

**Invitation for Comment on the “Short List” Candidates for the  
EPA Science Advisory Board Scientific and Technological Achievement Awards  
Committee**

**March 20, 2009**

The United States Environmental Protection Agency (EPA) Science Advisory Board (SAB) Staff Office announced in a *Federal Register* Notice (Volume 74, Number 22, Pages 6033 – 6034) that it was forming a Committee to review scientific publications nominated by EPA managers and make recommendations to the Administrator for recognition and awards. To form the Committee, the SAB Staff Office sought public nominations of recognized experts with specific experience and knowledge in one or more of the following areas: Environmental Exposure, Transport and Fate; Environmental Monitoring and Methods; Environmental Control Systems and Risk Management; Ecosystems and Ecological Risk Assessment; Human Health and Risk Assessment; and Social and Decision Sciences. Background information on the project and details on the nomination process appeared in the cited notice. The notice is available on the SAB Website for the Scientific and Technological Achievement Awards Committee (STAA) under the ‘Process for Committee/Panel Formation’ tab, at [http://yosemite.epa.gov/sab/sabproduct.nsf/fedrgstr\\_activites/2009%20STAA?OpenDocument](http://yosemite.epa.gov/sab/sabproduct.nsf/fedrgstr_activites/2009%20STAA?OpenDocument) .

Based on qualifications and interest of the nominees, the SAB Staff Office identified a number of candidates for the Committee. Brief biographical sketches of these candidates are listed below for comment. We hereby invite comments from members of the public to provide relevant information or other documentation that the SAB Staff Office should consider in determining who should serve on the Committee.

The SAB Staff Office will review all information provided by candidates, any information that the public may provide in response to the posting of information about the candidates on the SAB website, and information gathered by the SAB Staff independently on the background of the candidates. The SAB Staff Office Director makes the final decision about who will serve on the Committee based on all relevant information. For the EPA SAB Staff Office, a balanced committee or panel is characterized by inclusion of candidates who possess the necessary domains of knowledge, the relevant scientific perspectives (which, among other factors, can be influenced by work history and affiliation), and the collective breadth of experience to adequately address the general charge. Specific criteria to be used in evaluating a candidate include: a) scientific and/or technical expertise, knowledge, and experience; b) availability and willingness to serve; c) absence of financial conflicts of interest; d) absence of appearance of a lack of impartiality; e) skills working in committees, subcommittees, and advisory panels; and, for the panel as a whole, f) diversity of, and balance among, scientific expertise, viewpoints, etc.

Please provide any comments you may have with respect to the candidates, no later than April 10, 2009. Please make your comments to the attention of Mr. Edward Hanlon, Designated Federal Officer. Emailing comments ([hanlon.edward@epa.gov](mailto:hanlon.edward@epa.gov)) is the preferred mode of receipt.

## Candidates for the Scientific and Technological Achievement Awards Committee

### Allredge, J. Richard

#### Washington State University

Dr. Allredge is currently serving as Professor, Statistician, and Extension Specialist in the Department of Statistics at Washington State University. His duties include advising graduate students, teaching applied statistics to graduate and undergraduate students, consulting with faculty and graduate students, and providing statistical advice to extension specialists. His educational background includes a Ph.D. in Statistics from Texas A&M University, an M.S. in Statistics from Colorado State University, and a B.A. in Mathematics from Oakland University. Dr. Allredge's areas of expertise include applications of statistics to: wildlife resource selection, environmental research and monitoring, agricultural research, radiation exposure, spatial sampling and analysis, and geostatistics. He is currently serving on the Independent Scientific Advisory Board and the Independent Scientific Review Panel of the Northwest Power and Conservation Council. Dr. Allredge is a Fellow of the American Statistical Association and an elected member of the International Statistical Institute.

### Arvai, Joseph

#### Ohio State University

Dr. Arvai is a Professor and Associate Director of the Environmental Science and Policy Program at Michigan State University (MSU). He is also a faculty member in MSU's Cognitive Science Program and the Department of Community, Agriculture, Recreation and Resource Studies. Dr. Arvai received a B.Sc. in Biology, an M.Sc. in Marine Ecology/Oceanography, and a Ph.D. in decision sciences in the broader context of risk and environmental management from the University of British Columbia (Vancouver, B.C., Canada) in 1994, 1997, and 2002, respectively. After completing his PhD, Arvai worked as a post-doctoral researcher for the Decision Science Research Institute (i.e., Decision Research) in Eugene, OR on topics related to expert risk judgments and further studies of structured decision making approaches; he remains as one of the principal investigators at this institution. Dr. Arvai conducts an active research program that has two main objectives. First, it focuses on advancing and testing theories in the decision sciences that deal with how people make decisions—both as individuals and in groups—largely in the absence of formalized decision support. Informed by this work, the second objective of his research is to develop and test decision aids that can be used by people to improve decision quality across a variety of contexts. While some of this latter research is lab-based, a significant portion of it is carried out in the field and is intended to have practical benefit; to this end, much of it is carried out in cooperation with actual decision makers and is set against the backdrop of real-world decision problems. Beyond his research, Dr. Arvai frequently leads workshops to improve the decision-making skills of both risk managers and stakeholders. Dr. Arvai's home is in Michigan but he works across Canada, the United States, and internationally as a consultant to various government agencies and non-profit groups; recently, he has worked as an advisor to NASA, the EPA's Science Advisory Board, the National Academy of Sciences, and Natural Resources Canada. In 2006, he received the Chauncey Starr Award from the Society for Risk Analysis.

### Barnwell, Thomas

#### Independent Consultant

Mr. Barnwell is a retired employee of the U.S. Environmental Protection Agency (EPA), where he worked in EPA's National Center for Environmental Research, Office of Research and Development (ORD), and Region IV Regional office. Mr. Barnwell received a B.S. in Civil Engineering and an M.S. in Environmental Systems Engineering from Clemson University. He worked in EPA Region IV field operations Division in Athens, GA from 1971 to 1977, where he applied a variety of water quality models to environmental problems and also supported field investigations and compliance inspections. From 1977 to 1995, Mr. Barnwell was with EPA ORD's Environmental Research Laboratory in Athens, Georgia, where his responsibilities included development, modification and testing of environmental simulation models and providing technical assistance to states, EPA regional and program offices, and other ORD offices. Mr. Barnwell was actively involved in the Laboratory's Global Change Research Program, supervised a team of researchers and served as Acting Chief of the Biology Branch. He was involved in the Intergovernmental Panel on Climate Change Assessment that recently shared a Noble Peace Prize with Al Gore. In September 1995, Mr. Barnwell became Assistant Laboratory Director, National Exposure Research Laboratory (NERL) in ORD, representing the Laboratory's Ecology research program. Mr. Barnwell also served as Acting Associate Director for Ecology for his last 18 months with NERL. In March 2002, Mr. Barnwell moved to EPA's National Center for Environmental Research (where the STAR Grants program resides), where he served as Senior Science Advisor until retiring in January 2008. During his tenure with NCER, Mr. Barnwell was responsible for the Land Chapter of the 2003 Report on the Environment, but did not actively participate in the recently released update.

## **Benfield, Fred**

### **Virginia Polytechnic Institute & State University (Virginia Tech)**

Dr. E. F. (Fred) Benfield is Professor of Ecology and Associate Head in the Department of Biological Sciences at Virginia Polytechnic Institute & State University (Virginia Tech). He received his B.S. and M.S. in Biology from Appalachian State University, Boone, NC, and his Ph.D. in Zoology at Virginia Polytechnic Institute and State University (Virginia Tech) in 1971. Dr. Benfield has been employed at Virginia Tech since earning his Ph.D. degree. His research specialty is in the area of ecosystem level responses of Appalachian Mountain streams to landscape disturbance. He is a Co-Principal Investigator for the Coweeta Hydrologic Laboratory National Science Foundation Long Term Ecological Research (LTER) site in western N.C. His present research efforts include investigating long-term recovery of ecosystem function by a stream draining a watershed that was clear-cut in 1976. He is also studying population, community, and ecosystem level responses of headwater streams draining watersheds that are being experimentally clear-cut but are left with riparian strips of different widths. Dr. Benfield has also worked in pollution ecology, macroinvertebrate drift and production dynamics, aquatic insect toxicology, distribution and abundance of aquatic macroinvertebrates, and arthropod defensive behavior. He has designed and taught courses at Virginia Tech in the areas of ecology, freshwater ecology, general and invertebrate zoology. He has published over 65 peer reviewed scientific research articles and authored or coauthored numerous chapters in books, symposium proceedings, and edited volumes. He has served as Managing Editor and Associate Editor of the Journal of the North American Benthological Society and Associate Editor for Limnology and Hydrobiology of the American Midland Naturalist. He presently serves on the editorial board of the Journal of the North American Benthological Society. He has served as President, Executive Chair, Board of Trustees for the Endowment Chair, Annual Meeting Program Chair and various committees of North American Benthological Society. Dr. Benfield has served on National Science Foundation panels, reviewing the Long Term Ecological Research Program and the Ecosystems Program, and he has been a member of the National Science Foundation's Committee of Visitors. He has also served as a reviewer of the U.S. Environmental Protection Agency (EPA) Environmental Biology Program. Dr. Benfield is a member of the Ecological Society of America, the International Society of Limnology, the North American Benthological Society, the Society of Sigma Xi, and the Virginia Academy of Science. He presently serves as a member of the Ecological Processes and Effects Committee of the EPA Science Advisory Board.

## **Bredhoff, Nancy**

### **RTCA (Radon Testing Corp of America, Inc.)**

Ms. Bredhoff wrote the original business plan for Radon Testing Corporation of America, Inc. (RTCA™) in 1985 and has served as RTCA™'s President from 1989 to present. Ms. Bredhoff has a BA in Political Science from Barnard College and a MBA from Columbia University Graduate School of Business. She has participated in the research and development of new products for the radon industry culminating in several patents for state-of-the-art radiation monitors. Under Ms. Bredhoff's leadership, RTCA™'s computerized analytical laboratory processes tens of thousands of radon measurements annually for consumers, government programs and its nationwide network of professional radon testers. She is often a guest speaker at educational seminars and has authored numerous articles about radon. Ms. Bredhoff served on the Board of the American Association of Radon Scientists & Technologists (AARST) for 12 years and was Treasurer for 4 years. Ms. Bredhoff is currently the President of the National Radon Safety Board (NRSB) and is an advisor to the Conference of Radiation Control Program Directors' (CRCPD) E-25 Radon Committee.

## Bus, James

### The Dow Chemical Company

James S. Bus is Director of External Technology, Toxicology and Environmental Research and Consulting at The Dow Chemical Company. He received his B.S. in Medicinal Chemistry from the University of Michigan (1971) and Ph.D in pharmacology from Michigan State University (1975) and currently is an Adjunct Professor in the Department of Pharmacology and Toxicology at that institution. He previously held positions as Associate Director of Toxicology and Director of Drug Metabolism at The Upjohn Company (1986-1989), Senior Scientist at the Chemical Industry Institute of Toxicology (CIIT, 1977-1986), and Assistant Professor of Toxicology, University of Cincinnati (1975-1977). Dr. Bus participates in several external institutions including: Member of the Board of Directors and Science Program Committee of The Hamner Institutes (formerly CIIT); former Chair of the American Chemistry Council and International Council of Chemical Associations Long-Range Research Initiatives; the EPA Chartered Science Advisory Board; the FDA National Center for Toxicological Research Science Advisory Board; and the National Academy of Sciences/National Research Council Board on Environmental Sciences and Toxicology (BEST). He serves as an Associate Editor of Toxicology and Applied Pharmacology, Co-Editor of Current Protocols in Toxicology, and on the Editorial Boards of *Environmental Health Perspectives* and *Dose Response*. Dr. Bus is a member of the Society of Toxicology (serving as President in 1996-97), the American Society for Pharmacology and Experimental Therapeutics, the American Conference of Governmental and Industrial Hygienists, and the Teratology Society. He is a Diplomate and Past-President of the American Board of Toxicology and a Fellow of the Academy of Toxicological Sciences (member of Board of Directors, 2008-present). Dr. Bus received the Society of Toxicology Achievement Award (1987) for outstanding contributions to the science of toxicology, Rutgers University Robert A. Scala Award (1999), and K.E. Moore Outstanding Alumnus Award (Michigan State University, Dept. Pharmacol. And Toxicol.). His research interests include mechanisms of oxidant toxicity, defense mechanisms to chemical toxicity, relationships of pharmacokinetics to expression of chemical toxicity, and general pesticide and industrial chemical toxicology. He has authored/co-authored over 100 publications, books, and scientific reviews.

## Demczyk, Brian G.

### SYNMAT

Dr. Demczyk is currently a nanotechnology consultant with SYNMAT, an investment and materials consulting firm in the energy and nanotechnology arenas, a position he has held since 2005. Dr. Demczyk's areas of expertise include materials synthesis and characterization, structure analysis and imaging techniques, and has long had an interest in the energy sector and more recently in biotechnology applications. Dr. Demczyk received a B.S. in Physics from Carnegie Mellon University, an M.S. in Materials Science from the University of California at Berkeley, and a Ph.D. in Materials Science from the State University of New York at Stony Brook in 1999. He undertook a Physics Postdoctoral Fellowship position at the University of California, Berkeley, where he gained valuable teaching and research experience in sp<sup>2</sup> bonded nanotube structures. Between 2001 and 2006, Dr. Demczyk served as a guest researcher in the Materials Sciences Division at the University of California at Berkeley. Between 2001 and 2005, Dr. Demczyk served as a Staff Materials Engineer at the Maxtor Corporation (now Seagate Technology), where he studied the surface and interface properties of thin film recording media and lubricant layers while developing new predictive techniques for magnetic hard disks. Dr. Demczyk has worked in all three primary venues of applied research, including industrial, government and university research laboratories on a variety of materials including photonic and magnetic materials, nanotube structures and nanophase catalysts. He has authored or coauthored over fifty research publications and has presented his work extensively at national meetings and symposia, and has received three United States patents. He was the primary organizer of a weeklong symposium on Thin Film Structure and Morphology for the Materials Research Society. He also has experience in preparing Small Business Innovative Research grant proposals.

## **Eighmy, Taylor**

### **University of New Hampshire**

Dr. Taylor Eighmy is the Interim Vice President for Research at the University of New Hampshire (UNH). He is also the Director of Strategic Initiatives and a Professor of Civil Engineering. He received his B.S. in Biology from Tufts University in 1980, his M.S. in Civil Engineering from UNH in 1983, and his Ph.D. in Engineering (Civil) from UNH in 1986. He joined UNH's Office of Research in 2004 as a faculty fellow and was appointed in 2006 as the Assistant Vice President and as Interim Vice President in 2007. In his current capacity, he chairs the UNH Energy Task Force and helps manage the State's National Science Foundation (NSF) Experimental Program to Stimulate Competitive Research (EPSCoR) Research Infrastructure Improvement (RII) initiative. He works closely with the faculty, Department Chairs, Deans and the President's Cabinet to broaden and strengthen the research enterprise at UNH. Specific efforts are directed at entering into strategic relationships with the Federal government, the private sector, and foundations to foster investment in faculty, graduate and undergraduate research, and interdisciplinary research programs. Prior to joining the Office of Research, Dr. Eighmy was a Research Professor of Civil Engineering and the founding director of the Environmental Research Group (ERG), an applied environmental engineering and environmental science research center at UNH from 1987 through 2004. He is also the past director the Recycled Materials Resource Center from 1998 to 2004, a partnership with the Federal Highway Administration (FHWA), to promote the wise use of recycled materials in highway construction. He also presently serves on the Environmental Engineering Committee of the U.S. Environmental Protection Agency (EPA) Science Advisory Board. Dr. Eighmy's research interests are in beneficial use of waste materials, life cycle analysis of waste products, chemical speciation, environmental chemistry of leaching behavior, spectroscopic surface analysis, reactive barriers, and environmental microbiology. His most recent research was supported by FHWA, the National Oceanic and Atmospheric Administration (NOAA), NSF, EPA, the European Union, and the private sector. Dr. Eighmy is an inventor of a patented reactive barrier technology for contaminated sediments and co-inventor of a carbon sequestration technology (patent pending).

## **George, Andreas**

### **RTCA (Radon Testing Corp of America, Inc.)**

Mr. George is a part-time consultant and director of analytical operations for Radon Testing Corporation of America (RTCA). He holds an AAS in Medical Technology, a B.S. in Biology from Brooklyn College, an M.S. in Biological and Biophysical Science from Hunter College, an M.S. in Civil Engineering (Air Pollution) from City University of New York, and earned 30 credits in Radiation Biology and Radiation Physics. Previously he worked as a research scientist with the U.S. Atomic Energy Commission (AEC) and worked for 36 years with the U.S. Atomic Energy Commission and the U.S. Department of Energy (DOE). He conducted research to assess the radiation exposure of underground miners in the U.S. and Canada. In 1975-78, he conducted the first systematic radon survey in the U.S. He developed and evaluated instruments and methods for the measurement of radon and radon decay products in the indoor environment. He developed the charcoal canister method for conducting short-term radon measurements in residential buildings. In 1984-86, he assisted the U.S. Environmental Protection Agency (EPA) to plan and establish the Radon Program and served on the EPA Science Advisory Board. He published more than 95 scientific papers on radioactivity with the majority on radon and radon decay products. He is fluent in both English and Greek.

## Giesy, John P.

### University of Saskatchewan

Dr. John P. Giesy is currently Professor and Canada Research Chair in Environmental Toxicology in the Department of Veterinary Biomedical Sciences and Toxicology Centre at the University of Saskatchewan. He is also Distinguished Professor Emeritus of Zoology at Michigan State University in East Lansing, Michigan, where he was a Professor for 26 years. He is also Chair Professor at Large of Biology & Chemistry, at City University of Hong Kong and Concurrent Professor of Environmental Science at Nanjing University, China. Dr. Giesy obtained a B.S. degree, Summa cum laude with honors in Biology from Alma College in Alma, Michigan in 1970, and an M.S. and Ph.D. in Limnology from Michigan State University in 1971 and 1974, respectively. Dr. Giesy is a world leading eco-toxicologist with interests in many aspects of eco-toxicology, including both the fates and effects of potentially toxic compounds and elements, particularly in the area of ecological risk assessment. He has conducted research into the movement, bioaccumulation, and effects of toxic substances at different levels of biological organization, ranging from biochemical to ecosystem. Dr. Giesy has done extensive research in the areas of metal speciation, multi-species toxicity testing, biochemical indicators of stress in aquatic organisms, fate and effects of PAHs, halogenated hydrocarbons, including chlorinated dibenzo-dioxins and -furans, PCBs and pesticides. Dr. Giesy discovered the phenomenon of photo enhanced toxicity of organic compounds, such as PAHs and was the first to report the occurrence of perfluorinated chemicals in the environment. His studies include both laboratory and field as well as mesocosm studies and apply tools from molecular biology to ecosystem-level. Dr. Giesy was the first to report the occurrence of perfluorinated compounds in the environment. He has published 663 peer-reviewed articles and presented 1,125 lectures, world-wide. Dr. Giesy's research is significantly used and cited by other researchers; he is in the top 0.1% of active authors (ISI Current Contents), and was the 2nd most cited author in the field of Ecology/Environmental Science over the period 1997-2007 with 12,437 citations.

## Harris, Cynthia

### Florida A&M University

Dr. Cynthia M. Harris is the Director of the Institute of Public Health at Florida A&M University in Tallahassee, Florida. The Institute of Public Health was created by the 1995 Florida State Legislature to train students in public health areas with special emphasis on those disease states and environmental problems that disproportionately impact communities of color and the socioeconomically disadvantaged. Dr. Harris is a native of Kansas City, Kansas and attended the University of Kansas, where she received a B.A. (Honors' degree) in biology (1978) and a M.A. in genetics (1981). She received her Ph.D. in the biomedical sciences from Meharry Medical College in 1985, with concentrations in the areas of nutritional biochemistry and toxicology. Dr. Harris was awarded a postdoctoral fellowship in the Interdisciplinary Programs in Health of the Harvard School of Public Health, where she conducted research regarding the effects of heavy metals on pulmonary function and environmental risk assessment. She is a Diplomate of the American Board of Toxicology (DABT). The Institute of Public Health is administratively housed in the Florida A&M University (FAMU) College of Pharmacy and Pharmaceutical Sciences and offers the Master of Public Health (MPH) Doctor of Public Health (Dr.PH.) degree programs. The Dr.PH. Program focuses on the training of public health practitioners with advanced skills in disease surveillance and health promotion. The specialized doctoral areas are epidemiology and health education. From 1990-1996, Dr. Harris served as a staff toxicologist and branch chief with the Agency for Toxic Substances and Disease Registry (ATSDR), a sister agency of the Centers for Disease Control and Prevention (CDC), in Atlanta, Georgia. Dr. Harris was the first African American branch chief of the Agency for Toxic Substances and Disease Registry. As branch chief of the Community Health Branch, she was responsible for the administration and management of staff who conducted environmental health assessments, at the request of individual citizens and community groups across the nation. In 1995, Dr. Harris was the Program Director for the first National Minority Health Conference with a focus on environmental contamination. This conference was the first conference of the U.S. Public Health Service that examined the disproportionate impact of environmental contamination on minority communities. While at the ATSDR, she was the recipient of the CDC/ATSDR Award for Contributions to the Advancement of Women and the ATSDR Employee of the Year Award (for contributions to the development of the Agency Minority Health Initiative).

In January of 1996, Dr. Harris accepted the position of Director of the Institute of Public Health at Florida A&M University. Since her tenure, she has been actively engaged in the general planning and development of the MPH program. In addition, Dr. Harris has been successful in securing extramural funding for projects related to HIV/AIDS community outreach, determining the prevalence of learning disabilities and incarcerated youth in the state of Florida, and community/university partnerships related to environmental health problems in the states of Georgia and Florida. She is known nationally for her work in the area of environmental justice. She also served as the Principal Investigator for a training component of the Florida Disaster Preparedness Program and was responsible for risk communication and cultural competency training for first responders, as well as played a significant role in the Strategic National Stockpile Program, involving the conducting of a feasibility study and curriculum. During her tenure, the Institute of Public Health was asked to house the Florida Birth Defects Registry, which is responsible for birth defects surveillance, education, and prevention for the state of Florida. In addition, she spearheaded and authored a comprehensive community health needs assessment for Gadsden County, Florida – a predominantly rural, underserved African American community in the Panhandle Region of Florida. Dr. Harris has served on numerous committees and panels, which includes membership on the Board of Directors for the Florida Public Health Association, Chair of the Florida Public Health Partnership Council on Stroke, member of the Pregnancy Mortality Review Board, member of the Florida Sickle Cell Task Force, member of the American Public Health Association, member of the editorial board of the Harvard Journal of Public Health, reviewer for the Journal of Environmental Health, and board member for the Panhandle Chapter of the Florida March of Dimes. She has also provided a review for the Food and Nutrition Board of the National Academy of Sciences and was a member of the National Academy of Sciences Institute of Medicine Workgroup on Solvent Toxicology regarding possible environmental exposures during the Gulf War. She is a Full Member of the Society of Toxicology and was appointed by the Secretary of the U.S. Department of Health and Human Services to the ATSDR Board of Scientific Counselors. In addition, she has served on numerous grant reviews for several federal agencies such as CDC, National Institute for Occupational Safety and Health (NIOSH), National Institute of Environmental Health Sciences (NIEHS), and the Health Resources and Services Administration (HRSA) of the US Department of Health and Human Services. She was also a panel member for the IOM Committee on the Gulf War and Health and was appointed by Congresswoman Donna Christensen to the Congressional Black Caucus Homeland Security Advisory Board. She is also currently a member of the Association of Schools of Public Health Kellogg Racial and Ethnic Disparities Work Group. In December of 2004, Dr. Harris was appointed to the Council on Education for Public Health (CEPH) Board of Councilors for a three year term. CEPH is the national accrediting agency for all public health programs and schools of public health. In October of 2007, she was appointed to the U.S. Environmental Protection Agency Science Advisory Board on the Exposure and Human Health Subcommittee.

## Hattis, Dale

### Clark University

Dale Hattis is Research Professor with the George Perkins Marsh Institute at Clark University. He holds a Ph.D. in Genetics from Stanford University and a B.A. in biochemistry from the University of California at Berkeley. For the past three decades he has been engaged in the development and application of methodology to assess the health, ecological, and economic impacts of regulatory actions. His work has focused on approaches to incorporate interindividual variability data and quantitative mechanistic information into risk assessments for both cancer and non-cancer endpoints. Recent research has explored age-related differences in sensitivity to carcinogenesis and other effects, a taxonomy of different non-mutagenic modes of action for carcinogenesis with likely differential implications for age-related sensitivity, PBPK modeling of acrylamide dose in rats and humans, and mechanism-based dose response modeling of carcinogenic effects from ionizing radiation. Current efforts are using PBPK modeling to better assess dose response relationships for human birth weight changes and developmental delays associated with exposure to the insecticide chlorpyrifos during pregnancy. He is a leader in efforts to replace the current system of uncertainty factors for non-cancer effects with distributions based on empirical observations. He is a member of the Clean Air Science Advisory Committee panel reviewing EPA efforts to reassess the National Ambient Air Quality Criteria for nitrogen oxides and sulfur oxides, and for several years he has served as a member of the Food Quality Protection Act Science Review Board. Until recently he has also been a member of the Environmental Health Committee of the EPA Science Advisory Board. For 2007 he was the Chair of the Dose Response Specialty Group of the Society for Risk Analysis. He has also served as a member of the National Research Council Committee on Estimating the Health-Risk-Reduction Benefits of Proposed Air Pollution Regulations. He has been a councilor and is a Fellow of the Society for Risk Analysis, and serves on the editorial board of its journal, Risk Analysis.

## Henning, Miranda

### ENVIRON International Corporation

Ms. Miranda Henning is a Principal in the Ecology & Sediment Management practice at ENVIRON International Corporation. She holds a B.A. in Environmental Science from Wesleyan University (1983) and an M.E.M. in Water and Air Resources from Duke University's School of Forestry and Environmental Studies (now Nicolas School of the Environment) (1991). Ms. Henning specializes in the assessment and management of human and ecological risks at sites with sediment contaminated with mercury, polychlorinated biphenyls (PCBs), dioxins and furans, and other persistent, bioaccumulative and toxic chemicals. She has written over 50 risk assessments for contaminated sites throughout North America. Examples of her work include: designing and implementing innovative techniques for measuring effects of PCBs on birds and other wildlife; leading public consultation meetings with individual residents, municipal leaders and tribes; participating at a workshop convened by the Society of Environmental Toxicology and Chemistry (SETAC) on the nexus between ecological risk assessment and natural resource damage assessment; providing peer review to U.S. Environmental Protection Agency (EPA) on risk assessment guidance and toxicological reviews; chairing platform, debate and poster sessions on the topic of risk assessment guidance at the annual meeting of SETAC; and participating in work groups convened by the Massachusetts Department of Environmental Protection regarding revisions to the Massachusetts Contingency Plan and associated guidance.

## Ito, Kazuhiko

### New York University School of Medicine

Dr. Kazuhiko Ito is Assistant Professor of Environmental Medicine at Nelson Institute of Environmental Medicine, New York University School of Medicine. He received his M.S. and Ph.D. in environmental health sciences from New York University in 1985 and 1990, respectively. Dr. Ito received his B.S. in applied chemistry from Yokohama National University, Japan in 1982. Dr. Ito's main area of expertise is human health effects and exposure assessment of ambient air pollutants. His current research interests include: (1) the roles of particulate matter (PM) components on human health effects; (2) source-oriented evaluation of PM health effects using the PM<sub>2.5</sub> chemical speciation network data; (3) the exposure error associated with ambient air pollution monitoring network and its implication on observed health effects; and (4) identification of sensitive sub-populations to ambient air pollution. Dr. Ito has published many articles on the mortality and morbidity effects of PM and gaseous pollutants. He has also published research papers on spatial/temporal variations of air pollution as well as source-apportionment. Currently, Dr. Ito is a contributing author to EPA's Integrated Science Assessment document for Particulate Matter (short-term mortality effects) and Carbon Monoxide (short-term and long-term mortality effects).

## Janecky, David

### Los Alamos National Laboratory of U.S. Department of Energy (DOE)

Dr. Janecky is currently a Deputy Group Leader in the Ecology and Air Quality Group, Environmental Protection Division, of Los Alamos National Laboratory (LANL) of the U.S. Department of Energy (DOE). At DOE he also works on national security issues, and is a Program Liaison between LANL and DOE's Office of Science, BES Geoscience Program. Dr. Janecky received an A.B. in Geology from University of California, Berkeley in 1975, and a Ph.D. in Geology from the University of Minnesota in 1982, Minneapolis, and did graduate work at Stanford University in Geochemistry in 1977-78, and at University of California, Santa Barbara, in Structural Geology in 1975-76. Dr. Janecky's work at DOE focuses primarily on line management and technical project development/implementation for environmental compliance, science, and technical assistance on biological & cultural resources, ecological risk, air pollution, risk management, environmental assessments, and threat reduction. Dr. Janecky's research interests include geochemistry of aqueous transport and reaction processes. His role as a Research Geochemist at LANL includes research on actinide migration and speciation, geochemistry modeling, chemical weapon response and recovery, repository backfill and waste treatment reaction investigations, development and application of pore scale modeling of coupled geochemical processes, and carbon cycle and sequestration geochemical reaction processes. In 2007, Dr. Janecky served on the U.S. Environmental Protection Agency's (EPA) STAR Program Review Panel on Uncertainty Analyses of Models in Integrated Environmental Assessments. Between 2005 to the present, Dr. Janecky served on the Boise State University external advisory board (Chairperson) for the EPA-funded Centers for Environmental Sensors & Hydrology and Geophysics. Dr. Janecky has 60 reviewed publications and 121 reports/unreviewed papers, with over 1400 literature citations. He has presented over 140 abstracts and presentations at technical conferences and public forums.

## Kleinman, Michael T.

### University of California, Irvine

Michael T. Kleinman has been studying the health effects of exposures to environmental contaminants found in ambient air for more than 30 years. He holds a B.S. in Chemistry from Brooklyn College/City University of New York, an M.S. in Chemistry from the Polytechnic Institute of Brooklyn and a Ph.D. in Environmental Health Sciences from New York University. He is a Professor and Co-Director of the Air Pollution Health Effects Laboratory in the Department of Community and Environmental Medicine at University of California, Irvine. Prior to joining the faculty at U.C.I. in 1982, he directed the Aerosol Exposure and Analytical Laboratory at Rancho Los Amigos Hospital in Downey, CA. He has published more than 100 articles in peer-reviewed journals dealing with the uptake and dosimetry of inhaled pollutants in humans and laboratory animals, and effects on cardiopulmonary and immunological systems after controlled exposures to ozone and other photochemical oxidants, carbon monoxide and ambient or laboratory-generated aerosols. He chaired a National Academy committee to examine issues in protecting deployed US Forces from the effects of chemical and biological weapons. Dr. Kleinman's current studies focus on cardiopulmonary effects of concentrated ambient ultrafine, fine and coarse particles. Dr. Kleinman uses animal models (mice that are genetically predisposed to cardiopulmonary disease, aged rats as a model of aging human populations and a mouse model of allergic airways disease) to examine biological mechanisms of effects of inhaled air contaminants on the lungs and heart of normal and diseased individuals. Current studies have also addressed mechanisms by which inhaled particles can induce inflammation in the central nervous system. Dr. Kleinman is a consultant to the U.S. Environmental Protection Agency Science Advisory Board and is the Chair of the California Air Quality Advisory Committee, which reviews the scientific basis and recommendations for California's air quality criteria.

## Lawler, Desmond F.

### University of Texas at Austin

Dr. Desmond F. Lawler is a professor in the Environmental and Water Resources Engineering Program within the Department of Civil, Architectural and Environmental Engineering at the University of Texas at Austin. Dr. Lawler has a B.S. in Civil Engineering from the University of Notre Dame (1968) and M.S. and Ph.D. degrees in environmental engineering from the University of North Carolina at Chapel Hill (1975 and 1980). Dr. Lawler has been at the University of Texas since 1980 and is now the Bob R. Dorsey Professor of Engineering and a member of the University's Distinguished Teaching Academy. He was recognized in 1999 by the American Water Works Association with the A.P. Black Award for sustained contributions to drinking water research. His research on the removal of particles from water and other topics in physical/chemical treatment of water has been funded by NSF, EPA, the Water Research Foundation (formerly AwwaRF), and several Texas agencies. His paper on flocculation with M.Y.Han was recognized with the 2005 AEESP Outstanding Publication Award as one that has withstood the test of time and influenced environmental engineering practice. Dr. Lawler has served on the Board of Directors of the Association of Environmental Engineering Professors, has been on several committees within AWWA, and is now on the Board of Trustees of the Water Science and Research Division of AWWA and the Research Advisory Committee of the Water Research Foundation. Along with Dr. Mark Benjamin of the University of Washington, he is currently writing a graduate textbook on Physical/Chemical Treatment Processes for Water and Wastewater to be published by McGraw-Hill.

## Lifset, Reid

### Yale University

Mr. Reid J. Lifset is the Associate Director of the Industrial Environmental Management Program and Resident Fellow in Industrial Ecology at the Yale University School of Forestry and Environmental Studies. Professor Lifset received a B.A. in Philosophy and History from Swarthmore College, an M.S. in Political Science from Massachusetts Institute of Technology, and an M.P.P.M. in Public and Private Management from Yale School of Management. His research focuses on the application of industrial ecology to novel problems and research areas, and the evolution of extended producer responsibility. Mr. Lifset is the editor-in-chief and founder of the *Journal of Industrial Ecology*, an international peer-reviewed bimonthly on industry and the environment, headquartered at and owned by Yale University and published by Wiley-Blackwell. He serves on the Environmental Engineering Committee of the Science Advisory Board of the U.S. Environmental Protection Agency, and is a member of the governing council of the International Society for Industrial Ecology (ISIE), and the editorial advisory board for the Springer book series on Eco-efficiency in Industry & Science. He is an advisor to the Q Collection, New York, New York, an environmental design and furnishings firm. Mr. Lifset serves on the managing board of the American Journal of Science and is a topic editor for industrial ecology for the Encyclopedia of the Environment.

## Linkov, Igor

### U.S. Army Engineer Research and Development Center

Dr. Igor Linkov is a Research Scientist with the U.S. Army Engineer Research and Development Center in Concord MA, and Adjunct Professor of Engineering and Public Policy at Carnegie Mellon University. Dr. Linkov has a B.S. and M.Sc. in Physics and Mathematics (Polytechnic Institute, Russia) and a Ph.D. in Environmental, Occupational and Radiation Health (University of Pittsburgh). He completed his postdoctoral training in Biostatistics and Toxicology and Risk Assessment at Harvard University. Dr. Linkov has managed multiple ecological and human health risk assessments and risk management projects. Many of his projects have included application of the state-of-the-science modeling and software tools (e.g., probabilistic and Bayesian Monte-Carlo, spatially-explicit modeling) to highly complex sites (e.g., Hudson River, Dow Midland, Natick Soldier Systems Command, Elizabeth Mine) and projects (e.g., restoration and remediation planning, insuring emerging risks, risk-based prioritization of engineering projects). He has published widely on environmental policy, environmental modeling, and risk analysis, including ten books and over 100 peer-reviewed papers and book chapters. Dr. Linkov has organized more than dozen national and international conferences and continuing education workshops on risk assessment, environmental security, decision analysis, risk communication, nanotechnology and modeling and participated in organizing many others. Dr. Linkov has served on many review and advisory panels for U.S. Department of Homeland Security (DHS), the U.S. Environmental Protection Agency (EPA), the National Science Foundation (NSF), the European Union (EU), and other U.S. and international agencies. He is the U.S. Department of Defense (DOD) representative at the Interagency Working Group on Nanotechnology Environmental and Health Implications (NEHI). The Governor of Massachusetts has appointed Dr. Linkov to serve as a Scientific Advisor to the Toxic Use Reduction Institute. He is the recipient of the 2005 Society for Risk Analysis (SRA) Chauncey Starr Award for exceptional contribution to Risk Analysis.

## **Maddalena, Randy**

### **Lawrence Berkeley National Laboratory**

Randy Maddalena, Ph.D., is a Scientist in the Environmental Chemistry, Exposure and Risk Analysis Group within the Environmental Energy Technologies Division at Lawrence Berkeley National Laboratory in Berkeley, California. He received his B.S. in Environmental Toxicology (1992) and Ph.D. in Agricultural and Environmental Chemistry (1998) from the University of California, Davis. The focus of his research is on environmental fate and transport processes and multi-pathway exposure analysis for organic chemicals combining modeling, bench scale experimentation and field observational studies. Dr. Maddalena's research supports the development, evaluation and application of mathematical models that predict chemical fate in multiple environmental media (air, water, soil, vegetation, sediment) and chemical exposures through multiple pathways (drinking water, food, feed, indoor air, dust) for both human and ecological receptors. Dr. Maddalena has developed and published tools and methods for performing probabilistic risk assessment and sensitivity analysis for complex regulatory models. His current research focuses on characterizing indoor pollutant emissions from office equipment, identifying sources of indoor pollutants in temporary housing units, characterizing exposure concentrations of insecticides used on passenger aircraft and developing sampling and modeling tools for assessing indoor exposures to semi-volatile organic chemicals. Other research projects include method development of environmental analytical chemistry methods to support research on the fate and potential environmental impacts of bio-based fuels.

## **Matusiak, Matthew**

### **University of Louisiana, Monroe**

Dr. Matthew M. Matusiak is currently an Assistant Professor at the University of Louisiana Monroe (ULM). In this position he has assisted in the development and implementation of the new bachelor's program offered by the university in health studies. Dr. Matusiak has received a B.S. in Medical Technology from St. Joseph's College, New York; an M.S. in Management from Indiana Wesleyan University; and a Doctor of Health Science from Nova Southeastern University, Florida. He also received a Certificate (with Distinction) in Emergency Management from Frederick Community College, Maryland, and a Diploma in Medical Technology from St. Mary's Medical Center. Dr. Matusiak has been instrumental in moving the ULM program in health studies from the conceptual stage to actual course delivery, and in guiding and mentoring students into the program from various health and non-health related disciplines. Prior to this position he was the Director of the Public Health Laboratory for the Marion County Health Department in Indianapolis, IN. In this position he was instrumental in moving the public health laboratory from a supporting department to one that was sought as an expert in the field of public health laboratory science. He guided the department through several difficult times, such as the 9/11 attacks; several biological issues of concern including anthrax, monkey-pox, Severe acute respiratory syndrome (SARS); changes in the requirements for personnel and facilities due to the threat of terrorism in the United States, and various environmental health and children's health issues. Dr. Matusiak has recently published articles on various laboratory and public health issues in the Journal of Occupational and Environmental Hygiene, Internet Journal of Health and Wellness, Internet Journal of Health Administration, and the Internet Journal of Laboratory Medicine. Currently, he has several journal articles awaiting publication or in peer review. Dr. Matusiak has also served on various professional and governmental committees. He was one of only a handful of public health laboratory directors to serve on the Association of Public Health Laboratory as an informatics subject matter expert. He was asked by the State of Indiana to be a subject matter expert on the Statewide Anti-Terrorism Advisory Committee. Furthermore, he has served on several boards and commissions with the State of Indiana, Association of Public Health Laboratories, American Public Health Association, Clinical Laboratory Standards Institute, Indiana Public Health Association, and the Clinical Laboratory Management Association.

## Middleton, Paulette

### Panorama Pathways

Dr. Paulette Middleton is Creator and President of Panorama Pathways, and since 2002 has been a Special Advisor who provides advice on adequacy of air quality modeling and helps inform policy using integrated modeling, stakeholder consensus building and diverse communication strategies for several groups, including Environmental Defense, Earth Justice, Western Resource Associates, Yellowstone Coalition, Northern Cheyenne Indian tribe, U.S. Environmental Protection Agency (EPA) Region 8, Colorado Department of Public Health & the Environment, U.S. Department of Justice, and State of New Jersey, Division of Law. Dr. Middleton received her B.A. with honors in 1968, her M.A. in 1971, and her Ph.D. in 1973 in Chemistry from the University of Texas, and was a Postdoctoral Fellow in Chemical Engineering at the University of Texas. During her career, she has developed and applied a number of urban aerosol dynamics models; was a leader on the modeling team that created and applied the Regional Acid Deposition Model (RADM); led the development and application of the integrated assessment of scenarios for visibility protection in the Western United States as the cornerstone of the Grand Canyon Visibility Transport Commission efforts; created and applied a Visibility Assessment Screening Technique to estimate connections between emissions and visibility; was lead author of many air quality modeling and application reviews; and has been serving as an expert advisor to a number of programs using integrated modeling systems as well as individual air quality models. Dr. Middleton's EPA Science Advisory Board service includes: Current Member of the Scientific and Technological Achievement Awards (STAA) Subcommittee; Chair of the Air Quality Modeling Subcommittee (AQMS) evaluating EPA's assessment of the benefits and costs of the Clean Air Act; Member of the Environmental Modeling Committee responsible for the recent review of the National Air Toxics Assessment which included an evaluation of mercury and toxic volatile organic contaminants (VOC) risk assessment; Member of the Research Strategy Advisory Committee which provided direction to EPA on critical research needs; Member of the Clean Air Science Advisory Committee during its review of earlier ozone and fine particulate matter standards; and Member of the Environmental Futures Subcommittee developing guidelines for EPA foresight. Dr. Middleton has been director of the National Science Foundation- and NASA-funded Global Emissions Inventory Activity (GEIA) Center since GEIA's inception in 1990. She also was lead author on U.S. Agency for International Development-funded renewable energy assessments and is an elected member of the Board of Directors for the American Solar Energy Society, representing the Sustainability Division of that society. She works with Aspen Hill Films on informational videos about renewable energy and the environment and with Positive Pace on positive news about world progress, and led the Sustainable America: Spotlight Colorado Green Team. Previously she held research, program development and leadership/executive positions at the National Center for Atmospheric Research, Atmospheric Sciences Research Center at the State University of New York at Albany, Science & Policy Associates, Inc., and RAND Corporation.

## Miller, Fred J.

### Independent Consultant

Dr. Fred J. Miller is currently an independent consultant in dosimetry and inhalation toxicology. Dr. Miller's primary research interests include pulmonary toxicology, respiratory tract dosimetry of gases and particles, lung physiology and anatomy, extrapolation modeling, and risk assessment. Dr. Miller received a B.A. and M.S. in Statistics from the University of Wyoming, and a Ph.D. in Statistics from North Carolina State University in 1977. From February, 1991 until April, 2005, Dr. Miller was employed in various capacities at the Chemical Industry Institute of Toxicology (CIIT, now called the Hamner Institutes for Health Sciences), serving most recently as Vice President for Research. In 1968, he began a career as a commissioned officer in the U.S. Public Health Service (PHS). As a mathematical statistician involved with the design and analysis of studies on the effects of air pollutants on animals, Dr. Miller became interested in the use of such studies for assessing human health risks. He joined the U.S. Environmental Protection Agency (EPA) when it was created in 1970. During his career with EPA, Dr. Miller served in various leadership positions, including Director of the Health Effects Research Laboratory's Inhalation Toxicology and Environmental Toxicology Divisions (1986-1989). He was noted for bringing together interdisciplinary teams of scientists to solve important public health problems. Upon retirement from the U.S. PHS in 1989, Dr. Miller joined the faculty of Duke University Medical Center (1989-1991), continuing his long-standing interest in extrapolation modeling through his capacity as an Associate Director of the Duke Center for Extrapolation Modeling. Dr. Miller is internationally recognized for his research on the dosimetry of reactive gases, and the author or co-author of more than 160 publications. Dr. Miller received a number of Scientific and Technical Achievement awards from EPA, and is the recipient of the PHS' Outstanding Service Medal. In 2005, he was awarded the Career Achievement Award by the Inhalation Specialty Section of the Society of Toxicology (SOT) in recognition for his contributions to the field of inhalation toxicology. He has served both as a regular and as an ad hoc member of EPA's Clean Air Science Advisory Committee and has served on numerous other peer review panels.

## Mogolesko, Fred

### Entergy Corporation

Dr. Fred Mogolesko currently serves as a consultant to the energy generation industry. He recently retired as a Senior Project Manager for the Entergy Corporation having held this position since 1999. He holds a B.S. and an M.S. in Aerospace Engineering and Applied Mechanics from the Polytechnic Institute of Brooklyn in 1964 and 1968, respectively; and an M.S. and a Ph.D. in Oceanography (with Meteorology minor) from New York University in 1971 and 1977, respectively. Prior to working for the Entergy Corporation, Dr. Mogolesko served as a Senior Project Manager for the Boston Edison Company from 1987-1999. He also served as a Partner and Vice President of SeaMat Ocean Systems and FRW, Inc. between 1995 and 2002. He is a Certified Consulting Meteorologist under the American Meteorological Societies (AMS) Program. He was an Associate Editor of the Journal of Applied Meteorology and has Chaired the Nuclear Energy Institutes Committee on Dispersion Models for Atmospheric Pollutants, and the Boiling Water Reactor Owners' Group (BWROG) Committee on Instrument Uncertainty. He is currently a member of the U.S. Department of Energy (DOE) Meteorological Coordinating Council. From the technical and project management perspective, Dr. Mogolesko has had significant technical and management involvement in the following projects/issues: Lunar Excursion Module; Thermal Dispersion Modeling in Estuaries; Ocean Wave Spectra; Large Scale Circulation Models; Internal Waves; Air-Sea Interaction; Sea-Breeze Phenomena; Developing Probabilistic Risk Assessment Models of Complex Systems; Decision Analyses Under Uncertainty; Radiological Dispersion Analysis; Emergency Planning for Radiological Scenarios; Economic Costs vs Frequency of Event Occurrences; and Regulatory Agency Interactions. His project management experience has involved projects where he has managed as many as 85 engineers, scientists, and field implementation specialist. These projects have exceeded \$100M in value.

## Orlov, Alexander

### State University of New York, Stony Brook

Dr. Alexander Orlov is an Assistant Professor of Materials Science and Engineering at State University of New York, Stony Brook, USA. He is also a faculty member of the Consortium for Interdisciplinary Environmental Research. Previously, he was a Research Fellow in Science and Engineering at the University of Cambridge/King's College, UK. Dr. Orlov has 5 degrees from various European and the US institutions, including Doctoral and Master's degrees in Chemistry from the University of Cambridge (UK) and Master's degree in Engineering from the University of Michigan (USA). His major research and teaching activities are in development of novel materials for environmental protection, environmental chemistry and engineering, materials science, sustainable development, environmental aspects of energy production and environmental nanotechnology areas. His current work is focused on studies of pollutant interactions with mineral surfaces utilizing various spectroscopic techniques, development of novel materials for visible-light photocatalytic applications; synthesis of high surface area materials, such as mesoporous molecular sieves, and their applications for environmental remediation; and development of novel nanomaterials for environmental protection. Dr. Orlov teaches several undergraduate and graduate courses in environmental materials science and engineering. In the past, he taught several courses in environmental engineering and chemistry at the University of Michigan and in sustainable engineering at the University of Cambridge. He is appointed by the UK Secretary of State to advise the current Labour Government on such environmental issues as exposure to hazardous substances and environmental/health impacts of nanotechnology. Previously, he was a member of the UK Conservative Party Task Force charged with developing the science policy for the next Conservative Government. Dr. Orlov has served on science grant panels for the EU Commission, the UK Department of Environment, Food and Rural affairs, and other funding bodies. Dr. Orlov is a recipient of National Endowment for Science Technology and Arts CRUCIBLE award (UK), which focuses on developing skills in communicating science to general public and policymakers.

## Short, W Leigh

### Alternative Environmental Strategies

Dr. Short serves as is a principal at Alternative Environmental Strategies since 1999. He holds an M.Sc. in Chemical Engineering from the University of Alberta in 1957, and a Ph.D. in Chemical Engineering from the University of Michigan in 1963. Dr. Short served as a Principal and Vice President at Woodward-Clyde Consultants between 1987 to 1999, and a Senior Program Manager and Section Head at Radian Corporation between 1985 to 1987. He served as Vice President at Environmental Research and Technology between 1979-1985, a Professor of Chemical Engineering and a Department Head at the University of Massachusetts between 1967 to 1979, and an Engineer with Chevron Research Company and with Canadian Industries Limited between 1957 to 1967. Dr. Short's Areas of Expertise include hazardous waste services, chemical process engineering, feasibility studies and site remediation, air pollution, project management, and due diligence audits. He is a member of the American Chemical Society and the American Institute of Chemical Engineers, and served as a member of U. S. Environmental Protection Agency's (EPA) Science Advisory Board between 1974-1980. He also served on several EPA Small Business Innovation Research (SBIR) review panels, and served on the National Research Council (NRC) Stockpile Committee (chemical weapons destruction) in the early 2000's.

## Smith, John R.

### Alcoa Inc.

Dr. John R. Smith is currently employed with Alcoa Inc., managing the Environment, Health and Safety (EHS) Sciences & Technology Section, and is an Adjunct Professor in the Civil/Environmental Engineering Department at Carnegie-Mellon University. Dr. Smith has a B.S. in Forest Engineering from the State University of New York College of Environmental Science and Forestry in 1975, a B.S. in Civil Engineering from the State University of New York at Buffalo in 1976, an M.S. in Civil/Environmental Engineering from the State University of New York at Buffalo in 1978, and a Ph.D. in Civil/Environmental Engineering from Carnegie-Mellon University in 1986, and is a registered professional engineer in Pennsylvania. Dr. Smith has over 25 years experience in the environmental sciences and engineering field where he has dealt with numerous aspects of site remediation, treatment of plant process waters and wastewaters, and sustainable development technology initiatives. Presently, his main focus is to establish sustainable development initiatives within Alcoa via the innovative integration of EHS (environment, health, safety) into all new and existing products and production processes. Such work specifically relates to developing, evaluating and implementing technically viable and cost-efficient ways to treat, minimize and/or eliminate water and wastewater discharges, solid waste generation, and air pollutant discharges by addressing such issues via innovative modifications to production process and/or operations, rather than the more conventional end-of-pipe treatment approaches. Focus is also given to implementing energy efficiency, safe work practices and providing a healthy work environment associated with production operations. Dr. Smith also provides remediation consulting within Alcoa on strategically significant issues. Dr. Smith is recipient of the Best Research Paper Award from the American Society of Civil Engineers Practice Periodical in 2001, the Jack Edward McKee Medal from the Water Environment Foundation in 2000, and the Linn H. Enslow Memorial Award from the New York State Water Association in 1994.

## Twiss, Robert

### University of California, Berkeley

Dr. Robert Twiss is Professor of Environmental Planning Emeritus, The University of California, Berkeley, and is a consultant in environmental planning. Dr. Twiss received a B.A. in Conservation from San Jose State University in 1955, and an M.S. and Ph.D. from the School of Natural Resources, The University of Michigan, in 1958 and 1962, respectively. His teaching and research focused on the environmental law/planning interface, the natural science bases of regional planning, and development and application of geographic information systems in land use planning. Currently, he is a member of the California Bay-Delta Authority's Independent Science Board, and for the past two years, served as consultant to the California Governor's Delta Blue Ribbon Task Force. Recent work also includes oversight of planning and land regulation for the Lake Tahoe Basin, serving as a consultant to the Office of the California Attorney General. He founded and is president of Geostage Inc., which designs and implements web-based geographic information systems. He has held a number of public offices: Chairman of the California State Mining and Geology Board, Chairman of the Governing Board, California/Tahoe Regional Planning Agency, and Special Representative of the United Nations to the Government of Yugoslavia on planning for Montenegro.

## **Weis, Judith**

### **Rutgers University, Newark**

Dr. Judith Weis is a Professor, Department of Biological Sciences, Rutgers University, Newark NJ. She previously served as Associate Dean for Academic Affairs at the University. She also has served as American Association for the Advancement of Science (AAAS) Congressional Science Fellow with the Senate Environment and Public Works Committee, and Program Director at the National Science Foundation. She has been a visiting scientist at the U.S. Environmental Protection Agency (EPA), both at the research lab at Gulf Breeze FL and in the Office of Water (Ocean and Coastal Protection Division). She received her B.S. in Zoology from Cornell University in 1962, and an M.S. and Ph.D. in Biology from New York University in 1964 and 1967, respectively. Dr. Weis' research has focused on estuarine ecology and ecotoxicology. She has published about 200 refereed papers, focusing mainly on stresses in the estuarine environment and their effects on organisms, populations and communities. Particular areas of focus have been effects of metal contaminants on growth, development, behavior, and trophic interactions; development of tolerance to contaminants in populations living in contaminated areas; effects of parasites on behavior and ecology of fish; interactions of invasive and native crab species; effects of invasive marsh plants on estuarine ecology and on fate of metal contaminants. Much of her research has been focused on estuaries in the New York/New Jersey Harbor area. A book entitled "Salt Marshes: A Natural and Unnatural History" will be published in 2009. Dr. Weis has served on numerous advisory committees and has held leadership positions: Boards of Directors of the Society of Environmental Toxicology and Chemistry (SETAC), Association for Women in Science (AWIS) and the American Institute of Biological Sciences (AIBS); Chair of the Biology Section of American Association for the Advancement of Science (AAAS) in 2000; and President of AIBS in 2001. She is a fellow of the American Association for the Advancement of Science (AAAS). She has served on several advisory committees for the U.S. Environmental Protection Agency (EPA): Scientific and Technical Achievement Awards (STAA) and the initial review committee for the Report on the Environment (ROE) for the EPA Science Advisory Board, and the Endocrine Disruptors Screening and Testing Advisory Committee – EDSTAC). She has been a member of the Marine Board of the National Research Council, and currently serves on the National Sea Grant Advisory Board of the National Oceanic and Atmospheric Administration (NOAA). Dr. Weis has previously been on the Editorial Boards of Transactions of the American Fisheries Society and Bulletin of Environmental Contamination and Toxicology (BECT) and was Associate Editor of BECT. She is currently on the Editorial Board of BioScience and Journal of Marine Biology. Dr. Weis' sources of recent grant support include: U.S. Geological Survey - Water Resources Research Program; National Science Foundation - Division of Environmental Biology; NOAA, and Meadowlands Environmental Research Institute.

## **Zeng, Yousheng**

### **Providence Engineering and Environmental Group LLC**

Dr. Zeng is the Air Quality Services Director for Providence Engineering and Environmental Group LLC. His areas of expertise include method development and implementation of air pollution monitoring (ambient and source, criteria pollutants and air toxics), air quality modeling (both dispersion modeling and receptor modeling), air quality laws and regulations, and air pollution control technologies. Dr. Zeng received his B.S. degree in Analytical Chemistry from Sichuan University (China) in 1982, M.S. degree in Environmental Chemistry from Nankai University (China) in 1985, Ph.D. degree in Environmental Engineering from the University of Illinois at Urbana-Champaign in 1990, and MBA degree from the University of Texas at Dallas in 1998. He is a Professional Engineer (PE) registered in five states. Dr. Zeng has been a member of several workgroups organized by the Louisiana Department of Environmental Quality (LDEQ), specifically the Highly Reactive Volatile Organic Compounds (HRVOC) Workgroup, the Title V Workgroup, and the AERMOD Modeling Guideline Workgroup. He served as an organizer and the facilitator of a forum for the LDEQ, industries, metropolitan planning organization, mayors of affected cities, and other elected officials to discuss Baton Rouge area ozone non-attainment "bump-up", its consequences, and possible solutions. As an adjunct professor at Southern Methodist University (SMU) in Dallas for six academic years, Dr. Zeng taught two graduate level courses, "Air Pollution Management, Regulations, and Public Policy" and "Air Quality Modeling". More recently he developed and conducted four workshops on air quality related topics, in which over 250 professionals have participated. He co-chaired the trial burn session for the 1999 national conference in Dallas on hazardous waste combustors sponsored by AWMA and the U.S. Environmental Protection Agency (EPA). Dr. Zeng served as an external peer reviewer for EPA Region 6 Regional Air Impact Modeling Initiative (RAIMI) Pilot Study. He has co-authored 19 peer-reviewed research papers published in national and international journals, chapters in five books, and 37 papers presented to technical conferences. These publications were in the areas of air pollution source-receptor relations, air pollutants characterizations, air monitoring, and methods or models development.

## Zielinska, Barbara

### Desert Research Institute

Dr. Barbara Zielinska currently holds the position as Research Professor and Director of the Organic Analytical Laboratory at the Division of Atmospheric Sciences of the Desert Research Institute (DRI) in Reno, Nevada. Dr. Zielinska received her M.Sc. degree from the Lodz University of Technology, Poland, and her Ph.D. degree from the Polish Academy of Sciences, both in Chemistry. The DRI is an autonomous research division of the University and Community College System of Nevada (UCCSN). DRI was created in 1959 by a special act of the Nevada State Legislature. Under the act and subsequent actions of the University Board of Regents, DRI is charged with conducting basic and applied research in environmental sciences. Dr. Zielinska has been active in the air pollution field for more than 20 years and specializes in the analysis of organic compounds in ambient air and in emission sources. Her list of publications includes over 100 papers concerning the sources, ambient concentrations and atmospheric transformations of gas- and particle-associated organic species, such as polycyclic aromatic hydrocarbons (PAH), nitro-PAH and other toxic air pollutants. Her research is funded by grants and contracts from federal and state agencies (such as Department of Energy, Health Effect Institute, California Air Resource Board, etc.) and some private organizations (such as American Petroleum Institute, and the Coordinating Research Council).