## CURRICULUM VITAE Roger L. Wabeke

Industrial Hygiene Safety E Forensics	ngineering Toxicology Training Environmental Health Warnings Ventilation					
BORN	August 29, 1940 in Detroit, Michigan. United States citizen					
FAMILY	loving friend and wife: Mary lovable children: Lisa, Lori, Michael lovable grandchildren: Abigail, Charlotte, Grace, Kettler, Veronica					
DETROIT MEDICAL CENTER OFFICE	. Wayne State University School of Medicine Department of Family Medicine and Public Health Sciences Occupational and Environmental Medicine – Academic					
Wayne StatE UNIVERSITY	3800 Woodward Avenue Professional Plaza – Suite 808 Detroit, Michigan 48201 telephones: (EST): 313-593-1164 (or 313-577-2286)					
School of Medicine	administrative assistant: 313-577-6858 electronic mail: chemriskman@ameritech.net					
CHEMICAL RISK MANAGEMENT OFFICE and LABORATORY	Chemical Risk Management Eight Windham Lane Dearborn, Michigan 48120-1109 voice mail (EST): 313-593-1164 (or 313-577-2286) electronic mail: chemriskman@ameritech.net					
EDUCATION	Master of Science in Chemical Engineering (Hazardous Materials and Environmental Pollution Engineering), Wayne State University College of Engineering; Detroit, Michigan (1992)					
	Post-Graduate Certificate (Hazardous Materials Engineering), Wayne State University College of Engineering, Department of Chemical Engineering (1991)					
	Master of Science (Industrial Hygiene – Occupational and Environmental Health Sciences), Wayne State University School of Medic (1975)					
	19 post graduate courses in mathematics, biochemistry, engineering, psychology, radiobiology, physics at University of Michigan, Detroit Institute of Technology, Wayne State University (1966-1979)					
	Bachelors of Science (Biology and Chemistry), Wayne State University College of Science (1967,1969)					
	Medical Corps School, United States Navy, Great Lakes, Illinois (five months, 1959)					
	Redford High School, Detroit, Michigan (1958)					
	Continuing education professional development courses: industrial hygiene, toxicology, ventilation engineering, industrial and community noise control, hearing conservation, indoor air quality, ergonomics, heat stress, air contaminants, safety engineering, hazard communication, occupational medicine, carcinogenesis, hazard warning systems, management, inhalation toxicology, bioaerosols, industrial lighting, environmental law, ionizing radiation, environmental pollution, hazardous waste management, respiratory protection, explosion and fire prevention engineering, occupational disease epidemiology, exposure modeling, <i>et al</i> (1967 – present)					



MILITARY EMPLOYMENT	Medical Corpsman, United States Navy Medical Corps and United States Marine Corps, Fleet Marine Force – active duty aboard the United States Ships Mississinewa, Intrepid, Rutherford. Industrial hygiene naval shipyard experience at the Portsmouth and Norfolk, Virginia naval military bases. Honorable discharge (1963 + 2 i.d.) <u>CHEMICAL RISK MANAGEMENT and Wayne State University</u> (1987 to present)				
	President of CHEMICAL RISK MANAGEMENT, laboratory and offices in Dearborn and Detroit, Michigan				
	Director, Industrial Hygiene and Environmental Toxicology, Wayne State University School of Medicine, Department of Family Medicine, Occupational and Environmental Medicine Division. Adjunct Professor and Resident Lecturer				
	<u>Ford Motor Company (1972 – 1987)</u>				
	Supervisor of Industrial Hygiene, Ford Motor Company. Administrative management of corporate domestic and international industrial hygiene programs (167 plants and facilities worldwide and 484,000 employees) including super- vision of 18 professionals (11 industrial hygienists, five industrial hygiene chemists and technicians, two administra- tive assistants), and plant safety engineers and nurses to manage industrial hygiene, safety, and toxicology programs in 78 major U.S. and Canadian plants (1977 – 1987)				
	Director, Ford Motor Company AIHA and NIOSH-accredited Industrial Hygiene and Toxicology Laboratory (1977 – 1987)				
	Senior Industrial Hygienist, Ford Motor Company (1972 – 1977)				
	Industrial Hygienist, Ford Motor Company (1972)				
	Wyandotte Chemicals Corporation (later BASF Corporation) (1967 – 1972)				
	Assistant Industrial Hygienist (1968 – 1972)				
	Industrial Hygiene Technician (1967)				
	Consulting industrial hygienist, safety engineer, and occupational and environmental toxicologist (1969 – present)				
	Carpenter and roofer, Great Lakes Lumber Company (1954 –1959 and 1963 –1967). Various times: semi-truck driver, tile layer, sign painter, un-butchered meat handler, and newspaper deliverer.				
LICENSE	Registered Licensed Industrial Hygienist in the State of Illinois by the Illinois Environmental Protection Agency under <i>Illinois Industrial</i> <i>Hygienists' Licensure Act</i> , License 00065 – valid to January 2008. (Michigan and states other than Illinois do not require licensing.)				
PROFESSIONAL CERTIFICATIONS & REGISTRATIONS	Diplomate by examination, peer review, education, and experience in Comprehensive Practice of Industrial Hygiene by the American Board of Industrial Hygiene [Certificate 802 (1973)]. ABIH board recertified: 1976, 1982, 1988, 1994, 2000, 2006.				

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	Hazardous Process Materials Management Certificate, Wayne State University College of Engineering, Chemical Engineering Department (1991)
	Certified Hazardous Materials Manager (Master's Level); Diplomate by examination, peer review, experience, and education, Institute of Hazardous Materials Management (September 1994. Recertifie twice to December 2008)
	Registered Professional Engineer, Consulting Engineers Division, American Society of Safety Engineers (certified 1995 – present)
INTERNSHIPS	Hazardous medical, biohazard, and chemical waste managemer Detroit Receiving Hospital and University Health Center, Detroit Medical Center (1990 – 1992)
	Detroit Bureau of Industrial Hygiene; intern preceptor: William G. Fredrick, Sc.D. (nine months: 1965-1966)
MEMBERSHIPS	Academy of Certified Hazardous Materials Managers, Master
	American Academy of Industrial Hygiene, Diplomate
	American Conference of Governmental Industrial Hygienists, Full
	American Industrial Hygiene Association, Diplomate
	American Institute of Chemical Engineers, Full
	American Public Health Association, Full (1989-2004)
	American Public Health Association, Environmental Health Section
	American Public Health Association, Occupational Health Section
	American Society of Heating, Refrigeration, and Air-Conditioning Engineers, Professional Engineers Division, Full
	American Society of Safety Engineers, Consultants Division
	American Society of Safety Engineers, Engineering Division
	American Society of Safety Engineers, Industrial Hygiene Division
	American Society of Safety Engineers, Professional Engineer
	Association of Occupational and Environmental Health Clinics, Full
	Certified Hazardous Materials Managers of Michigan, Full
	Human Factors and Ergonomics Society, Full
	Michigan Industrial Hygiene Society, Full
	National Safety Council, Professional Engineers' Division
	Michigan Public Health Association (2003-2004)
	Society for Chemical Hazard Communication
	Society for Risk Analysis
	Member of several professional society and technical association industrial hygiene and occupational health committees including pa member of AIHA Biohazard, Engineering, and Ergonomics Committees; Motor Vehicle Manufacturing Association Industrial Hygiene-Occupational Health Committee; ACGIH Small Business Committee; Chlorine Institute Industrial Hygiene Committee; UAW-



Ford Motor Company National Joint Committee on Health and Safety; among many others

The Photographic Guild of Detroit; Print Director, Board of Directors

Photographic Society of America (1998-2005)

#### APPOINTMENTS and AWARDS

Nominated by the Awards Committee and elected by the Board of Directors of the American Industrial Hygiene Association as a Fellow of AIHA (2007)

"Certificate of Excellence" awarded for outstanding teaching resident mentoring excellence; Wayne State University School of Medicine, Department of Family Medicine and Public Health Sciences, Division of Ocupational and Environmental Medicine (2006)

"Teacher of the Year" – Voted "Outstanding Teacher in Occupational and Environmental Medicine Selected by the Residents and Physicians in Division of Occupational and Environmental Medicine, Division of Family Medicine, Wayne State University School of Medicine", 2006

Sole recipient of the "Outstanding Alumni Achievement Award" by the faculty and administration of the Eugene Applebaum College of Pharmacy and Health Sciences, Wayne State University, 2005, for scholarly activities, publications, community service, and mentoring

"Teacher of the Year" – Voted "Outstanding Teacher in Occupational and Environmental Medicine Selected by the Residents and Physicians in Division of Occupational and Environmental Medicine, Division of Family Medicine, Wayne State University School of Medicine", 2002

Appointed by the Chair, American Conference of Governmental Industrial Hygienists, as a Charter Member of the Small Business Committee (1998. Reappointed three times to 2008.)

Appointed by the Governor, State of Michigan, as Commissioner, Michigan Occupational Health Standards Commission, Department of Public Health, Lansing (1992 – 1995). Vice Chairman (1994 – 1995)

Appointed by Michigan Occupational Health Standards Commiss-ion to Occupational Health and Safety Core Advisory Committee, Michigan Department of Public Health (1990 – 1992)

Appointed by the Director, Michigan Department of Agriculture, to the Pesticide Advisory Committee as Representative for Non-Governmental Organizations with Human Health Interests. Serve as industrial hygiene consultant (1997 – present)

Adjunct Professor, Department of Community Medicine, Wayne State University School of Medicine (1994 – present)

Associate Graduate Faculty, Department of Occupational and Environmental Health Sciences, College of Pharmacy and Health Sciences, Wayne State University (1994 – present)

Chairman, Indoor Air Quality Advisory Committee of the Occupational Health Standards Commission. Michigan Department of Public Health (1989 – 1991)



Member, Program Advisory Committee; Safety, Industrial Hygiene, and Environmental Health, Ferris State University (1979-1983)

Member, Executive Advisory Board, Michigan Occupational Health Nurses Association (1980 – 1984)

President, Michigan Industrial Hygiene Society (1979–1980)

Secretary–Treasurer, Michigan Industrial Hygiene Society (1973 – 1974)

Director, Michigan Industrial Hygiene Society Executive Board (1971 – 1973). Re-Elected as Director (1999 – 2001)

Chairman of the Occupational Carcinogenesis Industrial Hygiene Committee, Michigan Cancer Foundation (1974 – 1981)

Member, Board of Directors, Michigan State Technical Institute for Rehabilitation of the Handicapped (1978 – 1983)

Member, UAW-Ford Motor Company National Joint Committee for Occupational Safety and Health (1981–1987)

Member, Personal Protective Equipment Advisory Committee, Michigan Department of Public Health, Division of Occupational and Environmental Health (1995)

Fellow, Toxicology Round Table, Poison Control Center, Children's Hospital of Michigan, Detroit Medical Center (1995 – present)

Member, Epidemiology and Biostatistics Research Core Committee, National Institute for Environmental Health and Safety Toxicology Center, Karmanos Cancer Center/Michigan Cancer Foundation (1995 – 2000)

Member, Center for Molecular and Cellular Toxicology, Human Applications and Epidemiology Departments, Institute of Chemical Toxicology, Wayne State University (1995 – present)

Director, The Photographic Guild of Detroit (1999 – 2004)

Board Member, written and oral examination reviewer for physicians and industrial hygienists as candidates for the Master of Science Degree in Occupational and Environmental Medicine, Wayne State University School of Medicine (2000, 2001, 2002, 2003, 2004)

Mercury Environmental Emissions Reduction Committee, Poison Control Center, Children's Hospital of Michigan, Detroit Medical Center (2002 – present)

Full appointment to the Regular Graduate Faculty, Wayne State Univeristy School of Medicine, Department of Family Medicine and Public Health Sciences (2006 – present)

Senior faculty mentor to graduate students in industrial hygiene, toxicology, and safety engineering, Wayne State University, Department of Occupational and Environmental Health Sciences (2004)

Eagle Scout, 1955

**TEACHING**Adjunct Graduate Professor, Wayne State University School of<br/>Medicine, Family Medicine, Department of Occupational and<br/>Environmental Medicine. Lecturer in occupational toxicology,<br/>industrial hygiene, environmental health and medicine to residents,



medical students, community primary care and occupational medicine physicians, and WSU staff (1987 – present). Courses taught: *Occupational and Environmental Medicine* (1994 – present).

Associate Graduate Faculty, Department of Occupational and Environmental Health, College of Pharmacy and Health Sciences, Wayne State University (1994 – present). Courses taught: *Risk Management* and *Principles of System Safety and Process Safety Engineering* (1998 – present), *Principles of Environmental Health* (2005 – present) Lectures in *Industrial Hygiene Statistics* (1996 – present)

Lecturer and instructor, Wayne State University and the University of Michigan/American Industrial Hygiene Association/Michigan Industrial Hygiene Society Board Certification Review and Continu-

ing Education courses, lectures in *Human Heat Stress and Strain* and *Industrial Hygiene Calculations: Air Contaminants and Industrial Ventilation*, Detroit and Ann Arbor, Michigan (1975 – present)

Instructor, Henry Ford Community College. Lectures and courses in *Industrial Hygiene, Air Sampling and Analysis, Environmental Pollution and Control, Toxicology, Industrial Ventilation, Noise Control Engineering, Safety Engineering.* I developed this undergraduate workplace health and safety education training program as the first for a community college in Michigan. (1974 – 1992)

Adjunct Instructor, University of Michigan School of Public Health -courses and lectures in *Industrial Ventilation, Air Sampling and Analysis, Chemical Hazard Recognition, Heat Stress and Strain* and *Industrial Hygiene Management* (various years, 1974 – 2003)

> Professional Development Course Instructor, American Industrial Hygiene Conference and Exhibition, *Heat Stress and Human Heat Strain*: Dallas, Texas (1997); Atlanta, Georgia (1998); Toronto, Ontario (1999); Orlando, Florida (2000); New Orleans, Louisiana (2001); San Diego, California (2002); Dallas, Texas (2003)

> I have taught since 1990, and currently teach, four courses in the program for Post-Master's Certificates in Industrial Toxicology and Industrial Safety at Wayne State University in Detroit, Michigan.

#### TOXICOLOGY QUALIFICATIONS

- I teach toxicology to physicians, toxicologists, chemical safety engineers, industrial hygienists, safety engineers, risk managers, and others. I have done this since 1987 as an Adjunct Professor at Wayne State University School of Medicine – nation's largest single-campus medical school. I specialize in occupational and environmental toxicology.
  - 2. I was the Director of the Industrial Hygiene and Toxicology Laboratory of Ford Motor Company for 10 years. I developed and designed this laboratory. Ford, at the time, had 484,000 employees in 30 countries. I supervised five analytical chemists, 18 industrial hygienists, and two administrative assistants. Our laboratory analyzed bulk, air, biological (blood, urine, sputum, hair, nails), radiological, and hazardous waste specimens for numerous toxicants. These included organic solvents, metals, asbestos, isocyanates, silica, gases, chemical intermediates, combustion products, dusts, radionuclides, and other toxicants.

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- 3. I completed graduate level courses in inorganic and organic toxicology.
- 4. I have taught since 1990, and currently teach, three courses in the program for a Post-Masters Certificate in Industrial Toxicology at Wayne State University in Detroit.
- 5. I have conducted toxicity testing using experimental animal models while employed by major chemical companies: Wyandotte Chemicals Corporation and BASF Corporation.
- 6. I have attended at least 13 professional development courses addressing current concepts and findings in human toxicity.
- 7. I am a member of a committee and an advisor to Michigan's Poison Control Center at the Children's Hospital in Detroit.
- 8. I have an appointment to the Wayne State University Institute of Chemical Toxicology.
- I am double Board-Certified in the Comprehensive Practice of Industrial Hygiene and in Hazardous Materials Management at the Master's Level. Both certifications require the successful passing of lengthy written examinations. Occupational, product, and environmental toxicology are major rubrics of both examinations.
- I have published articles in the field of toxicology. One is a book: Air Contaminants and Industrial Hygiene Ventilation. Others are in peer-reviewed scientific journals and in articles published by the federal government.
- 11. I have been invited to present numerous *pro bono* lectures to various groups over the years. These lectures on various aspects of toxicology were to groups in the United States, Canada, Mexico, Venezuela, Brazil, Argentina, Uruguay, England, Germany, Spain, Puerto Rico, and Israel.
- 12. I provide *pro bono* advice on matters regarding toxicology to those needing such information and guidance. These include patients examined in our clinics, community groups, physicians, the media, and various regulatory and government agencies.
- 13. My professional career as an industrial hygienist and an occupational toxicologist spans 42 years. In order for me to successfully practice my profession, I must know the toxicity of agents that people and animals encounter both acutely and chronically. I routinely study many professional scientific journals that cover toxicity of chemicals and biological agents.
- 14. My personal library contains 87 books on various aspects of occupational, environmental, and medical toxicology.
- 15. I am now in my ninth year of service as an appointee to the Michigan Department of Agriculture's Pesticide Advisory Committee. In that capacity, I render opinions on the hazards, toxicology, public health aspects, and the control of pesticides and other chemicals in our environments (air, water, soil, biota).
- 16. I have been accepted by courts in 33 states and two Canadian Provinces to render opinions on claims regarding the toxicity of



materials. These claims involved hundreds of chemicals and mixtures of hazardous agents per OSHA, EPA, DOT, CPSC, Coast Guard, FIFRA, *et al* regulations and standards. Included is ethyl alcohol under dramshop claims. My exposure toxicity research in one claim helped to defeat a *Daubert* challenge submitted to the Eighth Circuit Court of Appeals. I have never been disqualified as an occupational toxicologist by any State, Federal, or appellate court.

- 17. I have designed, fabricated, and used equipment to measure amounts of toxic agents in different matrices.
- 18. I have designed warning labels for consumer products that contain toxic ingredients. I teach graduate students on the proper design of hazard warnings and instructions for the safe handling of products with toxicity potential.
- 19. I am an advisor to and have provided lectures to the Wayne State University Environmental Health Sciences Center in Molecular and Cellular Toxicology with Human Applications.
- 20. A primary research interest is the mathematical modeling of human exposures to airborne and percutaneously-absorbed toxicants and their possible co-morbidity with over-the-counter and prescribed medications.
- 21. I regularly advise my industrial clients on the safety and legal disposal of their hazardous waste. This requires knowledge of the toxicity of these wastes to ensure safe, proper disposals.
- 22. I provided toxicological interpretations regarding platinum salts in the "Citizen Petition for the Revocation of Silicone Gel Breast Implants from the Market", 2000.
- 23. I petitioned the U.S. Consumer Product Safety Commission to remove, or significantly restrict, sulfuric acid drain openers from the commercial market. This petition included the toxicology and mechanisms of tissue injury by this strong mineral acid.

**CONSULTING** Previous consultant to the American Industrial Hygiene Association in comprehensive industrial hygiene practice: worksite studies and analyses, toxicology, product safety, ventilation, training instruct-ion, hazardous waste disposal, asbestos, noise control, labeling, expert witness, indoor air quality, respiratory protection, and heat stress and strain. Consultant listed with Expert Resources and Technical Advisory Service for Attorneys. Consultant to the U.S. Department of Labor – OSHA, Salt Lake City, Utah and the State of Michigan Department of Public Health, Division of Environmental and Occupational Health, Lansing, Michigan

PATENT"Chemical Drain Opener Safety Dispenser", Invention SubmissionSUBMISSIONSCorporation (1997).

" *'Give Pause' Safety Devices for Table Saw*', Invention Submission Corporation (2003)

*"Portable Fire Extinguisher Use Alert System"*, Invention Submission Corporation (2003)

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"Intersection Hazard Warning and Traffic Control Signals"; Carrier, Blackman & Associates, P.C. (patent pending) (2006)

Two trademarks submitted (one approved, one pending)

*"Ergonomically-Designed Restaurant Serving Tray and Bussing Tray"*; Carrier, Blackman & Associates, P.C. (2007)

**PRESENTATIONS** Several hundred lectures and speeches on numerous professional subjects throughout career including seminars and lectures at Michigan State University; Wayne State University; Oakland University; University of Michigan; University of Pennsylvania; Ohio State University; Columbia University; Industrial Hygiene Institute; University of Cincinnati; University of Sao Paulo, Brazil; University of Buenos Aires, Argentina (industrial hygiene, toxicology, indoor air quality, safety engineering, chemical hazard recognition and control, facility compliance auditing, statistics, heat stress, noise, air and water pollution, ventilation)

Presentation of educational and training seminars and lectures to medical staffs at the following hospitals: St. Joseph Mercy, Detroit Receiving, Hutzel, Wayne State University Health Center, St. John, Crittendon, William Beaumont, Oakwood, Harper, Children's, Mt. Carmel, Grace, and The Givens Institute

*Environmental Air Pollution*, Aspen Environmental Medicine Conference, Colorado (1995)

*Home Safety and Hygiene*, Continuing Medical Education television program broadcast by Comcast Cable Studios (1996)

*Heat Stress and Human Heat Strain*, Professional Development Course presented at American Industrial Hygiene Conference and Exhibition: Dallas, Texas (1997); Atlanta, Georgia (1998); Toronto, Ontario (1999); Orlando, Florida (2000); New Orleans, Louisiana (2001); San Diego, California (2002); Dallas, Texas (2003)

*Management of Solid Hazardous Waste*, Michigan State Medical Society, Annual Scientific Meeting, Westin Hotel, Detroit, Michigan (1997)

*Confined Space Entry Safety*, Occupational Health and Safety Seminar, City of Detroit – Detroit Board of Education Building and Powerhouse Engineers (1999)

*Chemical Process Safety*, Wayne State University College of Pharmacy and Allied Health Professions (1999)

Wabeke, R.L. and M.R. Harbut, *Collaboration Among Occupational Medicine Physicians and Industrial Hygienists in Recognizing and Controlling Workplace Exposures: Interfacing and Promotion of an Interactive Professional Alliance*, Joint Conference of the American College of Occupational and Environmental Medicine and American Academy of Industrial Hygiene; Nashville, Tennessee (2000).

What to Do if You Suspect Your Pulmonary/Allergic Patient Lives in a Moldy House, Department of Occupational and Environmental Medicine, Wayne State University School of Medicine (2000).



Industrial Toxicology Review for Those Preparing for Board Certification as Hazardous Materials Managers, Livonia, Michigan (2000).

*Industrial Hygiene and Occupational Toxicology*, Annual Michigan Conference of MIOSHA, Management, and AFL–CIO (2000).

*Indoor Air Quality for Health Professionals*, Michigan State Medical Society Meeting, Occupational and Environmental Health Section; Dearborn, Michigan (2000)

Industrial Hygiene and Occupational Toxicology for Family Medicine Residents, Wayne State University School of Medicine (1987–2000)

The Dangers of Concentrated Sulfuric Acid Drain Openers, WNBC TV presentation and demonstration, New York, NY (2000)

*Industrial Chemical Toxicology*, Michigan Safety Engineers' Conference, Lansing, Michigan (2001)

The Science, Health Effects, Lifecycles, and Re-mediation of Mold: The Mold Rush is On!, Kellogg Center, Michigan State University, East Lansing, Michigan (2001)

Four Major Chemical Asphyxiant Gases: [Carbon Monoxide (CO), Hydrogen Sulfide ( $H_2S$ ), Hydrogen Cyanide (HCN), and Arsine (AsH<sub>3</sub>)], Wayne State University School of Medicine, Occupational and Environmental Medicine, Detroit, Michigan (2001)

Control of Exposures to Anti-Microbial Chemicals in Residences and Commercial Buildings, Pesticide Advisory Committee, Michigan Department of Agriculture, Lansing, Michigan (2001)

Gaze Pursuit, Nystagmus, and Chronic Motion Carryover Disorders Simulating Meniere's Disease in Conveyor Belt Workers, Michigan Industrial Hygiene Society, Detroit, Michigan (2002)

Visiting Lecturer, *Controlling Occupational Health Hazard Exposures*, University of Witwatersrand, South Africa Council on Occupational Health, – Fogarty Grant, Johannesburg, South Africa (2002)

Chemical and Physical Properties of Mercury: Viewpoints of an Industrial Hygienist and Chemical Safety Engineer, Michigan Poison Control Center, Children's Hospital of Michigan (2002)

*Human Hypothermia and Hyperthermia*, all-day seminar at Maritime Section of American Industrial Hygiene Association, Halifax, Nova Scotia, Canada (2003)

Heat Stress and Human Heat Strain, Professional Development Course, Michigan Industrial Hygiene Society, James Henry Center at Michigan State University, East Lansing, Michigan (2003)

*Occupational and Environmental Health Regulations*, Wayne State University School of Medicine, Detroit, Michigan (2003)

Home Construction Sites: Safety, Industrial Hygiene, and Hazardous Waste Issues, Michigan Home Builders Association, Saginaw, Michigan (2003)

Visiting Lecturer, *Air Sampling and Analysis, Calculation Statistics, and Industrial Hygiene and Community Air Pollution Program Certification*, Israel Government Laboratory Accreditation Authority, Tel Aviv, Israel, (2004)



Thermal Stress: Controlling Human Heat and Cold Strain, Michigan Safety Conference, Insurance Division, Lansing, Michigan (2004) Human Thermoregulation: Preventing Heat Strain in Automobile and Truck Assemblers and Automotive Component Manufacturers, Daimler Chrysler Corporation, Auburn Hills, Michigan (2004) Overview of United States Approaches to Industrial Hygiene, Air Pollution, and Occupational Medicine, to a team of occupational medicine and community medicine physicians from Baghdad, Iraq, Wayne State University School of Medicine (2004) The Big Three CNS Metal Toxicants: Lead, Manganese, and Mercury – with a Dash of Solvent Vapors for Some Occupations, Department of Family Medicine, Division of Occupational and Environmental Medicine, Wayne State University School of Medicine (2004)Heat Stress and Strain: Improving Worker Productivity and the Bottom Line by Preventing Heat-Related Discomfort, Injuries, and *Deaths*, Insurance Division, Michigan Safety Conference, Lansing, Michigan (2005) Human Thermoregulation: Preventing Human Heat and Cold Strain, Michigan Industrial Hygiene Society all-day Professional Development Conference; Frankenmuth, Michigan (2005) Health Issues and Hazards from Environmental Sources, Faith and the Environment Conference, Grosse Ile, Michigan (2006) MAJOR Case-Control Study of Occupational Exposures of Wayne County RESEARCH *Males with Prostatic Carcinoma, \$2,500,000 five-year grant from* PROJECTS and National Institutes of Health, Principle Investigators: R. Severson, PROPOSALS R. Y. Demers, J. Siemiatycki, and R. L. Wabeke (supervise three industrial hygienists (1996 – 2001) A Nested Case-Control Study of Lung Cancer Among UAW–Ford Assembly Plant Employees, D. Brown, E. Delzell, F. Barbone, and R. L. Wabeke, submitted to The United Auto Workers Ford Motor Company National Joint Committee on Health and Safety (2000) Disposal of Hospital-Generated Hazardous Medical Waste, V. Neale and R.L. Wabeke, Blue Cross and Blue Shield of Michigan (2002)

C. Simpson and <u>R.L. Wabeke</u>, *Physical Activity and Disability in Hospital Workers*, University of Michigan (2002)

# PUBLICATIONS: FACULTY, STUDENT, RESIDENT, COMMUNITY PRESENTATIONS

Thousands of technical reports for thousands of clients since 1965.

<u>Wabeke, R. L.</u>, Method for Sampling Mercury Vapor and Its Inorganic Compounds in Air, *Criteria for a Recommended Standard for Occupational Exposure to Inorganic Mercury*; The National Institute for Occupational Safety and Health (1973).

<u>Wabeke, R. L.,</u> Industrial Hygiene Surveys of Three Plants Manufacturing Chlorine and Caustic Soda by the Diaphragm Cell Process, Master of Science Thesis, Graduate School – Wayne State University School of Medicine (1974).



<u>Wabeke, R. L.,</u> *Industrial Hygiene Problems*, review for the American Board of Industrial Hygiene Certification Examinations, American Industrial Hygiene Association (1990).

<u>Wabeke, R. L.</u> and R. Weinstein, *Case Studies in Environmental Medicine – Polychlorinated Biphenyl Toxicity*, a monograph for the Agency for Toxic Substances and Disease Registry, United States Department of Health and Human Services (1990).

<u>Wabeke, R.L.</u>, *Safe Use of Corrosive Chemical Drain-Pipe Cleaners*, Chemical Risk Management (1990).

Wabeke, R. L. and R. Weinstein, Polychlorinated Biphenyl Toxicity, *Clinical Toxicology*, 28 (4): 505-526 (1990).

Demers, R. Y., B. L. Markell, and <u>R. L. Wabeke</u>, Peripheral Vibratory Sense Deficits in Solvent-Exposed Painters, *Journal of Occupational Medicine*, *33* (10): 1051–1054 (1991).

Wabeke, R. L., Air Calculations for Industrial Hygiene, DataChem, Lewis Publishers, Inc. (1991).

<u>Wabeke, R. L., Air Calculations and Ventilation Problems in Industrial Hygiene</u>, DataChem Software, Lewis Publishers, Inc. (1991).

<u>Wabeke, R. L.</u>, Chlorine Gas Toxicity from the Mixture of Bleach and other Cleaning Products, *Morbidity and Mortality Weekly Report*, Volume *40*, No. 36; *Erratum 47* (1992).

<u>Wabeke, R. L., REACTä</u> Calculations in Industrial Air Sampling and Analysis, American Industrial Hygiene Association (1993).

Welch, L. S., <u>R. L. Wabeke</u>, and G. H. Bergeisen, Case Report of Congenital Cardiovascular Malformations Associated with Domestic Exposure to Glycol Ethers, submitted to *British Journal of Industrial Medicine* (1994).

<u>Wabeke, R. L.</u>, *Practical Aspects in Determining Causation in Toxic Tort Litigation*, 12<sup>th</sup> Annual Law and Science Seminar, San Francisco (1993).

<u>Wabeke, R. L.,</u> *Methods of Solid Waste Management*, Michigan State Medical Society Annual Meeting, Detroit (1993).

<u>Wabeke, R. L.</u> and R. Weinstein, *PCB Toxicity*, Association of Occupational and Environmental Clinics; Washington, D. C. (1993).

<u>Wabeke, R. L.</u>, J. Cisek, and M. Schultz, *Exposures of Medical Emergency Care Providers to Air and Dermal Toxicants During Decontamination of Chemically-Exposed Patients*, American Public Health Association 121<sup>st</sup> Annual Meeting, San Francisco (1993).

Schultz, M., J. Cisek, and <u>R. L. Wabeke</u>, Simulated Exposures of Hospital Emergency Personnel to Solvent Vapors and Respirable Dust During Patient Decontamination, submitted to *Annals of Emergency Medicine* (1994).

<u>Wabeke, R. L.</u>, *Carbon Monoxide Analysis*, chapter in book: *Carbon Monoxide*, D. Penney, Editor, C R C Press, Boca Raton, Florida (1995).

<u>Wabeke, R. L.</u>, *Heat Stress in the Workplace*, American Conference of Governmental Industrial Hygienists --- Small Business Committee, Cincinnati, Ohio (1995).

Pope, A.M and D.P. Rall, Editors; <u>Wabeke, R.L.</u>, *Environmental Medicine: Integrating a Missing Element into Medical Education, Polychlorinated Biphenyl Toxicity*, National Academy Press, Washington, D.C. (1995).

<u>Wabeke, R. L.</u>, *Human Thermoregulatory Mechanisms: Heat and Cold Stress*, University of Michigan School of Public Health, Ann Arbor, Michigan (1995).

<u>Wabeke, R. L.</u>, *Pitfalls in Industrial Hygiene – Problems with Technology and Measurement*, Second Annual Environmental Medicine Conference, University of Colorado School of Medicine, Givens Institute of Pathobiology, Aspen, Colorado (1995).



<u>Wabeke, R.L.</u>, Handbook of Air Calculations and Industrial Hygiene Ventilation: a Workbook of Practical Problems with Solutions (1995).

Schenk, M., <u>R. Wabeke</u>, S. Popp, and S. Matthews, *The Exposure History: Introduction to Environmental Exposures and Their Relationship to Health Risks*, a videotape training module for 2<sup>nd</sup>-year nation-wide medical students, National Institute of Environmental Health Sciences (1996).

Schultz, M., Cisek, J, and <u>R.L. Wabeke</u>, Simulated Exposure of Hospital Emergency Personnel to Solvent Vapors and Respirable Dust During Decontamination of Chemically-Exposed Patients, *Annals of Emergency Medicine*, *26* (3): 324-329 (1995).

<u>Wabeke, R.L.</u>, *Heat and Cold Stress and Strain: Human Thermoregulation*, American Industrial Hygiene Association (1997).

<u>Wabeke, R.L.,</u> *Environmental Heat Stress and Human Heat Strain: Recognition, Evaluation, and Control*, American Society of Safety Engineers (1997).

<u>Wabeke, R.L.</u>, *Air Contaminants and Industrial Hygiene Ventilation*, CRC Press and Lewis Publishers (1998).

Wabeke, R.L., Letter to the Editor, Industrial Safety and Hygiene News (1998).

Eklund, L., J. Rosbolt, R. Severson, <u>R. Wabeke</u>, Exposure Assessment Method Used in an Epidemiological Study of Occupational Risk Factors for Prostate Cancer, *American Industrial Hygiene Conference and Exhibition* – Atlanta, Georgia (1998).

<u>Wabeke, R. L.</u>, Industrial Hygiene: Exposures of Working Women, *Proceedings of the Annual American Trial Lawyers' Association Convention*, Washington, DC (1998).

<u>Wabeke, R.L.</u>, *Confined Space Entry Safety*, Occupational Health and Safety Seminar, City of Detroit -- Board of Education Building and Powerhouse Engineers (1999).

<u>Wabeke, R.L.</u>, Indoor Air Quality: Building-Related Illness and Sick Building Syndrome --What Doctors Need to Know, speech given to residents in Family Medicine and residents in Occupational and Environmental Medicine, The Detroit Medical Center (1999).

<u>Wabeke, R.L.</u>, Two chapters in a book (title is presently un-decided) edited by Chiodo, E. and D. Hadden: *Industrial Hygiene* and *Occupational Toxicology* (2000).

<u>Wabeke, R.L., Chemical Process Safety</u>, lectures presented to medical and graduate students in industrial hygiene, chemical engineering, and environmental health (1999).

<u>Wabeke, R.L.</u>, *Core Principles of Industrial Hygiene*, Wayne State University School of Medicine, Occupational and Environmental Medicine (1999).

<u>Wabeke, R.L.</u>, *Responding to Household Mercury Spills*, Children's Hospital of Detroit Poison Control Center (1999).

<u>Wabeke, R.L.,</u> *Industrial Hygiene Work Practices: Residential Bathroom and Shower Repairs*, Chemical Risk Management (1999).

<u>Wabeke, R.L.</u>, Chemical Safety Engineering and Industrial Hygiene Aspects of MPTP (1-Methyl-4-Phenyl-1,2,4,6-Tetrahydropyridine Hydrochloride), a Central Nervous System Non-Pharmacologic Neurotoxicant with Parkinsonism-Producing Properties, Henry Ford Hospital Bioresearch Department (1999).

<u>Wabeke, R.L., An Industrial Hygienist?</u> What's <u>THAT</u>?, The Synergist, American Industrial Hygiene Association (2000).

<u>Wabeke, R.L.,</u> *Indoor Air Quality: 31 Tips for Homeowners!*, Chemical Risk Management and Wayne State University School of Medicine (2000).

<u>Wabeke, R.L.</u>, Industrial Toxicology Review for Those Preparing for Board Certification as Hazardous Materials Managers (2000).



<u>Wabeke, R.L.</u>, *Indoor Air Quality: Residences, Office Buildings, and Non-traditional Workplaces*, Michigan State Medical Society, Division of Occupational and Environmental Medicine (2000).

<u>Wabeke, R.L.</u>, *Indoor Air Quality for Health Professionals*, PowerPoint<sup>®</sup> slide presentation, Association of Occupational and Environmental Health Clinics, Washington, DC (2000).

<u>Wabeke, R.L., Dust Mite Control Tips</u>, Wayne State University, Department of Occupational and Environmental Medicine (2000).

<u>Wabeke, R.L.</u>, *Industrial Hygiene and Occupational Toxicology for Family Medicine Residents*, Wayne State University School of Medicine, Occupational and Environmental Medicine (2000).

<u>Wabeke, R.L.</u>, *Remediation of Sewage-Contaminated Residences*, Wayne State University School of Medicine, Occupational and Environmental Medicine (2000).

<u>Wabeke, R.L.</u>, *Diagnostic Elements of Environmental House Calls: "The Building Doctor",* Wayne State University School of Medicine, Occupational and Environmental Medicine (2000).

<u>Wabeke, R.L.</u>, Common Chemical Asphyxiant Gases: Toxicokinetics of Carbon Monoxide, Hydrogen Sulfide, and Hydrogen Cyanide – Exposures, Prevention, Treatment, Wayne State University School of Medicine, Occupational and Environmental Medicine (2000).

<u>Wabeke, R.L.</u>, *Heat Stress and Human Heat Strain for Practitioners of Family Medicine*, Wayne State University School of Medicine, Occupational and Environmental Medicine (2000).

<u>Wabeke, R.L.</u>, So, Your Patient is a Construction Worker: Industrial Hygiene Aspects of Occupational Diseases of Construction Tradesmen, Wayne State University School of Medicine, Occupational and Environmental Medicine (2000).

<u>Wabeke, R.L.</u>, *Hobby Poisons: Are You Exposed to Toxic Chemicals in Your Avocation?*, Wayne State University School of Medicine, Occupational and Environmental Medicine (2000).

<u>Wabeke, R.L.</u>, *Protecting Workers' Eyes from Industrial Chemicals: A Gray-Beard's 36-Year Professional Perspective*, Wayne State University School of Medicine, Occupational and Environmental Medicine (2001).

<u>Wabeke, R.L.</u>, *Industrial Safety Hazards – Dangers that Lurk: Hidden Energy*, Wayne State University School of Medicine, Occupational and Environmental Medicine (2001).

<u>Wabeke, R.L.</u>, *Occupational Toxicology for Emergency Medicine Responders*, Detroit Receiving Hospital, Wayne State University School of Medicine, Occupational and Environmental Medicine (2001).

<u>Wabeke, R.L.</u>, *Medical Aspects of Ethyl Alcohol Determination in Biological Specimens for Family Medicine Practitioners*, Wayne State University School of Medicine, Occupational and Environmental Medicine (2001).

<u>Wabeke, R.L.</u>, *What Physicians Need to Know About Respirator Selection*, Wayne State University School of Medicine, Occupational and Environmental Medicine (2001).

<u>Wabeke, R.L.</u>, Occupational Medicine Physicians Still Make House Calls: The Building Walk-Through Inspection, Wayne State University School of Medicine, Occupational and Environmental Medicine (2001).

<u>Wabeke, R.L</u>., *Principles of Industrial Ventilation for Safety Engineers and Occupational Medicine Physicians*, Wayne State University School of Medicine, Occupational and Environmental Medicine (2001).



<u>Wabeke, R.L.</u>, *Food Sanitation – Processing, Preparation, and Storage*, Wayne State University School of Medicine, Occupational and Environmental Medicine (2001).

<u>Wabeke, R.L.</u>, *Health and Safety Education and Training: Tips and Techniques to Make You Most Effective*, Wayne State University School of Medicine, Occupational and Environmental Medicine (2001)

<u>Wabeke, R.L.</u>, *Comparative Audiology for Occupational and Environmental Medicine Residents*, Wayne State University School of Medicine, Occupational and Environmental Medicine (2001).

<u>Wabeke, R.L.</u>, *Agricultural Health Hazards – with Notes on PBB*, Wayne State University School of Medicine, Occupational and Environmental Medicine (2002).

<u>Wabeke, R.L.</u>, *Packager's Disease*, Wayne State University School of Medicine, Occupational and Environmental Medicine (2002).

<u>Wabeke, R.L.</u>, Information Resources for Practitioners of Occupational and Environmental Medicine, Wayne State University School of Medicine, Occupational and Environmental Medicine (2002).

<u>Wabeke, R.L.</u>, *Core Principles of Safety Engineering*, Wayne State University School of Medicine, Occupational and Environmental Medicine (2002).

<u>Wabeke, R.L.</u>, *Calculating Real Costs of Workplace Injuries and Diseases*, Wayne State University School of Medicine, Occupational and Environmental Medicine (2002).

<u>Wabeke, R.L.</u>, *Respiratory Protection: Medical and Industrial Hygiene Considerations*, Wayne State University School of Medicine, Occupational and Environmental Medicine (2002).

<u>Wabeke, R.L.</u>, *Occupational Toxicology*, Wayne State University School of Medicine, Occupational and Environmental Medicine (2002).

<u>Wabeke, R.L.</u>, Chemical and Physical Properties of Mercury: An Industrial Hygienist's and Chemical Safety Engineer's Perspective, Wayne State University School of Medicine, Occupational and Environmental Medicine (2002)

<u>Wabeke, R.L</u>. and Simpson, C. J., *Astute Clinicians in Occupational and Environmental Medicine*, Wayne State University School of Medicine, Occupational and Environmental Medicine (2003).

<u>Wabeke, R.L.</u>, *Human Hypothermia and Hyperthermia*, Maritime Section of the American Industrial Hygiene Association, Halifax, Nova Scotia, Canada (2003).

<u>Wabeke, R.L.</u>, *Hearing Protection Devices*, Wayne State University School of Medicine, Occupational and Environmental Medicine (2003).

<u>Wabeke, R.L.</u>, Worker-Patient Role Playing as Teaching Modules in Clinical Settings for *Residents in Occupational and Environmental Medicine*, Wayne State University School of Medicine, Occupational and Environmental Medicine (2003).

<u>Wabeke, R.L.</u>, *Industrial Hygiene and Workers' Hearts: Occupational Cardiac Pathology* (*Cardiotoxicants, Hypoxia, Hypobarism, and Heat Strain*), Wayne State University School of Medicine, Occupational and Environmental Medicine (2003).

<u>Wabeke, R.L.</u>, *Ergonomics and Repetitive Stress Musculoskeletal Disorders*, Wayne State University School of Medicine, Occupational and Environmental Medicine (2003).

<u>Wabeke, R.L.</u>, Integrated Risk Assessment Helps to Integrate Safety, Occupational and Environmental Health, and Business, Wayne State University School of Medicine, Occupational and Environmental Medicine (2003).

<u>Wabeke, R.L.</u>, Could Exposure to Chemicals at Work Kill You?, *Marquette Daily Press* (2003).



<u>Wabeke, R.L.</u>, *Designing Effective Hazard Warnings*, Wayne State University College of Engineering and School of Medicine (2003)

<u>Wabeke, R.L.</u>, ACGIH Threshold Limit Values and OSHA Permissible Exposure Limits: What Doctors Need to Know (2003)

<u>Wabeke, R.L.</u>, Air Sampling and Analysis Calculations – a Review for the American Board of Industrial Hygiene Certified Industrial Hygienist Examinations, Michigan Industrial Hygiene Society, American Industrial Hygiene Association, University of Michigan (2004)

<u>Wabeke, R.L.</u>, *Risk Management of Cardiovascular Industrial Hygiene Stress Factors*, Wayne State University School of Medicine (2004)

<u>Wabeke, R.L.</u>, *Risk Management Probability Calculations – A Powerful Tool for Safety Engineers and Industrial Hygienists*, Wayne State University School of Medicine (2004)

Requested by the Editor as a peer reviewer for chapter on "Indoor Air Quality – A General Overview" for the 2<sup>nd</sup> Edition of *Hazardous Materials Management Desk Reference* (2004)

<u>Wabeke, R.L.</u>, *PowerPoint*<sup>®</sup> image presentations: American Board of Industrial Hygiene – Calculations for the Certified Industrial Hygienist Examinations; Air Sampling and Analy-sis; Cardiac Issues in Industrial Hygiene; Conveyor Belt Sickness; Construction Site Safety, Health, and Environmental Issues; Ergonomics and Human Factors; Hazardous Waste; Hazard Warnings Design; Human Thermoregulation; Indoor Air Quality; Industrial Hygiene Principles; Laboratory Safety, Health, and Environmental Practices; Mentoring Safety, Health, and Environmental Professionals; Lead; Mercury; Noise-Induced Hearing Loss; History of Occupational and Environmental Medicine; Respiratory Protection; Risk Assessment, Management, and Communication, SHE Professional Development.

<u>Wabeke, R.L</u>., Editor, Wayne State University School of Medicine Occupational and Environmental Medicine <u>MeDucation Facts Sheets</u>, an evolving handbook for residents in Occupational and Environmental Medicine, Authored 162 Facts Sheets. (2004 – present).

<u>Wabeke, R.L.</u>, *Safety Practices for the Home*, Wayne State University School of Medicine, Occupational and Environmental Medicine (2005).

<u>Wabeke, R.L.</u>.., So, You Want to Be a Safety Engineer!, Wayne State University School of Medicine, Occupational and Environmental Medicine (2005).

<u>Wabeke, R.L.</u>., Safety Engineering Economics: A Set of Tools to Persuade, Wayne State University School of Medicine, Occupational and Environmental Medicine (2005).

<u>Wabeke, R.L.</u>, guest contributing consultant, *Hazardous Materials Management Desk Reference, 2<sup>nd</sup> Edition*, Academy of Certified Hazardous Materials Managers (2005).

Blessman, J., Skupski, J. Jamil, M., Bassett, D, <u>Wabeke, R</u>., and Arnetz, B.; Barriers to At-Home Preparedness in Public Health Employees: Implications for Disaster Prepared-ness Training, *Journal of Occupational and Environmental Medicine*, Volume 49 (2007).

Quoted in *The Detroit Free Press* (August 16, 2005) regarding an explosion and fire at a hazardous waste processing plant: "Roger Wabeke, former head of industrial hygiene at Ford Motor Company, and president of Dearborn-based Chemical Risk Management, said EPA scientists "...did it right when choosing which hazards to assess." But, he agreed, "It is unlikely they could test for everything. Even if they could, it wouldn't be helpful because chemists' abilities to measure ever-smaller amounts of potentially hazardous compounds have outstripped abilities of toxicologists to determine what levels pose threat to humans."

#### QUALIFIED to TESTIFY in FEDERAL, STATE, and CANADIAN PROVINCIAL

COUR	l	2
Alabam	12	a
Arizona	l	

Maine Maryland

New York North Dakota

Vermont Virginia



California Connecticut	Michigan Minnesota	Ohio Oklahoma		Washington West Virginia
Florida	Mississippi	Ontario		Wisconsin
Georgia	Missouri	Pennsylvania		Louisiana
Illinois	Montana	Quebec		New Mexico
Indiana Kentucky	Nebraska New Jersey	South Carolina South Dakota	Texas	

Expert in an appealed jury verdict that survived a *Daubert* challenge by opposing counsel in the United States Court of Appeals for the Eighth Circuit: No. 01-2246. Appeals from the United States Court for the District of South Dakota (2002).

Assisted many defense and plaintiff attorneys within my areas of professional expertise in numerous claims since 1968. These included research, record reviews, testing, testifying at depositions and trials, mathematical modeling, statistical analyses, preparing affidavits, designing safer product alternatives, risk assessments, and report preparations.

March 23, 2007