

Experts Selected by TERA to Peer Review TCEQ Isoprene Section 4.2 Carcinogenic Potential - Developmental Support Document, April 2013

TERA independently selected the following four experts to provide independent peer review of the TCEQ document. Each has been screened for conflict of interest. None of the selected experts has a conflict of interest with the review of this document.

Bruce Allen, M.S.

Mr. Bruce Allen received a Master of Biomathematics with a minor in statistics from North Carolina State University. He has 30 years of experience related to human and environmental health and safety assessment. He has expertise as a biomathematician involved in risk assessment, modeling, statistical analysis, and clinical trials, having worked for a variety of government and private clients. Mr. Allen has extensive experience with the quantitative aspects of risk analysis such as dose-response analysis; statistical appraisal of data, models, and modeling results; and developing rigorous approaches to decision making in risk assessment contexts. His expertise in dose-response analysis extends to modeling, including biologically motivated modeling of cancer, noncancer, and genotoxic endpoints as well as genomics data. Mr. Allen's statistical expertise includes computer-intensive approaches such as Monte Carlo simulation, bootstrap analysis, and Markov chain Monte Carlo approaches for Bayesian analyses. In addition he is an expert in other techniques for uncertainty analyses, data quality objectives, quality control/assurance, statistical analyses for site risk assessments, and analysis of clinical trials data. Mr. Allen has provided expert testimony, is a frequent peer reviewer of risk assessment documents, and has served as manager for numerous projects including multi-disciplinary, multi-year efforts. Mr. Allen has authored or coauthored more than 50 journal articles and has been given over 30 invited presentations at scientific meetings on bio-statistics, modeling and a wide range of quantitative risk assessment issues.

Lynne Haber, Ph.D., DABT

Dr. Lynne Haber received a Ph.D. in biology from the Massachusetts Institute of Technology. She has extensive experience in the developing and reviewing documents conducting hazard characterization and dose-response assessments for chemicals, and in risk assessment methods development. She has led the development of numerous assessment documents, and has been a coauthor or technical reviewer of 100's more. She currently serves as the Associate Director of TERA (Toxicology Excellence for Risk Assessment). She has served as a panel chairperson or panel member for scientific peer reviews organized by TERA, and U.S. and international government agencies, and has served on two panels for the US National Academy of Sciences. Dr. Haber is active in communicating her findings to the broader scientific community through participation in

professional societies, routine publication of her work, authoring book chapters (including lead author of the chapter on noncancer risk assessment for Patty's Toxicology, 2001, 2011), service as an editorial reviewer for scientific journals, and through presentation of invited lectures. She has done research into issues such as methods for improving the scientific basis for uncertainty factors by addressing genetic polymorphisms and risk to children; consideration of mode of action in cancer risk assessment; and use of biomarker data in risk assessment. She has served in several leadership positions the Society for Risk Analysis (SRA) Dose-Response specialty group and as an officer of the Society of Toxicology (SOT) Risk Assessment Specialty Section (RASS), and is a Diplomate of the American Board of Toxicology (ABT). She is one of the lead teachers for TERA's Dose-Response Assessment Boot Camp, developed a course on issues related to children's risk assessment, and presents specialized courses to diverse groups of risk assessors and at professional society meetings.

Rick Hertzberg, Ph.D.

Dr. Richard Hertzberg received a Ph.D. in biomathematics from the University of Washington. He is an adjunct professor in the Department of Environmental Health at Emory University where he teaches graduate courses in risk assessment in environmental health. Dr. Hertzberg has extensive experience with mathematical modeling for quantitative risk assessment, specializing in biomathematical modeling and health risk assessment of chemical mixture exposures. Prior to Emory University he led the research program on mixture risk assessment at the US EPA, National Center for Environmental Assessment (NCEA) and was instrumental in writing the EPA mixture risk guidelines. He initiated the use of categorical regression for dose-severity modeling, and the interaction-based hazard index for mixture risk assessment. In addition to his position at Emory, he is a private consultant, specializing in biomathematical methods for environmental health risk assessment of exposures to chemical mixtures including categorization by method and application and development of quantitative methods for cumulative risk assessment of chemical and nonchemical stressors for cumulative risk assessment, including interactions. During his career Dr. Hertzberg received two silver medals and four bronze medals for mixture risk assessment methods and cumulative risk assessment guidance. He also received the Distinguished Achievement Medal in environmental statistics from the American Statistical Association.

Jerry Rice, Ph.D.

Dr. Jerry Rice received a Ph.D. from Harvard University. He is an internationally recognized expert in experimental carcinogenesis and in carcinogenic hazard identification. Dr. Rice is a Distinguished Professor of Oncology and a Member of the Cancer Prevention and Control Program at the Lombardi Comprehensive Cancer Center, Georgetown University Medical Center. Prior to Georgetown University, Dr. Rice

managed the IARC Monographs on the Evaluation of Carcinogenic Risks to Humans program at the World Health Organization, and is now an ad-hoc advisor for the program. Dr. Rice also serves as science expert on the Joint FAO/WHO Expert Committee on Food Additives. He has published more than 250 research and review papers on tumor promotion, identification of chemical carcinogens, transplacental carcinogenesis and the molecular pathology of human and experimental tumors during his 30-year career at the NCI and has received countless invitations to present his work. He is a member of the Society of Toxicology, Toxicology Forum, European Association for Cancer Research, and the International Society for Differentiation. Dr. Rice has received numerous PHS Medals for outstanding contributions to the field of cancer research.