

**DEPARTMENT OF LABOR****Occupational Safety and Health Administration****29 CFR Part 1910****[Docket No. H-044]****RIN 1218-AA84****Occupational Exposure to 2-Methoxyethanol, 2-Ethoxyethanol and Their Acetates (Glycol Ethers)****AGENCY:** Occupational Safety and Health Administration (OSHA), Labor.**ACTION:** Withdrawal of proposed rule; termination of rulemaking.

**SUMMARY:** OSHA is withdrawing its proposed standard on Occupational Exposure to 2-Methoxyethanol (2-ME), 2-Ethoxyethanol (2-EE), and their Acetates (2-MEA, 2-EEA) (four glycol ethers). Production and use of the four glycol ethers either have ceased or are virtually limited to "closed systems" where exposure levels more than 10 years ago already were at or below the proposed permissible exposure limits (PELs). Because there are few, if any, remaining opportunities for workplace exposure to these glycol ethers and little or no potential for exposure in the future because of the availability of less-toxic substitutes, OSHA has concluded that the proposed rule is no longer necessary.

**DATES:** This withdrawal is effective December 31, 2003.

**FOR FURTHER INFORMATION CONTACT:** OSHA, Mr. George Shaw, Office of Communications, U.S. Department of Labor, Room N-3647, 200 Constitution Avenue, NW., Washington, DC 20210; telephone: (202) 693-1890 (OSHA's TTY number is (877) 889-5627).

For additional copies of this Federal Register notice, contact OSHA, Office of Communications, U.S. Department of Labor, Room N-3101, 200 Constitution Avenue NW., Washington, DC 20210; telephone (202) 693-1888. Electronic copies of this **Federal Register** notice, as well as news releases and other relevant documents, are available at OSHA's Webpage on the Internet at <http://www.OSHA.gov>.

**SUPPLEMENTARY INFORMATION:****I. Background**

On March 23, 1993, OSHA proposed to reduce the existing PELs for four

glycol ethers (2-ME, 2-EE, 2-MEA, 2-EEA) (58 FR 15526). Based on a review of scientific studies and other available evidence, OSHA preliminarily determined that the existing PELs were not adequate to protect an approximately 46,000 exposed workers from significant risks of adverse reproductive and developmental health effects. The Agency held informal public hearings on the proposal, and the record closed in March 1994.

On August 8, 2002, OSHA reopened the rulemaking record to solicit information on the extent to which these glycol ethers are still produced and used in the workplace (67 FR 51524). The Agency also requested information on substitutes for the four glycol ethers that employers may be using, including information on patterns of use, degree of toxicity, and levels of employee exposure to the substitutes. The comment period closed on November 6, 2002. OSHA received only six comments. While this action does not meet any of the criteria for an economically significant or major rule as specified by Executive Order or relevant statutes, it was reviewed by OMB pursuant to Executive Order 12866.

**II. Reasons for Withdrawal of the Proposed Standard**

Based on evidence of adverse reproductive and developmental health effects associated with exposure to the four glycol ethers (e.g., Exs. 19, 19A, 19B, 24 A-C), some commenters urged OSHA to issue a final standard on glycol ethers (e.g., Exs. 64-2; 64-4; 64-5). However, OSHA has decided to terminate the rulemaking because production, use and exposure to these glycol ethers has ceased or is virtually limited to closed system production where there is little opportunity for employee exposure. Exposure levels in those operations already are at or below the proposed PELs. In addition, use of these glycol ethers has largely been replaced by less-toxic substitutes.

Production and use of the four glycol ethers have declined substantially or ceased completely since the proposed rule was published. Starting in the 1990s employers began moving away from using these glycol ethers due to increasing awareness of their adverse health effects. As early as the mid-1990s, production and use of these glycol ethers had dropped from peak

production levels in the late 1980s (Ex. 302-X, pp. 597; 67 FR 51524). The four glycol ethers had been or were being eliminated from critical use areas (e.g., construction paints and coatings, printing inks, military jet fuel) and key industry sectors (e.g., automotive, electronics, semiconductor) (Exs. 11-18; 19B; 28; 29A; 48; 53; 58; 302-X, pp. 596-600). For example, these glycol ethers were no longer used in automotive refinishing, which had accounted for about 86 percent of the affected establishments and 57 percent of all exposed workers. Production of 2-MEA had been phased out completely and the use of 2-ME as a military jet fuel additive, its primary use, was to be phased out before 2000 (Ex. 302-X, pp. 597-98). Thus, by the close of the rulemaking record in 1994, most downstream use had been eliminated (Ex. 58; 302-X, pp. 596-600). Where 2-ME, 2-EE and 2-EEA were still manufactured, their production was virtually limited to "closed systems" where, even more than 10 years ago, average exposures (both arithmetic and geometric averages) already were at or below the proposed PELs (Ex. 302-X, pp. 597-98; 58 FR 15582).

More recent data confirm that use of and exposure to these glycol ethers have declined further and are now very limited (Ex. 64-1; 64-1-1. *See also*, SRI, Chemical Economics Handbook (CEH) 663.5000 *et seq.* (September 2000)). By 1999, use of 2-EE had fallen 70 percent, from a peak of 175 million pounds in 1980, and 2-ME use had dropped 96 percent, to just 3 million pounds, according to the Ethylene Glycol Ethers Panel of the American Chemistry Council (ACC), formerly Chemical Manufacturers Association (Ex. 64-1-1; CEH 663.5001A-H). Of the glycol ethers still produced, more than 55 percent was exported and more than 40 percent was used to produce 2-EEA in closed systems, where average exposure levels are at or below the proposed PELs and in most cases less than one-half the proposed PELs (Ex. 64-1-1; 58 FR 15582, Table VIII-2). All other domestic consumption totaled less than 4 percent (5 million pounds). (See Table 1.) Finally, OSHA also notes that the very few comments submitted in response to the record reopening may be further indication of the decline in use and exposure to the four glycol ethers:

TABLE 1.—CONSUMPTION OF ETHYLENE GLYCOL ETHERS, 1999 (MILLIONS OF POUNDS)

	Acetate production	Other U.S. consumption	Exports	Total
2-EE .....	52	1	0	53
2-EEA .....	0	1	71	72
2-ME .....	0	3	0	3
2-MEA .....	0	0	0	0
Total for all glycol ethers .....	52 (40.6%)	5 (3.9%)	71 (55.5%)	128 (100%)

Source: Ex. 64–1–1 (citing SRI, Chemical Economics Handbook (September 2000)).

There is now effectively only one producer of these glycol ethers remaining in the United States, Equistar Chemicals (Exs. 64–1; 64–1–1), whose production is virtually limited to closed systems so employees have little opportunity for exposure. According to ACC, Equistar exports the bulk of the glycol ethers it produces (Ex. 64–1). The *Chemical Economics Handbook* confirms this, reporting that the four glycol ethers are no longer sold in the United States (CEH 663.5000R–S). (OSHA notes that Eastman Chemical Company also produces a small amount of 2-EE in a closed system, but only for in-house use as a site-limited intermediate in the production of another product (Ex. 64–1).

Prior to 2001, Dow Chemical Company and Union Carbide, the largest producer of these glycol ethers, produced almost 60 percent of these glycol ethers (CEH 663.5000Q). In 2001, Dow acquired Union Carbide (Exs. 64–1; 64–1–1). Last year, Dow stopped manufacturing these glycol ethers, moving instead to producing less-toxic E-series butyl glycol ethers (*e.g.*, EB) (Exs. 64–1; 64–1–1. CEH 663.5000Q).

### III. Substitutes

There is little or no future potential exposure to the four glycol ethers because their use has largely been replaced by less-toxic substitutes. According to ACC, a number of substitutes are available, including other ethylene glycol ethers, propylene glycol ethers and other types of solvents (Ex. 64–1). The *Chemical Economics Handbook* reports that use of the four glycol ethers has been replaced primarily by E-series butyl glycol ethers (EB), P-series glycol ethers, and ethyl-3-ethoxypropionate (EEP). For example, ethylene glycol monobutyl ether acetate, diethylene glycol monobutyl ether acetate, and propylene glycol monomethyl acetate have replaced the use of 2-EEA (CEH 663.5000O). By 1999, the various substitutes accounted for about 80 percent of all glycol ethers consumed domestically (CEH

663.5000E–F). Of these substitutes, EB is now the largest volume glycol ether (64 FR 42127, August 3, 1999), accounting for 44 percent of all glycol ethers consumed domestically (CEH 663.5000E).

Some commenters raised concerns about the potential toxicity of some substitutes, particularly longer chain ethylene glycol ethers, and urged OSHA to promulgate standards addressing these substances (Exs. 64–2, 64–4, 64–5). For example, the California Department of Health Services said the following glycol ethers have been shown to produce adverse reproductive and developmental health effects: ethylene glycol dimethyl ether, ethylene glycol diethyl ether, diethylene glycol dimethyl ether, diethylene glycol diethyl ether, triethylene glycol dimethyl ether, propylene glycol methyl ether-beta, and propylene glycol methyl ether acetate-beta (Ex. 64–5). However, OSHA received little information on the degree to which these substances are used in workplaces and the extent to which employees are currently exposed to them. Therefore, OSHA is not able to determine, based on this rulemaking record, whether those substitutes need to be addressed.

OSHA notes that information submitted to the Environmental Protection Agency indicates that some substitutes do not appear to have the level of toxicity of the four glycol ethers (65 FR 47342, August 2, 2000; 64 FR 42125, August 3, 1999. See also EPA Docket No. A–99–24). Based on such information, EPA is currently considering whether the delist EB from the hazardous air pollutants list established by the Clean Air Act. EB is the most prevalent of the substitutes, accounting for 44 percent of all glycol ether consumed domestically.

In conclusion, given the very limited production, use and exposure to these glycol ethers and the lack of potential future workplace exposure due to the availability and increasing use of less-toxic substitutes, OSHA is withdrawing the proposed standard. Accordingly,

OSHA is devoting its resources to rulemaking projects where there is greater potential for employee exposure.

### Authority and Signature

This document was prepared under the direction of John L. Henshaw, Assistant Secretary of Labor for Occupational Safety and Health, U.S. Department of Labor. It is issued pursuant to section 6 of the Occupational Safety and Health Act of 1970 (84 Stat. 1594, 29 U.S.C. 655), 29 CFR 1911, and Secretary's Order 5–2002 (67 FR 65008).

Signed at Washington, DC, this 23rd day of December, 2003.

**John L. Henshaw,**

*Assistant Secretary of Labor.*

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## DEPARTMENT OF THE INTERIOR

### Office of Surface Mining Reclamation and Enforcement

#### 30 CFR Part 917

[KY–243–FOR]

#### Kentucky Regulatory Program

**AGENCY:** Office of Surface Mining Reclamation and Enforcement (OSM), Interior.

**ACTION:** Notice of withdrawal of proposed rule.

**SUMMARY:** We are announcing a decision that House Bill 556, passed by the Kentucky General Assembly on March 15, 2002, designating the ridge top of Pine Mountain as the Pine Mountain Trail State Park, does not meet the criteria to be deemed an amendment to the Kentucky Regulatory Program.

**EFFECTIVE DATES:** December 31, 2003.

**FOR FURTHER INFORMATION CONTACT:** William J. Kovacic, Director, Lexington Field Office, Telephone (859) 260–8400, e-mail: [bkovacic@osmre.gov](mailto:bkovacic@osmre.gov).

**SUPPLEMENTARY INFORMATION:**