

Charles A. Menzie, Ph.D.
Principal Scientist and Practice Director

Professional Profile

Dr. Charles A. Menzie is a Principal Scientist and Director of Exponent's Ecological and Biological Sciences practice. Dr. Menzie's primary area of expertise is the environmental fate and effects of physical, biological, and chemical stressors on terrestrial and aquatic systems. This includes work on chemicals in the environment, oil and gas operations, fossil fuel and nuclear power plants, alternative energy projects, invasive species, and climate change impacts. Dr. Menzie has worked at more than 100 hazardous waste sites, including many high-profile Superfund Sites and NRDA-related cases. He has been called upon to evaluate environmental damage claims related to the use of pesticides, herbicides, and other chemicals. He has provided expertise related to the environmental implications of atmospheric emissions and of point and nonpoint sources of nutrients and toxic chemicals to aquatic and marine environments (through Total Maximum Daily Loads or TMDL programs). Dr. Menzie has worked on a broad range of contaminants, including solvents (TEC, PCE, TCA, and others), persistent chlorinated compounds such as PCBs, dioxins, and pesticides, as well as hydrocarbons including PAHs, cyanides, and metals such as lead, hexavalent chromium, mercury, and cadmium. Employing his deep understanding of risk-based studies and remediation, Dr. Menzie has directed the development of work plans, the implementation of remedial investigations, and the selection of remedial measures, on behalf of individual potentially responsible parties (PRPs), as well as PRP groups. Dr. Menzie has worked in all EPA Regions, including the Midwest and South (Regions 4, 5, and 6), the Northeast and East Coast (Regions 1, 2, and 3), and the West (Regions 8, 9, and 10). He has an active international practice including projects in Ecuador, Uruguay, and Yemen. He has extensive litigation experience and has provided steady and compelling advice and guidance in many controversial and contentious situations. He is the co-inventor of SediMite™, a low-impact method for remediating contaminated sediments.

Dr. Menzie is recognized as one of the leaders in the field of risk assessment and was awarded the Risk Practitioner Award by the Society for Risk Analysis. He has served on the Councils of SRA and SETAC, the two major professional organizations in this field. Dr. Menzie has led numerous peer reviews for industry and for government. He has taken the lead in developing guidance documents for industry and government and has focused on methods that are workable and acceptable to a broad range of parties. He has developed and applied a formal causal-analysis methodology for assessing causation in cases of environmental impairment and contributions of chemical contamination. He was one of the committee members to draft the ASTM Standard for risk-based corrective action (RBCA) for chemical release sites and extended that standard to ecological considerations. He served on the National Research Council's Committee on Bioavailability of Chemicals in Soils and Sediments. In addition to his work on chemical risk-related matters, Dr. Menzie has developed and applied methods for identifying third parties who have contributed to contamination in aquatic and terrestrial environments. These projects have involved meshing historical information with transport-and-

fate analyses, risk considerations (remediation drivers), and forensic analyses. He has provided expert advice on historical use and disposal of asbestos products and historical assessments of asbestos in fill.

Academic Credentials and Professional Honors

Ph.D., Biology, City University of New York, 1978
M.A., Biology, City College of New York, 1974
B.S., Biology, Manhattan College, 1971

Licenses and Certifications

OSHA Certified Eight-Hour HAZWOPER Annual Refresher Training in Hazardous Waste Operations and Emergency Response, updated annually; OSHA Certified 40-Hours of Training in Hazardous Waste Operations and Emergency Response

Patents

U.S. Patent # 7,824,129: A Low-Impact Delivery System for In-Situ Treatment of Contaminated Sediment.

Publications

Deardorff TL, Menzie C, Pryke D. Uruguay's Orion Mill wins landmark environmental case before the World Court. Paper 360° 2011; 40–42.

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Kane Driscoll SB, Amos CB, McArdle ME, Menzie CA, Coleman A. Predicting sediment toxicity at former manufactured gas plants using equilibrium partitioning benchmarks for PAH Mixtures. *Soil & Sediment Contamination* 2009; 18(3):307–319.

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Menzie CA, MacDonell MM, Mumtaz M. A phased approach for assessing combined effects from multiple stressors. *Environmental Health Perspectives* 2007; 115(5):807–816.

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Menzie CA, Lacey R. Ecological risk assessment in a new millennium: Where are we going? *Risk Policy Report* 2002; 9(3):36–38.

von Stackelberg K, Menzie C. A cautionary note on the use of species presence and absence data in deriving sediment quality criteria. *Environmental Toxicology & Chemistry* 2002; 21(2):466–472.

Menzie CA, Hoepfner SS, Cura JJ, Freshman JS, LaFrey EN. Urban and suburban storm water runoff as a source of polycyclic aromatic hydrocarbons (PAHs) to Massachusetts estuarine and coastal environments. *Estuaries* 2002; 25(2):165–176.

Shatkin JA, Wagle M, Kent S, Menzie CA. Development of a biokinetic model to evaluate dermal absorption of polycyclic aromatic hydrocarbons from soil. *Human and Ecological Risk Assessment* 2002; 8(4):713–734.

Menzie CA. Hormesis in ecological risk assessment: A useful concept, a confusing term, and/or a distraction? *Belle Newsletter* 2001; 10(1):17–20.

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Menzie CA. Risk communication and careful listening—resolving alternative world views. *Human and Ecological Risk Assessment* 1998; 4(3):619–622.

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Callahan CA, Menzie CA, Burmaster DE, Wilborn DC, Ernst T. On-site methods for assessing chemical impact on the soil environment using earthworms: A case study at the Baird & McGuire Superfund Site, Holbrook, MA. *Environmental Toxicology & Chemistry* 1991; 10(6):817–826.

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Books and Book Chapters

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Proceedings, Conferences, and Symposia

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Morrison AM, Kane Driscoll S, McArdle M, Menzie CA. Integrated environmental benefit analysis of sediment remediation thresholds. Platform presentation, SETAC North America 32nd Annual Meeting, Boston, MA, November 13–17, 2011.

McArdle M, Fairbrother A, Kane Driscoll S, Menzie C. Guidance for a weight-of-evidence approach to ecological risk assessments in British Columbia. Poster presentation, SETAC North America 32nd Annual Meeting, Boston, MA, November 13–17, 2011.

Wickwire T, Menzie C, Cantor R. Multi-disciplinary and multi-scale climate change vulnerability assessment and response. Poster presentation, SETAC North America 32nd Annual Meeting, Boston, MA, November 13–17, 2011.

Deardorff T, Menzie C, Ma J, Salatas J, Wickwire T, McArdle M, Pryke D. The first international environmental decision by The World Court on paper mill impacts. Poster presentation, SETAC North America 32nd Annual Meeting, Boston, MA, November 13–17, 2011.

Menzie C, Deardorff. Considerations for assessing the status of ecosystem services following the 2007 Grass Valley Wildland Fire: Thinking historically. Poster presentation, SETAC North America 32nd Annual Meeting, Boston, MA, November 13–17, 2011.

Gard N, Fairbrother A, Menzie C. A causal analysis framework for informing endangered species jeopardy reviews. ACS Meeting, Denver, CO, 2011.

Menzie CA, Luthy R. Contaminated sediments: New tools and approaches for in-situ remediation – Session III. Sponsored by National Institute of Environmental Health Sciences,

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Superfund Research Program, January 19, 2011. Presentation recorded and available through NIEHS, at http://www.clu-in.org/conf/tio/sediments3_011911/.

Menzie C, Cantor R, Boehm P, Bailey JR. An approach to business vulnerability and risk assessments related to climate change. Paper presented at the Society of Petroleum Engineers International Conference on Health, Safety and Environment in Oil and Gas Exploration and Production, Rio de Janeiro, Brazil, April 12–14, 2010.

Menzie CA. Perspectives on the application of ecological services. Presented at SETAC North America Meeting, Abstract 693, Portland OR, November 2010.

Fairbrother A, Menzie C. Integrated exposure analysis for human health and ecological risks at contaminated site. Presented at the Society of Environmental Toxicology and Chemistry Annual Conference, Portland, OR, November 2010.

Menzie CA. Health and environmental risks of CO₂ sequestration in geological formations. Special Lecture at Lehigh University, March 4, 2010.

O'Reilly KT, Menzie CA. Endangered Species: Chemicals, places, and climate change. ABA Environmental Law Conference, Salt Lake City, UT, March 18–20, 2010.

Menzie CA, Booth P, Saba T. PCB Update: What's new, what you need to know, and why. Exponent Webinar, March 31, 2010. Available at www.exponent.com/webinars.

Menzie CA. Ecological implications of biofuels for the Chesapeake Bay Region. Presented at the Annual Meeting of the Society of Toxicology, Baltimore MD, March 15–19, 2009.

Menzie C, Henry B, Bigham G. Managing Contaminated Sediments: A Fresh Look. Exponent Webinar March 3, 2009. Available at: www.exponent.com/webinars.

Menzie CA. Combining engineering and biology in a low-impact in-situ treatment and capping for sediments: applications to sites contaminated with PAHs, PCBs, and mercury. RemTec Summit, March 3–5, 2009.

Cantor R, Menzie C. Vulnerabilities and risk exposures from climate and related changes. American Bar Association 38th Annual Conference on Environmental Law, Keystone C, March 12–15, 2009.

Menzie C, Kierski M. Begin with a vision: Integrating assessment, remediation, and NEBA within management goals. 30th Annual Meeting, Society of Environmental Toxicology and Chemistry, New Orleans, LA, November 2009.

Kane Driscoll S, McArdle M, Menzie C. Assessing risk of metals in sediment: Experience in applying the weight-of-evidence approach to aquatic sites contaminated with heavy metals. Sediment Management Work Group Spring Sponsor Forum, Kalamazoo, MI, April 29–30, 2008.

Kane Driscoll SB, Amos CB, McArdle ME, Menzie CA, Coleman AJ. Use of site-specific equilibrium partitioning benchmarks for polycyclic aromatic hydrocarbon mixtures to predict the toxicity of sediment at former manufactured gas plants. 28th Annual Meeting of SETAC North America, Milwaukee, WI, November 11–15, 2007.

Kierski M, Menzie C, Carroll C. Dinitrotoluene and Di-n-butylphthalate exposure and effects evaluation for birds at Badger Army Ammunition Plant. 28th Annual Meeting of SETAC North America, Milwaukee, WI, November 11–15, 2007.

Kierski M, Menzie C, Ferguson E. Soil lead risk for grit ingesting birds: A simple methodology to estimate the number of grit size lead particles in soils and sediment. 28th Annual Meeting of SETAC North America, Milwaukee, WI, November 11–15, 2007.

Wickwire WT, Menzie CA, Burmistrov D. Enhancing the realism of wildlife exposure modeling: An introduction and demonstration of the Spatially Explicit Exposure Model (SEEM). In: An Introduction to the Terrestrial Wildlife Exposure Model (TWEM) and the Spatially Explicit Exposure Model (SEEM). Johnson MJ, Sample BE, Wickwire WT, and Kapustka LA (eds.). SETAC 2004 Short Course Instructor. Society of Environmental Toxicology and Chemistry (SETAC) 4th World Congress and 25th Annual Meeting, Portland, OR, November 14–18, 2004.

Wickwire WT, Menzie CA, Burmistrov D, Johnson MS. Applying a spatially explicit wildlife exposure model to improve remedial efficiency: The SEEM case study (Abstract/Poster Presentation). Annual International Conference on Soils, Sediments and Water, University of Massachusetts, Amherst, MA, October 18–21, 2004.

Kane Driscoll SB, McArdle ME, Menzie CA, Coleman A. Application of sediment quality guidelines of PAHs to manufactured gas plant sites. Presented at the 23rd Annual Meeting of SETAC North America, Salt Lake City, UT, November 16–20, 2002.

Menzie CA, Cura JJ, Kane-Driscoll S, Lacey R, McArdle M. Assessing ecological risks of PAH-contaminated sediments. Proceedings, International Conference on Remediation of Contaminated Sediments, Venice, Italy, October 10–12, 2001. Battelle Press, Columbus, OH.

Cura JJ, Menzie C. Methodologies for ecological risk assessment: the overall process and recent advances. Conference Workshop #12 - Ecological Risk Assessment: Why and How—An Important Tool in Environmental Decision Making. Presented at the Water Environment Federation 69th Annual Conference & Exposition, Dallas, TX, October 5–9, 1996.

Menzie CA. Problems in ecological assessment related to contaminated site management. pp. 26–27. Proceedings, NRC-CNRC Workshop, Toxicity Testing Applied to Soil Ecotoxicology. NRC's Biotechnology Research Institute in collaboration with Environment Canada and the Quebec Ministry of Environment and Wildlife, Montreal, Quebec, November 28–29, 1995.

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Menzie CA, Cura JJ. Environmental evaluations at hazardous waste sites. pp. 77–84. Proceedings, HMC-Northeast '91 Conference, Hazardous Materials Control Research Institute, Boston, MA, July 10–12, 1991.

Menzie CA, Cura J. Loadings of pollutants in Massachusetts Bay. Presented at U.S. Environmental Protection Agency Conference on Estuaries, Sarasota, FL, February 24–26, 1991.

Burmester DE, Thompson KM, Menzie CA, Crouch E, McKone T. Monte Carlo techniques for quantitative uncertainty analysis in public health risk assessment. pp. 215–21. Proceedings, 1990 Hazardous Materials Control Research Institute Conference, New Orleans, LA, 1990.

Menzie CA. Application of Connecticut's aquatic toxicity program. Panel discussion and presentation to the 2nd Annual Workshop of the Connecticut Forum of Regulated Environmental Professionals, New Haven, CT, June 2, 1988.

Menzie CA. The use—and possible misuse—of risk assessment as part of overall site management. Presented at the 2nd Hazardous Waste Superfund Conference in San Francisco and Washington, DC, 1988.

Menzie CA, Burmaster DE. Overview of soil clean-up levels and risk based decision making. Presented at the HazMat '88 Conference, Atlantic City, NJ, June 14–16, 1988.

Menzie CA, Burmaster DE. Evaluation of environmental risk assessment methods. Presented at the 9th Annual Meeting of the Society of Environmental Toxicology and Chemistry, Arlington, VA, November 13–17, 1988.

Burmester DE, Murphy B, Gushue J, Menzie CA. A risk assessment for the Baird & McGuire Superfund Site. Presented at the Hazardous Materials International Conference, Washington, DC, 1987.

Menzie CA, Cura JJ, Gillmor R, Mariani G, Wilson S. Research needs related to ocean disposal. Presented at the Ocean Waste Management Conference at the University of Rhode Island, Kingston, RI, May 1983.

Menzie CA, Ryther, Jr. J, Boyer LF, Germano JD, Rhoads DC. Remote methods of mapping seafloor topography, sediment type, bedforms, and benthic biology. pp. 1046-1051. In: Oceans '82 Conference Record, IEEE Publication Number 82CH1827-5, Piscataway, NJ, IEEE Service Center, 1982.

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Menzie CA, Ryther, Jr. J. Diego Garcia (Indian Ocean): An Atoll estuary. Presented at the New England Estuarine Research Society at the University of Rhode Island, Spring Session, Kingston, RI, 1980.

Menzie CA, Frye D, Hazelwood RN. OTEC-1 environmental monitoring program. In: Proc. 7th Ocean Energy Conference, Washington, DC, June 1980.

Mulligan HF, Menzie CA. Phytoplankton as tracers of water masses on and around Georges Bank. Presented at the Second Informal Workshop on the Gulf of Maine and Scotian Shelf, May, Dalhousie, Nova Scotia, 1979.

Menzie CA, et al. The environmental impact of the Clean Water Act on the Hudson River Estuary. Presented at the 4th Hudson River Environmental Symposium, 1976.

Menzie CA, Hyman R, Woodward B. Investigations of the chironomid fauna of Haverstraw Bay. Presented at the 4th Hudson River Environmental Symposium, 1976.

Menzie CA, Logan D, Matousek J. 1976. Benthic investigations in the Hudson River Estuary. 1972-1974. Presented at the 24th Annual Meeting of the North American Benthological Society, Madison, WI, 1976.

Prior Experience

Principal and President, Menzie-Cura & Associates, Inc., 1983–2006

Manager of Environmental Services Department, EG&G Environmental Consultants, 1976-1983

Lecturer, Boston University and University of Lowell, Developed and presented graduate-level courses on Risk Assessment, Marine Pollution, and Environmental Science, 1978-1993

Project Experience

Chemical Assessments

Evaluated risk assessments and damage claims related to biocides such as legacy pesticides (DDT and chlordane), fungicides such as benlate and herbicides such as glyphosate. Applied formal causal analysis procedures to disaggregate the effects of chemicals from other stressors in the environment.

Manufacturing Industry (Metals and Organic Chemicals) with an Emphasis on Sediments

Worked on ecological and human health issues associated with contaminated sediments since the mid 1970s. Worked on projects involving the following classes of chemicals: organometallic compounds (e.g., methylmercury); inorganic metals such as chromium, lead, copper, cadmium, nickel, vanadium, and barium; chlorinated compounds such as PCBs, dioxins, and pesticides; petroleum-related hydrocarbons; and chemicals arising from combustion (e.g., PAHs). This work has involved assessing transport and fate of these chemicals, evaluating risks, and providing guidance for remediation. Developed a risk-based strategy for guiding the selection of less-invasive remedial methods for contaminated sediments with an emphasis on conditions where on-situ and/or monitored natural restoration (MNR) can be utilized. Developed a low-impact remedial technology referred to as SediMite™. Dr. Menzie regularly serves as a scientific advisor and peer reviewer for major projects or initiatives such as the issue of PCBs in the floodplains of the Kalamazoo River and the development of Sediment Quality Objectives (SQOs) for California.

Total Maximum Daily Load (TMDL) Evaluations

Evaluated TMDLs for toxic chemicals such as DDT, PCBs, and metals. Also evaluated TMDLs for nutrients such as nitrogen and phosphorus.

Contribution Cases

Participated in several large contribution cases involving regional contamination from multiple sources. Most of this work has focused on PCBs, pesticides, asbestos, and metals. Developed a line-of-evidence methodology that has been successfully applied to these cases. Risk assessment expertise has been an important element of establishing the connections between sources and environmental conditions. This framework also makes it possible to establish the implications and degree of risk associated with the particular sources. Dr. Menzie has specialized expertise on PCB products including PCBs in electrical equipment, carbonless paper, caulks, paints, and adhesives.

Manufactured Gas Plants (MGP) and Other Utility Work

Twenty years of experience evaluating the human health and ecological risks associated with manufactured gas plant (MGP) sites. Primary author of the Gas Research Institute (GRI) guidance on risk assessment for MGP sites and conducted assessments at more than forty sites. Currently a principal investigator for Electric Power Research Institute (EPRI)-funded research on the toxicity of soils and sediments at MGP sites. Principal investigator for the environmentally acceptable endpoints (EAE) program, which focused on the bioavailability of PAHs in surface soils. This program was subsequently extended to evaluations of PAHs in sediments. Co-author of the industry white paper on naphthalene toxicity and implications for risk assessment and risk management.

Principal investigator for the Gas Research Institute and Gas Technology Institute, and currently serves as principal investigator for EPRI on effects of hydrocarbons associated with MGP

operations. Wrote human health and ecological risk assessment guidance developed for MGP sites.

Published several papers related to the assessment of risks at MGP sites; author of the critical review on sources of exposure to carcinogenic PAHs. This paper was prepared to help provide a perspective on PAHs in soils at MGP and other sites. Published work on exposures to cyanides, including the complex cyanides that can be present at some MGP sites. Provided expert testimony on exposures to these MGP-related waste residuals.

Guided evaluations of background in a wide variety of cases. These evaluations have involved surface soils in urban and rural environments, and sediments in various water bodies.

Currently involved in permitting for coal-fired and nuclear power plants. For the latter, serves as an expert on chemical releases from such facilities. Also worked on approximately twenty projects involving entrainment/impingement and thermal discharges.

Led human health and ecological assessments related to the disposal of coal and oil ash at facilities.

Oil and Gas Industry

Has worked on upstream and downstream components of the oil and gas industry since the 1970s. Author of a key review paper in *Environmental Science and Technology* on the environmental implications of oil and gas exploration, development, and production. This paper addressed produced waters, drilling fluids, and other releases. Served as principal investigator for multi-industry study of the environmental risks associated with oil and gas exploration. Author of numerous reports related to potential environmental risks associated with onshore, coastal, and offshore oil and gas exploration and development. This includes an API report and associated peer-reviewed paper on the potential risks associated with barite.

Wrote the ecological risk assessment guidance related to petroleum releases for the American Petroleum Institute. Member of the ASTM RBCA work group. Served as the principal risk assessor for assessments at refinery sites: Bayway, New Jersey; Destrehan, Louisiana; Wood River, Illinois; Texas City, Texas; and Sugar Creek, Missouri.

Principal investigator for the Petroleum Environmental Research Forum program related to the evaluation of ecological and human health risks associated with petroleum-contaminated soils. Has served as a participant within the Total Petroleum Hydrocarbon Criteria Workgroup, an industry- and government-sponsored effort to develop a methodology for evaluating complex mixtures of hydrocarbons.

Impacts and Natural Resource Damages to Aquatic Ecological Resources

More than thirty years of experience working on aquatic and marine environments. Natural resource work began in New York; documented the distribution of habitats in the lower Hudson River. Worked extensively on lakes in the northeast United States, including the Finger Lakes, Lake Ontario, and Lake Erie. Published on the biological communities inhabiting submerged

aquatic vegetation and benthic environments. Also involved in more than 100 reports that deal with various fish populations and their response to chemical stressors and habitat modification. These projects have included the development of multi-pathway food webs and models.

Developed the conceptual approach for the Spatially-Explicit Exposure Model, a system that uses information on the spatial distribution of habitats to evaluate the distribution of species and to account for exposures that occur at the population level. Served as topic chair for the SETAC Pellston Workshop on assessing risks to populations.

Invited to prepare an issue paper associated with evaluating the combined effects of multiple stressors. The approach includes a habitat-specific methodology that can be employed in either aquatic or terrestrial environments.

Impacts and Risk Evaluations for Desert and Tropical Environments

Principal investigator evaluating impacts of development on Diego Garcia (Indian Ocean). This is a desert island on which the U.S. Navy established a base to support military operations at countries bordering the Indian Ocean. The work involved an extended stay on the island with investigations of physical and chemical impacts on upland and coastal environments.

Conducted field studies and prepared an expert report related to causal factors affecting environmental conditions near oil extraction activities in Yemen.

Evaluated the potential effects of aerial spraying of herbicides on environmental conditions in South America.

Evaluated the environmental impacts of pulp mill discharges on ecological conditions in a South American River.

Chaired the external peer review of radionuclide impacts associated with the Nevada Test Site, where nuclear weapons had been tested. Associated with this testing were a range of potential human health and ecological risks for this desert environment. Led a group of scientists who evaluated the studies performed by the Department of Energy.

Field operations manager and principal investigator for the Hawaiian Ocean Thermal Energy Conversion (OTEC) Program. Responsible for overseeing studies to evaluate the impacts of OTEC on Hawaiian coastal environments. The work involved an extended field program in coastal Hawaii. Also served as field operations manager and principal investigator for the evaluation of dredging and dredge material disposal for the Naval Roads Navy base in Puerto Rico.

Assessment of Nutrient Impacts Associated with Point and Non-Point Sources

Principal Scientist evaluating the effects of atmospheric deposition on nitrogen from power plants on nitrogen loading to and potential eutrophication of streams, rivers, and the Chesapeake Bay.

Principal Scientist evaluating the loadings and impacts of nitrogen and phosphorus to coastal waters of New England.

Development of CADDIS case studies to evaluate chemical, biological, and physical stressors to the environment.

Ecological Evaluations of Endangered Species and Invasive Species

Development of a spatially-explicit model to evaluate the potential impacts of wind farms on endangered bat and bird species.

Assessment of the risks of proposed projects on the Sage Grouse and other species.

Development and application of the Relative Risk Model to evaluate the risks associated with introducing a new oyster species to the Chesapeake Bay.

Current Academic Appointments

- Adjunct Professor, University of Maryland at Baltimore County

Editorships and Editorial Review Boards

- Associate Editor, *Human and Ecological Risk Assessment*, 2003–present
- Editorial Board, *Human and Ecological Risk Assessment*, 1995–2002

Professional Affiliations

- Water Environment Federation
- Society for Risk Analysis (Past President of New England Chapter)
- Society of Exposure Analysis
- Society of Environmental Toxicology and Chemistry (Board Member)
- New England Estuarine Research Society
- Estuarine Research Federation
- Boston Bar Association (Environmental)
- Association for the Environmental Health of Soils
- ASTM

Legal Cases Involving Expert Reports and/or Testimony

Pacific Gas and Electric Company (Defendant) through Sedgwick, Detert, Moran & Arnold, LLP (Counsel), case captioned United States of America v. Pacific Gas and Electric Company, Case No. 2:09-CV-02877-GEB-EFB in the United States District Court of the Eastern District of California. Expert report prepared rebutting claims of natural resource damages associated with the Sims Fire in 2004

United States of America v Southern California Edison Company, Edison International, and the County of San Bernardino. Case 2:09-cv-02597-RGK-CT. United States District Court, Central District of California. Expert and rebuttal reports related to claims of natural resource damages associated with the Grass Valley Fire, Arrowhead, CA.

Frye Hearing (Shook Hardy & Bacon), Florida Case No 97-739, Circuit Court of the Fifth Judicial District in and for Lake County, FL. Testimony regarding the lack of a sound technical basis for assessing fate, transport, and effects of the fungicide Benlate on ornamental plants at a particular facility.

Fuzzell et al. v DuPont through Shook Hardy & Bacon (for DuPont), Florida Case No 97-739, Circuit Court of the Fifth Judicial District in and for Lake County, FL. Expert report prepared and deposition related to fate and transport and associated damage claims regarding the use of Benlate in plant nurseries.

Aquamar et al. v DuPont through Boies Schiller & Flexner (for DuPontY), Florida Case No 97-020375. In the Circuit Court for the Seventeenth Judicial Circuit in and for Broward County, Florida. Expert report and deposition related to the fate, transport and aquatic toxicology of Benlate as that bears on shrimp farms.

Baker-Botts for Hunt Oil and ExxonMobil in *Republic of Yemen Case of Yemen Exploration & Production Company v. Republic of Yemen* ICC, Case No. 14108/EC. Expert report involving assessing causes of plant declines in an area of Yemen and the claim that these were due to atmospheric emissions associated with oil extraction.

Foley Hoag for Ecuador in *Ecuador v. Colombia* International Court of Justice. Expert and rebuttal reports related to claims of cross-boundary impacts associated with the use of herbicides.

Foley Hoag for Uruguay in *Argentina v. Uruguay* International Court of Justice. Expert and rebuttal reports and preparation of trail materials for use by counsel related to cross-boundary pollution issues associated with the construction of a pulp mill in Uruguay.

Husch and Eppenberger for Monsanto Company et al. in *Marty Paulsen et al. v. Monsanto et al.* in Cause No. DV-04-55, Montana Tenth Judicial District Court, Fergus County State of Montana. Expert report and deposition related to sources, fate, effects, and appropriate remedial strategies for PCBs released to Big Spring Creek in MT.

Husch and Eppenberger for *Solutia Inc. and Pharmacia Corp v. McWane Inc., et al.* Case No. CV-03-PWG-1345-E. U.S. District Court for the Northern District of Alabama, Eastern Division. Expert report and trial testimony related to third party claims regarding sources, fate, and potential risks associated with PCBs, lead, and other contaminants.

Kirkpatrick and Lockhart for Atlas Tack Corp. in *Atlas Tack Corp v. Fairhaven*, No. 01-10501WGY (lead case); United States vs. Atlas Tack Corp., No. 03-11601WGY. Expert report and trial testimony related to exposure levels of organic contaminants and metals and the appropriateness of alternative remedial approaches.

Husch and Eppenberger for *Monsanto et al. in United States of America, Plaintiff v. Monsanto et al., Defendants, v. United States of America and counterclaim defendants.* Civil Action 99-63-DRH. U.S. District Court, Southern District of Illinois, East St. Louis, Illinois. Expert report and trial testimony related to third party claims regarding sources, fate, and potential risks associated with PCBs, lead, and other contaminants.

Daubert Hearing related to Civil Action 99-63-DRH. United States of America District Court, Southern District of Illinois, East St. Louis, Illinois. Trial testimony presented against a Daubert challenge to the expertise of Dr. Menzie. The challenge was not successful.

Foley Hoag for Browning Ferris Industries (BFI) in Fall River, Massachusetts. Hearing testimony presented addressing claims of potential environmental consequences associated historical operations and a proposed expansion of an existing landfill. Testimony focused on the fate and effects of leachate, potential for groundwater and surface water contamination.

Morgan, Lewis & Bockius for Federal Pacific Electric Company in *Federal Pacific Electric v. Home Insurance Company.* Superior Court of New Jersey, Mercer County. Docket NO. MER-L-5192-96. Expert report and deposition related to the fate and transport of PCBs at the Cornell Dublier facility in New Bedford, MA.

Coburn & Croft for Monsanto in *Cerro Copper Products Co. v. Monsanto Company*, Case No. 92-CV-204-PER, U.S. District Court for the Southern District of Illinois. Expert report and deposition related to source identification and fate of PCBs and metals to a creek in Sauget IL.

Coburn & Croft for Joseph C. Burt in *Joseph C. Burt v. Sparton Engineered Products, Inc.*, Case No. 93-CV-04296-JPG, U.S. District Court for the Southern District of Illinois. Expert report and deposition related to source identification, fate, and potential effects of chemicals in a creek in Illinois.

Tillinghast, Collins & Graham for Eastern Gas & Electric in *Eastern Gas & Electric v. Commonwealth of Massachusetts.* Massachusetts Court. Expert report and trial testimony provided regarding the chemistry and toxicological implications of cyanides associated with manufactured gas plant operations.

New York City Department of Environmental Protection for City of New York. New Jersey Court. Expert report and trial testimony provided regarding the fate, transport, and potential effects associated with chemicals released from an incinerator.

Parker, Poe, Adams & Bernstein for Stewart-Warner Corp. in *ILCO – Unican Corporation v. Stewart-Warner Corporation*. Expert report and deposition related to a claim regarding the need for removal action due to the presence of an imminent and substantive danger.