Invitation for Public Comment on the List of Candidates
For the Environmental Protection Agency's Science Advisory Board
Radiation Advisory Committee
June 19, 2012

The U.S. Environmental Protection Agency (EPA) Science Advisory Board (SAB) Staff Office announced in a *Federal Register* Notice on March 4, 2012 (77 FR 20396-20398) that it was inviting nominations of experts to be considered for the Administrator's appointment to the SAB Radiation Advisory Committee (RAC). The RAC provides advice to the EPA Administrator, through the chartered SAB, on radiation protection, radiation science, and radiation science applications. For the RAC, the SAB Staff office sought nominations of experts in the following disciplines: dosimetry; radiation biology; radiation epidemiology; radiation fate and transport monitoring and measurement; radiological health and physical sciences; risk assessment; and statistics.

The SAB Staff Office identified 12 candidates based on their expertise and willingness to serve. We hereby invite public comments on the attached List of Candidates for appointment or reappointment for consideration by the SAB Staff Office. Comments should be submitted to Dr. K. Jack Kooyoomjian, Designated Federal Officer, no later than July 10, 2012 at kooyoomjian.jack@epa.gov. Email is the preferred mode of receipt. Please be advised that public comments are subject to release under the Freedom of Information Act.

Radiation Advisory Committee Candidates

Borch,Thomas

Colorado State University

Dr. Thomas Borch is an Associate Professor of the Department of Soil and Crop Sciences and has a joint position in the Department of Chemistry at Colorado State University. Dr. Borch is a faculty member of the graduate degree program in ecology, the school of global environmental sustainability and center for environmental medicine. He earned a B.S. and M.Sc. in Environmental Chemistry from the University of Copenhagen, and a Ph.D. in Environmental Soil Chemistry at Montana State University in affiliation with the Center for Biofilm Engineering. Following his graduate studies, he did a Postdoctoral Fellowship (2004-2006) in the Soil and Environmental Biogeochemistry group at Stanford University, and joined Colorado State University in 2006. Dr. Borch is the recipient of the prestigious Faculty Early Career Development Award, from the National Science Foundation (NSF). His research interests are directed at determining reaction mechanisms influencing the fate of trace elements, radionuclides and organic contaminants in soils. He applies a multitude of traditional soil chemistry methods in combination with state-of-the-art techniques such as synchrotron radiation-based X-ray techniques. Dr. Borch has extensive experience in issues related to uranium mining and remediation and has active collaborations, related to this subject, with research groups at several national laboratories. Some of Dr. Borch's current funding sources include the NSF for climate change research in sensitive wetland systems with focus on the role of iron minerals in controlling carbon sequestration and turnover; the US Department of Agriculture (USDA) pertaining to climate change controls on natural organic matter chemical composition from subalpine environments and implications for drinking water quality; USDA Agriculture and Food Research Initiative (AFRI) Air program pertaining to determining emissions and transport of reactive nitrogen from cattle feedlots along Colorado's front range; the United States - Israel Binational Agricultural Research and Development Fund for environmental fate studies of antiepileptic drugs with focus on biodegradation, complexation, and photodegradation. Dr. Borch is a member of the American Chemical Society and the Soil Science Society of America. Dr. Borch served on the SAB/RAC Panel for the Uranium In-Situ ISL Advisory.

Chen,Shih-Yew

Argonne National Laboratory

Dr. Shih-Yew Chen is currently Senior Environmental Systems Engineer and also serves as the Strategic Area Manager in Environmental Systems and Technology of the Environmental Science Division at Argonne National Laboratory, Argonne, Illinois. He received his B.S. in nuclear engineering from National Tsing Hua University in Taiwan and obtained his M.S. and Ph.D. in nuclear engineering from the University of Illinois at Champaign-Urbana. Dr. Chen's areas of specialty include radiation protection, human and environmental risk, and accident analysis, with particular expertise in waste transportation, environmental cleanup, and radioactive material and waste disposition. Dr. Chen is a council member and serves on the board of the National Council on Radiation Protection and Measurements (NCRP). He is currently Scientific Vice President of NCRP on Environmental Radiation and Waste Issues. He is also a certified health physicist sanctioned by the American Board of Health Physics, and he has served as the contamination limits section chair for the American National Standards Institute/Health Physics Standards Committee and as the chair of the U.S. Department of Energy's (DOE's) Transportation Risk Assessment Working Group. At Argonne, Dr. Chen developed an integrated risk assessment program that addresses the broad-based issues to support federal risk-based policies. To this end, he led a program to develop several analytical codes that are commonly used in risk assessment, including the RISKIND code for transportation risk analysis and the RESRAD family of codes for environmental cleanup analysis. Dr. Chen is currently leading studies of emerging issues associated with potential radiological incidents and events, particularly on those pertaining to long-term late phase recovery. His laboratory primarily receives funding from federal sources, such as the U.S. DOE, the U.S. Nuclear Regulatory Commission (NRC) and the U.S. Environmental Protection Agency (EPA). Dr. Chen currently is a member of the U.S. EPA, Science Advisory Board (SAB), Radiation Advisory Committee (RAC).

Field,R. William

University of Iowa

Dr. R. William Field is a professor with appointments in the department of occupational and environmental health and department of epidemiology within the College of Public Health at the University of Iowa. He directs the National Institutes of Occupational Safety and Health's funded occupational epidemiology training program at the University of Iowa. He received his Ph.D. in Preventive Medicine and Environmental Health from the College of Medicine at University of Iowa and prior to entering the academic ranks worked as a Health Physicist at the University of California, Berkeley. After 20 years of performing radon-related research, he is now known as one of the leading national and international advocates for promoting efforts to reduce radon exposure. Recent national and international activities include service to the National Academy of Sciences, the World Health Organization, and numerous other state and national organizations. In addition, he was appointed by President Obama in 2009 to serve on the Advisory Board for Radiation and Worker Health. Dr. Field's research focuses on occupational and environmental epidemiology. He recently oversaw completion of a Department of Defense funded retrospective cohort mortality and cancer incidence study of over 38,000 munitions workers. Dr. Field's research and teaching activities are supported in part by grants from the National Institute for Occupational Safety and Health, the National Institute of Environmental Health Sciences, and the U.S. Environmental Protection Agency. In 2012, Dr. Field was the recipient of the University of Iowa's Michael J. Brody award for his long-term commitment to community, state, regional, and national service. Dr. Field currently is a member of the SAB Radiation Advisory Committee.

Johnson,Thomas

Colorado State University

Dr. Thomas Johnson is an Associate Professor in the Department of Environmental and Radiological Health Sciences at Colorado State University. He holds a BS from Southern Illinois University, an MBA from the University of Illinois, an MS in Environmental Engineering from Northwestern University and PhD in Health Physics from Purdue University. His research efforts are on decontamination, health effects of uranium mining, the effect of lasers on the skin and cornea and laser safety standards. Current research projects include determination of best methods to decontaminate livestock, and fate of in-situ recovery uranium mines. He is a member of the Governor's Radiation Advisory Committee for the State of Colorado, serves on the Colorado State University Radiation Safety Committee, and a member of the American National Standards Institute Z136 editorial working group. Dr. Johnson served on the Scientific Advisory Board/Radiation Advisory Committee Panel on Uranium In-Situ Recovery. Current funding sources for his research include the United States Department of Agriculture, National Institute of Occupational Safety and Health, Nuclear Regulatory Commission, Department of Energy, and the City of Golden Colorado.

Kronenberg,Amy

Lawrence Berkeley National Laboratory

Dr. Amy Kronenberg is a Staff Biophysicist at the Lawrence Berkeley National Laboratory. Her research interests include radiation biology, cancer biology, charged particle radiation biophysics and mutagenesis. She has conducted extensive research on molecular mechanisms of mutagenesis and aspects of genomic instability. She is a Council Member of the National Council on Radiation Protection and Measurements (NCRP). Dr. Kronenberg is very active in national and international professional societies and institutions. She is currently a Senior Editor for the journal Radiation Research and is also a member of the editorial board of the Journal of Radiation Research (Japan). She was an invited speaker at a symposium on radiation carcinogenesis at the Radiation Effects Research Foundation (RERF) in Hiroshima, Japan. She was co-organizer of the American Statistical Association Conference on Radiation and Health (2006), in addition to many other venues. Dr. Kronenberg serves as a member of the External Advisory Board for the National Space Biomedical Research Institute, and as a member of an international review panel for the GSI Helmholtzentrum in Germany. Her research has been supported by Federal funding sources. Dr. Kronenberg received her A.B. in Biology at Brown University, and her Sc.D. in Cancer Biology from the Harvard School of Public Health.

Powell,Brian A.

Clemson University

Dr. Brian A. Powell has expertise in the understanding and prediction of the physical, chemical, and biological processes which govern the mobility of radionuclides in natural and engineered systems through his research in the Department of Environmental Engineering and Earth Sciences at Clemson University as well as previous work at the Lawrence Livermore National Laboratory and the Lawrence Berkeley National Laboratory. He has a B.S. in Chemistry from the University of Montevallo, and M.S. and Ph.D. in Environmental Engineering and Science from Clemson University. He holds memberships in the American Chemical Society, American Geophysical Union, Geological Society of America, Association of Environmental Engineering and Science Professors, and Sigma Xi. At Clemson University, Dr. Powell teaches courses in Actinide Environmental Chemistry, Environmental Radiation Protection (Lecture and Laboratory courses), Introductory Health Physics, Geochemistry, and Geochemical Reaction Modeling. Dr. Powell served on the SAB/RAC Panel for the Uranium In-Situ ISL Advisory. His research focuses on biogeochemical processes controlling radionuclide behavior in the environment such as sorption by minerals, interactions with nano-colloids, complexation by organic ligands, and interactions with microorganisms. He has published over 20 refereed journal publications, thirteen research reports, and made over 50 technical presentations on these topical areas. He has conducted sponsored research in a wide range of projects dealing with topics of nuclear forensics, evaluation of nanoparticle behavior, sorption and environmental transport of plutonium, development of radiation detection and radiation laboratory courses, iodine, radium, strontium geochemistry in wetland and subsurface sediments, radionuclide geochemistry of saltstone and solid waste performance assessments at the Savannah River Site, measurement of thermodynamic parameters supporting advanced fuel cycle chemistry, and related topics. These research projects have garnered funding from the National Science Foundation, the Department of Energy, the Nuclear Regulatory Commission, the Department of Homeland Security, the National Nuclear Security Agency, Savannah River Nuclear Services (through the South Carolina Universities Education and Research Foundation). Dr. Powell served on the SAB/RAC Panel for the Uranium In-Situ ISL Advisory.

Preston,Dale L.

Hirosoft International

Dr. Dale L. Preston is a principal scientist with Hirosoft International where he is a biostatistician who has worked on studies of radiation health effects for more than 25 years and is the author/ coauthor of almost 100 peer-reviewed publications in this area. Previously, he worked at the Radiation Effects Research Foundation (RERF) in Hiroshima, Japan (1981-2004), with a two year sabbatical (1987-1989) in the Radiation Epidemiology Branch of the National Cancer Institute (NCI). He continues to work on studies of cancer risks in the atomic bomb survivors while also working on the assessment of cancer risk in populations exposed to radiation as a result of the operations of the Russian plutonium production complex (Mayak), and studies of a large cohort of X-ray technologists in the United States. Dr. Preston served as a consultant to the National Academy of Sciences (NAS) BEIR V committee and to the United Nations Scientific Committee on the Effects of Atomic Radiation (UNSCEAR). Since 2000 he has been a member of Committee 1 of the International Commission on Radiological Protection (ICRP) where he played a major role in the development of the latest detriment estimates and tissue weighting factors. He is also the principal developer of the Epicure risk regression software that is widely used in studies of health effects of radiation and other environmental exposures. Dr. Preston is a fellow of the American Statistical Association. His research interests include: analysis of dose-response shape, effects modification, temporal patterns of radiation-associated cancer and non-cancer mortality and incidence; methodological research on the risk estimation from cohort survival and case-control data using generalized risk models; and the design and development of statistical software. Dr. Preston currently is a member of the U.S. Environmental Protection Agency (EPA), Science Advisory Board (SAB), Radiation Advisory Committee (RAC).

Raabe,Otto G.

University of California

Dr. Otto G. Raabe is Professor Emeritus of Molecular Biosciences and Environmental Engineering at the University of California, Davis, where he has taught and conducted research since 1976 in the fields of radiation biology and biophysics, airborne particle science, and inhalation toxicology. He is a recognized expert in fields of radiation biophysics, aerosol science, airborne particle inhalation deposition and airborne particle size-selective sampling and evaluation. Dr. Raabe earned his Ph.D. in Radiation Biology and Biophysics from the University of Rochester's School of Medicine and Dentistry, and his B.S. in Physics, graduating with distinction from the University of New Mexico. His research interests include radiation biology, biophysics, internal radiation dosimetry, radiation carcinogenesis, dose-response relationships, risk assessment, health physics, environmental health, environmental radioactivity, airborne radioactivity, aerosol science, aerosols in medicine, airborne particle sampling and characterization, inhalation toxicology, inhalation exposure equipment and methods, and chemical toxicology. Dr. Raabe has authored or co-authored over 100 publications in the above topical areas. He has been a Board-Certified Health Physicist (CHP) since 1970, and a member of the Health Physics Society (HPS) for 50 years. He was elected a Fellow of the HPS in 1992 and was awarded the Society's Distinguished Scientific Achievement Award in 1994. In addition to radiation biology, Dr. Raabe is knowledgeable in the fields of industrial hygiene and toxicology and is a member of the American Industrial Hygiene Association , the Society of Toxicology, the American Association for Aerosol Research, the American Conference of Governmental Industrial Hygienists, the Radiation Research Society, the American Academy of Health Physics, the International Society for Aerosols in Medicine, and the American Association for the Advancement of Science. He is a past president of the American Academy of Health Physics, and the Health Physics Society.

Richardson,David

University of North Carolina

David B. Richardson, PhD is Associate Professor of Epidemiology in the School of Public Health at the University of North Carolina at Chapel Hill. His research focuses on the health effects of occupational and environmental exposures, particularly with regards to ionizing radiation. He has conducted studies of cancer among nuclear workers at several U.S. Department of Energy facilities, as well as studied cancer among the Japanese survivors of the atomic bombings of Hiroshima and Nagasaki. He has served as a visiting scientist at the World Health Organization's International Agency for Research on Cancer in Lyon, France and at the Radiation Effects Research Foundation in Hiroshima, Japan. Since 2007, he has served as Director of the National Institute of Occupational Safety and Health-funded training program in occupational epidemiology at the University of North Carolina-Chapel Hill. In addition, he is a core faculty member at the Injury Prevention Research Center at the University of North Carolina, and a member of the Exposure and Biomarkers Research Core at the University's Center for Environmental Health and Susceptibility. He is an Associate Editor of the journals Occupational and Environmental Medicine, American Journal of Epidemiology and Environmental Health Perspectives, is a member of the President's Advisory Board on Radiation and Worker Health, and currently serves on the Institute of Medicine's Committee on Review of the Department of Labor's Site Exposure Matrix Database. Dr. Richardson's current research includes studies of mortality among workers in the nuclear industry and development of innovative methods for occupational cancer studies. These research activities are supported by grants from the National Institute for Occupational Safety and Health, and the National Cancer Institute. Dr. Richardson received a Ph.D. and M.S.P.H., both in epidemiology, from the University of North Carolina.

Stram,Daniel O.

University of Southern California

Dr. Daniel O. Stram, Ph.D. is Professor of Preventive Medicine, Biostatistics Division, of the University of Southern California. His research is primarily focused upon statistical problems that arise out of the design, analysis, and interpretation of large scale epidemiological studies. His research interests include measurement error analysis, meta-analysis, longitudinal modeling, association-based studies of genetic susceptibility to cancer, and general exposure-response modeling in cancer epidemiology. Dr. Stram received his Ph.D. in Statistics from Temple University in 1983, and did postdoctoral training in Biostatistics at the Harvard School of Public Health from 1984-86. In 1986-1989 he was a member of the Statistics Department of the Radiation Effects Research Foundation (RERF) in Hiroshima, Japan, collaborating on studies of the health of survivors of the atomic bombings. Since coming to the University of Southern California in 1990 he has been involved as co- or principal investigator in studies of the Colorado Plateau Uranium Miners cohort, the Multi-ethnic Cohort Study, and the California Teachers Study. Dr. Stram was a member of the National Academy of Sciences' Board on Radiation Research from 1997-2003. He has participated in the preparation of many National Academy of Sciences reports reviewing research into the impact of radiation releases on the health of nuclear weapons plant workers and populations living downwind of weapons facilities and nuclear test sites. Dr. Stram has authored or co-authored over 130 peer-reviewed articles in statistical, medical, and epidemiological journals. Dr. Stram currently is a member of the U.S. Environmental Protection Agency (EPA), Science Advisory Board (SAB), Radiation Advisory Committee (RAC).

Valberg,Peter

Gradient Corporation

Dr. Peter A. Valberg works in Human Health Risk Assessment (including ionizing radiation) at Gradient, an environmental consulting company in Cambridge, MA. Dr. Valberg received his B.A. in Physics and Mathematics from Taylor University, his M.A. and his Ph.D. in Physics from Harvard University, completing his doctoral thesis work in the laboratory of Nobel Prize winner Norman Ramsey. He also has an M.S. degree in Human Physiology and Inhalation Toxicology from the Harvard School of Public Health. His expertise includes electromagnetic fields, effects of radionuclide decay products on health risk, inhalation toxicology, environmental health, and the use of epidemiology for risk analysis. Dr. Valberg has served as a peer reviewer for grant applications for the National Institutes of Health and the Environmental Protection Agency. He has been an expert witness for the Justice Department as well as for private parties. He has testified before the Energy and Commerce Committee of the US Congress.Dr. Valberg served for 20 years on the faculty of the Harvard School of Public Health and has provided air quality expertise to the National Academy of Sciences. He is the author of more than 100 peer-reviewed scientific articles on biological effects of environmental exposures on humans and animals. Dr. Valberg's risk assessment expertise covers air pollutants, chemical exposures, bioaerosols, radionuclides, power-line electric and magnetic fields (EMF), radio waves, and cellular telephones. Recent projects have included evaluating health impacts of cellular telephone technology, airborne particulate matter, diesel exhaust, asbestos, and naturally occurring radioactive material (NORM).Dr. Valberg regularly prepares and interprets health-risk analyses for a variety of audiences, including government, municipalities, law firms, industries, and private parties. Dr. Valberg's salary and sources of funding for research projects derive primarily from private-sector clients who request Gradient services for scientific analyses of various environmental topics, many of which are described on Dr. Valberg's resume.

Xu,X. George

Rensselaer Polytechnic Institute

Dr. X. George Xu received his PhD in nuclear engineering from Texas A&M University and is currently professor and head of the nuclear engineering program at Rensselaer Polytechnic Institute. He held a joint appointment as the radiation safety officer, responsible for the management of RPI's comprehensive nuclear and radiation safety program including an electron accelerator and a low-power nuclear reactor. Dr. Xu is an internationally renowned expert in radiation dosimetry, radiation measurement, shielding design and Monte Carlo simulations. He has pioneered methods for computational phantoms for Monte Carlo based organ dose calculations for diverse health and medical physics applications. Dr. Xu has directed numerous projects funded by National Science Foundation (NSF), Department of Energy (DOE), National Institutes of Health (NIH), National Institute of Standards and Technology (NIST) and Electric Power Research Institute (EPRI). He has authored 140 peer-reviewed papers, 210 conference abstracts, and 94 invited seminars and plenary presentations. Dr. Xu served as the President of the Council on Ionizing Radiation Measurements and Standards (CIRMS) and is a member of the American Nuclear Society (ANS), Health Physics Society (HPS) and American Association of Physicists in Medicine (AAPM). In 2008, he was elected to a 6-year term as a member of National Council of Radiation Protection and Measurements (NCRP). Dr. Xu co-founded the International Consortium of Computational Human Phantoms (www.virtualphantoms.org) and, in 2009, served as the editor of "Handbook of Anatomical Models for Radiation Dosimetry." Dr. Xu is the recipient of numerous awards including NSF Faculty CAREER Award, Rensselaer School of Engineering Excellence in Research Award, American Nuclear Society Best-Paper Award, and Top-10 Best Paper Award by Physics in Medicine and Biology.