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Professional Profile

Dr. Sheehan is an ecologist, toxicologist, and risk assessor with more than 30 years of experience conducting human health and ecological risk assessments. Dr. Sheehan has been recognized as an expert in exposure and risk assessment. He has managed and conducted human health and ecological risk assessments at contaminated sites, industrial and commercial facilities, residences and for consumer products evaluating chemicals in air, surface water, groundwater, soils, soil vapors, and on the hands, packaging and food items. He specialized in assessing and quantifying potential historical, current and future exposures to chemicals in the environment, workplace and home, and associated health risks.

Dr. Sheehan has designed and directed studies to simulate and reconstruct historical exposures in occupational and residential settings to benzene, MTBE, TCE, PCE and other volatile chemicals in solvents, and asbestos in adhesives, roofing products, joint compound and talc, as well as lead, phthalates, formaldehyde and various other chemicals in consumer products. He has prepared and presented product risk assessments under California's Proposition 65 and U.S. Consumer Product Safety Commission regulations. He has also evaluated potential future chemical exposures associated with new facilities, combustion sources and products. He assists companies develop new products with testing and prospective risk assessment including assessment of allergic contact dermatitis risk from chemical allergens released from electronic wearable products.

Dr. Sheehan also has designed and directed wildlife population assessments, aquatic toxicity tests, toxicity identification evaluations, risk allocation evaluations, and probabilistic uncertainty analyses. Dr. Sheehan frequently interacts with local, state, and federal regulatory agencies, and has testified as an expert before government panels and in legal proceedings on toxicology, exposure and human health and wildlife risks from chemical exposures and has communicated risk issues in public, regulatory and legal forums.

Academic Credentials & Professional Honors

Ph.D., Toxicology/Ecology, University of California, Davis, 1980

M.S., Ecology, University of California, Davis, 1975

B.S., Mechanical Engineering, Santa Clara University, 1968

Prior Experience

Principal Scientist, McLaren Hart/ChemRisk, 1989-1998

Senior Scientist, Aqua Terra Technologies, 1985-1989

Assistant Professor, Duke University, 1984-1985

Research Scientist, National Research Council Canada, 1981-1984

Postdoctoral Research Associate, New York University, 1980-1981

Professional Affiliations

American Industrial Hygiene Association

Society of Environmental Toxicology and Chemistry

Society for Risk Analysis

Society of Toxicology

Publications

Sheehan P, Singhal A, Bogen KT, MacIntosh D, Kalmes R, McCarthy J. Potential exposure and cancer risk from formaldehyde emissions from Installed Chinese manufactured laminate flooring. *Risk Anal* 2018; 38(6):1128-1142.

Anderson EL, Sheehan PJ, Kalmes RM, Griffin JR. Assessment of health risk from historical use of cosmetic talcum powder. *Risk Anal* 2017; 37(5): 918-929.

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Martin R, Malzahn D, Hicks J, Sheehan P. Energy-saving thermal insulation — Industrial hygiene and occupational health considerations. *Indust Heating* 2008; 75:54-57.

Brorby GP, Sheehan PJ, Berman DW, Greene JF, Holm SE. Re-creation of historical chrysotile-containing joint compounds. *Inhalation Toxicol* 2008; 20:1043-1053.

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 Ecol Risk Assess* 2008; 14(2):421-432.

Finley BL, Richter RO, Mowat FS, Mlynarek S, Paustenbach DJ, Warmerdam JL, Sheehan PJ. Cumulative asbestos exposure for U.S. automobile mechanics involved in brake repair (circa 1950s-2000). *J Exp Sci Environ Epidemiol* 2007; 17:644-655.

Mowat F, Weidling R, Sheehan P. Simulation tests to assess occupational exposure to airborne asbestos from asphalt-based roofing products. *Ann Occup Hyg* 2007; 51(5):451-462.

Sheehan PJ, Warmerdam JM, Ogle S, Humphrey DN, Patenaude SM. Evaluating the risk to aquatic ecosystems posed by leachate from tire shred fill in roads using toxicity tests, toxicity identification evaluations, and groundwater modeling. *Environ Toxicol Chem* 2006; 25(2):400-411.

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exposures to MTBE from drinking water. *Hum Ecol Risk Assess* 2000; (5):827-849.

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Books Edited

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Singhal A, Posson M, Kalmes R, Gauthier A, Lewis R, Schenk J, Goswami E, Sheehan P. Proposition 65 risk assessment. In: Professional Practices of Product Stewardship. Hart GA (ed), Product Stewardship Society, Falls Church, VA, 2018.

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Richter RO, Sheehan PJ. Modeling of health risks associated with combustion emissions. In: Air Quality Modeling- Theories, Methodologies, Computational Techniques, and Available Databases and Software. Zannetti P (ed), The EnviroComp Institute and Air and Waste Management Association, Pittsburgh, PA, 2005.

Sheehan PJ, Warmerdam J, Feng SS. Using probabilistic risk assessment methods to predict the effects of pesticides on aquatic systems and waterfowl that use them. In: Health Risk Assessment. Paustenbach DJ (ed), John Wiley & Sons, Inc., New York, NY, 2002.

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Sheehan PJ, Winner RW. Copper gradient studies in stream systems. pp. 255-271. In: Effects of Pollutants at the Ecosystem Level. SCOPE 22. John Wiley & Sons, New York, NY, 1984.

Presentations

Sheehan P, Hellerstein J. Consumer exposure model (CEM). Presented at Product Stewardship 2018. Washington, DC September 27-29, 2018.

Lewis R, Bogen K, Singhal A, Sheehan P. Novel method for estimating dermal contact with hand-applied cleaning solutions. Presented at the American Industrial Hygiene Conference and Expo. Philadelphia, PA May 21-23, 2018.

Sheehan P, Kalmes R, Posson M, Singhal A, Lewis R, Gauthier A. Challenges in assessing health risks from exposure to bisphenol-A (BPA) in consumer products. Presented at the Society of Toxicology 57th Annual Meeting. San Antonio, TX March 11-15, 2018.

Lewis R, Winegar E, Bogen KT, Singhal A, Sheehan P. Exposures to an ethanol based cleaning product. Presented at the American Industrial Hygiene Conference and Expo. Seattle, WA June 4-7, 2017.

Winegar E., Bogen KT, Lewis RC, Singhal A, Sheehan P. A use simulation study of a denatured alcohol cleaning product to assess potential worker exposure. Presented at the 56th Annual Meeting of the Society of Toxicology. Baltimore MD, March 12-15, 2017.

Sheehan P, Kalmes K. Assessing exposure from consumer product use: Methods to address manufacturer, consumer and agency concerns. Presented at Society for Risk Analysis Annual Meeting, San Diego, CA December 11-15, 2016.

Singhal A, Posson M, Jones A, Lewis R, Gauthier A, Schenk J, Kalmes R, Sheehan P. Assessing risk for consumer products under California's Proposition 65 regulations. Presented at SETAC North America 37th Annual Meeting, Orlando, FL November 6-10, 2016.

Sheehan P, Singhal A, Kalmes R, Bogen KT. Formaldehyde emissions from Chinese manufactured laminate flooring: Is there a Proposition 65 Exposure Issue? Presented at the American Industrial Hygiene Conference and Expo, Baltimore, MA May 21-26, 2016.

Sheehan P, Bogen K, Singhal A, Kalmes R. Evaluating the Proposition 65 health significance of formaldehyde exposures from Chinese manufactured laminate flooring. Presented at 55th Annual Meeting of the Society of Toxicology, New Orleans, LA March 13-17, 2016.

Sheehan P, Lowney Y, Kalmes R, Bogen K, Posson M, Glomski M, Singhal A, Volberg V, Beckerman B, Goswami E. Assessing user exposure to consumer products: Methods specific to product use and exposure route to assess consumer health risks. Presented at SETAC North America 36th Annual Meeting, Salt Lake City, UT November 1-5, 2015.

Posson M, Bogen K, Glomski M, Sheehan P. A suite of integrated predictive models for the evaluation of consumer exposures to organic chemicals in paper products. Presented at SETAC North America 36th Annual Meeting, Salt Lake City, UT November 1-5, 2015.

Bogen K, Sheehan P, Singhal A, Kalmes R, Volberg V, Garry M. Wearable technology products and allergic contact dermatitis: Chemical exposure and risk assessment challenges & developments. Presented at SETAC North America 36th Annual Meeting, Salt Lake City, UT November 1-5, 2015.

Sheehan P, Bogen KT, Singhal A, Kalmes R, Robert M, Fedoruk MJ. Wearable products and allergic contact dermatitis: a new risk assessment challenge. Presented at the 54th Annual Meeting of the Society of Toxicology, San Diego, CA March 22-26, 2015.

Sheehan P, Cooper M, McNulty J, White K. Wearable technology - trends, design & risk considerations. Presented at the SFAI Thought Leadership Webinar. Sports Fitness Industry Association. November 18, 2014.

Sheehan P, Bogen K, Posson M, Singhal A, Glomski M, Hellerstein J. Assessing anthraquinone (AQ) exposure from food packaging: a product stewardship challenge in Europe. Presented at the American Industrial Hygiene Conference and Expo, San Antonio, TX May 31-June 5, 2014.

Sheehan P, Bogen KT, Singhal A. Estimating an acceptable intake of anthraquinone (AQ) in food packaging. Presented at the 53rd Annual Meeting of the Society of Toxicology, Phoenix AZ March 23-27, 2014.

Sheehan P, Kalmes R, Turnham P, Anderson E. Simulation study of potential historical user asbestos fiber exposure from cosmetic body talc use. Presented at the American Industrial Hygiene Conference and Expo, Montreal, Canada May 18-23, 2013.

Sheehan P, Bogen K, Posson M, Hellerstein J. Characterizing potential chemical exposures and

associated risks from food packaging: A product stewardship challenge. Presented at the American Industrial Hygiene Conference and Expo, Montreal, Canada May 18-23, 2013.

Sheehan P, Heilman J, Bogen K. An evaluation of the Human Carcinogenic Potency of Methyl tert-butyl ether (MTBE): Considering new data and mode of action. Presented at the 52nd Annual Meeting of the Society of Toxicology, San Antonio TX March 10-14, 2013.

Sheehan P. Proposition 65 exposure assessment: Compliance considerations for foods. Presented at the Northwest Food Processors Expo and Conference 2013, Portland, OR January 14-15, 2013

Sheehan P, Bogen K. Cumulative Chrysotile Fiber Exposures from Sanding Historical Joint Compound formulations: Inter- vs. Intra-individual Variability. Presented at the Society for Risk Analysis Annual Meeting, San Francisco, CA December 9-12, 2012.

Sheehan P, Bogen K, Brorby G, Holm S. Considering mode of action in estimating a NSRL for 3-MCPD. Presented at the Society of Toxicology 51st Annual Meeting & Tox Expo, San Francisco, CA March 11-15, 2012.

Sheehan P, Mowat F. Simulation tests of occupational asbestos exposure from removal of artificially weathered roof coatings and cements. Presented at the American Industrial Hygiene Conference and Expo, Portland, OR May 14-19, 2011.

Sheehan P, Brorby G, Bogen K, Berman DW, Holm S. New basis for interpreting historical exposures to dust from chrysotile-containing joint compound. Presented at the American Industrial Hygiene Conference and Expo, Portland, OR May 14-19, 2011.

Brorby G, Boelter F, Jones R, Simmons C, Berman W, Sheehan P. Spiraling consequences of poor data quality. Professional Conference of Industrial Hygienists 2010, Fort Worth, TX, October 9-12, 2010.

Sheehan P, Bogen K, Brorby G, Goswami E. Improved estimates of worker exposure to benzene during parts washing based on a new approach analyzing solvent and air data for other aromatic constituents. Presented at the American Industrial Hygiene Conference and Expo, Denver, CO May 22-27, 2010.

Brorby GP, Sheehan PJ, Berman DW, Holm SE. Re-interpreting historical exposure data associated with the use of chrysotile-containing joint compound. Society of Toxicology 2010 Annual Meeting, Salt Lake City, UT, March 7-11, 2010.

Sheehan P, Dahlstrom D. Green building: Finding a better way to assure indoor air quality. Presented at the American Industrial Hygiene Conference and Expo, Denver, CO May 22-27, 2010.

Sheehan P, Bogen K, Brorby G, Goswami E. Worker inhalation exposure to benzene from solvents during parts washing. Society for Risk Analysis 2009 Annual Meeting, Baltimore, MD, December 6-9, 2009.

Sheehan P, Goswami E, Hicks J, Barrie M. An assessment of historical benzene exposures of printing press operators. Presented at the American Industrial Hygiene Conference and Expo, Minneapolis, MN, May 31-June 5, 2008.

Brorby G, Kalmes R, Goswami E, Mowat F, Sheehan P. Evaluating exposures to consumer products. Presented at the Society for Risk Analysis, Baltimore, MD, December 3-6, 2006.

Sheehan P, Malzahn D, Goswami E, Kalmes R, Hicks J, Mandel J. Use of a simulation to estimate benzene exposure from degreasing elevator parts. Presented at the Society for Risk Analysis Meeting, Baltimore, MD, December 3-6, 2006.

Goswami E, Malzahn D, Richter R, Sheehan P. Simulation and modeling techniques to reconstruct historical benzene exposures. Presented at the Society for Risk Analysis Meeting, Baltimore, MD, December 3-6, 2002.

Sheehan P, Mowat F, Weidling R. Simulation of asbestos release from asphalt-based roofing products. Presented at the American Industrial Hygiene Conference and Expo, Chicago, IL, May 13-18, 2006.

Sheehan P, Hicks J, Goswami E, Lau E, Greene J, Fedoruk MJ. Assessment of mechanics' exposure to benzene in mineral spirit solvents during parts washing activities. Presented at the American Industrial Hygiene Conference and Expo, Chicago, IL, May 13-18, 2006.

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Richter RO, Sheehan PJ, Bouse E. Potential environmental impact of mercury emissions from Portland cement kilns. Presented at the 2005 IEEE Cement Industry Technical Conference, Kansas City, MO, 2005.

Sheehan P, Brorby G, Kalmes R, Mowat F, Richter R, Finley B. Characterization of the cumulative asbestos exposures of U.S. automobile brake mechanics. Presented at the American Industrial Hygiene Conference and Expo, Anaheim, CA, May 23-26, 2005.

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