

emissions, including work practices that must be followed to minimize the release of asbestos fibers during the handling of asbestos waste materials. EPA regulations promulgated under the Toxic Substances Control Act (40 CFR Part 763, Subpart F) address the problem of asbestos construction materials used in schools. These regulations require that all schools be inspected to determine the presence and quantity of asbestos-containing materials in school facilities. Corrective actions are left to the discretion of school officials. EPA regulations promulgated under the Clean Water Act set standards for asbestos levels in effluents to navigable waters.

Throughout this rulemaking, OSHA has consulted with the EPA on various regulatory aspects of dealing with the asbestos hazard. EPA has reviewed and critiqued OSHA's quantitative risk assessment for asbestos (Exs. 84-292, 86-6), and both EPA and OSHA belong to the Federal Asbestos Task Force, established in June 1983, to coordinate Federal regulatory actions with regard to asbestos. The Consumer Product Safety Commission is also a member of this task force because of its mandate to protect consumers from health and safety hazards.

C. State Plan Revisions

The 25 states and territories with their own OSHA-approved occupational safety and health plans must revise their existing standard within 6 months of this publication date or show OSHA why there is no need for action; for example, because an existing State standard covering this area is already "at least as effective" as the revised Federal standards. These states or territories are: Alaska, Arizona, California, Connecticut, Hawaii, Indiana, Iowa, Kentucky, Maryland, Michigan, Minnesota, Nevada, New Mexico, New York, North Carolina, Oregon, Puerto Rico, South Carolina, Tennessee, Utah, Vermont, Virginia, the Virgin Islands, Washington, and Wyoming. (In Connecticut and New York, the plan covers only State and local government employees.)

II: Regulatory History

OSHA has regulated asbestos since 1971. A 12 f/cc permissible exposure limit (PEL) for asbestos was included in the initial promulgation on May 29, 1971 (36 FR 10466) of OSHA standards pursuant to Section 6(a) of the Act. In Response to a petition by the Industrial Union Department of the AFL-CIO, OSHA issued an ETS on asbestos on December 7, 1971, which established a PEL of 5 f/cc as an 8-hour time-weighted

average (TWA) and a peak exposure level of 10 f/cc.

In June 1972, OSHA promulgated a new final standard that established an 8-hour time-weighted average PEL of 5 f/cc and a ceiling limit of 10 f/cc. These limits were intended primarily to protect employees against asbestosis, and it was hoped that they would provide some incidental degree of protection against asbestos induced forms of cancer. Effective July 1976, OSHA's 8-hour TWA limit was reduced to 2 f/cc and this limit remained in effect up to the present; the final rules published today revise the PEL for 8-hour employee exposures to asbestos, tremolite, anthophyllite, and actinolite to a level of 0.2 fiber/cc.

OSHA's 1972 asbestos standard was reviewed by the court and upheld in all major respects; however, the court remanded two issues for OSHA's reconsideration (*IUD v. Hodgson*, 449 F. 2d 487 (CA DC 1974)). These issues were whether the July 1976 effective date for the 2 f/cc standard should be accelerated for some industries and whether the standard's 3-year retention period for employee exposure monitoring records was adequate. In response to the remand, OSHA increased the record retention period to 20 years (41 FR 11504), and the passage of time mooted the acceleration issue.

In October 1975, OSHA published a notice of proposed rulemaking (40 FR 47652) to revise the asbestos standard because the Agency believed that "sufficient medical and scientific evidence has been accumulated to warrant the designation of asbestos as a human carcinogen" and that advances in monitoring and protective technology made reexamination of the standard "desirable." This proposal would have reduced the 8-hour time-weighted average to 0.5 f/cc and imposed a ceiling limit of 5 f/cc for 15 minutes.

The basis for the 1975 proposal's reduction in the permissible exposure limit to 0.5 f/cc was OSHA's then-current policy for carcinogens that assumed that no safe threshold level was demonstrable and therefore that the Act required the Agency to set the PEL at a level as low as technologically and economically feasible. This policy was rejected by the Supreme Court in the benzene decision (*IUD v. API*, 448 U.S. 601 (1980)) (see the discussion of the implications of the benzene decision for OSHA rulemaking in the Significance of Risk section of the preamble, section VI). The 1975 proposal would have applied to all industries except construction. Further, although OSHA announced its intention to develop a

separate proposal applicable to the construction industry, no such proposal was published.

In 1976, the National Institute for Occupational Safety and Health (NIOSH), and in 1980 a NIOSH/OSHA task force, recommended that OSHA reduce the permissible exposure limit for asbestos to 0.1 f/cc, based on evidence of the carcinogenicity of asbestos (Ex. 84-320). OSHA has considered these recommendations in determining what regulatory response is necessary to provide exposed employees with effective protection.

On May 24, 1983, OSHA consulted with the Advisory Committee for Construction Safety and Health (referred to as "CACOSH") concerning the applicability of any new asbestos standard to the construction industry. CACOSH endorsed OSHA's position that any new PEL adopted for general industry should also apply to the construction industry (Ex. 84-424). On November 4, 1983, OSHA published an Emergency Temporary Standard (ETS) for asbestos (48 FR 51086). The ETS marked a new regulatory initiative, related to, but not part of, the 1975 proceeding. The ETS was held invalid by the U.S. Circuit Court of Appeals for the Fifth Circuit on March 7, 1984.

Subsequently, OSHA published a notice of proposed rulemaking (49 FR 14116, April 10, 1984) for a standard covering occupational exposure to asbestos in all of the industries governed by the Act: maritime, construction, and general industry. Pursuant to Section 6(c) of the Act, the ETS also served as a proposed rule. Public hearings were held in Washington, D.C., from June 19 to July 10, 1984, to provide interested parties and the public with the opportunity to comment on the proposed revisions, pursuant to notice and section 6(b) of the Act (29 U.S.C. 655(b)(3)). The hearings were presided over by Administrative Law Judge Robert G. Mahoney. Post-hearing submissions of data, comments, and briefs were received through November 1, 1984. The entire record, including over 340 exhibits and approximately 55,000 pages of material, was certified by Judge Mahoney on September 27, 1985, in accordance with 29 CFR 1911.17. Copies of materials contained in the record may be obtained from the OSHA Docket Office, Room N3670, U.S. Department of Labor, 200 Constitution Avenue, NW., Washington, DC 20210. These final standards on occupational exposure to asbestos in construction and general industry are based on a thorough consideration of the entire record of this