

RESUME'

November 5, 1984

Jack E. Peterson, P.E., Ph.D.
Certified Industrial Hygienist

Consulting Office:
PETERSON ASSOCIATES
660 Forest Grove Circle
Brookfield, Wisconsin 53005
Phone: (414) 782-8142

QUALIFICATIONS IN BRIEF: Broad industrial, academic, and consulting experience in all areas of industrial hygiene. Emphasis on human inhalation toxicology of carbon monoxide and organic solvents and on the hazards of gases, vapors, and dusts and their control especially by engineering methods in chemical manufacturing plants, foundries, and metal working operations. Experience in evaluating and controlling heat stress, ionizing radiation, noise, and air pollution; teaching about air pollution, toxicology, and industrial hygiene.

PROFESSIONAL OBJECTIVES: To evaluate and solve environmental and occupational health problems and to organize health conservation efforts of clients. To offer the best possible training and education in industrial hygiene/toxicology and air pollution.

EXPERIENCE: Consultant in industrial hygiene and toxicology. Appointment at the University of Wisconsin—Parkside as Professor in Allied Health, and at the Medical College of Wisconsin as Clinical Professor of Preventive Medicine.

Current Half-time at Marquette University as Associate Professor of Civil Engineering and half-time industrial hygiene and toxicology consultant. Professor and Visiting Professor in Occupational and Environmental Health Sciences, University of Illinois from 1977.

July 1975 to August 1980 Completed a text, Industrial Health; helped to pilot the production of a unique small electrostatic precipitator; began consulting for several firms including FMC, Transamerica, Rexnord, Briggs & Stratton, and Fred S. James & Co.

July Joint appointment at Marquette University and the Medical College of Wisconsin, first as Assistant, then as Associate Professor of Civil Engineering and of Environmental Health Engineering.

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1968 Completely responsible for planning and teaching courses on the principles of industrial hygiene/toxicology and community air pollution, one course each semester since 1969. Responsible for the direction of several M.S. and Ph.D. candidates. Began research on small incinerator emissions with a grant from the Naulin Foundation in 1974.

to

July

1975

Responsible for the design, plan, construction, and operation of two human inhalation exposure chambers and ancillary laboratory facilities. Interfaced an on-line computer to the analytical equipment for the chambers and wrote programs used to acquire, interpret, and summarize much of the toxicological data gathered.

August

1952

Environmental Health Engineer, Biochemical Research Laboratory, The Dow Chemical Company, Midland, Michigan.

to

August

1965

Primary responsibility for the evaluation of health hazards in the preproduction stages of chemical manufacture and for assuring the use of appropriate controls during growth from the laboratory bench to full production. Evaluation and control of fumigation, heat stress, ionizing radiation, and noise hazards. Research in air pollution, on air sampling methods, ventilation (including laboratory hood design), and toxicology.

EDUCATION: B.S. in Chemical Engineering, Washington State College, 1951.

M.S. in Chemical Engineering, University of Michigan, 1952.

Ph.D. in Industrial Health, University of Michigan, 1968. Thesis: "Human Biothermal Strain in Relation to Environmental Stress Parameters."

HONORS AND AWARDS: "With honors" graduation in 1951.

Authorship award from the Michigan Section, American Industrial Hygiene Association, for the "Outstanding paper published in the American Industrial Hygiene Association Journal" in 1962 and again in 1970.

Certified in "Comprehensive Aspects" by the American Board of Industrial Hygiene, 1973, by examination. Recertified, 1983.

Registered as a Professional Engineer in Wisconsin since 1968.

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CONSULTANT TO: Briggs & Stratton, FMC, Transamerica, Fred S. James & Co., Dow Chemical, Globe Battery Division of Johnson Controls, National Institute for Occupational Safety and Health, Occupational Safety and Health Administration, U.S. Navy, Car-Mon Products, Rexnord, Polyurethane Manufacturer's Association, Eli Lilly, Johnson & Johnson, Oscar Mayer, Freeman Chemical, Borden Chemical, International Harvester, General Motors, Ford, Chrysler, Ritus Rubber, Miller Brewing, Pabst Brewing, Triple E. Bostrom Division of UOP, Anderson Development, S.C. Johnson & Son, Sanitaire, Environmental Resources Management, Gartland Foundries, Plastics Engineering, Research Products, American Concrete Pipe, Fiat-Allis, Southwest Forest Industries, Crawford and Company, Wisconsin Telephone, Stauffer Chemical, several law and insurance firms, and many others.

MEMBERSHIPS: ALPHA CHI SIGMA (National Professional Chemistry Fraternity), 1949 to present.

American Industrial Hygiene Association, 1956 to present; its Hygienic Guides Committee from 1963 to 1973; chairman of that committee from 1969 to 1973. Nominating Committee, 1983.

Spray Coating Code Advisory Committee for the State of Wisconsin, 1969 to 1973. Chairman.

Advisory Board of the Milwaukee County Air Pollution Control Department, 1971 to 1974.

Chicago Section, American Industrial Hygiene Association, 1972 to present.

American Academy of Industrial Hygiene, 1973 to present. Councilor, 1975 to 1978. Continuing Education Committee, 1981 to present. Planning Committee, 1981 Joint Conference on Occupational Health. Co-chairman, Accreditation Committee, 1984 to present.

SIGMA XI, The Scientific Research Society, 1976 to present.

Wisconsin Section, American Industrial Hygiene Association from 1979. Its Board of Directors, 1979 to 1980; President, 1981.

New York Academy of Sciences, 1979 to present.

Engineering Control Technology Workshop Committee (NIOSH), 1981 to present; chairman, 1983.

Council of Industrial Hygiene Consultants, member from 1983. Director, 1984 to present; Education Committee Chairman.

Consultant Capacities Group, Associate from 1983.

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PUBLICATIONS

Jack E. Peterson, P.E., Ph.D.

1. Peterson, J.E., H.R. Hoyle, and E.J. Schneider: "The Analysis of Air for Halogenated Hydrocarbon Contaminants by Means of Absorption on Silica Gel." Am. Ind. Hyg. Assoc. Quart. 17:429-33 (1956).
2. Peterson, J.E.: "An Approach to a Rational Method of Recommending Face Velocities for Laboratory Hoods," Am. Ind. Hyg. Assoc. J. 20:259-66 (1959).
3. Schneider, E.J., J.E. Peterson, H.R. Hoyle, E.H. Ode, and B.B. Holder: "Correlation of Industrial Noise Exposures with Audiometric Findings," Am. Ind. Hyg. Assoc. J. 22:245-51 (1961).
4. Stewart, R.D., H.H. Gay, D.S. Erley, C.L. Hake, and J.E. Peterson: "Human Exposure to Carbon Tetrachloride Vapor," J. Occup. Med. 3:586-90 (1961).
5. Stewart, R.D., H.H. Gay, D.S. Erley, C.L. Hake, and J.E. Peterson: "Observations on the Concentrations of Trichloroethylene in Blood and Expired Air Following Exposure of Humans," Am. Ind. Hyg. Assoc. J. 23:167-70 (1962).
6. Peterson, J.E., R.A. Copeland, and H.R. Hoyle: "Health Hazards of Spraying Polyurethane Foam Out-of-Doors," Am. Ind. Hyg. Assoc. J. 23:345-52 (1962). ("Outstanding Paper" award.)
7. Peterson, J.E. and J.A. Peay: "Laboratory Fume Hoods and Their Exhaust Systems," Air Condit. Heat. Vent. 63-72 (May, 1963).
8. Peterson, J.E.: "Air Conditioning of Research and Test Facilities: Contamination Control," Am. Soc. Heat. Refrig. Air Condit. Eng. J. 53-56 (September, 1964).
9. Peterson, J.E., H.R. Hoyle, and E.J. Schneider: "Applications of Computer Science to Industrial Health," Am. Ind. Hyg. Assoc. J. 27:180-85 (1966).
10. Peterson, J.E.: Human Biothermal Strain in Relation to Environmental Stress Parameters, Ph.D. Thesis, University of Michigan (1968). (Available from Xerox University Microfilms, 300 N. Zeeb Rd., Ann Arbor, Michigan 48106).
11. Stewart, R.D., J.E. Peterson, E.D. Baretta, R.T. Bachand, Jr., M.J. Hosko, and A.A. Herrmann: "Experimental Human Exposure to Carbon Monoxide," Arch. Environ. Health 21:154-64 (1970).
12. Peterson, J.E. and R.D. Stewart: "Absorption and Elimination of Carbon Monoxide by Inactive Young Men," Arch. Environ. Health 21:165-71 (1970).
13. Peterson, J.E.: "Postexposure Relationship of Carbon Monoxide in Blood and Expired Air," Arch. Environ. Health 21:172-73 (1970).

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14. Peterson, J.E.: "Experimental Evaluation of Heat Stress Indices," Am. Ind. Hyg. Assoc. J. 31:305-17 (1970). ("Outstanding Paper" award.)
15. Peterson, J.E.: "Iodine and Compounds," Encyclopaedia of Occupational Safety and Health p. 739, I.L.O., Switzerland (1971).
16. Stewart, R.D., T.N. Fisher, M.J. Hosko, J.E. Peterson, E.D. Baretta, and H.C. Dodd: "Carboxyhemoglobin Elevation After Exposure to Dichloromethane," Science 176:295-96 (1972).
17. Stewart, R.D., T.N. Fisher, M.J. Hosko, J.E. Peterson, E.D. Baretta, and H.C. Dodd: "Experimental Human Exposure to Methylene Chloride," Arch. Environ. Health 25:342-48 (1972).
18. Peterson, J.E. and R.D. Stewart: "Human Absorption of Carbon Monoxide from High Concentrations in Air," Am. Ind. Hyg. Assoc. J. 33:293-97 (1972).
19. Stewart, R.D., J.E. Peterson, T.N. Fisher, M.J. Hosko, E.D. Baretta, H.C. Dodd, and A.A. Herrmann: "Experimental Human Exposure to High Concentrations of Carbon Monoxide," Arch. Environ. Health 26:1-8 (1973).
20. Stewart, R.D., P.E. Newton, M.J. Hosko, and J.E. Peterson: "Effect of Carbon Monoxide on Time Perception," Arch. Environ. Health 27:155-160 (1973).
21. Peterson, J.E.: "Principles of Controlling the Occupational Environment," Chapter 35, The Industrial Environment--Its Evaluation and Control, pp. 511-17, NIOSH, Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402 (1973).
22. Stewart, R.D., C.L. Hake, and J.E. Peterson: "Degreaser's Flush," Arch. Environ. Health 29:1-5 (1974).
23. Stewart, R.D., C.L. Hake, and J.E. Peterson: "Use of Breath Analysis to Monitor Trichloroethylene Exposures," Arch. Environ. Health 29:6-13 (1974).
24. Stewart, R.D., C.L. Hake, J.E. Peterson, H.V. Forster, P.E. Newton, R.J. Soto, and A.J. Lebrun: "Development of Biologic Standards for Trichloroethylene," Behavioral Toxicology, Xintaras, Johnson, and deGroot, eds. pp. 81-91, NIOSH, Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402 (1974).
25. Stewart, R.D., C.L. Hake, A.J. Lebrun, J.H. Kalbfleisch, P.E. Newton, J.E. Peterson, H.H. Cohen, R. Struble, and K.A. Busch: "Effects of Trichloroethylene on Behavioral Performance Capabilities," op. cit. pp. 96-129.
26. Stewart, R.D., J.E. Peterson, P.E. Newton, C.L. Hake, M.J. Hosko, A.J. Lebrun, and G.M. Lawton: "Experimental Human Exposure to Propylene Glycol Dinitrate," Tox. Appl. Pharm. 30:377-95 (1974).

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27. Stewart, R.D., C.L. Hake, H.V. Forster, A.J. Lebrun, J.E. Peterson, and A. Wu: Tetrachloroethylene: Development of a Biologic Standard for the Industrial Worker by Breath Analysis, NIOSH Report No. NIOSH-MCOW-ENVM-PCE-74-6, National Institute for Occupational Safety and Health, Cincinnati, Ohio (1974), 170 pages.
28. Stewart, R.D., C.L. Hake, H.V. Forster, A.J. Lebrun, J.E. Peterson, and A. Wu: Methylene Chloride: Development of a Biologic Standard for the Industrial Worker by Breath Analysis, NIOSH Report No. NIOSH-MCOW-ENVM-MC-74-9, National Institute for Occupational Safety and Health, Cincinnati, Ohio (1975), 86 pages.
29. Stewart, R.D., C.L. Hake, H.V. Forster, A.J. Lebrun, J.E. Peterson, and A. Wu: Toluene: Development of a Biologic Standard for the Industrial Worker by Breath Analysis, NIOSH Report No. NIOSH-MCOW-ENVM-T-75-3, National Institute for Occupational Safety and Health, Cincinnati, Ohio (1975), 118 pages.
30. Stewart, R.D., P.E. Newton, M.J. Hosko, J.E. Peterson, and J.W. Mellender: "The Effect of Carbon Monoxide on Time Perception, Manual Coordination, Inspection, and Arithmetic," Behavioral Toxicology, Weiss and Laties, eds., Chapter 2, pp. 29-60, Plenum Press, New York (1975).
31. Peterson, J.E. and R.D. Stewart: "Predicting the Carboxyhemoglobin Levels Resulting from Carbon Monoxide Exposures," J. Appl. Physiol. 39:633-38 (1975).
32. Peterson, J.E.: Industrial Health, Prentice-Hall, Englewood Cliffs, N.J., (1977), 347 pages.
33. Peterson, J.E.: "Modeling the Uptake, Metabolism, and Excretion of Dichloromethane by Man," Am. Ind. Hyg. Assoc. J. 39:41-47 (1978).
34. King, W.R. and J.E. Peterson: "Phosphorus Vapor Exposure in Phosphorus Using Plants," Am. Ind. Hyg. Assoc. J. 39:922-27 (1978).
35. Hermann, E.D. and J.E. Peterson: "Evaluation," Fundamentals of Industrial Hygiene, 2nd ed., Julian B. Olishifski, ed., Chapter 16, pp. 501-15, National Safety Council, 444 North Michigan Ave., Chicago, Illinois 60611 (1979).
36. Peterson, J.E.: "Calculation of Vapor Penetration in Charcoal Sampling Tubes," Am. Ind. Hyg. Assoc. J. 41:450-51 (1980).
37. Peterson, J.E.: "Heat Stress," Clinical Medicine, John A. Spittell, jr., Editor-in-Chief, Chapter 57, vol. 12, R. D. Stewart, ed., Harper & Row, Publishers, Philadelphia, (1981).
38. Peterson, J.E.: "Air Pollution and Health," op. cit., Chapter 77, (1981).

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39. Peterson, J.E.: "Industrial Gases and Vapors," Toxicology: Principles & Practice Volume 2, Chapter 5, Frederick Sperling, Ed., John Wiley & Sons, Inc. (1984).
40. Peterson, J.E.: "Painting and Coating," Industrial Hygiene Aspects of Plant Operations, vol. 2, Chapter Fifteen, Cralley and Cralley, eds, John E. Mutchler Assoc. Ed., Macmillan Publishing Company (1984).
41. Peterson, J.E.: "Lead-Acid Storage Battery Manufacturing," op. cit. Chapter Thirty-Two.
42. First, M.W., C.E. Billings, R.L. Harris, J.E. Peterson, and T.B. Leamon: Engineering Control of Occupational Safety and Health Hazards: Recommendations for Improving Engineering Practice, Education, and Research, U. S. DHHS, Centers for Disease Control, NIOSH, Division of Training and Manpower Development (January 1984).