

Safer Chemical Management: Is OSHA Trying an End-Run Around PELs?

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With just a few exceptions, OSHA's permissible exposure limits (PELs) have not been updated since they were adopted in 1971. The Occupational Safety and Health Administration's (OSHA) attempt at a mass update in 1989 was overturned by the 11th Circuit Court, and attempts to establish PELs for newly-recognized chemical hazards have largely been hamstrung in the regulatory process. So, OSHA is looking for "new approaches." Is OSHA trying to create an end-run around its own standard-setting process for PELs?



In October 2014, OSHA published a request for information seeking comment on "current practices and future methods for updating PELs, as well as new strategies for better protecting workers from hazardous chemical exposures." The comment period on that proposal recently closed.

OSHA's Proposed Tiered Approach

One strategy OSHA is looking at as a possible way to regulate employee exposures to hazardous chemicals without having to go through its current process for setting and updating PELs is what the agency calls a "tiered approach to risk assessment."

OSHA's hope is that this approach will "enable the agency to more efficiently make the significant risk findings needed to establish acceptable PELs for larger numbers of workplace chemicals." It involves three stages:

Dose-response analysis in the observed range. During this step, which would replace OSHA's current labor-intensive and time-consuming risk assessment process, OSHA would analyze exposures (or doses) and adverse outcomes from human studies or animal bioassays. It would focus particularly at the lower end of the exposure range and would attempt to establish a Low End Toxicity Exposure (LETE) that can be used as a starting point for establishing exposure limits.

Margin of exposure (MOE) determination. Unlike the Environmental Protection Agency (EPA) and the Agency for Toxic Substances Disease Registry (ATSDR), OSHA is required to set its exposure limits at levels that are technologically "feasible" for employers to achieve rather than at levels that are deemed protective of human health. The MOE approach will compare the LETE with the range of feasible exposure limits.

Exposure-response extrapolation (if needed). In this step, the dose-response relationship is extrapolated outside the observed range to estimate the risk associated with a working lifetime at occupational exposures below the observed range. This step would only be needed if it is technologically feasible to reduce exposures well below the LETE.

The proposed process overlaps with the risk-based methodologies used by the EPA, the National Institute for Occupational Safety and Health, the ATSDR, and the European Union Registration, Evaluation, Authorization, and Restriction of Chemicals program, as well as other organizations that recommend chemical toxicity values or exposure levels protective of human health.

Polychlorinated biphenyls (PCBs) in building material are in the news everyday. The potential health risk and liability make them a widespread concern of EH&S staff, employees, building owners and construction. Learn to protect yourself and your employees by downloading [Don't Let PCBs Manage You](#) today!

Ultimately, the "new approach" will still require OSHA to demonstrate that a significant risk of harm exists before it can set a numerical limit on exposure. However, OSHA believes that this new approach will enable it to complete the process in less time and with fewer resources in part by allowing the agency to more easily rely on peer-reviewed risk assessments already prepared by other federal agencies.

Tomorrow, we'll look at some other strategies OSHA is proposing to achieve "safer chemical management."

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