

**Invitation for Comments on "Short List" Candidates for the
Clean Air Scientific Advisory Committee (CASAC)
National Ambient Air Monitoring Strategy (NAAMS) Subcommittee
EPA Science Advisory Board (SAB)**

The EPA Science Advisory Board (SAB, Board) announced in 68 FR 11082-11084, November 5, 2002 that it was forming National Ambient Air Monitoring Strategy (NAAMS) Subcommittee and requested nominations for potential panel members. Background on the project and details on panel nomination process reviewed appear in the above referenced Federal Register notice and are also available at the SAB website (www.epa.gov/sab).

The Science Advisory Board Staff Office has reviewed the nominations for the Panel, and has identified a list of nominees to a "Short List" of 22 candidates based on the qualifications and interest of the nominees. Brief biosketches of the candidates on the "Short List" are listed below for comment. We invite comments from the public on these candidates. We welcome information, analysis or documentation that the Board should consider in evaluating the "Short List" remaining candidates.

The SAB Staff Office Director, in consultation with SAB leadership, as appropriate, makes the final decision about who will serve on the panel in the "Panel Selection" phase. In that phase, SAB Staff completes its review of information regarding conflict of interest, possible appearance of impartiality, and appropriate balance and breadth needed to address the charge. They review all the information provided by the candidates, along with any information that the public may provide in response to the posting of information about the prospective panel on the SAB website during the "Short List Phase," and information gathered by SAB Staff independently on the background of each candidate.

Please provide any advice, observations or comments you might think would be helpful in selecting the final candidates no later than May 22, 2002. Please make your comments to the attention of Mr. Fred Butterfield, Designated Federal Officer. E-mailing comments (butterfield.fred@epa.gov) is the preferred mode of receipt. We intend to make final selections no later than June 3, 2002.

1. Dr. Praveen K. Amar

Dr. Praveen K. Amar is the Director of Science and Policy for the Northeast States for Coordinated Air Use Management (NESCAUM), Boston, MA. His areas of expertise, research activities and interests include: (1) implications of scientific findings for air pollution policy on state, regional, and national scales; and (2) atmospheric modeling of ozone and fine particles on regional scale. Dr. Amar was the conference chair or co-chair of the annual symposium at Endicott House, Boston, sponsored by MIT and Caltech. He also represented States' stakeholders at the EPA's NSR Advisory Subcommittee (1993-1996). In addition, he currently represents stakeholders from States in the national FACA process on developing MACT for mercury from coal-fired boilers.

Dr. Amar earned his M.S. (mechanical engineering) from California State University, Los Angeles in 1971; and his Ph.D. in engineering from UCLA in 1977. He was a member of the Science Advisory Committee, MIT/Caltech Center on airborne organics (1993-2001); and was a member of the NARSTO synthesis team on ozone assessment (1996-2000). In addition, Dr. Amar is a member of the Science Advisory Committee, NYSERDA's EMEP program, State of New York (1999-present); and is contributory author to the NARSTO PM assessment (2000-2003).

NESCAUM receives its funding from EPA (section 103 and 105 grants), its member States, and foundations. Dr. Amar's recent funding within NESCAUM has come from EPA (CAMD and OAR) on the subjects of monetizing benefits of controlling mercury from coal-fired units, and cost-effective strategies for reducing emissions from distributed generators such as diesel engines. A forthcoming (Summer 2003) EPA STAR grant project with Georgia Tech and MIT will evaluate the effect of global climate change on regional air quality for ozone and fine particles.

2. Mr. Craig Beskid

Mr. Craig Beskid is the Executive Director of the the Mickey Leland National Urban Air Toxics Research Center. His areas of expertise include ambient air monitoring of criteria and air toxics, and the health effects of urban air toxics. He was awarded an M.S. in Engineering from the University of Florida, 1980.

Mr. Beskid is the author of a professional article recently published in *Environmental Health Perspectives* (August 2002), entitled, "Environment Air Toxics: Role in Asthma Occurrence?"

His service on other advisory committees and professional associations includes: Chairman, Regional Air Quality Planning Committee (RAQPC), organize and lead meetings of government, academia and industry on air quality and environmental health issues; Vice-Chair, Greater Houston Partnership (GHP), organize and lead meetings of government, academia and industry on air quality and environmental health issues; and Board President, Houston Regional Monitoring (HRM), oversee fiscal and technical management of 7 site air quality monitoring program.

The Mickey Leland National Urban Air Toxics Research Center receives EPA Assistance grants.

3. Mr. Bart Croes

Mr. Bart Croes is currently Chief, Research Division, California Air Resources Board and director of the State's health and exposure research program. An atmospheric scientist with a background in air quality simulation modeling and a P. E. in Chemical Engineering (California), Mr. Croes was formerly responsible for the design of California's air-quality measurement program.

Mr. Croes holds advanced degrees with an M.S. (Chemical Engineering) from the University of California at Santa Barbara, 1983, and a B.S. (Chemical Engineering) from California Institute of Technology, 1979.

Mr. Croes is Public Sector Co-Chair, Executive Assembly, NARSTO, and is a member of the National Research Council Committee on Research Priorities for Airborne Particulate Matter. He received the Editors' Citation for Excellence in Refereeing, *Journal of Geophysical Research*.

Mr. Croes has had the following articles published by the NRC: "Research Priorities for Airborne Particulate Matter: III" (2001); "Early Research Progress and Research Priorities for Airborne Particulate Matter: II" (1999); "Evaluating Research Progress and Updating the Portfolio" (1999); and, with M. S. Bergin, A. G. Russell, W. P. L. Carter, and J. H. Seinfeld, "Ozone Control and VOC Reactivity" (1998). He has contributed to numerous publications: *Encyclopedia of Environmental Analysis and Remediation*, John Wiley & Sons, Inc. (1995); "Acidic Deposition in California: Findings from a Program of Monitoring and Effects Research, Water, Air and Soil Pollution," 85; *Acid Reign '95, Proceedings from the 5th International Conference on Acidic Deposition*, June 26-30; and, with A. Russell, J. Milford, M. S. Bergin, S. McBride, L. McNair, Y. Yang, and W. R. Stockwell, "Urban Ozone Control and Atmospheric Reactivity of Organic Gases," *Science*, 269 (1995).

4. Dr. Kenneth Demerjian

Dr. Kenneth Demerjian is currently a Professor in the Department of Earth and Atmospheric Science, and Director, Atmospheric Sciences Research Center, and the University at Albany, SUNY.

His areas of expertise, and research activities and interests include: chemical kinetics and mechanistic pathways of elementary atmospheric reactions in polluted and clean atmospheres; instrumentation development and measurement of atmospheric trace gases and particulate matter; development and evaluation of air quality forecast models and diagnostic analysis of atmospheric processes within air quality modeling systems; and sources and evaluation of uncertainty in theoretical models of atmospheric processes, air quality, and pollutant exposure;

Dr. Demerjian's leadership positions in national associations or professional publications include: Associate Editor, *Atmospheric Environment*, November, 2002 to present; Board on Oceans and Atmosphere NASULGC, November 2001 to November 2004; Member, UCAR Members' Nominating Committee, October 2001 to present; and Chairman, Committee for the Atmospheric Chemistry and Environmental Education in Global Change, 1994 to 1999.

Dr. Demerjian was awarded his M.S. and Ph.D. in physical chemistry from the Ohio State University in 1970 and 1973, respectively. He received his B.A. in chemistry from Northeastern University in 1968.

Dr. Demerjian's service on other advisory committees and professional associations includes: Member, Research Committee, Health Effects Institute, July 2002 to present; Member, National Research Council Committee on Atmospheric Chemistry, August 1999 to 2001; Co-Chair,

Synthesis Team - NARSTO, October 1996 to March 2000; and Member, National Research Council Committee on Research Opportunities and Priorities for the Environmental Protection Agency (ROPE), November 1995 to June 1997.

Dr. Demerjian's sources of recent grant and/or other contract support funding include: U.S. EPA, PM Supersite Cooperative Agreement, "PM2.5 Technology Assessment and Characterization Study - New York" (PMTACS-NY), January 15, 2000 - December 2004; New York Energy Research and Development Authority (NYSERDA), Contract, "Joint Enhanced Ozone and PM Precursors and PMTACS-NY Measurement Program," January 1999 - June 30, 2003; and New York State Department of Environmental Conservation, Environmental Bond Act Funds in support of PMTACS-NY, August 1, 1999 - July 2004.

5. Dr. David Diaz-Sanchez

Dr. David Diaz-Sanchez is Assistant Professor in the Department of Medicine, University of California, Los Angeles. For 15 years, Dr. Diaz-Sanchez' work has focused on the role of the environment in affecting immune responses with special emphasis on the ability of environmental agents to modulate the allergic and asthmatic response. For his Ph.D., he studied why workers in castor bean factories had very high incidence of allergy and asthma. Since that time his primary focus has centered on the link between industrialization and allergic diseases. Using human and animal models, Dr. Diaz-Sanchez has demonstrated and published extensively on the ability of combustion products to exacerbate allergy/asthma using the model pollutant diesel exhaust particles (DEP). In addition, his research has shown that particulate pollutants can also initiate allergy/asthma by promoting allergic sensitization.

Dr. Diaz-Sanchez received his Ph.D. from Guy's Hospital, London, England, in 1991, and B.Sc. from University College, London, England, in 1987.

Dr. Diaz-Sanchez served previously as a consultant to EPA's Clean Air Scientific Advisory Committee (CASAC) from 1998 to 2001. In 1999, he worked at the Southern California Environmental Health Sciences Center and in 1998 at the Children's Environmental Health Center in Southern California. He has recently served on the editorial boards of two publications; namely, *Clinical Immunology* in 2001 and *Immunology* in 2000.

Ongoing projects Dr. Diaz-Sanchez is associated with are: (1) NIEHS/EPA P01 ES09581, Respiratory Disease and Prevention 11/01/98 – 10/31/03 Project: "Modulation of Allergic Responses by Environmental Tobacco Smoke;" (2) NIH/NIAID P01 AI50495-01 Xenobiotics and Allergic Inflammation 09/01/01 – 08/31/06 Project: "Metabolic Pathways and Genes on Xenobiotic-Enhanced Allergic Inflammation"; (3) Allergy Research Foundation, Nasal Challenge with SCH 34117 02/01/00 – 01/31/03; and (4) Health Effects Institute Exacerbation of Allergic Inflammation in the Lower Respiratory Tract, proposed 05/01/03-04/30/06.

6. Mr. Eric Edgerton

M. Eric Edgerton is President/Scientist, Atmospheric Research & Analysis, Inc. His areas of expertise include atmospheric chemistry, measurement of trace atmospheric species, and geochemical cycles of sulfur, nitrogen and carbon.

Mr. Edgerton received his B.A. from Cornell University and his M.A. from the University of Florida.

Mr. Edgerton's sources of recent grant and/or other contract support funding include: EPRI (Contract), ARIES Epidemiology Study and SEARCH PM Study; the Southern Company, SEARCH-II PM Study; EDEP BRACE, NO_x/HNO₃ Measurements; and SEASARM/VISTAS, Focus Site Operations.

7. Dr. D. (Dennis) Alan Hansen

Dr. D. Alan Hansen has been manager since 1985 of Tropospheric Studies, Environment Department, Electric Power Research Institute (EPRI). Concurrently, he served as manager for: (1) Operational Evaluation Network of Eulerian Model Evaluation and Field Study (EMFS) from 1988 to 1990; (2) Southeastern Aerosol Research and Characterization Study, 1998 to the present; and (3) Aerosol Research and Inhalation Epidemiology Study, air quality measurements, from 1998 to the present.

Dr. Hansen has held two positions as convening chair: one with the Project Management Group of EMFS; and the second with the Consortium for Advanced Modeling of Regional Air Quality (CAMRAQ). Dr. Hansen received his Ph.D. in Chemistry from the University of California at Irvine in 1973, and a B.A. in Chemistry from Southern Illinois University, Carbondale, in 1967.

Dr. Hansen's fields of expertise include: atmospheric chemistry and atmospheric measurement methods (gases, particles, fluxes, optical properties); air quality associated with model development and evaluation (source and receptor oriented); and data analysis and interpretation, network design, and quality assurance for air quality networks.

Dr. Hansen has served in numerous positions related to his expertise in quantification of air quality. Dr. Hansen served on the Advisory Committee to North American Air Monitoring and Modeling Project of the Commission for Environmental Cooperation, from 1997 to 1999 and the Technical Committee for the San Joaquin Valley Air Quality Study/AUSPEX Regional Model Adaptation Project (SARMAP), from 1989 to 1996.

As an invited participant he worked with the Department of Energy Workshop to identify Meteorological Research Needs for Air Quality Studies in the Southwestern U.S. in May 1995. He co-chaired the Chemistry and Modeling Planning Group and Research Prioritization Group for the North American Research Strategy for Tropospheric Ozone in 1993. He was chair of the Peer Review Panel for Cooperative Agreement Proposals submitted to EPA/AREAL on Analysis of Ozone Data Sets, Global Carbon Cycle, Gas Phase Kinetics and Mechanisms and Heterogeneous Chemistry of Organohalogen Compounds also in 1993. He served on the Advisory Panel for Model Evaluation to the Canadian Ozone Research Program in 1992.

8. Dr. Philip K. Hopke

Dr. Philip K. Hopke is Bayard D. Clarkson Distinguished Professor, Departments of Chemical Engineering and Chemistry, Clarkson University.

Dr. Hopke's areas of expertise, research activities, and interests are: multivariate statistical methods for data analysis; sampling and analysis of airborne particulate matter; characterization of source/receptor relationships for ambient air pollutants; experimental studies of homogeneous, heterogeneous, and ion-induced nucleation; indoor air quality; and exposure and risk assessment.

Dr. Hopke's Ph.D. (1969) and M.A. (1967) are from Princeton University in Chemistry. His B.S. in Chemistry was from Trinity College, Hartford, CT.

Currently Dr. Hopke is Vice President of the American Association for Aerosol Research and Associate Editor for Reference Data Sets, Chemometrics and Intelligent Laboratory Systems. He was formerly Editor-in-Chief of *Aerosol Science & Technology* from 1993 through 2002.

Dr. Hopke has served as a member of the Executive Committee of the EPA Science Advisory Board from 2000 until 2004 and also chairman of the SAB's Clean Air Science Advisory Committee (CASAC) for the same time period. Currently he is also a member of the SAB's Research Strategies Advisory Committee. He participates as a member of the NAS/NRC Committee on Air Quality Management and their Committee on Research Priorities for Airborne Particulate Matter.

Dr. Hopke recent and current grant and other contract support includes consulting on scientific and technical matters related to: particulate matter, particle monitoring, semi-volatile pollutants, vapor nucleation, EPA Supersites, sources of PCBs, regional air quality monitoring, and computational fluid dynamic modeling in humans for the Federal government (EPA & NIOSH), a state agency (NYSERDA), and the National Science Foundation (NSF).

9. Dr. Rudolf B. Husar

Dr. Rudolf B. Husar is currently Professor of Mechanical Engineering, Director of Center for Air Pollution Impact and Trend Analysis (CAPITA), Washington University, St. Louis. In the early 1970s he was a post-doctoral fellow at the California Institute of Technology, Pasadena, CA.

His past research includes: atmospheric aerosols; regional and global air pollution transport and chemistry; biogeochemical cycles; environmental trend analysis; monitoring network evaluation and design. His interests include environmental informatics — the application of information science, engineering, and technology to environmental problems — as well as scientific support to air quality.

Dr. Husar has served as an executive editor of the journal *Atmospheric Environment*, and on the boards of five other international journals, including as Associate Editor, *Atmospheric Systems*; *The Scientific World*, (2001-present), member of Editorial Board, *Environmental Monitoring and*

Assessment, (2000-present). He is a member of the Hungarian Academy of Sciences and served on five committees of the U.S. National Academy of Sciences. Dr. Husar has also served on numerous national and international panels and committees dealing with various aspects of atmospheric sciences and air quality management. He was a contributor to EPA's Particulate Matter Criteria Document Panel in 1996.

Recent publications include articles (with others) in the *Journal of the Waste Management Association*, *Atmospheric Environment*, and the *Journal of Geophys. Res.* (all in 2001). Another article, "Sulfur and Nitrogen over North America, Global Aspects of the Environment," is available from the Elgar Reference Collection, Cheltenham, UK, and Northampton, USA (1999).

Dr. Husar's Ph.D. is in Mechanical Engineering from the University of Minnesota, Minneapolis, in 1966. He received a Dipl. Ing. in Mechanical Engineering from Technical University, Berlin, FRG.

Dr. Husar's sources of recent grant and/or other contract support funding include: National Science Foundation (NSF), Collaboration through Virtual Workgroups, 9/01/01-8/31/03; NSF, Digital Government: An Integrated Fire, Smoke and Air Quality Network, 6/01/02-5/31/06; EPA, A Web-based Visibility Information System, 5/98-5/03; EPA, Ozone and PM Air Quality Analysis in Support of Public Needs, 5/98-5/03; MARAMA-EPA, Source Apportionment of Air Quality Monitoring Data: Pair Aerosol/Trajectory Database Analysis Tool Development, 8/02-7/03; MCNC-EPA, Intercontinental Transport, 12/02-12/03; EPA, St. Louis-Midwest Particulate Matter (PM) Supersite, Monitoring Support, 1/00-12/03.

10. Ms. Cynthia Lee

Ms. Cynthia Lee is the Environmental Programs and Air Monitoring Manager, Air Pollution Control District of Jefferson County, Louisville, KY. Ms. Lee participated in and subsequently managed ambient air monitoring and voluntary emission reduction strategies for the Louisville, Kentucky, Metro Air Pollution Control District for six years. These projects integrated multi-pollutant non-traditional initiatives with their traditional counterparts in order to reduce emissions and protect the community's public health.

Ms. Lee has also worked with land use and planning, mobile source modeling, air quality outreach, pollution prevention, sustainability, energy use, and mobile source outreach by administering CMAQ funds. For the Kentucky State Implementation Plan (SIP) for the Louisville ozone attainment demonstration, she collected, documented, and submitted 25 years of information. Ms. Lee directed the growth and development of environmental laboratory services to meet increasing demands of the marketplace and expanded the scope of its services for 16 years.

Ms. Lee has been a presenter at the International Conference of Quality in Health & Environment of the Province of Buenos Aires, September 2001, focusing on health benefits from improving air quality. She was formally a member of the ELAB Federal Advisory Committee and the Field Measurements Ad Hoc Committee for the National Environmental Laboratory Accreditation Program STAPPA/ALAPCO Air Monitoring and Mobile Source Committees

Ms. Lee's B.S. degree is in Chemistry/Life Sciences from Indiana State University, Terre Haute, IN, and she has a Master's of Business Administration from University of Louisville, Louisville, KY.

Within the last two years Ms. Lee worked with the following: (1) EPA 105 grant: monitoring and voluntary programs; (2) EPA 103 grants: PM2.5, Speciation, EMPACT; (3) CMAQ grants on infrastructure enhancements and outreach activities; (4) EPA Sustainable Development Challenge grant; and (6) Air toxics CBEP grant.

11. Dr. Morton Lippmann

Dr. Morton Lippmann is Professor, New York University School of Medicine. Dr. Lippmann's areas of expertise and interest include human environmental exposure assessment and associated health effects, respiratory tract dosimetry, aerosol science and technology, and risk assessment.

He has served as past Chair of EPA's SAB Clean Air Scientific Advisory Committee (CASAC) and as a member of SAB's Exposure Committee. He has also served on the NIOSH Board of Scientific Counselors and with the American Conference of Governmental Industrial Hygienists. Dr. Lippmann was also President of the International Society of Exposure Analysis.

Dr. Lippmann received PM Health Effects Research grants from EPA and NIEHS grants for Environmental Health Sciences research, as well as an EPA Cooperative Agreement: Personal Exposure to PM.

12. Dr. Donald Milton

Donald K. Milton, M.D., DrPH, is a Lecturer on Occupational and Environmental Health, Harvard School of Public Health, Boston, MA; Lecturer in Medicine, Harvard Medical School, Boston, MA; Associate Physician, Brigham and Women's Hospital, Boston, MA; and Occupational Medicine Consultant, Fallon Clinic, Worcester, MA.

Dr. Milton's areas of expertise include occupational and environmental respiratory epidemiology, asthma, aerobiology, hygiene hypothesis of asthma pathogenesis, and airborne infection. He is a member and former chair of the American Conference of Governmental Industrial Hygienists Bioaerosols Committee (1989-present), and has been nominated to the editorial board of *Indoor Air* (2003).

Dr. Milton received his DrPH and MOH in occupational health from the Harvard School of Public Health in Boston in 1989 and 1984, respectively. He received his Doctor of Medicine (M.D.) from Johns Hopkins University, Baltimore in 1980, and his B.A. in chemistry from the University of Maryland, Baltimore County. He is a member of the American Thoracic Society task force on occupational contribution to the burden of airway disease.

Dr. Milton's sources of recent grant and/or other contract support funding include: NIEHS, home endotoxin and childhood asthma; home allergens and asthma, and outdoor allergens and acute asthma; NHLBI, community-based study of adult-onset asthma; NIOSH, prevention of indoor environmental quality-related absence, machining fluid microbiology and health, and identifying

the incidence of occupational asthma; ASPH/CDC/NIOSH, respiratory infections and asthma; and the Sloan Foundation: biodefense in the public school classroom.

13. Dr. Spyros Pandis

Dr. Spyros Pandis is ABB Professor, Departments of Chemical Engineering and Engineering & Public Policy, Carnegie Mellon University. His major areas of expertise are atmospheric aerosol measurements and atmospheric chemistry modeling.

Dr. Pandis has served on the Board of Directors of the American Association for Aerosol Research since 2001 and on the World Climate Research Program as a member of the Aerosol Modeling Group since 1995. He has been on the Editorial Board of the *Journal of Aerosol Science* since 2002, and is a Director of the Pittsburgh PM Supersite. Dr. Pandis has published more than 80 peer-reviewed documents and a textbook in atmospheric chemistry.

Both Dr. Pandis' Ph.D. (1991) and M.S. (1988) are in Chemical Engineering from the California Institute of Technology.

Dr. Pandis has served the National Research Council on two committees; namely, the Committee Reviewing US Air Quality Management, 2001-present, and the Committee Reviewing DOE Particulate Matter Program, 1999. He has also served on the Science Assessment Team for North American Research Strategy for Tropospheric Ozone from 2000 to the present.

Dr. Pandis' sources of recent grant and/or other contract support funding include: EPA (PM Supersites and STAR); DOE (PM Measurements and Modeling); NSF (PM Properties); and LADCO (PM Modeling).

14. Dr. Calvin B. Parnell, Jr.

Dr. Calvin B. Parnell, Jr., is Regents Professor, Texas A&M University, Biological & Agricultural Engineering Department, and Director of the Center for Agricultural Air Quality Engineering and Science.

Dr. Parnell's areas of expertise, research and special interest involve: air quality in areas of accurate measurements of PM10 and PM2.5 from agricultural sources for use in limiting emissions; dispersion modeling from low-level point sources (LLPS) and ground-level area sources (GLAS) for prediction of downwind concentrations near the source used for permitting and inventory purposes; development of accurate emission factors for LLPS and GLAS; and abatement strategies for reducing emissions, and also sound-science descriptors of odor intensity measurements.

Dr. Parnell received the G.B. Gunlogson Countryside Engineering Award (1999) and became a Fellow in the American Society of Agricultural Engineers (1995), of which he is a member. He also received the American Industrial Hygiene Paper Award for "A New Cotton Dust Sampler for PM-10 Aerosol" with A.R. McFarland and P.D. Hickman. Dr. Parnell is a member of the

American Society of Engineering Education, Texas Society of Professional Engineers, Sigma Xi, Alpha Epsilon, and the Air and Waste Management Association.

Dr. Parnell received both a Ph. D and an M.S. from Clemson University. He was awarded his Ph.D. in Environmental Systems Engineering in 1970 and his master's in Agricultural Engineering in 1965. His B.S. was also in Agricultural Engineering from New Mexico State University in 1964.

Dr. Parnell was appointed to the Task Force on Air Quality by the Secretary of Agriculture for 1996, 1998, 2000 and 2003. He served on the National Academy's Committee on Air Emissions from Animal Feeding Operations, 2002. Dr. Parnell was appointed to the Texas Air Control Board by the Governor of Texas, 1989-1993

He has received grants or support from: the Cotton Foundation, 1994 to present; the Texas Legislative Initiative, 1999 to present; the Federal Initiative, 2002 to present; and the Federal Initiative, in cooperation with the University of California at Davis, from 2002 to present.

15. Mr. Richard L. Poirot

Mr. Richard L. Poirot is an Air Quality Planner with the Vermont Dept. of Environmental Conservation. His field of expertise includes air quality data analysis (especially for ozone & precursors, PM-2.5 and regional haze), receptor modeling, source attribution, and aerosol/visibility effects.

Mr. Poirot is current chair and member of the Mid-Atlantic North East Visibility Union (MANE-VU) Regional Planning Organization (RPO) Ambient Monitoring and Data Analysis Workgroup and also current co-chair and member of the Inter-RPO Monitoring and Data Analysis Workgroup. He is United States co-chair and member of the New England Governors'/Eastern Canadian Premiers' Acid Deposition Workgroup on Trans-boundary Data Exchange. He is former chair and a member of the Northeast States for Coordinated Air Use Management (NESCAUM) Ambient Monitoring and Assessment Committee.

Mr. Poirot received a B.A. (Geography and Environmental Studies Program) from Dartmouth College in 1972.

Mr. Poirot is a former member of EPA's: (1) Acid Rain Advisory Committee; (2) FACA Subcommittee on Ozone, Particulate Matter and Regional Haze of the Science and Technical Support Workgroup; and (3) Ozone Transport Assessment Group (OTAG) Monitoring and Data Analysis Workgroup. He has further served as a member of several committees, including: National Atmospheric Deposition Program (NADP) Technical Committee; Interagency Monitoring of Protected Visual Environments (IMPROVE) Steering Committee; Visibility Information Exchange Web System (VIEWS) Steering Committee; US-Canada Air Quality Agreement Subcommittee on Scientific Cooperation; and US-Canada Air Quality Agreement, Workgroup on Trans-boundary PM2.5 Modeling and Data Analysis.

16. Dr. Paul T. Roberts

Dr. Paul T. Roberts is Executive Vice President and Senior Manager of Air Quality and Exposure Studies at Sonoma Technology, Inc. in Petaluma, CA.

Dr. Roberts has expertise in the areas of atmospheric science, exposure assessment, measurement of ozone and particulate matter and their precursors, and visibility. Most of his projects involve the use of field data and analysis methods to understand important meteorological, air quality, and exposure phenomena; to support the development, application, and evaluation of meteorological, photochemical, and exposure models; and to evaluate the effectiveness of ambient air quality and meteorological networks in meeting various regulatory requirements. Dr. Roberts has led and performed air quality projects throughout the United States, as well as in Juarez, Mexico, and Cairo, Egypt.

Dr. Roberts received his Ph.D. in Environmental Engineering Science, California Institute of Technology, 1975, and both a B.A. and M.Ch.E. in Chemical Engineering from Rice University in 1969 and 1970, respectively.

Among those committees and panels Dr. Roberts has served on are: California Inspection and Maintenance Review Committee, 1994-1995; EPA NCERQA grant peer-review panels 1995-1998; and External Peer-Review Panel for “Air Quality Criteria for Carbon Monoxide.”

Dr. Roberts’ sources of recent grant and/or other contract support funding include: NESCAUM (Evaluation of PAMS network in Northeast and Mid-Atlantic states); California Air Resources Board and U.C. Berkeley (Fresno Asthmatic Children’s Environment Study, FACES -- exposure assessment, measurements, data validation, data management, and data analysis); EPA, AAAQMC/OAR (PAH exposure measurements for FACES); Valleywide Air Pollution Study Agency (California Regional PM10/PM2.5 Air Quality Study, CRPAQS: PM measurements, data validation, and data analysis); TCEQ (data collection and data analysis related to ozone formation); EPA, Region 6 (VOC data collection in Houston and data analysis); Minerals Management Service (analysis of boundary-layer data in Gulf of Mexico); Offshore Operators Committee (Breton Aerometric Monitoring Study, BAMP - air quality and meteorological measurements, data validation, and data analysis); Arizona Department of Environmental Quality (PAMS, PM, and toxics monitoring support and data analysis); and EPA, OAQPS (AIRNOW operations and PM forecasting).

17. Dr. Armistead (Ted) G. Russell

Dr. Armistead (Ted) Russell is currently Professor at the Georgia Institute of Technology. His areas of expertise and research include air pollution engineering, air quality modeling, air quality policy analysis, particulate matter dynamics, and control strategy optimization.

Dr. Russell has chaired two National Research Council Committees (Evaluation of EPA’s Mobile Model; CO Non-attainment in Topographically and Meteorological Problem Areas), and was a member of three others. He chaired the HEI Workshop on Diesel Source Identification and co-chaired the AAAR Annual Meeting. Dr. Russell has been a member of the EPA FACA

subcommittee on Ozone, PM and Regional Haze. He received the Sigma Xi Sustained Research Award which concerned the NARSTO Ozone Assessment on Air Quality Modeling and NARSTO PM Assessment on a Conceptual Model for PM in the Southeast. Dr. Russell served on the Interagency Task Force on Oxygenated Fuels. He also is a finalist, Smithsonian Institute on Computing in the Environmental Sciences.

Dr. Russell received both his Ph.D. and his M.S. in Mechanical Engineering at the California Institute of Technology in 1985 and 1980, respectively. His B.S. was also in mechanical engineering from Washington State University in 1979.

Dr. Russell sources of recent grant and/or other contract support funding include: EPA (air pollution in the Southeast; PM dynamics, impact of climate change on air pollution control); State of Georgia (PM and ozone in Georgia); Southern Appalachians Mountains Initiative (atmospheric modeling of PM, ozone and acid deposition in the Southeast); Georgia Power (particulate matter monitoring in Atlanta; Emissions inventory development); Southern Company (particulate matter monitoring); Japan Clean Air Program (air pollution modeling); State of California (VOC Reactivity analysis); American Chemical Council (VOC Reactivity analysis); and Electric Power Research Institute (biogenic uncertainty).

18. Dr. Christian Seigneur

Dr. Christian Seigneur is Vice President, Atmospheric & Environmental Research, Inc. (AER), San Ramon, CA. His areas of expertise and research encompass air quality modeling, atmospheric chemistry, and aerosol science.

Dr. Seigneur is a member of AIChE, ACS, AGU, AWMA and SRA. He has about 80 peer-reviewed scientific publications and has made approximately 140 technical conference presentations. From 1994 to 1996 he served on the CASAC Panel on PM_{2.5} NAAQS.

He received his Ph.D. in Chemical Engineering at the University of Minnesota in 1978 and his M.S. in Chemistry from the University of Paris, in 1974.

He has received research and development funding in air quality modeling from EPA, EPRI, California Air Resources Board, Coordinating Research Council, American Petroleum Institute, and other organizations.

19. Dr. Roger L. Tanner

Dr. Roger L. Tanner is currently the principal Scientist for the Air, Land and Water Sciences Department at TVA's Environmental Research Center in Muscle Shoals, Alabama. His professional affiliations include serving as a member of the American Chemical Society and its Environmental Chemistry Division; and as a member of the American Association for the Advancement of Science, the American Geophysical Union, and the American Association for Aerosol Research.

Dr. Tanner's professional interests include the analytical chemistry of trace substances in the atmosphere as applied broadly in the following interconnected areas: (1) formation of fine aerosols from gaseous precursors, their atmospheric equilibria, transport and transformation, and health effects; (2) atmospheric photochemistry, transformation and loss of inorganic and organic reactive nitrogen, sulfur and oxygenated compounds especially as related to atmospheric ozone levels; and (3) atmospheric and climatic effects of biogenic and biomass combustion aerosols.

Dr. Tanner has been involved in a large number of field measurement campaigns at numerous locations in the United States using both surface and airborne measurement techniques. He has also made measurements of airborne gases and particles at locations in Canada and Brazil, and published over 85 papers in peer-reviewed publications.

Dr. Tanner has served on the IUPAC Commission on Environmental Analytical Chemistry (1990-1995), the Electric Power Research Institute (EPRI) Advisory Committee on Health Effects Research, and EPA's Chemistry and Physics Review Panel (1986-1992, 1995). He has co-chaired several symposia on aerosol measurements, including most recently acting as co-chair for the American Chemical Society's Symposium on Environmental Chemistry of the Atmosphere: 2000 and Beyond in San Francisco, March, 2000. Dr. Tanner recently received an EPRI Environmental Sector 2002 Delivery and Applications Award as a Research Champion for aerosol measurements in the Great Smoky Mountains.

Dr. Tanner received his Ph.D. in Analytical Chemistry from the University of Illinois in 1969 under Professor Richard S. Juvet, and received his B.S. in Chemistry from Pennsylvania State University in 1964.

Dr. Tanner has received grants or contract support from the following entities: EPA, Cooperative Agreement through the Southern Oxidant Study; TVA, Data Analysis of SOS Data; and EPRI, Aircraft Data Analysis for CCOS.SESARM/VISTAS, Install and Operate Continuous Speciated Fine Particulate Monitors (Look Rock, TN), Application of CUF Plume Data to Assess Alternate Model Approaches. Internal funding was received from TVA for several projects related to ambient aerosol monitoring in the Tennessee Valley. For DOE and EPRI, Dr. Tanner participated in the Development of a Regional Site for Special Purpose Measurements of Fine Particulate Mass and Composition.

20. Dr. George E. Taylor

Dr. George E. Taylor is Professor and Assistant Dean, School of Computational Sciences, George Mason University, Fairfax, VA. His areas of expertise and research encompass the environmental sciences and plant physiological ecology, including ecological risk assessment, atmosphere-biosphere exchange of trace gases, remote sensing of terrestrial landscapes, plant stress physiology, and ecological modeling.

Dr. Taylor is presently a CASAC member, and a member of the Environmental Technical Implementation Panel, American Chemistry Council. His editorial activities include: Editor, *Environmental Toxicology and Chemistry*; Associate Editor, *Journal of Environmental Quality*;

and Editorial Board, *Tree Physiology*. He has more than 100 publications in peer-reviewed open literature.

Dr. Taylor's Ph.D. is in Biology from Emory University (1976), and he was a Postdoctoral Fellow in Physiological Ecology (1977-1979). His B.S. is in Biology from Randolph-Macon College (1971).

Dr. Taylor's sources of recent grant and/or other contract support funding include: (1) Virginia Access, NASA grant (M. Kafatos, senior PI), remote sensing for environmental applications (current); (2) Inventory of Chesapeake Bay Wetlands, EPA (S. Prince, senior PI), remote sensing of wetlands in the Chesapeake Watershed (current); (3) Natural Resource Inventory of Meadowood Farms, BLM (G. Taylor, senior PI) (current), remote sensing and GIS data base for resource analysis; (4) Chesapeake Watershed Cooperative Ecosystem Study Unit, NPS, BLM, USGS and DoD (L. Pitelka, senior PI) (current), large-scale cooperative agreement among multiple universities and government agencies; and (5) modeling the dose of atmospheric pollutants to terrestrial plant communities, NPS (G. Taylor, senior PI) (pending), developing linked models at multiple scales to characterize gas-phase pollutant (ozone, N and S) exposure and dose in plant canopies in the National Capitol region.

21. Dr. Warren H. White

Dr. Warren H. White is Visiting Professor, Crocker Nuclear Laboratory, University of California at Davis, and was formerly Sr. Research Associate at Washington University. He is a member of the American Mathematical Society (AMS) and the Air & Waste Management Association (A&WMA).

Dr. White's areas of expertise involve mathematics, atmospheric chemistry and optics, and aerosol science, with specific interests in trend analysis, attribution of effects to emissions, and the sensitivity of empirical models to measurement uncertainties. Dr. White has served the A&WMA on the Publications and Visibility Committees and as past Chair of the St. Louis Air Pollution Control Association. He has also served as Coordinator of the Symposium on Plumes and Visibility, Grand Canyon.

Dr. White holds both a Ph.D. and M.S. in mathematics from the University of Wisconsin, in 1964 and 1967, respectively. He received his B.S. from the California Institute of Technology in 1963.

Dr. White has worked with EPA on committees and panels, namely: Clean Air Science Advisory Committee (CASAC), 1996-2000; Review Panel for PM Criteria Document, 1994-96, 2000-03; Subcommittee on Particle Monitoring, 1998-2003, Review Panel for NO_x Criteria Document, 1990-94; and Subcommittee on Visibility, 1987-89. He has served on the following committees of the National Research Council (NRC): Haze in National Parks and Wilderness Areas, 1990-93; Committee on Meteorological Prediction, Analysis, and Research, 1990-94; Committee to Assess the North American Research Strategy for Tropospheric Ozone (NARSTO) Program, 1997-2002; and Committee on Research Priorities for Airborne Particulate Matter, 1998-2003.

Dr. White has worked under a contract from National Park Service to Crocker Nuclear Laboratory to operate the IMPROVE monitoring network and also on a cooperative agreement between EPA and Washington University to operate St. Louis-Midwest PM Supersite. He has been a consultant to the Electric Power Research Institute (EPRI) on analysis of monitoring data from Atlanta, and to Environ Corp. on a test of source apportionment with simulated data.

22. Dr. Ronald E. Wyzga

Dr. Ronald E. Wyzga is currently the Technical Executive at Electric Power Research Institute (EPRI), Palo Alto, CA, where he is responsible for all aspects of air-quality research, including particulate matter/ozone health, air toxics and visibility issues. He oversees an annual research budget of over \$15 million. Dr. Wyzga's areas of expertise, research responsibilities and special interest include biostatistics, epidemiology, and air quality science.

Dr. Wyzga was elected as a Fellow of the American Statistical Association in 1990. He has held numerous advisory positions, including Consultant to the EPA Science Advisory Board's Environmental Health Committee (EHC) and Clean Air Scientific Advisory Committee (CASAC). He has served the National Research Council as Chairman of the Safe Drinking Water Committee on Mixtures and as a member of: Research Priorities for Airborne Particulate Matter Committee; Subcommittee on Biostatistics and Modeling; Safe Drinking Water Oversight Committee; Neurotoxicity and Risk Assessment Committee; and the Committee to Review the Effectiveness of the Health Effects Institute.

Dr. Wyzga is a member of the National Academy of Sciences. With others he participated in "The Washington University-EPRI Veterans' Cohort Mortality Study: Preliminary Results," *Inhalation Toxicology*, 12(Supplement 4): 41-73, April 2000. He also published with others study results on "Infant Mortality and Air Pollution: A Comprehensive Analysis of U.S. Data for 1990," in the *Journal of Air & Waste Management Association*, Volume 50: 1350-1366, August 2000. He has also had articles published in *Human and Ecological Risk Assessment* and *Water, Air & Soil Pollution*.

Dr. Wyzga received his Sc.D. in Biostatistics from Harvard University School of Public Health, Boston, MA (1971) and his M.S. in Statistics from Florida State University, Tallahassee, FL (1966). His A.B. was in Mathematics from Harvard, Cambridge, MA (1964). He was Professor of Statistics at the American College in Paris, France (1973-1974).

Dr. Wyzga worked with the Organization for Economic Cooperation and Development (OECD) in Paris, France, where his duties included statistical and economic research and analysis of environmental problems. He also authored a book on estimating the economic value of environmental damage, 1971-1974. Since Dr. Wyzga is employed directly by EPRI, he receives no income or funding support from grants or contracts.