

This addendum was developed by the Division to supplement and update the HEAC summary dated March 2, 2011.

MEASUREMENT & IMPLEMENTATION FEASIBILITY

Usage Summary: n-Propanol is used as a solvent for waxes, vegetable oils, resins, cellulose esters, and ethers. It is found in inks, brake fluids and polishing compounds and has been used as a degreasing agent, an antiseptic, and a chemical intermediate. More recently, it is being used as a hand disinfectant by health care workers. According to the most recently available Cal/EPA California Environmental Reporting System (CERS) data, no more than about 175 businesses in California use reportable quantities of n-Propanol and are therefore likely to be substantially affected by the lowered PEL.

Analytical Method: NIOSH Method 1405: Alcohols Combined. Samples collected on coconut shell charcoal with analysis by GC/FID OSHA Method 7: Organic Vapors. Samples collected on coconut shell charcoal with analysis by GC/FID.

Instrument/Sampler: GC/FID; CSC

Estimated LOD/LOQ: Limit of detection (LOD) for both methods is approximately 0.04 ppm based on 1 microgram per sample. NIOSH Method 1405 was validated at 8 micrograms per sample which results in an LOD of 0.325ppm.

Measurement Issues: Based on a proposed PEL of 100ppm, there are no analytical feasibility issues to report.

Recommended Workplace Controls: Providing suitable control measures such as ventilation to control exposure can be done using existing equipment as most systems have the ability to control to the proposed levels

Economic Impact Analysis/Assessment:

The Division has made a determination that this proposal is not anticipated to result in a significant, statewide adverse economic impact directly affecting businesses, including the ability of California businesses to compete with businesses in other states. This proposal will not have any effect on the creation or elimination of California jobs nor result in the creation or elimination of existing businesses or affect the expansion of existing California businesses. The Division anticipates that any potential costs will be balanced by avoiding or minimizing the costs inherent in workers' compensation claims, lost work time, and productivity losses that would have been caused by exposure related illness of employees.

The PEL proposed is consistent with recent scientific findings, of which professional health and safety staff and consultants of these employers and others with significantly exposed employees should be aware. Many of these entities already seek to control employee exposures to

chemicals to levels below existing PELs in the interest of business continuity and minimization of tort and workers compensation liability. Based upon federal OSHA 1989 estimates of the distribution of costs for businesses adopting new PELs, about 12% (or 21) of the 175 California businesses listed in CERS as n-Propanol users would incur costs of about \$120,000 each, for a total of about \$2.52 million. Although they did not quantify the benefits, Federal OSHA also estimated that these costs would be more than offset by savings incurred from improved employee health and productivity.

Setting a Permissible Exposure Limit for n-Propanol that is up-to-date and consistent with current scientific information and state policies on risk assessment will send appropriate market signals to employers with respect to the costs of illness and injury which chemicals can impose on workers and their families, the government, and society at large. With appropriate market signals, employers may be better able to choose chemicals for use in the workplace that impose less of a burden on workers and society. There are no anticipated benefits to the state's environment.

The economic benefits from the proposed PEL will result primarily from reduced health risk among exposed workers. Based on the assumptions in the federal OSHA final rule, the total benefit for the work related illnesses prevented would far exceed the \$2.52 million cost estimated for this proposal.