CONTAMINATED SOILS, SEDIMENTS, AND WATER
Volume 16

Fate and Transport
Heavy Metals
PBCs
Pesticides
Remediation
Sediments
Vapor Intrusion

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Foreword

2010! For many of us, the Amherst Conference has been a longtime career companion. As we’ve grown professionally, so has the Conference. It is an interesting exercise to track the proceedings publications through the years. The field of environmental management has matured. We are now working to solve very difficult problems, problems that reflect the complexities of the human and non-human components of the biosphere and especially their interactions.

Before you delve into the technical details of the papers comprising this year’s Proceedings, take a moment to reflect on the larger picture, and the kinds of issues these authors have tackled. High-quality, rapid and cost-effective data collection, chemical mixtures, risk assessment and risk management tradeoffs, high-tech remediation methods…we are fighting hard battles. And the Amherst Conference is once again on the front lines. See you here next year!

Dave Ludwig
Kate Sellers
Tim Iannuzzi
ARCADIS US
Annapolis, Maryland
About the Editors

**Paul T. Kostecki**, Vice Provost for Research Affairs, University of Massachusetts at Amherst and Associate Director, Northeast Regional Environmental Public Health Center, School of Public Health, University of Massachusetts at Amherst, received his Ph.D. from the School of Natural Resources at the University of Michigan in 1980. He has been involved with human and ecological risk assessment and risk management research for the last 13 years. Dr. Kostecki has co-authored and co-edited over 50 articles and 16 books on environmental assessment and cleanup including: Remedial Technologies for Leaking Underground Storage Tanks; Soils Contaminated by Petroleum Products; Petroleum Contaminated Soils, Vols. 1, 2, and 3; Hydrocarbon Contaminated Soils and Groundwater, Vols. 1, 2, 3 and 4; Hydrocarbon Contaminated Soils, Vols. 1, 2, 3, 4 and 5; Principles and Practices for Petroleum Contaminated Soils; Principles and Practices for Diesel Contaminated Soils, Vols. 1, 2, 3, 4 and 5; SESOIL in Environmental Fate and Risk modeling; Contaminated Soils, Vol. 1; and Risk Assessment and Environmental Fate Methodologies. Dr. Kostecki also serves as Associate Editor for the Journal of Soil Contamination, Chairman of the Scientific Advisory Board for Soil and Groundwater Cleanup Magazine, as well as an editorial board member for the journal Human and Ecological Risk Assessment.

**Edward J. Calabrese** is a board certified toxicologist and professor of toxicology at the University of Massachusetts School of Public Health at Amherst. Dr. Calabrese has researched extensively in the area of host factors affecting susceptibility to pollutants and has authored more than 300 papers in scholarly journals, as well as 24 books, including: Principles of Animal Extrapolation;
About the Editors

Nutrition and Environmental Health, Vols. 1 and 2; Ecogenetic: Safe Drinking Water Act: Amendments. Regulations, and Standards; Soils Contaminated by Petroleum: Environmental and Public Health Effects; Petroleum Contaminated Soils, Vols. 1, 2 and 3; Ozone Risk Communication and Management; Hydrocarbon Contaminated Soils, Vols. 1, 2, 3, 4 and 5; Hydrocarbon Contaminated Soils and Groundwater, Vols. 1, 2, 3, and 4; Multiple Chemical Interactions; Air Toxics and Risk Assessment; Alcohol Interactions with Drugs and Chemicals; Regulating Drinking Water Quality; Biological Effects of Low Level Exposures to Chemicals and Radiation; Contaminated Soils; Diesel Fuel Contamination; Risk Assessment and Environmental Fate Methodologies; Principles and Practices for Petroleum Contaminated Soils, Vols. 1, 2, 3, 4, and 5; Contaminated Soils, Vol. 1; and Performing Ecological Risk Assessments. He has been a member of the U.S. National Academy of Sciences and NATO Countries Safe Drinking Water Committees, and the Board of Scientific Counselors for the Agency for Toxic Substances and Disease Registry (ATSDR). Dr. Calabrese also serves as Director of the Northeast Regional Environmental Public Health Center at the University of Massachusetts, Chairman of the BELLE Advisory Committee and Director of the International Hormesis Society.

James Dragun, Ph.D., is a soil chemist with extensive experience dealing with soil remediation. He has addressed the extent, danger, and/or cleanup of chemicals at sites of national and international concern such as the oil lakes caused by the 1991 Persian Gulf War (Kuwait), VX chemical warfare agent for the U.N. Weapons Inspection Program (Iraq), malfunction of the Three Mile Island Nuclear Power Plant USA), and dioxin in Missouri (USA). Twenty-four nations including Japan, Canada, the United Kingdom, Australia, Germany, Switzerland, Italy, France, Spain, Scandinavia, and the Netherlands have utilized his expertise.

He founded and built an environmental engineering-science consulting company. For 18 years, he has led a team of specialists in chemical engineering, civil engineering, environmental engineering, geotechnical engineering, mechanical engineering, physics, plant engineering, environmental science, geology, hydrogeology, chemistry, biochemistry, toxicology, and biology. Dr. Dragun and his associates have solved environmental issues for major companies and governments in six continents (Africa, Asia, Australia, Europe, North America, and South America).

Dr. Dragun is a full Professor at the University of Massachusetts and at Wayne State University, Detroit, MI. He has authored two college textbooks and co-authored/edited eight technical books. Also, Dr. Dragun has been the Editor-
in-Chief of the International Journal of Soil and Sediment Contamination for over 15 years.

Dave Ludwig has a Bachelor’s of Science from Rutgers University, a master’s in Marine Ecology from the Virginia Institute of Marine Sciences, and a doctorate in ecology from the Institute of Ecology at the University of Georgia. He is a systems ecologist by training and an applied environmental scientist and restorationist by trade.

Dr. Ludwig is helping to pioneer AEHS’s online learning and training program, building education infrastructure amenable to the interdisciplinary and specialty fields that are difficult for traditional institutions to accommodate. By integrating the Foundation’s worldwide reputation and expertise in technical colloquia, environmental planning and policy, and interdisciplinary project leadership, the Education and Training Department is working to meet learning needs critically important for the future of environmental science and management.