



DENNIS J. PAUSTENBACH, Ph.D., C.I.H., DABT
Vice President
Exponent, Inc.

Education

Ph.D., Environmental Toxicology, Purdue University, 1982

M.S., Industrial Hygiene, University of Michigan, 1977

M.S., Counseling Psychology, Indiana State University, (at night), 1978

BScHE, Chemical Engineering, Rose-Hulman Institute of Technology, 1974

- Post-Doctoral Research (in absentia), Pharmacokinetics, Wright-Patterson Air Force Base, Dayton, Ohio; 1985-1987 (Dr. Melvin Andersen, collaborator).
- Visiting Scientist at the Harvard School of Public Health; Center for Risk Analysis; Boston, MA. A one-year appointment (June, 1996-June, 1997) which included 10 weeks in residence at the college. Worked with Dr. John Graham.

Professional Honors/Awards

- Purdue University Distinguished Alumnus Award, School of Health Sciences (2000)
- Society of Toxicology Best Platform Presentation in Risk Assessment Award at the 39th Annual Meeting (2000)
- Society for Risk Analysis Outstanding Risk Practitioner Award (1997)
- Society of Toxicology Best Published Paper Award in the Field of Risk Assessment (1995)
- Rose-Hulman Institute of Technology Distinguished Alumni Award (1994)
- American Industrial Hygiene Association Award for “distinguished contribution to the field by a person under 40 years of age” (Kusnetz Award) (1992)
- American Men and Women in Science (1993–present)
- Who’s Who in America (1993–present)
- Who’s Who in the Health Sciences (1994–present)
- Health Sciences Honorary (Alpha Chi Omega) (1980)
- Chemical Engineering Honorary (Omega Chi Epsilon) (1974)

Security Clearance

- Q-level Security Clearance was issued by the United States Government for 1991-1993 (Rocky Flats Nuclear Weapons Facility).

Membership and Service to Professional Societies

- Society for Risk Analysis (SRA)
 - Council Member for National Organization (1998–2000)
 - Council Member of Northern California chapter (1995–1996)
- American Industrial Hygiene Association (AIHA)
 - Member of Risk Assessment Committee (1995–1997)
 - Liaison representative between AIHA and the Society of Risk Analysis (1991–1994)
 - Member of Toxicology Committee (1982–1984)
 - Member of Workplace Exposure Limits Committee (1982–1984)
 - Co-Chair of Committee on Unusual Workshifts (1981–1984)
 - President, Indiana Section (1981)
 - Member of Hygienic Guides Committee (1976)
- American Conference of Governmental Industrial Hygienists (ACGIH)
- American Association for the Advancement of Science (AAAS)
- Society of Toxicology (SOT)
 - President, Risk Assessment Specialty Section (2000)
 - Vice President elect, Risk Assessment Specialty Section (1998–2000)
- Society of Environmental Toxicology and Chemistry (SETAC)
 - Associate Chairman of Organization Committee (2000)
- International Society of Exposure Analysis (ISEA) (2000)
- International Society of Regulatory Toxicology and Pharmacology (ISRTP)
- American Board of Toxicology (ABT)
- Air and Waste Management Association (AWMA)
- New York Academy of Science (NYAS)
- Sigma Xi (Stanford Chapter)
- Board of Certified Safety Professionals (CSP)
- American Board of Industrial Hygiene (ABIH)

Service to Academic Institutions

- Adjunct Clinical Professor of Medicine; University of California at Irvine (1996-1999)
- Adjunct Professor in Toxicology, University of Massachusetts (1993-2001)
- Adjunct Professor, Univ. of Texas, School of Public Health in Houston (1985-1989)
- Adjunct Professor, Purdue Univ., Dept. of Toxicology/Pharmacology. (1983-1984)
- Visiting Professor, Univ. of Bridgeport, Dept. of Mechanical Eng. (1983)

Profession-Related Activities

- Textbook reviewer for MacMillan Publishing Company (1986-1992)
- Textbook reviewer for Wiley Interscience (1985-1994)

Science Advisory Panels

- 2001: Member of EPA Advisory Board on Exposure Assessment for Children (December 8-10, Washington, DC).
- 1987-01: Consulting Member of the USEPA Science Advisory Board (SAB) - Environmental Health Committee (Washington, DC).
- 2001: Member of Governor's Science Panel to evaluate human health hazard posed by ingestion of chromium VI in drinking water. (May-August, Sacramento, CA). Resigned prior to Public Meeting.
- 2000-01: Member of Society of Toxicology (SOT) National Panel to develop guidelines for assessing the health hazards posed by mixtures. (Washington, DC).
- 2000-01 Member of the EPA Science Advisory Board (SAB) which evaluated "Dioxin and dioxin like compounds" (Nov. 1-2, Washington, DC). Chaired by Mort Lippmann.
- 2000: Member of Department of Energy Science Panel charged with evaluating the radiological and chemical hazards posed by the storage of the Nuclear Submarines in the former USSR. (Chicago, IL.) Chaired by Paul Ziemer.
- 2000: Member of the EPA Science Advisory Board (SAB) which evaluated "Benefits of reductions in exposure to hazardous air pollutants" (June 22-23, Washington, DC). Chaired by Roy Albert.
- 2000: Served on Harvard Science Advisory Panel Assessing the Possible Human Health Hazards Posed by Styrene. (Feb. and May; Boston, MA). Chaired by Dan Krewski.
- 2000: Chairman of the Expert Panel to set Occupational Exposure Limits (OELs) for select glycol ethers (2-ME, 2-EE, and 2-EEA) for Union Carbide Corporation (UCC).
- 1993-01: Charter member of Scientific Committee 87-2 (Risk-Based Waste Classification) of the National Council on Radiation Protection (NCRP) (Quarterly meetings).
- 1998-01: Member, Science Advisory Board of the Mickey LeLand National Urban Air Toxics Research Center (a center established by Congress). Houston, Texas.
- 1998-01: Member of the Environmental Board of Directors for the Savannah River Site.
- 1997: Ad-hoc member of the EPA Board of Scientific Counselors (BOSC) whose charge was to give guidance to the EPA Office of Research and Development (ORD). [Reviewed both the Cincinnati Engineering program and National Center for Environmental Assessment (NCEA) program in Washington; August and September.]

- 1997-98: Member of the Advisory Board for the Harvard Center for Risk Analysis.
- 1997: Member of Oversight Board for the Environmental Engineering and Sciences Program at UCLA (met on March 20 and 21; Los Angeles).
- 1996-98: Served on the German Commission for setting national soil clean-up standards and risk assessment guidelines (Mr. Tom Long represented me at two different meetings) (Munich).
- 1996: Member of the ILSI Expert Panel to review the new EPA Cancer Risk Assessment Guidelines (May 8; Washington, D.C.).
- 1995-97: Served on the United Nation's International Atomic Energy Commission (IAEC) to identify an international approach to classify hazardous wastes (Vienna, Austria; December 10-15, 1995).
- 1996: Member of the Expert Panel to set Occupational Exposure Limits (OELs) for select glycol ethers (2-ME, 2-EE, and 2-EEA) established by Union Carbide Corporation (UCC).
- 1995: Chairman of Risk Assessment program (with Dr. Roger McClellan) of the International Symposium on Butadiene and Isoprene (June 27-29; Blaine, WA).
- 1994-95: Served on the EPA Science Advisory Board (SAB) which reviewed the "EPA's Reassessment of Dioxin-1994-95" [the Second Dioxin Reassessment] (May 15-16, 1995; Washington, D.C.). Chaired by Dr. Morton Lippmann.
- 1994-95: Member, Commission for Incorporating Epidemiology into Health Risk Assessment. Sponsored by Federal Focus (Washington, November 2; New York, March 9; and London, October 7-9).
- 1988-89: Served on United States Environmental Protection Agency (EPA) Ad-Hoc Science Advisory Board (SAB) Dioxin Subcommittee [1st Dioxin Reassessment] (December 6-8; Washington, D.C.). Chaired by Dr. Bernard Goldstein.
- 1984-90: Member of the Council for the Health and Environmental Safety of Soils (CHESS). A group established to set consensus United States clean-up goals for soils. Sponsored by the University of Massachusetts at Amherst.
- 1991: Chairman of Industrial Health Foundation's Expert Panel which was charged with recommending an OEL for formaldehyde (June-December).
- 1990: Served on the Scientific Review Board of the Chemical Industry Institute of Toxicology [CIIT] on Ethylene Oxide (November 8; Chapel Hill, NC).

- 1985: Appointed to one of Governor Deukmejian's Technical Advisory Committees of the task force on toxics, waste and technology. The group assessed the effectiveness of California sponsored programs for Remediating Hazardous Waste Sites (October - December). Task force was reconvened in November, 1987.
- 1985: Chaired expert panel to assess Developmental and Reproductive Hazards Posed by Glycol Ethers as they were used in the semiconductor industry.
- 1985-87: Appointed to California Hazard Evaluation System and Information Services (HESIS) Advisory Committee (1985-87). Chaired by Dr. Bob Spear, University of California Berkeley.
- 1984: Served as a member of National Nutrition Foundation Expert Panel which evaluated the 1984 proposed Congressional Office of Science and Technology Policy (OSTP) "Risk Assessment Guidelines for Carcinogens."

Peer-Reviewer of Proposed Government Regulatory Positions/Documents

- 2001: Invited peer-reviewer of the United Kingdom's National Guidelines for "Assessing the health hazards posed by contaminated soils" (London).
- 2001: Invited peer-reviewer of the EPA Draft "Guidelines for Dermal Exposure Assessment" (Cincinnati, Ohio)
- 1998: Invited peer-reviewer for EPA of the draft "Methodology for Assessing Health Risks Associated with Multiple Pathway Exposure to Combustor Emissions" (Cincinnati, Ohio).
- 1997: Invited peer-reviewer of the Draft ATSDR Policy on "Acceptable Concentrations of Dioxin in Soil" (Atlanta, GA; January).
- 1996: ATSDR peer-reviewer of the draft "Toxicological Profile for 2,3,7,8-Tetrachlorodibenzo-p-dioxin (dioxin)" (December).
- 1996: Invited to be on NIOSH Advisory Panel on "Dermal Uptake of Workplace Chemicals" (Dr. Brent Kerger represented me) (September 25 & 26; Washington, DC).
- 1995: Member of the five person ATSDR/CDC Expert Panel which evaluated the Bioavailability of Mercury in Soils (August 28-29; Atlanta, GA).
- 1994: Member of the ATSDR/CDC Review Panel for "Toxicological Profile for Dioxin" (Aug. 10; Atlanta, GA).
- 1992: Member of EPA Expert Panel to review the draft document Exposure Assessment of Dioxin-like Compounds (September 14; Washington, DC).

1991: Served on the Congressional Office of Technology Assessment (OTA) Advisory Panel to evaluate “Dioxin Treatment Technologies” (May 29; Washington, DC). Proceedings were published as OTA-BP-0-93 and ISBN 0-16-036007-2.

Specialized Training and Certifications

- Certified Industrial Hygienist (CIH) (#1815) - Recertified 1987, 1993, and 1998
- Certified Safety Professional (CSP) (#5954) - Recertified 1987 and 1996
- Registered Professional Engineer-in-Training (EIT) - 1974
- Diplomat American Board of Toxicology (DABT) - 1984 (#253) - Recertified 1992, 1996 and 2000
- Certified Environmental Assessor (California) - REA #01264 - 1991 then Recertified 1995 and 2000
- Fellow of the American College of Toxicological Sciences (FACTS) - 1993 – then Recertified 1998

Grants Won

- 1980: NIOSH grant to develop teaching modules for use in undergraduate engineering classes. Award: \$80K. [Purdue University]
- 1981: Grant to write industrial hygiene engineering course to be used by NIOSH. Award: \$60K. [Purdue University]
- 1982: NIOSH grant to study low volume/high velocity ventilation systems. Award: \$60K [Purdue University]

Experience Summary (Professional Career)

Vice President

Exponent, Inc.

October 1998–Present

- Member of Corporate Management Committee, Most Senior Scientist and Consultant within Environmental Group,
- Currently responsible for business development and serve as Principal-in-Charge on major projects.
- Responsible for operations and management of Environmental and Epidemiology Groups from Oct. 1998 – Jan. 2000. Group had about 170 employees and performed \$19M a year in business.
- Has over 25 years of experience in the fields of chemical/environmental engineering, risk assessment, toxicology, and industrial hygiene.
- Has published more than 170 peer-reviewed publications and about 130 conference abstracts in the fields of risk assessment, toxicology, engineering, industrial hygiene, and safety.
- Written about 40 book chapters.
- Author of a college textbook and reference text (1989) which is among the most frequently used in undergraduate and graduate health risk assessment courses; e.g., “The Risk Assessment of Environmental Hazards: A Textbook of Case Studies.” (7,000 copies sold).
- Author of a recent college textbook and reference text (2002) entitled “Human and Ecological Risk Assessment: Theory and Practice” (D.J. Paustenbach, editor).
- Specializes in the areas of industrial and environmental toxicology, pharmacokinetics, air pollution, historical state-of-knowledge regarding environmental issues, and ecological and human risk assessments.
- Advises the management of Fortune 100 firms regarding a wide range of environmental and occupational health challenges.
- Investigates the health effects of exposure to, as well as the remediation of, carcinogenic and noncarcinogenic chemicals, including dioxins, benzenes, furans, PCBs, petroleum products, MTBE, asbestos, chlorinated hydrocarbons, lead, 1,3-butadiene, and chromium.
- Provides expert witness testimony in public meetings and court hearings concerning the health effects of waste discharges and chemicals in sediments, air, soil, and groundwater.

Senior Consulting Toxicologist (of counsel)
McLaren/Hart Environmental Engineering Corporation
September 1997–November 1998

- Assisted the company in moving through the process of merging or selling the firm.
- Senior scientist in the firm.
- Maintained relationship with various clients and served as Principal-in-Charge on select projects.

President and Chief Executive Officer
McLaren/Hart Environmental Engineering Corporation
June 1996–September 1997

- Responsible for profit/loss, growth and vision for the firm.
- Gave strategic direction to McLaren/Hart Environmental Inc., a 525-person nationwide firm that provided comprehensive environmental consulting services. Responsible for oversight of many of the technical/consulting aspects of the firm. Annual revenues of \$100M.
- Directed the Consulting Operations Managers (COM) for 16 offices nationwide
- Served on the Board of Directors.
- Maintained an active consulting and applied research practice in the areas of risk assessment, environmental engineering, toxicology, and occupational health.

Vice President, McLaren/Hart Environmental Engineering Corporation
Chief Technical Officer, McLaren/Hart/ChemRisk®
January 1994–June 1996

- Second ranking officer in the company.
- Responsible for revenue production for U.S. consulting operations (600 persos).
- Responsible for directing the technical/scientific efforts of this major (top 100) environmental consulting company.
- Responsible for directing the technical/scientific efforts of the company and for providing leadership to the four professional disciplines within fifteen offices.

- Jointly responsible with the CEO/President for developing an international business presence. Focused on the development of business in Australia, and China, as well as coordinating joint work efforts in England, Spain, Switzerland, and Germany. Became premier human and ecological risk assessment contractor in Australia and Switzerland.
- Responsible for starting-up, developing, and managing new offices in Sydney and Melbourne, Australia (March 1994 - March 1995). Presented a series of six lectures (2-4 hours each) to or for the New South Wales and Victoria EPA
- Directed/conducted more than two hundred of risk assessments between 1985-1996 and was the project manager on numerous major contracts.

Vice President, McLaren/Hart Environmental Engineering Corp.

Chief Technical Officer, McLaren/Hart/ChemRisk®

October 1991–December 1993

- Responsible for providing direction to the technical/scientific portions of the company and for providing leadership to the five professional disciplines within all fifteen offices. Responsible for coordinating corporate efforts when bidding on and executing major projects.
- Responsible for managing the National Business Programs in a) Remediation, b) Regulatory Compliance Management (RCM), c) Risk Assessment, d) Government Programs, e) Environmental Chemistry, f) Sales/Business Development, and g) Marketing. Responsible for the budget associated with these efforts.
- Responsible for day-to-day management of the ChemRisk® Division. In various polls by trade associations, it was ranked as the most respected risk assessment group in the U.S. In 1993, it performed about \$14M in risk assessment consulting.
- Provided guidance on operations in: Alameda, CA; Burbank, CA; Irvine, CA; Rancho Cordova, CA; Chicago, IL; Portland, ME; Southfield, MI; Springfield, MO; St. Louis, MO; Warren, NJ; Albany, NY; Cleveland, OH; Philadelphia, PA; Pittsburgh, PA; and Houston, TX.
- Coordinated scientific and business aspects of international activities (primarily in Europe). In particular, gave scientific advice regarding work performed in former East Germany (Jena); Basil, Switzerland; and Budapest, Hungary.

Vice President, McLaren/Hart Environmental Engineering Corp.

Founder and National Director, ChemRisk® Division

November 1987–October 1991

- Founder of the ChemRisk® Division of McLaren/Hart Environmental Engineering. Managed and directed in the joint venture involving the risk assessment component of the firm. The ChemRisk group grew from one person to nearly 100 professionals within four to five years. Annual revenues for 1991 were about \$10M. The group had five offices nationwide (Alameda, CA; Irvine, CA; Cleveland, OH; Warren, NJ; and Portland, ME), which provided ecological and human health risk assessment services. ChemRisk® was ranked as one of the ten most successful environmental consulting groups in the industry for three consecutive years.
- Directed consulting activities in the areas of risk assessment, environmental and occupational toxicology, and the scientific aspects of toxic tort cases. Provided advice on air toxics and industrial hygiene issues, as well as, remediation investigations and feasibility studies (RI/FS).
- Provided expertise in the areas of industrial and environmental toxicology, pharmacokinetics, environmental fate and transport, air pollution, odor abatement, and ventilation engineering.
- Routinely involved in the evaluation of health hazards posed by hazardous waste sites, landfills, contaminated soil, gaseous emissions, water, the workplace, and incinerators, as well as the control of in-plant gaseous releases, local exhaust ventilation, treatment of point-source gaseous emissions, contaminated soil and run-off, pesticides, and manufacturing processes.
- Managed projects involving the assessment of the health risks and significance of chemical contaminants present in water, sediment, ambient air, food, soil, the occupational environment, and in consumer products.
- Frequently interacted with local, regional, state and federal regulatory agencies. Participated in negotiations to resolve issues involving clean-up standards for air, water, soil and reusable items, e.g., contaminated vehicles and equipment.
- Risk communication experience included: (a) coordination of the scientific and medical aspects of complex toxic tort cases, (b) representation of clients at public hearings, (c) presentation of scientific data in professional and public forums, and (d) development of opinion letters for use in litigation.
- Participated in the scientific debate regarding acceptable levels of emissions of TCDD in water from pulp and paper mills (Georgia, North Carolina, and Washington 1990); as well as, identifying acceptable levels of TCDD, benzene, formaldehyde and chromium in air and soil.

Manager, Industrial and Environmental Toxicology
Syntex Corporation; Palo Alto, CA
August 1984–November 1987

- Managed a group of Ph.D. toxicologists responsible for evaluating the corporation's occupational and environmental health hazards (world-wide). The group also served as a scientific resource for the industrial hygiene and environmental engineering departments at both the corporate headquarters and remote manufacturing facilities.
- Conducted complex risk assessments of three Superfund waste sites including Times Beach, Missouri. Other significant sites include the Lyons Landfill (Denver) and a site in the Bahamas.
- Other activities in which my group was involved included the assessment of health risks of hazardous waste sites, the coordination of toxicity testing of all manufactured intermediates, the establishment of guidelines for laboratory use and manufacture of super-potent pharmaceuticals, setting of corporate occupational exposure limits, and directing of applied toxicology research programs.
- Participated in many face-to-face negotiations with federal and state regulatory agencies with regard to: the evaluation, remediation, and closure of hazardous waste sites; reaching agreements on joint research efforts (e.g., EPA's mobile incinerator); and defining compliance with air and water pollution regulations. Many involved dioxins and various metals.
- Developed and directed the scientific and medical aspects of the litigation associated with the remediation of Times Beach, Missouri, and, peripherally, the other 43 dioxin-contaminated sites.
- Wrote six, 200-page evaluations of proposed Federal environmental standards, which were then submitted to EPA. Was influential in the development of the EPA and CDC positions on the health hazards posed by dioxin in soil, air, fly ash, water, sediment, dust, and other materials.

Major Contributions

- Participated in the EPA's scientific re-evaluation of the health hazards posed by low level exposure to dioxin (Region VII and at headquarters).
- Conducted a risk assessment of an EPA Superfund site (CERCLA) outside Boulder, Colorado, and the Lowry Landfill in Denver.

Risk Assessment Scientist

Stauffer Chemical Company; Westport, CT

February 1982–August 1984

- The toxicologist responsible for the risk assessment aspects of environmental regulatory affairs. Primary responsibility was to evaluate the safety of company products through the design of toxicology studies and the conduct of health risk assessments.
- Responsible for risk assessment aspects of obtaining and maintaining the registration of agricultural and specialty chemicals. Conducted scientific assessment of company products alleged to present environmental or human health hazards. Responsible for developing and awarding contract research involving radionuclides, as well as, environmental fate and toxicology of pesticides, and non-target wildlife.
- Responsible for assessing the potential hazards posed by municipal waste sites, groundwater contamination, water pollutants, new product uses, indoor and ambient air pollutants; and the manufacture and use of new products.
- Jointly responsible with the IH and Occupational Medicine groups for the development of the firm's occupational exposure limits. Provided toxicology support for developing PMNs.
- Interacted with environmental groups such as the Sierra Club, Environmental Defense Fund, Audobon Society, etc. Interacted with both state and federal regulatory agencies including OSHA, EPA and CPSC as well as California Department of Health Services, Louisiana Department of Health, and Texas Department of Agriculture. Worked as many as two days per week in Washington, DC interacting with the above mentioned groups, as well as Federal EPA and OSHA.
- Represented the regulated community (AIHC, CMA and CICC) at three public hearings regarding the proposed California Cancer Policy (1983).

Major Contributions

- Responsible for developing many of the environmental research programs and the risk assessment needed to obtain an EPA registration for the first “Biorational” pesticide to be approved by the EPA. Pro-Drone, a pesticide for fire ants, was an insect juvenile hormone mimic. Designed and supervised the field studies to demonstrate the efficacy of the chemical.
- Prepared risk assessments, which were instrumental in registering three major agricultural chemicals. Facilitated and streamlined the registration / approval of major pesticides which had complex toxicology profiles by using risk assessment methodologies.

- Participated in EPA Science Advisory Board hearings on Radionuclide Emissions from phosphorous processing facilities (Section 112 of Clean Air Act). Participated in development of the risk assessment used in developing the proposed rule (worked with Don Scroggins, Attorney at Law).

Adjunct Professor/Graduate Instructor
Purdue University; West Lafayette, Indiana
September 1978–February 1982

- Prior to and during the pursuit of a doctoral degree, held an appointment in the School of Health Sciences and in the Department of Industrial Engineering.
- Developed and directed the undergraduate, graduate program and curriculum in industrial hygiene in the School of Health Sciences. Over four years, the Purdue undergraduate Industrial Hygiene program became the largest in the Nation with nearly 60 students graduating per year.
- Developed and taught the graduate level courses in environmental and occupational health which included: (a) Industrial Hygiene and Toxicology, (b) Industrial Hygiene Engineering, (c) Occupational Health Law, and (d) Occupational Safety and Health Engineering.
- Under a research grant from NIOSH, wrote a comprehensive (500-page) detailed outline for a textbook(s) and graduate course in Occupational Health Engineering. This textbook was used by many engineering schools to incorporate an awareness of safety and health principles into their design courses.
- Taught a 15-week graduate engineering course (Ind. Eng. 550) on closed network live TV in which 150 students (90 on-site) and 60 others at 10 companies from 2 states were enrolled (one of first graduate courses in the United States taught interactively entirely via TV).

Industrial Hygiene Engineer
Eli Lilly and Company, Lafayette, Indiana
July 1977–February 1980

- Participated in a wide variety of corporate projects involving environmental and occupational health at the firm's three major production facilities in Lafayette, Clinton and Indianapolis, Indiana. Established the company's industrial hygiene program, including employee training and a trace analytical chemistry lab at these plants. Worked on numerous corporate projects in occupational health in the U.S., Canada and elsewhere. Responsible for establishing programs to ensure the safe laboratory use and manufacture of toxic chemicals and sensitizing agents.

Major Contributions

- Involved in the design of new production facilities (\$200,000,000 program) with the goal of insuring that good environmental and occupational health engineering practices were implemented.
- Participated in developing the original EPA protocol to assess the potential human hazards associated with the field application of herbicides and pesticides.
- Played a significant role in obtaining a favorable closure of an EPA RPAR of this firm's major product (Treflan) that has been found to contain nitrosamines.
- Primary contact with NIOSH on health hazard evaluation studies of workplaces which handled or manufactured DES, pesticides, nitroglycerin and products containing nitrosamines.

Process Engineer/Chemist

Eli Lilly and Company, Clinton, Indiana

May 1974–September 1976

- Served as a chemical engineer, chemist and industrial hygienist. Duties included improvement of production yields and installing process equipment in the facilities that manufactured antibiotics (including Keflex and Cechlor) and fermentation products (including monensin and cyclovine). Designed and installed several million dollars in process equipment.
- Played a significant role in several research and development projects that brought about dramatic improvements in profitability.
- Was member of primary engineering team responsible for “start-up” of new automated broth processing unit for world's largest fermentation operation. Member of technical service group responsible for daily operation of two large solvent recovery units.
- Involved in establishing procedures for complying with FDA, OSHA and EPA regulations. Established this facility’s industrial hygiene program.

Key Projects (Partial List)

Evaluate safety of medical device [California]. In 2000, evaluated the hazard posed by the release of micron sized metal and airborne particles which are unintentionally released by a medical device which delivered drugs via inhalation.

Hazard to Children Posed by Arsenic in Playground Soils [National]. In 2001, was retained by at least two national trade associations to evaluate the possible hazards posed by the leaching of arsenic into soils from timber treated with CCA. This was the first major health risk assessment related to the national initiative to specifically focus on the possible hazards of certain contaminants and media to children.

Dioxin in Soils Near a Former Hazardous Waste Incinerator [Midland, Mich] In 2001, was retained by Dow Chemical Company to characterize the possible human health hazard posed by the historical deposition of dioxins and furans unto soils downwind of their incinerator. The soil concentrations were in the range of 50-400 ppt TEQ. Bioaccessibility research was conducted on these soils and clean-up levels were derived. Participated in community and regulatory meetings.

Dioxin in Soils Near a Former Hazardous Waste Incinerator [New Zealand] In 2001, was retained by Dow Chemical Company to characterize the possible human health hazard posed by the historical deposition of dioxins and furans unto soils downwind of their incinerator. The soil concentrations were in the range of 50-400 ppt TEQ. Bioaccessibility research was conducted on these soils and clean-up levels were derived. Participated in community and regulatory meetings.

Hazard Posed by Coal Tars in Shampoo [California]. In 2000-2001, was retained by a pharmaceutical company to evaluate claims under Prop 65 that the content of polycyclic aromatic hydrocarbons exceeded the amount allowable under California's Prop 65. An exposure assessment was conducted.

Brain Cancers in a Large Office Building [California]. In 2000-2001, was asked to conduct a dose-reconstruction and epidemiology study of the inhabitants of a formerly occupied office building in Southern California. The assessment is still underway.

Contamination of meats by Methyl Bromide [2000]. Evaluated the human health risks posed by treating a truck full of frozen bacon and processed meats with methyl bromide. This case was litigated and expert testimony was provided.

NAFTA Litigation Involving MTBE [Toronto, Canada] In 1999, Methanex Corp. retained us to address the environmental and human health hazards associated with the use of MTBE by the United States as an oxygenate. Their claim was that California banned MTBE in an arbitrary manner. Case will be argued in World Court in 2003 or later.

Benzene in Diesel Exhaust from Locomotives [South Dakota] During 1999-2000, due to the application of a different legal standard regarding causation criteria with respect to occupational exposure of railroad workers, a question was raised regarding the possibility that benzene present in

diesel exhausts could contribute to an increased incidence of leukemia and other diseases in these workers. A series of dose reconstruction studies involving diesel exhaust, nitrous oxides, carbon monoxide, and benzene were conducted in a turn of the century roundhouse.

Dose Reconstruction of Occupational Exposure to Benzene [Texas] From 1999-2001, conducted a retrospective exposure assessment of about 400 chemical and office workers at an acetic acid plant. Exposure began in the 1960's and ended in the 1980's. Data will be used in an epidemiology study.

Community Health Hazard and Diesel Exhaust from Truck Terminal [Phoenix] As a result of recent EPA positions that diesel exhaust from trucks may pose a human health hazard, a petition was filed to prevent construction of a truck terminal which was to hold 500 vehicles. Conducted a quantitative and semi-quantitative assessment. Attended a public hearing in September, 2000.

Understanding Occupational Health Hazards Posed by Airborne Beryllium [Ohio and Arizona] Beginning in early 1999, we designed a comprehensive program for characterizing the hazards posed by airborne and dermal contact with Beryllium in the workplace. Ultimately, was involved in numerous research efforts to understand the (a) usefulness of BLPT monitoring, (b) importance of particle size and chemical form of the Beryllium in determining the hazard, (c) relationship between disease and the other routes of exposure to Beryllium and (d) importance of establishing different dose-metrics. Worked with the client and ACGIH to put together an international symposium on Beryllium which was held in September, 1999 (Washington, DC).

Dose-Reconstruction of Chromium Workers at the Painesville Site [Ohio]. Beginning in 1996, we conducted an evaluation of historical occupational exposure information for one of the largest chromium processing sites in the United States which operated from about 1940-1970. The project involved reviewing thousands of pages of documents including air sampling data, medical data, and manufacturing information. The analysis resulted in the publication of four different manuscripts which should serve as the basis for cancer regulations regarding Cr(VI).

Health Hazards of Formaldehyde in Mobile Homes [Missouri] In 1999, was involved in evaluating the historical health hazards including asthma, cancer, the immune system, and respiratory system associated with presence of various concentrations of formaldehyde in mobile homes. Some of this work was used in personal injury litigation.

Hazard Posed by Combustion Products from Commercial Fires [California] Evaluated the possible public health hazards associated with the emissions and transport of combustion products produced during a fire involving a chemical plant. Assessed hazards due to CO₂, dioxins, PAHs, soot and fine particles. Litigation surrounding the fire was resolved in 1998.

Mercury in Gas Line Pressure Regulators [Michigan and Illinois] In the summer of 2000, it was reported that in homes built between 1935-1975, gas pressure regulators often contained elemental mercury (1-3 teaspoons each). Apparently, during installation and during their removal (which has occurred to a large extent over the past 25 years) some small spills occurred. We developed a field program to measure airborne mercury in the 0.01 to 5.0 ug/m³ range and to evaluate the possible public health significance (assuming exposure has occurred for many years).

Lead in Consumer Products [California] As a result of claims under California's Prop 65, a series of law suits were filed from 1996-2001 involving human exposure to lead. We conducted scientific evaluations and supplied expert reports for at least six of them. The suits generally focused on ingestion and dermal absorption. We designed a number of studies to understand some of the various consumer products and the likelihood that enough lead could be absorbed to exceed the "safe harbor" standards. The media of interest included lead in telephone cable, vacuum cleaner hoses, computer battery charger cables and related materials. In a related suit, we also evaluated the presence of lead in talc and ointments used in baby products.

Established Occupational Exposure Limit (OEL) for Glycol Ethers for Union Carbide Corp. [National] Since no OEL had been established to prevent the developmental or reproductive hazard to workers, this firm asked that a panel be formed to recommend a guideline. A blue ribbon panel was convened in 1996 which recommended that research be conducted to support a physiologically-based pharmacokinetic model. Four years later, after the research work was completed, a new panel was established and the data were used to establish a new OEL (published in 2001).

Benzene Hazard Posed by Mineral Spirits [Arizona] It was alleged that benzene present in mineral spirits between 1960-1990 might have contained enough benzene to be measurable in air and, therefore, increase the probability of developing AML in railroad workers. To resolve this issue, a series of dose-reconstruction experiments were conducted in the field in 1999.

Hazard Posed by Occupational Exposure to Sensory Irritants [National] As a result of international concern about the relatively small margin of exposure (MOE) between many OELs for irritants and the current OELs. A project was initiated by the American Chemistry Council (ACC) to convene a national symposium on the topic. Was Chairman of the meeting and guest editor for special issue of AIHA Journal which presented the various papers.

Setting TMDL for Mercury for Savannah River [Georgia] Helped interface with Savannah River Nuclear Site (SRS) and regulatory agencies to develop a program to assess the mercury burdens to the river and the need to comply with new TMDL guidelines.

Assess Occupational Hazard to Various Types of Beryllium in Different Settings [California] Conducted dose reconstruction to evaluate the average and peak lifetime exposure of a person who worked in the aerospace industry to various forms of Beryllium. Assessed the quality of the employers efforts to minimize exposure to this agent over the last 50 years. Case was settled in 2000.

PCB's in Hudson River [New York] Over a number of years (1987-1997), was involved in designed studies of the concentrations and location of PCB's in sediments. A creel study was conducted of local and Native American fisherman in an effort to characterize the health risks due to PCBs. A risk assessment was later conducted.

CR VI in Groundwater [California] A number of studies have shown that Cr III and CR VI are both naturally occurring and industrial derived. It is now known that hexavalent chromium is present in tap water throughout the State of California. The concentrations of CR VI have generally

been very low but a new public health guidance (PHG) value has been proposed by OEHHA which would suggest that a large number of drinking water supplies could pose a health hazard. During 2001, will be involved in interacting with regulatory agencies and may be involved in science advisory board.

Risk Assessment of Radionuclides in Phosphate Slag Mine Used to Construct Cement Blocks [Tennessee]. In 1979-1982, conducted original research at Purdue University to determine radon emanation rate from brick, concrete block and insulation derived from phosphate slag. Performed a risk assessment which considered the resulting airborne radon concentration in typical homes, as well as background levels. Concluded there was negligible risk to persons living in these homes and later published the assessment in a peer-reviewed journal.

Risk Assessment of PCBs in Recycled Paper Products [California]. PCBs are present in most recycled paper. Was asked to determine if the possible human health risks due to using napkins and paper towels made from these materials exceeded limits established under California's Prop 65. Risks were determined to be well below the Prop 65 Risk Criteria. Work was conducted in 1992-1993.

Risk Assessment of Emissions from a Waste Incinerator [Louisiana]. In 1998-1999, conducted risk assessment of airborne emissions released from the largest existing waste incinerator. Determined that improved emission controls were necessary to limit potential dioxin exposures to farmers living near the incinerator. The design of the air pollution control devices was modified and a permit was then issued so that it could operate. For other reasons, the new facility has yet to be started up.

Evaluation of 2-ethylcyanoacrylate (ECA) as a respiratory sensitizer [US and Europe]. In recent years, there has been an increased concern about chemicals in the workplace and in consumer products that might induce or elicit an asthmatic response. In 1998-1999 conducted a literature evaluation of all published studies on ECA and concluded that the weight of evidence was that it was a strong irritant but not a sensitizer. Conducted an exposure assessment on location in Puerto Rico. We also conducted an epidemiology study of this worker cohort and the results were published in a journal. This information was then presented to and evaluated by the ACGIH TLV Committee who revised the TLV, in part, based on this study.

Evaluation of the Safety of Silicone Breast Implants (SBI): From about 1964 to 1984, SBI were used by plastic surgeons throughout the world for physical enhancement. Conducted an evaluation of the toxicology information, medical literature, epidemiology, case reports, biomaterials information, and related materials to assess the safety to humans of using this product. Work was conducted in 1997-1998.

Assessment of Health Risks of Water Contaminant (New Jersey). In 1996, it had been alleged that low concentrations of a "trimer" had leaked from contaminated soil into groundwater. The so-called Toms River site. It was claimed that some persons may have ingested the water and might be at risk of adverse health effects. As a result, we designed a number of toxicology studies and conducted a health risk assessment. The work is still ongoing.

Exposure Assessment of Herbicide Risks [California]. During 1994-1995, developed plausible estimates of dioxin uptake resulting from specific work activities. Designed and conducted experiments to quantitate exposure to aerosols due to blowback for a roadside weed abatement operator. Developed dermal uptake models that were integrated with physiologically-based pharmacokinetics model to estimate total dioxin uptake and the blood concentrations of dioxin.

Risk Assessment of Risks of Chromium (VI) in Drinking Water [California]. Developed a multipathway exposure and risk assessment to estimate the retrospective exposure history of less than ten test plaintiffs with alleged exposure to hexavalent chromium in groundwater. Designed and conducted a series of bench scale testing and human pharmacokinetic studies to examine the fate of hexavalent chromium in humans after ingestion of tap Water. Nearly twenty peer-reviewed papers and/or abstracts were developed and then presented at various scientific meetings. Work was conducted in 1995-96. This case was popularized in the movie Erin Brockovitch in 1999.

Pentachlorophenol/Dioxin Research and Risk Assessment [Georgia]. Managed a project that delineated the state of scientific knowledge from 1950 to present regarding the known environmental fate and transport characteristics of pentachlorophenol products. Provided a summary and analysis of site-characterization data and a screening level risk assessment for two facilities seeking cost recovery. Work conducted in the mid-1990s.

Metals Bioavailability Research [Louisiana]. In the mid-1990s, conducted research of several issues pertaining to the production of a vitrified aggregate material from soils originally contaminated with lead. Provided research materials relevant to the critical issue of metals accumulation and the fate/transport and risk assessment considerations to identify safe uses of the aggregate. The aggregate has been used in both concrete and asphalt. Served as an expert witness in federal court to address the regulatory compliance issues with respect to toxicology and risk assessment.

Risk Assessment of Chloroform, H₂S, Dioxin [Washington]. Conducted risk assessment of possible airborne chemical emissions during the dredging and remediation of a wastewater treatment facility. More than thirty expert reports and datasets provided by the plaintiffs' experts were analyzed. The chemicals of interest were chlorinated dioxins and furans, chloroform, methylene chloride and other chlorinated compounds, hydrogen sulfide and mercaptans, mustard gas, oxides of sulfur and nitrogen, nitrosamines, and sulfuric acid mist or fog. Testified in State Court in 1994.

Risk Assessment of PCB/DDT Contaminated Fish from the Palos Verdes Shelf [California]. Over a period of five years, developed and implemented a unique Monte Carlo based assessment of the health risks of ingested fish containing PCB and DDT that was due to contaminated sediments in Los Angeles harbor. This was, at the time, the most costly clean-up litigated by the Department of Justice (~ \$1B). The assessment was peer-reviewed by an outside panel of professors and later published in a peer reviewed article (and book chapter) The case was resolved in Federal Court in late 2000. Commonly known as the Montrose case.

Risk Assessment for CERCLA Cost Recovery [California]. Conducted a comprehensive critique of remedial investigation, risk assessment, and feasibility study documents prepared for an extensively investigated CERCLA site in California. Examined the strengths and weaknesses of the reported findings and conclusions demonstrating a *de minimis* contributor role for a pesticide product supplier. Work completed in 1994-1995.

Risk Assessment of Refinery Emissions [California]. Conducted an analysis of chemical emissions and the associated risks from a refinery in California. Past chemical emissions were found in refinery records and a retrospective assessment of exposures of 4,000 nearby residents was built. Work conducted in the middle 1990s.

Assessment of Wood Treatment Chemicals in Soils and Sediments [North Carolina]. In the early 1990s, examined contaminant migration and potential human health risks to community associated with a former wood treatment facility contaminated with creosote, polycyclic aromatic hydrocarbons, pentachlorophenol, and dioxin compounds. Evaluated whether alleged chemical releases could have adversely affected residents.

Assessment of Dioxin Emissions from Oil Refineries [Northern California]. Assembled available air and water emissions from refineries and assessed the hazard to humans and wildlife. Conducted the first comprehensive study of the dioxin runoff to the San Francisco Bay due to all airborne deposition from all possible sources. The work was presented at the International Dioxin Conference and it was published in a peer reviewed journal.

Human Health and Ecological Risk Assessment of a Southern California Port [California]. In the early 1990s, served as lead scientist and project manager for the risk assessment of a remedial action plan for metal recycling facility located in a Port District area. Assessed potential exposures to on-site workers, nearby residents, and marine life related to heavy metals, polycyclic aromatic hydrocarbons, and polychlorinated biphenyls. Developed a risk-based sampling approach to collect data to support using site-specific leaching profile and conducted the risk assessment.

Critique of Proposed Regulation of Airborne Hydrogen Sulfide [Washington]. Reviewed a hazard communication document released by a State Health Department regarding hydrogen sulfide toxicity. Supervised research and documentation to support comments to the State to consider in revising the hazard communication. Early 1990s.

Mercury in Fish [Puerto Rico, Mexico]: Developed a quantitative health risk assessment of inorganic and methyl mercury exposures in a fishing village in Puerto Rico (Superfund site, USEPA, Region II). Analyses included pharmacokinetic modeling of chemical uptake into beef and dairy cows, and edible marine organisms and subsequent evaluation of maternal body burden and breast-milk levels in exposed human populations. Monte Carlo analysis of fish tissue data was used to evaluate human exposure.

Dioxin Emissions from World's Largest Incinerator [Michigan]: At the request of former mayor Coleman Young, served as an expert in determining the possible health risks associated with the

aerial emissions from the City of Detroit's municipal waste incinerators. The issue was of considerable interest to Canada who believed that the majority of the emissions were being deposited onto Canadian soils. Work conducted in the mid-1990s.

Dioxin in Soil [California]: In 1995-1996, served as Project Manager of risk assessment of polychlorinated dibenzo-p-dioxin/furans (PCDD/Fs) in soil, sediment, and air. Approach evaluated tetra- through hepta-CDD/F separately from octa-CDD/F to allow use of congener-specific disposition and toxicity data. Source of dioxins was a combustor.

Lead and cadmium in talc and other baby products (California): In 2000-2001, conducted a risk assessment that evaluated the likelihood that trace amounts of lead and cadmium in talc and zinc oxide ointment used in baby products might penetrate the skin and produce an absorbed dose in excess of the California Proposition 65 "safe harbor" concentration.

Environmental Assessment of Proposed Tournament Golf Course (Ohio): Pesticide runoff and water consumption have been a concern to communities across America since about 1985. As a result, most new golf courses can't be built without a comprehensive assessment. This was one of the first examples where risk assessment was used to characterize the issues. It was presented to the planning commission, course design was modified and later approved. Work conducted in 1996-97.

Chloroform from a Paper Mill [Georgia]: Principal-in-Charge for assessment of chronic inhalation exposure to chloroform. Health risk was characterized using alternative cancer slope factor and presented a strong defense for the use of a physiologically-based pharmacokinetics (PB-PK) model approach that considers species-specific metabolic pathways. Work conducted in mid-1990's.

Benzene in Indoor Air Due to Contaminated Soil [California]: Managed risk assessment evaluating cancer risk via potential indoor exposure to benzene emitted from contaminated soil underlying residences. Risk characterization evaluated the California EPA and USEPA cancer slope factors for benzene. Work was conducted in the mid-1990s.

Lead from a Rotary Kiln [Louisiana]: Prepared human and ecological risk assessments for a former hazardous waste treatment facility. The assessment included the evaluation of lead in site soils using the USEPA Uptake Biokinetic Model (IUBK). This was a landmark risk assessment because it addressed the thorny issue of recycling so-called "low risk" by products of combustion. The case was argued in Federal Court in Louisiana against the US Dept of Justice in about 1995.

Times Beach [Missouri]: From 1984-1987, directed the scientific research that evaluated the possible health risks associated with exposure to dioxin (2,3,7,8-TCDD) in soil. Managed a group of three full-time Ph.D. research toxicologists and a number of contract labs who conducted work involving exposure assessment and low-dose extrapolation analyses. Directed the original research involving (a) dermal bioavailability of dioxin in soil, (b) oral bioavailability of dioxin in soil, (c) ingestion rates of soil by children (via Dr. Calabrese at the University of Massachusetts), (d) vapor pressure measurements of dioxin, (e) soil erosion wind models, (f) low dose model sensitivity analyses (with Sielken) and (g) dermal uptake via human skin (in-vitro). Resulted in eight peer-reviewed publications. Following three years of effort, in 1987, the US Environmental Protection

Agency decided that our analyses had merit and chose to recommend that the Risk Specific Dose (RSD) for the 1 in 1,000,000 cancer risk for dioxin be changed from 6 fg/kg/day to 100 fg/kg/day [the first EPA reassessment]. This work was used in decisionmaking regarding dozens of dioxin contaminated sites in the 1980s and 1990s. At least ten peer reviewed papers describing the work were published.

Love Canal [New York]: Evaluated more than ten years of work by numerous groups and was to serve as an expert witness in the personal injury litigation involving exposure to dioxin and volatile organics in the homes of residents at Love Canal. Retained by Piper-Marbury; Washington, DC.

Hudson County [New Jersey]: Over a period of eight years, served as the primary toxicologist and risk assessor that evaluated the hazards posed by the presence of chromium VI and chromium III in soils. During this time, we conducted a significant amount of original research to evaluate the possible health hazards posed by Chromite Processing Ore Residue (COPR) in soils. The work involved a significant breadth of activity:

- a) **Developed Method for Airborne Cr(VI) in Particulates:** The primary concern associated with the presence of Cr(VI) in soil was the potential inhalation hazard of Cr(VI), which is a likely human carcinogen when present in acid mist. Since no ambient method for detecting part-per-billion concentrations was available, we developed a new method that was based on the work of the California Air Resources Board and NIOSH. It was later accepted by the ASTM as the standard method for sampling ambient concentrations of Cr(VI) in airborne particulate.
- b) **Conduct Sampling for Cr(VI) in Air:** During two summers, served as the principal-in-charge of a major research program devoted to collecting more than 300 twelve hour samples of airborne dust near sites containing chromite ore processing residue in soils (COPR). At least four papers were published about this work.
- c) **Conduct Comprehensive Risk Assessment of Chromium in Soil:** Over a period of two years (1991-1993), we conducted a number of risk assessments of the cancer and dermatitis hazard posed by the presence of COPR in soil. Our analyses were published in three different peer-reviewed journals.
- d) **Leaching of Cr(VI) From Soil Due to Contact with Sweat:** Conducted research that evaluated the dermal bioavailability of Cr(VI) and Cr(III) in soil when present in sweat. The work was published in a peer-reviewed journal.
- e) **Allergic Contact Dermatitis (ACD) Research:** This work involved developing an original research program to identify the minimum-elicitation threshold (MET) for Cr(VI) in sensitized people. This \$1-million program involved 54 volunteers who were patch tested and the threshold of elicitation was determined. The work was published in a peer-reviewed journal.

Exposure to Airborne Selexol [Chicago, Illinois]: In 1990, we evaluated the potential health hazards to the community following an episodic event wherein a chemical used to scrub gaseous vinyl chloride and benzene emissions from landfill gas was accidentally released to the atmosphere during an accident.

Evaluated the Reasonableness of the USEPA Model for Predicting Soil Concentrations in Airborne Particulates [New Jersey]: Conducted an air-sampling program near a chromium-contaminated site with the intent of validating Cowherd's Soil Suspension Model. The results will be published in a peer-review journal.

Dioxin Emissions from an Industrial Oil-Fired Boiler [Portland, Maine]: In early 1990's, served as a principal reviewer for an assessment that predicted the concentration of dioxins in local crops and grazing stock near an oil-fired boiler.

Toxics in Sediment, Groundwater, and Soil [Louisiana]: From 1992-1998, oversaw a major human- and eco-toxicology assessment. Involved the evaluation of potential hazards due to emissions from one of America's largest chemical manufacturing plants adjoining a wetlands and bayou. The study occurred over about six years and involved the development of nearly 3,000 pages of text. The chemical of primary interest was hexachlorobenzene.

Ecotoxicology Assessment of Contaminated Sediments in the Newark Bay Watershed [New Jersey]: Directed a six-year project (1991-1997) involving a complete assessment of the human, aquatic, and avian hazard posed by dioxin, PCBs, and other long-lived chemicals in sediments. Area of primary study was the Passaic River.

Ecotoxicology Assessment of Chromium in Sediment in the Hackensack River [New Jersey]: Assessment involved collecting sediments, crabs, and other wildlife (about 1994-1995). Served as technical oversight for the resulting ecological assessment.

Assessment of Dioxin Contaminated Site [Arkansas]: In 1991 and 1992, identified acceptable cleanup levels for soil at an industrial site that was a former manufacturer of 2,4,5-T. Known as the Vertac site. Work conducted in the mid-1990s.

Assessment of Cadmium Contaminated Sediment on the Hudson River (Marathon Battery) [New York]: Conducted a preliminary ecological assessment of the potential hazards to aquatic and avian species due to cadmium in both surface and buried sediments. Ultimately, the sediments at this site were remediated under Superfund. Work conducted in the early 1990s.

Human and Eco-Toxicology Assessment of Multichemical Contaminated Site [California]: In about 1994, conducted an assessment of nearly 100 chemicals that were present in soil under a former drum-storage area. The assessment was the first multi-component soil assessment (pre and post remediation) accepted by the South Coast Board and the California EPA. Clean-up of the site was conducted by a steam heated auger under an EPA research grant program.

Proposed Ambient Water Quality Criteria for 2,3,7,8-TCDD [Texas, Louisiana, and Georgia]:

During the late 1980s, assisted in preparing the assessment that served as a scientific basis for setting dioxin emission standards for pulp and paper mills on waterways in the three above mentioned states. These limits were later accepted by regulatory agencies and courts in ten other states.

Health Assessment of Contaminated Groundwater at a Major Superfund Site [California]:

Conducted an assessment of three pesticides in soil to determine whether one of the suppliers of these chemicals could have produced soil contamination sufficient to warrant cleanup (around 1994-1995).

Evaluation of Occupational Standards for Formaldehyde: On behalf of the Formaldehyde Institute, convened a panel of experts to identify the airborne concentration of formaldehyde that did not produce sensory irritation (about 1993-1994). A 50 page paper was eventually published.

Ecotoxicology Hazards Associated with Sediments Contaminated with Organochlorines [California]: Conducted risk assessment of human health and aquatic hazards associated with concentrations of DDT, chlordane, heptachlor, and dieldrin in surface sediments.

Evaluating a Residential Community Built on a Landfill [Southern California]: Evaluated the possible future health risks associated with a 40-acre municipal landfill above which a large residential community was to be located. Work was conducted in the early 1990s.

Retrospective Exposure Assessment of Benzene (Pliofilm) Workers: Under a contract with the API (1991-1993), we reviewed industrial hygiene and process engineering records for three pliofilm manufacturing facilities in Ohio, and reconstructed the likely uptake of benzene by almost 400 different people who worked during the period of 1939-1976. These exposure estimates were then combined with the mortality data, and the cancer potency factor for benzene based on the human epidemiology experience was completed. Our work was considered during the 1997 reassessment of the EPA/OSHA cancer potency factor for benzene. The current TLV [0.3 ppm (1994)] was based on our analysis. Work was published in a peer reviewed journal which has been frequently used in international rulemaking.

Dioxin-Emissions from a Combustor [Columbus, Ohio]: Evaluate the legitimacy of a claim that airborne emissions of dioxins from a combustor may have raised the blood level of the citizens. The data indicated that the uptake was negligible since the amount of farmland near the combustor was very small. After preliminary work, the case was settled (late 1990s).

Retrospective Risk Assessment at Oak Ridge National Laboratory [Tennessee]: Served as a Science Advisor on this largest-ever risk assessment which involved reconstructing the possible historical off-site exposures of the public as a result of 50 years of operations at the Oak Ridge Reservation. Work was conducted from 1995-2000.

Dose-Reconstruction at Rocky Flats [Colorado]: From 1991-1994, served as a Science Advisor for a \$6-million toxicologic review and the dose-reconstruction project for the Colorado Department of Health. This retrospective assessment quantitatively evaluated the possible off-site health impacts

of radionuclide and chemical emissions from the Rocky Flats Nuclear Weapons Facility since operations began in 1953. Several peer-reviewed papers were published describing our work.

Dioxin Contaminated Sediment in Passaic River [New Jersey]: From 1991-1995, served as the Principal-in-Charge and key interface to EPA on a project involving dioxin-contaminated sediment in New Jersey. Developed scoping documents and work plans for sediment sampling on at least six different occasions. Helped write the work plan for the RI, which will require four years to implement.

Cyclodiene Pesticides in Soil [Illinois]: From 1990-1992, prepared a multipathway exposure and risk assessment for a State Superfund site in Illinois. It was alleged that aerial emissions from a pesticide-formulation facility increased the concentration of dieldrin, chlordane, aldrin, and heptachlor in the city soils. The city was scheduled to be partially evacuated and then was to go extensive remediation. The EPA ultimately issued a no-action alternative for the site and no remediation was required.

Mercury in Soil [Puerto Rico, Mexico]: During 1992, evaluated the acceptability of post-remedial levels of mercury in soil at a site in Puerto Rico.

Assessment of Incinerator Emissions [Northern California]: From 1988-1991, managed and prepared a multipathway assessment of the health risks associated with emissions of particulates and vapors from a combustor (Martinez, CA). The State of California had previously determined that the dioxin risks were significant and that the client would have to warn the surrounding communities. We developed one of the nation's first multi-pathway exposure analyses which accounted for ingestion of mother's milk, vegetables, crops, as well as, indirect exposure due to grazing animals (meat and dairy products).

Assessment of the Emissions from a Combustor/Vitrifier [Louisiana]: Conducted a state-of-the-art screening risk assessment (1998) of all aerial emissions from what was to be the world's largest combustor. Primary focus of this work was to assess the long term impact on aquatic species due to runoff and entry into streams/bayous.

Health Hazards Posed By CCA Treated Wood [National]: During 2001-2002, directed a team who evaluated the possible human health hazards posed by contact with the arsenic, copper and chromium which is present on the surface of treated wood. The concern of regulatory agencies and society was the risk to children who played on decks and treated wood used in playgrounds. Work was presented to EPA FIFRA SAP.

State-of-the-Art Assessment Involving Disposal of Wastes in Landfills [Ohio and Michigan]: In 1998, conducted an evaluation of the appropriateness of behavior by major rubber and steel casting firms who chose to place industrial wastes in municipal landfills. Testimony regarding the evaluation was presented in State court in Akron, Ohio.

Assessment of Risks Posed by Cr III in Hackensack River [New Jersey]: From about 1994-1999, evaluated the risks to aquatic species and humans posed by the presence of chromium in the sediments of the Hackensack.

Risks Posed by Asbestos in Automotive Friction Materials [National]: During 2001-2001, conducted a State-of-the-Art evaluation of the toxicology, epidemiology, regulatory and exposure components of the use of chrysotile in friction materials (brakes and clutches) used in autos and trucks. The assessment was a component of the litigation involving the major automotive manufacturers.

Dioxin Emissions from Oil Refineries [California]: From 1995-2001, evaluated data regarding the contribution of dioxin emissions in air and water to the environment due to oil refineries. Provided testimony to several government agencies on this issue.

Cadmium in Sediments [New York]: In 1994, evaluated the possible ecological and human health hazards posed by cadmium contamination of sediments in a Bay. Ultimately, the site was among the first to undergo sediment remediation (so-called, Marathon Battery site).

MTBE in California Groundwater [California]: In 1999-2001, was involved in work to evaluate the magnitude of the impact of MTBE on the groundwater in the State of California. During the course of the evaluation, a number of papers were presented at conferences and published in the literature.

Risks Posed by Bioterrorism [Virginia]: As a result of post-Sept. 11, 2001 concerns, was retained by a major credit card firm to evaluate the possible threat to their enterprise posed by mail contaminated by chemical or biological agents. The evaluation identified the primary areas of concern and suggestions were offered about how to improve engineering controls and implement a more comprehensive program of protection.

Coal Tar in Shampoos [California]: In response to a Proposition 65 claim, conducted a human health risk assessment of the cancer hazard posed by the coal tar content (1-2.5%) in some dandruff shampoos. The assessment was primarily based on epidemiology data. Testimony was provided.

Chemical Fingerprinting of Sediments [New Jersey]: From 1990-1994, used PVA and multivariate analysis (fingerprinting) to understand dioxin contamination of river sediments. Six papers on our work were published in the peer-reviewed literature.

Risk-based Remedial Investigation; Rockwell Site [Southern California]: From 1989-1991, used risk assessment principles to design and guide remedial investigation activities at a Federal Superfund site involving mixed wastes. EPA approval of the sampling designs, which greatly minimized the number of environmental samples collected (residential soil, groundwater, garden vegetables, and ambient air), saved a substantial amount of the originally estimated sampling and analytical costs, yet this plan provided more useful information than the previous approach.

Avian Risk Assessment [Illinois]: From 1989-1990, conducted an avian assessment of the possible hazard due to cyclodienes in surface soil at a State Superfund site. Assessment involved collecting and analyzing live and dead birds thought to be exposed to the high levels of pesticides. Pathology and tissue analyses were conducted.

Proposed RfC for Chromium [Consortium Clients]: From 1991-1993, prepared and submitted comments to the USEPA's proposed "reference concentration" for airborne chromium. Was invited to serve as advisor to a USEPA work group to evaluate better methods for setting these criteria. Work was published in a peer reviewed journal.

Assessment of TCDD from Incinerator; Times Beach [Missouri]: In 1986-88, evaluated hazard posed by the aerial emissions associated with combusting dioxin-contaminated soils. Work was conducted for EPA who had hoped to install a temporary incinerator at Times Beach. In 1990, published a peer-reviewed paper describing the analyses.

NJDEPE Soil Clean-Up Levels [New Jersey]: In 1991-1992, prepared an extensive critique of the State of New Jersey's proposed 1991 Regulation for Soil Cleanup Standards. The critique included detailed comments regarding appropriate methods for assessing contaminant uptake and developing health-protective levels for chemicals and metals in soils, groundwater, and interior surfaces of buildings. Ultimately, the proposed standard adopted most of our recommendation.

Assessment of Aquatic Hazard Due to Contaminated Sediments [California]: In 1991-1993, evaluated the possible impact of contaminated sediments on a reach of the Port of Oakland (Heckathorn site). Following a field study, we showed that most significant adverse effect on aquatic life was due to high levels of suspended solids in waters due to boats moving in and out of the shipping channel.

Property Near A Former Landfill Subsequently Used As A Residential Site [Northern California]: From 1990-1997, served as Principal-in-Charge of health risk assessment for a residential development which was built in the vicinity of an excavated former landfill. A comprehensive risk assessment was conducted. The analysis was presented in State Court.

Assessment of DEHP in Packaged Cheeses Under Proposition 65 [Washington, D.C.]: In 1997-1998, evaluated the validity of claims that DEHP was present at unacceptable levels (under Proposition 65) in processed cheeses using a stratified, random focused sampling program. A sampling plan and risk assessment evaluating 60 cheeses was conducted. State dropped the claim as a result of the risk assessment.

Evaluation of the Use of a "Non-Target-Specific" pesticide to eradicate Coyotes in a Farming Area [California and Arizona]. As a pro-bono consultant to the "Friends of the Earth" (Washington, D.C.), submitted an affidavit that indicated that the approach proposed by the United States government was not sufficiently target-species-specific to warrant the benefit. For this and other reasons, the program was not implemented.

Assessment of Hazards Posed by Contaminated Soil at a Former Battery Recycling Facility [New York and Pennsylvania]: In 1992-1993, conducted an ecologic and human health assessment of lead contaminated soil at two former battery recycling centers. This site ultimately underwent partial (selective) remediation. It was considered a model remediation because of how the risk assessment directed the approach to the clean-up.

Aquatic and Human Health Hazard Posed by Sediment Containing Very High Levels of TCDD [Sydney, Australia]: In 1994-1995, conducted a preliminary risk assessment of the hazards posed by harbor sediments which contained 2,3,7,8-TCDD at concentrations as great as 20 ppm. This site is near Homebush Bay in Sydney Harbor. Portions of the area were eventually remediated and used as part of the Olympic Village for the 2000 Olympics.

Retrospective Assessment of TCE in Drinking Water [Phoenix]: In 1997-1998, conducted research and health risk assessment to assess exposure to TCE vapors from contaminated tapwater.

Assessment of 1,4-Dioxane in Wine Under Proposition 65 [California]. In 1992, evaluated the accuracy of claims that 1,4-dioxane was present at unacceptable levels in wine. Developed a PB-PK model for the chemical and the results were published in a journal in 1994. Evaluate sensitization hazard posed by ethyl 2-cyanoacrylate: in 1998, the ACGIH chose to list ECA as a sensitizer. We evaluated the legitimacy of that claim.

Epidemiology Study of Hexavalent Chromium [Ohio]. During 1998-2000, served as a science advisor to work involving the assembly all of the available personnel, medical and industrial hygiene data for the Painesville, Ohio workers (so-called Diamond Shamrock Cohort). The work will determine whether the current EPA/OSHA dose-response curve and cancer potency factors are accurate.

Assessment of NDMA and Perchlorate in Drinking Water [California]. During 1998-2001, evaluated the health risk to residents who might have ingested water containing various concentrations of dimethylnitrosamine and perchlorate. The assessment was conducted at a former rocket test site. The work was partially completed and never finalized.

PUBLICATIONS/PRESENTATIONS

Peer-Reviewed Publications

Fries, G., Paustenbach, D., and Luksemburg, W. 2002. A Complete Mass Balance of Dietary Polychlorinated Dibenzo-P-Dioxins and Dibenzofurans in Dairy Cattle and Characterization of the Apparent Synthesis of Hepta and Octa Chlorodioxins. *J. Agric. Food Chem.* (In Review).

Madl, A., and Paustenbach, D.J. 2002. Airborne Concentration of Benzene Due to Diesel Locomotive Exhaust in a Roundhouse. *J. Tox. Env. Health*. (Tentative Acceptance).

Madl, A., and Paustenbach, D.J. 2002. Airborne Concentrations of Benzene and Mineral Spirits During Cleaning of a Locomotive Generator and Traction Motor. J. Tox. Env Health. (In Review).

Proctor, D., Otani, J.M., Finley, B.L., Paustenbach, D.J., Bland, J.A., Speizer, N., Sargent, E.V. 2002. Is hexavalent chromium an oral carcinogen? A weight-of-evidence review. J. Tox. Env. Health. (Accepted for Publication).

Proctor, D., Panko, J.P., Leibig, E.W., Mundt, K.A., Buczynski, M.A., Barnhart, R.J., Harris, M.A., Morgan, R.J., Finley, B.L. and Paustenbach, D.J. 2002. Workplace concentrations of airborne hexavalent chromium for the Painesville, Ohio chromate production plant. Occ. And Env. Hyg. (In Review).

Proctor, D., Panko, J.P., Liebig, E.W., Otani, J.M., Paustenbach, D.J., Austin, R.A., Luippold, R.M., and Mundt, K.A., et al. 2002. Exposure reconstruction for a cohort of workers exposed to hexavalent chromium at the Painesville, Ohio chromate production plant from 1940-1972. J. Tox. Env. Health. (In Review).

Crump, C., Crump, S.K., Hack, E., Panko, J., Liebig, E., Proctor, D., and Paustenhach, D.J., Dose-Response Assessment of Hexavalent Chromium and Lung Cancer Mortality. 2002. Risk Anal. (In Review).

Paustenbach, D.J., 2001. An Overview of Occupational Hazards Posed by Sensory Irritants. Amer. Ind. Hyg. Assoc. J. (In Press).

Williams, P.R.D., and D.J. Paustenbach. 2002. Risk Characterization: Principles and Practice, J. Tox. Env. Health. (Accepted).

Sweeney LM, Tyler TR, Kirman CR, Corley RA, Reitz RH, Paustenbach DJ, Holson JF, Whorton MD, Thompson KM, Gargas ML. 2001. Proposed Occupational Exposure Limits for Select Ethylene Glycol Ethers Using PBPK Models and Monte Carlo Simulations. J. Toxicol Sci. 62(1):124-139.

Wilson, N., P. Price, and D.J. Paustenbach. 2001. An Event-by-Event Probabilistic Methodology For Assessing the Health Risks of Persistent Chemicals in Fish: A Case Study at the Palos Verdes Shelf. J. Toxicol. Environ. Health. 62: 595-642.

O'Flaherty, E.J., B. D. Kerger, S.M. Hays and D.J. Paustenbach. 2001. A physiologically based model for the ingestion of Chromium (III) and Chromium (VI) by humans. J. Tox. Sci. 60: 196-213.

Paustenbach, D.J., M.L. Burke, M. Shum, and R. Kalmes. 2001. Airborne concentrations of ethyl and methyl cyanoacrylate in the workplace. Amer. Ind. Hyg. Assoc. J. 62:70-79.

Kolanz, M.E., A. Madl, M. Kelsh, M. Kent, R. Kalmes, and D.J. Paustenbach . 2001. A Comparison and Critique of Historical and Current Exposure Assessment Methods for Beryllium: Implications for Evaluating Risk of Chronic Beryllium Disease. Appl. Occ. Env. Hyg. 16(5): 593-614.

Paustenbach, D.J. A. Madl and J. Greene 2001. Identifying an Appropriate Occupational Exposure Limit (OEL) for Beryllium. Appl. Occ. Env. Hyg. 16(5): 527-538.

Deubner, D.C., Yvette W. Lowney, D.J. Paustenbach, and J. Warmerdam. 2001. Contribution of incidental exposure pathways to total beryllium exposures. Appl. Occ. Env. Hyg. 16(5): 568-578.

Williams, P.R.D., P.K. Scott, P.J. Sheehan, and D.J. Paustenbach. 2000. A Probabilistic Assessment of Household Exposures to MTBE from Drinking Water. Human and Ecological Risk Assessment. 6: 827-849.

Kerger, B.D., C.E. Schmidt, and D.J. Paustenbach. 2000. Assessment of airborne exposure to trihalomethanes from tap water in residential showers and baths. Risk Analysis. 20: 637-651.

Paustenbach, D.J. 2000. The practice of exposure assessment: A state-of-the-art review. J. Toxicol. Environ. Health (Part B) 3: 179-291.

Gargas, M.L., T.R. Tyler, L.M. Sweeney, R.A. Corley, K.K. Weitz, T.J. Mast, D.J. Paustenbach, and S.M. Hays. 2000. A toxicokinetic study of inhaled ethylene glycol ethyl ether acetate (EGEEA) and validation of a physiologically based pharmacokinetic model for rats and humans. Toxicol. Appl. Pharm. 165: 53-62.

Gargas, M.L., T.R. Tyler, L.M. Sweeney, R.A. Corley, K.K. Weitz, T.J. Mast, D.J. Paustenbach, and S.M. Hays. 2000. A toxicokinetic study of inhaled ethylene glycol monomethyl ether (2-MR) and validation of a physiologically based pharmacokinetic model for the pregnant rat and human. Toxicol. Appl. Pharm. 165: 63-73.

Reinke, G., Swanson, M., D. J. Paustenbach, and J. Beach. 2000. Chemical and mutagenic properties of asphalt fume condensates generated under laboratory and field conditions. Mutation Research. 469: 41-50.

Goodman, M., D.J. Paustenbach, K. Sipe, C. Malloy, P.S. Chapman, et al. 2000. Epidemiologic study of pulmonary obstruction in workers occupationally exposed to ethyl and methylcyanoacrylate. J. Toxicol. Environ. Health. Part A, 59:135–163.

Williams, P.R.D., P.K. Scott, S.M. Hays, and D.J. Paustenbach. 2000. A screening level assessment of household exposures to MTBE in California drinking water. Soil Sediment & Groundwater. MTBE special issue, pp. 63–69, March 2000.

Paustenbach, D.J., and B.L. Finley. 1999. DNA—Protein cross-links as a biomarker of Cr(VI) exposure. Environ. Health Perspect. 107(10):A494–A495.

Fowler, J.F., Jr., C.L. Kauffman, J.G. Marks, Jr., D.M. Proctor, M.M. Fredrick, J.S. Otani, B.L. Finley, D.J. Paustenbach, and J.R. Nethercott. 1999. An environmental hazard assessment of low-level dermal exposure to hexavalent chromium in solution among chromium-sensitized volunteers. J. Occup. Environ. Med. 41(3):150–160.

Fries, G.F., D.J. Paustenbach, D.B. Mathur, and W.J. Luksemburg. 1999. A congener specific evaluation of transfer of chlorinated dibenzo-*p*-dioxins and dibenzofurans to milk cows following ingestion of pentachlorophenol-treated wood. Environ. Sci. Tech. 33(8):1165-1170.

R.J. Wenning, Mathur, D.B. D.J. Paustenbach, M.J. Stephenson, S. Folwarkow and W.J. Luksemburg. 1999. Polychlorinated dibenzo-*p*-dioxins and dibenzofurans in stormwater outfalls adjacent to urban areas and petroleum refineries in San Francisco Bay, California. Arch. Environ. Contam. Toxicol. 37:290–301.

Huntley, S.L., H. Carlson-Lynch, G.W. Johnson, D.J. Paustenbach, and B.L. Finley. 1998. Identification of historical PCDD/F sources in Newark Bay Estuary subsurface sediments using polytopic vector analysis and radioisotope dating techniques. Chemosphere 36(6):1167–1185.

Price, P.S., P.K. Scott, N.D. Wilson, and D.J. Paustenbach. 1998. An empirical approach to deriving information on total duration of exposure from information on historical exposure. Risk Analysis 18(5):611–619.

Proctor, D.M., M.M. Fredrick, P.K. Scott, D.J. Paustenbach, and B.L. Finley. 1998. The prevalence of chromium allergy in the United States and its implications for setting soil cleanup standards based on allergic contact dermatitis: a cost effectiveness case study. Regul. Toxicol. Pharm. 28(1):27–37.

Wilson, N.D., N. Shear, and D.J. Paustenbach. 1998. The effects of cooking practices on levels of DDT and PCB compounds in the edible tissue of fish. J. Exp. Anal. Environ. Epid. 8:423-440.

Paustenbach, D.J. 1997. Methods for setting limits for acute and chronic toxic ambient air contaminants. Appl. Occup. Environ. Hyg. 12(6):418–428.

Paustenbach, D.J. 1997. OSHA's program for updating the permissible exposure limits (PELs): can risk assessment help move the ball forward? Harvard University School of Public Health's Monograph. Risk Perspect. 5(1):1–6.

Paustenbach, D.J. 1997. Updating OSHA's permissible exposure limits: putting politics aside. Amer. Ind. Hyg. Assn. J. 58:845–849.

Finley, B.L., and D.J. Paustenbach. 1997. Using applied research to reduce uncertainty in health risks assessment: five case studies involving human exposure to chromium in soil and groundwater. J. Soil Contam. 6(6):649–705.

Corbett, G.E., B.L. Finley, D.J. Paustenbach, and B.D. Kerger. 1997. Systemic uptake of chromium in human volunteers following dermal contact with hexavalent chromium (22 mg/L). J. Exp. Anal. Environ. Epid. 7(2):179–189.

Costa, M., A. Zhitkovich, M. Harris, D. Paustenbach, and M. Gargas. 1997. DNA-protein crosslinks produced by various chemicals in cultured human lymphoma cells. J. Toxicol. Environ. Health 30:101–116.

Finley, B.L., B.D. Kerger, M.W. Katona, M.L. Gargas, G.C. Corbett, and D.J. Paustenbach. 1997. Human ingestion of chromium (VI) in drinking water: pharmacokinetics following repeated exposure. Toxicol. Appl. Pharm. 142(1):151–159.

Finley, B.L., K.R. Trowbridge, S. Burton, D.M. Proctor, J.M. Panko, and D.J. Paustenbach. 1997. Preliminary assessment of PCB risks to human and ecological health in the Lower Passaic River. Toxicol. Environ. Health 52(2):95–118.

Kerger, B.D., B.L. Finley, G.E. Corbett, D.G. Dodge, and D.J. Paustenbach. 1997. Ingestion of chromium (VI) in drinking water by human volunteers: absorption, distribution, and excretion of single and repeated doses. J. Toxicol. Environ. Health 50(1):67–95.

Paustenbach, D.J., Y. Alarie, T. Kulle, R.G. Smith, N. Schacter, H.P. Witschi, J. Swenberg, and S. Horowitz. 1997. A recommended occupational exposure limit for formaldehyde based on irritation. J. Toxicol. Environ. Health 50:217–263.

Paustenbach, D.J., G.M. Bruce, and P. Chrostowski. 1997. Current views on the oral bioavailability of inorganic mercury in soil: the impact on health risk assessments. Risk Anal. 17:533–545.

Paustenbach, D.J., S.M. Hays, B.A. Brien, D.G. Dodge, and B.D. Kerger. 1997. Observations of steady state in blood and urine following human ingestion of hexavalent chromium in drinking water. J. Toxicol. Environ. Health 49:453–461.

Paustenbach, D.J., B.L. Finley, and T.F. Long. 1997. The critical role of house dust in understanding the hazards posed by contaminated soils. Inter. J. Toxicol. 16:339–362.

Paustenbach, D.J., J.M. Panko, M.M. Fredrick, B.L. Finley, and D.M. Proctor. 1997. Urinary chromium as a biological marker of environmental exposure: what are the limitations? Regul. Toxicol. Pharm. 26(1):523–534.

Paustenbach, D.J. 1996. Conducting a state-of-the-art risk assessment of 1,3-butadiene. Toxicology 113:212–214.

Aylward, L.L., S. Hays, N.J. Karch, and D.J. Paustenbach. 1996. Relative susceptibility of animals and humans to the cancer hazard posed by 2,3,7,8-tetrachlorodibenzo-*p*-dioxin (TCDD) using internal measures of dose. Environ. Sci. Technol. 30(12):3534–3543.

Costa, M., A. Zhitkovich, M. Gargas, D. Paustenbach, B. Finley, J. Kuykendall, R. Billings, T.J. Carlson, K. Wetterhahn, M. Waalkes, J. Xu, S. Patierno, and M. Bogdanffy. 1996. Interlaboratory validation of a new assay for DNA-protein crosslinks. Mutat. Res. 369:13–21.

Finley, B.L., B.D. Kerger, D.G. Dodge, S.M. Myers, R.O. Richter, and D.J. Paustenbach. 1996. Assessment of airborne hexavalent chromium in the home following use of contaminated tapwater. J. Exp. Anal. Environ. Epid. 6(2):229–245.

Finley, B.L., P.K. Scott, R.L. Norton, M.L. Gargas, and D.J. Paustenbach. 1996. Urinary chromium concentrations in humans following ingestion of safe doses of hexavalent and trivalent chromium: implications for biomonitoring. J. Toxicol. Environ. Health 48(5):479–499.

Gargas, G., M. Harris, D. Paustenbach, and B. Finley. 1996. Response to the letter-to-the editor written by Stern et al. regarding the paper “Urinary Excretion of Chromium Following Ingestion of Chromite-Ore Processing Residues in Humans: Implications for Biomonitoring. Risk Anal. 16(5):609–612.

Kerger, B.D., D.J. Paustenbach, G.E. Corbett, and B.L. Finley. 1996. Absorption and elimination of trivalent and hexavalent chromium in humans following ingestion of a bolus dose in drinking water. Toxicol. Appl. Pharm. 141:145–158.

Kerger, B.D., B.E. Finley, B.L. Corbett, Dodge, D.G., and D.J. Paustenbach (1996b) Ingestion of chromium VI in drinking water by human volunteers: absorption, distribution, and excretion of single and repeated doses. J. Toxicol. Environ. Health .

Kerger, B.D., R.O. Richter, S.M. Chute, D.G. Dodge, S.K. Overman, J. Liang, B.L. Finley, and D.J. Paustenbach. 1996. Refined exposure assessment for ingestion of tapwater contaminated with hexavalent chromium: consideration of exogenous and endogenous reducing agents. J. Exp. Anal. Environ. Epidemiol. 6(2):163–179.

Kuykendall, J.R., B.D. Kerger, E.J. Jarvi, G.E. Corbett, and D.J. Paustenbach. 1996. Measurement of DNA-protein cross-links in human leukocytes following acute ingestion of chromium in drinking water. Carcinogenesis 17:9.

Mirsalis, J.C., C.M. Hamilton, K.G. O’Loughlin, D.J. Paustenbach, B.D. Kerger, and S. Patierno. 1996. Brief communication: chromium(VI) at plausible drinking water concentrations is not genotoxic in the *in vivo* bone marrow micronucleus or liver unscheduled DNA synthesis assays. Environ. Mol. Mutagen. 28:60–63.

Paustenbach, D.J., B.L. Finley, and S. Kacew. 1996. Biological relevance and consequences of chemical- or metal-induced DNA cross-linking. In: Proc. Experimental Biology and Medicine (PEBM) 21:211–217.

Paustenbach, D.J., S. Hays, B.A. Brien, D.G. Dodge, and B.D. Kerger. 1996. Observation of steady-state in blood and urine following human ingestion of hexavalent chromium in drinking water. J. Toxicol. Environ. Health 49:453–461.

Paustenbach, D.J. 1995. Retrospective on U.S. health risk assessment: how others can benefit. Franklin Pierce Law School’s journal; Risk: Health, Safety, and Environment 6(4):283–332.

Paustenbach, D.J. 1995. Risk assessment methods for setting acceptable limits for acute and chronic toxic ambient air contaminants. Australian J. Clean Air 29(2):26–32.

Paustenbach, D.J. 1995. The practice of health risk assessment in the United States (1975–1995): how the U.S. and other countries can benefit from that experience. Hum. Ecol. Risk Assess. 1:29–79.

Leung, H.W., and D.J. Paustenbach. 1995. Physiologically based pharmacokinetic and pharmacodynamic modeling in health risk assessment and characterization of hazardous substances. Toxicol. Lett. 79:55–65.

Anderson, R.A., T. Colton, J. Doull, J.G. Marks, R.G. Smith, G.M. Bruce, B.L. Finley, and D.J. Paustenbach. 1995. Response to Fagliano et al. and Gochfeld & Lioy letter-to-the-editor. J. Toxicol. Environ. Health 44:123–134.

Finley, B., J. Nethercott, and D. Paustenbach. 1995. Response to comments by Hazen and Stern. Occ. Environ. Med. 52:1–8.

Finley, B.L., D.J. Paustenbach, J. Nethercott, and J. Fowler. 1995. Risk assessment of the allergic dermatitis potential of environmental exposure to hexavalent chromium. Letter-to-the-editor regarding: Stern et al. (1993). J. Toxicol. Environ. Health 44(3):377–83.

Gargas, M.L., B.L. Finley, R. Norton, and D.J. Paustenbach. 1995. Response to Fagliano et al. letter-to-the-editor on urine chromium screening. Drug Metab. Disp. 23(6):607–609.

Huntley, S.L., R.J. Wenning, S.H. Su, N.L. Bonnevie, and D.J. Paustenbach. 1995. Geochronology and sedimentology of the Lower Passaic River, New Jersey. Estuaries 18(2):351–361.

Nethercott, J.R., D.J. Paustenbach, and B.L. Finley. 1995. Response to Stern and Hazen letter-to-the-editor. British Medical J. 1–8.

Paustenbach, D.J., B. Finley, J. Nethercott, and J. Fowler. 1995. Response to comments by Lioy and Gochfeld. J. Toxicol. Environ. Health. 44:377–383.

Finley, B.L., and D.J. Paustenbach. 1994. The benefits of probabilistic exposure assessment: three case studies involving contaminated air, water, and soil. Risk Anal. 14(1):53–73.

Leung, H.W., and D.J. Paustenbach. 1994. Techniques for estimating the percutaneous absorption of chemicals due to occupational and environmental exposure. Appl. Occup. Environ. Hyg. 9(3):187–197.

Paustenbach, D.J., and B.E. Kerger. 1994. What's new with dioxin. Sonreel: A publication of the American Bar Association 25(5):8–9 (March/April).

Copeland, T.L., A.H. Holbrow, J.M. Otani, K.T. Connor, and D.J. Paustenbach. 1994. Use of probabilistic methods to understand the conservatism in California's approach to assessing health risks posed by air contaminants. J. Air Waste Mgt. Assn. (JAWMA) 44:1399–1413.

Ehrlich, R., R.J. Wenning, G.W. Johnson, S.H. Su, and D.J. Paustenbach. 1994. A mixing model for polychlorinated dibenzo-p-dioxins and dibenzofurans in surface sediments from Newark Bay, New Jersey using polytopic vector analysis. Arch. Environ. Contam. Toxicol. 27:486–500.

Finley, B.L., D.M. Proctor, P. Scott, P.S. Price, N.W. Harrington, and D.J. Paustenbach. 1994. Recommended distributions for exposure factors frequently used in health risk assessment. Risk Anal. 14(4):533–553.

Gargas, M.L., R.L. Norton, D.J. Paustenbach, and B.L. Finley. 1994. Urinary excretion of chromium by humans following ingestion of chromium picolinate: implications for biomonitoring. Drug Metab. Disposition 22(4):522–528.

Gargas, M.L., R.B. Norton, M.A. Harris, D.J. Paustenbach, and B.L. Finley. 1994. Urinary excretion of chromium following ingestion of chromite-ore processing residues in humans: implications for biomonitoring. Risk Anal. 14(6):1019–1024.

Michaud, J.M., S.L. Huntley, R.A. Sherer, M.N. Gray, and D.J. Paustenbach. 1994. PCB and dioxin re-entry criteria for building surfaces and air. J. Exp. Anal. Environ. Epidemiol. 4(2):197–227.

Nethercott, J., D.J. Paustenbach, R. Adams, S. Horowitz, B.E. Finley, J. Fowler, J. Marks, C. Morton, and J. Taylor. 1994. A study of chromium induced allergic contact dermatitis with 54 volunteers: implications for environmental risk assessment. Occup. Environ. Med. (London) 51(6):371–380.

Nethercott, J.R., B. Finley, S. Horowitz, and D. Paustenbach. 1994. Safe concentrations of dermal allergens in the environment. New Jersey Med. 91(10):694–697.

Paustenbach, D.J., R.D. Bass, and P. Price. 1994. Benzene toxicity and risk assessment, 1972–1992: implications for future regulation. Environ. Health Perspect. 101(6):177–200.

Wenning, R.J., W. Mitterhuemer, B. Finley, and D.J. Paustenbach. 1994. New directions in the conduct on health risk assessment: pitfalls and lessons learned. The InterData Environment Handbook 5:22–26 (Australia).

Wenning, R.J., S.L. Huntley, A.S. Wong, D.J. Paustenbach, and W.J. Luksemburg. 1994. Potential sources of polychlorinated dibenzothiophenes in the Passaic River, New Jersey. Chemosphere 29(2):257–272.

Paustenbach, D.J. 1993. Environmental leadership starts with setting priorities. Guest Editorial. Amer. Ind. Hyg. Assoc. J. 54:123–124.

Paustenbach, D.J. 1993. Jousting with environmental windmills. Letter to the editor. Risk Anal. 13(1):13–15.

Anderson, R.A., T. Colton, J. Doull, J.G. Marks, R.G. Smith, D.J. Paustenbach, B.E. Finley, and G. Bruce. 1993. Designing a biological monitoring program to assess community exposure to chromium: conclusions of an expert panel. J. Toxicol. Environ. Health 40(4):555–583.

Copeland, T.L., D.J. Paustenbach, M.A. Harris, and J. Otani. 1993. Comparing the results of a Monte Carlo analysis with EPA's reasonable maximum exposed individual (RMEI): a case study of a former wood treatment site. Regul. Toxicol. Pharmacol. 18:275–312.

Finley, B.E., P. Scott, and D.J. Paustenbach. 1993. Evaluating the adequacy of maximum contaminant levels as health-protective cleanup goals: an analysis based on Monte Carlo techniques. Regulat. Toxicol. Pharmacol. 18(3):438–455.

Finley, B., K. Fehling, M. Falerios, and D.J. Paustenbach. 1993. Field validation for sampling and analysis of airborne hexavalent chromium. Appl. Occup. Environ. Hyg. 8(3):191–200.

Wenning, R.J., M.A. Harris, B.L. Finley, D.J. Paustenbach, and H. Bedbury. 1993. Application of pattern recognition techniques to evaluate polychlorinated dibenzo-p-dioxin and dibenzofuran distributions in surficial sediments from the lower Passaic River and Newark Bay. Ecotox. Environ. Safety 25:103–125.

Wenning, R., D. Paustenbach, G. Johnson, R. Ehrlich, M. Harris, and H. Bedbury. 1993. Chemometric analysis of potential sources of polychlorinated dibenzo-*p*-dioxins and dibenzofurans in surficial sediments from Newark Bay, New Jersey. Chemosphere 27:55–64.

Wenning, R.J., and D.J. Paustenbach. 1992. Comment on: a major incident of dioxin contamination: sediments of New Jersey estuaries. Environ. Sci. Technol. 25(5):951–956.

Falerios, M., P. Sheehan, K. Schild, and D. Paustenbach. 1992. Airborne concentrations of trivalent and hexavalent chromium from contaminated soils at unpaved and partially paved commercial/industrial sites. J. Air Waste Mgmt Assoc. 42:40–48.

Finley, B., D. Proctor, and D.J. Paustenbach. 1992. An alternative to USEPA's proposed inhalation reference concentration for hexavalent and trivalent chromium. Regul. Toxicol. Pharmacol. 16:161–176.

Finley, B., V. Lau, and D. Paustenbach. 1992. Using an uncertainty analysis of direct and indirect exposure to contaminated groundwater to evaluate EPA's MCLs and health-based cleanup goals. J. Haz. Mat. 32:263–274.

Paustenbach, D.J., R.J. Wenning, and V. Lau. 1992. A Monte Carlo analysis of exposures and cancer risks from 2,3,7,8-tetrachlorodibenzo-*p*-dioxin in soil at residential and industrial sites. In: Proc. of 12th International Symposium on Chlorinated Dioxin and Related Compounds 10:339–342.

Paustenbach, D.J., J. Jernigan, R. Bass, R. Kalmes, and P. Scott. 1992. A proposed approach to regulating contaminated soil: identify safe concentrations for seven of the most frequently encountered exposure scenarios. Regul. Toxicol. Pharmacol. 16:21–56.

Paustenbach, D.J., R.J. Wenning, V. Lau, N.W. Harrington, D.K. Rennix, and A.H. Parsons. 1992. Recent developments on the hazards posed by 2,3,7,8-tetrachlorodibenzo-p-dioxin in soil: implications for setting risk-based clean-up levels at residential and industrial sites. J. Toxicol. Environ. Health 36:103–149.

Paustenbach, D.J., P.E. Price, R.D. Bradshaw, W. Ollison, D. Peterson, and C. Blank. 1992. Re-evaluation of benzene exposure for the pliofilm (rubber worker) cohort (1939–1976). J. Toxicol. Environ. Health 36:177–232.

Paustenbach, D., P. Sheehan, L. Wisser, B. Finley, and J. Paull. 1992. Review of the allergic contact dermatitis hazard posed by chromium contaminated soil: identifying a threshold ‘safe’ concentration. J. Toxicol. Environ. Health 37:177–208.

Sheehan, P., R. Ricks, S. Ripple, and D.J. Paustenbach. 1992. Field evaluation of a sampling and analytical method for environmental levels of airborne hexavalent chromium. Amer. Ind. Hygiene Assoc. J. 53(1):57–68.

Wenning, R.J., M. Harris, M.J. Unga, B. Finley, D.J. Paustenbach, and H. Bedbury. 1992. Application of pattern recognition techniques to evaluate PCDD and PCDF distributions in surficial sediments from the Lower Passaic River and Newark Bay. Ecotoxicol. Environ. Safety 25:103–125.

Wenning, R.J., M.A. Harris, M.J. Unga, D.J. Paustenbach, and H. Bedbury. 1992. Chemometric comparison of polychlorinated dibenzo-p-dioxin and dibenzofuran residues in surficial sediments from Newark Bay, New Jersey, and other industrialized waterways. Arch. Environ. Contam. Toxicol. 22:397–413.

Wenning, R.J., M.A. Harris, M.J. Unga, D.J. Paustenbach, and H. Bedbury. 1992. Chemometric comparisons of PCDD and PCDF residues in surficial sediments from Newark Bay and known environmental sources. Arch. Environ. Contam. Toxicol. 23:133–146.

Wenning, R.J., M.A. Harris, D.J. Paustenbach, and H. Bedbury. 1992. Potential sources of 1,2,8,9-tetrachlorodibenzo-p-dioxin in the aquatic environment. Ecotoxicol. Environ. Safety 23:133–146.

Wenning, R.J., M.A. Harris, M.J. Unga, D.J. Paustenbach, and H. Bedbury. 1992. Chemometric comparisons of PCDD and PCDF residues in surficial sediments from Newark Bay and other environmental sources. In: Proc. Twelfth International Symposium on Chlorinated Dioxin and Related Compounds 8:189–192.

Paustenbach, D.J. 1991. Analysis of EPA Science Advisory Board’s document-reducing risk. Hazmat World 4:42–47.

Paustenbach, D.J., and R.E. Wenning. 1991. Letter to the editor regarding Bopp et al. Environ. Sci. Tech. 26:1254–1256.

Huntley, S.L., R.J. Wenning, N.L. Bonnevie, R.E. Kalmes, and D.J. Paustenbach. 1991. Scientific evaluation of natural resource damage claims associated with PCDD and PCDF contamination in the aquatic environment. pp. 1047–1051. In: Proc. Technical Association of the Pulp and Paper Industry.

Keenan, R.E., R.J. Wenning, A.H. Parsons, and D.J. Paustenbach. 1991. A reevaluation of the tumor histopathology of Kociba et al. (1978) using 1990 criteria: implications for the risk assessment of 2,3,7,8-TCDD using the Linearized Multistage Model. J. Toxicol. Environ. Health 34:279–296.

Paustenbach, D.J., D. Meyer, P.J. Sheehan, and V. Lau. 1991. An assessment and quantitative uncertainty analysis of the health risks to workers exposed to chromium contaminated soils. Toxicol. Ind. Health. 7:159–196.

Paustenbach, D.J., B.L. Finley, V. Lau, M. Ungs, and T.T. Sarlos. 1991. An evaluation of the inhalation hazard posed by dioxin-contaminated soils. J. Air Waste Mgmt. Assn. 41:1334–1340.

Paustenbach, D.J., M. Layard, R.J. Wenning, and R.E. Keenan. 1991. Risk assessment of 2,3,7,8-TCDD using a biologically-based cancer model: a reevaluation of the Kociba et al. bioassay using 1978–1990 histopathology criteria. J. Toxicol. Environ. Health 34:11–26.

Paustenbach, D.J., W.E. Rinehart, and P.J. Sheehan. 1991. The health hazards posed by chromium contaminated soils in residential and industrial areas: conclusions of an expert panel. Regulat. Toxicol. Pharmacol. 13:195–222.

Paustenbach, D.J., T.T. Sarlos, V. Lau, B.L. Finley, D.A. Jeffrey, and M.J. Ungs. 1991. The potential inhalation hazard posed by dioxin contaminated soil. Chemosphere 23:1719–1729.

Sheehan, P., D. Meyer, M. Sauer, and D. Paustenbach. 1991. Assessment of the human health risks posed by exposure to chromium contaminated soils. J. Toxicol. Environ. Health 32:161–201.

Wenning, R.J., M.A. Harris, B. Finley, D.J. Paustenbach, and H. Bedbury. 1991. Application of pattern recognition techniques to evaluate polychlorinated dibenzo-p-dioxin and dibenzofuran distributions in surficial sediments from the Lower Passaic River and Newark Bay. Ecotoxicol. Environ. Safety 24:103–125.

Paustenbach, D.J. 1990. Health risk assessment and the practice of industrial hygiene. Amer. Ind. Hyg. Assn. J. 51:339–351.

Paustenbach, D.J. 1990. Occupational exposure limits: their critical role in preventive medicine and risk management—a guest editorial. Amer. Ind. Hyg. Assn. J. 51:A332–A336.

Finley, B., and D.J. Paustenbach. 1990. Using risk assessment to design cost effective remedial investigations: a case study. Econ. 5(1):57–59.

Finley, B., R.J. Wenning, M.J. Unga, S. Huntley, and D.J. Paustenbach. 1990. PCDDs and PCDFs in surficial sediments from the lower Passaic River and Newark Bay. pp. 409–414. In: Proc. Tenth International Symposium on Chlorinated Dioxin and Related Compounds. Bayreuth, Germany.

Fries, G.F., and D.J. Paustenbach. 1990. Evaluation of potential transmission of 2,3,7,8-tetrachlorodibenzo-p-dioxin-contaminated incinerator emissions to humans via foods. J. Toxicol. Environ. Health 29:1–43.

Leung, H.W., and D.J. Paustenbach. 1990. Cancer risk assessment for dioxane based upon a physiologically-based pharmacokinetics approach. Toxicol. Lett. 51:147–162.

Leung, H.W., and D.J. Paustenbach. 1990. Organic acids and bases: review of toxicological studies. Amer. J. Ind. Med. 18:717–735.

Keenan, R.E., R.J. Wenning, A.H. Parsons, and D.J. Paustenbach. 1990. A re-evaluation of the tumor histopathology of Kociba et al. (1978) using 1990 criteria: implications for the risk assessment of 2,3,7,8-TCDD using the linearized multistage model. pp. 549–554. In: Proc. Tenth International Symposium on Chlorinated Dioxin and Related Compounds.

Keenan, R.E., A.H. Parsons, R.J. Wenning, E.S. Ebert, and D.J. Paustenbach. 1990. Dioxin risk assessment for the Columbia River. pp. 541–548. In: Proc. Tenth International Symposium on Chlorinated Dioxins and Related Compounds. Bayreuth, Germany.

Keenan, R.E., A.H. Parsons, E.S. Ebert, R.J. Wenning, and D.J. Paustenbach. 1990. Setting rational health-based water quality standards for dioxin-Risk assessment for the Columbia River. pp. 801–812. In: Proc. Technical Association of the Pulp and Paper Industry (TAPPI). Bayreuth, Germany.

Layard, M., D.J. Paustenbach, R.J. Wenning, and R.E. Keenan. 1990. Risk assessment of 2,3,7,8-TCDD using a biologically-based cancer model: a re-evaluation of the Kociba et al. (1978) bioassay. pp. 561–566. In: Proc. Tenth International Symposium on Chlorinated Dioxins and Related Compounds. Bayreuth, Germany.

Leung, H.W., D.J. Paustenbach, F.J. Murray, and M.E. Anderson. 1990. A physiological pharmacokinetics description of the tissue distribution and enzyme inducing properties of 2,3,7,8-tetrachlorodibenzo-p-dioxin in the rat. Toxicol. Appl. Pharm. 103:399–410.

Leung, H.W., A.P. Poland, D.J. Paustenbach, F.S. Murray, and M.E. Andersen. 1990. Pharmacokinetics of [¹²⁵I]-2-lodo-3,7,8-trichlorodibenzo-p-dioxin in mice: analysis with a physiological modeling approach. Toxicol. Appl. Pharm. 103:411–419.

Leung, H.W., J.M. Wendling, R. Orth, F. Hileman, and D.J. Paustenbach. 1990. The relative distribution of 2,3,7,8-TCDD in human hepatic and adipose tissues. Toxicol. Lett. 50:275–282.

Paustenbach, D.J., J. Jernigan, B. Finley, S. Ripple, and R. Keenan. 1990. The current practice of health risk assessment: potential impact on standards for toxic air contaminants. J. Air Waste Management Assn. 40(12):1620–1630.

Paustenbach, D.J. 1989. Health risk assessments: opportunities and pitfalls. Columbia J. Environ. Law. 41(2):379–410.

Paustenbach, D.J. 1989. Important recent advances in the practice of health risk assessment: implications for the 1990's. Regul. Toxicol. Pharm. 10:204–243.

Paustenbach, D.J. 1989. (Summary of Oral Paper). Toxic chemicals and health risk assessments in regulation and litigation. The Record of the Association of the Bar of The City of New York 44:406–409.

Paustenbach, D.J., and R. Keenan. 1989. Health risk assessment in the 1990's. Hazmat World 2(11):44–56.

Leung, H.W., D.J. Paustenbach, and M.E. Andersen. 1989. A physiologically-based pharmacokinetics model for 2,3,7,8-tetrachlorodibenzo-p-dioxin. Chemosphere 18:659–664.

Leung, H.W., F.J. Murray, and D.J. Paustenbach. 1989. Documentation for an occupational exposure limit for 2,3,7,8-tetrachlorodibenzo-p-dioxin. Chemosphere 18(1–6):1115–1122.

Paustenbach, D.J. 1988. Assessment of the developmental risks resulting from occupational exposure to select glycol ethers within the semi-conductor industry. J. Toxicol. Environ. Health 23:53–96.

Paustenbach, D.J. 1988. Response to comments on paper on engineering education. J. Prof. Issues in Engineering.

Leung, H.W., and D.J. Paustenbach. 1988. Application of pharmacokinetics to derive biological exposure indexes from threshold limit values. Amer. Ind. Hyg. Assoc. J. 49:445–450.

Leung, H.W., and D.J. Paustenbach. 1988. Setting occupational exposure limits for irritant organic acids and bases based on their equilibrium dissociation constants. Applied Ind. Hygiene 3:115–118.

Leung, H.W., F.J. Murray, and D.J. Paustenbach. 1988. A proposed occupational exposure limit for 2,3,7,8-tetrachlorodibenzo-p-dioxin. Amer. Ind. Hyg. Assoc. J. 49:466–474.

Leung, H.W., R.H. Ku, D.J. Paustenbach, and M.E. Andersen. 1988. A physiologically-based pharmacokinetics model of 2,3,7,8-tetrachlorodibenzo-*p*-dioxin in C57BL/6J and DBA/2J mice. Toxicol. Lett. 42:15–28.

Paustenbach, D.J., H.J. Clewell, M. Gargas, and M.E. Andersen. 1988. A physiological pharmacokinetic model for carbon tetrachloride. Toxicol. Appl. Pharm. 96:191–211.

Shu, H., P. Teitelbaum, A.S. Webb, L. Marple, B. Brunck, D. Dei Rossi, J. Murray, and D.J. Paustenbach. 1988. Bioavailability of soil-bound TCDD: dermal bioavailability in the rat. Fundam. Appl. Toxicol. 10:335–343.

Shu, H., D.J. Paustenbach, J. Murray, L. Marple, B. Brunck, D. Dei Rossi, and P. Teitelbaum. 1988. Bioavailability of soil-bound TCDD: oral bioavailability in the rat. Fundam. Appl. Toxicol. 10:648–654.

Paustenbach, D.J. 1987. Assessing the potential environment and human health risks of contaminated soil. Comm. Toxicol. 1:185–220.

Paustenbach, D.J. 1987. Bhopal, asbestos, and Love Canal . . . how they should affect engineering education. IEEE Tech. and Society Mag. (March) 6(1):9–15.

Paustenbach, D.J. 1987. Should engineering schools address environmental and occupational health issues? J. Prof. Issues Eng. 113:93–116.

Andersen, M.E., M.G. MacNaughton, H.J. Clewell, III, and D.J. Paustenbach. 1987. Adjusting exposure limits for long and short exposure periods using a physiological pharmacokinetics model. Amer. Ind. Hyg. Assn. J. 48:335–343.

Leung, H.W., D.W. Hallesey, L.D. Shotwell, F.J. Murray, and D.J. Paustenbach. 1987. Toxicological evaluation of substituted dicyclopentadienyliron (ferrocene) compounds. Toxicol. Lett. 38:103–108.

Parades, C., W.V. Kessler, R.R. Landolt, P.L. Ziemer, and D.J. Paustenbach. 1987. Radionuclide content of, and ²²²Rn emanation from building materials made from phosphate industry waste products. Health Physics 53:23–29.

Paustenbach, D.J., J.H. Clewell, III, M.L. Gargas, and M.E. Andersen. 1987. Development of a physiologically based pharmacokinetics model for multiday inhalation of carbon tetrachloride. In: Pharmacokinetics in Risk Assessment, Volume VIII of “Drinking Water and Health”. NRC Press, Washington, DC.

Shu, H.P., D.J. Paustenbach, and F.J. Murray. 1987. A critical evaluation of the use of mutagenesis, carcinogenesis and tumor promotion data in a cancer risk assessment of 2,3,7,8-TCDD. Regul. Toxicol. Pharm. 7:57–88.

Veng-Pedersen, P., D.J. Paustenbach, G.P. Carlson, and L. Suarez. 1987. A linear systems approach to analyzing the pharmacokinetics of carbon tetrachloride in the rat following exposure to an 8 hour day and 12 hour/day schedules. Arch. Toxicol. 60:355–364.

Paustenbach, D.J., and F.J. Murray. 1986. A critical examination of assessments of health risks associated with 2,3,7,8-TCDD (dioxin) in soil. Chemosphere 15:1867–1874.

Paustenbach, D.J., and R.R. Langner. 1986. Corporate occupational exposure limits: the current state of affairs. Amer. Ind. Hyg. Assoc. J. 47:809–818.

Paustenbach, D.J., G.P. Carlson, J.E. Christian, and G.S. Born. 1986. A comparative study of the pharmacokinetics of carbon tetrachloride in the rat following repeated inhalation exposures of 8 and 11.5 hr/day. Fundam. Appl. Toxicol. 6:484–497.

Paustenbach, D.J., H.P. Shu, and F.J. Murray. 1986. A critical examination of assumptions used in risk assessments of dioxin contaminated soil. Regul. Toxicol. Pharmacol. 6:284–307.

Paustenbach, D.J., J.E. Christian, G.P. Carlson, and G.S. Born. 1986. The effect of an 11.5 hr/day exposure schedule on the toxicity and distribution of inhaled carbon tetrachloride in the rat. Fund. Appl. Toxicol. 6:472–483.

Paustenbach, D.J. 1984. Occupational safety - are you professional? Mech. Eng. 106:76–82.

Paustenbach, D.J. 1984. Risk assessment and engineering in the 80's. Mech. Eng. 106:54–59.

Paustenbach, D.J. 1984. The need to educate engineers in occupational safety and health: a proposal for schools of engineering. Prof. Safety 100:15–23.

Paustenbach, D.J. 1984. The toxicology, environmental fate and ecological impact of pro-drone as a fire ant pesticide. pp. 55–56. In: Proc. Sixth Annual Imported Fire Ant Conference. M. Mispagel (ed). University of Georgia Press.

Paustenbach, D.J., and J.T. Dufour. 1984. The engineer's role in protecting human health: legal aspects. Mech. Eng. 106:62–69.

Stewart, W.T., and D.J. Paustenbach. 1984. Ethical decision making for engineers and production managers. Ind. Eng. 16:68–76.

Paustenbach, D.J. 1983. The professional engineers responsibility for occupational disease prevention. pp. 5–24. In: Industrial Hygiene Aspects of Plant Operations, Volume II. Cralley and Cralley (eds). MacMillan Publishers, New York, NY.

Paustenbach, D.J., G.P. Carlson, J.F. Christian, G.S. Born, and J.E. Rausch. 1983. A dynamic closed-loop recirculating inhalation chamber for conducting pharmacokinetic and short term toxicity studies. Fundam. Appl. Toxicol. 3:528–532.

Published three hygienic guides on the toxicology and analytical chemistry of sulfur dioxide (SO)₂, sulfur trioxide (SO)₃ and sulfuric acid (H₂SO₄). (1976). Published by the American Industrial Hygiene Association, Akron, OH.

Books Edited

2002. Human and Ecological Risk Assessment: Theory and Practice. D.J. Paustenbach (ed). John Wiley and Sons, New York, NY. (33 chapters by 50 contributors).

1997. Chromium in soil: perspectives in chemistry, health and environmental regulation. Proctor, Finley, Harris, Paustenbach, and Rabbe (eds). Amherst Scientific Publishing. Amherst, MA. 707 pages.

1989. The risk assessment of environmental hazards: a textbook of case studies. D.J. Paustenbach (ed). John Wiley & Sons, New York, NY. 1157 pages (34 chapters by 51 contributors).

Book Chapters

Paustenbach, D.J. 2002 (in press). Fundamentals of risk assessment and the practice of industrial hygiene. Chapter 12. In: Perkins' Fundamentals of Industrial Hygiene, Volume II. J. Perkins (ed). John Wiley & Sons, New York, NY.

Paustenbach, D.J. 2002 (in press). The history and biological basis for occupational exposure limits. Chapter 6. In: Perkins' Fundamentals of Industrial Hygiene, Volume II. J. Perkins (ed). John Wiley & Sons, New York, NY.

Paustenbach, D.J. 2001. The Practice of Exposure Assessment. pp. 387-448 In: Principles and Methods of Toxicology. Fourth edition. A.W. Hayes (ed). Taylor and Francis Publishing. Philadelphia, PA.

Paustenbach, D.J. 2000. The history and biological basis of occupational exposure limits for chemical agents. pp. 1903-2000. In: Patty's Industrial Hygiene. Chapter 41, Volume 3, Fifth Edition. R. Harris (ed). John Wiley & Sons, New York, NY.

Paustenbach, D.J. 2000. Pharmacokinetics and Unusual Work Schedules. pp. 1787-1901. In: Patty's Industrial Hygiene. Chapter 40, Volume 3, Fifth Edition. R. Harris (ed). John Wiley & Sons, New York, NY.

Leung, H., and D.J. Paustenbach. 1999. Percutaneous toxicity. pp. 577-586. In: General and Applied Toxicology. Chapter 29, Volume 1. Second Edition. B. Ballantyne, T.C. Marrs, and T. Syversen (eds). MacMillan Reference Ltd.

Rodriguez, T., and D.J. Paustenbach. 1999. Risk assessment in environmental remediation. pp. 1051–1066. In: Textbook on Toxicology. Marquardt, Schaffer, et al. (eds). Academic Press, New York, NY.

Gargas, M.L., B.L. Finley, D.J. Paustenbach, and T.F. Long. 1999. Environmental health risk assessment: theory and practice. pp. 1749–1809. In: General and Applied Toxicology. Chapter 82, Volume 3. Second Edition. B. Ballantyne, T.C. Marrs, and T. Syversen (eds). MacMillan Reference Ltd.

Paustenbach, D.J., H.W. Leung, and J. Rothrock. 1999. Health risk assessment. Chapter 18. pp. 291–323. In: Occupational Skin Disease, 3rd Edition. R. Adams (ed). W.B. Saunders Company, Philadelphia, PA.

Finley, B.L., and D.J. Paustenbach. 1998. Using applied research to reduce uncertainty in health risk assessment: five case studies involving human exposure to chromium in soil and groundwater. Chapter 6. In: Chromium in the Environment. Proctor, Finley, Harris, Rabbe, and Paustenbach (eds). Amherst Publishing, Amherst, MA.

Paustenbach, D.J. 1997. Health risk assessment. Chapter 47. pp. 766–782. In: Occupational and Environmental Medicine, Second Edition. J. LaDou (ed). Appleton & Lange Publishing, Stanford, CT.

Paustenbach, D.J. 1997. Occupational exposure limits. Chapter 30. pp. 30.27–30.34. In: ILO Encyclopaedia of Occupational Health and Safety, Fourth Edition. World Health Organization, Geneva, Switzerland.

Ashby, J., G. Carlo, S.M. Cohen, J. Evans, G. Matanowski, D.J. Paustenbach, G. Williams, L. Koo, and J. Graham. 1996. Principles for evaluating epidemiologic data in regulatory risk assessment. Federal Focus, Washington, DC.

Paustenbach, D.J. 1995. Acute and chronic exposure to benzene: effects in humans. In: Advances in Occupational Medicine & Rehabilitation. M. Imbriani, S. Ghitori, G. Pezzagno, and E. Capodaglio (eds). 1(2):69–91: [Pavia, Italy. Fondazione Salvatore Maugeri Edizioni.]

Graham, J.D., D.J. Paustenbach, and W.J. Butler. 1995. Epidemiology and risk assessment: divorce or marriage? Chapter 1. pp. 1–14. In: The Role of Epidemiology in Regulatory Risk Assessment. CRC Press, Washington, DC.

Sheehan, P., A. Baril, P. Mineau, and D.J. Paustenbach. 1995. Predicting the effects of insecticides on aquatic systems and the waterfowl that use them: an ecological risk assessment. Chapter 30. pp. 827–857. In: Fundamentals of Aquatic Toxicology, 2nd edition. G. Rand (ed). Taylor and Francis Publishers, Washington, DC.

Paustenbach, D.J. 1994. Occupational exposure limits, pharmacokinetics, and unusual work schedules. Chapter 7. pp. 191–348. In: Patty's Industrial Hygiene and Toxicology, Volume IIIa, 4th edition. Cralley, Cralley, and Harris (eds). John Wiley & Sons, New York, NY.

Leung, H.W., and D.J. Paustenbach. 1993. Percutaneous toxicity. Chapter 27. p. 433–452. In: General and Applied Toxicology, Volume I. Ballentine, Marks, and Turner (eds). Stockton Press, London.

Jernigan, J., D.J. Paustenbach, R. Bass, and P. Scott. 1993. A cost-effective approach to regulating contaminated soils: set *de minimus* concentrations for eight different exposure scenarios. Chapter 2. In: Hydrocarbon Contaminated Soils and Groundwater. E. Calabrese and P. Kostecki (eds). Lewis Publishers, Chelsea, MI.

Keenan, R.E., E.R. Algeo, E.S. Ebert, and D.J. Paustenbach. 1993. Taking a risk assessment approach to RCRA corrective action. pp. 255–275. In: How Clean is Clean? Developing Cleanup Standards for Contaminated Soil, Sediment, and Groundwater. Water Environment Federation, Specialty Conference Series Proceeding, Alexandria, VA.

Leung, H.W., and D.J. Paustenbach. 1992. Techniques for assessing the health risks of dermal contact with chemicals on the environment: approaches for oral and dermal uptake. Chapter 18. pp. 343–386. In: Health Risk Assessment: Dermal and Inhalation Exposure and Absorption of Toxicants. Wang, Knaak, and Maibach (eds). CRC Press, Cleveland, OH.

Leung, H.W., and D.J. Paustenbach. 1991. Organic acids and bases. Chapter 24. pp. 775–784. In: Hazardous Materials Toxicology: Clinical Principles of Environmental Health. Sullivan and Krieger (eds). Williams and Wilkins Publishing, Philadelphia, PA.

Michaud, J.M., A.H. Parsons, S.R. Ripple, and D.J. Paustenbach. 1991. Human health risks of contaminated sites: critical factors in the exposure assessment. Chapter 20. pp. 283–292. In: Hydrocarbon Contaminated Soils and Groundwater, Volume 4. P. Kostecki and E. Calabrese (eds). Lewis Publishers, Chelsea, MI.

Paustenbach, D.J. 1991. Dioxin treatment technologies: background paper. OTA-BP-0-93. U.S. Government Printing Office, Washington, DC. (Panel Member of U.S. Congress' Office of Technology Assessment)

Paustenbach, D.J. 1989. A comprehensive methodology for assessing the risks to humans and wildlife posed by contaminated soil: a case study involving dioxin. Chapter 7. pp. 296–330. In: The Risk Assessment of Environmental Hazards: A Textbook of Case Studies. D.J. Paustenbach (ed). John Wiley & Sons, New York, NY.

Paustenbach, D.J. 1989. A methodology for evaluating the environmental and public health risks of contaminated soil. Chapter 20. pp. 225–261. In: Petroleum Contaminated Soils. E. Calabrese and P. Kostecki (eds). Lewis Publishers, Ann Arbor, MI.

Paustenbach, D.J. 1989. A survey of health risk assessment. Chapter 1. pp. 27–124. In: The Risk Assessment of Environmental Hazards: A Textbook of Case Studies. D.J. Paustenbach (ed). John Wiley & Sons, New York, NY.

Paustenbach, D.J. 1989. A primer for conducting human or environmental health risk assessment. pp. 1–26. In: The Risk Assessment of Environmental Hazards: A Textbook of Case Studies. D.J. Paustenbach (ed). John Wiley & Sons, New York, NY.

Paustenbach, D.J. 1989. Risk assessment methodologies for developmental and reproductive toxicants: a study of the glycol ethers. Chapter 22. pp. 725–768. In: The Risk Assessment of Environmental Hazards: A Textbook of Case Studies. D.J. Paustenbach (ed). John Wiley & Sons, New York, NY.

Paustenbach, D.J. 1989. The engineer's responsibilities for controlling occupational disease and preventing accidents. Chapter 28. pp. 541–569. In: In-Plant Practices for Job Related Health Hazards Control: Engineering Aspects, Volume II. L. Cralley and L. Cralley (eds). John Wiley & Sons, New York, NY.

Leung, H.W., and D.J. Paustenbach. 1989. Assessing health risks in the workplace: a study of 2,3,7,8-TCDD. Chapter 20. pp. 689–710. In: The Risk Assessment of Environmental Hazards: A Textbook of Case Studies. D.J. Paustenbach (ed). John Wiley & Sons, New York, NY.

Paustenbach, D.J., H.P. Shu, and F.J. Murray. 1987. Assessing the potential human health hazards of dioxin-contaminated soil. Chapter 14. pp. 178–213. In: Solving Hazardous Waste Problems. J. Exner (ed). American Chemical Society, Washington, DC.

Paustenbach, D.J., J.H. Clewell, III, M.L. Gargas, and M.E. Andersen. 1987. Development of a physiologically based pharmacokinetics model for multiday inhalation of carbon tetrachloride. pp. 312–326. In: Pharmacokinetics in Risk Assessment, Volume VIII: Drinking Water and Health. NRC Press, Washington, DC.

Paustenbach, D.J. 1985. Biological rhythms, shiftwork, and occupational health. pp. 175–312. In: Patty's Industrial Hygiene and Toxicology, Volume IIIB. Cralley and Cralley (eds). John Wiley & Sons, New York, NY.

Paustenbach, D.J. 1985. Occupational exposure limits, pharmacokinetics, and unusual work schedules. pp. 111–277. In: Patty's Industrial Hygiene and Toxicology, Volume IIIA. Cralley and Cralley (eds). John Wiley & Sons, New York, NY.

Presentations

2001 (September) Reducing PCDD/PCDF formation and emission from a hazardous waste combustion facility-technological identification, implementation, and achievement. (with B. Sun) Dioxin 2001, September 9-14, 2001. Kyongju, Korea.

2001 (September) In-Vitro bioaccessibility study of low concentrations (50-350 ppt TEQ) of dioxin/furans in weathered soils. (with K. Fehling, and M.V. Ruby) Dioxin 2001, September 9-14, 2001. Kyongju, Korea.

2001 (September) The United States EPA Science Advisory Board Report (2001) On the EPA Dioxin Reassessment. Dioxin 2001, September 9-14, 2001. Kyongju, Korea.

2001 (March) A probabilistic assessment of household exposures to MTBE from drinking water. 40th Annual Meeting of Society of Toxicology, March 25-29, 2001. San Francisco, CA.

2001 (March) Event by event probabilistic methodology for assessing health risks of persistent chemicals in fish: a case study. 40th Annual Meeting of Society of Toxicology, March 25-29, 2001. San Francisco, CA.

2001 (March) Is hexavalent chromium carcinogenic via the oral route of exposure an evaluation of the state of the science and implications for drinking water regulations. (with Proctor, D.M.) 40th Annual Meeting of Society of Toxicology, March 25-29, 2001. San Francisco, CA.

2001 (March) An alternative approach for toxicity testing of genetically modified foods. 40th Annual Meeting of Society of Toxicology, March 25-29, 2001. San Francisco, CA.

2001 (March) Contribution of individual truck operations to ambient diesel particulate matter (DPM) concentrations: implications for risk assessment and management. (with Madl, A.K. and B. Finley.) 40th Annual Meeting of Society of Toxicology, March 25-29, 2001. San Francisco, CA.

2001 (March) Identification of a proposition 65 no significant risk level for coal tar. 40th Annual Meeting of Society of Toxicology, March 25-29, 2001. San Francisco, CA.

2000 (December) A case study of MTBE exposures and risk in California. (with Williams, P.R.D.) Platform Presentation at the 16th Annual Society of Risk Analysis Conference, December 3-6, 2000. Arlington, VA.

2000 (October) MTBE Ambient Air and Drinking Water Exposures in California. (with Williams, P.R.D., P. Sheehan, D. Paustenbach, J. Warmerdam.) 10th Annual International Society of Exposure Analysis, October 24-27, Monterey, CA.

2000 (October) MTBE in California Drinking Water: A Probabilistic Assessment of Exposures. (with Sheehan, P., P. Williams, D. Paustenbach.) 10th Annual International Society of Exposure Analysis, October 24-27, Monterey, CA.

2000 (October) Assessing Risks to Nursing Infants Whose Mother's Ingested Fish Containing Persistent Organic Pollutants (POPs): Inadequacy of USEPA Default Methods and Directions for the Future. (with Wilson, N.D., V.A. Craven, D.J. Paustenbach, S.M. Hays, B.E. Finley, and B.D. Kerger.) 10th Annual International Society of Exposure Analysis, October 24-27, Monterey, CA.

2000 (August) Is Dioxin a threshold carcinogen? A quantitative analysis of the epidemiological data using internal dose and Monte Carlo Methods. (with Kirman, CR; Aylward, LA; Karch, NJ; Finley, BL; and Hays, SM.) Presented at Dioxin 2000: 20th International Symposium on Halogenated Environmental Organic Pollutants and POPS. Aug.13-17, 2000, Monterey, CA.

2000 (August) International Concern Over Persistent Organic Pollutants (POPs) in Foods: Risk Assessment and Public Policy. (with Kevin Connor). Presented at Dioxin 2000: 20th International Symposium on Halogenated Environmental Organic Pollutants and POPS., Aug.13-17, 2000, Monterey, CA.

2000 (August) The formation of hepta- and octa-dioxins in feces of cows fed pentachlorophenol treated wood. (with Fries, G, Luksemburg, W. Lorber, M., and Ferrario, J.) Presented at the 20th International Symposium on Halogenated Environmental Organic Pollutants and POPS. Aug.13-17, 2000, Monterey, CA.

2000 (May). Alveolar-deposited airborne particles of beryllium as a predictor of the prevalence of disease in a beryllium processing facility. Platform presentation at the American Industrial Health Conference & Exposition (with M. Kent, T. Robins, A.K. Madl, and M. Goodman), May 22–26, 2000, Orlando, FL.

2000 (May). Biomonitoring for beryllium in workers of a beryllium processing facility. Platform presentation at the American Industrial Health Conference & Exposition (with Y.Lowney, D. Deubner, S.M.Hays, P. Chapman, B. Kerger, and W. Shields), May 22–26, 2000, Orlando, FL.

2000 (May). Chronic beryllium disease and beryllium sensitization at a beryllium mine and extraction facility. Platform presentation at the American Industrial Health Conference & Exposition (with M. Kelsh, D. Deubner, L. Maier, M Kent, B. Smith, P. Chapman, K. Zhao, and M. Kolan), May 22–26, 2000, Orlando, FL.

2000 (May). The role of extrapulmonary exposure pathways in the prevalence of chronic beryllium disease and beryllium sensitization. Platform presentation at the American Industrial Health Conference & Exposition (with D. Deubner, M. Kelsh, Y. Lowney), May 22–26, 2000, Orlando, FL.

2000 (February). Using PBPK modeling in the regulation of toxic compounds. Presentation at the Toxicokinetic Modeling Symposium (with S. Hays), February 17–18, 2000, The Hague, the Netherlands.

2000 (March). Consideration of alternate exposure pathways in the possible relation to prevalence chronic beryllium disease. Presentation at the Society of Toxicology Annual Meeting (D.J. Paustenbach, D. Deubner, M. Kelsh, Y. Lowney, and M. Kolan), March 19–23, 2000, Philadelphia, PA.

2000 (March). The persistent, bioaccumulative toxics (PBT) project: risk-based intentions— toxicological limitations. Presentation at the Society of Toxicology Annual Meeting (D.J. Paustenbach, H. Estreicher, and K.T. Connor), March 19–23, 2000, Philadelphia, PA.

1999 (September). Fingerprinting analysis of PCDD/PCDF sources in a surface water outfall near a petroleum refinery. Paper presented at the 19th International Symposium on Halogenated Environmental Organic Pollutants and POPs (with M.L. Moore, M.K. Butcher, K. Connor, and D.B. Mathur), Venice, Italy.

1999 (September). Risk assessment in industrial hygiene. Presented to Symposia in Risk Assessment Methodology for the Practicing Industrial Hygienist, New Orleans, LA.

1999 (September). Joint ACGIH and Brush Wellman Symposia on “Understanding the Risks and Research Involving Beryllium”. Washington, D.C.

1999 (March). Comparison of acute inhalation exposure levels for chemical irritants among six agencies in the United States. Paper presented at the 38th Annual Meeting of the Society of Toxicology (A.K. Madl and R.M. Kalmes), New Orleans, LA.

1999 (March). Evolution of safety evaluation in the 20th century. Paper presented at the 38th Annual Meeting of the Society of Toxicology (with D.G. Dodge, P.J. Sheehan, and T.C. Bernhardt), New Orleans, LA.

1998 (December). Assessing the ecological risks of dam removal. Paper presented at the Meeting of the Society for Risk Analysis (with P.J. Sheehan, R.J. Wenning, B.D. Wright, N.M. King, and D.M. Becklin), Phoenix, AZ.

1998 (December). Background risks associated with exposure to n-nitrosodimethylamine (NDMA): is something amiss in the regulation of this chemical? Paper presented at the Meeting of the Society for Risk Analysis (with Sheehan, P.J., D. Mathur, D. Dodge), Phoenix, AZ.

1998 (December). Background risks from dietary exposure to di-2-ethylhexyl phthalate (DEHP): implications of regulations in the context of California’s Proposition 65. Paper presented at the Meeting of the Society for Risk Analysis (with Mathur, D.B., D.G. Dodge), Phoenix, AZ.

1998 (December). Is TCDD a threshold carcinogen? A quantitative analysis of the epidemiological data. Paper presented at the Meeting of the Society for Risk Analysis (with C.R. Kirman, S.M. Hays, L. Aylward, and N.J. Karch), Phoenix, AZ.

1998 (December). Significant up-coming changes in the application and practice of risk assessment. Paper presented at the Meeting of the Society for Risk Analysis (with D.G. Dodge), Phoenix, AZ.

1998 (May). Future trends in the practice of health risk assessment. Keynote Speaker at Southern California Society for Risk Analysis Annual Meeting, UCLA, Los Angeles, CA.

1998 (March). Comparison of measured and model-estimated indoor concentrations of airborne chloroform from use of residential tap water. Paper presented at the 37th Annual Meeting of the

Society of Toxicology (with R.O. Richter, D. Suder, G.E. Corbett, T.P. Flahive, and B.D. Kerger), Seattle, WA.

1998 (March). Measurements of airborne concentrations of halogenated methanes due to showering and bathing. Paper presented at the 37th Annual Meeting of the Society of Toxicology (with B.D. Kerger, C.E. Schmidt, T.P. Flahive, G.E. Corbett, and R.O. Richter), Seattle, WA.

1998 (March). The ever-changing environmental responsibilities of the golf course industry. Keynote speaker at annual meeting of the Ohio Professional Golf Course Owners Association, Columbus, OH.

1998 (March). Update on methods to derive ambient air limits. Paper presented at the 37th Annual Mtg. of the Society of Toxicology (with J.E. Ryer-Powder and K. Gaynor), Seattle, WA.

1998 (February). A methodology for evaluating the human health hazard posed by ingesting hexavalent chromium in drinking water. Invited lecturer at Harvard University School of Public Health, Boston, MA.

1998 (February). Series of lectures on human and ecological risk assessment. Invited lecturer for 4 days at the University of Kuwait: Sponsored by Kuwait Foundation for the Advancement of Science (KFAS). Kuwait City, Kuwait.

1998 (February). Using the risk assessment methodology to tackle a unique environmental issue: hexavalent chromium in groundwater. Invited lecturer at Yale University School of Public Health, New Haven, CT.

1998 (January). How industrial hygienists can change the national risk priorities embraced by regulatory agencies. Invited lecturer as part of the University of Michigan School of Public Health "Experts in the Field" series: How Industrial Hygienists Can Change the National Risk Priorities Embraced by Regulatory Agencies. Ann Arbor, MI.

1997 (December). Critical review and reassessment of U.S. EPA's risk-based cleanup level for dioxin and relocation plan for the Escambia Superfund site in Pensacola, Florida. Paper presented at the Annual Meeting and Exposition of the Society of Risk Analysis (with T.C. Bernhardt, D.B. Mathur, G.R. Vishwanath, and R.J. Wenning), Washington, DC.

1997 (December). Human ingestion of chromium (VI) in drinking water: pharmacokinetics following repeated exposure. Paper presented at the Annual Meeting and Exposition of the Society of Risk Analysis (with B.L. Finley, D.B. Kerger, M.W. Katanoa, M.L. Gargas, and G.C. Corbett), Washington, DC.

1997 (December). The effect of cooking practices on levels of DDT and PCB compounds in the edible tissue of fish. Paper presented at the Annual Meeting and Exposition of the Society of Risk Analysis (with N.D. Wilson and N.M. Shear), Washington, DC.

1997 (November). Invited speaker to the 2nd Workshop on Guidance for Environmental Risk Assessment and Management of Great Britain (Institute for Environment and Health), Royal College of Physicians, London.

1997 (November). Participant in discussion on “Dust is More than Dirt.” 7th Annual Meeting of the International Society of Exposure Analysis, Research Triangle Park, NC.

1997 (November). The historical practice of risk assessment and how the field will evolve over the next 10 years. Featured speaker at the annual Lone Star Section Meeting of the Society of Risk Assessment, San Antonio, TX.

1997 (October). The practice of health risk assessment; 1975–1995 and 1995–2005. Experts Guest Lecture Series of the Graduate Program at the Stanford University Civil/Environmental Engineering Department, Palo Alto, CA.

1997 (August). Comparing the predicted uptake of TCDD based on exposure calculations with the actual uptake: a case study of residents of Times Beach. Paper presented at the 17th International Symposium on Chlorinated Dioxins and Related Compounds (with S. Hays, S. El-Sururi, P. Underwood, and R. Ku), Indianapolis, IN.

1997 (August). Relative doses of 2,3,7,8-TCDD using alternative dose metrics: comparison of the NIOSH and ranch hand populations. Paper presented at the 17th International Symposium on Chlorinated Dioxins and Related Compounds (with L. Aylward, S. Hays, J. Czernek, B. Brien, and N. Karch), Indianapolis, IN.

1997 (April). Lecture in the “Topics in Risk Assessment” course at Stanford University, directed by Dr. Warner North, Alto, CA.

1997 (April). Scientific symposium on proper dose metrics for assessing the risks due to persistent chemicals like dioxin, furans, PCB, and DDT. Sponsored by International Life Science Institute, Resources for the Future, and the American Industrial Health Council 1997, Washington, DC.

1997 (March). Desert Storm: environmental contamination, litigation strategies and bankruptcy considerations. Paper presented at Toxic/Hazardous Substances and Environmental Law Committee Symposium, ABA Tort and Insurance Practice Section, Inserting Real Science into Mass Toxic Tort Actions (with B.D. Kerger and J.V. Dagdigian).

1997 (March). Risk assessment and its role in remedy selection. Invited paper at the Information Network for Superfund Settlements (a group of 100 Superfund Attorneys), Denver, CO.

1997 (March). Risk assessment isn’t dead . . . it is just undergoing a rebirth: implications to the Portland Cement Association. Presented to the Portland Cement Association, Chicago, IL.

1997 (January). The role of risk assessment in environmental decision making in the U.S. and in Europe in the year 2000. Third Annual International Symposia on US-EURO Environmental Management, Brussels, Belgium.

1996 (August). PCDD/PCDFs in urban stormwater discharged to San Francisco Bay, California USA. Paper presented at the 16th International Symposium on Chlorinated Dioxins and Related Compounds (with D. Mathur), Amsterdam, The Netherlands.

1996 (August). Transport of chlorinated dioxin and furan contaminants in pentachlorophenol-treated wood to milk and adipose tissue of dairy cattle. Paper presented at the 16th International Symposium on Chlorinated Dioxins and Related Compounds (with Drs. Mathur and Fries), Amsterdam, The Netherlands.

1996 (April). The role of risk assessment in Brownfield initiatives. Invited Paper at the International Conference on Industrial Site Recycling, Pittsburgh, PA.

1996 (April). Urinary chromium as a biological marker of environmental exposure: what are the limitations? Invited Paper at the 30th Industrial Health Foundation's Annual Chromium Symposium, Washington, DC.

1996 (March). An analysis of inter-individual variability in uptake and elimination of chromium from human volunteers. Annual Mtg. of the Society of Toxicology, Anaheim, CA.

1996 (March). A physiologically-based pharmacokinetics model for ingestion of chromium (III and VI) in drinking water: validation with human studies. 35th Annual Meeting of the Society of Toxicology, Anaheim, CA.

1996 (March). Assessment of airborne hexavalent chromium in the home following use of contaminated tapwater. 35th Annual Meeting of the Society of Toxicology, Anaheim, CA.

1996 (March). Dermal uptake of hexavalent chromium in human volunteers measures of systemic uptake from immersion in water at 22 ppm. 35th Annual Meeting of the Society of Toxicology, Anaheim, CA.

1996 (March). Dioxin - health risk assessment and analytical methodologies. Invited lecture to the San Francisco Bay Regional Water Quality Control Board, San Francisco, CA.

1996 (March). Monte Carlo techniques and risk assessment. Four-hour professional development short course. 30th Annual Meeting of the Society of Toxicology, San Diego, CA.

1996 (March). The Cr(VI) reductive capacity of household beverages: implications for risk assessment. 35th Annual Meeting of the Society of Toxicology, Anaheim, CA.

1996 (March). Toxicologic and environmental hazards posed by CR(VI) in the environment. Chair of a 1-day national symposium. Sponsored by the University of Massachusetts. Newport Beach, CA.

1996 (March). Pharmacokinetics of drinking water exposure to select chromium (III and VI) compounds in human volunteers. 35th Annual Meeting of the Society of Toxicology, Anaheim, CA.

1996 (March). Reduction kinetics of hexavalent chromium in human blood. 35th Annual Meeting of the Society of Toxicology, Anaheim, CA.

1996 (March). Testing for DNA-protein crosslinking after drinking water exposure to chromium (III and VI) in human volunteers. 35th Annual Meeting of the Society of Toxicology, Anaheim, CA.

1996 (February–March). The critical role of house dust in understanding the hazards posed by contaminated soils. Invited paper at the First National Conference on Exposure and Risk Assessment, Munich, Germany.

1996 (February). Lessons learned in the United States about environmental regulations and risk assessment (1975–1995). Risk, Regulation, and Reason Conference (sponsored by the Santa Clara County Manufacturing Association), Palo Alto, CA.

1996 (January). Risk assessment aspects of Proposition 65. California Bar Association, Sacramento, CA.

1995 (October). The cost of identifying and evaluating airborne toxicants. Invited paper presented at the 1st East Asian Regional Air Toxics Conference (with R. Wenning), Hong Kong.

1995 (September). Lessons learned in the United States about environmental regulations and risk assessment (1975–1995). Annual Meeting of the Business Council of Australia, Sydney, Australia.

1995 (September). The Australian challenge regarding chlorinated chemicals: establishing a plan based on the U.S. experience. Australian/New Zealand Chlorine Work Group and PACIA, Melbourne, Victoria, Australia.

1995 (August). Human vs. animal sensitivity to the immunological effects of TCDD: a preliminary comparison. 15th International Symposium on Chlorinated Dioxins and Related Compounds, Edmonton, Alberta, Canada.

1995 (August). The relative susceptibility of animals and humans to the carcinogenic hazard posed by exposure to 2,3,7,8-TCDD: an evaluation of different dosimetric measures. 15th International Symposium on Chlorinated Dioxins and Related Compounds, Edmonton, Alberta, Canada.

1995 (August). Validating dermal exposure assessment techniques for dioxin using body burden data and pharmacokinetic modeling. 15th International Symposium on Chlorinated Dioxins and Related Compounds, Edmonton, Alberta, Canada.

1995 (May and June). Symposia on evaluation of the human health components of the life cycle assessment (LCA). Expert panel member. Sponsored by the International Life Sciences Institute, Washington, DC.

1995 (May). Presented two invited lectures as part of a “Visiting Experts in Risk Assessment” series directed by Dr. Steve Hrudy. University of Calgary and University of Alberta at Edmonton.

1995 (March). Chairman and key presenter at professional development course on risk assessment, 30th Annual Meeting of the Society of Toxicology, Baltimore, MD.

1995 (March). Fundamentals of health risk assessment. Professional development short-course. 30th Annual Meeting of the Society of Toxicology, Baltimore, MD.

1995 (March). New methods for assessing the risks of sites with contaminated soil. EPA of Switzerland and the Kanton of Zurich, Zurich, Switzerland.

1995 (February). Methods for improving risk assessments of sites contaminated with chemical carcinogens. 1st Australian Symposia on Carcinogens in the Environment, Melbourne, Australia.

1995 (February). Risk assessment techniques for airborne toxics. Symposia sponsored by The Australian Clean Air Society, Melbourne, Australia.

1995 (February). State-of-the-art exposure techniques: the use of Monte Carlo techniques. 1st Australian Symposia on Carcinogens in the Environment, Melbourne, Australia.

1995 (January). Session chair (with Dr. Roger McClellan) on risk assessment methods at the 1st International Symposia on Butadiene and Isoprene, Seattle, WA.

1994 (November). Presented a 4-hour short-course on human and ecological risk assessment. Royal Academy of Engineering of South Australia, Adelaide, Australia.

1994 (October). The proper role of epidemiology in regulatory risk assessment. Invited symposia participant. Harvard School of Public Health, Boston, MA.

1994 (May). How realistic are current risk assessment procedures and criteria? Presentation at the Australian Waste Management Conference, Melbourne, Australia.

1994 (May). Presented a 2-hour short-course on ecological risk assessment. New South Wales Environmental Protection Agency, Sydney, Australia.

1994 (May). Presented an 8-hour course on advanced topics in health risk assessment at the Clean Air Society of Australia Meeting, Melbourne, Australia.

1994 (February). Presented a lecture on ecotoxicology and risk assessment at the PPG Annual Environmental Conference, Lake Charles, LA.

1994 (January). A comparison of generic human health and ecological risk-based soil remediation criteria in Canada and the United States. Paper presented at the 4th Annual ASTM Symposia on Environmental Toxicology and Risk Assessment (with B.L. Finley, M.J. Kangas, and P. Scott), Montreal, Canada.

1994 (January). New methods for assessing the risks of airborne toxicants. Paper presented at the CIRCA/AWMA-OS Joint International Conference on Atmospheric Chemistry (with M. Gray and C. Curry), Toronto, Canada.

1993 (October). Keynote speaker at the 1st U.S. Environmental Protection Agency Workshop on Physiologically-Based Pharmacokinetics (PB-PK) and Cancer Risk Assessment, North Carolina.

1993 (October). Keynote speaker and invited U.S. representative to the 1st International Conference on Ecotoxicology, Melbourne, Australia.

1993 (October). State-of-the-art in risk assessment. Invited speaker. Professional Conference on Industrial Hygiene, Cincinnati, OH.

1993 (October). The historical use of risk assessment in the United States and how this experience can be utilized within the international arena. Presentation at the 1st International Environmental Risk Assessment Conference for Australia and New Zealand, Melbourne, Australia.

1993 (September). Participated in a panel discussion on the pharmacokinetics of the dioxins at the 13th Annual International Dioxin Meeting, Vienna, Austria.

1993 (August). Presented a lecture to the on setting an RfC for hexavalent and trivalent chromium at the EPA Reference Dose Task Group meeting, Cincinnati, OH.

1993 (March). An alternative to the USEPA's proposed inhalation reference concentrations for hexavalent chromium. Paper presented at the 32nd Annual Meeting of the Society of Toxicology (with B.L. Finley and D.M. Proctor), New Orleans, LA.

1993 (March). Approaches to assessing human exposure to soil contaminants at wood preserving facilities. Paper presented at the 32nd Annual Meeting of the Society of Toxicology (with M.L. Gargas, P.K. Scott, and B.L. Finley), New Orleans, LA.

1993 (March). Fundamentals of health risk assessment. Professional development course (4 hours). 32nd Annual Meeting of the Society of Toxicology, New Orleans, LA.

1993 (March). Presented two, 1-hour professional development courses on recent improvements in exposure assessment at the 32nd Annual Meeting of the Society of Toxicology, New Orleans, LA.

1993 (February). Health risk assessment and the practice of engineering. Presentation at the UCLA School of Public Health and Engineering, Los Angeles, CA.

1993 (February). Using human patch-test data to establish health-protective concentrations of allergens in soils. Paper presented at the International Conference on Dermatology (with Drs. Finley and Nethercott), Honolulu, Hawaii.

1993 (February). Understanding the hazard posed by xenobiotics in Passaic River sediments. Presentation at the SETAC Symposium on The Hazards posed by Dioxin in the Passaic River, Rutgers University, Piscataway, NJ.

1992 (December). Historical reconstruction of benzene exposure for an occupational cohort of rubber workers. Paper presented at the Annual Meeting of the Society of Risk Analysis (with P.S. Price), San Diego, CA.

1992 (December). Comparing the results of a Monte Carlo analysis with EPA's reasonable maximum exposed individual (RMEI): a case study of a former wood treatment site. Paper presented at the Annual Meeting of the Society of Risk Analysis (with T.L. Copeland, M.A. Harris, and V. Lau), San Diego, CA.

1992 (November). How to prioritize the national environmental agenda using risk assessment. Invited participant at a meeting of experts. Resources for the Future, Annapolis, MD.

1992 (October). How to set a TLV for an irritant. Presentation at the Quarterly Meeting of the Northeast Section of the AIHA, Hartford, CT.

1992 (October). The U.S. should adopt a risk-based environmental agenda. Presentation at the President's Forum at the Annual Meeting of the American Paper and Pulp Institute, Syracuse University, NY.

1992 (August). A Monte Carlo analysis of exposures and cancer risks from 2,3,7,8-TCDD in soil at residential and industrial sites. Paper (Abstract #RSK-29) presented at the 12th International Dioxin meeting (with R. Wenning and V. Lau), Tampere, Finland.

1992 (August). Chemometric analysis of potential sources of PCDD/PCDD in surficial sediments from Newark Bay. Paper (Abstract #13520) presented at the 12th International Dioxin Meeting (with R.J. Wenning), Tampere, Finland.

1992 (August). Chemometric comparisons of PCDD and PCDF fingerprint patterns in environmental sources and marine and freshwater sediments. Paper (Abstract #ANA-9) presented at the 12th International Dioxin Meeting (with R.J. Wenning), Tampere, Finland.

1992 (June). The rationale for the proposed TLV for formaldehyde. Presentation at the Annual American Industrial Hygiene Conference, Boston, MA.

1992 (April). State-of-the-art approaches for assessing the risks of contaminated groundwater. Presentation at the Gulf Coast Hazardous Substance Research Center's Fourth Annual Symposium, Lamar University, Beaumont, TX.

1992 (March). Regulatory actions with TCDD: what will happen in the 1990s? Presentation at the Fourth Annual Petroleum Contaminated Soils Conference, Newport Beach, CA.

1992 (March). Use of risk assessment in setting TLV's. Presentation at the Northern California American Industrial Hygiene Association Annual Meeting, San Francisco, CA.

1992 (February). Ecological risk assessment guidelines. Invited participant at the National Academy of Science's workshop, Fairfax, VA.

1992 (February). Improving risk assessment through the use of Monte-Carlo analyses. Presentation given at the National Academy of Sciences', CREAM Committee, State-of-the-Art Approaches to Exposure Assessment, Washington, DC.

1992 (February). State of the art approaches to exposure assessment. Invited speaker and participant at the National Academy of Science's Symposia, held as part of EPA's Committee on Risk Assessment Methods, Washington, DC.

1992 (January). Environmental exposure assessment. Invited workshop participant. U.S. Environmental Protection Agency, Virginia Beach, VA.

1991. Recent changes in regulatory toxicity rankings for wood-treating chemicals and their impact on risk assessment and remediation at wood-treating site. Paper presented at the American Wood Preservers Institute (with B. Finley and M. Harris), Scottsdale, AZ.

1991 (November). A quantitative uncertainty analysis of the CAPCOA approach to risk assessment. Paper presented at the Western States Meeting of the Air and Waste Management Association (with T. Copeland), Seattle, WA.

1991 (November). A state-of-the-art review of the human health hazards posed by benzene. Presentation at the First International Conference on the Health Hazards of Gasoline, Miami, FL.

1991 (November). The role of risk assessment. Presentation at Problems Posed by Transferring Contaminated Properties (sponsored by Diepenback and Associates), Sacramento, CA.

1991 (March). A comprehensive approach to setting soil standards. Presented at the 3rd Western States Contaminated Soil and Groundwater Conference, Newport Beach, CA.

1991 (February). Future likely changes in the TLV's. University of Michigan School of Public Health, Ann Arbor, MI.

1991 (February). Future trends in health risk assessment. Exxon Biomedical Research Laboratories, East Millstone, NJ.

1991 (February). Risk-based remedial investigations. Presented to Phillips Petroleum Environmental Engineering Staff, Bartlesville, OK.

1991 (January). The use of risk assessment to optimize the remedial investigation process. Presentation at Environment Remediation From Cradle to Grave (sponsored by Armstrong, Teasdale, Schlafly, Davis, and Dicus), St. Louis, MO.

1991 (February). Future likely changes in the TLV's. University of Michigan School of Public Health, Ann Arbor, MI.

1990 (December). The proper use of risk assessment to solve environmental problems. Presentation at the Northern Ohio Manufacturers Association (sponsored by the law firm of Squire, Sanders and Dempsey), Cleveland, OH.

1990 (November). Practice of health risk assessment and its impact on the economy. Presentation at the Annual Meeting of American Institute of Chemical Engineers of New York State, Albany, NY.

1990 (October). What does the risk assessment process tell us about the TLVs? Presentation at the 20th Professional Industrial Hygiene Conference, Vancouver, British Columbia, Canada.

1990 (September). An evaluation of the inhalation hazard posed by dioxin-contaminated soil. Presentation at the 10th International Dioxin Meeting, Bayreuth, Germany.

1990 (September). A re-evaluation of the tumor histopathology of Kociba et al. (1978) using 1990 criteria: implications for the risk assessment of 2,3,7,8-TCDD using the linearized multistage model. Presentation at the 10th International Dioxin Meeting, Bayreuth, Germany.

1990 (September). Dioxin risk assessment of the Columbia River. Presentation at the 10th International Dioxin Meeting, Bayreuth, Germany.

1990 (September). PCDDs and PCDFs in surficial sediments from the lower Passaic River and Newark Bay. Presentation at the 10th International Dioxin Meeting, Bayreuth, Germany.

1990 (September). Risk assessment of 2,3,7,8-TCDD using a biologically-based cancer model: a re-evaluation of the Kociba et al. (1978) bioassay. Presentation at the 10th International Dioxin Meeting, Bayreuth, Germany.

1990 (June). Using health risk assessment to set clean-up levels. Presentation at Management of Hazardous Waste Issues (sponsored by Executive Enterprises), San Francisco, CA.

1990 (May). Development and field validation of a sampling and analytical method for airborne hexavalent chromium. Presentation at the Annual Meeting of the Air Pollution and Waste Management Association, Raleigh, NC.

1990 (May). The assessment of health risks associated with indoor benzene vapor emitted from building foundation soil: a case study. Presentation at the Annual Meeting of the Air Pollution and Waste Management Association, Raleigh, NC.

1990 (April). Criteria for using substitution as a control measure. Presentation at the 10th Annual Meeting of the Semiconductor Safety Association, Phoenix, AZ.

1990 (April). Current procedures in the practice of health risk assessment. Team-taught 8-hour short course presented at the 12th Annual Hazmacon Meeting, Anaheim, CA.

1990 (April). Fundamentals in risk assessment for safety engineers. Presentation at the Annual Meeting of the American Society of Safety Engineers (California Section), Long Beach, CA.

1990 (April). Methodology for setting airborne emissions limits for chloroform, chlorine dioxide, and chlorine from paper and pulp mills. Presentation at the Annual Meeting of the Technical Association of the Paper and Pulp Industries, Seattle, WA.

1990 (April). Risk assessments methods and compliance with AB-2588. Presentation at Santa Clara Manufacturers Association, San Jose, CA.

1990 (April). Setting rational health-based water quality standards for dioxin: risk assessment for the Columbia River. Presentation at the Annual Meeting of the Technical Association of the Paper and Pulp Industries (TAPPI), Seattle, WA.

1990 (April). The practice of health risk assessment in the 1990's. Presentation at the 4th Conference on Toxic Substances, Canadian Air and Waste Management Association, Montreal, Canada.

1990 (February). Risk assessment approaches for petroleum contaminated soils. Presentation at the Annual West Coast Meeting on Petroleum Contaminated Soils, Anaheim, CA.

1989 (November). Assessing the risks of environmental tobacco smoke. Presented at the International Symposia on Environmental Tobacco Smoke, Montreal, Canada.

1989 (November). Conservation in the practice of health risk assessment suggestions for avoiding mistakes. Presented at the Annual Meeting of the Society of Risk Analysis, San Francisco, CA.

1989 (November). The role of risk assessment in dioxin litigation. Presented at Dioxin Claims and Litigation (sponsored by Executive Enterprises, Inc.), Washington, DC.

1989 (November). Setting a clean-up level for dioxin contaminated soil based on indirect routes of exposure. Invited paper presented at the symposium A Re-Evaluation of the 1 ppb Standard for Dioxin in Soil, Washington, DC.

1989 (September). Assessment of pesticide related hazards to birds in residential setting. Presented at the Annual Meeting of the Society of Environmental Toxicology and Chemistry, Toronto, Canada.

1989 (September). Risk assessment methods for petroleum contaminated sites. Presented at the 4th Annual Petroleum Contaminated Soils Conference, Amherst, MA.

1989 (August). Evolving science and risk assessment methods. Presentation at the Fifth Annual San Diego Conference on Environmental Compliance, San Diego, CA.

1989 (June). Risk based clean-up. Presented at California Environmental Compliance Management (sponsored by California Business Law Institute), Los Angeles, CA.

1989 (May). Case studies of less than perfect risk assessments. Presented at California Manufacturers Association (CMA), Los Angeles, CA.

1989 (April and May). Risk assessment approaches for complying with California's toxic hot spots - AB 2588 Law. Presented as short courses sponsored by Latham and Watkins, San Francisco, Los Angeles, Burbank, and San Diego, CA.

1989 (February). Setting clean-up levels; site, by site, by site. Presented at the Western States HAZMAT Meeting, Seattle, WA.

1989 (February). Fundamentals of human and ecological risk assessment. Professional development short-course (4 hours). Annual Meeting of the Soc. of Toxicology, Atlanta, GA.

1989 (February). The risk assessment of environmental and human health hazards. Presented at the Annual Meeting of the Society of Toxicology, Atlanta, GA.

1988 (December). Use of risk assessment methods in negotiating clean-up standards. Presentation at the Peninsula Industrial and Business Association (PIBA), San Mateo, CA.

1988 (November). New approaches to assessing the risks posed by dioxin. Presented at the East Coast Section of the Society of Toxicology, Cadbury, NJ.

1988 (September). The EPA's proposed position on the health hazards posed by dioxin. Presented at the Center for Environment and Energy Management, Washington, DC.

1988 (July). CAPCOA air toxics risk assessment. Presented to the Santa Clara County Manufacturing Group, Santa Clara, CA.

1988 (July). How health standards for groundwater contaminants are established. Presented at the American Groundwater Trust workshop Solving Groundwater Problems, City of Industry, CA.

1988 (May). Why the EPA risk assessment guidelines need to be updated. Presentation at the Joint Meeting of the Northern California Society of Toxicology and Society of Risk Analysis, Letterman Toxicology Institute, San Francisco, CA.

1988 (April). A comparative health risk assessment of land filling versus incineration. Presentation at the 1st Conference on Municipal Solid Waste Disposal, Amherst, MA.

1988 (April). Justification for EPA's new position on dioxin. Paper presented at the Joint Meeting of the EPA's Science Advisory Panel and Society of Toxicology session Assessing the Risks from Toxics in Northern California; What Science Can Tell Us, San Francisco, CA.

1988 (April). Risk assessment approaches for developmental toxicants and other non-carcinogenic chemicals. Presentation at the Annual Meeting of the American Occupational Medical Association, New Orleans, LA.

1988 (March). Risk assessment and Prop. 65: a challenge for industrial hygienists. Presented at the Southern California Chapter of the American Industrial Hygiene Association, Los Angeles, CA.

1988 (February). A physiologically pharmacokinetics description of the tissue distribution and enzyme induction of 2,3 7,8-tetrachlorodibenzo-p-dioxin in the rat. Presented at the 27th Annual Meeting of the Society of Toxicology, Dallas, TX.

1988 (February). Assessing the environmental and human health hazards of contaminated soil. Presentation at the 27th Annual Meeting of the Society of Toxicology, Dallas, TX.

1988 (February). Risk assessment and Prop 65. Presented at the Annual Meeting of the Food Processors and Engineers, Santa Barbara, CA.

1988 (February). Shortcomings in traditional approaches to risk assessment. Presentation at the New York City Bar Association (Environmental Law Section), New York, NY.

1987 (December). Assessing the risks of your operations under Proposition 65. Short course at the California Manufacturers Association, Oakland and Anaheim, CA.

1987 (December). Complying with Prop. 65 using risk assessment approaches. Presentation at the Hazardous Materials Conference, San Diego, CA.

1987 (November). A methodology for calculating the level of dioxin contamination due to particulate emissions from incinerators. Presentation at the Annual Meeting of the Society of Environmental Toxicology and Chemistry, Pensacola, FL.

1987 (November). A risk assessment of incinerator emissions as a potential source in foods of animal origin. Paper presented at the Annual Meeting of the Society of Risk Analysis (with G. Fries), Houston, TX.

1987 (November). Risk assessment approaches for developmental and reproductive toxicants. Presentation at the Annual Meeting of the Occupational and Environmental Health Groups at Hewlett-Packard Corporation, Palo Alto, CA.

1987 (October). A physiologically-based pharmacokinetics model for 2,3,7,8-TCDD. Presentation at the 7th International Symposium on Dioxins and Related Compounds, Las Vegas, NV.

1987 (October). Documentation of an occupational exposure limit for 2,3,7,8-TCDD. Presentation at the 7th International Symposium on Dioxins and Related Compounds, Las Vegas, NV.

1987 (October). Evaluation of factors used to assess incinerator emissions as a potential source of TCDD in foods of animal origin. Presentation at the 7th International Symposium on Dioxins and Related Compounds, Las Vegas, NV.

1987 (October). Oral bioavailability in the rat of soil-bound TCDD. Presentation at the 7th International Symposium on Dioxins and Related Compounds, Las Vegas, NV.

1987 (September). Evaluating the public health hazards of contaminated soil. Presentation at the 2nd Annual Conference on Petroleum Contaminated Soil, Amherst, MA.

1987 (September). Improved risk assessment approaches for carcinogens and developmental toxins. Presentation at the Annual Meeting of the California Manufacturers Association, Santa Barbara, CA.

1987 (September). Risk assessment methods for developmental and reproductive toxicants. Presentation at the EPA Experts Workshop, Little Rock, AR.

1987 (August). The fundamentals of toxicology and risk assessment. Presentation at the Silicon Valley Clean Water Alliance, San Jose, CA.

1986 (November). The process of evaluating environmental health risks. Presentation at the Dioxins: From Soil to Receptor, Medical College of Virginia, Richmond, VA.

1986 (October). The use of pharmacokinetics in risk assessment. Presentation at the National Academy of Science Workshop, Washington DC.

1986 (September). A critical examination of assumptions used in risk assessments of dioxin contaminated soil. Paper presented at the 3rd Annual meeting of the International Society of Regulatory Toxicology and Pharmacology (with J. Murray), Washington, DC.

1986 (May). Conducting an environmental risk assessment of contaminated soil. Presentation at the EPA Region I, II and III Workshop on the Assessment of Health Hazards of Contaminated Soil, Andover, MA.

1986 (April). Critical assumptions in the risk assessment of soil contaminated with 2,3,7,8-TCDD. Presentation at the 196th Annual Meeting of the American Chemical Society, New York, NY.

1986 (March). An examination of critical assumptions in health risk assessments of 2,3,7,8-TCDD contaminated soil. Presentation at the 25th Annual Meeting of Society of Toxicology, New Orleans, LA.

1985 (September). A critical review of assessments of the health risk associated with TCDD in soil. Presentation at the 5th International Symposium on Chlorinated Dioxins and Related Compounds, Bayreuth, Germany.

1985 (May). Shortcomings in risk assessment approaches used in occupational health. Presentation at the Annual Meeting of the American Industrial Hygiene Association, Las Vegas, NV.

1985 (April). Setting occupational exposure limits in high tech industries. Presentation at the Northern California AIHA Symposium on Industrial Hygiene Aspects of Emerging Technologies, Oakland, CA.

1985 (March). A physiologically-based pharmacokinetics (PB-PK) model for carbon tetrachloride. Presentation at the Annual Mtg. of the Society of Toxicology, San Diego, CA.

1985 (March). Methods for setting exposure limits. AIHA and NSC Professional Development Course, Salt Lake City, UT.

1985 (February). The shortcomings of most environmental risk assessments. Presentation to the Monsanto Corporation, St. Louis, MO.

1984 (October). What does industry expect engineering graduates to know about environmental safety and health? Presentation to the Accreditation Board for Engineering and Technology, Knoxville, TN.

1984 (April). Principles of occupational health engineering. NIOSH-Sponsored Course for Engineering Professors, Purdue University.

1984 (April). The problem with most risk assessments. Presentation at the Risk Assessment at the New EPA (sponsored by the Center for Environmental and Energy Management), Washington, DC.

1984 (March). Methods for setting occupational exposure limits and conducting risk assessments. AIHA and National Safety Council Professional Development Seminar, Las Vegas, NV.

1984 (March). The toxicology, environmental fate and ecological impact of pro-drone as a fire ant pesticide. Presentation at the Annual Fire Ant Symposium, Gainesville, FL.

1983 (December). The successful interaction of the toxicologist and the industrial hygienist. Presentation at the 3rd Northeastern Occupational Health Conference, East Brunswick, NJ.

1983 (November). An environmental risk assessment of pro-drone: insect growth regulator for the control of the imported red fire ant. Presentation at the Annual Meeting of Society of Environmental Toxicology and Chemistry, Washington, DC.

1983 (November). Inhalation toxicology methods and data interpretation. Presentation at the Southern States Occupational Health Conference, Tulane University, New Orleans, LA.

1983 (November). The regulatory and societal aspects of using pesticides for fire ant control. Presentation to the Connecticut Chapter of Sigma XI, Southbury, CT.

1983 (October). Quantitative risk assessment and occupational health. Presentation at the Midwest Occupational Health Conference, St. Louis, MO.

1983 (May). Approaches to establishing occupational exposure limits. Symposium chair at the Annual Meeting of the American Industrial Hygiene Association, Philadelphia, PA.

1983 (February). Pharmacokinetics aspects of 12 hour per day exposure schedules. Presentation to the Exxon Environmental Health Center, East Millstone, NJ.

1982–1984. Co-authored and presented with Dr. Tanner Stewart three case studies at the Darden Graduate School of Business, University of Virginia. The cases addressed the ethical and societal difficulties faced by executives who must deal with issues surrounding environmental and occupational safety and health. The cases were later used at several other prominent business schools.

1982 (July). A new technique for educating engineering in occupation safety and health. Presentation at the 90th Annual Conference of the American Society for Engineering Education, Texas A&M University, College Station, TX.

1982 (July). Health physics and industrial hygiene education and training at Purdue University. Presentation at the Annual Meeting of the Health Physics Society, Honolulu, HI.

1982 (June). Industrial hygiene and health physics education at Purdue University. Paper presented at the Annual Meeting of the American Industrial Hygiene Association (with N. Zimmerman), Cincinnati, OH.

1982 (June). The effect of the unusual workshift on the toxicology, disposition, and pharmacokinetics of carbon tetrachloride in the rat. Presentation at the Annual Meeting of the American Industrial Hygiene Association, Cincinnati, OH.

1982 (June). The non-traditional workshift and human health. Editor of the symposia manuscript for the Annual Meeting of the AIHA, Cincinnati, OH.

1982 (June). Toxicological implications of the 12 hour workshift and various models for adjusting occupational exposure limits. Presentation to the University of Texas School of Public Health, Houston, TX.

1982 (April). The fate of carbon tetrachloride in the rat following exposure during the 8 and 12 hour workshift. Presentation at the Annual Meeting of the Soc. of Toxicology, Boston, MA.

1982 (February). The effect of a 12 hour exposure regimen on the distribution, pharmacokinetics and toxicology of carbon tetrachloride in the rat. Presentation to the Rocky Mountain Center for Occupational Health, Salt Lake City, UT.

1982 (January). Criteria for setting occupational exposure limits for unusual work schedules. Presentation to the University of Michigan, School of Public Health, Ann Arbor, MI.

1981 (November). The need to educate engineers in occupational safety and health and a proposal for schools of engineering. Presentation at the Annual Meeting of the American Institute of Chemical Engineers, New Orleans, LA.

1981 (July). The need for industrial hygiene engineering in engineering education. Presentation at the Second NIOSH Symposium, Texas A&M University, College Station, TX.

1979 (October). Engineering control techniques in the chemical industry. Presentation at the New York State Section of the AIHA, Rochester, NY.

1979 (May). The toxicology and pharmacokinetics of inhaled carbon tetrachloride during 8 and 12 hour exposure periods. Presentation at the Annual Meeting of the AIHA, Portland, OR.

1978 (April). Reviewing new manufacturing facility designs in order to minimize future environmental health problems. Presentation at the Midwest Mgmt. Conf., Traverse City, MI.

1978 (April). Nitrosamines: one corporation's experience with a suspect carcinogen. Presentation at the Midwest Management Conference, Traverse City, MI.

1977 (December). The problems of accurate air sampling at the part per billion level. Presentation at the Midwest Safety Conference, Indianapolis, IN.

Published Abstracts

Madl AK, Kelsh MA, Paustenbach DJ. 2002. Studies of beryllium-exposed workers: Understanding the prevalence of chronic beryllium disease and beryllium sensitization. ISEA/ISEE 2002. August 11-15, 2002. Vancouver, British Columbia

Sun, Benjing, A.Sarofim, E. Eddings, and D.J. Paustenbach. 2001. Reducing PCDD/PCDF formation and emission from a hazardous waste combustion facility-technological identification, implementation and achievement. 21st International Symposium on Halogenated Environmental Organic Pollutants and POPs, September 9-14, 2001. Kyongju, Korea.

Fehling, K.A., M.V. Ruby, and D.J. Paustenbach. 2001. In Vitro bioaccessibility of low concentrations (50-350ppt TEQ) of dioxin/furans in weathered soils. 21st International Symposium on Halogenated Environmental Organic Pollutants and POPs, September 9-14, 2001. Kyongju, Korea.

Paustenbach, D.J. 2001. The United States EPA Science Advisory Board Report (2001) on the EPA Dioxin Reassessment. 21st International Symposium on Halogenated Environmental Organic Pollutants and POPs, September 9-14, 2001. Kyongju, Korea.

Williams, P.R., P.J. Sheehan, and D.J. Paustenbach. 2001. A probabilistic assessment of household exposures to MTBE from drinking water. Abstract # 105. Final Program and Abstracts. 40th Annual Meeting of Society of Toxicology, March 25-29, 2001. San Francisco, CA.

Wilson, N.D., V.A. Craven, P.S. Price, and D.J. Paustenbach. 2001. Event by event probabilistic methodology for assessing health risks of persistent chemicals in fish: a case study. Abstract # 1211. Final Program and Abstracts. 40th Annual Meeting of Society of Toxicology, March 25-29, 2001. San Francisco, CA.

Proctor, D.M., B.L. Finley, and D.J. Paustenbach. 2001. Is hexavalent chromium carcinogenic via the oral route of exposure an evaluation of the state of the science and implications for drinking water regulations. Abstract # 1499. Final Program and Abstracts. 40th Annual Meeting of Society of Toxicology, March 25-29, 2001. San Francisco, CA.

Greene, J., P. Williams, K. Avadhanam, and D.J. Paustenbach. 2001. An alternative approach for toxicity testing of genetically modified foods. Abstract # 1955. Final Program and Abstracts. 40th Annual Meeting of Society of Toxicology, March 25-29, 2001. San Francisco, CA.

Madl, A. K., B.J. Finley, J. Warmerdam, R. Richter, and D.J. Paustenbach. 2001. Contribution of individual truck operations to ambient diesel particulate matter (DPM) concentrations: implications for risk assessment and management. Abstract # 2063. Final Program and Abstracts. 40th Annual Meeting of Society of Toxicology, March 25-29, 2001. San Francisco, CA.

Fehling, K. A., M. A. Bono, S. Hays, and D. J. Paustenbach. 2001. Identification of a proposition 65 no significant risk level for coal tar. Abstract # 2093. Final Program and Abstracts. 40th Annual Meeting of Society of Toxicology, March 25-29, 2001. San Francisco, CA.

Williams, P.R.D. and D.J. Paustenbach. 2000. A case study of MTBE exposures and risk in California. Abstract M26.04. Platform Presentation at the Society for Risk Analysis Annual Conference, December 3-6, 2000. Arlington, VA.

Sheehan, P.J., R.R.D. Williams, and D.J. Paustenbach. 2000. MTBE in California drinking water: A probabilistic assessment of exposures. Abstract 5A-10P. Presentation at the International Society of Exposure Analysis Annual Conference, October 24-27, 2000. Monterey, CA.

Williams, P.R.D., P.J. Sheehan, and D.J. Paustenbach. 2000. MTBE ambient air and drinking water exposures in California. Abstract 3E-04P. Presentation at the International Society of Exposure Analysis Annual Conference, October 24-27, 2000. Monterey, CA.

Madl, A.K., and D.J. Paustenbach. 2000. Worst-case benzene exposure scenario from diesel locomotive exhaust in a roundhouse. Abstract 500. 39th Annual Meeting of the Society of Toxicology, Philadelphia, PA.

Hays, S.M., M. Butcher, G.C. Hook, Y. Lowney, C.R. Kirman, and D.J. Paustenbach. 2000. Probabilistic distributions for PBPK model parameters. Abstract 423. 39th Annual Meeting of the Society of Toxicology, Philadelphia, PA.

Kelsh, M., D. Deubner, L. Maier, M. Kent, B. Smith, P. Chapman, K. Zhao, D.J. Paustenbach, and M. Kolan. 2000. Medical monitoring survey results and beryllium exposure at a beryllium mine and extraction facility. Abstract 1960. 39th Annual Meeting of the Society of Toxicology, Philadelphia, PA.

Kent, M., T. Robins, A.K. Madl, M. Goodman, and D.J. Paustenbach. 2000. Is total mass or mass of alveolar-deposited airborne particles of beryllium a better predictor of the prevalence of disease? A preliminary study of a beryllium processing facility. Abstract 82. 39th Annual Meeting of the Society of Toxicology, Philadelphia, PA.

Lowney, Y., D. Deubner, S.M. Hays, P. Chapman, B. Kerger, W. Shields, and D.J. Paustenbach. 2000. Biomonitoring for beryllium: experience with a U.S. work force. Abstract 1454. 39th Annual Meeting of the Society of Toxicology, Philadelphia, PA.

Madl, A.K., R.M. Kalmes, and D.J. Paustenbach. 1999. Community one-hour inhalation exposure limits for chemical irritants among five agencies in the United States. American Industrial Hygiene Conference. Toronto, Canada.

Paustenbach, D.J., D.B. Mathur, and P.J. Sheehan. 1999. Implications of regulations in the context of California's Proposition 65: is it really necessary to limit exposure to background concentrations of chemicals? Abstract 1600. 38th Annual Meeting of the Society of Toxicology, New Orleans, LA.

Paustenbach, D.J., and G. Dodge. 1998. Significant up-coming changes in the application and practice of risk assessment. Abstract 51.01. Final Program and Abstracts. Society for Risk Analysis Annual Meeting and Exposition, Phoenix, AZ.

Kirman, C.R., S.M. Hays, L. Aylward, N.J. Karch, and D.J. Paustenbach. 1998. Is TCDD a threshold carcinogen? A quantitative analysis of the epidemiological data. Abstract 1.02. Final Program and Abstracts. Soc. for Risk Analysis Annual Meeting and Exposition, Phoenix, AZ.

Mathur, D.B., D.G. Dodge, and D.J. Paustenbach. 1998. Background risks from dietary exposure to di-(2-ethylhexyl)phthalate (DEHP): implications of regulations in the context of California's Proposition 65. Abstract 75.01. Final Program and Abstracts. Society for Risk Analysis Annual Meeting and Exposition, Phoenix, AZ.

Richter, R.O., D. Suder, G.E. Corbett, T.P. Flahive, and B.D. Kerger. 1998. Comparison of measured and model-estimated indoor concentrations of airborne chloroform from use of residential tap water. 37th Annual Meeting of the Society of Toxicology, Seattle, WA.

Ryer-Powder, J.E., K. Gaynor, and D.J. Paustenbach. 1998. Update on methods to derive ambient air limits. 37th Annual Meeting of the Society of Toxicology, Seattle, WA.

Sheehan, P.J., R.J. Wenning, B.D. Wright, N.M. King, D.J. Paustenbach, and D.M. Becklin. 1998. Assessing the ecological risks of dam removal. Abstract 65.01. Final Program and Abstracts. Society for Risk Analysis Annual Meeting and Exposition, Phoenix, AZ.

Sheehan, P.J., D. Mathur, D. Dodge, and D.J. Paustenbach. 1998. Background risks associated with exposure to n-nitrosodimethylamine (NDMA): is something amiss in the regulation of this chemical? Abstract 75.02. Final Program and Abstracts. Society for Risk Analysis Annual Meeting and Exposition, Phoenix, AZ.

Wilson, D., P.S. Price, and D.J. Paustenbach. 1998. Characterization of the health risks to two populations of anglers who consume DDT and PCB compounds in fish from the Palos Verdes Shelf. 37th Annual Meeting of the Society of Toxicology, Seattle, WA.

Paustenbach, D.J. 1997. Biosynthesis of hepta- and octa-chlorodioxins in cattle and evidence for lack of involvement by rumen microorganisms. In: *Organohal. Comp.* 33:296–301. 17th International Symposium on Chlorinated Dioxins and Related Compounds, Indianapolis, IN.

Andersen, M.E., M.L. Gargas, S.M. Hays, H.J. Clewell, and D.J. Paustenbach. 1997. Estimating minimally effective inducing doses (ED01s) of TCDD in livers of rats and humans using physiologically based pharmacokinetics modeling. In: *Organohal. Comp.* 34:311–316. 17th International Symposium on Chlorinated Dioxins and Related Compounds, Indianapolis, IN.

Aylward, L.L., S.M. Hays, J. Czernek, B. Brien, D.J. Paustenbach, and N.J. Karch. 1997. Relative doses of 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD) using alternative dosimetrics: comparison of the NIOSH and ranch hand populations. In: *Organohal. Comp.* 34:6–9. 17th International Symposium on Chlorinated Dioxins and Related Compounds, Indianapolis, IN.

Bernhardt, T.C., D.B. Mathur, G.R. Vishwanath, R.J. Wenning, and D.J. Paustenbach. 1997. Critical review and reassessment of USEPA's risk-based cleanup level for dioxin and relocation plan for the Escambia Superfund site in Pensacola, Florida. Abstract #P1.22. Annual Meeting and Exposition of the Society for Risk Analysis, Washington, DC.

Carlson-Lynch, H., G.E. Corbett, S.M. El-Sururi, B.D. Kerger, R. Reitz, and D.J. Paustenbach. 1997. Multipathway assessment of dioxin uptake and resulting body burden for selected occupational exposure scenarios. In: *Toxicologist* 30(1):160. 36th Annual Meeting of the Society of Toxicology, Cincinnati, OH.

Chute, S., B.D. Kerger, D.G. Dodge, G.E. Corbett, and D.J. Paustenbach. 1997. Product testing to realistically assess exposure: a case study involving workers' use of an anticorrosive substance containing chromic acid. Meeting and Exposition of the Society of Risk Analysis, Washington, DC.

Finley, B.L., B.D. Kerger, M.W. Katona, M.L. Gargas, G.C. Corbett, and D.J. Paustenbach. 1997. Human ingestion of chromium(VI) in drinking water: pharmacokinetics following repeated exposure. Abstract #P2.18. Annual Meeting and Exposition of the Society for Risk Analysis, Washington, DC.

Fries, G.F., D.J. Paustenbach, R.J. Wenning, D.B. Mathur, and W.J. Luksemburg. 1997. Excretion of polychlorinated dibenzo-*p*-dioxins and dibenzofurans into milk of cows. Abstract #1107. 36th Annual Meeting of the Society of Toxicology, Cincinnati, OH.

Fries, G.F., D.J. Paustenbach, D.B. Mathur, and W.J. Luksemburg. 1997. Rates of elimination of polychlorinated dibenzo-*p*-dioxins and dibenzofurans from lactating dairy cattle. In: *Organohal. Comp.* 33:338–342. 17th International Symposium on Chlorinated Dioxins and Related Compounds, Indianapolis, IN.

Hays, S.M., L.L. Aylward, P. Mocarelli, L.L. Needham, P. Brambilla, P.M. Gerthoux, D.G. Patterson, J. Czernek, D.J. Paustenbach, and N.J. Karch. 1997. Comparative dose-response of the NIOSH and seveso populations to the carcinogenic hazard of 2,3,7,8-tetrachlorodibenzo-*p*-dioxin (TCDD) using alternative dosimetrics. In: *Organohal. Comp.* 34:305–310. 17th International Symposium on Chlorinated Dioxins and Related Compounds, Indianapolis, IN.

Kirman, C.R., T.F. Long, M.L. Gargas, and D.J. Paustenbach. 1997. Proposed molecular mechanism of action for dioxin-like compounds: a view inside the black box. In: *Organohal. Comp.* 34:323–327. 17th International Symposium on Chlorinated Dioxins and Related Compounds, Indianapolis, IN.

Mathur, D.B., M.J. Stephenson, R.J. Wenning, and D.J. Paustenbach. 1997. PCDD/PCDFs in storm water outfalls adjacent to urban areas and petroleum refineries in San Francisco Bay, California, USA. In: *Organohal. Comp.* 32:1–5. 17th International Symposium on Chlorinated Dioxins and Related Compounds, Indianapolis, IN.

O'Flaherty, E.J., B.D. Kerger, G.E. Corbett, S. Hays, and D.J. Paustenbach. 1997. Fitting a scaled physiologically-based model of Cr(III) and Cr(VI) kinetics to human plasma, red cell, and urine concentration measurements. Abstract #1705. 36th Annual Meeting of the Society of Toxicology, Cincinnati, OH.

Paustenbach, D., S. Hays, S. El-Sururi, P.M. Underwood, and R.H. Ku. 1997. Comparing the predicted uptake of TCDD based on exposure calculations with the actual uptake: a case study of residents of Times Beach, Missouri. In: *Organohal. Comp.* 34:25–31. 17th International Symposium on Chlorinated Dioxins and Related Compounds, Indianapolis, IN.

Paustenbach, D.J., D.G. Dodge, G.E. Corbett, S.M. Hays, B.A. Brien, and B.D. Kerger. 1997. Steady-state observations in blood and urine of human volunteers following ingestion of hexavalent chromium in drinking water. Abstract #1711. 36th Annual Meeting of the Society of Toxicology, Cincinnati, OH.

Price, P.S., P.K. Scott, N.D. Wilson, and D.J. Paustenbach. 1997. An empirical approach for deriving information on total duration of exposure from information on historical exposure from surveys. Abstract #W1.4.04. Annual Meeting and Exposition of the Society for Risk Analysis, Washington, DC.

Proctor, D.M., J.R. Nethercott, M.M. Fredrick, B.L. Finley, and D.J. Paustenbach. 1997. Assessing the potential for elicitation of allergic contact dermatitis in Cr(VI)-sensitized subjects following prolonged contact with Cr(VI) in solution. Abstract #1051. 36th Annual Meeting of the Society of Toxicology, Cincinnati, OH.

Scott, P.K., D.M. Proctor, and D.J. Paustenbach. 1997. Evaluation of the 10% elicitation threshold for Cr(VI) in terms of mass per surface area using benchmark dose methods. Abstract #852. 36th Annual Meeting of the Society of Toxicology, Cincinnati, OH.

Underwood, P.M., D.G. Dodge, S. Meyers, B.D. Kerger, and D.J. Paustenbach. 1997. Comparison of two sampling methods for ambient airborne chromium(VI) in California: implications for risk assessment. Abstract #1430. 36th Annual Meeting of the Society of Toxicology, Cincinnati, OH.

Wilson, N.D., N.M. Shear, and D.J. Paustenbach. 1997. The effect of cooking practices on levels of DDT and PCB compounds in the edible tissue of fish. Abstract #W4.3.03. Annual Meeting and Exposition of the Society for Risk Analysis, Washington, DC.

Paustenbach, D.J. 1996. Discussion – exposure metrics and low-dose response evaluation. Abstract #I10.03. Annual Meeting of the Society for Risk Analysis, New Orleans, LA.

Paustenbach, D.J. 1996. The health hazards of chromium in soil: an overview. Abstract #1. Annual Meeting of the National Conference on Contaminated Soil, Newport Beach, CA.

Chute, S.M., S.K. Overman, B.D. Kerger, B.L. Finley, and D.J. Paustenbach. 1996. The Cr(VI) reductive capacity of household beverages: implications for risk assessment. Abstract #18228. In: *The Toxicologist* 30(1):4. 35th Annual Meeting of the Soc. of Toxicology, Anaheim, CA.

Clark, J.J., G.E. Corbett, B.D. Kerger, B.L. Finley, and D.J. Paustenbach. 1996. Dermal uptake of hexavalent chromium in human volunteers: measures of systemic uptake from immersion in water at

22 ppm. Abstract #18225. In: The Toxicologist 30(1):15. 35th Annual Meeting of the Society of Toxicology, Anaheim, CA.

Corbett, G.E., B.D. Kerger, D.G. Dodge, and D.J. Paustenbach. 1996. Studies providing empirical data on dose and biological mechanisms to address litigation and regulatory issues. Abstract #F1.10. Annual Meeting of the Society for Risk Analysis, New Orleans, LA.

Corbett, G.E., E. O'Flaherty, B.D. Kerger, B.L. Finley, and D.J. Paustenbach. 1996. Reduction kinetics of hexavalent chromium in human blood. Abstract #19620. In: The Toxicologist 30(1):117–118. 35th Annual Meeting of the Society of Toxicology, Anaheim, CA.

Dodge, D.G., G.E. Corbett, J. Miralis, B.D. Kerger, and D.J. Paustenbach. 1996. Investigation of the potential in vivo genotoxicity of chromium(VI) in drinking water using the in vivo bone marrow micronucleus and liver UDS assay. Abstract #P2.20. Annual Meeting of the Society for Risk Analysis, New Orleans, LA.

Dodge, D.G., J.J.J. Clark, B.D. Kerger, R.O. Richter, B.L. Finley, and D.J. Paustenbach. 1996. Assessment of airborne hexavalent chromium in the home following use of contaminated tapwater. Abstract #19618. In: The Toxicologist 30(1):251. 35th Annual Meeting of the Society of Toxicology, Anaheim, CA.

Finley, B.L., B.D. Kerger, G.E. Corbett, and D.J. Paustenbach. 1996. Pharmacokinetics of drinking water exposure to selected chromium (III and VI) compounds in human volunteers. Abstract #18224. In: The Toxicologist 30(1):14. 35th Annual Meeting of the Society of Toxicology, Anaheim, CA.

Fries, G., D.J. Paustenbach, R. Wenning, D. Mathur, and B. Lukseberg. 1996. Transport of chlorinated dioxin and furan contaminants in pentachlorophenol-treated wood to milk and adipose tissue of dairy cattle. 16th International Symposium on Chlorinated Dioxins and Related Compounds, Amsterdam, The Netherlands.

Kerger, B.D., B.L. Finley, D.J. Paustenbach, and E. O'Flaherty. 1996. A physiologically-based pharmacokinetics model for ingestion of chromium(III and VI) in drinking water: validation with human studies. Abstract #13014. In: The Toxicologist 30(1):14. 35th Annual Meeting of the Society of Toxicology, Anaheim, CA.

Kerger, B.D., D.G. Dodge, G.E. Corbett, and D.J. Paustenbach. 1996. Fostering EPA's use of biologically-based models in risk assessment and regulation. Abstract #A2.06. Annual Meeting of the Society for Risk Analysis, New Orleans, LA.

Kuykendall, J., S.K. Overman, B.D. Kerger, B.L. Finley, and D.J. Paustenbach. 1996. Testing for DNA-protein after drinking water exposure to chromium (III and VI) in human volunteers. Abstract #19616. 35th Annual Meeting of the Society of Toxicology, Anaheim, CA.

Paustenbach, D.J., S. Hays, B.D. Kerger, and B.L. Finley. 1996. An analysis of interindividual variability in uptake and elimination of chromium from human volunteers. Abstract #4301. In: The Toxicologist 30(1):35. 35th Annual Meeting of the Society of Toxicology, Anaheim, CA.

Paustenbach, D.J., Rick Wenning, D. Mathur, and B. Luksemburg. 1996. PCDD/PCDFs in urban stormwater discharged to San Francisco Bay, California USA. 16th International Symposium on Chlorinated Dioxins and Related Compounds, Amsterdam, The Netherlands.

Paustenbach, D.J. 1995. Assessing the risks of sites of contaminated soils. Abstract #1. 2nd Workshop on Contaminated Soils, Melbourne, Australia.

Finley, B., and D. Paustenbach. 1995. Human vs. animal sensitivity to the immunological effects of TCDD: a preliminary comparison. Abstract #C. 15th International Symposium on Chlorinated Dioxins and Related Compounds, Edmonton, Canada.

Kerger, B.D., B.L., Finley, and D.J. Paustenbach. 1995. Cost-benefit analysis of California policy on cancer risk: a case study of chromium(VI). Abstract #203. In: The Toxicologist 15(1):37. 34th Annual Meeting of the Society of Toxicology, Baltimore, MD.

Kerger, B.D., G.E. Corbett, S. El-Sururi, R. Reitz, and D. Paustenbach. 1995. Validating dermal exposure assessment techniques for dioxin using body burden data and pharmacokinetics modeling. Abstract #D-1, Annual Meeting of the Society for Risk Analysis, Honolulu, HI, and Abstract #A, 15th International Symposium on Chlorinated Dioxins and Related Compounds, Edmonton, Canada.

Nethercott, J.R., R.M. Adams, J. Fowler, J.G. Marks, C. Morgan, J.S. Taylor, B. Finley, S. Horowitz, and D. Paustenbach. 1995. Response to topical challenge with hexavalent and trivalent chromium in human volunteers. Abstract #18. International Conference on Contact Dermatitis, Barcelona, Spain.

Paustenbach, D.J., N. Karch, R. Golden, H.W. Leung, and B. Kerger. 1995. The relative susceptibility of animals and humans to the carcinogenic hazard posed by exposure to 2,3,7,8-TCDD: an evaluation of different dosimetric measures. Abstract #B. 15th International Symposium on Chlorinated Dioxins and Related Compounds, Edmonton, Canada.

Richter, R.O., B.D. Kerger, J. Cunningham, and D.J. Paustenbach. 1995. Exposure modeling and validation studies for aerosols a case study of dioxin exposure during roadside weed abatement with 2,4,5-T. Abstract #332. 34th Annual Meeting of the Society of Toxicology, Baltimore, MD.

Paustenbach, D.J., and R.J. Wenning. 1994. The cost of identifying and evaluating airborne toxicants. Abstract #4. 1st East Asian Regional Air Toxics Conference, Hong Kong.

Finley, B.L., M.J. Kangas, D.J. Paustenbach, and P.K. Scott. 1994. A comparison of generic human health and ecological risk-based soil remediation criteria in Canada and the United States. 4th Annual ASTM Symposia on Environmental Toxicology and Risk Assessment, Montreal, Canada.

Gargas, M.L., B.L. Finley, R.L. Norton, D.M. Proctor, and D.J. Paustenbach. 1994. Biomonitoring of chromium (Cr) exposure by urinary excretion: bioavailability and sampling design. Abstract #383. In: The Toxicologist 14:383. 33rd Annual Meeting of the Society of Toxicology, Dallas, TX.

Kerger, B.D., L.B. Walker, M.J. Gargas, D.J. Paustenbach, and R.H. Reitz. 1994. Perspective on risks of chloroform in tap water: implications of physiologically-based pharmacokinetics modeling (PB-PK) on regulatory toxicity criteria. Abstract #542. 33rd Annual Meeting of the Society of Toxicology, Dallas, TX.

Walker, L.B., B.D. Kerger, and D.J. Paustenbach. 1994. Integrating critical scientific data into regulatory exposure limits: a case study with hydrogen sulfide. Abstract #794. 33rd Annual Meeting of the Society of Toxicology, Dallas, TX.

Wong, A., W. Luksemburg, and D.J. Paustenbach. 1994. Analytical chemistry and air toxics. Abstract #2. 1st East Asian Regional Air Toxics Conference, Hong Kong.

Wenning, R.J., and D.J. Paustenbach. 1993. Sources of PCDD/Fs in Newark Bay sediments. Abstract #13520. 13th Annual Meeting of SETAC, Cincinnati, OH.

Finley, B.L., D.M. Proctor, and D.J. Paustenbach. 1993. An alternative to the USEPA's proposed inhalation reference concentrations for hexavalent chromium. Abstract #1643. 32nd Annual Meeting of the Society of Toxicology, New Orleans, LA.

Gargas, M.L., P.K. Scott, B.L. Finley, and D.J. Paustenbach. 1993. Approaches to assessing human exposure to soil contaminants at wood preserving facilities. Abstract #1045. In: The Toxicologist 13:1045. 32nd Annual Meeting of the Society of Toxicology, New Orleans, LA.

Michaud, J., and D. Paustenbach. 1992. Development of a risk based re-entry levels for PCB's, dioxins and furans following a PCB fire. Abstract #686. 31st Annual Meeting of the Society of Toxicology, Seattle, WA.

Paustenbach, D.J., and P.S. Price. 1992. Historical reconstruction of benzene exposure for an occupational cohort of rubber workers. Abstract #4I-1. Annual Meeting of the Society of Risk Analysis, San Diego, CA.

Wenning, R.J., and D.J. Paustenbach. 1992. Chemometric of potential sources of PCDD/PCDF in surficial sediments from Newark Bay. Abstract #ANA-9. 12th International Symposium on Chlorinated Dioxins and Related Compounds, Tampere, Finland.

Connor, K.M., T.L. Copeland, A.M. Holbrow, and D.J. Paustenbach. 1992. Quantitative uncertainty analysis of AB-2588 default exposure parameters. Abstract #1170. 31st Annual Meeting of the Society of Toxicology, Seattle, WA.

Copeland, T, D.J. Paustenbach, M.A. Harris, and V. Lau. 1992. Comparing the results of a Monte Carlo analysis with EPA's reasonable maximum exposed individual (RMEI): a case study of a

former wood treatment site. Abstract #4PS-8. Annual Meeting of the Society of Risk Analysis, San Diego, CA.

Paustenbach, D.J., R. Wenning, and V. Lau. 1992. A Monte Carlo analysis of exposures and cancer risks from 2,3,7,8-TCDD in soil at residential and industrial sites. Abstract #RSK-29. 12th International Symposium on Chlorinated Dioxins and Related Compounds, Tampere, Finland.

Wenning, R.J., D.J. Paustenbach, M.A. Harris, and H. Bedbury. 1992. Potential sources of PCDDs and PCDFs in Newark Bay sediments using principal components analysis. Annual Meeting of the Society of Environmental Toxicology and Chemistry.

Finley, B., M. Harris, and D.J. Paustenbach. 1991. Recent changes in regulatory toxicity rankings for wood-treating chemicals and their impact on risk assessment and remediation at wood-treating site. Abstract #16. Annual Meeting of the American Wood Preservers Institute, Scottsdale, AZ.

Harris, M.A., R.J. Wenning, M.J. Unga, and D.J. Paustenbach. 1991. Comparisons of PCDD and PCDF fingerprint patterns in Lower Passaic and Newark Bay sediments and known environmental sources using multivariate statistics. Abstract #447, Annual Meeting of the Society of Toxicology and Environmental Chemistry, Seattle, WA, and Session P125, 11th International Symposium on Chlorinated Dioxins and Related Compounds, Research Triangle Park, NC.

Harris, M., B. Finley, R. Wenning, and D.J. Paustenbach. 1991. Evaluation of potential sources of 1,2,8,9-TCDD in aquatic biota from Newark Bay. Abstract #729. In: The Toxicologist 11(1):198. 30th Annual Meeting of the Society of Toxicology, Dallas, TX.

Huntley, S.L., R.J. Wenning, N.L. Bonnevie, R.E. Keenan, and D.J. Paustenbach. 1991. Scientific evaluation of natural resource damage claims associated with PCDD and PCDF contamination in the aquatic environment. Session #36-3. 1991 Environmental Conference, San Antonio, TX.

Paustenbach, D.J., R. Keenan, and M. Layard. 1991. A new look at the dioxin RSD using a biologically-based model. Abstract #42. Technical Association of the Paper and Pulp Industry.

Paustenbach, D.J., R.J. Wenning, V. Lau, N.W. Harrington, D.K. Rennix, and A.H. Parsons. 1991. Recent developments on the hazards posed by 2,3,7,8-tetrachlorodibenzo-*p*-dioxin in soil: implications for setting risk-based clean-up levels at residential and industrial sites. Session P154. 11th International Symposium on Chlorinated Dioxins and Related Compounds, Research Triangle Park, NC.

Paustenbach, D.J., R.J. Wenning, R.E. Keenan, and M.W. Layard. 1991. Risk estimates for 2,3,7,8-TCDD 1978 and 1990 histopathology interpretations of the Kociba et al. bioassay using a biologically-based cancer model. Session #33-4. 1991 Environmental Conference, San Antonio, TX.

Wenning, R.J., M.J. Unga, and D.J. Paustenbach. 1991. Comparisons of PCDD and PCDF fingerprint patterns in sediments from Newark Bay and other industrialized waterways using

principal components and cluster analyses. Abstract #448. Annual Meeting of the Society of Toxicology and Environmental Chemistry, Seattle, WA.

Wenning, R.J., M.J. Unga, and D.J. Paustenbach. 1991. PCDD and PCDF fingerprint patterns in sediments from Newark Bay and other industrialized waterways using principal components and cluster analyses. Session P129. 11th International Symposium on Chlorinated Dioxins and Related Compounds, Research Triangle Park, NC.

Wenning, R.J., M. Harris, M.J. Unga, B.L. Finley, and D.J. Paustenbach. 1991. PCDD and PCDF fingerprint patterns in surficial sediments from the lower Passaic River and Newark Bay using multivariate statistics. Abstract #446. Annual Meeting of the Society of Toxicology and Environmental Chemistry, Seattle, WA.

Paustenbach, D.J. 1990. Criteria for using substitution as a control measure. 5th Annual Meeting of the Semiconductor Safety Association, Phoenix, AZ.

Paustenbach, D.J. 1990. Setting rational, health-based water quality standards for dioxin-risk assessment for the Columbia River. Abstract #38-2. TAPPI Annual Meeting, Seattle, WA.

Paustenbach, D.J., and P. Sheehan. 1990. Development and field validation of a sampling and analytical method for airborne hexavalent chromium. Air Pollution and Waste Management Association Annual Meeting, Raleigh, NC.

Finley, B.L., R.J. Wenning, M.J. Unga, S. Huntley, and D.J. Paustenbach. 1990. PCDDs and PCDFs in surficial sediments from the lower Passaic River and Newark Bay. Organohalogen Compounds. 10th International Dioxin Meeting, Bayreuth, Germany. 1:409–414.

Keenan, R.E., R.J. Wenning, A.H. Parsons, and D.J. Paustenbach. 1990. A reevaluation of the tumor histopathology of Kociba et al (1978): using 1990 criteria: implications for the risk assessment of 2,7,8-TCDD using the linearized multistage model. 10th International Dioxin Meeting, Bayreuth, Germany. 1:549–554.

Keenan, R.E., A.H. Parsons, R.J. Wenning, E.J. Ebert, and D.J. Paustenbach. 1990. Dioxin risk assessment of the Columbia River. 10th International Dioxin Meeting, Bayreuth, Germany. 1:541–546.

Keenan, R.E., A.H. Parsons, R.J. Wenning, E.S. Ebert, and D.J. Paustenbach. 1990. Setting rational health based standards for dioxin--risk assessment for the Columbia River. pp. 801–811, Book 2. TAPPI Environmental Conference, Seattle, WA.

Layard, M., D.J. Paustenbach, R.J. Wenning, and R.E. Keenan. 1990. Risk assessment of 2,3,7,8-TCDD using a biologically-based cancer model: a reevaluation of the Kociba et al. (1978) bioassay. 10th International Dioxin Meeting, Bayreuth, Germany. 1:561–566.

Paustenbach, D.J., B.L. Finley, and T.T. Sarlos. 1990. An evaluation of the inhalation hazard posed by dioxin-contaminated soil. 10th International Dioxin Meeting, Bayreuth, Germany. 3:335–338.

Paustenbach, D.J., B. Finley, R. Kalmes, and B. Fishman. 1990. Methodology for setting airborne emissions limits for chloroform, chlorine dioxide, and chlorine from paper and pulp mills. pp. 133–136, Book 1. TAPPI Environmental Conference, Seattle, WA.

Paustenbach, D.J. 1989. Conservatism in health risk assessment: suggestions for avoiding past mistakes. Abstract #MPM-F4. Annual Meeting of the Society of Risk Analysis, San Francisco, CA.

Paustenbach, D.J. 1989. Improvements in health risk assessment 1990's. 5th Annual HazTech Meeting, San Francisco, CA.

Paustenbach, D.J. 1989. Risk Assessment in the 1990's. Abstract #101. 4th Annual Hazmat West Conference, San Jose, CA.

Finley, B., and D.J. Paustenbach. 1989. Assessment of pesticide-related hazards to birds in a residential community. Abstract #P118. Annual Meeting of the Society of Environmental Toxicology and Chemistry, Toronto, Canada.

Paustenbach, D.J., and C.K. Kasunic. 1989. Dioxin emissions from incinerators. Abstract #8A. 6th International Meeting on Dioxins and Related Chemicals, Toronto, Canada.

Paustenbach, D.J., and S. Ripple. 1989. Applications of risk assessment to toxic tort litigation. Abstract #3. Annual Meeting of the American Bar Association, Honolulu, HI.

Leung, H.W., A.P. Poland, F.J. Murray, D.J. Paustenbach, and M.E. Andersen. 1989. Dose-dependent pharmacokinetics of [¹²⁵I]-2-IODO- 3,7,8-trichlorodibenzo-*p*-dioxin (I-TCDD) in mice. Abstract #946. 28th Annual Meeting of the Society of Toxicology, Atlanta, GA.

Sarlos, T., B. Fishman, and D.J. Paustenbach. 1989. Evaluation of emission rate and health risks of volatile gasoline components of soil. Abstract #P111. Annual Meeting of the Society of Environmental Toxicology and Chemistry, Toronto, Canada.

Paustenbach, D.J. 1987. Determining significant risk under Proposition 65. Abstract #2D. 3rd Hazmat West Conference, Long Beach, CA.

Paustenbach, D.J. 1987. Environmental and public health hazards of contaminated soil. Abstract 12. 2nd Conference on the Environmental and Public Health Effects of Petroleum Contaminated Soils, Amherst, MA.

Fries, G.F., and D.J. Paustenbach. 1987. A critical evaluation of the factors used in assessing incinerator emissions as a potential source of TCDD in foods of animal origin. Abstract RC-05. 7th International Dioxin Symposium, Las Vegas, NV.

Fries, G.F., and D.J. Paustenbach. 1987. Evaluation of factors used to assess incinerator emissions as a potential source of TCDD in foods of animal origin. Abstract #279. 8th Annual Meeting of the Society for Environ. Toxicology and Chemistry, Pensacola, FL.

Leung, H.W., and D.J. Paustenbach. 1987. Documentation for an occupational exposure limit for 2,3,7,8-TCDD. Abstract RC-04. 7th International Dioxin Symposium, Las Vegas, NV.

Paustenbach, D.J., and G.F. Fries. 1987. A risk assessment of incinerator emissions as a potential source of TCDD in foods of animal origin. Abstract WAM-C4. 6th Annual Meeting of the Society of Risk Analysis, Houston, TX.

Leung, H.W., M.E. Anderson, R.H. Ku, and D.J. Paustenbach. 1987. A physiologically-based pharmacokinetics model for 2,3,7,8-TCDD. Abstract MA-02. 7th International Dioxin Symposium, Las Vegas, NV.

Leung, H.W., M.E. Andersen, R.H. Ku, and D.J. Paustenbach. 1988. A physiological pharmacokinetics description of the tissue distribution and enzyme induction of 2,3,7,8-TCDD in the rat. Abstract #618. Annual Meeting of the Society of Toxicology, Dallas, TX.

Shu, H., D.J. Paustenbach, J. Murray, L. Marple, P. Brunck, and D. DeiRossi. 1987. Oral bioavailability in the rat of soil-bound TCDD. Abstract PS-40. 7th International Dioxin Symposium, Las Vegas, NV.

Paustenbach, D.J. 1986. An examination of critical assumptions in health risk assessments of 2,3,7,8-TCDD in contaminated soil. Abstract #1133. Society of Toxicology, New Orleans, LA.

Paustenbach, D.J. 1986. Critical assumptions in the risk assessment of TCDD in contaminated soil. Abstract #30. 191st National Meeting, American Chemical Society, New York, NY.

Sielken, R.L., F.W. Carlborg, D.J. Paustenbach, F.J. Murray, and H.S. Shu. 1986. Alternate approaches to mathematically analyzing the bioassay data for 2,3,7,8-TCDD. Abstract #1132. Society of Toxicology, New Orleans, LA.

Paustenbach, D.J., and J.T. Dufour. 1985. A critical review of cancer risk assessment methodologies. Abstract #219. American Industrial Hygiene Conference, Las Vegas, NV.

Paustenbach, D.J., and F.J. Murray. 1985. A critical examination of assessments of the health risks associated with 2,3,7,8-TCDD in soil. Abstract #135. 5th International Dioxin Symposium, Bayreuth, Germany.

Paustenbach, D.J., et al. 1985. A physiologically-based pharmacokinetics model (PB-PK) for inhaled CCl₄ in the rat. Abstract #288. Society of Toxicology, San Diego, CA.

Paustenbach, D.J. 1984. Unusual work schedules: an overview. Abstract #112. American Industrial Hygiene Conference, Detroit, MI.

Paustenbach, D.J. 1983. An environmental risk assessment of an insect growth regulator for control of fire ants. Abstract #224. Society of Environmental Toxicology and Chemistry, Washington, DC.

Paustenbach, D.J. 1982. Effects of exposure duration on the severity of toxic response. Abstract #188. Society of Environmental Toxicology and Chemistry, Boston, MA.

Paustenbach, D.J. 1981. A comparative study of the pharmacokinetics and toxic effects of exposing rats to CCl₄ during a standard and normal workweek. Abstract #120. American Industrial Hygiene Conference, Portland, OR.

Paustenbach, D.J. 1981. The need to educate undergraduate engineers in occupational health and safety. Abstract #124 American Institute of Chemical Engineering, New Orleans, LA.

Paustenbach, D.J. 1980. A unit operations approach to engineering control of health hazards. Abstract #302. American Industrial Hygiene Conference, Houston, TX.

ADVISORY BOARDS TO INDUSTRY

- Member of the Alcoa Environmental Technology Board of Directors (ETAB) (1993-1996)
- Member of the Savannah River Environmental Board of Directors (1997-2001)

PROFESSIONAL CONTRIBUTIONS

2001: Chaired a one-day symposium on “Current and future international trends regarding dioxins in foods”. (September 10; Souel, Korea). 21th Annual International Dioxin Meeting.

2001: Served on Strategic Environmental Research and Development Program (SERDP) and Environmental Security Technology Certification Program (ESTCP) of the Department of Defense. (August 6-7, Washington, D.C.).

2001: Served on Governor’s task force to evaluate health hazard posed by Cr VI in soils. (June-August, 2000, Sacramento, CA).

2000: Chaired a one day symposium on “Current and future international trends regarding dioxins in foods and its impact on trade”. (September, 2000, Monterey, CA). 20th Annual International Dioxin Meeting. Monterey, CA.

2000: EPA Science Advisory Board member on the dioxin reassessment (December 2-3, Washington, D.C.).

- 2000: EPA Science Advisory Board member in the role of cost-benefit analysis in environmental decision-making.(November 7-8, Washington, D.C.).
- 1996: Chaired a one-day national symposium on “Toxicologic and Environmental Hazards Posed by Cr(VI) in the Environment” (March; Newport Beach, CA). Sponsored by the University of Massachusetts.
- 1996: Presented a four-hour professional development short course at the 30th Annual meeting of the Society of Toxicology entitled “Monte Carlo Techniques and Risk Assessment” (March; San Diego, CA).
- 1995: Expert Panel Member at the Symposia on Evaluation of the Human Health Components of the Life Cycle Assessment (LCA) sponsored by the International Life Sciences Institute (ILSI) in Washington, D.C. (May 4-6 and June 6-8).
- 1995: Member of the CDC Expert Panel to evaluate ways to “Assess Bioavailability of Mercury in Soil” (August 29-30; Atlanta, GA).
- 1995: Presented professional development short-course at the annual meeting of the Society of Toxicology entitled “Fundamentals of Health Risk Assessment.” 250 members attended (March 4; Baltimore, MD)
- 1994: Invited peer-reviewer of the new National Academy of Sciences book entitled “Risk Assessment: Science and Policy” (January).
- 1994: Invited participant in Symposia “The Proper Role of Epidemiology in Regulatory Risk Assessment” (October 13-14; Harvard School of Public Health; Boston, MA).
- 1994: Member of the CDC Science Advisory Board assigned to review and comment on the Toxicological Profile for Dioxin (August 10; Atlanta).
- 1993: Invited peer-reviewer of the proposed Canadian Guidelines for Assessing Contaminated Soil (December).
- 1993: Invited peer reviewer of the National Academy of Science (NAS) document regarding their evaluation of the “Role of the National Health Effects Research Institute” (January 2; Washington, D.C.).
- 1993: Invited speaker on “State-of-the-Art in Risk Assessment” at the Professional Conference on Industrial Hygiene (PCIH); (October 23; Cincinnati, Ohio).
- 1993: Invited peer-reviewer of the risk assessment report of the committee assigned to evaluate the Great Lakes Initiatives (July).

- 1993: Keynote speaker and the only invited representative of U.S. to the 1st International Conference on Ecotoxicology; Melbourne, Australia (October 6-8).
- 1993: Keynote speaker at the 1st U.S. Environmental Protection Agency Workshop on Physiologically-Based Pharmacokinetics (PB-PK) and Cancer Risk Assessment (October 18-20; North Carolina).
- 1993: Presented a professional development course (4-hours) at the annual meeting of the Society of Toxicology entitled "Fundamentals of Health Risk Assessment" (March 4).
- 1992: Invited participant in the USEPA 1992 Workshop on Environmental Exposure Assessment (January 21-23; Virginia Beach, Virginia).
- 1992: Invited peer reviewer of Congress' Office of Technology Assessment (OTA) document "Risk Assessment Research Needs in the 1990's." (December 28; Washington, D.C.).
- 1992: Invited speaker and participant at the National Academy of Science Symposia on "State of the Art Approaches to Exposure Assessment." Symposia was held as part of the EPA's Committee on Risk Assessment Methods (February 10 and 11; Washington, D.C.).
- 1992: Invited participant in the National Academy of Science Workshop on developing Ecological Risk Assessment Guidelines (February 26-28; Fairfax, Virginia).
- 1992: Invited participant at a meeting of experts who discussed How to Prioritize the National Environmental Agenda Using Risk Assessment. (November 10 & 11; Resources for the Future; Annapolis, MD).
- 1990: Selected as a charter member of the Council for the Health and Environmental Safety of Soils (CHESS), which operated under the auspices of the International Society for Regulatory Pharmacology and Toxicology (September 1987 - 1993). Objective of this group was to set national clean-up guidelines/limits for chemically contaminated soils. From 1989-1992, was the co-chairman of the Health Effects Group with Dr. Renate Kimbrough.
- 1989: Presented a professional development short-course (four hours) at the annual meeting of the Society of Toxicology entitled "Fundamentals of Human and Ecological Risk Assessment."
- 1987: Invited peer reviewer of U.S. EPA's proposed Risk Specific Dose (RSD) for Dioxin (December).
- 1987: Selected as a member of the steering committee for the ACGIH Community Air Guidelines Committee. The objective of the group was to set community air standards for airborne toxics [dissolved in 1988].

- 1984: Member of American Industrial Health Council's (AIHC) Scientific Committee and the Quantitative Risk Assessment Sub-Committee (1982-1984).
- 1983: A principal reviewer of the 1983 DOHS California Cancer Policy. Represented Chemical Industry Council of California (CICC) in public hearing dealing with the proposed Cancer Policy.
- 1981: President of Indiana Section-American Industrial Hygiene Association (Indianapolis).

EDITORSHIP

- Associate Editor; Journal of Toxicological Sciences (1998-2001)

EDITORIAL REVIEW BOARDS

- Risk Analysis (1992-2004)
- Journal of Toxicology and Environmental Health (1994-2001)
- Journal of Soil Contamination (1995-2001)
- Journal of Human and Experimental Toxicology (England) (1995 - 2001)
- Journal of Human and Ecological Risk Assessment (1995-2001)
- Regulatory Toxicology and Pharmacology (1993-2001)
- Environmental and Occupational Medicine (1998-2001)

PEER-REVIEWER FOR THE FOLLOWING SCIENTIFIC JOURNALS

- American Industrial Hygiene Association Journal (AIHA)
- Applied Environmental and Occupational Hygiene (AEOH)
- Archives Environmental Health
- Chemical Engineering Education
- Drug Metabolism and Disposition
- Environmental Science and Technology (EST)
- Environmental Health Perspectives (EHP)
- Journal of Toxicological Sciences (JTS)
- Human and Ecological Risk Assessment
- Human and Experimental Toxicology
- Mechanical Engineering
- Occupational and Environmental Medicine (British)
- Professional Issues in Engineering
- Environmental Health Perspectives

- Regulatory Toxicology and Pharmacology (RTP)
- Risk Analysis
- Science
- Toxicology
- Toxicology and Applied Pharmacology (TAP)
- Toxicology and Environmental Health
- Toxicology and Industrial Health
- Canadian Journal of Dermatology

RESEARCH AND PROFESSIONAL INTERESTS

Quantitative Risk Assessment, Pharmacokinetics, Industrial Toxicology, Environmental Toxicology, Industrial Hygiene Engineering, Setting Occupational and Environmental Exposure Limits, Radon, Engineering and Business Ethics, Indoor Air Pollution, Industrial Ventilation, Occupational Health, and Unusual Workshifts.

PUBLIC SERVICE

- 1997: Member of the Bellarmino High School Board to identify the “vision” for the next 30 years.
- 1995: Member of Bellarmino High School Board to review performance criteria for Office of the President.
- 1976-77: Served as a psychologist/counselor in training (as part of MS degree requirements) at a State Institution for Juvenile Delinquents (Terre Haute, Indiana).

Other Activities

- 1995: Presented lecture at Heart of County – National Antique Show entitled "The history of the food safe in America" as part of their symposia on material culture. (February).

Publications (Non-scientific)

- 1995: D. Paustenbach and L. Paustenbach. Pie Safes: American Furniture and Folk Art. Part VI: Safes of the Deep South (Georgia, Alabama, Mississippi, Louisiana and Arkansas). Antique Review. Mar.
- 1994: D. Paustenbach and L. Paustenbach. Pie Safes: American Furniture and Folk Art. Part V: Safes of Virginia, Tennessee and Kentucky. Antique Review. Jan.

- 1993: D. Paustenbach and L. Paustenbach. Pie Safes: American Furniture and Folk Art. Part IV: Safes of the Midwestern States. Antique Review.
- 1992: D. Paustenbach and L. Paustenbach. Pie Safes: American Furniture and Folk Art. Part III: Geographical Differences Among Pie Safes (New England, New York, Pennsylvania, Delaware, and Maryland). Antique Review. Mar:21-240.
- 1991: D. Paustenbach and L. Paustenbach. Pie Safes: American Furniture and Folk Art. Part II. Various Food Safes in America. Antique Review. Nov:33-38
- 1990: D. Paustenbach and L. Paustenbach. Pie Safes: American Furniture and Folk Art. Part I. The Early History of Food Safes. Antique Review. Aug:29-34.

APPENDIX A

Depositions and Court Testimony

- 2001 Gave a 1-day deposition as an expert witness in the case of Gottesfeld vs. Alva-Amco Pharmcal Cos., Inc., et al. Represented by Skadden, Arps et al [Jose Allen] (Oakland, CA: Nov. 5, 2001).
- 2001 Gave a 1-day deposition as an expert witness in the case of Danner et al. vs. Brush Wellman. Represented by Jones, Day, Reavis and Pogue [Steve Giblin] (Palo Alto CA: November 16, 2001).
- 2001 Gave a 1-day deposition as an expert witness in the case of Cronise vs. Norfolk Southern Railway. Represented by Huddleston, Bolen, Beatty, Porter & Copen [Jim Turner] (San Francisco, CA: August 15, 2001).
- 2001 Gave a 1-day deposition as an expert witness in the case of Morgan, et al. vs. Brush Wellman, Inc. Represented by Jones, Day, Reavis and Pogue [Jim Johnson] (Atlanta, GA: July 13, 2001).
- 2001 Gave a 2-day courtroom testimony in the case of Ballinger, et al. vs. Brush Wellman, Inc. Represented by Jones, Day, Reavis & Pogue [Sydney McDole]. (Golden, CO: June 15 and 18, 2001)
- 2001 Gave a 3-day deposition as an expert witness in the case of Ballinger, et al. vs. Brush Wellman, Inc. Represented by Jones, Day, Reavis & Pogue [Sydney McDole]. (Cleveland, OH: March 20-21, 2001). A follow-up deposition on the same case occurred on April 23, 2001.
- 2000 Gave a 1-day deposition as an expert witness in the case of Allianz, Plumrose vs. Garrison Trucking. Represented by the law offices of Steven J. Schoen (Oakland, CA: November 13, 2000).
- 2000 Gave a 5 hour deposition in the case of Gabaldon vs. Brush Wellman. Defended by law firm of Peter J. Nova [Peter Nova] (Long Beach; October 15, 2000)
- 2000 Gave video-taped courtroom testimony in the case of Hirsch vs. Union Pacific Railroad. Represented by law offices of Thompson Coburn LLP [Thomas Jayne] (Menlo Park, CA: May 5, 2000).
- 2000 Gave a 1-day deposition as an expert witness in the case of Hirsch v. Union Pacific Railroad. Represented by the law offices of Thompson Coburn LLP (Menlo Park; March 31, 2000).

- 1998 Testified at trial in case of Goodyear vs. Aetna in Akron, Ohio District Court. Case involved state-of-the-art knowledge of disposal of waste in landfills. Law firm of Brouse and McDowell of Akron [Paul Rose] (Akron; May 27). Case was dismissed and it has been appealed.
- 1997 Gave a two-day deposition as an expert witness in the case of Lagrimas vs. Southampton. Represented by the law offices of Folger, Levin, Cohn et. al. [Dick Keeman] (San Francisco, October 22 and October 30.)
- 1997 Gave a one-day deposition as an expert witness in the case of Goodyear vs. Aetna represented by the law offices of Brouse & McDonell [Paul Rose] (San Francisco; October 29).
- 1995 Gave a one day deposition as an expert witness in the case of Terri L. Hurst et al. vs. California Homes Inc. represented by the Law offices of Seneff, Kelly, Kimelman, and Beach [Mike Seneff] (Santa Rosa, CA; November 20). Case was settled out of court.
- 1995 Submitted an affidavit as an expert witness involving exposure to a pesticide that was applied in the home. Burke vs. Dow Elanco; The Law Firm of Duker & Burrett (Federal Court; New York, NY; report submitted April 27). Case was heard by Judge Weinstein and dismissed.
- 1995 Testified before two arbiter judges as an expert witness involving Cr(VI) in groundwater in the case of Anderson vs. PG&E. Law offices of Haight, Brown, and Bonesteel [Greg Reed]; and Sedgwick, Detert, Moran, and Arnold [Gary Ottoson] (Los Angeles, CA; February 6 and 15).
- 1994 Gave a one day deposition as an expert witness in the case of Shumaker vs. Dow Chemical Company Law offices of Hardin, Cook, Loper, Engel, and Bergez [Nick Kayhan] (Oakland, CA; August 15). Case was settled.
- 1994 Gave two, one-day depositions as an expert witness in the case of Pickering vs. Chevron. Case involved alleged exposure to TCDD. Law offices of Lane, Powell, Spears and Lubersky of Los Angeles [Larry Janssen] and Hardin, Cook, Loper, Engel, and Bergez [Gus Felice] (Oakland, CA; August 15; December 14). Case was settled.
- 1994 Testified at trial (United States vs. Marine Shale Processors) in New Orleans, Louisiana Federal Court (May 6). Law firm of Perret et al. of Lafayette, LA [Hank Perret]. This case involved the possible health hazards posed by lead in aggregates from a high temperature kiln.
- 1994 Gave two depositions as an expert witness on risk assessment of lead in soil in the case of United States vs. Marine Shale Processors (March). Law offices of Perret,

Doise, Daigle, Longman, Russo, & Zaunbrecher [Hank Perret] (Palo Alto, CA; November).

- 1993 Testified at trial (Cutshaw vs. Weyerhaeuser) in Cosmopolis, WA, (March 28-30). Law firm of Hillis, Clark, Martin, and Peterson [Mark Clark]. Case involved alleged exposure to TCDD and hydrogen sulfide.
- 1993 Gave several days of depositions as an expert witness in the case of Cutshaw vs. Weyerhaeuser. Law firm was Hillis, Clark, Martin, and Peterson of Seattle (Depositions: January 11-13, January 26 and February 4).
- 1992 Presented testimony to an administrative law judge on the health hazards of trace levels of vinyl chloride in natural gas. Represented GSF Energy and Air Products Inc. (October 16; San Francisco, CA).
- 1992 Gave two depositions as an expert witness in the case of White vs. Tanglewood. Attorneys were from Brown, Maroney, Oaks, and Hartline of Austin, Texas [Dee Gullekson] and Royston-Razor of Houston, Texas [Tobi Tabor] (April and May; Houston, Texas). Case was settled out of court.
- 1990 Served as a fact witness in Myers vs. Exxon. Law firm of LaCava et al of Indianapolis [Duffy LaCava]. Case was settled out of court. Deposition was taken in San Mateo, CA.

APPENDIX B

Expert Testimony in Public Meetings and/or Hearings

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| 2001 | Presented discussion to State Agency regarding Dioxin. (August 29, New Zealand). |
| 2001 | Presented discussion to State Agency regarding Dioxin. (August 30, New Zealand). |
| 2001 | Presented discussion to Community Advisory Panel (CAP) regarding Dioxin. (July 12, Midland; MI). |
| 1998 | Presented testimony at an <u>Evidentiary Hearing</u> in Morgan City, LA. Testimony involved description of the possible human hazards posed by the emissions from, if permitted, the world's largest combustor. (May; Morgan City, LA). |
| 1997 | Presented comments regarding "ATSDR's Interim Dioxin in Soil" guidelines at the <u>ATSDR Board of Science Councilors Meetings</u> (Nov 19-20; Atlanta, GA). |
| 1997 | Presented Testimony at <u>Public Workshop on Dioxins</u> which was sponsored by the Bay Area Water Quality Control Board (BAWQCB) (May 7; San Francisco, CA). |
| 1997 | Presented testimony to <u>Town Council of the City of Benicia</u> regarding the Village of Southampton (March 11; Benicia, CA). |
| 1996 | Presented testimony to <u>Regional Air Quality Management (AQMD) Board of Directors</u> and the public on "Dioxins in the Environment" (April 4; San Francisco, California). The question involved whether appreciable amounts of dioxins were emitted by petroleum refineries and whether TCDD levels were increasing in fish in the Bay. |
| 1996 | Gave a two-hour semi-public briefing seminar to the staff of the <u>Bay Area Air Quality Management District</u> (BAAQMD) and Regional Water Quality Control Board (RWQCB) on dioxins and dioxin emissions from refineries (March 18; Oakland, California). |
| 1996 | Presented testimony to <u>Shell Community Advisory Panel</u> (SAP) of Martinez, California regarding health hazards posed by dioxin emissions from local refineries (March 9; Martinez, California). |
| 1994 | Presented testimony on the risk assessment aspects of proposed bill AB-1401 and AB-1402 to the <u>Executive Board of the South Coast Air Quality Management District (SCAQMD)</u> and the public (January 13; Los Angeles). |

- 1993 Presented testimony on the risk assessment aspects of proposed bill AB-1401 and AB-1402 to the Executive Board of the South Coast Air Quality Management District and the public (July 18; Los Angeles).
- 1993 Participated in a semi-public meeting with Newark/New York Port Authority regarding dioxin contamination of sediments in the Passaic River and Newark Bay (February 16; New York City).
- 1992 Participated in a series of four semi-public Inter-agency meetings with NJDEPE, EPA, and NOAA on chromium toxicology and risk assessment (Trenton; New Jersey).
- 1992 Presented and discussed chromium research activities to Commissioner Weiner, New Jersey Department of Environmental Protection [NJDEP]. (April 15, May 20, and June 16; Trenton, New Jersey).
- 1992 Presented testimony to the ACGIH TLV Committee on benzene and formaldehyde (February 23; Seattle, Washington).
- 1991 Participated on the Panel at South Coast Air Quality Management District (SCAQMD) Exposure Assessment Workshop on AB-2588 on behalf of the Western States Petroleum Association (WSPA) (April 8; Los Angeles, California).
- 1991 Presented testimony to the ACGIH TLV committee on benzene (March 26; Cincinnati, OH).
- 1990 Participated in a Public Hearing involving the Rocky Flats dose reconstruction project [retrospective risk] (September 27; Denver, CO).
- 1990 Presented testimony before the Oregon Environmental Health Commission on "Risks Posed by Paper Mill Effluents containing Dioxin." (June 12; Portland, OR).
- 1990 Presented testimony before the Michigan Air Pollution Control Commission on "Risk Assessment of Dioxin emissions from a Municipal Waste Combustor." (May 2; Detroit, MI).
- 1989 Presented testimony to the Prop 65 Science Advisory Board on "A PB-PK Model for Estimating the Risk Specific Dose for 1,4 Dioxane" on behalf of the Halogenated Solvents Industry Alliance (HSIA). (October 20; Davis, CA).
- 1989 Presented the health risk assessment for a California Superfund site (Barron Park) at a town meeting (June 27; Palo Alto, CA).
- 1989 Presented the health risk assessment for an Illinois State Superfund site at a Town Meeting (May 9; Atlanta, IL).

- 1989 Presented the health risk assessment for a proposed Hazardous Waste Incinerator to the Martinez town council and Local Assessment Committee (LAC) (Tanner Process) at a public meeting (April 12; Martinez, CA).
- 1988 Presented expert opinions at a public hearing on the human and environmental health hazards posed by implementation of a Remedial Action Plan (RAP) for a dioxin contaminated Superfund site (March 28; Verona, MO).
- 1988 Discussed the potential human health hazards posed by an accidental release of Selexol (Hydrogen Sulfide Scrubber Solution) at a meeting of the Town Council (November 9; Calumet City, Indiana).
- 1987 At a public hearing, discussed the human health hazards posed by toxic and odorous emissions from pharmaceutical and power generation facilities (October 17; Freeport, Bahamas).
- 1984 Represented Stauffer Chemical Company and the American Industrial Health Council (AIHC) at several public hearings regarding the proposed California Cancer Policy (February, April, and June; Berkeley, CA).
- 1983 Expert witness at four public hearings that addressed the environmental safety of an aerially applied pesticide used to control Fire Ants [pro-drone] (January, March and September in Kerrville, Bourne, and San Antonio, TX).

APPENDIX C

Have Participated in the Following Public Meetings

GTX, Inc. (Amelia, Louisiana): In May of 1998, gave testimony at an evidentiary hearing regarding a permit for a large combustor. The testimony addressed how the modifications to the incinerator were intended to prevent significant quantities of airborne emissions.

Hewlett Packard; Barron Park Site (Palo Alto, CA): This job involved conducting a small risk assessment of contaminated sediment and effect on plant life in a Barron Park Creek. In short, solvents had leaked from a contaminated plume into a creek that passed through a residential community in Palo Alto, CA. Upon completion of the assessment in 1992, the results were communicated in a public hearing to more than 150 residents and regulatory agency staff. Due to the poor reception that state and local regulatory agencies had received at previous public hearings, Dennis Paustenbach (of the ChemRisk® group) was asked to present the data and the interpretation at this meeting, which was covered by local television and newspaper reporters.

Southern Wood Piedmont (Augusta, GE): A wood treatment facility was operated in a small town in Georgia for many years. Their primary treatment chemical was pentachlorophenol which is known to be contaminated with 2,3,7,8-TCDD. As a result of the treatment process, a groundwater plume had contaminated a creek that ran adjacent to the facility. We conducted a risk assessment on this site and presented the results at a public meeting in 1991. Nearly 100 people attend.

Stauffer Chemical (Houston, TX): In 1989, a number of chemical plants along the Houston ship channel had had releases of hydrogen sulfide on a number of occasions. Due to the odors associated with this chemical, the local community had significant concern about the possible health effects of the emissions. Stauffer had installed a number of preventive measures as well as on-line continuous monitors for this chemical. Our job was to attend the public meetings wherein the renewal of their operating permit was discussed. As such, we needed to explain a number of scientific issues to a relatively hostile audience.

City of Detroit (Worlds largest municipal incinerator): In 1991, Mayor Coleman Young of Detroit had run into significant difficulty in maintaining the permits to operate Detroit's municipal incinerators. For a number of years, the Canadian government had expressed concern about the release of airborne chemicals by these incinerators and the drift of the plume toward the Canadian boarder.

Due to dozens of questions which had been raised about the possibility that dioxins were being admitted from the incinerators, Mayor Young and the operators of the incinerators, wanted us to give presentations to the air pollution control district at their next public meeting and to answer the public's questions. Dennis Paustenbach developed some teaching materials for that meeting and answered several hours of questions from the community (in early 1992). Nearly 500 people attended that meeting.

GSF Industries (Calumet City, IN): As a result of an accidental release of a scrubbing agent (selexol) from a gas recycling exhaust system, a number of cars besides this landfill had had their paint pitted. Because nearly 100 autos had been effected, local residences believed that it was likely that the particulate released during the accident would effect their health. Our client asked that we conduct a screening risk assessment and present our findings to residents in the area. In 1990, a public question/answer session took place in a largely poor-minority neighborhood outside Chicago for about 2 1/2 hours. As a result of the meeting, no law suits were filed and there was no further press coverage of this incident.

Syntex Agribusiness and Region VII USEPA (Springfield, MO): In 1978, dioxin contaminated oils were used as dust control for a number of towns in central Missouri. Most famous among these was Times Beach, Missouri. Although this site received most of the press coverage, a good deal of remediation activities were required at the two manufacturing sites from which the oils originated or where analyzed. As a result of those activities, EPA and Syntex Agribusiness wanted to conduct remediation activities at both the Verona and the Springfield sites.

Because the townspeople had read literally hundreds of pages of information on dioxin for nearly 15 years, they were quite nervous about living near a remediation activity involving this chemical. At the request of the Region VII Administrator (Mr. Morris Kay), a public hearing was conducted in 1989 to explain the risks to humans and the environmental associated with the upcoming remediation activities. Fortunately, as a result of that meeting, the remediation process began to occur without significant resistance from either the community or local environmental action groups.

Maxus Energy (Kearny, NJ): Between 1890 and 1960 nearly three million tons of chromite-ore processing residue was used as landfills in the meadowlands outside Newark, New Jersey. In the last 1980s the New Jersey Department of Environmental Protection (NJDEP) requested that plans be made to assess the health risks posed by the 150 sites where the residues were used as landfill and which now were predominantly the surfaces of parking lots. After conducting nearly two years of research, Maxus requested that we conduct a public meeting wherein we would answer the questions posed by members of the community, including the Mayor and the Town Council. At least two meetings were held in 1990-1992 wherein our work was explained and questions of the press and other groups were answered.

Occidental Chemical (Atlanta, IL): In the 1970s and 80s, a pesticide formulation facility operated in a town of about 1500 people in Illinois. During a remedial investigation of the plant site, it was concluded that persistent pesticides (cyclodienes) may have been distributed from a stack from the baghouse at the facility. The State EPA and towns people were seriously concerned by the results of the RI and consideration was given to evacuating the town.

ChemRisk® conducted a series of focused risk assessments to evaluate the potential hazard posed by the soils in the town which had elevated concentrations of several cyclodiene pesticides. Following our work we were asked to give two town meetings, which were held in the high school gymnasium in 1989. These meetings were conducted jointly with the State EPA and the Fish and Game Organization. As a result of our work, a no-action alternative had been issued by the Agency and we were able to answer the various concerns of the townspeople in these meetings.

APPENDIX D

Clients

Have, at times, served as a consultant to:

3M	Georgia Pacific	Pacific Treatment
Abbott Laboratories	Gould Ind.	Pfizer
Aerojet	GSF Energy	PPG Incorporated
Air Products	GSX Inc.	Proctor & Gamble
Alcoa	Halogenated Solvents Industry	Questar
Allergen	Alliance (HSIA)	RCA
Allied Signal	Hercules	Rhône Poulenc
American Petroleum Institute	Hewlett Packard Company	Roche
American Paper Institute	Holly Sugar	Rocketdyne
Amoco	Hughes Aircraft	Rockwell
Apple Computers	IBM	Rogers Seeds
ARCO	ICI Americas	Sandoz Pharmaceutical
Boeing	Industrial Health Foundation	Semiconductor Industry Assn.
Beazer Corporation	James River Paper	Shell
CA Dept. of Health Services	Johnson + Johnson	Simpson Paper Company
Champion Paper	Koppers	Southern Wood Piedmont
Cheese Institute	Lockheed Missiles & Space	State of Colorado
Chemical Manufacturers Assn	Los Alamos	State of Tennessee
Chevron Chemical Company	Lucent	Stauffer Chemicals
Chevron Land & Development	Maxus Energy Corporation	Syntex Agribusiness
Chrysler	McKesson	U.S. EPA
Dow Chemical	Mead Paper	U.S. Steel
Eli Lilly and Company	Merck	Union Carbide
Exxon	Miles	Westvaco
Fermenta	Mobay	Weyerhaeuser
FMC	Mobil Oil Corporation	Vulcan Chemicals
Ford Land & Development	Monsanto	Zeneca
Ford Motor Company	Montrose	
Formaldehyde Institute	NACASSI	
GATX	Northrop	
General Dynamics	Northwest Paper and Pulp Assn.	
General Electric	Occidental Petroleum	
General Telephone		