



NIOSH Occupational Exposure Banding

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Presenter biography

T.J. Lentz is a lead health scientist/research occupational hygienist and Chief of the Science Applications Branch with the National Institute for Occupational Safety and Health, Centers for Disease Control and Prevention (NIOSH/CDC). Dr. Lentz conducts research to evaluate occupational and environmental hazards, with projects and interests that include: investigation of small business industries and their hazards; assessment of safety hazards in construction trades; and evaluation of toxicology and epidemiology data on chemical and physical agents to determine health risks and appropriate prevention strategies. Dr. Lentz is particularly interested in studying how design, planning, and control engineering can be used to address safety and health challenges in the work environment. Major duties include developing informational materials and guidance for other agencies, industry, labor groups, and the public. Dr. Lentz previously served as the Policy Response Coordinator for the Institute. Dr. Lentz earned a B.A. in biology/philosophy from Wittenberg University (1989), an M.P.H. in environmental health sciences/health policy from Yale University (1991), and a Ph.D. in environmental health/industrial hygiene from the University of Cincinnati (1997).



Dr. Lentz has been an active member of both the ACGIH and AIHA, serving on multiple committees including the following:

- ACGIH Small Business Committee (Chair)
- ACGIH International Committee
- AIHA Control Banding Working Group (past-Chair)
- AIHA-NIOSH Partnership Committee

Dr. Lentz has also served on scientific working panels with the National Academies, the World Health Organization, and the International Labour Organization.

Presentation abstract

In July 2019, the National Institute for Occupational Safety and Health (NIOSH) developed a document entitled *The NIOSH Occupational Exposure Banding Process: Guidance for the Evaluation of Chemical Hazards*. This new guidance addresses an important need for chemical hazard assessment to protect workers from workplace chemicals without occupational exposure limits (OELs). Specifically, the occupational exposure banding process is a method for assigning chemicals into specific categories called Occupational Exposure Bands (OEBs). These bands are assigned based on a chemical's toxicological potency and the adverse health effects associated with exposure. OEBs range from band A to band E, with each band corresponding to a range of exposure concentrations that is expected to protect worker health. The guidance is intended to apply occupational exposure banding to a broad spectrum of chemicals used in the workplace. Given the reality that the rate at which chemicals are introduced into commerce outpaces the development of authoritative OELs, occupational exposure banding provides a practical approach for chemical assessment to inform risk management decisions. Details about the process and use of the e-Tool will be described to provide the audience with practical guidance for assessing chemical hazards in the workplace. Efforts to disseminate the guidance and assess its utility through stakeholder engagement in public review and feedback will also be described. The impact of this effort has been evident in calls from professional safety and health practitioners for occupational exposure bands for implementing risk management of chemicals in the absence of OELs.