water. He received the University's Underwood and McGavran Awards for excellence in teaching and the Greenberg Alumni Endowment Award for excellence in teaching, research, and service. He is a past president of the Health Physics Society, the national radiation safety society, and a past chairman of the Radiological Health Section of the American Public Health Association. He has served as a National Lecturer for Sigma Xi, on National Academy of Sciences committees studying radioactive waste management, on the Centers for Disease Control and Prevention's Advisory Committee for Energy-Related Epidemiologic Research, as chairman of the Environmental Protection Agency's Radiation Advisory Committee, and as chairman of the North Carolina Radiation Protection Commission. He received his undergraduate education in nuclear engineering at North Carolina State University. He holds a M.S. degree in Physics from North Carolina State University and a Ph.D. in Environmental Sciences and Engineering from the University of North Carolina at Chapel Hill.