



Exponent[®]
Engineering & Scientific Consulting

Delno Malzahn, CIH, FAIHA

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Professional Profile

Mr. Malzahn has more than 40 years of experience in environmental engineering, industrial hygiene and building materials exposure assessment. He has managed and conducted hundreds of exposure studies for wide variety of industries including oil and natural gas, manufacturing, food processing, asphalt, iron and steel and construction.

In addition, Mr. Malzahn's expertise includes indoor air quality and mold investigations in residential and commercial buildings. He has extensive management and technical expertise related to EPA and OSHA compliance matters. He has also designed and conducted exposure simulation studies for reconstruction of past occupational asbestos, silica and trace benzene exposures.

Academic Credentials & Professional Honors

M.S., Industrial Health, University of Michigan, Ann Arbor, 1971

B.S., Meteorology and Oceanography, University of Michigan, Ann Arbor, 1969

Fellow Award, American Industrial Hygiene Association (AIHA), 2013

President, Yuma Pacific Southwest Section, AIHA, 2014

Licenses and Certifications

Board Certification in the Comprehensive Practice of Industrial Hygiene by the American Board of Industrial Hygiene

Prior Experience

Director of Environment, Health, and Safety, Director of Industrial Hygiene and Environmental Affairs, Manger of Industrial Hygiene and Senior Environmental Engineer, ANR Pipeline Company, Coastal Corporation, 1977-2001

Group Leader Ambient Studies, Clayton Environmental Consultants, Inc., 1971-1977

Professional Affiliations

American Industrial Hygiene Association—AIHA

AIHA Aerosol Technology Committee

Academy of Industrial Hygiene

Michigan Industrial Hygiene Society local section of AIHA

Yuma Pacific Southwest local section of AIHA

Publications

Sheehan P, Malzahn D, Goswami E, Mandel JH. Simulation of benzene exposure during use of a mineral spirits solvent to clean elevator bearing housings. *Human and Ecological Risk Assessment* 2008; 14(2):421-432.

Malzahn DD. New models, technologies help cut ozone formation, transport. pp. 59-67. In: *Pipe Line & Gas Industry*. Houston, TX, Gulf Publishing Co., 1999.

Malzahn DD. Ground level ozone: A review of the science, the regulations and the control technologies. 1999 AGA Operating Section Proceedings, Washington, DC, May 1999.

Mutchler JE, Malzahn DD, Vecchio JL, Soule RD. An improved method for monitoring heat stress levels in the workplace. *American Industrial Hygiene Association Journal* 1973; 37(3):151.

Malzahn DD (Contributing Author). Control of industrial stack emissions. The industrial environment—its evaluation and control. Chapter 43. U.S. DHEW, Cincinnati, OH, January 1973.

Presentations

Mosher GE, Malzahn DD. Evaluating take home silica exposure from uniforms. 24th American Foundry Society Environmental Health & Safety Conference Nashville, TN, August, 2012.

Malzahn DD, Mowat F, Armstrong P. Simulation of asbestos release during dismantling of a residential sectional boiler. American Industrial Hygiene Conference & Exposition, Minneapolis, MN, May, 2008.

Goswami E, Malzahn DD, Richter R, Sheehan P. Simulation and modeling techniques to reconstruct historical benzene exposures. Society of Risk Analysis Annual Meeting, October 2006.

Malzahn DD. The NOx SIP call: The rule, some numbers, some key issues and some unanswered questions. News and Notes. East Michigan Chapter, East Central Section, Air and Waste Management Association, Spring 2000.

Cook DK, Malzahn DD. Natural gas pipeline PCB cleanup program. Hazardous Materials Management Conference, August 1987.

Malzahn DD, Lee WL. An occupational health hazard rating scheme for coal gasification projects: Engineering design phase. American Industrial Hygiene Conference, Fairfax, VA, May 1981.

More than 100 presentations to various other technical and trade organizations on variety of occupational and environmental health topics. Invited course lecturer on industrial hygiene at the University of Michigan School of Public Health.

Project Experience

Conducted, directed, and supervised hundreds of projects and programs in the fields of industrial hygiene, meteorology, environmental engineering and environmental health. Subject areas include asbestos, asphalt fumes (roofing and paving), benzene, carbon monoxide, explosive dust, formaldehyde, isocyanates (spray foam insulation), lead, metal removal fluids, mercury, nanoparticles, PAH, PCBs,

petroleum hydrocarbons, sanitation and sterilization chemicals, building product off gassing, solvents, silica, welding fumes, noise and heat stress, etc., ambient air quality studies (particulates and toxic chemicals), ambient air quality dispersion modeling, indoor air quality exposure studies (antimicrobial products, various chemicals including diacetyl, petroleum distillates, reduced sulfur compounds, xylene, pesticides and bioaerosols including mold, bacteria and legionella), mold assessment and remediation, product contamination indoor air quality modeling, building ventilation and water /moisture intrusion studies and soils and groundwater studies (toxic chemicals), lithium-ion battery in vehicles and storage, environmental remediation, ambient air quality monitoring and modeling, air quality permitting, hazard communication, general industrial hygiene and corporate industrial hygiene and environmental management. Expert retentions have been in matters related to personal injury/toxic tort, product liability, property contamination and damage and new product development.