CURRICULUM VITAE
MICHELE MYERS TWILLEY, DRPH, CIH

Dr. Twilley has over thirty years of environmental, industrial hygiene, cancer and non-cancer risk assessment, health and safety consulting experience related to the testing and inspection of the built environment for a variety of occupational and environmental hazards and indoor air quality concerns.

EDUCATION:

Doctor of Public Health, 2008
Bloomberg School of Public Health, Johns Hopkins University, Baltimore, MD

Certificate, Risk Sciences and Public Policy, 2002
Bloomberg School of Public Health, Johns Hopkins University, Baltimore, MD

M.H.S., Environmental Health Science/Industrial Hygiene and Safety, 1998
School of Hygiene and Public Health, Johns Hopkins University, Baltimore, MD

B.S., Natural Science with Environmental Science concentration, 1988
Towson State University, Towson, Maryland

EXPERIENCE:

2003 to Present:

Aria Environmental, Inc., Sykesville, Maryland

Dr. Twilley is a founding partner and President of Aria Environmental, Inc. As one of the company's Certified Industrial Hygienists, she serves as the primary point of contact and project manager for both environmental and industrial hygiene projects. She is also a team leader for indoor air quality and hazardous materials investigations including asbestos, lead-paint, mercury, ozone depleting substances, low level radioactive materials, aboveground and underground storage tanks, and other hazardous and regulated materials. She prepares cancer and non-cancer risk screening and modeling as needed for a worker and public health exposures in a variety of settings. Projects that illustrate notable skills are presented below.

Industrial Hygiene Project Manager, Maryland Aviation Administration Thurgood Marshall Baltimore Washington International (BWI) and Martin State Airports (MTN) for AECOM and EA Engineering Science and Technology

Since 2010, Dr. Twilley has served as the industrial hygiene project manager on two contracts supporting BWI and MTN. Tasks preformed under her management include: the 2015 3-year asbestos reinspection of BWI airport and support buildings; annual asbestos periodic surveillance of BWI and MTN; and project monitoring of several asbestos abatement projects at BWI and MTN. AE provided project management for the hazardous materials abatement prior to demolition of the BWI Sheraton. AE has four industrial hygienists with current badging for the BWI airport and maintains one airfield vehicle.

Redevelopment of the I-95 Travel Plazas at Maryland House and Chesapeake House
Aberdeen and Northeast, MD

One of the most notable projects in Maryland involved the complete redevelopment of the two I-95 travel plazas under the Public-Private Partnership (P3) model. Maryland House in Harford County and Chesapeake House in Cecil County in northeastern Maryland were State owned and operated restaurant buildings with two full service fueling facilities at each location that opened to the traveling public fifty years ago. For two years, Dr. Twilley served as Environmental Project Manager for AREAS USA MDTP, LLC and the design team lead by Ayers Saint Gross Architects. Her duties involved: the installation of six 120 foot multi-level wells through variable geology that ranged from sandy clay to hard

crystalline rock; the identification of hazardous materials in multiple buildings on both sites; the removal and disposal of underground storage tanks, three generations of product piping, and contaminated soil from four service stations including the collection of soil samples for characterization and confirmation that remedial action was complete for case closure; and the installation of new groundwater monitoring wells where existing wells were abandoned in the course of the project. The south service station at the Maryland House had the largest excavation operation to remove petroleum impacted soil at the source known to the Maryland Department of the Environment inspectors. A total of 42,334 tons of soil were excavated and hauled offsite at the direction of the Maryland Transportation Authority (MDTA).

HF Miller, Millers Court, Geotechnology Associates (GTA) for Seawall Development Baltimore, MD

At the request of the client, Dr. Twilley reviewed existing sub-slab and room air sample data collected from Miller's Court by other consultants. The data was from several rounds of sampling for volatile organic compounds (TO-15) plus naphthalene in areas of the mixed-use residential and commercial building affected by an uncontrolled release of petroleum product that had occurred during redevelopment. Dr. Twilley revised the sampling requirements to include outdoor air samples because the reliance on indoor and subslab sampling alone was not representative. Additional sampling of the space and ambient outdoor air revealed that the naphthalene source causing the repeated failure to meet screening requirements was predominantly from outdoor air and not soil vapor intrusion. Modeling was performed using anticipated worker and resident exposure patterns. The Maryland Department of the Environment closed the case concerning the property.

U.S. Navy, Military Department Investigative Agencies Headquarters Complex RFP Marine Corps Base Quantico, Virginia

Ms. Twilley provided subsurface investigation services to address potentially contaminated soil at two proposed sites for the Collocation of the Military Defense Investigative Agencies (MDIA) aboard Marine Corps Base Quantico. The work involved the direct push sampling of soil, laboratory analysis for volatile and semivolatile organic compounds, metals, pesticides/PCBs, and petroleum hydrocarbons. Risk assessment techniques were employed to determine cancer risk to construction workers from exposure to arsenic in soil.

2002-2004: **Johns Hopkins University,** Baltimore, Maryland
Research Assistant

Post 9-11 Pentagon Employee Exposure Assessment: The project duties included providing input into the development of the medical and psychosocial questionnaire and exposure history, pilot testing the draft questionnaires, and administration of the final questionnaire that were designed to predict medical outcomes of Pentagon workers affected by the events of September 11, 2001.

1999-2002: **Kennedy Krieger Research Institute,** Baltimore, Maryland
Affiliated with the Johns Hopkins Hospital and University, Baltimore, MD
Research Assistant

Involved in the development of sampling methods and strategies, coordination of resources, project planning, progress report preparation, and Geographic Information System display of data as a Research Assistant on the HUD-funded "Evaluation of Maryland's Reduction of Lead Risk in Housing Law," the "Study of the Relative Importance of Exterior Dust and Soil as Lead Exposure Sources in Two Urban

Residential Environments," and the "Urban Demolition Study.". The work with the evaluation of Maryland's lead law marries quantitative and qualitative data collection and analysis. Work on this project included the development of the interview tools, conducting the interviews, and analysis of the interviews across various stakeholder groups (*e.g.,* property owners, tenants, attorneys, government agencies, etc.) to see how well the Maryland Reduction of Lead Risk in Housing law is working.

1993-2001: **Froehling & Robertson, Inc**., Baltimore, Maryland
Senior Environmental Professional

Senior Environmental Scientist. November 1999 to March 2001. Provided part-time project support for the Delaware Department of Transportation Laboratory Design-Build project in Kent Co., DE. Additional responsibilities include project support for various environmental, health and safety consulting projects to industry.

University of Maryland, Chemistry Teaching Building, College Park, MD: Ms. Twilley led a team of asbestos, lead-paint and hazardous materials inspectors in the conduct of a pre-renovation survey of Wing 3 of the Chemistry Teaching Building. Beside asbestos and lead-based paint, the survey included the investigation into radiological agents, chemical residuals in laboratory fume hoods, mercury in sink traps, clean room decommissioning and chemical storage facility decommissioning. The survey was followed by the development of construction specifications and cost estimates for the proposed scope of work.

Senior Environmental Scientist. From 1996 until 2001, Ms. Twilley provided fiscal and quality control over the environmental operations in the Baltimore, Maryland office; developed written health and safety programs for the corporation and provided implementation for the programs; and provided office and peer review for other branch operations. She managed hundreds of varied projects with multiple task orders as a prime and subcontractor for Constellation Energy/BGE, the US Army, US Navy, Federal Deposit Insurance Corporation, University of Maryland, and the City of Baltimore. She served as Project Manager on several fast-track projects for the Maryland Stadium Authority and Charles County Public Schools.

Regional Environmental Coordinator. During this period, she was responsible for professional development of the environmental staff in the Maryland and the Northern Virginia offices. The position involved peer review of all proposals and reports prepared in these offices. Other responsibilities included providing corporate staff with input regarding report formats, areas of growth, marketing, and quality control. Through reorganization, Regional Environmental Coordinator positions transitioned to Senior Environmental Professionals in 1996.

Environmental Project Manager. She performed Phase I and II Environmental Site Assessments; prepared and implemented subsurface soil and groundwater investigations using conventional drilling and direct-push technologies on petroleum-contaminated and hazardous waste sites; provided industrial hygiene consulting including physical agents, Indoor Air Quality, bioaerosols, asbestos, lead, metals, pesticides and herbicides, Volatile and Semi-volatile organic compound characterizations.

1991-1993: **Jenkins Professionals, Inc**., Baltimore, Maryland
Environmental Project Manager

Ms. Twilley performed health and safety training for various clients, asbestos inspections, and asbestos abatement project oversight. Provided compliance auditing services for environmental and occupational safety and health programs to various industrial clients.: Developed and implemented arsenic and hazard communication programs, chemical process safety evaluations; toxic air pollutant emissions inventory and permitting; ventilation studies; waste water discharge monitoring and permitting; NPDES permitting; lead in drinking water sampling; developed a Toxic Release Inventory data collection and reporting system; and Phase I and II environmental site assessment preparation.

1990: **Environmental Dynamics**, Paramount, California
Technical Services Director

Ms. Twilley prepared Site Specific Health and Safety Plans for hazardous waste sites and emergency response sites; conducted HAZWOPER training; and scientific support to the sales and marketing staff. She served as site supervisor for remediation activities at abandoned hazardous waste sites and active industrial sites involving confined space entry of underground utility vaults and tanks subjected to the accumulation of toxic and explosive atmospheres. She was the Project Manager for remediation of biomedical waste at a large incinerator, tank cleaning, remediation of an asbestos spill on Highway 405, illicit drug laboratory decommissioning, laboratory waste packaging, and various fuel spill remediation activities.

1988-1990: **Aerosol Monitoring and Analysis,** Hanover, Maryland
Training Consultant

Ms. Myers conducted health and safety training programs for asbestos, lead, arsenic and confined spaces for abatement contractors, consultants, government and industry. The asbestos programs followed the Maryland 6-hour format and the various AHERA Model Contractor Accreditation formats that were tailored to meet state requirements. Lead programs were modeled after federal OSHA regulations, while the confined space entry program was designed to meet the Maryland regulations. Researched and developed new courses, the developed audiovisual aids, presentations and hands-on demonstrations. Performed equipment calibrations, worked with interpreters to present Spanish and Laotian language courses, and marketing.

LICENSES AND CERTIFICATIONS:

Hazardous Waste Operations and Emergency Response since 1990
Confined Space Entry/Rescue/First Aid and CPR
Asbestos Inspector/Management Planner - MD and VA since 1988
Asbestos Project Designer - MD and VA since 1996
Asbestos Supervisor - MD since 1988, expired 2008
Lead Inspector Technician/Risk Assessor - MD since 1996
Sediment and Erosion Control Inspector - MD since 1994
Industrial Hygienist in Training since 1998
Certified Industrial Hygienist since 2002

AWARDS/ACHIEVEMENTS:

1994 Tied for Environmental Professional of the Year (F&R)
1994 Senior Environmental Professional (F&R)
1996 Environmental Professional of the Year (F&R)
1997 NIOSH/Departmental Scholarship for MHS at Johns Hopkins University
2001 Johns Hopkins University Risk Sciences and Public Policy Institute Scholarship
2004 CDC/Environmental Public Health Tracking Fellow

VOLUNTEER ACTIVITIES:

American Industrial Hygiene Association
Director (2017-2020)

Chesapeake Local Section of the American Industrial Hygiene Association
Past President (2016)
AIHce 2016 Local Conference Committee Chair
President (2015)
Treasurer (2012-2014)
Past President (2011)
Professional Conference on Industrial Hygiene (PCIH) Conference Committee
President (2010)
President Elect (2009)

PUBLICATIONS: Krenzischek DA, Schaefer J, Nolan M, Bukowski J, Twilley M, Bernacki E, and Dorman T. *Phase I collaborative pilot study: Waste anesthetic gas levels in the PACU.* J. PeriAnesthesia Nurses, Vol 17, No 4(Aug), 2002: pp 227-239.

Twilley, M (2008). *An Evaluation of Maryland's Reduction of Lead Risk in Housing Law* (Doctoral Thesis). Johns Hopkins University, Baltimore, MD.