



A/C Pipe
Producers Association
Public Affairs Committee
International Affairs Committee

Internal Correspondence

TO
J. F. Welch
FROM J. F. Welch, Vice President

DATE January 18, 1982

SUBJECT OSHA - Regulations of Interest to A/C Pipe Industry

REF: (1) JFW correspondence, same title, December 4, 1980.
(2) JFW correspondence, same title, November 16, 1981.

ACTION REQUIRED: Review for information

On January 5, 1981, the U.S. Department of Labor published a list of rules (Attachment 1) that will be reviewed in the next twelve (12) months. Such notification is required by the Regulatory Flexibility Act.

Under the Occupational Safety and Health Administration (OSHA), the following rules relevant to the A/C pipe industry are listed:

1. Occupational Exposure to Asbestos

The listing contains no new information about the agency's schedule or priority for reviewing the current and proposed asbestos standards. The wording is similar to that in Reference (2) but makes no mention of publishing an advance notice of proposed rulemaking before Spring 1982.

2. Identification, Classification and Regulation of Potential Occupational Carcinogens

OSHA published in the same Federal Register an advance notice of proposed rulemaking (ANPRM) and proposal for partial stay of the so-called "carcinogen policy" pending completion of rulemaking proceedings. This is enclosed as Attachment 2.

The ANPRM seeks to reevaluate the policy in light of the Supreme Court decision on the OSHA benzene standard and to improve its cost effectiveness and scientific basis. Public comments are invited on the scope of the reevaluation.

If you have any questions, please do not hesitate to call.

JFW/ajb

Enclosures

cc: A. Kahn, Esq.
N. Rahn, Esq.
N. Battle

Special Counsel (6)
Asbestos Institute
W. E. Smith, M.D.
Brian Commins, Ph.D.

copies to:

Public Affairs Committee

H. Olson
B. Cook
R. LeGault
W. Perrell
J. Woods
J. Baker
T. Dougherty
D. Stinson
W. McCallie
B. Collier

International Affairs Committee

R. Dorner
E. van der Rest
B. Giboin
N. Officer
R. Hobbs
A. Saoulis
R. Jalan
V. Pattabhi
H. Hudson
C. Barton
S. Al-Tarkait

H01PI20801
Chrono

DEPARTMENT OF LABOR

Office of the Secretary

20 CFR Chs. I, V, and VI

29 CFR Subtitle A and Chs. V, XVII, and XXV

30 CFR Ch. I

41 CFR Ch. 60

Twelve-Month List for Review of Rules

AGENCY: Department of Labor.

ACTION: Twelve-month listing for review of rules.

SUMMARY: This Notice sets forth the Department's twelve-month listing for review of existing regulations pursuant to the Regulatory Flexibility Act. **DATES:** This schedule includes all regulations which will be under review between now and the succeeding twelve months.

FOR FURTHER INFORMATION CONTACT: Seth D. Zinman, Associate Solicitor for Legislation and Legal Counsel, Office of the Solicitor, Department of Labor, Room N2428, 200 Constitution Avenue, NW., Washington, D.C. 20210, 202-523-8201.

SUPPLEMENTARY INFORMATION: The Regulatory Flexibility Act requires that by July 1, 1981, each agency publish a 10-year schedule for the review of all agency rules that are in existence on the effective date of the Act (January 1, 1981), that have or will have a significant economic impact on a substantial number of small entities. The Department published its 10-year schedule on June 30, 1981 (see 46 FR 33536).

The Regulatory Flexibility Act also requires that each year agencies publish in the Federal Register a list of the rules to be reviewed during the succeeding twelve months which have a significant economic impact on a substantial number of small entities. The list must include a brief description of each rule, the need for and legal basis of each rule, and must invite public comment.

The twelve-month review list for the Department of Labor is listed below and public comment is invited on the listing. Concurrently with its review of each of the rules listed below, the Department intends to consider the following factors: (1) the continued need for the rule; (2) the nature of complaints or comments received concerning the rule from the public; (3) the complexity of the rule; (4) the extent to which the rule overlaps, duplicates, or conflicts with other Federal rules, and, to the extent

feasible, with State and local governmental rules; and (5) the length of time since the rule has been evaluated or the degree to which technology, economic conditions, or other factors have changed in the area affected by the rule.

Twelve-Month Review List

I. Mine Safety and Health Administration

1. 30 CFR Part 100—Civil Penalties

Description: The existing rule, published on May 30, 1978 (45 FR 23514), set forth procedures for proposing and assessing civil penalties for violations of the Federal Mine Safety and Health Act of 1977 (Mine Act), standards and regulations. Basically, the rule established a "formula system" for determining most proposed penalties and included for the first time the metal and nonmetal mining industries in the assessment process. MSHA reviewed the existing regulation in 1979 and decided that revisions were necessary. On November 7, 1980 (45 FR 74444), MSHA published a proposal for restructuring the civil penalty system to provide increased incentives for mine operators to comply with the Mine Act, its standards and regulations. Public hearings would be the next step in the rulemaking process. This project is one of MSHA's highest priorities and the need for a regulatory impact analysis is under study.

Need and Legal Basis: This rule is necessary because it will implement the penalty provision in the Mine Act. This proposal is authorized under sections 105, 110, and 508 of the Mine Act.

2. 30 CFR Parts 55, 56 and 57—Review of Standards

Description: The existing safety and health standards applicable to metal and nonmetal mines have generally been in effect for over ten years. They cover all aspects of metal and nonmetal mining activity, e.g. ground control, electrical, explosives, fire prevention, health, and loading, hauling and dumping. MSHA is reviewing the standards to (1) eliminate unnecessary standards, (2) clarify and update existing standards, (3) incorporate technological advances and (4) reduce recordkeeping burdens on the industry. This project is one of MSHA's highest priorities and the need for a regulatory impact analysis is under study. MSHA anticipates holding open conferences on selected high priority sections during the Spring of 1982.

Need and Legal Basis: This rule is necessary to improve the existing metal and nonmetal safety and health

standards, many of which are outdated, unnecessary, duplicative, or ambiguous. This project is authorized under Section 101 of the Mine Act which provides for the development, revision and promulgation of new and improved mandatory safety and health standards.

3. 30 CFR Part 23—Telephones and Signaling Devices

Description: The existing rule sets forth the requirements and conditions for MSHA approval of battery-operated telephones and signaling devices for uses in mines. The proposed amendment would modify the definition of "signaling device" to permit the approval of devices and telephones that are equipped with a standby power source, as well as those that are battery-operated. It would conform the existing rule to advances in technology. A regulatory impact analysis is not required. MSHA expects to publish the final rule by the end of 1981.

Need and Legal Basis: This regulation is necessary because it would remove outdated restrictions related to the design and approval of telephones and signaling devices in mines. It is issued pursuant to Section 101 of the Mine Act, which provides for the promulgation of improved safety and health standards.

4. 30 CFR Part 36—Electrical Components and Headlights for Mobile Diesel-powered Transportation Equipment

Description: The existing rule prohibits the use of all electrical devices except self-contained, battery-operated headlights on permissible mobile diesel-powered transportation equipment for use in gassy metal and nonmetal mines. The proposed amendment would modify the requirements and conditions for approval of such equipment by removing current design restrictions. The amendment would not affect currently approved equipment, but it would allow operators of gassy mines to use improved equipment which incorporates advanced technology. A regulatory impact analysis is not required. MSHA anticipates that the final rule will be published by the end of 1981.

Need and Legal Basis: This regulation is necessary because it would improve the existing standards by removing outdated design restrictions. It is authorized under Section 101 of the Mine Act which provides for new and improved safety and health standards.

5. 30 CFR Part 19—Electric Cap Lamps

Description: The existing rule sets forth procedures for the approval of electric cap lamps in underground

mines. The amendment would allow MSHA to test and approve cap lamps which incorporate advances in technology. The proposal would not affect currently approved cap lamps, nor would it affect testing and evaluation of any cap lamp design which can be approved under the existing procedures. A regulatory impact analysis is not required. MSHA expects to publish the final rule by the end of 1981.

Need and Legal Basis: This regulation is necessary because it would improve the existing standard by removing outdated design restrictions. MSHA believes miners would be afforded greater safety and health protection by amending Part 19. The proposal is authorized under Section 101 of the Mine Act which provides for new and improved safety and health standards.

6. 30 CFR Parts 75 and 77—Wire Rope Standards

Description: MSHA's current coal mine wire rope standards incorporate by reference the American National Standards Institute (ANSI) standard M.11.1 on wire ropes in mines. The proposal would revise the standards to include specific requirements for the selection, installation, use, inspection, maintenance, and removal of wire ropes used in underground and surface coal mines. A regulatory impact analysis is not required. MSHA expects to publish a proposed rule by the Spring of 1982.

Need and Legal Basis: In a recent decision, the Federal Mine Safety and Health Review Commission held that MSHA's coal mine wire rope standards are not mandatory. The proposal is necessary to correct any ambiguity in the existing method. It is authorized under Section 101 of the Mine Act which provides for new and improved safety and health standards.

5. 30 CFR Parts 55, 56, 57, 75 and 77—Revisions to Mandatory Safety Standards for Coal and Metal and Nonmetal Mines Based on Affirmative Decisions on Petitions for Modification of the Application of Standards

Description: Under Section 101(c) of the Mine Act, MSHA has granted many petitions for modification of the application of standards (variances) based on mine operators' implementation of alternative methods which reflect advances in technology. MSHA intends to review the standards for which modifications have been granted and determine which standards could be revised to allow the use of improved and alternative methods which provide adequate protection for miners. A regulatory impact analysis is not required. MSHA anticipates

publishing an advanced notice of proposed rulemaking by the Spring of 1982.

Need and Legal Basis: This regulation is necessary so that MSHA can revise its standards, as appropriate, to reflect technological advancements. This proposal is authorized under Section 101 of the Mine Act which provides for the promulgation of improved mandatory safety and health standards.

II. Labor-Management Services Administration, The Pension and Welfare Benefits Program

1. 29 CFR 2510.3-37—Multiemployer Plan

Description: Multiemployer employee benefit plans under ERISA must meet different rules and requirements than other employee benefit plans. Section 3(37) of ERISA defines, subject to regulations of the Secretary, when an employee benefit plan is a multiemployer plan. The existing regulation specifying the requirements that an employee benefit plan must meet in order to be a multiemployer plan under ERISA was published in both temporary and proposed form on November 7, 1975 (40 FR 52008). Different standards were set forth for plans in existence prior to the effective date of ERISA (September 2, 1974) and those not in existence at that time. The regulation was never finalized. In addition, the Multiemployer Pension Plan Amendments Act of 1980, Pub. L. 96-364, amended the definition of multiemployer plan.

Need and Legal Basis: Section 3(37)(A)(iii) of ERISA provides that a plan is multiemployer plan if, among other things, it "satisfies such other requirements as the Secretary may prescribe by regulation." In addition, the Secretary is given general authority in Section 505 to promulgate necessary and appropriate regulations. In light of the new law and the fact that the temporary regulation was never finalized, this regulation has been designated for review.

2. 29 CFR 2550.412-1—Bonding Requirements

Description: Section 412 of ERISA provides that, with certain exceptions, every fiduciary of an employee benefit plan and every person who handles funds or other property shall be bonded. The statute also provides that the Secretary shall prescribe regulations necessary to carry out this section, including exemptions from the bonding requirement in certain specified instances. On January 10, 1975 (40 FR 2203), the Department published

temporary regulations that were to be effective pending the issuance of permanent regulations. The temporary regulations in general, adopted the bonding requirements that were applicable under Section 13 of the Welfare and Pension Plans Disclosure Act Prior to ERISA.

Need and Legal Basis: Section 412(e) provides for the promulgation of regulations by the Secretary. In addition general authority exists under Section 505. Since this temporary regulation has never been finalized and a number of requests have been received for advisory opinions in this area, this regulation has been designated for review.

III. Occupational Safety and Health Administration

1. 29 CFR 1910.1001—Occupational Exposure to Asbestos

Description: OSHA's 1972 standard for asbestos established an 8-hour time-weighted (TWA) exposure limit of 5 fibers (longer than 5 micrometers) per cubic centimeter of air (5 f/cc), with a ceiling limitation against any exposure in excess of 10 fibers per cubic centimeter of air (10 f/cc). Under the 1972 standard, and effective as of 1976, that 8-hour TWA was reduced to 2 fibers per cubic centimeter of air (2 f/cc). On October 9, 1975 (40 FR 47652), OSHA issued a notice of proposed rulemaking to further lower the permissible exposure level (PEL) to 0.5 fibers per cubic centimeter of air (0.5 f/cc). In 1976, OSHA requested the National Institute for Occupational Safety and Health (NIOSH) to reevaluate information on asbestos and to advise OSHA of the findings. NIOSH recommended to OSHA that the PEL be lowered to 0.1 fibers per cubic centimeter of air (0.1 f/cc). A technological feasibility assessment and an economic impact analysis were prepared in September 1977 and 1978. In April 1980, OSHA announced that it would begin work on a proposed revision to the present standard. This decision was based on recommendations of an OSHA/NIOSH committee formed in 1979 to review scientific information on asbestos-related disease and to assess the adequacy of the current OSHA occupational health standard. A draft regulatory analysis was prepared in 1980 to address the proposed PELs of 0.5 f/cc of air and 0.1 f/cc of air. OSHA will continue to review the current asbestos standard during the next year, both under the standards set by Executive

Order 12291 and the Regulatory Flexibility Act.

Need and Legal Basis: This rule is needed because asbestos is a hazard to which many thousands of American workers are exposed. New research on the health hazards of asbestos, particularly its role as a cause of occupationally related cancer, and concern for the adequacy of the current standard have prompted Agency review of the PEL for asbestos. Recent epidemiologic evidence indicates that asbestos-related disease may be induced at very low levels of exposure, and experimental data in animals suggest that all forms of asbestos present a health hazard. The asbestos standard was promulgated pursuant to section 6 of the Occupational Safety and Health Act (hereinafter 29 U.S.C. 655).

29 CFR 1910.20—Access to Employee Exposure and Medical Records

Description: The standard on access to employee exposure and medical records was published in the Federal Register on May 21, 1980 (45 FR 35212). The standard went into effect on August 21, 1980. The standard requires employers to: (1) preserve and maintain exposure and medical records pertinent to an employee's occupational exposure to toxic substances and harmful physical agents; (2) assure access to pertinent exposure records by the exposed employee, similarly exposed employees, designated employee, representatives, and OSHA; (3) assure access to medical records by the employee who is the subject of the records and to OSHA; and (4) inform employees annually of their rights under the standard and of the requisite procedures for exercising those rights. On August 7, 1981, OSHA announced in the Federal Register (46 FR 40492) that the Agency has requested a six-month deferral of the briefing schedule from U.S. Court of Appeals for the District of Columbia in the consolidated challenges to the records access standard, *Industrial Union Department, AFL-CIO v. Marshall, No. 80-1550 et al.*, to permit the Agency an opportunity to decide whether and to what extent to repropose a modified records access standard.

Need and Legal Basis: This rule is needed because employee exposure and medical records are critically important to the detection, treatment, and prevention of occupational disease. OSHA believes that workers and their representatives need direct access to this information. Representatives of OSHA also need access to this information to fulfill responsibilities under the Occupational Safety and Health Act. The legal basis for this rule

is under Sections 6(b), 3(8), 2(b)(3), 2(b)(9), 8(c)(i) and 8(g)(2) of the Occupational Safety and Health Act.

3. 29 CFR 1910.1043—Occupational Exposure to Cotton Dust

Description: On March 31, 1981 (46 FR 19501), the Occupational Safety and Health Administration (OSHA) published an advance notice of proposed rulemaking to reevaluate and reconsider the occupational health standard regulating exposure to cotton dust. This standard prescribes levels of exposure from 0.2 to 0.75 milligrams per cubic meter of air (0.2–0.75 mg/m³) for different types of operations involving exposure to cotton dust. The purpose of the current proceeding is to review the economic consequences of the regulation and the cost-effectiveness of the standard. Public comments, suggestions, and information were invited and requested to be submitted by May 15, 1981. On June 17, 1981, the U.S. Supreme Court held that cost-benefit analysis in promulgating a standard under Section 6(b)(5) is not required by the OSH Act because feasibility analysis is required.

Need and Legal Basis: This rule is needed because cotton dust exposure presents a severe risk of debilitating respiratory disease, especially among cotton textile workers. The legal basis for this rule is 29 U.S.C. 655.

4. 29 CFR 1990—Identification, Classification and Regulation of Potential Occupational Carcinogens

Description: OSHA plans to reevaluate and reconsider the current standard for the identification, classification and regulation of potential occupational carcinogens. As a result of a July 1980 Supreme Court decision on OSHA's benzene standard, the Agency deleted portions of the current regulations to reflect the Court's finding that consideration must be given to the significance of risk in the issuance of carcinogen standards. The deletions were published on January 19, 1981 (46 FR 4889). Amendments to conform the carcinogen regulations to the Supreme Court's decision were proposed on January 23, 1981 (46 FR 7402) but were withdrawn on March 27, 1981 (46 FR 19000) to permit the Agency to address alternatives that had not been fully considered. The Agency plans to publish an advance notice of proposed rulemaking and request for comments in January 1982.

Need and Legal Basis: This rule is needed because OSHA needs to have a consistent method of dealing with the specific identification, classification and regulation of toxic substances for which

there is reported to be evidence of a carcinogenic potential to humans. The rule attempts to deal with the exposure of workers to toxic substances that may be potential carcinogens. The legal basis for this rule is 29 U.S.C. 655.

5. 29 CFR 1910.1018—Occupational Exposure to Inorganic Arsenic

Description: The Occupational Safety and Health Administration (OSHA) will publish a limited notice of rulemaking on the risk assessment of inorganic arsenic in December 1981. This notice will provide the scientific data and an analysis of the degree of risk due to exposure to inorganic arsenic as well as the scientific basis for justifying the current standard of 10 micrograms of arsenic per cubic meter of air (10 µg/m³). The notice will provide for public comment on the risk assessment. A hearing may be scheduled if requested. The Regulatory Flexibility Act review will be conducted in conjunction with the agency's over-all review.

Need and Legal Basis: This rule is needed because worker exposure to arsenic can result in the development of cancer. The legal basis for this rule is 29 U.S.C. 655.

6. 29 CFR 1910.1025—Occupational Exposure to Lead

Description: On April 21, 1981 (46 FR 22764), the Occupational Safety and Health Administration (OSHA) published an advance notice of proposed rulemaking to reevaluate and reconsider the occupational health standard regulating exposure to lead. The proposal provides for a permissible exposure limit (PEL) of 50 micrograms of lead per cubic meter of air (50 µg/m³) averaged over an 8-hour day, for control strategies for reducing lead exposures, and for medical removal protection. The purpose of this proceeding is to review and analyze the technological and economic feasibility of complying with the standard and to evaluate the feasibility and utility of relying on cost-benefit analysis in setting occupational health standards. Public comments, suggestions, and information were required to be received by June 1, 1981. On June 29, 1981, the U.S. Supreme Court upheld the lead standard for primary and secondary lead smelters, ink, paint, coatings and wallpaper manufacturers, and for electronic component and battery manufacturers. During the next year, OSHA will continue to review the feasibility and cost-effectiveness of the standard for lead industries, and will conduct a Regulatory Flexibility Act review in conjunction with its over-all review.

Need and Legal Basis: This rule is needed because exposure to lead presents severe health hazards to workers. The legal basis for this rule is 29 U.S.C. 655.

7. 29 CFR 1910.95—Occupational Exposure to Noise

Description: In 1974, the Occupational Safety and Health Administration (OSHA) proposed standards governing occupational noise exposure, which included a permissible exposure limit (PEL) of 90 dB, as an 8-hour time-weighted average (TWA), and requirements for establishing hearing conservation programs. Public hearings were held during 1975 and 1976. On January 16, 1981 (46 FR 4078), OSHA published a final hearing conservation amendment as a final rule and a regulatory impact analysis of the amendment. This amendment was directed toward establishing hearing conservation programs for employees to prevent occupational hearing loss. Since January, the Agency received numerous petitions for an administrative stay and reconsideration of the hearing conservation amendment. In order to evaluate those petitions and to comply with Executive Order 12291, the Agency delayed the effective date from April 15 to June 1, 1981; from June 1 to August 1, 1981; and from August 1 to August 22, 1981. A regulatory impact and regulatory flexibility analysis was performed and published on August 21, 1981 (46 FR 42622). OSHA will continue to evaluate and study those stayed requirements of the amendment that did not go into effect on August 22, 1981.

Need and Legal Basis: This rule is needed because there are over 900,000 Americans who suffer a moderate to severe hearing loss due to exposure to occupational noise. Epidemiological and laboratory evidence indicates that protracted noise exposures above 90 dB cause hearing loss in a substantial portion of the exposed population and that more susceptible individuals will incur hearing loss at levels below 90 dB. Noise-induced hearing loss is an irreversible condition that progresses with increased exposure and with age. Because hearing is essential for communication, hearing loss can lead to serious social and psychological handicaps. The legal basis for this rule is 29 U.S.C. 655.

8. 29 CFR 1910.134; 1926.103; 1915.82; 1916.82; 1917.82, and 1918.102—Respiratory Protection

Description: On May 19, 1981 (46 FR 27356), OSHA proposed to permit specific methods of qualitative fit testing in lieu of the quantitative fit testing.

procedures currently required by the lead standard (29 CFR 1910.1025(f)(3)(iii)). Quantitative fit testing requires special equipment to assign a numerical value to the protection afforded the wearer; qualitative fit testing relies on the subjective reaction of a wearer to an irritant fume or other test substance. The agency invited public comment on its proposal and received several requests for a public hearing, which was held in September 1981. In addition, OSHA is building a public record to ascertain what changes should be made to present regulations for respiratory protection in general. A Regulatory Flexibility Act review will be conducted in conjunction with the overall review of the present regulations.

Need and Legal Basis: This rule is needed because respirators are effective for protecting workers only when they are properly fitted to the wearer, properly used, and properly maintained. These rules help employers provide adequate respiratory protection for employees. The legal basis for this rule is 29 U.S.C. 655.

9. 29 CFR Part 1910, Subpart H—Hazardous Materials Description: The current standards address the hazards associated with compressed gases, flammable and combustible liquids, including those used in spray finishing or dip tank operations, explosives and blasting agents, liquified petroleum gases and anhydrous ammonia. These standards were originally promulgated in 1971 based on the then existing national consensus standards.

Need and Legal Basis: This rule is needed because of the hazards associated with workers handling of substances such as compressed gases, flammable and combustible liquids, and explosives. The legal basis for the rule is 29 U.S.C. 655.

10. 29 CFR Part 1926, Subpart Q—Concrete, Concrete Forms and Shoring

Description: Present standards set forth safe work practices for the erection of concrete and masonry buildings and structures.

Need and Legal Basis: This rule is needed because of the number of building collapses and other structure collapses. The legal basis for this rule is 29 U.S.C. 655.

11. 29 CFR Part 1910, Subpart N—Materials Handling and Storage

Description: Present standards address safe design and safe work practices for storage and handling of materials. The standards also address the safe design, maintenance, and use of

motorized materials handling equipment.

Need and Legal Basis: This rule is needed because of the occupational hazards related to improper handling and storage of materials and failures of material handling equipment. The legal basis for this rule is 29 U.S.C. 655.

12. 29 CFR 1910.177—Servicing Multi-Piece Rim Wheels

Description: Present standards set forth safe work practices design for servicing tires on multi-piece rim wheels. The standard sets training requirements for those who service multi-piece rim wheels.

Need and Legal Basis: This rule is needed because of worker accidents and injuries resulting from the servicing of multiple and single piece rim wheels. The legal for this rule is 29 U.S.C. 655.

13. 29 CFR Part 1926, Subpart L—Ladders and Scaffolding

Description: Present standards address safe work practices for employees who use portable and fixed ladders and scaffolds. The standard sets forth design load criteria and care and use of equipment. These standards were originally promulgated in 1971 under in the Construction Safety Act.

Need and Legal Basis: This rule is needed because of the numerous occupational injuries and deaths from accidents and falls associated with unsafe ladders and scaffolding in the general industry and in construction. The legal basis for this rule is 29 U.S.C. 655.

14. 29 CFR Part 1910, Subpart D—Walking-Working Surfaces

Description: Present standards address the design, maintenance and use of walking-working surfaces. These standards set forth fall protection measures for walking-working surfaces and address fall hazards on the same level, as well as falls to different levels. These standards were originally promulgated in 1971 based on the then existing national consensus standards.

Need and Legal Basis: This rule is needed because of the number of occupational injuries and deaths due to accidents and falls associated with unsafe walking and working surfaces in the general industry and in construction. The legal basis for this rule is 29 U.S.C. 655.

15. 29 CFR Part 1926, Subpart K—Electrical

Description: Present standards address safe design and installation for electrical wiring and electrically

energized equipment. The standard sets forth design criteria for temporary and permanent electrical installations.

Need and Legal Basis: This rule is needed because of the injuries and fatalities associated with temporary and permanent electrical installation used on the jobsite. The legal basis for this rule is 29 U.S.C. 655.

16. 29 CFR Part 1910, Subpart T—Commercial Diving Operations

Description: The current standards specify safe work practices for commercial diving operations as well as requirements for equipment and maintenance and recordkeeping and reporting. These standards were originally promulgated in 1977.

Need and Legal Basis: This rule is needed because of the safety and health hazards associated with commercial diving operations. The legal basis for this rule is 29 U.S.C. 655.

17. 29 CFR Part 1926, Subpart M—Floor and Wall Openings

Description: These standards address safety hazards associated with the danger of employees or materials falling through or from floors, roofs or wall openings or from stairways and other points of access. These standards were originally promulgated in 1971 under the Construction Safety Act.

Need and Legal Basis: This rule is needed because of the occupational injuries and deaths resulting from accidents and falls associated with unsafe floor and wall openings in the general industry and in construction. The legal basis for this rule is 29 U.S.C. 655.

18. 29 CFR Part 1926, Subpart S—Tunnels and Shafts, Caissons, Cofferdams and Compressed Air

Description: Present standards address construction activities underground and under water areas in cofferdams and similar areas. The present standards address safe conditions and work practices for structures and employees within these work areas. These standards were originally promulgated under the Construction Safety Act in 1971.

Need and Legal Basis: This rule is needed because of the safety and health hazards associated with work performed in tunnels and shafts, caissons and coffer-dams, and with compressed air. The legal basis for this rule is 29 U.S.C. 655.

19. 29 CFR Part 1910, Subpart O—Machinery and Machine Guarding

Description: Present standards address safe design, maintenance, care

and use of machinery. These standards also set forth machine guarding criteria for power transmission and point-of-operation guarding of fixed machinery. These standards were originally promulgated in 1971 based on the then existing national consensus standards with some more recent changes.

Need and Legal Basis: This rule is needed because of the occupationally related injuries and deaths associated with unguarded and poorly maintained machinery. The legal basis for this rule is 29 U.S.C. 655.

20. 29 CFR Part 1926, Subpart P—Excavation, Trenching and Shoring

Description: Subpart P, Excavation, Trenching and Shoring, is comprised of four sections, §§ 1926.650 through 1926.653. Section titles are: General protection requirements; Specific excavation requirements; Specific trenching requirements; and Definitions applicable to the subpart. Basically, the subpart requires that all trenches and/or excavations over five feet in depth be shored or the sidewalls sloped.

Need and Legal Basis: This rule is needed because of trench and excavation sidewall failures that have resulted in death and injury to workers. The percentage of such failures is unknown, but deaths resulting from these accidents exceed 100 each year. The changes, additions, and clarifications in the standard will provide a flexibility to the user that will allow for the use of more advanced technological solutions to the problems of shoring trenches and excavations. The legal basis for this rule is 29 U.S.C. 655.

IV. Employment and Training Administration

1. 20 CFR Part 615—Extended Benefits

Description: The regulation implements the Federal-State Extended Unemployment Compensation Act of 1970, and amendments thereto. The act requires States to provide for payment of Extended Benefits during periods of high unemployment to persons who have exhausted their regular benefits.

Need and Legal Basis: The regulations are necessary to clarify many terms and effective dates in the law. The legal basis for the rule is the Federal-State Extended Unemployment Compensation Act of 1980, which was Title II of Pub. L. 91-373, and amendments thereto.

2. 20 CFR Part 616—Combined Wage Claims

Description: Implementing regulations were promulgated on December 28, 1971 (36 FR 24991), and amended

periodically. They approve and implement an arrangement between the States to combine all employment and wages in all States for an individual who worked in more than one State. All changes in the arrangement are developed jointly by the Secretary of Labor and the participating State agencies, as needed to meet operating problems.

Need and Legal Basis: The rule is needed to establish the basic policies that are binding upon the Federal and State partners. The legal basis for the rule is section 3304(9)(B) of the Internal Revenue Code of 1954.

3. 20 CFR Part 618—Federal Supplemental Benefits

Description: Implementing regulations were promulgated February 6, 1975 (40 FR 5498), and amended March 23, 1976 (41 FR 12152). A notice to be published in the Federal Register will serve to officially cancel the enabling regulations for this program.

Need and Legal Basis: The Emergency Unemployment Compensation Act of 1974 was Pub. L. 93-572 (88 Stat. 1869). It created a temporary program to pay extended benefits during periods of high unemployment to individuals who were unemployed and had exhausted all other regular and extended unemployment compensation. The program operated from January 1, 1975 to March 31, 1977. All benefit payment processes have been completed.

4. 20 CFR Part 619—Special Unemployment Assistance

Description: Implementing regulations were promulgated February 6, 1975 (40 FR 5502), and subsequently amended March 23, 1976 (41 FR 12162). A notice to be published in the Federal Register will serve to officially cancel the enabling regulations for this program.

Need and Legal Basis: Title II of the "Emergency Jobs and Unemployment Assistance Act of 1974" contained in Pub. L. 93-567 and amended Pub. L. 94-32 and Pub. L. 94-45, created a temporary program of Special Unemployment Assistance (SUA) for individuals who were unemployed during a period of aggravated unemployment and were not otherwise eligible for unemployment compensation under any other State or Federal Law. The program was operational commencing with the week beginning December 22, 1974. No further benefits were payable for any week of unemployment ending after June 30, 1977, thus terminating the program. All benefit payment and appellate processes have been completed.

DEPARTMENT OF LABOR

Occupational Safety and Health
Administration

29 CFR Part 1990

[Docket No. H090C]

Identification, Classification and
Regulation of Potential Occupational
Carcinogens

AGENCY: Occupational Safety and
Health Administration (OSHA), Labor.

ACTION: Advance notice of proposed
rulemaking and proposal for partial stay
pending completion of rulemaking
proceedings.

SUMMARY: The Occupational Safety and
Health Administration is considering
rulemaking proceedings, under Section 6
of the Occupational Safety and Health
Act of 1970 and pursuant to 29 CFR
1990.106(b)(3), to reevaluate certain
provisions of the generic standard,
Identification, Classification and
Regulation of Potential Occupational
Carcinogens—the "Carcinogen Policy"—
29 CFR Part 1990. This reevaluation is to
determine the need for modification
based on recent Supreme Court

decisions, public requests for review and the Agency's own experience. The Agency is considering possible changes to improve the cost-effectiveness of regulation under the Policy to coordinate the Policy with relevant portions of Executive Order 12291. The provisions for scientific review, for setting priorities and making the selection of substances public, and for limiting the use of certain kinds of scientific evidence are also being evaluated. Comments are invited on the scope of the reevaluation of the Carcinogen Policy.

OSHA also proposes to stay the requirements of the Policy relating to the establishment and publication of the Candidate List and Priority Lists for the duration of the comment period on this advance notice and during any rulemaking proceedings which may follow. Other provisions of the Policy will continue in effect under the terms of this proposed stay.

DATES: Comments on suggested changes to the standard must be submitted by April 5, 1982. Comments concerning the issuance of a stay on the requirements to establish and publish the Candidate and Priority Lists must be submitted by February 19, 1982.

ADDRESSES: Comments, data and information should be submitted to the Docket Officer, Occupational Safety and Health Administration, Docket No. H290C, Room S6212, U.S. Department of Labor, 3rd St. and Constitution Avenue NW., Washington, D.C. 20210, where they will be available for inspection and copying.

FOR FURTHER INFORMATION CONTACT: James Foster, Occupational Safety and Health Administration, Room N3637, U.S. Department of Labor, 3rd St. and Constitution Avenue NW., Washington, D.C. 20210, telephone (202) 523-8148.

SUPPLEMENTARY INFORMATION:

Background

OSHA published the standard, Identification, Classification and Regulations of Potential Occupational Carcinogens—the "Carcinogen Policy"—as 29 CFR Part 1990 on January 22, 1980 (45 FR 5001 *et seq.*) The stated purposes of the Policy are to streamline the regulatory process and provide predictable and uniform criteria for identifying and regulating substances as occupational carcinogens.

The Policy includes criteria and scientific policies for identifying and classifying a substance as a potential occupational carcinogen. It includes a screening and priority setting process to be followed in determining whether a proposed standard on a potential carcinogen should be issued. Guidelines

are included on the substantive provisions of a proposed standard and are generally non-binding except for provisions giving preference to engineering and work practice controls. Certain procedures are included for issuing advance notices of proposed rulemaking, and for considering new scientific information and for setting time periods for comments and actions. Provisions are also included for amending the Policy and for scientific review by government scientists outside OSHA. The Policy does not, by itself, regulate specific substances. For a detailed explanation of the Policy see 29 CFR Part 1990, 45 FR 5001, January 22, 1980, as amended by 46 FR 4889, January 19, 1981.

On August 12, 1980, OSHA published a Candidate List (45 FR 53672) as part of the priority setting process. OSHA listed the substances which were candidates for further scientific review after conducting a brief scientific review of "available positive data" (as defined in the Policy, 45 FR 5209 and § 1980.121).

Since its effective date of April 21, 1980, the Policy has been modified in light of the Supreme Court's decision in *Industrial Union Department, AFL-CIO v. American Petroleum Institute (IUD v. API)* 448 U.S. 607 (1980). Provisions of the Policy that were inconsistent with that decision regarding OSHA's benzene standard, were deleted (46 FR 4889, January 19, 1981). Among the deleted provisions was one that required worker's exposure to carcinogens automatically to be set at the lowest feasible levels. Another provision that was deleted automatically characterized all carcinogens as presenting a grave danger. Furthermore, the Agency published additional proposed amendments to the Policy on January 23, 1981, (46 FR 7402), which were later withdrawn (46 FR 19000, March 27, 1981).

The Carcinogen Policy remains the subject of several court challenges. These challenges have been consolidated in the United States Court of Appeals for the Fifth Circuit in *American Petroleum Institute et al. v. OSHA et al.*, Nos. 80-3018, et al. The litigation is still in a preliminary stage, and no decision on the legal merits of the Policy has issued, nor is expected in the near future.

Reasons for Considering a Proposed Rulemaking

OSHA is considering reevaluating the Carcinogen Policy for a number of reasons, including the following:

1. To assure consistency with Supreme Court decisions.

2. To consider more cost-effective means of achieving the regulation of occupational carcinogens.

3. To consider modifications based on OSHA's experience under the existing policy e.g., the priority system, and additional policy considerations.

4. To consider and respond to any advances or changes in the science of carcinogenesis, including quantitative risk assessment, occurring since the closing of the record in 1979.

5. To respond to the requirements of Executive Order 12291.

Summary of Issues for Which Submissions of Comments, Data and Information are Requested

This summary is representative only. OSHA invites the submission of comments and data on all aspects of the Policy.

1. How should OSHA consider the cost-effectiveness of provisions which are incorporated into a standard regulating carcinogens under the Policy?

The Policy preamble and standard do not explicitly address methods of obtaining required levels of employee protection at lower cost. Appropriate areas for consideration of cost-effective approaches may include methods of compliance with the exposure limits in a standard. One such approach might utilize a combined strategy of engineering controls, work practices, personal protective equipment and medical surveillance. Greater use of action levels, percentage exclusions (see the discussion at 45 FR 5242) and performance language in the model standard, if one is to be retained, also may increase cost-effectiveness. In addition, more performance oriented standards may encourage cooperative efforts between employees and employers, which should lead to better protection in a more cost-effective manner. OSHA solicits comments on the approaches suggested, and any other suggestions to incorporate considerations of cost-effectiveness into this Policy.

2. Is it proper or appropriate for OSHA to retain the requirement for setting a no-exposure level where a suitable substitute exists for a use or a process of a potential occupational carcinogen?

The Policy now requires OSHA to assess whether the significance of the carcinogenic risk warrants the imposition of a no-exposure level for uses or processes involving a carcinogen, where a suitable substitute exists. Industrial hygienists generally state that substitution is a preferred compliance strategy because it

precludes the possibility of exposure from mechanical breakdown or human error. Some commenters suggest that it is difficult to evaluate the suitability of substitutes and that considerable disruption to industrial processes may occur when substitutes originally deemed to be suitable replacements are not actually adequate. It is also argued that this provision is unnecessary, since market pressure would generally force substitution when it is feasible. OSHA invites additional comments on these issues.

3. Should OSHA amend the provisions for the review and utilization of negative (non-positive) animal and human data?

Under the current policy, negative (non-positive) data are given less evidentiary value than positive data in making Agency decisions on identifying, classifying and regulating substances as potential occupational carcinogens. The basis for this preference is the scientific generalization that positive studies are more persuasive than negative studies. Moreover, it is alleged that negative studies typically have a low degree of sensitivity for detecting an increased risk of cancer.

The Policy provides that only positive data will be used in the initial screening of the large number of chemicals in order to determine which will be placed on the Candidate List for further scientific review. The preamble states that for purposes of creating Priority Lists the Secretary is "to thoroughly review all of the relevant and meaningful scientific and technological evidence" (45 FR 5210).

The Policy also provides that (except for significant risk determinations) negative studies in humans must meet stringent criteria before consideration. Negative animal studies are to be evaluated in relationship to positive studies in the same species, but not in relationship to positive studies in different species.

Comments are requested on the appropriate procedures for evaluating the relationship between positive and negative data. Should these procedures, which currently give positive and negative data different weights at different stages in the regulatory process, be modified? If so, what scientific criteria are appropriate for evaluating negative studies and for determining their relative weight in the decision-making process?

4. Should OSHA alter or continue its process for reviewing data on the substantial number of substances for which there is some evidence of carcinogenicity, and for setting priorities?

The Policy establishes a three stage review process for screening the substantial number of substances for which there is some evidence of carcinogenicity. The first stage, limited to a brief review of certain available data, culminates in the preparation and publication of a Candidate List. OSHA completed that stage and published the first Candidate List of approximately 200 substances in August, 1980. Public comment was requested and reviewed.

At the second stage, OSHA performs a more searching scientific review, and applies priority factors set out in § 1990.132, which include the estimated number of employees exposed, their levels of exposure, and the levels reported to cause an increased incidence of neoplasms. The second stage culminates in the selection of ten Category I and ten Category II substances for inclusion on two Priority Lists. OSHA has not yet prepared these lists for public comment.

At the third stage, the Assistant Secretary for Occupational Safety and Health selects high priority substances for rulemaking, as appropriate, based on the application of the priority factors, scientific judgment, policy considerations and public comment received after publication of the Priority Lists.

Suggestions have been received which argue that the review process should be divided into separate scientific and regulatory stages, and that an outside panel should perform the scientific evaluation. In addition, required publication of the Candidate List, and especially the Priority Lists, has been seriously questioned. The basis of the concern is that the Lists are preliminary since they are published before OSHA fully evaluates all available evidence. A serious concern is that the public will perceive the Lists as the Government's conclusions that substances are carcinogens, possibly leading to undue and unwarranted concern or "cancer scares."

Comments are also requested on the screening and priority setting process, established in the current Policy. What have been the effects of the publication of the Candidate List in August 1980? Suggestions are requested on methods of involving the public in the screening and review process prior to rulemaking, without publication of the lists (or results) at varying stages of the process.

5. How should OSHA incorporate the provisions of Executive Order 12291, including cost/benefit analysis, in its priority setting process?

The Supreme Court, in *American Textile Manufacturers Institute (ATMI) v. Donovan*, 101 S. Ct. 2478 (1981)

permits OSHA to utilize cost/benefit analysis in setting priorities. Executive Order 12291 (46 FR 13193, February 19, 1981) sets an analytic framework for performing cost/benefit analysis and evaluating regulatory alternatives. Some of the factors listed in the Policy for setting priorities would be relevant to performing cost/benefit analysis. They include whether controlling a carcinogen would reduce other occupational and environmental risks and the costs. Comments are requested on the appropriate framework for incorporating a cost/benefit approach in the prioritization process. Comments are also requested on incorporating the analytic framework of Executive Order 12291 in the priorities setting process of the Policy consistent with *ATMI v. Donovan*.

6. Should the Policy specify methods or techniques of quantitative risk assessment and significant risk determinations?

The Policy preamble has an extensive discussion of risk assessment techniques and uncertainties (45 FR 5178-5201). As amended in light of *IUD v. API*, the Policy permits OSHA to consider all relevant evidence in making risk assessments § 1990.111(j) as amended at 46 FR 4809 for purposes of priority setting and to assess the significance of the risk in rulemaking. However no specific methods of performing risk assessments or significant risk determinations are contained in the language of the Policy.

Comments are requested on techniques of quantitative risk assessment, and their reliability. In addition, comments are requested on methods of assessing the significance of the risk, and the value of incorporating guidelines on these matters into the Policy.

Other Matters

In addition to specific responses to the questions posed in this notice and to other relevant issues, and in accordance with the provisions of the Regulatory Flexibility Act (Pub. L. 96-354, 95 Stat. 1164, 5 U.S.C. 601 *et seq.*) and Executive Order No. 12291, OSHA also requests information regarding the economic impact which any changes might have on affected industries and, in particular, small businesses.

The preamble to the final Carcinogen Policy concluded that economic analysis would be performed at the later stage of regulating specific carcinogens. This conclusion was based on the availability of data at that time and on the argument that no direct cost burdens are imposed by the Policy.

Representatives of industry argued that economic analysis should be performed at the earlier policy stage to indicate possible overall economic effects, and that this would show that a cost-benefit approach to regulation should be adopted.

Subsequently, in two major decisions, the Supreme Court substantially changed the legal context of this debate. In *IUD v. API*, *supra*, the Court held that the Agency had to demonstrate significant risk before regulating hazards. Consequently, OSHA eliminated provisions of the Policy which would automatically require the Agency to reduce workers' exposure to the lowest feasible level without consideration of the significance of the risk. In *ATMI v. Donovan*, *supra*, the Court held that the OSH Act requires that exposure levels be reduced to levels limited by the significance of the risk and by feasibility but not by cost-benefit considerations.

Within this changed context, and the applicable Administration policies stated in Executive Order 12291, OSHA requests comment on what is the appropriate kind of economic analysis for an amended Policy? If the Policy should concentrate on scientific issues and leave specific regulatory policy issues to individual rulemakings, would the same comments apply? Should modifications to the Policy be made to facilitate economic analysis at all stages and, if so, what changes are recommended?

OSHA concluded that environmental issues are to be considered in the context of regulation of specific carcinogens. The Agency prepared an environmental impact statement, however, which generally and qualitatively assessed the impact of specific policies on the internal and external environment (see discussion at 45 FR 5254, January 22, 1980). OSHA requests the public to submit comments and data concerning the environmental impact of any suggested changes to the Policy.

Proposed Partial Stay Pending Reevaluation and Rulemaking

Pending the reconsideration of the entire Policy, including any related rulemaking, OSHA hereby proposes to stay the provisions of the Policy requiring OSHA to establish and publish in the Federal Register the Candidate List and the Priority Lists. These provisions of the Carcinogen Policy are found in 29 CFR 1990.121, 122, 131 and 133. OSHA believes that these provisions should be stayed so that the Agency can fully evaluate the actual impact of the published Candidate List,

the possible impact of publishing the Priority Lists (before any further publication occurs), and the underlying criteria for inclusion of substances of these Lists.

At this time OSHA believes that a stay should be limited to the provisions concerning the Candidate and Priority Lists, and that all other provisions of the Cancer Policy should continue in effect during this period of reconsideration.

OSHA invites the public to comment on this proposal to issue a partial stay. OSHA will carefully evaluate all comments, which are submitted on time, before it determines whether such a stay should be issued.

Comments on the proposed partial stay must be submitted by February 19, 1982. Comments on possible changes to the Policy must be submitted by April 5, 1982. All comments should be sent to the Docket Officer, Occupational Safety and Health Administration, Docket H090C, Rm. S6212, U.S. Department of Labor, 3rd St. and Constitution Ave. NW., Washington, D.C. 20210.

Authority

This document was prepared under the direction of Thorne G. Auchter, Assistant Secretary of Labor for Occupational Safety and Health, 200 Constitution Avenue NW., Washington, D.C. 20210. It is issued pursuant to Sections 6(b), 6(c) and 8(g) of the Occupational Safety and Health Act (84 Stat. 1593; 29 U.S.C. 655), 29 CFR 1990.106(b)(3), and the Administrative Procedure Act.

Signed at Washington, D.C., this 29th day of December 1981.

Thorne G. Auchter,

Assistant Secretary of Labor.

(FR Doc. 81-37173 Filed 12-31-81; 8:45 am)

BILLING CODE 4510-26-M

GENERAL INDUSTRY

STANDARDS AND INTERPRETATIONS

VOLUME I

CAPCO JEN 0002736

STANDARDS AND INTERPRETATIONS

(c) **Table Z-3:** An employee's exposure to any material listed in table Z-3, in any 8-hour work shift of a 40-hour work week, shall not exceed the 8-hour time weighted average limit given for that material in the table.

TABLE Z-3—MINERAL DUSTS

Substance	Mppcf *	Mg/M ³
Silica:		
Crystalline:		
Quartz (respirable).....	250 †	10mg/M ³ =
	$C\%SiO_2+5$	$C\%SiO_2+2$
Quartz (total dust).....		30mg/M ³
		$C\%SiO_2+2$
Cristobalite: Use $\frac{1}{2}$ the value calculated from the count or mass formulae for quartz.		
Tridymite: Use $\frac{1}{2}$ the value calculated from the formulae for quartz.		
Amorphous, including natural diatomaceous earth.....	20	80mg/M ³
		$C\%SiO_2$
Silicates (less than 1% crystalline silica):		
Mica.....	20	
Soapstone.....	20	
Talc (non-asbestos-form) ..	20 ^a	
Talc (fibrous). Use asbestos limit		
Tremolite (see talc, fibrous)		
Portland cement.....	50	
Graphite (natural).....	15	
Coal dust (respirable fraction less than 5% SiO ₂).....		2.4mg/M ³ or
		10mg/M ³
For more than 5% SiO ₂		$C\%SiO_2+2$
Inert or Nuisance Dust:		
Respirable fraction.....	15	5mg/M ³
Total dust.....	50	15mg/M ³

NOTE: Conversion factors—
mppcf $\times 35.3$ = million particles per cubic meter
= particles per c.c.

* Millions of particles per cubic foot of air, based on impinger samples counted by light-field techniques.

† The percentage of crystalline silica in the formula is the amount determined from air-borne samples, except in those instances in which other methods have been shown to be applicable.

‡ Both concentration and percent quartz for the application of this limit are to be determined from the fraction passing a size-selector with the following characteristics:

^a Containine < 1% quartz; if > 1% quartz, use quartz limit.

(d) Computation formulae:

(1)

(i) The cumulative exposure for an 8-hour work shift shall be computed as follows:

$$E = \frac{C_1T_1 + C_2T_2 + \dots + C_nT_n}{8}$$

where:

E is the equivalent exposure for the working shift

C is the concentration during any period of time T where the concentration remains constant.

T is the duration in hours of the exposure at the concentration C .

The value of E shall not exceed the 8-hour time weighted average limit in table Z-1, Z-2, or Z-3 for the material involved.

(ii) To illustrate the formula prescribed in subdivision (i) of this subparagraph, note that isoamyl acetate has an 8-hour time weighted average limit of 100 p.p.m. (table Z-1). Assume that an employee is subject to the following exposure:

Two hours exposure at 150 p.p.m.

Two hours exposure at 75 p.p.m.

Four hours exposure at 50 p.p.m.

Substituting this information in the formula, we have

$$\frac{2 \times 150 + 2 \times 75 + 4 \times 50}{8} = 81.25 \text{ p.p.m.}$$

Since 81.25 p.p.m. is less than 100 p.p.m., the 8-hour time weighted average limit, the exposure is acceptable.

(2)

(i) In case of a mixture of air contaminants an employer shall compute the equivalent exposure as follows:

$$E_m = \frac{C_1}{L_1} + \frac{C_2}{L_2} + \dots + \frac{C_n}{L_n}$$

where:

E_m is the equivalent exposure for the mixture.

C is the concentration of a particular contaminant.

L is the exposure limit for that contaminant, from table Z-1, Z-2, or Z-3.

STANDARDS AND INTERPRETATIONS

The value of E_m shall not exceed unity (1).

(ii) To illustrate the formula prescribed in subdivision (i) of this subparagraph, consider the following exposures:

Material	Actual concentration of 8-hour exposure	8-hour time weighted average exposure limit
Acetone (Table Z-1)	300 p.p.m.	1,000 p.p.m.
2-Butanone (Table Z-1)	45 p.p.m.	200 p.p.m.
Toluene (Table Z-2)	40 p.p.m.	200 p.p.m.

Substituting in the formula, we have:

$$E_m = \frac{300}{1,000} + \frac{45}{200} + \frac{40}{200}$$

$$E_m = 0.300 + 0.225 + 0.200$$

$$E_m = 0.925$$

Since E_m is less than unity (1), the exposure combination is within acceptable limits.

(e) To achieve compliance with paragraph (a) through (d) of this section, administrative or engineering controls must first be determined and implemented whenever feasible. When such controls are not feasible to achieve full compliance, protective equipment or any other protective measures shall be used to keep the exposure of employees to air contaminants within the limits prescribed in this section. Any equipment and/or technical measures used for this purpose must be approved for each particular use by a competent industrial hygienist or other technically qualified person. Whenever respirators are used, their use shall comply with § 1910.134.

1910.1001—ASBESTOS

(a) Definitions.

For the purpose of this section.

(1) "Asbestos" includes chrysotile, amosite, crocidolite, tremolite, anthophyllite, and actinolite.

(2) "Asbestos fibers" means asbestos fibers longer than 5 micrometers.

(b) Permissible exposure to airborne concentrations of asbestos fibers.

(1) **Standard effective July 7, 1972.** The 8-hour time-weighted average airborne concentrations of asbestos fibers to which any employee may be exposed shall not exceed five fibers, longer than 5 micrometers, per cubic centimeter of air, as determined by the method prescribed in paragraph (e) of this section.

(2) **Standard effective July 1, 1976.** The 8-hour time-weighted average airborne concentrations of asbestos fibers to which any employee may be exposed shall not exceed two fibers, longer than 5 micrometers, per cubic centimeter of air, as determined by the method prescribed in paragraph (e) of this section.

(3) **Ceiling concentration.** No employee shall be exposed at any time to airborne concentrations of asbestos fibers in excess of 10 fibers, longer than 5 micrometers, per cubic centimeter of air, as determined by the method prescribed in paragraph (e) of this section.

(c) Methods of compliance.

(1) Engineering methods.

(i) **Engineering controls.** Engineering controls, such as, but not limited to, isolation, enclosure, exhaust ventilation, and dust

STANDARDS AND INTERPRETATIONS

collection, shall be used to meet the exposure limits prescribed in paragraph (b) of this section.

(ii) **Local exhaust ventilation.**

(a) Local exhaust ventilation and dust collection systems shall be designed, constructed, installed, and maintained in accordance with the American National Standard Fundamentals Governing the Design and Operation of Local Exhaust Systems, ANSI Z9.2-1971, which is incorporated by reference herein.

(b) See § 1910.6 concerning the availability of ANSI Z9.2-1971, and the maintenance of a historic file in connection therewith. The address of the American National Standards Institute is given in § 1910.100.

(iii) **Particular tools.** All hand-operated and power-operated tools which may produce or release asbestos fibers in excess of the exposure limits prescribed in paragraph (b) of this section, such as, but not limited to, saws, scorers, abrasive wheels, and drills, shall be provided with local exhaust ventilation systems in accordance with subdivision (ii) of this subparagraph.

(2) **Work practices.**

(i) **Wet methods.** Insofar as practicable, asbestos shall be handled, mixed, applied, removed, cut, scored, or otherwise worked in a wet state sufficient to prevent the emission of airborne fibers in excess of the exposure limits prescribed in paragraph (b) of this section, unless the usefulness of the product would be diminished thereby.

(ii) **Particular products and operations.** No asbestos cement, mortar, coating, grout, plaster, or similar material containing asbestos shall be removed from bags, cartons, or other containers in which they are shipped, without being either wetted, or enclosed, or ventilated so as to prevent effectively the release of airborne asbestos fibers in excess of the limits prescribed in paragraph (b) of this section.

(iii) **Spraying, demolition, or removal.** Employees engaged in the spraying of asbestos, the removal, or demolition of pipes, structures, or equipment covered or insulated with asbestos, and in the removal or demolition of asbestos insulation or coverings shall be provided with respiratory equipment in accordance with paragraph (d)(2)(iii) of this section and with special clothing in accordance with paragraph (d)(3) of this section.

(d) **Personal protective equipment.**

(1) Compliance with the exposure limits prescribed by paragraph (b) of this section may not be achieved by the use of respirators or shift rotation of employees, except:

(i) During the time period necessary to install the engineering controls and to institute the work practices required by paragraph (c) of this section;

(ii) In work situations in which the methods prescribed in paragraph (c) of this section are either technically not feasible or feasible to an extent insufficient to reduce the airborne concentrations of asbestos fibers below the limits prescribed by paragraph (b) of this section; or

(iii) In emergencies.

(iv) Where both respirators and personnel rotation are allowed by subdivisions (i), (ii), or (iii) of this subparagraph, and both are practicable, personnel rotation shall be preferred and used.

(2) Where a respirator is permitted by subparagraph (1) of this paragraph, it shall be selected from among those approved by the Bureau of Mines, Department of the Interior, or the National Institute for Occupational Safety and Health, Department of Health, Education, and Welfare, under the provisions of 30 CFR Part 11 (37 F.R. 6244, Mar. 25, 1972), and shall be used in accordance with subdivisions (i), (ii), (iii), and (iv) of this subparagraph.

(i) **Air purifying respirators.** A reusable or single use air purifying respirator, or a

STANDARDS AND INTERPRETATIONS

respirator described in subdivision (ii) or (iii) of this subparagraph, shall be used to reduce the concentrations of airborne asbestos fibers in the respirator below the exposure limits prescribed in paragraph (b) of this section, when the ceiling or the 8-hour time-weighted average airborne concentrations of asbestos fibers are reasonably expected to exceed no more than 10 times those limits.

(ii) **Powered air purifying respirators.** A full facepiece powered air purifying respirator, or a powered air purifying respirator, or a respirator described in subdivision (iii) of this subparagraph, shall be used to reduce the concentrations of airborne asbestos fibers in the respirator below the exposure limits prescribed in paragraph (b) of this section, when the ceiling or the 8-hour time-weighted average concentrations of asbestos fibers are reasonably expected to exceed 10 times, but not 100 times, those limits.

(iii) **Type "C" supplied-air respirators, continuous flow or pressure-demand class.** A type "C" continuous flow or pressure-demand, supplied-air respirator shall be used to reduce the concentrations of airborne asbestos fibers in the respirator below the exposure limits prescribed in paragraph (b) of this section, when the ceiling or the 8-hour time-weighted average airborne concentrations of asbestos fibers are reasonably expected to exceed 100 times those limits.

(iv) **Establishment of a respirator program.**

(a) The employer shall establish a respirator program in accordance with the requirements of the American National Standard Practices for Respiratory Protection, ANSI Z88.2-1969, which is incorporated by reference herein.

(b) See § 1910.6 concerning the availability of ANSI Z88.2-1969 and the maintenance of an historic file in connection therewith. The address of the American National Standards Institute is given in § 1910.100.

(c) No employee shall be assigned to tasks requiring the use of respirators if, based upon his most recent examination, an examining physician determines that the employee will be unable to function normally wearing a respirator, or that the safety or health of the employee or other employees will be impaired by his use of a respirator. Such employee shall be rotated to another job or given the opportunity to transfer to a different position whose duties he is able to perform with the same employer, in the same geographical area and with the same seniority, status, and rate of pay he had just prior to such transfer, if such a different position is available.

(3) **Special clothing:** The employer shall provide, and require the use of, special clothing, such as coveralls or similar whole body clothing, head coverings, gloves, and foot coverings for any employee exposed to airborne concentrations of asbestos fibers, which exceed the ceiling level prescribed in paragraph (b) of this section.

(4) **Change rooms:**

(i) At any fixed place of employment exposed to airborne concentrations of asbestos fibers in excess of the exposure limits prescribed in paragraph (b) of this section, the employer shall provide change rooms for employees working regularly at the place.

(ii) **Clothes lockers:** The employer shall provide two separate lockers or containers for each employee, so separated or isolated as to prevent contamination of the employee's street clothes from his work clothes.

(iii) **Laundering:**

(a) Laundering of asbestos contaminated clothing shall be done so as to prevent the release of airborne asbestos fibers in excess of the exposure limits prescribed in paragraph (b) of this section.

(b) Any employer who gives asbestos-contaminated clothing to another per-

STANDARDS AND INTERPRETATIONS

son for laundering shall inform such person of the requirement in (a) of this subdivision to effectively prevent the release of airborne asbestos fibers in excess of the exposure limits prescribed in paragraph (b) of this section.

(c) Contaminated clothing shall be transported in sealed impermeable bags, or other closed, impermeable containers, and labeled in accordance with paragraph (g) of this section.

(e) Method of measurement.

All determinations of airborne concentrations of asbestos fibers shall be made by the membrane filter method at $400\text{--}450\times$ (magnification) (4 millimeter objective) with phase contrast illumination.

(f) Monitoring.

(1) **Initial determinations.** Within 6 months of the publication of this section, every employer shall cause every place of employment where asbestos fibers are released to be monitored in such a way as to determine whether every employee's exposure to asbestos fibers is below the limits prescribed in paragraph (b) of this section. If the limits are exceeded, the employer shall immediately undertake a compliance program in accordance with paragraph (c) of this section.

(2) Personal monitoring.

(i) Samples shall be collected from within the breathing zone of the employees, on membrane filters of 0.8 micrometer porosity mounted in an open-face filter holder. Samples shall be taken for the determination of the 8-hour time-weighted average airborne concentrations and of the ceiling concentrations of asbestos fibers.

(ii) **Sampling frequency and patterns.** After the initial determinations required by subparagraph (1) of this paragraph, samples shall be of such frequency and pattern as to represent with reasonable accuracy the levels of exposure of employees. In no case shall the sampling be done at intervals greater than 6 months for employees whose

exposure to asbestos may reasonably be foreseen to exceed the limits prescribed by paragraph (b) of this section.

(3) Environmental monitoring.

(i) Samples shall be collected from areas of a work environment which are representative of the airborne concentrations of asbestos fibers which may reach the breathing zone of employees. Samples shall be collected on a membrane filter of 0.8 micrometer porosity mounted in an open-face filter holder. Samples shall be taken for the determination of the 8-hour time-weighted average airborne concentrations and of the ceiling concentrations of asbestos fibers.

(ii) **Sampling frequency and patterns.** After the initial determinations required by subparagraph (1) of this paragraph, samples shall be of such frequency and pattern as to represent with reasonable accuracy the levels of exposure of the employees. In no case shall sampling be at intervals greater than 6 months for employees whose exposures to asbestos may reasonably be foreseen to exceed the exposure limits prescribed in paragraph (b) of this section.

(4) Employee observation of monitoring. Affected employees, or their representatives, shall be given a reasonable opportunity to observe any monitoring required by this paragraph and shall have access to the records thereof.

(g) Caution signs and labels.

(1) Caution signs.

(i) **Posting.** Caution signs shall be provided and displayed at each location where airborne concentrations of asbestos fibers may be in excess of the exposure limits prescribed in paragraph (b) of this section. Signs shall be posted at such a distance from such a location so that an employee may read the signs and take necessary protective steps before entering the area marked by the signs. Signs shall be posted at all approaches to areas containing excessive concentrations of airborne asbestos fibers.

STANDARDS AND INTERPRETATIONS

(ii) **Sign specifications.** The warning signs required by subdivision (i) of this subparagraph shall conform to the requirements of 20" x 14" vertical format signs specified in § 1910.145(d)(4), and to this subdivision. The signs shall display the following legend in the lower panel, with letter sizes and styles of a visibility at least equal to that specified in this subdivision.

Legend	Notation
Asbestos.....	1" Sans Serif, Gothic or Block.
Dust Hazard.....	¾" Sans Serif, Gothic or Block.
Avoid Breathing Dust.....	¾" Gothic.
Wear Assigned Protective Equipment...	¾" Gothic.
Do Not Remain In Area Unless Your Work Requires It.	¾" Gothic.
Breathing Asbestos Dust May Be Haz- ardous To Your Health.	14 point Gothic.

Spacing between lines shall be at least equal to the height of the upper of any two lines.

(2) **Caution labels.**

(i) **Labeling.** Caution labels shall be affixed to all raw materials, mixtures, scrap, waste, debris, and other products containing asbestos fibers, or to their containers, except that no label is required where asbestos fibers have been modified by a bonding agent, coating, binder, or other material so that during any reasonably foreseeable use, handling, storage, disposal, processing, or transportation, no airborne concentrations of asbestos fibers in excess of the exposure limits prescribed in paragraph (b) of this section will be released.

(ii) **Label specifications.** The caution labels required by subdivision (i) of this subparagraph shall be printed in letters of sufficient size and contrast as to be readily visible and legible. The label shall state:

CAUTION

Contains Asbestos Fibers
Avoid Creating Dust
Breathing Asbestos Dust May Cause
Serious Bodily Harm

(h) **Housekeeping.**

(1) **Cleaning.** All external surfaces in any place of employment shall be maintained free of accumulations of asbestos fibers if, with their dispersion, there would be an excessive concentration.

(2) **Waste disposal.** Asbestos waste, scrap, debris, bags, containers, equipment, and asbestos-contaminated clothing, consigned for disposal, which may produce in any reasonably foreseeable use, handling, storage, processing, disposal, or transportation airborne concentrations of asbestos fibers in excess of the exposure limits prescribed in paragraph (b) of this section shall be collected and disposed of in sealed impermeable bags, or other closed, impermeable containers.

(i) **Recordkeeping.**

(1) **Exposure records.** Every employer shall maintain records of any personal or environmental monitoring required by this section. Records shall be maintained for a period of at least 20 years and shall be made available upon request to the Assistant Secretary of Labor for Occupational Safety and Health, the Director of the National Institute for Occupational Safety and Health, and to authorized representatives of either.

[41 F.R. 11504, March 19, 1976.]

(2) **Access.** Employee exposure records required by this paragraph shall be provided upon request to employees, designated representatives, and the Assistant Secretary in accordance with 29 CFR 1910.20 (a)-(e) and (g)-(l).

[45 F.R. 35281, May 23, 1980.]

(3) **Employee notification.** Any employee found to have been exposed at any time to airborne concentrations of asbestos fibers in excess of the limits prescribed in paragraph (b) of this section shall be notified in writing of the exposure as soon as practicable but not later than 5 days of the finding. The employee shall also be timely notified of the corrective action being taken.

STANDARDS AND INTERPRETATIONS

(i) Medical examinations.

(1) **General.** The employer shall provide or make available at his cost, medical examinations relative to exposure to asbestos required by this paragraph.

(2) **Placement.** The employer shall provide or make available to each of his employees, within 30 calendar days following his first employment in an occupation exposed to airborne concentrations of asbestos fibers, a comprehensive medical examination, which shall include, as a minimum, a chest roentgenogram (posterior-anterior 14 x 17 inches), a history to elicit symptomatology of respiratory disease, and pulmonary function tests to include forced vital capacity (FVC) and forced expiratory volume at 1 second (FEV_{1.0}).

(3) **Annual examinations.** On or before January 31, 1973, and at least annually thereafter, every employer shall provide, or make available, comprehensive medical examinations to each of his employees engaged in occupations exposed to airborne concentrations of asbestos fibers. Such annual examination shall include, as a minimum, a chest roentgenogram (posterior-anterior 14 x 17 inches), a history to elicit symptomatology of respiratory disease, and pulmonary function tests to include forced vital capacity (FVC) and forced expiratory volume at 1 second (FEV_{1.0}).

(4) **Termination of employment.** The employer shall provide, or make available, within 30 calendar days before or after the termination of employment of any employee engaged in an occupation exposed to airborne concentrations of asbestos fibers, a comprehensive medical examination which shall include, as a minimum, a chest roentgenogram (posterior-anterior 14 x 17 inches), a history to elicit symptomatology of respiratory disease, and pulmonary function tests to include forced vital capacity (FVC) and forced expiratory volume at 1 second (FEV_{1.0}).

(5) **Recent examinations.** No medical examination is required of any employee, if adequate records show that the employee has been examined in accordance with this paragraph within the past 1-year period.

(6) Medical records.

(i) **Maintenance.** Employers of employees examined pursuant to this paragraph shall cause to be maintained complete and accurate records of all such medical examinations. Records shall be retained by employers for at least 20 years.

(ii) **Access.** Records of the medical examinations required by this paragraph shall be provided upon request to employees, designated representatives, and the Assistant Secretary in accordance with 29 CFR 1910.20 (a)-(e) and (g)-(i). These records shall also be provided upon request to the Director of NIOSH. Any physician who conducts a medical examination required by this paragraph shall furnish to the employer of the examined employee all the information specifically required by this paragraph, and any other medical information related to occupational exposure to asbestos fibers.

[45 F.R. 54333, August 15, 1980.]

(k) Emergency temporary standard effective November 4, 1983.

(1) **Scope.** This emergency temporary standard is issued pursuant to section 6(c) of the Act and applies to all workplaces where employees may be exposed to asbestos in all industries covered by the Act, including, general industry, construction and maritime. Except to the extent modified by this emergency temporary standard all provisions of §1910.1001 remain in effect.

(2) **Permissible levels of exposure.** The 8-hour time-weighted average airborne concentration of asbestos fibers to which any employee may be exposed shall not exceed one-half (0.5) fiber, longer than 5 micrometers, per cubic centimeter of air, as determined by the method prescribed in paragraph (e) of this section.

(3) **Methods of compliance with the emergency temporary standard.** Notwithstanding any other requirements of this section, compliance with the reduced exposure limit of 0.5 f/cc shall be achieved by any feasible combination of engineering controls, work practices, and personal protective equipment and devices.

STANDARDS AND INTERPRETATIONS

(4) Employee information and training.

(i) As soon as possible, but not later than thirty (30) days from the effective date of this emergency temporary standard, the employer shall institute a training program for all employees exposed to airborne concentrations of asbestos in excess of 0.5 f/cc, without regard to the use of respirators and shall assure their participation in the program during the effective period of this emergency temporary standard.

(ii) The employer shall assure that each such employee is informed of the following:

(a) The health effects associated with asbestos exposure;

(b) The relationship between asbestos and smoking in producing lung cancer;

(c) The nature of operations which could result in exposure to asbestos and necessary protective steps to minimize exposure including, as applicable, engineering controls, work practices, respirators, housekeeping and protective clothing;

(d) The purpose, proper use, fitting instructions and limitations of respirators permitted by the standard; and

(e) A review of all the provisions contained in 1910.1001.

(5) Respiratory protection during the ETS. Notwithstanding any other requirement of this section, where respirators are used to achieve the permissible exposure limit of 0.5 f/cc they shall be selected according to Table 1.

(6) Warning signs during the ETS. In addition to the requirements of paragraph (g)(1) of this section, legible signs warning of the health hazards of asbestos shall be provided and displayed at each location where airborne concentrations of asbestos fibers may exceed 0.5 f/cc.

Table 1
Respiratory Protection
For Airborne Concentrations of Asbestos

Airborne Concentration of Asbestos (TWA)	Required Respirator ¹
Not in excess of 5 f/cc (10 X PEL)	Reusable or single use air purifying respirator
Not in excess of 50 f/cc (100 X PEL)	Full facepiece air purifying respirator, or a powered air purifying respirator
Greater than 50 f/cc	A type "C" continuous flow or pressure demand, supplied air respirator.

¹ Respirators specified for high concentrations may be used at lower concentrations of asbestos.

[48 F.R. 51140, November 4, 1983]

1910.1002—COAL TAR PITCH VOLATILES; INTERPRETATION OF TERM

As used in §1910.1000 (Table Z-1), coal tar pitch volatiles include the fused polycyclic hydrocarbons which volatilize from the distillation residues of coal, petroleum (excluding asphalt), wood, and other organic matter. Asphalt (CAS

8052-42-4, and CAS 64742-93-4) is not covered under the "coal tar pitch volatiles" standard.

[48 F.R. 2768, January 21, 1983]