



DATE: November 25, 2009

SUBJECT: Occupational Exposure Limits for Chemicals

FROM: Technical Assistance Branch, DOHS

The Division of Occupational Health and Safety (DOHS) identifies, evaluates and recommends controls of environmental factors arising in or from the National Institutes of Health (NIH) workplace in order to prevent occupational injuries and illnesses.

In identifying and determining occupational exposure limits for chemicals, the DOHS references the limits and values established by both the Occupational Safety and Health Administration (OSHA) and the American Conference of Governmental Industrial Hygienists (ACGIH). OSHA establishes permissible exposure limits (PELs), which are enforceable, regulatory limits. The ACGIH establishes threshold limit values (TLVs), which are values that are health based. OSHA and ACGIH may also establish short term exposure limits (STELs) and other limits, as appropriate.

An exposure level is a maximum airborne concentration and is not intended to represent a fine line between safe and harmful conditions. In determining an exposure limit, it is not possible to take into account all factors that could influence the effect that exposure to a substance may have on an individual employee. Because of the wide variation in individual susceptibility, however, a small percentage of employees may experience discomfort from some substances at concentrations at or below the exposure limit; a smaller percentage may be affected more seriously. Therefore, the DOHS references the lowest limit or value established by OSHA or ACGIH in determining the NIH occupational exposure limit to a particular chemical.

An ACGIH value, if referenced as an NIH occupational exposure limit for a chemical, does not have an inclusive affect on the OSHA regulations that are incorporated into DOHS written programs.

Additional levels and limits, such as the recommended exposure limits (RELs) that are established by the National Institutes for Occupational Safety and Health (NIOSH), may also be reviewed and considered in determining occupational exposures to chemicals.