M E T A

Mayhew Environmental Training Associates

I N C O R P O R A T E D

AHERA

Inspector/Management Planner Recertification Manual

P.O. Box 786 Lawrence,KS 66044
800-444-6382

M E T A
Mayhew Environmental Training Associates
I N C O R P O R A T E D

P.O. Box 1961 Lawrence, Kansas 66044

AHERA ASBESTOS INSPECTOR RECERTIFICATION

AGENDA

8:00 - 10:00	-Regulatory Review -Changes in AHERA and OSHA Regulations -Excursion Limit -100 Questions on AHERA
10:00 - 10:15	-Break
10:15 - 10:25	-Background on Asbestos -Health Effects -Personal Protection
10:25 - 10:35	-Qualification and Legal Liabilities
10:35 - 10:45	-Building Systems -Public Relations
10:45 - 10:55	-Pre-Inspection Planning
10:55 - 11:20	-Inspection for Fr and Non-Friable ACM and Assessing suspect material
11:20 - 11:40	-Bulk Sampling
11:40 - 11:50	-Record Keeping and Report Writing
11:50 - 12:00	-Q & A

M E T A
Mayhew Environmental Training Associates
I N C O R P O R A T E D

P.O. Box 1961 Lawrence, Kansas 66044

AHERA ASBESTOS MANAGEMENT PLANNER RECERTIFICATION

AGENDA

1:00 - 1:30	-Course Overview-Review Evaluation/Interpretation of Survey Results
1:30 - 1:45	-Hazard Assessment
1:45 - 2:20	-Legal Responsibilities
2:20 - 2:35	-Control Options
2:35 - 2:50	-Break
2:50 - 3:00	-Roles of other Professionals
3:00 - 3:10	-Developing and O & M Plan
3:10 - 3:20	-Record Keeping
3:20 - 3:30	-Check List-Assembling a Management Plan
3:30 - 3:45	-Cost Estimation
3:45 - 4:00	-Regulation Review Q & A

REGULATIONS

I. OSHA Asbestos Regulations

OSHA Purpose: Worker Protection Rules

Sphere of enforcement covers any handling of friable and non-friable asbestos. Protects private sector employees. Public sector employees are covered if there is an approved state program. Federal government coverage under the regulation varies by agency.

OSHA Regulations Highlights

A. Worksite Monitoring of airborne fiber levels establishes allowable fiber concentrations

B. Work Practices - to reduce levels of and contain airborne asbestos

C. Personal Protective Equipment - Respirators, protective clothing

D. Medical Monitoring of employees

E. Medical, exposure, training and respirator records

F. Worker and competent person training

40 CPR 61 – Subpart M
DEMOLITION

II. EPA

A. Clean Air Act -- NESHAPS

ALL BUILDINGS:

1. Purpose: Protect the outdoor air from airborne asbestos

2. Sphere of Enforcement:

   a) Operations disturbing more than 160 square feet or 260 linear feet of friable asbestos.
   b) Prohibits application of friable asbestos in buildings
   c) Disposal of friable asbestos

> 10 day
< 20 day
○ ASAP

3. Highlights:

   a) Notifications to EPA of all demolitions and covered renovations
   b) prohibits visible emissions in removal, transport to disposal, and at the landfill
   c) Wet removal methods required under most circumstances
   d) Waste must be wet, sealed and labelled with dust control at the landfill

4. New Developments - states take the responsibility for inspection or enforcement in many instances

B. Asbestos-In-Schools Rule - superseded by AHERA

Cover on asbestos waste
6" on day
30" to finish

visible emission
state – can fine $5000/bag
ADESHAP – " " $25,000/bag

C. AHERA - See Appendix A and B

THE IMMEDIATELY EFFECTIVE PROVISIONS OF AHERA

Note: See Appendix A and B for a more complete discussion of AHERA requirements and definitions of terms.

1. Each Local Education Agency (LEA) must designate an individual responsible for the asbestos program. That person must receive training as specified in the regulation.

2. Response actions must be designed by an accredited individual. This individual must attend a 3-day EPA accredited Project Design Course or alternatively a 4-day EPA accredited Supervisor course and pass the course examination.

3. Response actions must be conducted by accredited persons. Contractors/Supervisors must have a 4-day course and Workers a 3-day course. The courses must be EPA accredited and the trainees must pass the course examination.

4. At the completion of response actions the LEA designated person must perform a visual inspection of the workplace.

5. Air monitoring at the completion of a response action must be conducted per AHERA requirements by an entity separate from the one conducting the response action.

6. Qualified labs must be used for sample analysis.

D. ASHAA - Grants and loans to schools for asbestos hazard control.

E. EPA Worker Protection Rule

Purpose: State and Local Government Employee Protection where there is no other equivalent State program

Sphere of Enforcement/Regulation Highlights: Similar to OSHA Asbestos Regulations

III. National Bureau of Standards (NBS) Bulk Asbestos Laboratory Accreditation

Clearance: 1500 ft² or 500 lin. ft. next oct. 160 ft/260 lin ft.

< PCM 0.01 f/cc min. 5 samples

> TEM 0.005 f/cc 13 samples 5 in / 5 out / 1 30 sec out / 1 30 sec in / 1 Box blank

There have been no significant changes in AHERA since it was effective on December 14, 1987. The changes are attached. You will find that most of them are to correct typographical errors or clarify the regulations (e.g., language was added to reflect the EPA's prohibition on disposable respirators).

PART 763-(AMENDED)

12. in Part 763:

a. The authority citation for Part 763 continues to read as follows:

Authority: 15 U.S.C. 2605 and 2607 (c): Subpart E also issued under 15 U.S.C. 2641. 2643, and 2647.

763.90 (Amended)

b. Section 763.90 is amended as follows:

i. The third sentence of paragraph (i) (5) is amended by revising the words "The method is available at the Office of the Federal Register Information Center, 11th and L St., NW., Room 8401 * * *" to read "The method is available for public inspection at the Office of the Federal Register, 11th and L St., NW., Room 8401 * * *".

ii. The third sentence in paragraphs (i) (6) and (7) is amended by revising the words "The method is available at the Office of the Federal Register, 11th and L St., NW., Room 8301 * * *" to read "The method is available for public inspection at the Office of the Federal Register, 11th and L St., NW., Room 8401 * * *".

c. Section 763.119 is revised to read as follows:

763.119 References.

(a) General. The following reference contains detailed information on sampling and analysis of friable materials and provides a background on which this Part is based. Microfiche copies may be obtained from the TSCA Public Docket Office (TS-793), Rm. NE-G004, Office of Toxic Substances, Environmental Protection Agency, 401 M St., SW., Washington. DC 20460.

(1) USEPA. 1979. "Asbestos-Containing Materials in School Buildings: A Guidance Document" Part 1 (EPA No. C00090), OPTS Docket 61004.

(2) (Reserved)

(b) (Reserved)

ENVIRONMENTAL PROTECTION AGENCY

[OPTS-62066; FRL-3424-2]

Asbestos-Containing Materials in Schools; Deferral of Deadline for Submission of Asbestos Management Plans

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice.

SUMMARY: EPA is issuing a notice under amendments to the Asbestos Hazard Emergency Response Act (AHERA) to inform Local Education Agencies (LEAs) of the opportunity to request a deferral until May 9, 1989, for the submission of asbestos management plans to their States if they are unable to provide the plan by the original due date of October 12, 1988.

DATE: An LEA must submit its deferral request to the respective State Agency by October 12, 1988.

ADDRESSES: For obtaining copies of this notice and the Act, contact the office listed under FOR FURTHER INFORMATION CONTACT or the State Offices listed under Unit VIII of this notice.

FOR FURTHER INFORMATION CONTACT: Michael M. Stahl, Acting Director, TSCA Assistance Office (TS-799), Office of Toxic Substances, Environmental Protection Agency, Rm. EB-44, 401 M St., SW., Washington, DC 20460. Telephone: (202) 554-1404, TDD: (202) 554-1404.

I. Overview

On July 18, 1988, President Reagan signed Pub. L. 100-368 (formerly H.R. 3893), an amendment to AHERA. The primary provision of the amendment provides an LEA with the opportunity to request a deferral to May 9, 1989 for the submission of its asbestos management plan to the State Governor if it is unable to provide the plan by the original due date of October 12, 1988.

The requirement for submission of management plans for asbestos in schools comes from the original AHERA, signed into law October 22, 1986. Under AHERA, EPA issued the AHERA schools rule, which requires LEAs to inspect for and to manage asbestos-containing materials in their schools. The AHERA schools rule was published at pages 41826-41898 of volume 52 of the Federal Register, and is codified at 40 CFR Part 763.

Under the amendment, EPA is required to notify LEAs of the opportunity to request deferrals and to provide a list of offices in each State to which deferral requests should be sent. (The State offices are listed in Unit VIII. below.) EPA is providing notification though this Federal Register notice and a subsequent direct mailing to individual LEAs.

II. How the Deferral Process Works

A. School Submission

An LEA may request, from its Governor, a deferral to May 9, 1989, for submission of a management plan to the State. The request may cover one or more schools and must include a list of all schools covered by the request.

The LEA must make certain assurances in its deferral request that requirements specified by the amendment have been met. (The required assurances are listed in Unit III. below.)

Before filing a deferral request, the LEA shall notify affected parent, teacher, and employee organizations of its intent to file, and in the case of a public school, the LEA shall discuss the request at a public meeting of the school board. The deferral request must be filed with the State by October 12, 1988—the original due date for plan submission under AHERA.

B. State Review

Within 30 days after receipt of a deferral request, the Governor shall respond to the LEA in writing to acknowledge whether the deferral request is complete or incomplete. If incomplete, the Governor must identify in the response the items which are missing from the request. The LEA may correct and refile its request with the Governor not later than 15 days after it has received a response from the Governor.

Only when a deferral request is accepted as complete and acknowledged in writing by the State, has the deferral been granted.

An LEA whose deferral request has been approved must submit a management plan to the Governor not later than May 9, 1989. (The submission must include a copy of the deferral request and the appropriate assurances accompanying the request, as discussed in Unit III. below.) The Governor must review the deferred management plan in accordance with the applicable standards for review of management plans under the original AHERA. There is one exception, however. Under the original law, the Governor could extend the 30-day period under which an LEA may revise a disapproved plan for an additional 90 days. Under the new law, the Governor may extend the 30-day revision period only for an additional 30 days.

LEAs are still required to begin implementation of their management plans by July 9, 1989, as originally specified in AHERA and the AHERA schools rule.

III. LEA Assurances Required for Deferrals

The amendment creates two categories of LEA deferrals, with assurances specified for each category. The first category (Category A) applies to LEAs in States which have, before June 1, 1988, requested waivers from AHERA under 40 CFR 763.98. These States are Connecticut, Illinois, New Jersey, and Rhode Island. The second Category (Category B) applies to LEAs in all other States. Many of the activities associated with these deferral assurances must be completed before October 12, 1988.

A. Category A Deferrals

Only LEAs in Connecticut, Illinois, New Jersey, and Rhode Island may seek a deferral under Category A. (These States have requested waivers under the AHERA schools rule for their own State programs by June 1, 1988.)

The amendment requires two assurances for Category A deferrals, which may be made in a single statement:

1. *Assurance 1:* That the State in which the LEA is located has requested a waiver from EPA before June 1, 1988.

2. *Assurance 2:* That the LEA has carried out the notification of affected groups and in the case of a public school, that the LEA has conducted the public meeting required by the amendment. The amendment requires that before filing a deferral request, an LEA must notify affected school (parent, teacher, and employee) organizations of its intent. Further, in the case of a public school, the LEA must discuss the request at a public meeting of the school board. Affected school organizations must be notified in advance of the meeting's time and place.

B. Category B Deferrals

The amendment requires four assurances for Category B deferrals.

1. *Assurance 1:* A statement and brief explanation why the LEA, despite good faith efforts, will not be able to meet the original October 12, 1988, deadline for submittal of its management plan.

2. *Assurance 2:* A statement that the LEA has made at least one of the following documents available for inspection at each school for which a deferral is sought:

a. A solicitation by the LEA to contract with an accredited asbestos

contractor for inspection or management plan development.

b. A letter certifying that school district personnel are enrolled in an EPA-approved training course for inspection and management plan development.

c. Documentation showing that suspected asbestos-containing material from the school is being analyzed at an accredited laboratory.

d. Documentation showing that an inspection or management plan has been completed in at least one other school under the LEA's authority.

3. *Assurance 3:* A statement giving assurance that the LEA has carried out notification of affected groups and, in the case of a public school, a public meeting. (Again, the new law requires that before filing a deferral request, an LEA shall notify affected parent, teacher, and employee organizations of its intent to file its request. In the case of a public school, the LEA shall discuss the request at a public meeting of the school board, and affected organizations shall be notified in advance of the time and place of the meeting.)

4. *Assurance 4:* A proposed schedule outlining all significant activities leading up to submission of a management plan by May 9, 1989, including the inspection of the school. This schedule must contain a deadline of no later than December 22, 1988, for entering into a contract with an accredited inspector (unless inspections are to be performed by accredited school personnel). Laboratory analysis and management plan development must also be included in the activity schedule.

IV. Worker Protection Requirements

As of October 12, 1988, renovations or removals, with the exception of "emergency repairs," are prohibited in schools whose management plans have not completed the AHERA State review process unless:

(1) The school is carrying out work with a grant under the EPA's Asbestos School Hazard Abatement Act (ASHAA) award program.

(2) An inspection that complies with the requirements of the AHERA schools rule has been carried out in the school and the LEA complies with key sections of the AHERA schools rule: Section 763.90 (g), (h), and (i) on response actions and Appendix D to Subpart E of Part 763 on transport and disposal of asbestos waste.

An "emergency repair" is a repair in a school building that was not planned and was in response to a sudden, unexpected event that threatens either the health or safety of building occupants or the structural integrity of the building.

In addition (again, as of October 12, 1988), no operations and maintenance (O&M) work can occur in schools whose management plans have not received a completed State review unless the LEA complies with key sections of the AHERA schools rule: Section 763.91 on O&M activities, including Appendix B to Subpart E of Part 763, and § 763.92(a)(2) regarding training.

Finally, any school employee who conducts emergency repairs involving any material containing asbestos or suspected of containing asbestos or who conducts O&M activities must have proper training and equipment to safely conduct the work in order to prevent potential exposure to asbestos.

V. Responsibilities of the State

The States have two primary responsibilities under the amendment. The first responsibility deals with the deferral process, as outlined in Unit II. of this notice. LEAs must understand that only when a deferral request is accepted as complete and acknowledged in writing by the State, has the deferral been granted.

The second responsibility involves submitting status reports to EPA. No later than December 31, 1988, the Governor of each State must submit to EPA a written statement on the status of management plan submissions and deferral requests received by the State. The list must contain the information specified in section 205(e) of the amendment and must be made available to LEAs in the State. An updated version of the report must be submitted to EPA no later than December 31, 1989.

VI. Publication of EPA-Approved Courses

EPA must issue each quarter in the Federal Register, beginning August 31, 1988, a list of training courses approved by EPA for AHERA purposes and laboratories accredited under AHERA. The list of training courses, which has been published approximately every 4 months since October 1987, was last published in the Federal Register of June 1, 1988 (53 FR 20066).

VII. Penalties for LEAs

LEAs are subject to the civil penalties under the original AHERA for violating worker protection requirements of the amendment, described in Unit IV. above, or for submitting false information in the deferral request. Under AHERA, LEAs are liable for a civil penalty of not more than $5,000 per building for each day during which the violation continues.

Dated: July 28, 1988.

John A. Moore,

Assistant Administrator for Pesticides and Toxic Substances.

VIII. List of State Offices

LEAs should submit their deferral requests to their State office as indicated below:

Alabama:
- Alabama Safe State Program, College of Continuing Studies, P.O. Box 2967, University of Alabama, Tuscaloosa, AL 35486-2967, (205) 348-3033, Attn: William Weems.

Alaska:
- Alaska Department of Education (Facilities), P.O. Box F, Juneau, AK 99811, (907) 465-2865, Attn: Susan Miller.

American Samoa:
- Office of the Governor, American Samoa Government, Pago Pago, AS 96799, (809) 774-0315, Attn: Pati Faiai.

Arizona:
- Dept. of Environmental Quality, Office of Air Quality, 2005 North Central Avenue, Phoenix, AZ 85004, (602) 257-2285, Attn: David O. Cheigren.

Arkansas:
- School Plant Services, AR Dept. of Education, Arch Ford Education Building, #4 Capitol Mall, Rm. 1103, Little Rock, AR 72201-1021, (501) 682-4261, Attn: Jimmy Moore.

California:
- Office of Local Assistance, 501 J Street, Suite 350, Sacramento, CA 95814, (916) 445-3377, Attn: Art S Kevorkian.

Colorado:
- Colorado Department of Health, 4210 E. 11th Avenue, Denver, CO 80220 (303) 331-8587, Attn: Dave Ouimette.

Connecticut:
- Dept. of Education Bureau of Grants Processing, 165 Capitol Avenue, Hartford, CT 06106, (203) 566-8204 Attn: William D. Guzman.
- Preventable Diseases Division, State of Connecticut, 150 Washington Street, Hartford, CT 06106, (203) 566-3188, Attn: Paul Schur.

Delaware:
- Dept. of Administrative Services, Division of Facilities Management, P.O. Box 1401, O'Neill Building, Dover, DE 19901, (302) 736-3611, Attn: Robert Foster.

District of Columbia:
- DC Public Schools, Presidential Bldg., 415 12th St., NW., Rm. 1209, Washington, DC 20001, (202) 724-4098, Attn: Andrew Weeks.

Florida:
- Florida Dept. of Education, W.V.

Knott Bldg., 114 Collins. Tallahassee, FL 32399-0400. (904) 487-1130. Attn: Bobby L. Johnson.

Georgia:
Director, Transportation Facilities and Asbestos Division, Georgia Dept. of Education, 1670 Twin Towers East, Atlanta, GA 30334. (404) 656-2440. Attn: Don Thornhill.

Guam:
Guam Environmental Protection Agency, P.O. Box 2999, Agana, GU 96910. (671) 646-8863. Attn: Charles P. Crisostmo.

Hawaii:
Environmental Protection Health Services Division, State Health Department, P.O. Box 3378, Honolulu, HI 96801. (808) 548-6455. Attn: James Ikeda.

Idaho:
Department of Administration, 650 West State Street, Boise, ID 83720. (208) 334-3382. Attn: Loren Nelson.

Illinois:
Asbestos Abatement Program, Illinois Dept. of Public Health, 525 W. Jefferson St., 3rd Floor, Springfield, IL 62761. (217) 782-3517. Attn: R. Kent Cook.

Indiana:
Office of Air Management, Dept. of Environmental Management, 105 S. Meridian Street, P.O. Box 6015, Indianapolis, IN 46206-6015. (317) 232-8232. Attn: Andrew Knott.

Iowa:
School Plant & Facilities Unit, Dept. of Education, Grimes State Office Building, Des Moines, IA 50319-0146. (515) 281-4743. Attn: C. Milton Wilson.

Kansas:
Dept. of Health & Environment, Forbes Field, Topeka, KS 66620, (913) 296-1544. Attn: John Irwin.

Kentucky:
Division of Buildings and Grounds, Kentucky Dept. of Education, Capital Plaza Tower, 15th Floor, Frankfort, KY 40601, (502) 564-4326. Attn: Jim Judge.

Louisiana:
Enforcement Program Manager, Office of Air Quality, P.O. Box 44096, Baton Rouge, LA 70804, (504) 342-9053, Attn: Chris Roberie.

Maine:
Dept. of Administration, Division of Asbestos Management Activities, State House Station 77, Augusta, ME 04333, (207) 289-4511, Attn: Henry E. Warren.

Maryland:
Maryland Dept. of the Environment, 201 West Preston Street, Rm. 214, Baltimore, MD 21201, (301) 225-5753. Attn: Dr. Katherine Farrell.

Massachusetts:
Division of Occupational Hygiene, Massachusetts Dept. of Labor & Industry, 1001 Watertown Street, West Newton, MA 02165, (617) 969-7177, Attn: Richard Levine.

Michigan:
Dept. of Public Health, Division of Occupational Health, Attn: Asbestos Program, 3500 N. Logan St., P.O. Box 30035, Lansing, MI 48909, (517) 335-8250, Attn: Bill De Liefde.

Minnesota:
Minnesota Dept. of Education, 943 Capitol Square Building, 550 Cedar Street, St. Paul, MN 55101, (612) 296-1382, Attn: Len Nachman.

Mississippi:
Superintendent of School Buildings, Mississippi State Department of Education, P.O. Box 771, Jackson, MS 39205, (601) 359-3555, Attn: Gerald Pevey.

Missouri:
Bureau of Environmental Epidemiology, Health Dept., 1730 East Elm Street, P.O. Box 570, Jefferson City, MO 65102, (314) 751-6411, Attn: Daryl W. Roberts.

Montana:
Dept. of Health & Environmental Science, Cogswell Bldg., Rm A107, Helena, MT 59620, (406) 444-3948, Attn: Tom Ellerhoff.

Nebraska:
Asbestos Program Coordinator, Nebraska Dept. of Health—EHHS, 301 Centennial Mall South, P.O. Box 95007, Lincoln, NE 68509, (402) 471-2541, Attn: Jacqueline M. Fiedler.

Nevada:
Nevada Dept. of Education, 215 E. Bonanza St., State Mail Rm., Las Vegas, NV 89158, (702) 486-6455, Attn: Douglas Stoker.

New Hampshire:
Department of Education, State Office Park South, 101 Pleasant St., Concord, NH 03301, (603) 271-3620, Attn: Douglas Brown.

New Jersey:
New Jersey Department of Health, Asbestos Control Service, AHERA Implementation, CN 360, Trenton, NJ 08625, (609) 984-2193, Attn: James A. Brownlee.

New Mexico:
State Dept. of Education, Education Building, Santa Fe, NM 87501-2876, (505) 827-3848, Attn: Ed Tangman.

New York:
State Education Department, Rm. 3059, Cultural Education Ctr., Albany, NY 12230, (518) 474-3384, Attn: Mae Timer.

North Carolina:
North Carolina Division of Health Services, Cooper Memorial Building, Rm. 3011, P.O. Box 2091, 225 N. McDowell Street, Raleigh, NC 27602, (919) 733-0820, Attn: Howard Bridges.

North Dakota:
North Dakota Health Dept., Missouri Office Building, 1200 Missouri Ave., Box 5520, Bismarck, ND 58502, (701) 224-2348, Attn: Dana Mount.

or,

Dept. of Public Instruction, Missouri Office Building, 1200 Missouri Ave., Box 5520, Bismarck, ND 58502, (701) 224-2267, Attn: Alton Koppang.

Northern Marianas:
Dept. of Public Health & Environmental Services, P.O. Box 1304 (CK), Saipan, CM 96950, Attn: Russell F. Mechem.

Ohio:
Ohio Department of Health, 246 N. High St., P.O. Box 118, Columbus, OH 43266-0118, (614) 466-1450, Attn: Marty King.

Oklahoma:
Radiation and Special Hazards Service, Oklahoma State Dept. of Health, N.E. 10th and Stonewall, P.O. Box 53551, Oklahoma City, OK 73152, (405) 271-5221, Attn: Emily Allen or J. Dale McHard.

Oregon:
Oregon Dept. of Education, 700 Pringle Parkway, S.E., Salem, OR 97310, (503) 378-6964, Attn: Al Shannon.

Pennsylvania:
Dept. of Education, 333 Market Street, Harrisburg, PA 17126-0333, (717) 787-5480, Attn: Gerald Grove.

Puerto Rico:
Puerto Rico Environmental Quality Board, 204 Pumarada Street, 10th Floor, Box 11488, San Turce, PR 00910, (809) 722-0077, Attn: Juan Merced.

Rhode Island:
Dept. of Health, Division of Occupational Health, 206 Cannon Bldg., 75 Davis St., Providence, RI 02908, (401) 277-3601, Attn: J. Hickey/W. Dundulis.

South Carolina:
South Carolina Dept. of Education, Office of School Planning & Building, 100 Executive Center Drive, Santee Building, Suite A-22, Columbia, SC 29210, (803) 737-8700, Attn: G. Stuart Clarkson.

South Dakota:
Office of School Standards, Division of Education, 700 Governor's Drive, Pierre, SD 57501, (605) 773-3553, Attn: Leonard Powell.

Tennessee:
Tennessee Department of Education, 126 Cordell Hull Building, Nashville, TN 37219, (615) 741-3489, Attn: Dr. Nile McCrary.

Texas:
Occupational Health Program, 1100 West 49th Street, Austin, TX 78756, (512) 458–7254, Attn: Jerry F. Lauderdale.
Occupational Safety and Health Division, 1100 West 49th Street, Austin, TX 78756, (512) 458–7254, Attn: Joel Smith.
Utah:
Department of Health, P.O. Box 16690, 288 North 1460 West, Salt Lake City, UT 84116–0690, (801) 538–6121, Attn: Kenneth L. Alkema.
Vermont:
Vermont Dept. of Health, Asbestos Program, 60 Main Street, P.O. Box 70, Burlington, VT 05402, (802) 863–7231, Attn: James Meriwether.
Virgin Islands:
Dept. of Planning & Natural Resources, Division of Environmental Protection, 179 Altona and Welgunst, Charlotte Amelia, St. Thomas, VI 00802, (809) 774–3411, Attn: Vernon Richards.
Virginia:
Virginia Dept. of Education, James Monroe Building, 24th Floor, 101 N. 14th Street, P.O. Box 6–Q, Richmond, VA 23219, (804) 225–2035, Attn: David Boddy.
Washington:
Superintendent of Public Instruction, Old Capitol Building, FG–11, Olympia, WA 98504, (206) 753–6703, Attn: Harvey C. Childs.
West Virginia:
West Virginia Dept. of Education, Rm. B–264, Capitol Complex Bldg. #6, Charlestown, WV 25305, (304) 348–2969, Attn: Roy Blizzard.
Wisconsin:
Wisconsin Division of Health, P.O. Box 309, Madison, WI 53701, (608) 266–9337, Attn: Bill Otto.
Wyoming:
Wyoming Dept. of Education, 2300 Capitol, Hathaway Building, 2nd Floor, Cheyenne, WY 82002, (307) 777–6198, Attn: Dr. Roger Hammer.

[FR Doc. 88–17366 Filed 8–1–88; 8:45 am]
BILLING CODE 6560–50–M

THE NATIONAL BUREAU OF STANDARDS

Bulk Asbestos Laboratory Accreditation Program

Program Summary

Laboratory accreditation for bulk asbestos analysis was established by the National Bureau of Standards in response to the requirements set forth in the Asbestos Hazard Emergency Response Act. The purpose of accreditation is to identify and recognize laboratories that produce reliable test data for the services covered.

Test Method Covered:	U.S. Environmental Protection Agency, "Interim Method for the Determination of Asbestos in Bulk Insulation Samples", EPA 600/MR-82-020, Dec. 1982.
Period of Accreditation:	One Year
On-Site Assessment:	Performed by NVLAP peer assessor, to determine compliance with NVLAP criteria, after initial application and every two years thereafter. Monitoring visits as required.
Assessors:	Technical experts with experience in analysis of bulk asbestos by polarized light microscopy.
Proficiency Testing:	Participation in proficiency testing is required. Testing of precharactized quality assurance materials sent to the laboratory by NBS or an authorized contractor. Data to be returned to NBS for evaluation. Proficiency testing schedule will be provided in advance.
Fees:	Annual administrative/technical support fee, on-site assessment fee, proficiency testing fees.
Granting Accreditation:	Based upon successful on-site assessment, proficiency testing, and technical evaluation of applicable laboratory information.

From the draft:

National Voluntary Laboratory Accreditation Program

nvlap

U.S. DEPARTMENT OF COMMERCE
National Bureau of Standards

Bulk Asbestos Handbook

OPERATIONAL AND TECHNICAL REQUIREMENTS OF THE LABORATORY ACCREDITATION PROGRAM FOR BULK ASBESTOS ANALYSIS

OSHA 29 CFR 1910 and 1926

OSHA's standards for occupational exposure to asbestos, tremolite, anthophyllite, and actinolite for general industry (29 CFR 1910.1001) and construction (29 CFR 1926.58) were effective July 21, 1986. Those regulations, 29 CFR 1910.1001 and 29 CFR 1926.58 are stayed from enforcement to July 21, 1989, as they apply to non-asbestiform tremolite, anthophyllite, and actinolite. The 1972 OSHA standards republished with changes at 29 CFR 1910.1101 apply to non-asbestiform tremolite, anthophyllite and actinolite. The stay was granted to allow the record to be reopened on the issue of whether non-asbestiform tremolite, anthophyllite, and actinolite should be regulated according to the same standards as asbestos or whether it should be treated another way.

Other minor changes were made to 29 CFR 1910 and 1926 to correct typographical errors and clarify language in the regulations. Those changes are attached.

Effective October 14, 1988, OSHA has established a short-term exposure limit to asbestos, tremolite, anthophyllite, and actinolite in general industry and construction. The 1986 OSHA standards established an 8-hour time weighted average (TWA) permissible exposure limit (PEL) of 0.2 f/cc (see 29 CFR 1910.1001 (C) (1) and 29 CFR 1926.58 (C) (1)) but did not establish a short-term exposure limit. A new short-term exposure unit to airborne concentration of asbestos, tremolite, anthophyllite, and actinolite, or a combination, is established at 1.0 fiber per cubic centimeter of air (1 f/cc) as averaged over a sampling period of 30 minutes (see 29 CFR 1910.1001 (C) (2); 29 CFR 1926.58 (C) (2)). This new permissible exposure limit is called an "excursion limit." An employer subject to the OSHA provisions must satisfy both the 8-hour TWA and the 30 minute EL. A brief discussion follows regarding the regulations on the excursion limit. The regulations are also attached.

MEASURING THE EXCURSION LIMIT

The employer is required to perform breathing zone sampling that is representative of the 30-minute short-term exposure of each employee as well as TWA exposures. Separate measurements for each employee are not required. If a number of employees perform essentially the same job under the same condition, it may be sufficient to monitor a fraction of such employees. Additionally, unnecessary monitoring in general industry can be eliminated where employers have monitored short-term employee exposures to asbestos within the six months preceding September 14, 1988 if the earlier monitoring showed the excursion limit was not exceeded. New initial monitoring is not necessary for construction employers who have prior monitoring results taken under similar workplace conditions.

The employer collects airborne asbestos samples using 25 mm diameter mixed cellulose filters and a 50 mm electrically conductive extension cowl. A 37 mm diameter filter can be used in certain circumstances. Samples must be analyzed using a phase contrast microscope calibrated using a phase shift test slide and equipped with a Walton-Beckett graticule.

WHEN THE EXCURSION LIMIT IS EXCEEDED

As with the TWA-PEL, engineering control and work practices when feasible are the preferred methods to reach the excursion limit. However, when the excursion limit is exceeded, certain ancillary protective actions are required such as establishing regulated areas, decontamination and hygiene facilities and providing protective work clothing. Where either the EL or TWA-PEL is exceeded, the employer must establish and implement a written means of engineering and work practice controls and by the use of respirators when permitted.

Employee rotation as a means of compliance for either EL or TWA-PEL is not permitted.

The standards for general industry require a medical surveillance program for those employees who are or will be exposed to asbestos at or above the action level and/or excursion limit. The standards for construction require a medical surveillance program only for those employees who are required to wear negative-pressure respirators and for those employees exposed to levels of asbestos at or above the action level and/or above the excursion limit for 30 or more days per year.

Take 1 EL per day - even if no excursion occurs.

NO ROTATING SHIFTS

DEPARTMENT OF LABOR

Occupational Safety and Health Administration

29 CFR Parts 1910 and 1926

[Docket No. H-033]

Occupational Exposure to Asbestos, Tremolite, Anthophyllite and Actinolite

AGENCY: Occupational Safety and Health Administration, Department of Labor.

ACTION: Final rules; amendment.

SUMMARY: On June 20, 1986 OSHA published revised standards governing occupational exposure to asbestos, tremolite, anthophyllite and actinolite in general industry and construction. In these standards, OSHA reduced the 8-hour time weighted average (TWA) permissible exposure limit (PEL) to 0.2 f/cc, but did not issue a short term exposure limit (STEL) or excursion limit for exposure to these materials. OSHA is now amending these rules by adding an excursion limit of 1 f/cc average over a sampling period of 30 minutes.

The Agency has based this determination on its review of the asbestos rulemaking record using criteria set forth by the Court of Appeals for the District of Columbia Circuit (*Public Citizen Health Research Group v. Tyson*, 796 F. 2d 1479 (D.C. Cir., 1986) and *Building and Construction Trades Department, AFL-CIO v. Brock*, 838 F. 2d 1258, 1273 (D.C. Cir., 1988)). Based on this review, OSHA has determined that the record supports the issuance of a 1 f/cc excursion limit measured over 30 minutes for all workplaces affected by the revised asbestos standards and is amending the standards to that effect. In addition employers are required to take other protective actions when employee exposures exceed the EL. The evidence and considerations supporting this determination are set out in the supplementary information section of this document.

EFFECTIVE DATE: This final standard will become effective October 14, 1988 except the information collection requirements of 29 CFR 1910.1001 (d)(2), (d)(3), (d)(5), (d)(7), (f)(2), (f)(3)(i), (j)(5), (l), and (m), and 29 CFR 1926.58 (f)(2), (f)(3), (f)(6), (h)(3)(i), (k)(3), (k)(4), (m) and (n) as they apply to the excursion limit which will be submitted to OMB for approval. OSHA will publish a document in the future establishing an effective date for the information collection requirements.

FOR FURTHER INFORMATION CONTACT: Mr. James Foster, OSHA, U.S. Department of Labor, Office of Public Affairs, Room N3647, 200 Constitution Avenue NW., Washington, DC 20210. Telephone (202) 523-8151.

SUPPLEMENTARY INFORMATION:

I. Clearance of Information Collection Requirements

On March 31, 1983, the Office of Management and Budget (OMB) published 5 CFR Part 1320, implementing the information collection provisions of the Paperwork Reduction Act of 1980, 44 U.S.C. 3501 et seq. (48 FR 13666). Part 1320, which became effective on April 30, 1985 and was revised May 10, 1988 Federal Register, Vol. 53, No. 90), sets forth procedures for agencies to follow in obtaining OMB clearance for information collection requirements. The sections of this final standard which may create recordkeeping requirements are the following: 29 CFR 1910.1001 (d)(2), (d)(3), (d)(5), (d)(7), (f)(2), (f)(3)(i), (j)(5), (l), and (m), and 29 CFR 1926.58 (f)(2), (f)(3), (f)(6), (h)(3)(i), (k)(3), (k)(4), (m) and (n).

In accordance with the provisions of the Paperwork Reduction Act and the regulations issued pursuant thereto, OSHA certifies that it will be submitting the information collection requirements for the standards under control numbers 1218-0133 and 1218-0134 to OMB for review under section 3504(h) of that Act.

Public reporting burden for this collection of information for General Industry is estimated to average 0.73 hours per response and 0.03 hours per response for the Construction Industry, which includes the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or and other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Information Management, Department of Labor, Room N-1301, 200 Constitution Avenue., NW., Washington, DC 20210; and to the Office of Information and regulatory Affairs, Office of Management and Budget, Washington, DC 20503.

II. Regulatory and Legal Authority Background

On June 17, 1986, OSHA issued revised standards governing occupational exposure to asbestos, tremolite, anthophyllite and actinolite for general industry and construction (51 FR 22612 *et seq.*, Pub. June 20, 1986). Effective July 21, 1986, the revised standards amended OSHA's previous asbestos standard issued in 1972. The 1972 standard included a 10 f/cc "ceiling" limit as well as a 2 f/cc time weighted average (TWA) permissible exposure limit.

Chief among the revised stand provisions was a tenfold reduction of the TWA PEL to 0.2 f/cc from 2 f/cc. However, although the April 1981 notice of proposed rulemaking stated that OSHA would consider a revised ceiling limit, in the final revised standards OSHA determined not to issue an explicit short term limit (51 FR 22632-3, 22709).

OSHA based this determination on its finding that the rulemaking record consisting of "toxicological and dose-response data failed to show that short-term exposure to asbestos is associated with an independent or greater adverse health effect than is exposure to a corresponding dose spread over an 8-hour day; that is, there is no evidence that exposure to asbestos results in a "dose-rate" effect * * *" OSHA further stated that its decision was "consistent with OSHA's recent policy decision described in the Supplemental Statement of Reasons for the Final Rule for Ethylene Oxide (50 FR 84) in which OSHA established that short term exposure limits for toxic substances are not warranted in the absence of health evidence demonstrating a dose-rate effect (51 FR at 22709)." OSHA's decision to not issue a STEL was challenged in petitions filed in the C of Appeals for the District of Columbia.

Subsequently, on July 25, 1986, the United States Court of Appeals for the District of Columbia reviewed the ethylene oxide (EtO) standard which OSHA had relied on in its decision to not issue an asbestos EL. It held that OSHA contravened the OSH Act when it failed to issue a short term limit for ethylene oxide based on the Agency's finding that the EtO record did not support a "dose-rate effect." The Court held that the OSH Act compels the Agency to adopt a short term limit if the rulemaking record shows that it would further reduce a significant health risk and is feasible to implement regardless of whether the record supports a "dose-rate" effect (796 F. 2nd at 1505). This decision states that "(B)arring alternative avenues to the same result, OSHA shall set the standard which most adequately assures, to the extent feasible, on the basis of the best available evidence that no employees will suffer material impairment of health, 29 U.S.C. 655 (b)(5) (1982). "(S)ince OSHA has found that a significant health hazard remains even with the (TWA) PEL, the agency must find either that a STEL will have no effect on that risk, or that a STEL is not

feasible, if the Agency declines to impose a short term limit" (796. F. 2nd at 1505).

Because OSHA had relied on the EtO rationale in making its asbestos decision, OSHA decided to reconsider its decision not to issue an excursion limit for asbestos and informed the Court of its intention to reconsider the STEL issue based on the existing record.

The Court issued its decision reviewing the asbestos standards in February 1988 (*B.C.T.D., AFL-CIO* v. *Brock* 838 F. 2d 1258). Therein, the Court noted OSHA's commitment to complete reconsideration of the STEL issue and ordered "that reconsideration be completed within 60 days of the issuance of the mandate in this case, which issued on July 6, 1988.

The Court also reiterated the criteria requiring an agency to adopt a STEL: *viz.* that the measure will result in a further reduction in significant health risk and that it is feasible to implement.

OSHA has reviewed the asbestos rulemaking record in order to apply these criteria. The agency finds that compliance with a short term excursion limit would further reduce a significant health risk remaining after the TWA limit of 0.2 f/cc was imposed. Secondly, the Agency finds that the lowest excursion level which is feasible both to measure and to institute primarily through engineering and work practice controls is 1 fiber per cc measured over 30 minutes. OSHA therefore is imposing this level as an excursion limit to be met by all employers covered by the revised standards. The Agency also is withdrawing its previous determination to not issue an excursion limit or STEL.

OSHA notes that it is adopting the term "excursion limit" to refer to the short term permissible exposure limit established here, so that the terminology used by the American Conference of Governmental Industrial Hygienists (ACGIH) and by OSHA will not conflict. The term "excursion limit" is used by the ACGIH to refer to a limitation on short term exposures which are called for by industrial hygiene considerations, where toxicological data are unavailable. The term "STEL" is used by the American Conference of Governmental Industrial Hygienists (ACGIH) to refer to a short term limit dictated by specific toxicologic or hazard data (ACGIH Threshold Limit Values and Biological Exposure Indices for 1986–1987, 3–5). Because OSHA is not basing the short term permissible limit for asbestos on toxicological data, OSHA instead is using the term "excursion limit" to designate that limit.

The term "ceiling limit" historically was used by OSHA to refer to both a "peak" limit, *ie.* with no duration specified, and to a limit measured over a given time period, such as 30 minutes. Because of this dual usage, the term was imprecise and OSHA believes it should be replaced with "excursion limit."

This preamble, in some places, uses "STEL" and "excursion limit" interchangeably, mostly in quoting from previous discussions to conform to previous usage. The following discussion further explains the reasons for OSHA's decision to adopt an excursion limit of 1 f/cc measured over 30 minutes.

A. The Excursion Limit Chosen Will Further Reduce a Significant Health Risk

OSHA finds that compliance with a reduced excursion limit would further reduce a significant health risk from asbestos exposure which exits after imposing a 0.2 f/cc time-weighted PEL.

OSHA's risk assessment showed that lowering the TWA PEL from 2 f/cc to 0.2 f/cc reduces the asbestos related cancer mortality risk from lifetime exposure from 64 deaths per 1,000 worker to 6.7 deaths per 1,000 workers. OSHA estimated that the incidence of asbestosis would be 5 cases per 1,000 workers exposed for a working lifetime under the TWA PEL of 0.2 f/cc. Counterpart risk figures for 20 years of exposure are excess cancer risks of 4.5 per 1,000 workers and an estimated asbestosis incidence of 2 cases per 1,000 workers.

OSHA's risk assessment also showed the persistence of a significant risk at the 0.1 f/cc action level. The excess cancer risk remaining at that level is a lifetime risk of 3.4 per 1,000 workers and a 20 year exposure risk of 2.3 per 1,000 workers. OSHA concludes therefore that continued exposure to asbestos at the TWA permitted level and action level presents residual risks to employees which are still significant.

Imposing the excursion limit will reduce risk to employees whose asbestos exposure is limited to one or two short term bursts, lasting 30 minutes each. If the periods of exposure are less than 30 minutes then employees with more "bursts" will also have their risk reduced by the excursion limit. The maximum reduction will be felt by employees with non-detectable background asbestos exposures, whose only detectable exposure is a single burst (or bursts) lasting no longer than 30 minutes and which measure no more than 3.2 f/cc (the short term equivalent of the 0.2 f/cc TWA PEL).

To calculate the degree of risk reduction for such employees we note that the 8-hour time-weighted average exposure equivalent of the excursion limit established here is 0.063 f/cc. That is, if a worker is exposed to asbestos at the excursion limit of 1 f/cc for 30 minutes and exposed to no other asbestos for the remainder of the day, the 8 hour TWA exposure would be 0.063 f/cc. This figure is calculated by dividing the excursion limit of 1 f/cc by the number of 30 minute periods in an eight hour work day (16).

The risk assessment methods previously employed in the final asbestos standards (the linear cumulative dose model) can be used to calculate cancer risks for workers exposed only to one burst of asbestos for 30 minutes at the 1 f/cc excursion limit (equivalent to 0.063 f/cc as an 8-hour TWA). Using linear proportionality to previously calculated risks, these predictions are a lifetime (45 year) excess risk of 2.3 per 1,000 workers, and an excess cancer risk for 20 years exposure of 1.5 per 1,000 workers. OSHA believes that these risks are clearly not insignificant. In this case where workers are exposed only to one burst of asbestos per day, asbestos exposure and thus also cancer risk are substantially reduced by 97%. Where additional exposures occur beyond the 30-minute exposure, the reduction in risk is lower than calculated, and conversely, the cancer risk is greater than calculated.

The impact of this reduction will be felt by approximately 35,800 employees estimated by OSHA as having 8-hour TWA exposures below the current 0.2 f/cc PEL but short term exposures which exceed the excursion limit. (See Table 2, infra).

Thus, in accordance with the *Public Citizen* decision, the imposition of an excursion limit will further reduce significant risk remaining under the current standard. OSHA estimates, based on the total estimated affected population, and the risk factors cited, that about 118 lives will be saved based on lifetime exposures and 79 lives based on 20 year exposure because of the imposition of this excursion limit.

OSHA also finds that unregulated short-term exposures to asbestos unnecessarily elevate cumulative exposures even if the time weighted average is below the PEL. Because OSHA has found that significant risks of asbestos-related disease exist at cumulative exposures below the 1986 PEL of 0.2 f/cc, compliance with an excursion limit would further reduce such risks as well (See 51 FR at 22647–8), although these reductions have not been quantified.

The ways the institution of an excursion limit of 1 f/cc over 30 minutes will reduce risks to employees are illustrated by the following examples from the rulemaking record.

In some important operations exposure patterns consist of frequent short term rather that continuous levels of exposure. In the construction industry, asbestos removal and repair of asbestos-containing products are often short-term and generate peak exposures (Ex. 84–174, 84–162). Installation of new construction materials also involves intermittent peak exposures, for example, drilling and sawing pipe and sheet.

When asbestos-cement pipe is installed, cutting and machining of pipe can result in potentially high exposures. A representative of the Association of A/C Pipe Producers (AACPP) recommended work practices involving shrouded tools, which if followed were said to limit peak exposures for 15 minutes to 0.75 f/cc and 8-hour TWA exposures to under 0.1 f/cc (Ex. 91–16).

OSHA believes that the use of shrouded tools on-site will increase because of the adoption of an excursion limit. Where only a small amount of cutting on the construction site is needed, it is possible that a 0.2 f/cc TWA can be attained with unshrouded tools. With a short term excursion limit, he employer is more likely to require and the employee is more likely to use the shrouded tools to ensure compliance. In so doing, the employee's cumulative exposure will be significantly reduced and the risk of developing asbestos related disease will be correspondingly reduced.

In general industry, the largest group of exposed workers, brake repair workers, are subject to peak exposures. Their work can be intermittent and the evidence shows that for workers performing occasional brake repair jobs, their exposures occur in short spurts which can be above 1.0 f/cc, but when averaged over an 8 hour day fall within the permissible TWA limit.

OSHA believes the imposition of an excursion limit will increase the probability that employers will utilize the more effective but not required, work practices to assure compliance with the new excursion limit. OSHA had prohibited one method of cleaning brake linings using compressed air because the evidence showed that using that method likely would exceed the new TWA PEL in almost all cases. Other practices, although discouraged, are not prohibited. The evidence indicated that brushing the asbestos residue from fected parts sometimes exceeded a 1 /cc excursion limit, although the new time-weighted PEL of 0.2 f/cc might still be met (Exh. 84–263, 90–148). Additional information about practices which will result in lower short-term as well as TWA exposures levels is set out in Appendix F to § 1910.1001. Consequently, safer working conditions will result for the large number of employees performing automotive brake repair operations.

Other general industry employees will benefit from an excursion limit. In secondary manufacturing, especially gasket manufacturing, asbestos operations often are conducted on an intermittent basis (Exh. 235 A). The time-weighted average would mostly be met even with the use of inferior control equipment. Issuance of an excursion limit would require the use of the best available control equipment and would thus reduce the risk of asbestos related disease for secondary manufacturing workers whose TWA exposures were at or below the PEL.

In addition, control of short term exposures will help employers identify and control the sources that result in variable exposures. OSHA notes that an employee's exposure to toxic substances in the workplace varies from day-to-day and varies within the day's work shift. The meaning of day-to-day variability was considered in the promulgation of the 0.2 f/cc, 8-hour TWA PEL (see 51 FR 22652 to 22654).

OSHA recognizes that various factors cause day-to-day variability, including sampling error in the measurement of the airborne asbestos concentrations, changes in work practices, and changes in ventilation due to misapplication or malfunction. OSHA has concluded that the major sources of day-to-day variability can be moderated by diligent employer control (51 FR 22653). In addition, OSHA has specified a sampling and analytical method which would standardize measurement procedures and greatly reduce sampling error. OSHA determined that the 0.2 f/cc PEL is technologically feasible and will not result in an unfair citation to the conscientious employer. The reviewing Court upheld OSHA's findings in these respects.

Based on its analysis, OSHA believes, for industries that manufacture asbestos products, where asbestos is used as part of a continuing process, that the causes of excursions within a day are similar to the causes of day-to-day variability. Changes in work practice and malfunctioning equipment could cause exposure excursions. Break-downs were identified as a major reason for excursions in manufacturing (AIA/NA, P.H. brief III–44). Within-day-variability may also occur in industries where work with asbestos occurs intermittently during the day; the work cycle will result in temporary and high dust concentrations. Poor maintenance and deterioration of ventilation equipment, such as fan belt slippage, clogged filters and system damage can also influence within day variability as the ventilation system copes increasingly less successfully with the high end of the day's distribution of airborne fibers.

OSHA believes that industries that use asbestos on a continuous basis in well controlled processes such as the manufacture of asbestos products, should keep air concentrations from fluctuating greatly; that the 0.2 f/cc TWA PEL will force the use of the best technology and will require that diligent work practices, maintenance procedure and housekeeping be applied. Thus the 1.0 f/cc excursion limit should have minimal impact on these industry sectors and will not require the installation of new equipment and controls. However, OSHA believes that here too, the 1.0 f/cc excursion limit will provide a quantitative measure of the diligence of the applied work practices, maintenance procedures and housekeeping, and thus will have an overall beneficial effect to limit both interday and within-day-variability.

For the foregoing reasons, OSHA believes that imposing an excursion limit will further reduce the significant risk of asbestos related disease remaining after compliance with the TWA PEL of 0.2 f/cc.

B. Feasibility and Costs of Meeting the New Excursion Limit

The second prong of the legal test requiring OSHA to adopt an excursion limit, is that such a limit is feasible to implement. (*Public Citizen*, 796 F.2d at 1505). Because section 6(b)(5) of the Act provides that OSHA may promulgate standards to the extent that they are both economically and technologically feasible, the following discussion explores both aspects of feasibility. This discussion is organized into a summary discussion of technological and economic feasibility for all sectors; a sector by sector operational discussion of technological feasibility, and a discussion of the capability of the OSHA reference method (ORM) to measure the excursion limit.

OSHA finds that the new excursion limit of 1 f/cc measured over ½ hour is technologically feasible for most significant operations in most affected industries using the same engineering and work practice controls that were determined necessary to meet the PEL. OSHA believes also that the additional

cost of the engineering and work practice controls will be minimal. Thus, compliance with the new excursion limit is technologically feasible at minimal additional costs, which are well below the threshold of economic infeasibility. For some operations, OSHA has determined that compliance with the new limit will require respirators. Since these operations in large part are the same which OSHA previously determined will require respiratory protection to meet the time weighted average PEL of 0.2 f/cc in the revised standards, OSHA believes that the cost of the additional respirators will also be minimal. OSHA also believes that the costs of the ancillary provisions triggered by the excursion limit are similarly minimal and feasible for affected industries.

The evidence supporting these determinations consists of data and comments previously discussed and analyzed by OSHA in its Final Economic Impact and Regulatory Flexibility Analysis set out in 51 FR 22650 *et seq.*, and of data in the rulemaking record illustrating historic industry capability to meet the excursion limit. OSHA projects that this capability will improve because the new limit requires optimum use of existing technology.

. General Industry

As stated above, OSHA finds that the excursion limit is feasible to achieve in most sectors using the same engineering and work practice controls necessary to achieve the time weighted average limit. In some cases, increased attention to maintenance of controls, diligence in their application, and housekeeping will achieve compliance with the excursion limit, when a more relaxed application of the same controls would meet the TWA PEL. The data submitted to the record specifically showing short term exposures indicate that troublesome areas in meeting the new excursion limit in general industry are essentially the same areas as OSHA determined would have difficulty in meeting the TWA limits. Thus data from 1979 showing 60 minute exposures in asbestos cement sheet plants indicated that as with TWA exposures the operations likely to experience compliance difficulty were finishing or sanding operations (Exh. 235A, Table VI) which are unique to A/C sheet. Although these data also imply difficulty for the mixing stage of the sheet process, OSHA notes that it has determined the wet and dry mixing stages for A/C sheet are "virtually the same as the mixing stages of A/C pipe which was judged capable for reducing exposures to required levels (51 FR 22656).

The relatively poor reported levels in mixing reflect the fact that the A/C sheet industry has lagged behind the pipe industry in using the best available control technology. (See 51 FR 22657.) Pipe-coupling cutoff operations were also judged to have difficulty in meeting the permissible limits (51 FR 22657).

For both the sheet and pipe manufacturing operations, therefore, OSHA believes that only in sheet finishing and pipe coupling should there be problems in feasibility of compliance without respirator use. Because respirator use is likely to be needed to comply with the TWA as well as excursion limit in finishing, OSHA finds the new excursion limit feasible for these industries.

For friction products, since no data was introduced specially relating to short term limits, OSHA analysis essentially turns on its knowledge of the operations constituting the manufacturing of these products. As explained in the preamble to the revised standards, the asbestos friction products include drum brake linings, disc brake linings, disc brake pads, and clutch facings as well as other materials for motion control in industrial applications. As in the A/C sheet industry, troublesome operations needing respirators for compliance may occur in finishing operations, similar to the projections for compliance with the time-weighted average limit (51 FR 22657).

Other primary manufacturing industries, such as gasket and packings, asbestos paper coatings and sealants and asbestos reinforced plastics are expected to have similar capabilities to respond to the new excursion limit. OSHA believes the feasibility analysis for the TWA permissible limits indicates the feasibility of the 1 fiber excursion limit. OSHA notes that its detailed feasibility analysis based on measurements in such sectors for the time weighted average PEL identified sectors where OSHA believed that even in dry mechanical processing, the newly reduced TWA PEL could be met. Thus the agency concluded that the gasket and packings industry could meet the 0.2 f/cc TWA PEL in dry mechanical operations based on data showing levels below 0.2 f/cc, the asbestos paper industry also, on the basis of measurement showing a mean TWA exposure in dry mechanical operations of 0.14 f/cc, was found to be able to meet the TWA PEL of 0.2 f/cc (51 FR 22657–59).

With respect to secondary manufacturing, the Agency noted in the feasibility analysis for the revised standards that in general, receiving and handling primary asbestos products do not pose exposure problems. Compared with the primary processing steps of fiber introduction, mixing, and covering loose fibers, secondary fabrication takes place in a more controllable environment. OSHA had determined that it is feasible for these industries to comply with the 0.2 f/cc TWA PEL in all operations with the exception of some maintenance activities (e.g. repairing or servicing the controls that protect the other workers and a limited number of dry mechanical operations, 51 FR 22660). OSHA believes this judgment applies equally to the new 1 fiber excursion limit.

With respect to ship repair, OSHA has already determined that respirators will be required to comply with the PEL in many jobs because of the problems associated with ship safety rules, confined spaces and nuclear power plants. This imposition of an excursion limit should not result in additional compliance problems for this sector.

12. New Construction

OSHA believes that the new excursion limit of 1 f/cc measured over one-half an hour is feasible for most operations without relying on respirators. OSHA bases this determination on measurement data in the rulemaking record and the feasibility analysis set out in the June, 1986 preamble to the final revised standards.

First, the data on short term exposures in the record, even measurements taken 10 years ago, show that in most new construction activities, the 1 fiber excursion limit is easily compiled with. For example in a 1977 study of operations involving A/C pipe installation, virtually all hour long measurements were well below the new limit. After adjustment to the new 1 fiber limit measured over ½ hour, the only operations which would not be in compliance are cutting of pipe with an abrasive disc saw, and cutting and machining pipe with a doty tool without a shroud and wet methods (Consad final report, table 3.2, (p. 39).

Joe Jackson of the Association of A/C Pipe Producers (AACPP) stated that workers following AACPP's recommended work practices could almost always ensure that they would avoid peak exposures in excess of 0.75 f/cc over 15 minutes, while eight-hour time weighted average exposures would remain at 0.1 f/cc or below (Exhibit 91–16, Section p. 12). OSHA stated that "the

current trend is for more of these activities to be performed by the manufacturer rather than in the field" (51 FR at 22662, citing to Exhibit 333, Sections G. O. Q), and that the potential for these exposures has decreased substantially since the 1977 study upon which he based his conclusions. For those operations which will be continued to be performed in the field the study referenced above and Jackson's testimony support OSHA's conclusion that the use of shrouded and doty tools will result in exposure below the new excursion limit.

For A/C sheet installation, measurement results of more recent studies also indicate that with the use of shrouded tools most operations can comply with the new excursion limit. Thus personal exposure monitoring results from use of a shrouded circular saw and drill on flat A/C sheet resulted in 40 minute exposure levels of 0.1 f/cc. well below the 1.0 fiber excursion limit measured over 30 minutes (cite) and use of a shrouded circulator saw, sabre and drill in a 1979 study for period of under one half hour resulted in measurements no higher than 0.15 f/cc. (Consad Tables 3.3 and 3.4).

Installation of asbestos floor products is an operation which generally results in very low exposures (see e.g. Ex. 84–474). Although certain activities involved in removing old flooring may produce exposures which would exceed the TWA and excursion limits, there appears to be virtually no possibility that the excursion limit would be exceeded if the recommendations of the Resilient Floor Covering Institute were followed. (See, for example Table 3.5 in Consad's report, which indicates that TWA exposures of 2.0 f/cc were measured when dry removal or dry sweeping was performed. However, the Institute would prohibit powersanding and blowing asbestos dust and would require wet sweeping and handling.)

Other operations involving the installation of construction products similarly are expected to have few problems complying with the new excursion limit. The installation of new roofing felts and removal of old asbestos-containing felts, have reported measurements which range from significantly below, to above the TWA permissible limit of 0.2 f/cc. Because the geometric mean concentration, however, is below 0.1 for all activities involved in roofing installation and removal, OSHA believes that the excursion limit will be achievable in most cases. Where based upon circumstances such as the age and condition of the materials removed, the wind, and location of the job, if appears that exposures may exceed this mean, and respiratory protection may be called for to meet both the new excursion limit as well as the PEL.

Installation of asbestos sheet gaskets, on the other hand, should easily meet the new limit without reliance on respirators. Measurement data reporting mostly one-half hour measurements; (the sample ranged from 15 to 95 minutes measurements, with most activities measured up to 37 minutes (Consad, Table 3–8), shows exposures not exceeding 0.39 f/cc measured over 28 minutes. Based on this data, OSHA finds that the new excursion limit is feasible for this sector.

3. Construction, Abatement and Demolition

In the feasibility analysis performed relative to the TWA permissible limit of 0.2 f/cc, OSHA determined that engineering controls cannot routinely reduce exposure below the 0.2 f/cc PEL during major asbestos removal projects and that the supplemental use of respirators may be required. (51 FR 22563). Smaller abatement projects, on the other hand, were judged capable o meeting the TWA limit, because the levels measured over a day's work ranged from less than 0.1 f/cc to 0.57 f, cc with a geometric mean value of 0.09 f/cc (51 FR 22664 citing to 84–74, Table 3.10). Compliance expectations for the new excursion limit are that for major removal projects, respirator usage is expected and employees will be protected against both permissible levels by such equipment. For small projects, such as removal of insulation covering pipes in small areas, glove boxes may be available and can, at least some of the time, res lt in exposures low enough to meet both the TWA and excursion permissible limits (see 51 FR 22664).

Renovation activities involve asbestos exposure when asbestos materials used for pipe and boiler insulation, fireproofing, drywall tape and spackling, and acoustical plasters are disturbed during renovation projects. OSHA concluded in the feasibility analysis in the revised asbestos standards that "engineering controls are generally effective in limiting exposures after asbestos-containing materials have been disturbed, but that workers who actively disturb these materials will probably require respiratory protection to comply with the 0.2 f/cc PEL." 51 FR 22664.

OSHA's contractor noted that "as in asbestos abatement, exposures in renovation vary tremendously depending on the condition and friability of the asbestos materials, and the nature of the work being performed." (Clayton report, Exh. 3 at 32). Data submitted on the work exposures of renovation workers reflect TWA measurements, not short term levels. However, based on the time weighte average levels reported, OSHA concludes that most renovation workers who are indirectly exposed to asbestos will be protected against the limit by engineering and work practice controls but workers who directly disturb asbestos will need respiratory protection to comply with the new excursion limit, as OSHA similarly concluded with the respect to the TWA PEL.

Maintenance workers will not need respiratory protection for compliance with the new excursion limit in most situations. OSHA bases this determination on limited record data which shows concentrations during routine maintenance activities in a building in which serious deterioration of the asbestos materials had occurred and which appear to be short-term peak measurements. (Clayton report, Exh. 3 at 33).

These measurements ranged from 0.02 to 1.4 f/cc. Because these measurements appear to be a worst case situation, OSHA believes that engineering and work practice controls will adequately control exposures during routine maintenance activities within the new excursion limit of 1 f/cc measured over one-half hour.

III. Regulatory Analysis

Executive Order 12291 (46 FR 13197, Feb. 19, 1981) requires that a regulatory analysis be conducted for any rule having major economic consequences. OSHA has analyzed the economic consequences of the asbestos standards as promulgated in 1986 at that time. The further analysis required for these revisions follows.

A. Population-At-Risk and Benefits

As part of this analysis, OSHA estimates that, under the current asbestos rule, at least 36,000 workers in general industry and construction remain unprotected from asbestos fiber levels above the 1 f/cc excursion limit. For general industry, about one-tenth of the workers within plant operations with 8-hour TWA exposures of between 0.1 and 0.2 f/cc may exceed the excursion limit for thirty minutes a day. This fraction was applied to the sectoral exposure data reported in the Asbestos Regulatory Impact Analysis (RIA) [App. G] to yield OSHA's estimate of 2,703 workers affected by the excursion limit in general industry.

In automotive repair, approximately five percent of the population at risk to asbestos fibers are estimated to exceed the excursion limit. Hence, of the 527,000 workers exposed to asbestos in this sector, approximately 26,000 face thirty-minute exposures above 1 f/cc. In its RIA, OSHA estimated the costs and benefits of using solvent spray on brake-repair work in all affected establishments under the assumption that all firms would find it cost-effective to keep exposures below the action level by using the solvents on all repair jobs. OSHA now believes that some establishments are able to comply with the current standard without excursion-level controls and that the costs and benefits estimated for this industry sector in the RIA were too high.

To comply with the proposed excursion limit provisions, these brake-repair establishments would now be required to use the solvent spray, thereby ensuring protection of the total population-at-risk in the sector. Assuming workers affected by the excursion limit perform one two-hour brake job per day—during which peak exposures—OSHA estimates that use of the spray will reduce 8-hour TWA exposures from around 0.13 f/cc to 0.06 f/cc (Ex. 84–263). Based on the mortality rates for asbestos exposure given in the RIA, OSHA estimates that, in brake repair, approximately 3 of the 39 avoided fatalities that were estimated in the RIA should be assigned to the benefits of the proposed excursion limit standard.

In ship repair, OSHA assumed that all workers were provided vacuum cleaners and air-purifying respirators for the purpose of reducing TWA exposures. This equipment carries protection factors ranging from 10 to 1,000 and therefore would also protect employees from high excursion levels (see Asbestos RIA, Tables G–19 and G–18). For this reason, OSHA projects that few ship repair workers are exposed above the excursion limit.

In new construction, only asbestos/cement pipe installers are expected to be currently exposed to high excursion levels at frequent intervals. The estimated 16,000 workers involved in a/c pipe installation can be divided into 3,200 crews (five per crew). In the absence of controls, high fiber exposures can occur during the machining and cutting of pipe prior to installation. Employers experiencing excursion-level exposures can use shrouded tools during these activities to comply with paragraph (g)(2)(i) in the asbestos construction standard. Given the trend to have most of the machining done by the fabricator, and given the expense of purchasing shrouded tools, it is anticipated that only one-third of the crews will cut pipe at the worksite. Therefore, assuming one person on each crew is involved in cutting pipe, the population at risk in a/c pipe installation is expected to be around 1,100.

During most asbestos abatement, demolition and renovation jobs, the use of engineering controls and respirators to meet the TWA PEL will also reduce exposures to below the excursion limit (see Asbestos RIA, Table G–20). OSHA anticipates that the excursion level will be exceeded only during occasional small-scale jobs, where these controls are not needed to meet the TWA PEL. Similarly, in two activities within new construction, a/c sheet installation and asbestos roofing installation, the use of shrouded tools, vacuums, clothing and respirators needed to meet the TWA PEL are expected to prevent exposure levels from exceeding the excursion limit in all but a few short-duration activities. Thus, some minor, non-quantifiable benefits are expected in these sectors once the existing engineering controls and respirators are applied in the small jobs.

The overall population at risk from exceeding the excursion limit in construction maintenance is estimated at 32,000. In commercial/residential building maintenance, approximately 90,000 workers in small-scale jobs are potentially exposed to asbestos (RIA, p. F–20). However, OSHA believes that only about ten percent of these workers will be routinely exposed to asbestos. Thus, OSHA estimates that approximately 10,000 employees, working in two-person crews, will specialize in small-scale repair and renovation work involving contact with asbestos. In routine maintenance for general industry, of the approximately 220,000 workers exposed to asbestos and not equipped with respirators, an estimated ten percent, or 22,000, are assumed to be exposed to levels above the excursion limit.

Thus, the overall population at risk to exposures above the excursion limit is expected to be approximately 36,000 workers (not counting the population at risk in automotive repair). In the construction maintenance sectors affected by the standard, exposures are not expected to occur on a daily basis. For the purpose of estimating the incremental benefits of an excursion limit, the population at risk must be expressed as the number of full-time equivalent workers. Accordingly, OSHA estimates that the 36,000 workers with some exposures above the excursion limit translate to the equivalent of 10,000 full-time employees.

To develop a quantitative estimate of the expected incremental benefits of an excursion limit, OSHA conservatively assumes that the use of engineering controls, respirators and other measures will reduce 8-hour exposure levels by a factor of ten. Table 1 shows the number of expected cancer deaths for each sector at 0.13 f/cc TWA—estimated as the current mean exposure level for all industry establishments impacted by the excursion limit—and .013 f/cc TWA, the level after the tenfold exposure reduction. For each exposure level the number of expected deaths in manufacturing and construction is summed. Taking the difference of these two sums yields the figure for avoided cancer deaths. As indicated in the table, OSHA's risk assessment model predicts that an excursion limit of 1 f/cc for thirty minutes will prevent approximately two cancer fatalities per year in the indicated sectors (not counting the benefits in automotive repair discussed above).

TABLE 1.—ESTIMATED EXCESS CANCER DEATHS AVOIDED DUE TO PROMULGATION OF A THIRTY-MINUTE EXCURSION LIMIT OF 1 F/CC FOR ONE YEAR *

Sector	No. of full-time equivalent workers	Excess cancer deaths at 0.13 f/cc TWA *	Excess cancer deaths at 0.013 f/cc TWA *	No. of cancer deaths avoided
Primary manufacturing	784	0.152	0.016	0.136
Secondary manufacturing	1,919	0.388	0.057	0.331
Construction	6,930	1.340	0.133	1.207

TABLE 1.—ESTIMATED EXCESS CANCER DEATHS AVOIDED DUE TO PROMULGATION OF A THIRTY-MINUTE EXCURSION LIMIT OF 1 f/cc FOR ONE YEAR [a]—Continued

Sector	No. of full-time equivalent workers	Expected cancer death at .131/cc TWA [b]	Expected cancer deaths at .013 f/cc TWA [c]	Number cancer deaths avoided
Total	9,683	1.86	0.186	1.674

Source: U.S. Department of Labor, OSHA, Office of Regulatory Analysis.
[a] Automotive repair workers exposed to excursion levels are excluded from the analysis in the table.
[b] Based on exposure data in the Asbestos RIA (App. G), OSHA estimates that the population at risk from short-term levels experiences a mean of 0.13 f/cc TWA.
[c] Use of engineering controls and respirators are assumed to result in a tenfold reduction in TWA exposures.

Moreover, as explained in Chapter V in the Asbestos RIA, the estimated number of lives saved understates the total benefits derived from lowering worker exposure. Additional expected benefits (but not quantified) should appear in the form of reduced worker disability from asbestosis and a reduced incidence of asbestos-related diseases in groups outside the directly exposed work force.

B. Compliance Costs

OSHA estimates that the total annual compliance costs for achieving a thirty-minute excursion limit of 1 f/cc in the sectors shown in Table 1 will be approximately $29 million. (Some additional compliance costs in automotive repair were already estimated in OSHA's original RIA and are discussed below.) Table 2 shows the number of exposed workers in each industry sector and the breakdown of compliance costs by regulatory provision. In general, the exposure distributions and the compliance cost formulae presented in the RIA were reemployed here. The majority of the costs will occur in the construction industry, where the annual costs are estimated to be $23 million. Primary and secondary manufacturing are expected to incur annual costs of $2.0 million and $4.4 million, respectively. In ship repair, additional compliance costs are expected to be insignificant because it is assumed that most firms already use adequate controls in order to comply with the existing provisions of the asbestos standard.

TABLE 2.—ASBESTOS EXCURSION LIMIT[a] Annual Compliance Costs [By sector and provision, in dollars]

Sector	Number of exposed workers	Engineering controls	Shower/change rm total	Respirators	Clothing	Monitoring	Medical surveillance	Training	Grand tot
Primary manufacturing:									
A/C pipe	29	0	34,557	4,923	21,750	2,712	373	208	64,523
A/C sheet	20	0	23,833	3,395	15,000	3,255	514	144	46,139
Textiles	3	0	3,575	509	2,250	1,505	39	22	7,899
Floor tile	24	0	28,599	4,074	18,000	1,505	308	172	52,553
Coatings	102	0	121,547	17,314	76,500	35,941	1,310	732	253,344
Friction	510	0	607,733	86,569	382,500	27,664	6,551	3,652	1,114,679
Paper	39	0	46,474	6,620	29,250	11,933	501	280	95,058
Gaskets	32	0	38,132	5,432	24,000	9,764	411	230	77,969
Plastics	25	0	29,791	4,244	18,750	2,006	321	180	55,291
Subtotal	784	[b]0	934,241	133,079	588,000	96,284	10,070	5,629	1,767,203
Secondary manufacturing:									
A/C sheet	35	0	41,707	5,941	26,250	10,538	450	251	85,197
Textiles	17	0	20,258	2,886	12,750	23,500	218	122	59,734
Friction	150	0	178,745	25,462	112,500	16,796	1,927	1,077	336,509
Gaskets	997	0	1,188,058	169,234	747,750	121,368	12,806	7,158	2,246,375
Plastics	245	0	291,950	41,597	183,750	102,890	3,147	1,759	625,084
Auto remanufacturing	475	0	565,026	80,528	356,250	83,401	6,101	3,411	1,095,917
Subtotal	1,919	[b]0	2,286,744	325,738	1,439,250	358,556	24,650	13,778	4,448,717
Construction:									
A/C pipe installation	1,100	1,550,000	0	N/R	N/R	0	113,916	15,736	1,779,712
Routine maint. in C/R	10,000	7,417,947	0	2,228,004	3,450,000	0	1,035,600	143,800	14,295,151
Routine maint. in GI	22,000	147,400	0	5,330,509	660,000	0	0	315,920	6,453,329
Subtotal	33,100	9,215,347	[c]0	7,568,512	4,110,000	[c]0	1,149,516	475,316	22,518,791
Total	35,803	9,215,347	3,220,985	8,027,430	6,137,250	454,840	1,184,235	494,724	28,734,911

Source: U.S. Department of Labor, OSHA, Office of Regulatory Analysis.
[a] Compliance costs in automotive repair are not reported in the table (see discussion in text).
[b] No additional controls are expected beyond those required to meet the TWA PEL.
[c] Additional decontamination facilities are assumed not to be necessary because either they would have been required to meet the existing standard or because the operations are excluded due to their small-scale, short-duration nature.
[d] Employers are expected to minimize the need for additional monitoring through the use of objective data or by equipping their workers with air-supplied respirators.

1. Construction

Annual compliance costs in construction are estimated at $23 million to protect approximately 33,000 workers in asbestos/cement pipe installation, routine maintenance in commercial/residential buildings, and routine maintenance in general industry. The Two maintenance sectors in construction account for over 92 percent of the costs in construction, with a/c pipe installation accounting for the remaining cost. Asbestos abatement, demolition and renovation are not expected to incur additional compliance costs. With the exception of a minor number of small-scale jobs, exposures in those sectors, and in a/c sheet installation and asbestos roofing installation, are projected to remain below the excursion limit through the use of engineering controls and respirators put in place to meet the TWA PEL. During these jobs, additional use of existing controls and respirators will be required without any incremental costs beyond those previously estimated.

As shown in Table 2, compliance costs for additional engineering controls, respirators and disposable clothing in construction are expected to total $9.2 million, $7.6 million and $4.1 million, respectively. No decontamination costs are anticipated because the activities in these sectors are of short duration and are exempted from this provision.

In a/c pipe installation, it is anticipated that short-term exposures will be reduced through the use of shrouded tools during machining and cutting of pipe. In the maintenance sectors, supplied-air respirators, glove bags, HEPA vacuums and filters, and disposable clothing and gloves will protect workers during activities when fiber concentrations may exceed the excursion limit. Office workers and the general public in commercial and residential buildings (c/r) will also benefit from signs alerting them to the hazards at the worksite. Applying a unit cost of 50 cents for each sign put in place, the costs of warning signs are expected to total $1.8 million annually in c/r maintenance.

In routine maintenance in general industry, OSHA estimates that approximately 35,000 gasket projects will face asbestos level excursion. Most of these jobs will be small and therefore will require only one sign in most cases. At a unit cost of 50 cents per sign, the total compliance cost for the regulated-area provisions will be approximately $43,000 in gasket maintenance.

To avoid the costs of monitoring exposure levels at each project, it is assumed that construction maintenance crews will purchase supplied-air respirators and compressors at unit costs of $278.25 and $1,000, respectively, and capitalize them over five years. In addition, firms in commercial/residential maintenance and a/c pipe installation will incur costs associated with the medical and training provisions when the excursion limit is exceeded. (Workers in routine maintenance in general industry are exempted from the medical surveillance provisions because they will be exposed for fewer than 30 days.) Assuming a medical exam/lost-work-time cost of $100 and recordkeeping costs of around $3.50 per employee, annual medical costs for these workers are estimated to be approximately $1.1 million.

Training costs in construction are based on the assumption that a supervisor (at a wage rate of $13.10 per hour in construction and $17.11 per hour in general industry (routine maintenance)) will conduct one-half hour training sessions for groups of five employees (at an hourly wage rate of $11.91 in construction and $16.37 in general industry). Added to these costs of instruction are recordkeeping costs (estimated in the RIA, p. VI–41, to be $0.85 per record in construction and $1.50 per record in general industry), bringing the total cost of training in construction to around $475,000.

2. General Industry

OSHA estimates annual compliance costs of $6.2 million in primary and secondary manufacturing. As noted above, the ship repair sector should not experience costs to comply with the excursion limit since controls currently in use to meet the TWA PEL prevent thirty-minute levels from exceeding 1 f/cc. OSHA expects automotive repair, however, to incur some compliance costs from the use of solvent spray to meet the excursion limit. Assuming one-third of the affected employees are currently in compliance, and assuming (as in the RIA) that approximately thirty seconds of worker time is spent spraying an entire can of solvent spray (at $1.75 per can) on the brake surface to minimize the number of airborne fibers, compliance cost is estimated to be $4.0 million in this sector. As noted above, these compliance costs were already included in the RIA for the TWA permissible exposure level. Hence, the costs are not incremental as are the excursion limit costs in the other sectors and therefore are not reported in Table 2.

Half of the total cost in general industry, $2.1 million, or $1,192 per worker, will be spent on decontamination of workers after high fiber exposures. To comply with the decontamination provisions, employers are expected to expand shower rooms and change rooms (see pp. VI 15–16 in the RIA for details of the calculation) in order to accommodate the estimated 2,700 workers who are exposed below the 0.2 f/cc TWA but above the 1 f/cc excursion limit. In addition, OSHA assumed that each of those workers would be given one change of disposable clothing and gloves each day, at a cost of $3 per set.

Initial monitoring is necessary to help firms determine the need for respiratory protection and to provide the objective data required by the standard where such data does not currently exist. Because exposure levels in primary and secondary manufacturing will occasionally exceed 1 f/cc for thirty minutes despite the presence of engineering controls, OSHA assumed that all employers will perform initial monitoring at each workstation in all establishments. This assumption tends to overstate actual costs because in some instances other objective data will be available. Based on the expected variation in these exposures, OSHA estimates that approximately 50 percent of the workstations will have exposures above the excursion limit. These workstations are expected to continue monitoring twice a year and to equip their workers with cartridge respirators during peak exposure periods.

For the workstations where exposures exceed the excursion limit but not the TWA action level, medical surveillance and training would be required. OSHA estimated that half of the workers expected to exceed the excursion limit will be affected by these provisions for the first time (the balance of these workers are in establishments where these costs are currently required under the existing rule). Annual medical and training costs for these workers is calculated to be about $35,000.

IV. Economic and Environmental Impacts

OSHA anticipates no major economic or environmental impacts from the promulgation of the excursion limit. In most manufacturing sectors, estimated annual compliance costs fall below $100,000. The highest compliance costs in manufacturing will be felt in secondary gasket production and primary friction products. In these two sectors the additional annual compliance costs are not expected to exceed one-half of one percent of annual revenue. Thus, OSHA does not anticipate a significant economic impact

in manufacturing due to compliance with the excursion limit.

Although automotive repair is expected to face compliance costs to meet the excursion limit, these costs were estimated previously and were applied to the economic impact computed in the RIA. The overall economic impact on this sector as described in the original RIA was not significant.

Compliance costs in the construction industry are expected to be higher than in general industry. OSHA estimates that annual compliance costs in a/c pipe installation will be approximately $1,500 per exposed worker, while the per-worker costs in routine maintenance in commercial/residential buildings and in routine maintenance in general industry will be $1,400 and $300, respectively. However, OSHA expects that firms within the affected sectors will be able to pass along compliance costs to the building owners and project developers. As noted in OSHA's Asbestos RIA, higher construction and maintenance costs are routinely passed forward to owners and developers. Further, annual compliance costs in these sectors represent a minor percentage of the total value of the structure being built or repaired. Therefore, it is anticipated that the impact of the excursion limit on final rents and prices will be negligible.

In accordance with the Regulatory Flexibility Act, OSHA has assessed the economic impact of a 1 f/cc excursion limit on small establishments and certifies that those establishments will not be adversely affected. In addition, OSHA does not foresee a significant environmental impact from the excursion limit provision.

V. Feasibility of Measuring Excursion Limit

OSHA also has determined, based on the rulemaking record of the revised standard, that the lowest feasible short term limit which can be reliably measured for purposes of the OSHA compliance programs, is 1 f/cc measured over 30 minutes. OSHA reaffirms that the OSHA Reference Method (ORM) provides the optimal technology for assessing worker exposure to airborne asbestos.

A brief review of the ORM is necessary to an understanding of this determination. The ORM is based largely on NIOSH Method 7400, a method widely acknowledged in the record as superior to the earlier NIOSH P&CAM 239 method previously prescribed by OSHA [Exs. 117-A; 123-328; 330; Tr. 6/20, p. 10; Tr. 6/21, p. 5; Tr. 7/31, p. 69].

In the preamble to the revised standards OSHA explained the relationship of the ORM to NIOSH P&CAM 239 and to the revised NIOSH 7400 method (51 FR 22688).

Because the NIOSH 7400 method takes advantage of technological improvements that have been adopted worldwide for asbestos sample analysis, but retains the same counting rules as the NIOSH P&CAM 239, OSHA has used the major features of the NIOSH 7400 method as the basis for developing a required standardized sampling and analytical method measuring airborne asbestos concentrations. The method required by the revised asbestos standards for both general industry and construction, referred to as the OSHA Reference Method (ORM), is detailed in the mandatory Appendix A of each standard. (§ 1910.1001 and 1926.58).

These appendices require that the employer collect airborne asbestos samples using 25 mm diameter mixed cellulose filters and a 50 mm electrically conductive extension cowl. Samples must be analyzed using a phase contrast microscope calibrated using a phase shift test slide and equipped with a Walton-Beckett graticule. The ORM also requires that filter samples be prepared using acetone-triacetin clearing solution and be counted in accordance with the rules specified.

The ORM differs from the NIOSH 7400 method in two important respects. The ORM mandates a flow rate for asbestos sampling of between 0.5 and 2.5 lpm, which is similar to the flow rate range permitted by the NIOSH P&CAM 239 method (1.0 to 2.5 lpm). In contrast, the NIOSH 7400 method permits the use of any flow rate between 0.5 lpm and 16 lpm. Secondly, the ORM permits the use of the large 37 mm diameter filter when the employer has written justification explaining the need to use a larger filter to obtain readable samples. Both of these departures from the NIOSH 7400 method were made in response to commenters who pointed out that the use of high flow rates (e.g., 4 lpm) combined with the use of the smaller 25 mm filter may result in samples that are too overloaded with dust to permit the counting of asbestos fibers. This is particularly true in construction where nonasbestos dust particles released to the air as a result of demolition or renovation activities may interfere with analyzing samples that were collected using high flow rates and the smaller filter. OSHA believes that, by limiting the flow rate and permitting the use of the 37 mm filter in certain circumstances, employers will be more likely to obtain readable samples in dusty environments. As explained below however, the 37 mm filter will be allowed to measure short term exposures only when they are above the EL. Since short term exposures in impacted construction activities are likely to exceed the EL, OSHA believes that many employers will continue to have the flexibility to pick the filter and flow rate to best assure reliable measurement results. In addition, record evidence suggests that the use of high flow rates may increase electrostatic charges in the filter apparatus, preventing some fibers from reaching the filter and resulting in lower fiber counts [Ex. 84-178; Tr 7/6., p. 99]. OSHA adopted these specific provisions to establish uniformity to the asbestos exposure determination.

To determine whether the ORM could be used to analyze short-term samples, and what the lowest feasible excursion limit is, the limit of reliable detection for 15-and 30-minute samples was evaluated. OSHA calculated the lowest reliable limit of quantitation using the following formulas:

$$E = \frac{(f)}{(n)(Af)}$$

where:

E is the fiber density in fibers per square millimeter;
f is the total fiber count;
n is the number of microscope fields examined;
Af is the field area (0.00785 mm^2 for a properly calibrated Walton-Beckett graticule); and

$$C = \frac{(E)(Ac)}{(V)(1000)}$$

where:

E is as above;
Ac is the effective area of the filter (nominally 385 mm^2 for a 25-mm-diameter filter and 855 mm^2 for a 37-mm diameter filter; and
V is the sample volume.

Prior to the ORM, analysts could use different procedures which resulted in different asbestos counts from one laboratory to the next. In addition the ORM method contains procedures that reduce variability in asbetos counts within a laboratory. In the final rule OSHA acknowledged that the use of the phase contrast light microscope method was approaching its limits of use with the new PEL but OSHA determined the method, with the procedures required by the ORM, could reliably measure 8 hour TWA exposures at 0.1 f/cc for purposes of the OSHA compliance program.

Using the minimum filter loading that is suggested for the ORM (i.e., 80 fibers/100 fields, or 100 fibers/mm²), OSHA examined the relationships among these two sampling periods (15 and 30 minutes), the two filter sizes (25- and 37-mm in diameter), and various possible flow rates ranging between 2.5 lpm and 0.5 lpm.

The results set out in the Table show that 1 f/cc measured over 30 minutes is the lowet level which can be reliably measured for most operations likely to be affected by an excursion limit.

The ORM has been designed to provide needed flexibility to reliably measure exposures in the wide variety of operations where asbestos, tremolite, anthophyllite and actinolite are used. As explained in the preamble to OSHA's revised standards, filter overload or interference by other particles in dusty environments is accommodated by the ORM by permitting the use of the 37 mm filter when justified, and by reducing the flow rate. OSHA believed that in most cases reducing the flow rate will minimize filter overload for TWA exposure measurements, but allowed the 37 mm filter for stubborn situations, with written justification (51 FR 22690–1).

The major industries and operations affected by the imposition of an excursion limit: construction, and maintenance and brake repair in general industry, expose employees to the kinds of dusty environments which may result in filter overload. In addition, short term bursts of dust containing asbestos may contribute to overloading the filter.

The flexibility needed to reliably measure excursions in these operations, requires the ability to sample at low flow rates. Table *X* shows that only at the relatively high flow rates of 1.6 lpm and above are levels less than 1 f/cc over 30 minutes quantifiable. We note, based on the results in the Table that the use of the 37 mm filter is precluded for measuring short term limits down to 1 f/cc over 30 minutes. OSHA therefore finds 1 f/cc measured over 30 minutes is the lowest level feasibly measured for the operations impacted by this amendment.

OSHA notes that these considerations apply to measurements at or below the excursion limit, the level which must be capable of being measured for most enforcement and compliance purposes. The employer is not precluded from using the 37 mm filter to reliably measure short term exposures *above* the excursion limit so long as the level measured falls within the limits or reliability set out in the table. OSHA therefore will allow the use of the 37 mm filter for measuring short term exposures for the same reasons and requiring the same justification as time-weighted average measurements. If an employer uses measurement results to show exposures below the excursion limit, he must use the 25 mm filter.

Also, OSHA has determined that employers can comply with the 1 f/cc excursion limit within the accuracy requirements of the revised asbestos standards. As discussed at length in the preamble to the final rules (see 51 FR 22686–22691), the key factor in sampling precision is fiber loading. Using the minimum loading s ·gested by the ORM (80 fibers/100 field: or 100 fibers/mm²), employers can be c ıfident that they are measuring the : tual airborne concentrations of a ›estos in their workplaces within standard sampling and analytical error (SAE) of ÷/—25%.[1]

OSHA points out, as stated earlier, that a superficial contradiction exists between OSHA's finding that 1 f/cc measured over 30 minutes is the lowet reliable level of detection, and data cited regarding lower levels in brake repair (51 FR 22662). Those measurements, mainly derived from studies, were made by NIOSH with expert analytical capabilities under controlled conditions. In addition these measurements do not reflect the differences in results that occur due to common statistical sampling factors. As stated above, OSHA does not believe, based on a full rulemaking record, that such low levels can reliably be measured by employers for regulatory requirements. OSHA considers the recorded levels indicative of a range of exposures for the brake repair industry, and has not used these results for any other regulatory purposes.

Thus, OSHA's finding that the excursion limit of 1 f/cc for 30 minutes is the lowest that can be reliably measured is based upon the enforceability of the limit, recognizing that in some situations, lower exposures could theoretically be measured and are reported in the rulemaking record. In reaching this decision, OSHA has relied upon the asbestos rulemaking record, the equations described above being part of the record.

[1] OSHA evaluates the precision of the ORM (implemented as NIOSH 7400) as follows: NIOSH has estimated that the overall precision, expressed as the coefficient of variation (CV), of the 7400 method ranges from 0.13 to 0.315 for samples in which 30 to 100 fibers per 100 fields have been counted (Ex. 84–144). For filters at the minimum loading suggested by the ORM, (80 fibers/100 fields) the CV is 0.13. This yields a 95% One Sided Upper Confidence Interval of 21.4%. This is lower than the SAE of 25% currently listed for this method in OSHA's Industrial Hygiene Technical Manual.

VI. The Process for Promulgating the Excursion Limit

As the foregoing discussion indicates, the *Public Citizen* Court explicitly rejected OSHA's reliance in the EtO standard on the need for a "dose-rate effect" to justify an excursion limit. OSHA based its determination in the revised asbestos standards on the same rationale. The Agency hereby withdraws the determination. Instead, OSHA has made a new determination based on appropriate criteria and a review of the rulemaking record concerning whether and what excursion limit should be required in the revised asbestos standards.

Table *X* shows the results of OSHA's analysis.

TABLE *X*—RELIABLE QUANTITATION LIMITS FOR SHORT-TERM ASBESTOS SAMPLING USING THE OSHA REFERENCE METHOD

[fiber density of 100 f/mm²]

Flow rate (liters/min)	Sampling time	Lower limit of quantification (fibers/cc)
For 25 mm filters:		
2.5	15	1.05
2.0	15	1.21
1.6	15	1.62
1.0	15	2.51
0.5	15	5.22
2.5	30	.51
2.0	30	.65
1.6	30	.82
1.0	30	1.31
0.5	30	2.61
For 37 mm filters:		
2.5	15	2.32
2.0	15	2.91
1.6	15	3.63
1.0	15	5.81
2.5	30	1.15
2.0	30	1.45
1.6	30	1.82
1.0	30	2.91

OSHA's previous STEL determination did not apply the criteria which the Court held must compel the issuance of a short term limit. However, these

criteria: feasibility of the limit and further reduction of significant risk were raised by OSHA in its proposal (see 49 FR 14116, 14122), and were the subjects of data and comment submitted to the record as well as testimony at the hearing. Therefore all aspects of OSHA's statutory rulemaking requirements, consisting of notice, comment and hearing, have been compiled with concerning whether OSHA must issue an excursion limit (See section 6(b) of the Act).

Ample notice on all relevant issues was provided by OSHA. In its proposal the Agency stated it was considering reducing the prior "ceiling limit" of 10 f/cc to a limit based, in large part on the TWA-PEL which would be required. OSHA specifically mentioned the possibility of imposing a 5 f/cc limit measured over 15 minutes if a 0.5 f/cc TWA-PEL were chosen and a 2 f/cc "ceiling limit" if a 0.2 f/cc limit were chosen, and requested comments on these as well as "other suggested limits". OSHA noted that ceiling limits "may be necessary to ensure further that employees are not exposed to dangerous concentration(s) of asbestos fibers" and also asked for "(i)nformation concerning the feasibility of achieving (the limits mentioned or others) particularly in industries with variable exposures" (49 FR at 14123).

Comment and evidence submitted to the record responded to all relevant issues and provided an ample evidentiary base for OSHA to make determinations regarding a revised excursion limit for asbestos exposure. Participants representing both industry and employee groups recommended that OSHA adopt a "short term limit ranging from 0.5 f/cc measured over 30 minutes" (BCTD, Exh. 330 at 155), to 5.0 f/cc measured over 15 minutes (AIA/NA, P.H. brief, III-45).

Data introduced during the rulemaking, as discussed previously, shows the feasibility of the limit adopted. Most data relates to service industries and construction. The relative scarcity of data for general industry was explained by AIA/NA as resulting from the fact that "at least in manufacturing plants, there are few routine operations where exposures are episodic. Consequently, the occurrence of peak exposures is generally an unexpected event such as an equipment breakdown." (AIA/NA, P.H. brief III-44).

Data used in OSHA's risk assessment and regulatory analysis similarly show that the imposition of an excursion limit of 1 f/cc measured over 30 minutes will further reduce the significant risk remaining after a TWA exposure limit of 0.2 f/cc is achieved.

OSHA finds pursuant to 5 U.S.C. 553(b), that additional notice and comment are unnecessary. OSHA believes that additional notice of the intent to consider an excursion limit would merely duplicate the prior notice. As discussed above, public participation has already taken place during the extensive rulemaking held to develop the 1986 standards.

VII. Summary and Explanation

The requirements set forth in this notice are those which, based on currently available data, OSHA believes are necessary and appropriate to provide additional protection to employees who are now exposed to airborne concentrations of asbestos at levels that pose a significant risk of material impairment to their health. OSHA has considered all data and recommendations on the short-term limit issue contained in the asbestos docket (H-033).

The following sections discuss new individual requirements of the asbestos standard. The final standard adopts an additional permissible exposure limit of 1 f/cc excursion limit averaged over a sampling period of 30 minutes. As with the TWA-PEL, engineering controls and work practices when feasible are the preferred methods to reach the excursion limit.

Other provisions of the revised standards are being amended to also require certain ancillary protective actions when the excursion limit is exceeded. For example, regulated areas must be established, and decontamination facilities be provided for employees whose exposure exceeds the EL. Employers must measure the exposure of employees to ascertain whether the EL is being exceeded. For purposes of this preamble, OSHA is combining the discussion of general industry and construction standard provisions which relate to the same subject matter. Of course, the respective regulatory texts remain separately designated and codified. For example, the discussion on both the general industry and construction revised requirements on monitoring is combined. Any differences in application or text between these industries will be noted in the discussion, as well as, where required, in the respective regulatory texts. OSHA believes that this combined discussion will aid interpretation of the requirements since a unified rationale, where appropriate, is presented, and differences are highlighted where they exist.

Permissible Exposure Limit, Paragraph (c)(2), (General Industry and Construction)

In the final amendment, OSHA establishes a 1 f/cc excursion limit for asbestos and revises existing paragraph (c) to incorporate an excursion limit and to clarify that the excursion limit is to be determined as a time-weighted average over a sampling time of 30 minutes.

In the proposed rule of 1984, OSHA stated that it was considering a ceiling limit of 2.0 f/cc for a 15-minute period if a TWA of 0.2 f/cc was established. The 1984 proposal specifically asked participants for recommendations for specific ceiling levels. In response, some participants recommended a 5 f/cc ceiling limit (Exs. 92-645, 90-180); a ceiling limit equivalent to 10 times the PEL (Ex. 127) and the AFL-CIO recommended that OSHA should lower the ceiling level for the asbestos standard proportionally to the reduction in the permissible exposure limit which would be 0.5 f/cc, based on the AFL-CIO recommended 0.1 f/cc time-weighted average PEL (Ex. 335, p. 46).

Based on the rulemaking record of the revised standard, OSHA determined that the lowest feasible short term level which can be reliably measured using the OSHA Reference Method (ORM) is 1 f/cc measured over 30 minutes. OSHA has also determined that a 1 f/cc EL is effective at lowering total asbestos dose below that achievable through the 0.2 f/cc 8-hour TWA alone. OSHA has determined that, based on the evidence in the record, a 1 f/cc 30 minute EL is feasible and can be reliably and consistently monitored, using available monitoring methodology. There is insufficient evidence on the feasibility of monitoring and attaining lower short-term exposure levels.

With respect to the length of the permitted sampling period, OSHA believes that collection of asbestos over 30 minutes is necessary to ensure that a sufficient amount of asbestos is collected for accurate analysis. It should also be noted that the newly established ceiling limit of 1 f/cc over 30 minutes, in terms of dose exposure to asbestos, is similar to the limits that OSHA considered in the proposal, that is, a 2 f/cc ceiling for 15 minutes.

OSHA has determined that exposure to asbestos under the present standard still presents a significant risk of material impairment to employees. Based on the current record, OSHA believes that compliance with the excursion limit as set forth in this paragraph will further reduce such significant risk.

Exposure Monitoring: Paragraphs (d)(2)(i), (d)(1)(ii), (d)(2)(i), (d)(2)(ii), (d)(2)(iii), (d)(3), (d)(4), (d)(5), and (d)(7)(ii) (General Industry); Paragraphs (f)(1)(ii), (f)(1)(iii), (f)(2)(ii), (f)(4) (Construction)

Section 6(b)(7) of the Act (29 U.S.C. 655) mandates that any standard promulgated under section 6(b) shall, where appropriate, "provide for monitoring or measuring of employee exposures at such locations and intervals, and in such a manner as may be necessary for the protection of employees." The primary purpose of monitoring is to determine the extent of employee exposures to asbestos.

Exposure monitoring informs the employer whether the employer is meeting the obligation to keep employee exposures below the established permissible exposure limits. Exposure monitoring also permits the employer to evaluate the effectiveness of engineering and work practice controls and informs the employer whether additional controls need to be installed. In addition, section 8(c)(3) of the Act (29 U.S.C. 657(c)(3)) requires employers to notify promptly any employee who has been or is being exposed to toxic materials or harmful physical agents at levels that exceed those prescribed by an applicable occupational safety or health standard. Finally, the results of exposure monitoring are part of the information that must be supplied to the physician, and these results may contribute information on the causes and prevention of occupational illness.

Short-term monitoring is required whenever asbestos concentration will not be uniform throughout the workday and where high concentrations of asbestos reasonably may be expected to be released or created in excess of the EL. For example, in the manufacture of asbestos products, peak exposures could be expected during the dry handling of asbestos in manual debagging and charging operations, and during mechanical operations such as cutting, lathing, machining, sawing, drilling, and sanding. Peak exposures could also be expected during maintenance and repair activities where asbestos insulation is disturbed and in automotive repair during brake and clutch servicing.

Amended paragraphs (d)(1)(i) (general industry), and (f)(1)(ii) (construction), set out general requirements for monitoring required under the standards. They now require that the employer perform breathing zone sampling that is representative of the 30-minute short-term exposure of each employee as well as TWA exposures. Paragraphs (d)(1)(ii) (general industry), and (f)(1)(iii) (construction), require that representative 30-minute short-term employee exposures be determined on the basis of one or more samples representing 30-minute exposures associated with operations that are most likely to produce exposures above the excursion limit for each shift for each job classification in each work area.

These exposure monitoring provisions require that the monitoring yield information enabling the employer to determine the short-term exposure for each employee. However, it does not necessarily require separate measurements for each employee. If a number of employees perform essentially the same job under the same conditions, it may be sufficient to monitor a fraction of such employees.

Representative personal sampling for employees engaged in similar work and exposed to similar short-term asbestos levels can be achieved by measuring the exposure of that member of the exposed group who can reasonably be expected to have the highest exposure. This result would then be attributed to the remaining employees of the group.

In many specific work situations, the representative monitoring approach can be more cost-effective in identifying the exposures of affected employees. However, employers may use any monitoring strategy that correctly identifies the extent to which their employees are exposed.

Paragraphs (d)(2)(i) (general industry), and (f)(2)(i) (construction), cover the duty to conduct "initial monitoring" so that employers have baseline data on which to determine whether they must conduct further periodic monitoring. Now employers must perform initial monitoring to determine accurately the short-term airborne concentrations of asbestos to which employees are exposed as well as TWA exposures. However, paragraph (d)(2)(ii) (general industry), contains a provision designed to eliminate unnecessary monitoring in general industry where employers have monitored short-term employee exposures to asbestos within a six-month period immediately preceding publication of this final rule in the Federal Register. In such cases initial monitoring may be excused, pursuant to paragraph (d)(2)(i) (general industry), if the results of the earlier monitoring show that their employees are not exposed to asbestos levels above the excursion limit.

The results of prior monitoring should be acceptable if such sampling was conducted in accordance with the monitoring provisions prescribed for excursion limit monitoring in this standard: i.e., prior exposure determinations were made from breathing zone air samples that are representative of 30 minute short-term exposures (paragraph (d)(1)(ii) (general industry)), such determinations were associated with operations that are most likely to produce exposures above the excursion limit and if the monitoring method was accurate, to a confidence level of 95 percent, within plus or minus 25 percent for airborne concentrations of asbestos at the excursion limit of 1 f/cc.

Based on the discussion above, paragraph (d)(2)(ii) (general industry), permits the use of prior monitoring results to fulfill the initial monitoring requirements prescribed under paragrah (d), as long as such monitoring satisfies all other requirements of the new monitoring provisions.

In addition, paragraph (f)(2)(iii) (construction) provides an exemption from new initial monitoring for construction employers who have historical monitoring data (prior monitoring results). This exemption prevents these employers from having to repeat monitoring activity for construction jobs that are substantially similar to previous jobs for which monitoring was conducted. The data the employer uses, upon which judgments are based, must be obtained under workplace conditions closely resembling the process, type of material, control methods, work practices, and environmental conditions used and prevailing in the employer's current operations. Additionally, paragraph (d)(2)(iii) (general industry), and (f)(2)(ii) (construction), excuse initial monitoring, when the employer can demonstrate, on the basis of "objective data", that the asbestos-containing product or material being handled cannot cause exposures above the action level and/or excursion limit under those work conditions having the greatest potential for releasing asbestos.

"Objective data" is limited to information demonstrating that a particular product or material containing asbestos or a specific process, operation, or activity involving asbestos, cannot release fibers in concentrations above either the action level or Eleven under worst-case release conditions. Objective data can be obtained from an industry-wide study, from manufacturers of asbestos-containing products or materials, or from laboratory test results of an asbestos containing product. For the employer who relies upon an industry-wide study, the data he uses must be obtained under workplace conditions closely resembling the processes, type of material, control

methods, work practices, and environmental conditions used and prevailing in the employer's current operations. Sampling and analytical procedures must conform to NIOSH and/or OSHA approved methods. The following three examples illustrate how an employer may use "objective data" to avoid the burden of initial monitoring.

In the automotive brake and clutch repair industry (the largest group of exposed workers) OSHA has determined that employers can successfully reduce their employees' exposures to asbestos to below the EL by employing the enclosed cylinder/HEPA vacuum system method as described in Appendix F to § 1910.1001. This determination is based on evidence in the rulemaking record (NIOSH Report 22.4, Ex. 84–263). The effectiveness of the vacuum/enclosure is dependent upon the mechanic being adequately trained so that he/she can perform the manufacturer's recommended sequence of steps with care and skill. OSHA therefore believes that employers in the brake and clutch repair industry will be able to avail themselves of exemption from initial monitoring in this amended standard if they conscientiously employ the enclosed cylinder/HEPA vacuum system.

In construction, where certain operations are short-term, intermittent in nature and generate peak exposures, data show that the use of shrouded tools may limit peak exposures to below the EL. An example of a detailed study, which can be used as objective data in lieu of exposure monitoring is Ex. 84–279. This study by the A/C Pipe Producers Association shows that under certain conditions (e.g. experienced workmen, properly maintained equipment, strict adherence to recommended work practices), cutting and machining A/C pressure and sewer pipe, using wet methods and a shrouded Doty tool will limit exposures to below 0.5 f/cc.

Small-scale, short-duration maintenance or renovation activities where the use of glove bags and wet methods are capable of keeping employee exposures to asbestos below the 0.1 f/cc action level and 1 f/cc EL is another situation where objective data could be used to obviate the need for exposure monitoring. The success of glove bag asbestos removal operations relies heavily on the use of workers specially trained in asbestos abatement working under well controlled conditions. Generally, two persons are required to perform removal especially with the use of heavy bags or in elevated locations. Diligence on the part of management and employees is essential for minimizing contamination. Appendix G to § 1926.58 (51 FR 22785)—"Work Practices and Engineering Controls for Small-Scale, Short Duration Asbestos Renovation and Maintenance Activities", provides requirements for glove-bag procedures which when followed by employers, will satisfy the requirements for relying on "objective data" to be relieved from monitoring duties.

In general industry the amended provisions regarding initial monitoring, periodic monitoring, and termination of monitoring requirements relative to the excursion limit are found in paragraphs (d)(2)(i), (d)(3), and (d)(4). These provisions do not change the frequency and termination of monitoring provisions as they apply to the action level.

Where the employer has kept exposures below the applicable action level and excursion limit, the regulatory scheme normally excuses periodic monitoring. Existing paragraph (d)(5) (general industry) of OSHA's asbestos standard requires a new exposure determination for TWA exposures whenever there has been a change in production, process, control equipment, personnel or work practices that may result in new or additional asbestos exposures. With the adoption of an excursion limit, revised paragraph (d)(5) will also require additional excursion limit monitoring or determination where the employer suspects that workplace changes may increase short-term exposures. Short-term monitoring or an allowable determination should be repeated whenever situations arise or workplace changes occur which could increase employee short-term exposure.

In construction, initial monitoring and termination of monitoring requirements are found in paragraph (f)(2)(i) and (f)(4). As in general industry, the excursion limit does not change the current frequency of initial monitoring and termination of monitoring provisions.

The construction employer can lessen the burden of daily monitoring in a regulated area during removal, demolition and renovation operations, by providing all employees, within the regulated area, supplied-air respirators operated in the positive-pressure mode (§ 1926.58(f)(3)).

Paragraphs (d)(6) (general industry) and (f)(5) (construction) of the current asbestos standards require that monitoring methods be accurate to within plus or minus 25% of the OSHA Reference Method (ORM) results with a 95% confidence level as demonstrated by a statistically valid protocol. It is clear to OSHA, based on data in record, that adoption of excursion limit accuracy requirements are necessary to ensure that employees exposures are adequately determined. OSHA also finds that the record supports adoption of accuracy parameters of plus or minus 25 percent at the 95 percent confidence level (See discussion *supra*).

OSHA, therefore, adopts in final paragraph (d)(5)(ii), the requirement that monitoring to a confidence level of 95 percent, shall be accurate, to within plus or minus 25 percent for airborne concentrations of asbestos at the 30 minute excursion limit of 1 f/cc.

Paragraph (d)(7)(i) (general industry) and (f)(6)(i) (construction) require that employers notify employees of the results of excursion limit monitoring performed pursuant to the standard. Such notification has been determined to be appropriate where TWA monitoring is performed, and is believed to be appropriate where excursion limit monitoring is performed.

Regulated Areas: Paragraph (e)(1). (General Industry and Construction)

The amended provision of paragraph (e) in the general industry standard now will require employers to designate as regulated areas any locations in their workplaces where occupational exposures to airborne concentrations of asbestos exceed the excursion limit as well as the TWA-PEL. This regulated area concept is consistent with other OSHA toxic substance standards.

The intent of OSHA's regulated area requirement is to protect employees from unknowingly entering areas where their exposures exceed either PEL. They will be warned of the need to wear respirators and to keep out if they have no need to be present.

Only authorized persons may enter regulated areas, which are required to be clearly marked to ensure that employees are aware of these locations. Warning signs are to be posted at each regulated area and at all approaches to regulated areas so that an employee can take the necessary protective steps before entering the area. The final standard gives employers an option of whether to use, for example, ropes, markings, temporary barricades, gates or more permanent enclosures to demarcate and limit access to these areas.

Paragraph (e) of the construction standard now requires employers to establish regulated areas whenever the PELs are exceeded. Regulated areas required by the standard can take two forms. For most employers who perform asbestos removal, demolition, or

renovation operations (other than small-scale short-duration), the regulated area must consist of a negative-pressure enclosure that will confine the asbestos fibers being generated to the area within the enclosure and will thus protect other employees and bystanders on the site from exposure to excessive levels of asbestos. For small-scale, short-duration removal, demolition and renovation operations and for asbestos work operations that do not involve asbestos removal, demolition, or renovation, the employer may simply demarcate the regulated area by posted signs that limit the number of employees entering the area.

Regulated areas do not have to be established when engineering and work practice controls reduce employee exposures to asbestos to levels below the standard's TWA and excursion permissible limits.

Methods of Compliance: Paragraphs (f)(1)(i), (f)(1)(ii), (f)(2)(i) and (f)(2)(iv) (General Industry); Paragraphs (g)(1)(i), (g)(2)(ii), and (g)(3) (Construction)

As discussed previously (see section on Summary of Regulatory Flexibility and Impact Analysis) OSHA believes that compliance with both the excursion limit and 8-hour TWA PELs can be accomplished by the majority of the asbestos industry through implementation of feasible engineering and work practice controls. OSHA, therefore, requires in paragraph (f)(1)(i) (general industry), and (g)(1)(i) (construction), of the amended asbestos standards, that the employer institute engineering and work practice controls to reduce and maintain employee exposure to or below the PELs except to the extent that such controls are not feasible. The amended rule further requires, in paragraph (f)(1)(ii) (general industry) and (g)(1)(ii) (construction), that wherever feasible engineering controls and work practices that can be instituted are not sufficient to reduce employee exposure to or below the PELs, the employer shall use them to reduce exposure to the lowest levels achievable by those controls, and shall supplement them by the use of respirators. Based on available evidence, OSHA believes that the use of engineering and work practices controls will reduce employee exposure to or below the PELs for many work situations.

The methods used to control the EL will of course vary with the operation. In the revised general industry standard employers in the automotive brake and clutch repair industry can successfully reduce their employees' exposures to asbestos to below the EL by employing the enclosed cylinder/HEPA vacuum system method as detailed in Appendix F to § 1910.1001.

In the revised construction standard, OSHA listed general categories of work practices and engineering controls acceptable for meeting the PEL (§ 1926.58(g)(1)). One activity likely to be impacted by this EL is maintenance and repair operations. These employers can use either singly or in combination: local exhaust ventilation equipped with HEPA filter dust collection systems, general ventilation systems, wet methods, vacuum cleaners equipped with HEPA filters, enclosure or process isolation, and prompt disposal of asbestos waste, all of which are listed in the previous cited provision.

In the installation of new construction materials such as A/C pipe and sheet the use of tools fitted with local exhaust shrouds connected to a HEPA vacuum have been demonstrated to reduce airborne asbestos concentrations significantly. Such shrouded tools are capable of reducing exposures below the excursion limit (Ex. 84–279).

OSHA in general believes that the imposition of the EL will not require the purchase of new controls or the development of new or different processes. Since many firms already use adequate controls in order to comply with the existing provisions of the asbestos standards, OSHA believes that meeting the EL will often require increased diligence in the application of existing controls and work practices implemented for the 8-hour TWA-PEL. These measures include such items as, but not limited to: (1) Frequently checking the effectiveness of exhaust systems, (2) increased attention to good housekeeping, employing a regular cleanup schedule using HEPA filtered vacuum cleaners, (3) periodic inspection and maintenance of process and control equipment to prevent system failure, (4) better trained workers to carry out their job functions with greater care and skill, and (5) improved supervision ensuring that work practices are carried out properly. In addition to the above measures the employer should consider shutting-off or temporarily modifying the air-hauling system to prevent the distribution of asbestos fibers to areas outside the work site and to other areas in the building.

Amended paragraph (f)(2)(i) (general industry) requires, where either PEL is exceeded, that the employer establish and implement a written program to reduce employer exposure to or below the excursion limit, by means of engineering and work practice controls, and by the use of respirators when permitted.

It is OSHA's belief that the written plan for achieving the excursion limit is as essential as the written plan requirement adopted for achieving the TWA, in ensuring that the employer implement the necessary controls to reduce exposure. The plan also provides the information that would allow OSHA, the employer, and employees to examine the excursion limit control methods chosen and to evaluate the extent to which these planned controls are being implemented. As with the TWA written plan, the excursion limit compliance plan will be accessible to individuals designated in paragraph (f)(2)(iii) (general industry) for inspection and copying.

Final paragraph (f)(2)(iv) (general industry) and (g)(3) (construction), prohibits employee rotation as a means of compliance with the excursion limit for the same reasons that employee rotation is not permitted for compliance with the TWA. This prohibition is consistent with OSHA's view that this control strategy is not appropriate in occupational environments involving exposure to potential carcinogens. It results in exposure of a larger number of employees to levels of asbestos which still present a significant risk.

Respiratory Protection: Paragraph (g)(1) (General Industry); Paragraph (h)(1)

The amended standards provide that respirators be used to limit short-term employee exposure to asbestos in the following circumstances:

(i) During the interval necessary to install or implement feasible engineering and work practice controls;

(ii) In work operations such as maintenance and repair activities or vessel cleaning or other activities for which the employer establishes that engineering and work practice controls are not feasible;

(iii) In work situations where feasible engineering and work practice controls are not yet sufficient to reduce exposure to or below the excursion limit.

These same requirements apply under the current standard with respect to respirator use in complying with the TWA, and are based on OSHA's established policy on compliance methodology (see preamble discussion in the current asbestos standard, 51 FR 22692).

OSHA has estimated that respirator use will be required to meet the excursion limit in a number of general industry operations as well as routine maintenance and repair in general industry and construction. So that respirator use will be effective OSHA

has incorporated the requirements of § 1910.134 into the revised standards supplemented by requirements such as fit testing protocols for respirator use. OSHA is concerned about relying on respirator use to meet the EL in the maintenance and repair sector of the construction industry. Although maintenance crews employed by larger building maintenance firms may often be specialized for asbestos work and trained accordingly, smaller building firms where work with asbestos is spotty and perhaps not always recognized may not institute adequate respirator programs.

The imposition of an EL hopefully will fill lapses in respirator programs in such firms, if ony because a specific short-term limit corresponds with the asbestos exposure of most maintenance employees and thus highlights the need for protection, i.e., respiratory control.

Of course, engineering and work practice controls are still preferred, but as discussed earlier, for these operations respiratory protection often will be the feasible control strategy.

Other requirements under these paragraphs dealing with "Respirator selection" and "Respirator program," remain unchanged and apply where respirators are used to achieve the excursion limit.

Protective Work Clothing: Paragraphs (h)(1), (h)(3)(iii), (h)(3)(iv) (General Industry); Paragraphs (i)(1), (i)(2)(i), (i)(2)(ii) (Construction).

Existing paragraphs (h)(1) (general industry), and (i)(1) (construction), require that the employer provide to employees and ensure that the employees use appropriate protective clothing and equipment whenever the employees are exposed above the 8-hour TWA-PEL.

OSHA adopts in this rule, a similar requirement relative to the excursion limit, that protective clothing such as coveralls or similar full-body work clothing, gloves, head coverings, foot coverings, and face shields or other appropriate eye protection (when necessary to prevent eye irritation) be provided to employees exposed above the excursion limit.

It is OSHA's belief that protective clothing and foot coverings be required above the EL to prevent contamination of the employee's street clothing and shoes, so that exposure is not extended both beyond the time period and work area when the excusion limit was exceeded and beyond the workday and workplace.

The amended standards (h)(3)(iii), (h)(3)(iv) (general industry), and (i)(2)(i), (i)(2)(ii) (construction) require that the employer ensure that laundering of contaminated clothing be done in a manner that prevents the release of airborne asbestos fibers in excess of the PELs, and to inform those who launder or clean the contminated protective clothing to exercise caution to prevent the release of fibers in excess of the PELs. These provisions are designed to make clear the need to use proper care in handling of the contaminated clothing.

Hygiene Facilities and Practices: Paragraphs (i)(1)(i), (i)(2)(i), (i)(3)(i), (i)(3)(iii), (General Industry); Paragraph (j)(1)(iii), (Construction).

The amended provisions in general industry, require that the employer provide hygiene facilities and ensure that employees engage in good personal hygiene when asbestos exposures exceed both the 8-hour TWA-PEL and excursion limit. Specifically, employers are required to provide clean changerooms, showers, and lunchroom facilities and ensure that employees that work in areas where their exposures exceed either PEL, wash their hands and faces prior to eating, drinking and smoking and shower at the end of the work shift.

Similar provisions for hygiene facilities and good personal hygiene practices are found in the construction standard and are required whenever the 8-hour TWA-PEL or excursion limit is exceeded. However, unlike the general industry standard that requires the lunchroom be provided with a positive-pressure filtered air supply, the construction standard requires that airborne asbestos concentrations within lunchrooms be kept below the action level and excursion limit.

Communication of Asbestos Hazards to Employees: Paragraph (j)(5)(i) (General Industry); Paragraph (k)(3)(i) (Construction).

Existing paragraphs (j)(3)(i) (general industry) and (k)(3)(i) (construction) require that information and training concerning asbestos be provided to employees exposed at or above the action level. OSHA adopts in this rule, a requirement that information and training on asbestos be also provided to employees exposed at or above the excursion limit.

OSHA is adopting this provision based on the determination that informing employees through training, that high levels of asbestos might be released into the workplace, will better enable affected employees to take precautionary measures to protect themselves.

Medical Surveillance: Paragraphs (l)(1)(i), (l)(4)(i) (General Industry); Paragraph (m)(1)(i) (Construction)

The amended standard for general industry requires each employer to institute a medical surveillance program for all employees who are or will be exposed to asbestos at or above the action level and/or excursion limit.

The amended standard for construction requires employers to implement the medical surveillance program only for employees required by the standard to wear negative-pressure respirators and for employees exposed to levels of asbestos at or above the action level and/or above the excursion limit for 30 or more days per year.

Since significant health risks are likely to be present at the excursion limit OSHA believes that it is essential that workers are provided medical surveillance whenever worker exposure exceeds the EL as well as at or above the action level. The initial and annual medical examination and evaluation is an important tool in protecting the worker exposed to asbestos by: detecting changes in a worker's physical condition, detecting biological effects of inhalation of asbestos as early as possible, providing a way to re-evaluate the workplace conditions, and evaluating the worker's suitability to continue doing the same job. For these reasons OSHA feels that the amended standards should require medical surveillance triggered above the excursion limit as well as by the action level.

Dates. Paragraph (o). (General Industry and Construction)

Effective Date

The amendments to the asbestos standards will become effective thirty (30) days following publication in the Federal Register. OSHA believes that a 30 day period between issuance of these standards and their effective date provides sufficient time for employers and employees to become informed of the existence of the standards and their requirements.

Start-up Dates

Since there was little record evidence on this issue, OSHA is using its experience in making a determination on the startup dates for these standards. The start-up dates discussed below provide the time required for employers to implement training programs and medical surveillance: to order and receive protective equipment and respirators; to construct changerooms, showers, lavoratories, and lunchrooms;

to plan, order, receive and install engineering controls; and to implement work practice controls. OSHA believes that the dates set in this standard should be adequate in all but unusual circumstances.

OSHA believes that expeditious action by employers to achieve compliance with the provisions of these amended standards is warranted. Employees under the current standard are being exposed to asbestos at concentrations that present a significant risk of adverse health effects. Compliance with the excursion limit will further reduce total asbestos dose, and therefore the risk, to which employees are presently being exposed under the existing rule.

The information available to OSHA clearly indicates that, with few exceptions, affected employers can be reasonably expected to be able to implement feasible engineering and/or work practice controls that would bring their workplaces into compliance with the amended standards' excursion limit within 6-months from the effective date of this standard.

As stated earlier in this discussion OSHA believes that the imposition of the EL will not necessarily require the purchase of new controls or the development of new or different processes. Many firms already use adequate controls in order to comply with the existing provisions of the asbestos standards. Therefore, OSHA believes that meeting the EL will often require increased diligence in the application of existing controls and work practices implemented for the 8-hour TWA-PEL. Consequently, employers should be able to comply with this provision in the time-frame specified.

OSHA believes that employers should be able to achieve compliance with changerooms, showers, lavatories and lunchroom facilities within one year after the effective date. This time-frame appears to be reasonable, since it allows employers an additional six months after engineering controls are completed to install hygiene and lunchroom facilities, should engineering and work practice controls fail to reduce exposures below the EL. The amended standards like the current standards do not require the immediate installation of changerooms, showers, lavatories, and lunchrooms if installation of engineering controls would only make their use necessary for a few months.

Additionally, compliance with all the other requirements of the standard within ninety (90) days of the effective date also is believed by OSHA to be appropriate. In response to the requirements set forth in OSHA's 1986 asbestos standard, asbestos employers have already instituted programs regarding training, compliance plans, respirators, exposure monitoring and work practices, recordkeeping, signs and labels, and regulated areas. Thus, compliance with new burdens imposed by adoption of the excursion limit within the periods specified is believed to be reasonable and appropriate.

If the time period for meeting any of these startup dates cannot be met because of technical difficulties, employers are entitled to petition the Assistant Secretary for a temporary variance under section 6(b)(6)(A) of the Act.

VIII. State Plan Applicability

Twenty-four states and U.S. territories have their own OSHA-approved occupational safety and health plans. These states and territories are: Alaska, Arizona, California, Connecticut (for state and local government employees only), Hawaii, Indiana, Iowa, Kentucky, Maryland, Michigan, Minnesota, Nevada, New Mexico, North Carolina, Oregon, Puerto Rico, South Carolina, Tennessee, Utah, Vermont, Virginia, Virgin Islands, Washington, and Wyoming. These states and territories are to adopt a standard comparable to that of OSHA's within 6 months of the effective date of the Federal rule.

List of Subjects

29 CFR Part 1910

Asbestos, Cancer, Health, Labeling, Occupational safety and health, Protective equipment, Respiratory protection, Signs and symbols.

29 CFR Part 1926

Asbestos, Cancer, Construction industry, Hazardous materials, Health, Labeling, Occupational safety and health, Protective equipment, Respiratory protection, Signs and symbols.

IX. Authority

This document was prepared under the direction of John A. Pendergrass, Assistant Secretary of Labor for Occupational Safety and Health, U.S. Department of Labor, 200 Constitution Avenue NW., Washington, DC 20210. Accordingly, pursuant to sections 4, 6(b), 6(c) and 8(g) of the Occupational Safety and Health Act of 1970 (29 U.S.C. 653, 655, 657), section 107 of the Contract Work Hours and Safety Standards Act (Construction Safety Act) (40 U.S.C. 333), the Longshoremen's and Harbor Workers' Compensation Act (33 U.S.C. 941), 29 CFR Part 1911 and Secretary of Labor's Order No. 9-83 (48 FR 35736), 29 CFR Parts 1910 and 1926 are hereby amended as set forth below.

Signed at Washington, DC, this 6 day of September, 1988.

John A. Pendergrass,

Assistant Secretary of Labor.

Parts 1910 and 1926 of Title 29 of the Code of Federal Regulations are amended as set forth below:

X. Amended Standards

Part 1910 of Title 29 of the Code of Federal Regulations is amended as set forth below:

PART 1910—[AMENDED]

1. The authority citation for Subpart Z of 29 CFR Part 1910 continues, in pertinent part, to read as follows:

Authority: Secs. 6 and 8, Occupational Safety and Health Act, (29 U.S.C. 655, 657); Secretary of Labor's Orders No. 12-71 (36 FR 8754); 8-76 (41 FR 25059), or 9-83 (48 FR 35736), as applicable; and 29 CFR Part 1911.

* * * * *

2. In § 1910.1001, paragraphs (c), (d)(1), (d)(2), (d)(3), (d)(4), (d)(5), (d)(7)(ii), (e)(1), (f)(1)(i), (f)(1)(ii), (f)(1)(iii), (f)(1)(v), (f)(1)(vi), (f)(1)(viii), (f)(2)(i), (f)(2)(iv), (g)(1)(iii), (h)(1) introductory text, (h)(3)(iii), (h)(3)(iv), (i)(1)(i), (i)(2)(i), (i)(3)(i), (i)(3)(iii), (j)(4)(i), (j)(5)(i), (l)(1)(i), (l)(4)(i), and the last sentence of (o)(1) are revised and (o)(3) is added to read as follows:

§ 1910.1001 Asbestos, tremolite, anthophyllite, and actinolite.

* * * * *

(c) *Permissible exposure limits (PELs)*—(1) *Time-weighted average limit (TWA).* The employer shall ensure that no employee is exposed to an airborne concentration of asbestos, tremolite, anthophyllite, actinolite, or a combination of these minerals in excess of 0.2 fiber per cubic centimeter of air as an eight (8)-hour time-weighted average (TWA) as determined by the method prescribed in Appendix A of this section, or by an equivalent method.

(2) *Excursion limit.* The employer shall ensure that no employee is exposed to an airborne concentration of asbestos, tremolite, anthophyllite, actinolite, or a combination of these minerals, in excess of 1.0 fiber per cubic centimeter of air (1 f/cc) as averaged over a sampling period of thirty (30) minutes.

(d) * * *

(1) General.

(i) Determinations of employee exposure shall be made from breathing zone air samples that are representative

of the 8-hour TWA and 30-minute short-term exposures of each employee.

(ii) Representative 8-hour TWA employee exposures shall be determined on the basis of one or more samples representing full-shift exposures for each shift for each employee in each job classification in each work area. Representative 30-minute short-term employee exposures shall be determined on the basis of one or more samples representing 30 minute exposures associated with operations that are most likely to produce exposures above the excursion limit for each shift for each job classification in each work area.

(2) Initial monitoring.

(i) Each employer who has a workplace or work operation covered by this standard, except as provided for in paragraphs (d)(2)(ii) and (d)(2)(iii) of this section, shall perform initial monitoring of employees who are, or may reasonably be expected to be exposed to airborne concentrations at or above the action level and/or excursion limit.

(ii) Where the employer has monitored after December 20, 1985, for the TWA and after March 14, 1988, for the excursion limit, and the monitoring satisfies all other requirements of this section, the employer may rely on such earlier monitoring results to satisfy the requirements of paragraph (d)(2)(i) of this section.

(iii) Where the employer has relied upon objective data that demonstrates that asbestos, tremolite, anthophyllite, actinolite, or a combination of these minerals is not capable of being released in airborne concentrations at or above the action level and/or excursion limit under the expected conditions of processing, use, or handling, then no initial monitoring is required.

(3) *Monitoring frequency (periodic monitoring) and patterns.* After the initial determinations required by paragraph (d)(2)(i) of this section, 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 six months for employees whose exposures may reasonably be foreseen to exceed the action level and/or excursion limit.

(4) *Changes in monitoring frequency.* If either the initial or the periodic monitoring required by paragraphs (d)(2) and (d)(3) of this section statistically indicates that employee exposures are below the action level and/or excursion limit, the employer may discontinue the monitoring for those employees whose exposures are represented by such monitoring.

(5) *Additional monitoring.* Notwithstanding the provisions of paragraphs (d)(2)(ii) and (d)(4) of this section, the employer shall institute the exposure monitoring required under paragraphs (d)(2)(i) and (d)(3) of this section whenever there has been a change in the production, process, control equipment, personnel or work practices that may result in new or additional exposures above the action level and/or excursion limit or when the employer has any reason to suspect that a change may result in new or additional exposures above the action level and/or excursion limit.

* * * * *

(7) * * *

(ii) The written notification required by paragraph (d)(7)(i) of this section shall contain the corrective action being taken by the employer to reduce employee exposure to or below the TWA and/or excursion limit, wherever monitoring results indicated that the TWA and/or excursion limit had been exceeded.

(e) * * *

(1) *Establishment.* The employer shall establish regulated areas wherever airborne concentrations of asbestos, tremolite, anthophyllite, actinolite, or a combination of these minerals are in excess of the TWA and/or excursion limit prescribed in paragraph (c) of this section.

* * * * *

(f) * * *

(1) * * *

(i) The employer shall institute engineering controls and work practices to reduce and maintain employee exposure to or below the TWA and/or excursion limit, prescribed in paragraph (c) of this section, except to the extent that such controls are not feasible.

(ii) Wherever the feasible engineering controls and work practices that can be instituted are not sufficient to reduce employee exposure to or below the TWA and/or excursion limit prescribed in paragraph (c) of this section, the employer shall use them to reduce employee exposure to the lowest levels achievable by these controls and shall supplement them by the use of respiratory protection that complies with the requirements of paragraph (g) of this section.

(iii) For the following operations, wherever feasible engineering controls and work practices that can be instituted are not sufficient to reduce the employee exposure to or below the TWA and/or excursion limit, prescribed in paragraph (c) of this section, the employer shall use them to reduce employee exposure to or below 0.5 fiber per cubic centimeter of air (as an eight-hour time-weighted average) or 2.5 fibers/cc for 30 minutes (short-term exposure) and shall supplement them by the use of any combination of respiratory protection that complies with the requirements of paragraph (g) of this section, work practices and feasible engineering controls that will reduce employee exposure to or below the TWA and to or below the excursion limit prescribed in paragraph (c) of this section: Coupling cutoff in primary asbestos cement pipe manufacturing; sanding in primary and secondary asbestos cement sheet manufacturing; grinding in primary and secondary friction product manufacturing; carding and spinning in dry textile processes; and grinding and sanding in primary plastics manufacturing.

* * * * *

(v) *Particular tools.* All hand-operated and power-operated tools with would produce or release fibers of asbestos, tremolite, anthophyllite, actinolite, or a combination of these minerals so as to expose employees to levels in excess of the TWA and/or excursion limit prescribed in paragraph (c) of this section, such as, but not limited to saws, scorers, abrasive wheels, and drills, shall be provided with local exhaust ventilation systems which comply with paragraph (f)(1)(iv) of this section.

(vi) *Wet methods.* Insofar as practicable, asbestos, tremolite, anthophyllite, or actinolite, shall be handled, mixed, applied, removed, cut, scored, or otherwise worked in a wet state sufficient to prevent the emission of airborne fibers so as to expose employees to levels in excess of the TWA and/or excursion limit, prescribed in paragraph (c) of this section, unless the usefulness of the product would be diminished thereby.

* * * * *

(viii) *Particular products and operations.* No asbestos cement, mortar, coating, grout, plaster, or similar material containing asbestos, tremolite, anthophyllite, or actinolite 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 fibers of asbestos, tremolite, anthophyllite, actinolite, or a combination of these minerals so as to expose employees to levels in excess of the TWA and/or excursion limit prescribed in paragraph (c) of this section.

* * * * *

(2) * * *

(i) Where the TWA and/or excursion limit is exceeded, the employer shall establish and implement a written

program to reduce employee exposure to or below the TWA and to or below the excursion limit by means of engineering and work practice controls as required by paragraph (f)(1) of this section, and by the use of respiratory protection where required or permitted under this section.

• • • • •

(iv) The employer shall not use employee rotation as a means of compliance with the TWA and/or excursion limit.

(2) • • •

(1) • • •

(iii) In work situations where feasible engineering and work practice controls are not yet sufficient to reduce exposure to or below the TWA and/or excursion limit; and

• • • • •

(h) • • •

(1) *Provision and use.* If an employee is exposed to asbestos, tremolite, anthophyllite, actinolite, or a combination of these minerals above the TWA and/or excursion limit, or where the possibility of eye irritation exists, the employer shall provide at no cost to the employee and ensure that the employee uses appropriate work clothing and equipment such as, but not limited to: • • •

• • • •

(3) • • •

(iii) Laundering of contaminated clothing shall be done so as to prevent the release of airborne fibers of asbestos, tremolite, anthophyllite, and actinolite, or a combination of these minerals in excess of the permissible exposure limits prescribed in paragraph (c) of this section.

(iv) Any employer who gives contaminated clothing to another person for laundering shall inform such person of the requirement in paragraph (h)(3)(iii) of this section to effectively prevent the release of airborne fibers of asbestos, tremolite, anthophyllite, actinolite, or a combination of these minerals in excess of the permissible exposure limits.

• • • • •

(i) • • •

(1) • • •

(i) The employer shall provide clean change rooms for employees who work in areas where their airborne exposure to asbestos, tremolite, anthophyllite, actinolite, or a combination of these minerals is above the TWA and/or excursion limit.

• • • • •

(2) • • •

(i) The employer shall ensure that employees who work in areas where their airborne exposure is above the TWA and/or excursion limit shower at the end of the work shift.

• • • • •

(3) • • •

(i) The employer shall provide lunchroom facilities for employees who work in areas where their airborne exposure is above the TWA and/or excursion limit.

• • • • •

(iii) The employer shall ensure that employees who work in areas where their airborne exposure is above the TWA and/or excursion limit wash their hands and faces prior to eating, drinking or smoking.

• • • • •

(j) • • •

(4) • • •

(i) Asbestos, tremolite, anthophyllite, or actinolite fibers have been modified by a bonding agent, coating, binder, or other material provided that the manufacturer can demonstrate that during any reasonably foreseeable use, handling, storage, disposal, processing, or transportation, no airborne concentrations of fibers of asbestos, tremolite, anthophyllite, actinolite, or a combination of these minerals in excess of the action level and/or excursion limit will be released or

• • • • •

(5) • • •

(i) The employer shall institute a training program for all employees who are exposed to airborne concentrations of asbestos, tremolite, anthophyllite, actinolite, or a combination of these minerals at or above the action level and/or excursion limit and ensure their participation in the program.

• • • • •

(l) • • •

(1) • • •

(i) The employer shall institute a medical surveillance program for all employees who are or will be exposed to airborne concentrations of asbestos, tremolite, anthophyllite, actinolite, or a combination of these minerals at or above the action level and/or excursion limit.

• • • • •

(4) • • •

(i) The employer shall provide, or make available, a termination of employment medical examination for any employee who has been exposed to airborne concentrations of fibers of asbestos, tremolite, anthophyllite, actinolite, or a combination of these minerals at or above the action level and/or excursion limit.

• • • • •

(o) • • •

(1) • • • The requirements in the amended paragraphs in this section which pertain only to or are triggered by the excursion limit shall become effective October 14, 1988.

• • • • •

(3) *Start-up dates for excursion limit.* Compliance with the excursion limit requirements in this section shall be as follows:

(i) Paragraphs (c), (d), (e), (g), (h), (j), (k), (l), (m) of this section, shall be complied with by December 13, 1988.

(ii) Paragraph (f) of this section, shall be complied with by March 13, 1989.

(iii) Paragraph (i) of this section, shall be complied with by September 14, 1989.

• • • • •

Part 1926 of Title 29 of the Code of Federal Regulations is amended as set forth below.

PART 1926—[AMENDED]

1. The authority citation for Subpart D of 29 CFR Part 1926 continues to read as follows:

Authority: Secs. 4, 6, 8, Occupational Safety and Health Act of 1970 (29 U.S.C. 653, 655, 657); Sec. 107 Contract Work Hours and Safety Standards Act (Construction Safety Act), 40 U.S.C. 333, and Secretary of Labor's Orders 12–71 (36 FR 8754) 8–76 (41 FR 25059), or 9–83 (48 FR 35736) as applicable. Sections 1926.55(c) and 1926.58 also issued under 29 CFR Part 1911.

2. In § 1926.58 paragraphs (c), (e)(1), (e)(2), (f)(1)(ii), (f)(1)(iii), (f)(2)(ii), (f)(2)(iii), (f)(4), (g)(1)(i) introductory text, (g)(1)(ii), (g)(3), (h)(1)(iii), (i)(1), (i)(2), (j)(1)(iii), the first sentence of (k)(1)(i), (k)(2)(vi)(A), (k)(3)(i), (m)(1)(i), (n)(1)(i), the last sentence of (o)(1) and (o)(2) are revised to read as follows:

§ 1926.58 Asbestos, tremolite, anthophyllite, and actinolite.

• • • • •

(c) *Permissible exposure limits (PELS)*—(1) *Time-weighted average limit (TWA).* The employer shall ensure that no employee is exposed to an airborne concentration of asbestos, tremolite, anthophyllite, actinolite, or a combination of these minerals in excess of 0.2 fiber per cubic centimeter of air as an eight (8)-hour time-weighted average (TWA) as determined by the method prescribed in Appendix A of this section, or by an equivalent method.

(2) *Excursion limit.* The employer shall ensure that no employee is exposed to an airborne concentration of asbestos in excess of 1.0 fiber per cubic centimeter of air (1 f/cc) as averaged over a sampling period of thirty (30) minutes.

• • • • •

(e) * * *

(1) *General.* The employer shall establish a regulated area in work areas where airborne concentrations of asbestos, tremolite, anthophyllite, actinolite, or a combination of these minerals exceed or can reasonably be expected to exceed the TWA and/or excursion limit prescribed in paragraph (c) of this section.

(2) *Demarcation.* The regulated area shall be demarcated in any manner that minimizes the number of persons within the area and protects persons outside the area from exposure to airborne concentrations of asbestos, tremolite, anthophyllite, actinolite, or a combination of these minerals in excess of the TWA and/or excursion limit.

* * * * *

(f) * * *

(1) * * *

(ii) Determinations of employee exposure shall be made from breathing zone air samples that are representative of the 8-hour TWA and 30-minute short-term exposures of each employee.

(iii) Representative 8-hour TWA employee exposure shall be determined on the basis of one or more samples representing full-shift exposure for employees in each work area. Representative 30-minute short-term employee exposures shall be determined on the basis of one or more samples representing 30-minute exposures associated with operations that are most likely to produce exposures above the excursion limit for employees in each work area.

(2) * * *

(ii) The employer may demonstrate that employee exposures are below that action level and/or excursion limit by means of objective data demonstrating that the product or material containing asbestos, tremolite, anthophyllite, actinolite, or a combination of these minerals cannot release airborne fibers in concentrations exceeding the action level and/or excursion limit under those work conditions having the greatest potential for releasing asbestos, tremolite, anthophyllite, or actinolite.

(iii) Where the employer has monitored each asbestos, tremolite, anthophyllite, or actinolite job for the TWA, and where he has monitored after March 14, 1989, for the excursion limit, and the data were obtained during work operations conducted under workplace conditions closely resembling the processes, type of material, control methods, work practices, and environmental conditions used and prevailing in the employer's current operations, the employer may rely on such earlier monitoring results to satisfy the requirements of paragraph (f)(2)(i) of this section.

* * * * *

(4) *Termination of monitoring.* If the periodic monitoring required by paragraph (f)(3) of this section reveals that employee exposures, as indicated by statistically reliable measurement, are below the action level and/or excursion limit the employer may discontinue monitoring for those employees whose exposures are represented by such monitoring.

* * * * *

(g) * * *

(1) * * *

(i) The employer shall use one or any combination of the following control methods to achieve compliance with the TWA and/or excursion limit prescribed by paragraph (c) of this section: * * *

(ii) Wherever the feasible engineering and work practice controls described above are not sufficient to reduce employee exposure to or below the TWA and/or excursion limit prescribed in paragraph (c), of this section, the employer shall use them to reduce employee exposure to the lowest levels attainable by these controls and shall supplement them by the use of respiratory protection that complies with the requirements of paragraph (h) of this section.

* * * * *

(3) *Employee rotation.* The employer shall not use employee rotation as a means of compliance with the TWA and/or excursion limit.

(h) * * *

(1) * * *

(iii) In work situations where feasible engineering and work practice controls are not yet sufficient to reduce exposure to or below the TWA and/or excursion limit; and

* * * * *

(i) * * *

(1) *General.* The employer shall provide and require the use of protective clothing, such as coveralls or similar whole body clothing, head coverings, gloves, and foot coverings for any employee exposed to airborne concentrations of asbestos, tremolite, anthophyllite, actinolite or a combination of these minerals that exceed the TWA and/or excursion limit prescribed in paragraph (c) of this section.

(2) Laundering.

(i) The employer shall ensure that laundering of contaminated clothing is done as to prevent the release of airborne asbestos, tremolite, anthophyllite, actinolite, or a combination of these minerals in excess of the TWA and/or excursion limit prescribed in paragraph (c) of this section.

(ii) Any employer who gives contaminated clothing to another person for laundering shall inform such persons of the requirement in paragraph (i)(2)(i) of this section to effectively prevent the release of airborne asbestos, tremolite, anthophyllite, actinolite, or a combination of these minerals in excess of the TWA and/or excursion limit prescribed in paragraph (c) of this section.

* * * * *

(j) * * *

(1) * * *

(iii) Whenever food or beverages are consumed at the worksite and employees are exposed to airborne concentrations of asbestos, tremolite, anthophyllite, actinolite, or a combination of these minerals in excess of the TWA and/or excursion limit, the employer shall provide lunch areas in which the airborne concentrations of asbestos, tremolite, anthophyllite, actinolite, or a combination of these minerals are below the action level and/or excursion limit.

* * * * *

(k) * * *

(1) * * *

(i) Warning signs that demarcate the regulated area shall be provided and displayed at each location where airborne concentrations of asbestos, tremolite, anthophyllite, actinolite, or a combination of these minerals may be in excess of the TWA and/or excursion limit prescribed in paragraph (c) of this section. * * *

(2) * * *

(vi) * * *

(A) Asbestos, tremolite, anthophyllite, or actinolite fibers have been modified by a bonding agent, coating, binder, or other material, provided that the manufacturer can demonstrate that, during any reasonably foreseeable use, handling, storage, disposal, processing, or transportation, no airborne concentrations of asbestos, tremolite, anthophyllite, actinolite, or a combination of these mineral fibers in excess of the action level and/or excursion limit will be released, or

* * * * *

(3) * * *

(i) The employer shall institute a training program for all employees exposed to airborne concentrations of asbestos, tremolite, anthophyllite, actinolite, or a combination of these minerals in excess of the action level and/or excursion limit and shall ensure their participation in the program.

* * * * *

(m) * * *

(1) * * *

(i) The employer shall institute a medical surveillance program for all employees engaged in work involving levels of asbestos, tremolite, anthophyllite, actinolite, or a combination of these minerals at or above the action level and/or excursion limit for 30 or more days per year, or who are required by this section to wear negative pressure respirators.

* * * * * *

(n) * * *

(1) * * *

(i) Where the employer has relied on objective data that demonstrates that products made from or containing asbestos, tremolite, anthophyllite, or actinolite are not capable of releasing fibers or asbestos, tremplite, anthophyllite, or actinolite or a combination of these minerals, in concentrations at or above the action level and/or excursion limit under the expected conditions of processing, use, or handling to exempt such operations from the initial monitoring requirements under paragraph (f)(2) of this section, the employer shall establish and maintain an accurate record of objective data reasonably relied upon in support of the exemption.

* * * * * *

(o) * * *

(1) * * * The requirements in the amended paragraphs in this section which pertain only to or are triggered by the excursion limit shall become effective October 14, 1988.

(2) Start-up dates. The requirements of paragraphs (c) through (n) of this section, including the engineering controls specified in paragraph (g)(1) of this section, shall be complied with by January 16, 1987. Compliance with the excursion limit requirements in this section shall be as follows:

(i) Paragraphs (c), (d), (e), (f), (h), (i), (k), (l), (m), (n) of this section, shall be complied with by December 13, 1988.

(ii) Paragraph (g) of this section, shall be complied with by March 13, 1989.

(iii) Paragraph (j) of this section shall be complied with by September 14, 1989.

* * * * * *

[FR Doc. 88-20556 Filed 9-13-88; 8:45 am]

BILLING CODE 4510-26-M

records. Subpart—Cutting Off Supplies or Service: § 13.635 Threatening disciplinary action or otherwise.

List of Subjects in 16 CFR Part 13

Hospital privileges, Podiatry, Trade practices.

(Sec. 6, 38 Stat. 721; 15 U.S.C. 46. Interprets or applies sec. 5, 38 Stat. 719, as amended; 15 U.S.C. 45)

Emily H. Rock,

Secretary.

[FR Doc. 86-23334 Filed 10-16-86; 8:45 am]

BILLING CODE 6750-01-M

DEPARTMENT OF THE TREASURY

Customs Service

19 CFR Part 111

[T.D. 85-192]

Notice of Due Date of Customs Brokers Lists of Employees

AGENCY: Customs Service, Treasury.

ACTION: Clarification of final rule and compliance date.

SUMMARY: This notice is to advise customs brokers when they must submit to each district director of Customs where the broker has a permit to transact customs business, the list of its employees. This notice also clarifies that brokers' employees who do not work directly in the brokerage portion of the business must be included on the list and that employees employed in several districts must be reported on the list of each district.

EFFECTIVE DATE: October 17, 1986.

FOR FURTHER INFORMATION CONTACT: Fred Burns O'Brien, Entry, Licensing and Restricted Merchandise Branch, (202-566-5765).

SUPPLEMENTARY INFORMATION:

Background

In T.D. 86-161, published in the Federal Register on August 28, 1986 (51 FR 30335), Parts 111, 171 and 178, Customs Regulations (19 CFR Parts 111, 171 and 178), were extensively revised to implement the statutory changes made by the Trade and Tariff Act of 1984 (Pub. L. 98-573), relating to the regulation of customs brokers. Section 111.28(b), Customs Regulations (19 CFR 111.28(b)), was amended to state that each broker shall submit, in writing, to each district director where the broker has a permit to transact customs business, a list of names of persons currently employed in that district by the broker. For each such employee, the broker shall also provide the current home address, last prior home address, social security number, date and place of birth, and if the employee has been employed by the broker for less than 3 years, the name and address of each former employer and dates of employment for the 3-year period preceding current employment with the broker.

Section 111.28(b) further provides that after an initial submission is made, the list shall be updated and submitted with the status report required by § 111.30(d), Customs Regulations (19 CFR 111.30(d)). However, no date was indicated in § 111.28(b) as the deadline for the initial submission. To give brokers ample time to prepare the list, Customs has now determined that initial submissions will not be required until January 31, 1987.

Regarding the employee lists, it is to be noted that the lists must include all employees who are employed by a broker in each district. This means that even those employees who do not work in the brokerage portion of the business must be listed. Also, employees who are employed in several districts must be reported on the list of each district in which they work.

Dated: October 10, 1986.

John P. Simpson,

Director, Office of Regulations and Rulings.

[FR Doc. 23531 Filed 10-16-86; 8:45 am]

BILLING CODE 4820-02-M

DEPARTMENT OF LABOR

Occupational Safety and Health Administration

29 CFR Parts 1910 and 1926

[Docket No. H-033D]

Occupational Exposure to Asbestos, Tremolite, Anthophyllite, and Actinolite

AGENCY: Occupational Safety and Health Administration, Labor.

ACTION: Partial administrative stay of final rules; redesignation and amendment of final rule.

SUMMARY: OSHA's revised final standards for occupational exposure to asbestos, tremolite, anthophyllite and actinolite for general industry (§ 1910.1001) and construction (§ 1926.58) promulgated on June 17, 1986, were published in the Federal Register on June 20, 1986, and became effective on July 21, 1986 (51 FR 22612). This document gives notice of a 9-month administrative stay of the revised standards insofar as they apply to occupational exposure to non-asbestiform tremolite, anthophyllite and actinolite. This stay is granted for the purpose of reopening the record, reviewing new submissions, and conducting supplemental rulemaking limited to the issue of whether non-asbestiform tremolite, anthophyllite and actinolite should continue to be regulated in the same standards and to the same extent as asbestos, or should be treated in some other way.

This stay applies only to the application of the revised standards to non-asbestiform tremolite, anthophyllite and actinolite. In all other respects, the revised standards will take effect as previously scheduled. In addition, during the period of the stay, the provisions of the 1972 standard governing occupational exposure to asbestos will remain in effect with respect to regulation of non-asbestiform tremolite, anthophyllite and actinolite.

To provide notice of the application of the 1972 standard to non-asbestiform tremolite, anthophyllite and actinolite, OSHA is republishing and redesignating the 1972 standard as 29 CFR 1910.1101 and is making several technical changes to that standard.

The 1972 standard is redesignat 29 CFR 1910.1101 to distinguish it the revised standard for general industry which is designated as 29 CFR 1910.1001. The provisions in the prior standard which constituted the Emergency Temporary Standard for Asbestos issued in November 1983, are being deleted. Also a note is added to clarify the scope and application of the redesignated § 1910.1101.

DATE: The partial stay of 1910.1001 and 1926.58 was effective July 21, 1986 and will expire April 21, 1987. Revisions to the 1972 standard republished as 1910.1101 and all other amendments in this rule are effective October 17, 1986.

FOR FURTHER INFORMATION CONTACT: Mr. James F. Foster, Director, Office of Information and Consumer Affairs, OSHA, U.S. Department of Labor, Room N 3637, 200 Constitution Avenue, NW., Washington, DC 20210, Telephone (202) 523-8151.

SUPPLEMENTARY INFORMATION: On June 17, 1986, OSHA issued revised standards governing occupational exposure to asbestos, tremolite, anthophyllite and actinolite for general industry and construction. They were published in the Federal Register on June 20, 1986 (51 FR 22612) and will be codified at 29 CFR 1910.1001 and 1926.58. Their effective date is July 21, 1986. The revised standards amend OSHA's previous asbestos standard

issued in 1972 and codified at 29 CFR 1910.1001 and 29 CFR 1926.55(c).

OSHA's 1972 asbestos standard defined "asbestos" as including "chrysotile, amosite, crocidolite, tremolite, anthophyllite and actinolite.". In recognition of the fact that tremolite, anthophyllite, and actinolite appear as both asbestiform and non-asbestiform minerals, the revised standards redefined the term "asbestos" to include only the asbestiform varieties of these substances (as well as chrysotile, amosite and crocidolite). The title of the standards were changed, however, to apply not only to "asbestos" as redefined, but also to non-asbestiform tremolite, actinolite and anthophyllite. 29 CFR 1910.1001 (b) and 1926.58(b) (1986). OSHA made these changes to conform to mineralogical terminology, as reflected by the evidence in its rulemaking record. Thus while a change in nomenclature was made, the Agency noted that the 1972 standard and the revised standards regulate precisely the same substances (51 FR 22612, 22679).

Since the issuance of the revised standards on June 17, 1986, OSHA has received letters and petitions from rulemaking participants and non-participants which contain additional comments, assertions, and information which the rulemaking record may not fully reflect. These letters and petitions concern the appropriateness of regulating non-asbestiform tremolite, anthophyllite and actinolite as presenting the same health risk as asbestos.

For the reasons indicated below, a temporary stay of 9 months of the effective date of the revised standards has been granted insofar as the standards apply to occupational exposure to non-asbestiform tremolite, anthophyllite and actinolite.

OSHA granted this temporary stay in part to enable the Agency to review a July 17, 1986 letter from the Director of the National Institute for Occupational Safety and Health (NIOSH) and certain related NIOSH staff memoranda which have recently been brought to OSHA's attention, as well as submissions by the R.T. Vanderbilt Co. and various trade associations concerning the appropriateness of regulating non-asbestiform tremolite, anthophyllite and actinolite in the revised asbestos standards. These documents, and, in particular, the documents generated by NIOSH, raise serious questions about the nature and extent of the hazards posed by these non-asbestiform minerals. This temporary stay was granted also to allow sufficient time for OSHA to reopen the rulemaking record and conduct supplemental rulemaking proceedings on the issue of whether and how to regulate occupational exposure to non-asbestiform tremolite, anthophyllite and actinolite.

OSHA's decision to reopen the record is consistent with the Agency's determination that it provided adequate notice to the public that the recent asbestos rulemaking would address whether the Agency should amend the 1972 definition of asbestos, and whether the revised standards should apply to the three non-asbestiform minerals. Nevertheless, OSHA acknowledges that letters and petitions which contain additional comments, as described above, have been received since the issuance of the revised standards. These letters and petitions contain information which the rulemaking record may not fully reflect, and request an opportunity to submit further information. To assure that these submissions are fully considered by OSHA, to allow public comment on these additional submissions, and to invite additional comment and evidence on all issues relevant to regulation of non-asbestiform tremolite, anthophyllite and actinolite, OSHA will shortly reopen the rulemaking record, by notice in the Federal Register, to consider the limited issue of whether non-asbestiform tremolite, anthophyllite and actinolite should continue to be regulated as presenting the same health risk as asbestos, or whether they should be treated in some other way.

When that notice is published, all submissions to OSHA concerning the regulation of these minerals which have been received since the rulemaking record was closed on September 26, 1985, will be placed in the record and made available for public review and comment.

It should be noted that during the period of the stay, the provisions of the 1972 standard governing occupational exposure to asbestos (now redesignated 29 CFR 1910.1101) will remain in effect with respect to regulation of non-asbestiform tremolite, anthophyllite and actinolite.

The continued applicability of the 1972 standard was provided in the preamble to the revised standard in order not to leave "gaps in coverage and so that the existing provisions not terminate unless the new provisions are in effect." 51 FR 22704, 22732. Therefore, OSHA stated that if the amended provisions (of the revised standards) are not in effect because of stays or judicial action, then the unamended provisions (of the 1972 standard) will remain in effect" *Ibid.*

To provide notice of the continued applicability of the 1972 standard, OSHA believes it is appropriate to republish the 1972 standard to ensure continued protection for employees exposed to non-asbestiform tremolite, anthophyllite and actinolite as well as in the event that other administrative stays or judicial actions render provisions of the revised standards unenforceable.

In such case the parallel provisions of the 1972 standard would come into effect and would be immediately enforceable by OSHA. Without this automatic reversion to the older standard, employees would be denied the protection which they have long been assured. Given the very serious nature of the asbestos hazard, OSHA regards such denial as inconsistent with the Agency's mandate under the Occupational Safety and Health Act of 1970.

Several technical revisions to the 1972 standard are being made to facilitate this "back-up" function. First, the 1972 standard is being redesignated as 29 CFR 1910.1101 to distinguish it from the revised general industry standard which is codified as 29 CFR 1910.1001. OSHA is also adding a "note" to the 1972 standard to describe the intended application of the standard.

In addition, OSHA is deleting paragraph (k) of the 1972 standard, because that paragraph constituted the requirements of the emergency temporary standard issued by OSHA in November 1983 and was invalidated by the 5th Circuit Court of Appeal's decision in *Asbestos Information Ass'n v. OSHA*, 727 F.2d 415. Finally, OSHA is deleting an outdated provision which set the permissible exposure limit from July 7, 1972 to July 1, 1976.

OSHA is also amending the references to the 1972 asbestos standard which are found in the revised standards to reflect the redesignation of the 1972 standard as 29 CFR 1910.1101.

With respect to the temporary stay which has been granted, OSHA finds that advance notice and opportunity for comment are impracticable and unnecessary within the meaning of 5 U.S.C. 553, in view of (a) the limited duration of the stay; (b) the need to provide the relief requested before the standard went into effect; and (c) the continued applicability of the 1972 standard to non-asbestiform tremolite, anthophyllite and actinolite during the period of the stay.

Similarly, OSHA is making the technical amendments to 1910.1101 without advance notice and opportunity for comment pursuant to the authority of 5 U.S.C. 553(b). OSHA finds such process unnecessary and impractical due to the fact that these revisions (1)

implement a policy already determined after full rulemaking to continue to enforce parallel provisions of the 1972 standard where a stay or judicial action renders provisions of the 1972 standard unenforceable (see 51 FR 22704, 22732) and (2) delete provisions which are no longer effective. In neither case is an evidentiary issue involved.

List of Subjects

29 CFR Part 1910

Asbestos, Cancer, Health, Labeling, Occupational safety and health, Protective equipment, Respiratory protection, Signs and symbols.

29 CFR Part 1926

Asbestos, Cancer, Construction industry, Hazardous materials, Health, Labeling, Occupational safety and health, Protective equipment, Respiratory protection, Signs and symbols.

Authority and Signature

This document was prepared under the direction of John A. Pendergrass, Assistant Secretary of Labor for Occupational Safety and Health, U.S. Department of Labor, 200 Constitution Avenue NW., Washington, DC, 20210.

It is issued pursuant to sections 4, 6(b), 8(c) and 8(g) of the Occupational Safety and Health Act of 1970 (29 U.S.C. 653, 655, 657), section 107 of the Contract Work Hours and Safety Standards Act (Construction Safety Act) (40 U.S.C. 333), the Longshoremen's and Harbor Workers' Compensation Act (33 U.S.C. 941), 29 CFR Part 1911 and Secretary of Labor's Order No. 9-83 (48 FR 35736), and 5 U.S.C. 551 et seq.

Signed at Washington, D.C., this 10th day of October, 1986.

John A. Pendergrass,

Assistant Secretary for Occupational Safety and Health.

Amended Standards

PART 1910—[AMENDED]

PART 1926—[AMENDED]

Part 1910 of Title 29 of the Code of Federal Regulations is hereby amended as follows:

1. The authority citation for Subpart B of Part 1910 continues to read as follows:

Authority: Secs. 4, 6, and 8 of the Occupational Safety and Health Act, 29 U.S.C. 653, 655, 657; Walsh-Healy Act, 41 U.S.C. 35 et seq.; Service Contract Act of 1965, 41 U.S.C. 351 et seq.; Pub. L. 91-54, 40 U.S.C. 333; Pub. L. 85-742, 33 U.S.C. 941; National Foundation on Arts and Humanities Act, 20 U.S.C. 951 et seq; Secretary of Labor's Orders 12-71 (36 FR 8754), 8-76 (41 FR 25059), or 9-83 (48 FR 35736); and 29 CFR Part 1911.

2. Paragraph (a) of § 1910.19 is hereby revised to read as follows:

§ 1910.19 Special provisions for air contaminants.

(a) Asbestos, tremolite, anthophyllite, and actinolite dust. Section 1910.1001 or 1910.1101 shall apply to the exposure of every employee to asbestos, tremolite, anthophyllite, and actinolite dust in every employment and place of employment covered by §§ 1919.13, 1910.14, 1910.15 or 1910.16, in lieu of any different standard on exposure to asbestos, tremolite, anthophyllite, and actinolite dust which would otherwise be applicable by virtue of any of those sections.

* * * * *

Subpart Z—[Amended]

3. The authority citation for Subpart Z of Part 1910 continues to read as follows:

Authority: Sec. 6 and 8, Occupational Safety and Health Act, 29 U.S.C. 655, 657; Secretary of Labor's Orders Nos. 12-71 (36 FR 8754), 8-76 (41 FR 25059), or 9-83 (48 FR 35736), as applicable; and 29 CFR Part 1911.

Section 1910.1000 Tables Z-1, Z-2, Z-3 also issued under 5 U.S.C. 553.

Section 1910.1000 not issued under 29 CFR Part 1911, except for "Arsenic" and "Cotton Dust" listings in Table Z-1.

Section 1910.1002 not issued under 29 U.S.C. 655 or 29 CFR Part 1911; also issued under 5 U.S.C. 553.

Section 1910.1003 through 1910.1018 also issued under 29 U.S.C. 653.

Section 1910.1025 also issued under 29 U.S.C. 653 and 5 U.S.C. 556.

Section 1910.1043 also issued under 5 U.S.C. 551 et seq.

Sections 1910.1045 and 1970.1047 also issued under 29 U.S.C. 653.

Section 1910.1499 and 1910.1500 also issued under 5 U.S.C. 553.

§ 1910.1001 [Amended]

§ 1926.58 [Amended]

4. Sections 1910.1001 and 1926.58 are hereby amended by adding the following note after Appendix H to § 1910.1001 and Appendix I to 1926.58.

Note.—Pursuant to a 9-month administrative stay effective July 21, 1986 (Insert citation from this Federal Register document), enforcement of this section is stayed as it applies to non-asbestiform tremolite, anthophyllite and actinolite. During the period of this stay the provisions of the 1972 standard governing occupational exposure to asbestos (redesignated as 29 CFR 1910.1101) will remain in effect with respect to regulation of non-asbestiform tremolite, anthophyllite and actinolite.

5. Paragraph (o)(1) of § 1910.1001 is hereby revised to read as follows:

§ 1910.1001 Asbestos.

* * * * *

(o) *Dates—Effective date.*

This standard shall become effective July 21, 1986. The requirements of the asbestos standard issued in June 1972 (37 FR 11318), as amended, and published in 29 CFR 1910.1101 remain in effect until compliance is achieved with the parallel provisions of this standard.

6. Paragraph (o)(1) § 1926.58 is hereby revised to read as follows:

§ 1926.58 Asbestos, tremolite, anthophyllite, and actinolite.

* * * * *

(o) *Dates—Effective date.*

This section shall become effective July 21, 1986. The requirements of the asbestos standard issued in June 1972 (37 FR 11318), as amended, and published in 29 CFR 1910.1101 remain in effect until compliance is achieved with the parallel provisions of this standard.

7. Section 1910.1101 is hereby added to read as follows:

§ 1910.1101 Asbestos.

Note.—This section applies to occupational exposure to non-asbestiform tremolite, anthophyllite and actinolite during the pendency of stay of the revised standards (29 CFR 1910.1001; 29 CFR 1926.58).

(See [Insert citation from this Federal Register document] for a description of the stay).

This section also applies whenever all or part of the revised standards are rendered unenforceable because of a stay or judicial action. In such a case, to preclude a gap in coverage, parallel provisions of this section will take effect. OSHA will publish an appropriate notice in the Federal Register announcing each such application of this section. This section also applies pursuant to the requirements of 29 CFR 1910.1001(O) and 29 CFR 1926.58(O).

(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) The 8-hour time-weighted average airborne concentrations of asbestos fibers to which any employment may be exposed shall not exceed two fibers longer than 5 micrometers, per cubic centimeter of air, as determined by

method prescribed in paragraph (e) of this section.

(2) *Ceiling concentration.* No employee shall be exposed at any time to airborne concentration 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) *Engineerings controls.* Engineering controls, such as, but not limited to, isolation, enclosure, exhaust ventilation, and dust collection, shall be used to meet 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 Standards 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 Z90.2–1971, and the maintenance of a historic file in connection therewith. The address of the American National Standards Instituted 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 exhasuet ventilation systems in accordance with paragraph (c)(1)(ii) of this section.

(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 airborn fibers in excess of the exposure limits prescribed in paragraph (b) of this section, unless the usefuiness of the product would be dimished thereby.

(ii) *Particular products and operations.* No asbestos cement, mortor, 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 insuitated with asbestos, and in the removal of 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 of 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 paragraphs (d)(1) (i), (ii) or (iii) of this section, and both are practicable, personnel rotation shall be preferred and used.

(2) Where a respirator is permitted by paragraph (d)(1) of this section, it shall be selected from among those approved by the Bureau 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 FR 6144, Mar. 25, 1972), and shall be used in accordance with paragraph (d)(1) (i), (ii), (iii), and (iv) of this section.

(i) *Air purifying respirators.* A reusable or single use air purifying respirator, or a respirator described in paragraph (d)(2) (ii) or (iii) of this section, 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 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 paragraph (d)(2)(iii) of this section, 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 Standards 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 a 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 employee 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 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

cont: :ination of the employee's street cloth · from his work clothes.

(iii _aundering: (A) Laundering of asbe: :s 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 person for laundering shall inform such person of the requirement in paragraph (d)(4)(iii)(A) of this section 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 concentration of asbestos fibers shall be made by the membrane filter method at 400–450 X (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 paragraph (f)(1) of this section, 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 . 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 frequencey and patterns. After the initial determinations required by paragraph (f)(1) of this section, 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.

(ii) *Sign specifications.* The warning signs required by paragraph (g)(1)(i) of this section shall conform to the requirements of 20"x14" 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	½" Sans Serif, Gothic or Block
Avoid Breathing Dust	½" Gothic
Wear Assigned Protective Equipment	½" Gothic
Do Not Remain in Area Unless Your Work Requires It	½" Gothic
Breathing Asbestos Dust May Be Hazardous 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 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 requied by paragraph (g)(2)(i) of this section 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.

(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)–(i).

(3) *Employee notification.* Any employee found to have been exposed at any time to airborne concentration 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.

(j) *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) *Preplacement.* 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 fiber, a comprehensive medical examination, which shall include, as a minimum a chest roentgenogram (posterior-anterior 14x17 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 minimum, a chest roentgenogram (posterior-anterior 14x17 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 concentration of asbestos fibers, a comprehensive medical examination which shall include, as a minimum, a chest roentgenogram (posterior-anterior 14x17 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 provide upon request to employees, designated representatives, and the Assistant Secretary in accordance with 29 CFR 1910.20 (a)–(e) and (g)–(l). These records shall also be provided upon the 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.

TABLE 1.—RESPIRATOR PROTECTION FOR AIRBORNE CONCENTRATIONS OF ASBESTOS

Airborne concentration of asbestos (f/cc)	Required respirator [1]
Not in excess of 5 f/cc (10 x PEL).	Permissible 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.

(Approved by the Office of Management and Budget under control number 1218-0010)

8. The authority citation for Subpart D of Part 1926, continues to read as follows:

Authority: Secs. 4, 5, 6, 8 Occupational Safety and Health Act of 1970, 29 U.S.C. 653, 655, 657; Sec. 107, Contract Work Hours and Safety Standards Act (Construction Safety Act), 40 U.S.C. 333, and Secretary of Labor's Orders 12–71 (36 FR 8754), 8–76 (41 FR 25059), or 9–83 (48 FR 35736), as applicable. Sections 1926.33(c) and 1926.58 also issued under 29 CFR Part 1911.

9. Paragraph (c) of § 1926.55 is hereby revised to read as follows:

§ 1926.55 Gases, vapors, fumes, dusts, and mists

* * * * *

(c) Paragraphs (a) and (b) of this section do not apply to the exposure of employees to airborne asbestos, tremolite, anthophyllite, or actinolite dust. Whenever any employee is exposed to airborne asbestos, tremolite, anthophyllite, or actinolite dust, the requirements of § 1910.1101 or § 1926.58 of this title shall apply.

[FR Doc. 86–22102 Filed 10–16–86; 8:45 am]

BILLING CODE 4510-26-M

Mine Safety and Health Administration

30 CFR Parts 16 and 17

Stemming and Blasting Devices; Revocation of Regulations Concerning Approval

AGENCY: Mine Safety and Health Administration, Labor.

ACTION: Final rule.

SUMMARY: This final rule revokes obsolete the Mine Safety and Health Administration's (MSHA) regulations concerning approval of stemming devices and blasting devices under the authority of section 508 of the Federal Mine Safety and Health Act of 1977 (30 U.S.C. 957).

EFFECTIVE DATE: October 17, 1986.

FOR FURTHER INFORMATION CONTACT: Patricia W. Silvey, Director, Office of Standards, Regulations and Variances, MSHA, phone (703) 235–1910.

SUPPLEMENTARY INFORMATION: MSHA originally published these final rules in the Federal Register on June 20, 1986 (51 FR 22519 and 22520); however, the Agency withdrew them on June 30, 1986 (51 FR 23536) to avoid paying republishing costs for Title 30. The Code of Federal Regulations is published on an annual basis and MSHA's volume (Title 30) is revised on July 1 of each year.

The requirements in Part 16 apply to stemming devices that incorporate asbestos, the manufacture of which has been discontinued because of health hazards associated with asbestos. Asbestos stemming devices have not been used in underground coal mines for approximately 30 years, and no MSHA approvals have been issued under Part 16 since August 1957. The requirements in Part 17 apply to devices that use high gas pressure to blast coal, a method of blasting that has not been used for at least 20 years in underground coal mines. No approvals for blasting devices have been issued under Part 17 since June 1960. The regulations in 30 CFR Parts 16 and 17 are therefore obsolete and are removed.

Executive Order 12291 and the Regulatory Flexibility Act

MSHA certifies that this rulemaking action will not have a significant economic impact on a substantial number of small entities.

Publication as a Final Rule

This rule eliminates obsolete regulations and does not affect the rights or obligations of any person currently holding an approval. In

DEPARTMENT OF THE INTERIOR

Bureau of Indian Affairs

25 CFR Part 118

Judgment Funds, Shoshone Tribe of the Wind River Reservation, WY

March 13, 1987.

AGENCY: Bureau of Indian Affairs, Interior.

ACTION: Final rule; removal.

SUMMARY: The judgment funds for the Shoshone Tribe of the Wind River Reservation, Wyoming have been depleted through payment to tribal members. Since there are no funds left to be distributed, there is no further need for this rule. Part 118 is removed in its entirety. This removal will not have an adverse effect on any ongoing program.

EFFECTIVE DATE: The effective date of removal is June 1, 1987.

SUPPLEMENTARY INFORMATION: The authority to remove this rule and regulation is vested in the Secretary of the Interior by 5 U.S.C. 301 and 25 U.S.C. 2 and 9. This rule is published in exercise of rulemaking authority delegated by the Secretary of the Interior to the Assistant Secretary—Indian Affairs in the Departmental Manual at 209 DM 8.

The Act of June 25, 1938, provided for an appropriation for payment of judgment funds to members of the Shoshone Tribe of the Wind River Reservation in Wyoming who were living on July 27, 1939. A roll prepared listing these members was the basis for the distribution of the judgment fund. Bureau of Indian Affairs' records indicate that the judgment funds for the Shoshone Tribe of the Wind River Reservation in Wyoming have been depleted. Since there are no funds left to distribute, removal of this part is necessary because Part 118 has become obsolete. There will be no effect on the public.

In order to provide the public an opportunity to comment on the removal of 25 CFR Part 118, the rule was published as a proposed rule removal on December 5, 1986 at 51 FR 43935. No comments were received.

This rule does not constitute a major federal action significantly affecting the quality of the human environment under the National Environmental Policy Act of 1969.

This rule did contain information collections which required the approval of the Office of Management and Budget under 44 U.S.C. 3501 *et seq.* However, the requirements need not be submitted due to the removal of ths rule.

List of Subjects in 25 CFR Part 118

Indians—claims, Indians—judgment funds.

PART 118—[REMOVED]

Accordingly, for the reasons set out above, Part 118, Chapter I of Title 25 of the Code of Federal Regulations is hereby removed.

Nancy C. Garrett,

Acting Deputy Assistant Secretary, Indian Affairs.

[FR Doc. 87-9717 Filed 4-29-87; 8:45 am]

BILLING CODE 4310-02-M

DEPARTMENT OF LABOR

Occupational Safety and Health Administration

29 CFR Parts 1910 and 1926

[Docket No. H-332D]

Occupational Exposure to Asbestos, Tremolite, Anthophyllite, and Actinolite

AGENCY: Occupational Safety and Health Administration, Labor.

ACTION: Extension of partial stay and amendment of final rule.

SUMMARY: OSHA is hereby extending the partial administrative stay of the revised final standards for occupational exposure to asbestos, tremolite, anthophyllite and actinolite for general industry (§ 1910.1001) and construction (§ 1926.58), insofar as they apply to occupational exposure to non-asbestiform tremolite, anthophyllite and actinolite. The current partial stay which expired on April 21, 1987, is being extended until July 21, 1988 to allow OSHA to conduct supplemental rulemaking limited to the issue of whether non-asbestiform tremolite, anthophyllite and actinolite should continue to be regulated in the same standards and to the same extent as asbestos, or should be treated in some other way.

OSHA is also making minor conforming amendments to notes to the affected standards.

DATES: Effective April 21, 1987. The partial stay of §§ 1910.1001 and 1926.58 will expire on July 21, 1988.

FOR FURTHER INFORMATION CONTACT: Mr. James Foster, Director, Office of Information and Consumer Affairs, OSHA, U.S. Department of Labor, Room N3647, 200 Constitution Avenue NW., Washington, DC 20210. Telephon 523-8151.

SUPPLEMENTARY INFORMATION: In June 1986, OSHA issued revised standards governing occupational exposure to asbestos, tremolite, anthophyllite and actinolite for general industry and construction which were to be effective on July 21, 1986. (See 51 FR 22812 *et seq.* June 20, 1986).

On October 17, 1986 OSHA issued a partial stay of the revised standards insofar as they apply to occupational exposure to non-asbestiform tremolite, anthophyllite and actinolite, in order to enable the Agency to review new submissions raising questions about the appropriateness of regulating these minerals in the revised asbestos standards, and to allow sufficient time to reopen the rulemaking record and conduct supplemental rulemaking proceedings limited to this issue (51 FR 37002).

OSHA is now beginning to draft a notice of proposed rulemaking and is collecting data relating to the issue of whether and how to regulate these non-asbestiform minerals including the feasibility of regulating all impacted industries. The length of the initial partial stay has proven inadequate for the Agency to complete the rulemaking procedures contemplated in the notice which announced the partial stay because of the variety of the impacted industries and the unavailability of both minerologic and exposure data concerning many of these industries. OSHA therefore is extending the partial stay for 15 months, until July 21, 1988. The Agency believes that this extension more realistically and adequately reflects the amount of time which the data collection, analysis and drafting of an appropriate notice will take.

As was the case with the initial partial stay, OSHA intends that during the period of the extension, the 1972 standard governing occupational exposure to asbestos (redesignated 29 CFR 1910.1101) will remain in effect to the extent of the stay.

The full text of the stay with respect to these non-asbestiform minerals was published in the October 17, 1986 Federal Register (51 FR 37002).

This document also makes conforming amendments to the text of notes to the affected standards which refer to the partial stay.

With respect to the extension of the stay, OSHA finds that advance notice and opportunity for comment are impracticable and unnecessary within the meaning of 5 U.S.C. 553, in view of the limited duration of the extension and the continued applicability of the 1972

standard to cover the gaps in coverage created by the partial stay.

The minor amendments to the notes are similarly made without advance notice and opportunity for comment. OSHA finds such process unnecessary and impracticable in that the changes merely incorporate references to the extension and restate applicability of the stay and of the 1972 standard.

No evidenciary issues are involved.

List of Subjects

29 CFR Part 1910

Asbestos, Occupational safety and health.

29 CFR Part 1926

Asbestos, Occupational safety and health.

Authority and Signature

This document was prepared under the direction of John A. Pendergrass, Assistant Secretary of Labor for Occupational Safety and Health, U.S. Department of Labor, 200 Constitution Avenue NW., Washington, DC, 20210.

It is issued pursuant to sections 4, 6(b), 8(c) and 8(g) of the Occupational Safety and Health Act of 1970 (29 U.S.C. 653, 655, 657), section 107 of the Contract Work Hours and Safety Standards Act (Construction Safety Act) (40 U.S.C. 333), the Longshore and Harbor Workers' Compensation Act (33 U.S.C. 941), 29 CFR Part 1911 and Secretary of Labor's Order No. 9-83 (48 FR 35736), and 5 U.S.C. 551 *et seq.*

Signed at Washington, DC, this 23rd day of April, 1987.

John A. Pendergrass,

Assistant Secretary for Occupational Safety and Health.

Amended Standards

PART 1910—[AMENDED]

Part 1910 of Title 29 of the Code of Federal Regulations is hereby amended as follows:

Subpart Z—[Amended]

1. The authority citation for Subpart Z of Part 1910 continues to read as follows:

Authority: Secs. 6 and 8, Occupational Safety and Health Act, 29 U.S.C. 655, 657; Secretary of Labor's Orders Nos. 12-71 (36 FR 8754), 8-76 (41 FR 25059), or 9-83 (48 FR 35736), as applicable; and 29 CFR Part 1911.

Section 1910.1000 Tables Z-1, Z-2, Z-3 also issued under 5 U.S.C. 553.

Section 1910.1000 not issued under 29 CFR Part 1911, except for "Arsenic" and "Cotton Dust" listings in Table Z-1.

Section 1910.1002 not issued under 29 U.S.C. 655 or 29 CFR Part 1911; also issued under 5 U.S.C. 553.

Section 1910.1003 through 1910.1018 also issued under 29 U.S.C. 653.

Section 1910.1025 also issued under 29 U.S.C. 653 and 5 U.S.C. 556.

Section 1910.1043 also issued under 5 U.S.C. 551 *et seq.*

Sections 1910.1045 and 1910.1047 also issued under 29 U.S.C. 653.

Section 1910.1499 and 1910.1500 also issued under 5 U.S.C. 553.

§ 1910.1001 [Amended]

2. Section 1910.1001 is hereby amended by revising the note after Appendix H to § 1910.1001 to read as follows:

Note—Pursuant to an administrative stay effective July 21, 1986, published on October 17, 1986, (51 FR 37002) and extended to July 21, 1988 (at 52 FR 15722, Apr. 30, 1987) enforcement of this section is stayed as it applies to non-asbestiform tremolite, anthopyllite and actinclite. During the period and to the extent of this stay, the 1972 standard governing occupational exposure to asbestos (redesignated as 29 CFR 1910.1101) will remain in effect.

3. Section 1910.1101 is hereby amended by revising the note preceding § 1910.1101(a) to read as follows:

§ 1910.1101 Asbestos.

Note—This section applies in lieu of the revised standards governing occupational exposure to asbestos, tremolite, anthophyllite, and actinolite (29 CFR 1910.1001; 29 CFR 1926.58), during the period and to the extent that the revised standards have been partially stayed. (See 51 FR 37002, Oct. 17, 1986 and 52 FR 1572[illegible], Apr. 30, 1987, for a description of the stay).

This section also applies whenever all or part of the revised standards are rendered unenforceable because of a stay or judicial action. In such a case, to preclude a gap in coverage, parallel provisions of this section will take effect. OSHA will publish an appropriate notice in the Federal Register announcing each such application of this section. This section also applies pursuant to the requirements of 29 CFR 1910.1001(o) and 29 CFR 1926.58(o).

* * * * *

PART 1926—[AMENDED]

Part 1926 of the Code of Federal Regulations is hereby amended as follows:

Subpart D—[Amended]

4. The authority citation for Subpart D of Part 1926 continues to read as follows:

Authority: Secs. 4, 6, and 8, Occupational Safety and Health Act of 1970, 29 U.S.C. 653, 655, 657; sec. 107, Contract Work Hours and Safety Standards Act (Construction Safety Act), 40 U.S.C. 333, and Secretary of Labor's Orders 12-71 (36 FR 8754), 8-76 (41 FR 25059), or 9-83 (48 FR 35736), as applicable. Sections 1926.55(c) and 1926.58 also issued under 29 CFR Part 1911.

§ 1926.58 [Amended]

5. Section 1926.58 is hereby amended by revising the note after Appendix I to § 1926.58 to read as follows:

Note—Pursuant to an administrative stay effective July 21, 1986, published October 17, 1986 (51 FR 37002), and extended to July 21, 1988 (at 52 FR 15722, Apr. 30, 1987) enforcement of this section is stayed as it applies to non-asbestiform tremolite, anthopyllite and actinolite. During the period and to the extent of this stay, the 1972 standard governing occupational exposure to asbestos (redesignated as 29 CFR 1910.1101) will remain in effect.

* * * * *

[FR Doc. 87-9637 Filed 4-29-87; 8:45 am]

BILLING CODE 4510-29-M

DEPARTMENT OF TRANSPORTATION

Coast Guard

33 CFR Part 165

[COTP Wilmington, NC Regulation 87-02]

Safety Zone Regulations; Cape Fear River From Military Ocean Terminal, Sunny Point, NC to State Ports Authority, Wilmington, NC

AGENCY: Coast Guard, DOT.

ACTION: Emergency rule.

SUMMARY: The Coast Guard is establishing a safety zone which encompasses a water area 100 yards around the SS PFC Eugene A. Obregon during a port call to Wilmington, North Caroiina. This zone is needed to safeguard the vessel and public from any accidents during Military Preposition Ship (MPS) operations. Entry into this zone by other than assist tugs is prohibited unless authorized by the Captain of the Port.

EFFECTIVE DATES: This regulation becomes effective on May 10, 1987. It terminates on May 15, 1987, or when the SS PFC Eugene A. Obregon departs the Port of Wilmington, NC, whichever first occurs.

FOR FURTHER INFORMATION CONTACT: LTJG A. D. Wiest, Assistant Chief, Operations Department, U.S. Coast Guard Marine Safety Office, Suite 500, 272 N. Front Street, Wilmington, North

mortgages insured on or after April 27, 1987.

• • • • •

PART 235—MORTGAGE INSURANCE AND ASSISTANCE PAYMENTS FOR HOME OWNERSHIP AND PROJECT REHABILITATION

3. The authority citation for 24 CFR Part 235 continues to read as follows:

Authority: Sections 211, 235, National Housing Act. (12 U.S.C. 1715b, 1715z); Section 7(d), Department of Housing and Urban Development Act. (42 U.S.C. 3535(d)).

4. In § 235.9, paragraph (a) is revised to read as follows:

§ 235.9 Maximum interest rate.

(a) The mortgage shall bear interest at the rate agreed upon by the mortgagee and the mortgagor, which rate shall not exceed 9.50 percent per annum with respect to mortgages insured on or after April 27, 1987.

• • • • •

5. In § 235.540, paragraph (a) is revised to read as follows:

§ 235.540 Maximum interest rate.

(a) The mortgage shall bear interest at the rate agreed on by the mortgagee and the mortgagor, which rate shall not exceed 9.50 percent per annum with respect to mortgages insured after April 27, 1987.

• • • • •

Dated: April 30, 1987.

Thomas T. Demery,

Assistant Secretary for Housing—Federal Housing Commissioner.

[FR Doc. 87-10736 Filed 5-11-87; 8:45 am]

BILLING CODE 4210-27-M

DEPARTMENT OF JUSTICE

28 CFR Part 17

[Order No. 1187-87]

Membership of the Department Review Committee

AGENCY: Department of Justice.

ACTION: Final rule.

SUMMARY: This Order revises Part 17 of Title 28, Code of Federal Regulations, to change the security regulations of the Department of Justice for the purpose of providing a Civil Division representative to the Department Review Committee.

EFFECTIVE DATE: April 24, 1987.

FOR FURTHER INFORMATION CONTACT: D. Jerry Rubino, Department Security Officer, Department of Justice, Washington, DC 20530 (202) (633-2094). This is not a toll-free number.

SUPPLEMENTARY INFORMATION: This regulation is exempt from the requirements of Executive Order 12291 as a regulation related to agency organization and management. Furthermore, this regulation will not have a significant impact on a substantial number of small entities because its effect is internal to the Department of Justice and is therefore exempt from the Regulatory Flexibility Act.

List of Subjects in 28 CFR Part 17

Classified information, Foreign relations.

By virtue of the authority vested in me by E.O. 12356, 5 U.S.C. 301 and 28 U.S.C. 509, 510, § 17.135 of Part 17 of Title 28, Code of Federal Regulations is revised as set forth below.

PART 17—[AMENDED]

1. The authority citatation for Part 17 is revised to read as follows:

Authority: 5 U.S.C. 301; 28 U.S.C. 509, 510; E.O. 12356.

§ 17.135 [Amended]

2. Section 17.135 is amended by redesignating paragraphs (b) (4), (5), and (6) as paragraphs (b) (5), (6), and (7), and by adding a new paragraph (b)(4) to read as follows:

• • • • •

(b) • • •

(4) Civil Division

• • • • •

Dated: April 24, 1987.

Edwin Meese III,

Attorney General.

[FR Doc. 87-10756 Filed 5-11-87; 8:45 am]

BILLING CODE 4410-01-M

DEPARTMENT OF LABOR

Occupational Safety and Health Administration

29 CFR Parts 1910 and 1926

Occupational Exposure to Asbestos, Tremolite, Anthophyllite, and Actinolite; Corrections and Information Collection Requirements Approval

AGENCY: Occupational Safety and Health Administration, Labor.

ACTION: Final rules; corrections, technical amendments and information collection requirements approval.

SUMMARY: This document makes corrections to the preamble of the final rules for Occupational Exposure to Asbestos, Tremolite, Anthophyllite, and Actinolite which appeared in the Federal Register on June 20, 1986 (51 F 22612) and technical amendments to 29 CFR Parts 1910 and 1926.

EFFECTIVE DATES: May 12, 1987. 29 CFR 1910.1001 (d)(2), (d)(3), (d)(5), (d)(7), (f)(2), (g)(3)(i), (j)(5), (l), and (m) became effective on October 2, 1986. 29 CFR 1926.58 (f)(2), (f)(3), (f)(6), (h)(3)(i), (k)(3), (k)(4), (m), and (n) became effective on November 14, 1986.

FOR FURTHER INFORMATION CONTACT: Mr. James F. Foster, OSHA Office of Information and Consumer Affairs, Room N3637, U.S. Department of Labor, 200 Constitution Avenue NW., Washington, DC 20210, Telephone (202) 523-8148.

SUPPLEMENTARY INFORMATION: On June 20, 1986 (51 FR 22612) OSHA published a document titled "Occupational Exposure to Asbestos, Tremolite, Anthophyllite, and Actinolite; Final Rules". At the time of publication the information collection requirements of those rules had not been approved by the Office of Management and Budget under the Paperwork Reduction Act of 1980, 44 U.S.C. 3501, et seq.

On October 2, 1986, the Office of Management and Budget approved the information collection requirements for 29 CFR 1910.1001 and has assigned th Control No. 1218-0133. Accordingly, th information collection requirements of the asbestos, tremolite, anthophyllite, and actinolite final rule (§ 1910.1001) published June 20, 1986 became effective on October 2, 1986.

On November 14, 1986, the Office of Management and Budget approved the information collection requirements for 29 CFR 1926.58 and has assigned them Control No. 1218-0134. Accordingly, the information collection requirements of the construction industry standard for asbestos, tremolite, anthophyllite, and actinolite (§ 1926.58) published June 20, 1986 became effective on November 14, 1986.

There were a number of typographic errors in the June 20, 1986 document preamble as well as in the codified standards 29 CFR 1910.1001 and 29 CFR 1926.58. This document amends and corrects all the substantive and typographic errors in the regulatory text and those in the preamble where correction is needed to make the meaning clearer.

One of the amendments being made is to the respirator selection tables codified at 29 CFR 1910.1001, Table 1, and § 1926.58, Table D-4. These tables are being amended by adding the phr "other than a disposable respirator" the description of the class of respirator allowed to be worn in airborne

concentrations not in excess of 2 f/cc. While this explicit prohibition on the use of disposable respirators was not included in the regulatory text issued on June 20, 1986.

OSHA intended to prohibit their use. OSHA indicated in the preamble to the standards that disposable respirators were not allowed (51 FR 22718), and had stated in the appendices to the standards that "disposable respirators or dust masks are not permitted to be used for asbestos, tremolite, anthophyllite and actinolite work." (App. G. (III)A, 51 FR 22754, App. H. (III)A, 51 FR 22788).

OSHA omitted the clarifying phrase, "other than a disposable respirator," from the tables because the purpose of the respirator selection tables is primarily to state which respirators are permitted in specific air concentrations, not to list explicitly those which are not allowed. As explained above, the Federal Register document, read as a whole, clearly indicated OSHA's decision to prohibit disposable respirators. However, to ensure that the respirator selection tables, when read alone, are clear, they are being amended to specifically state that disposable respirators are not permitted. Since these technical amendments do not substantively change the requirements of the standards, they were made effective immediately and without opportunity for advance notice and comment which OSHA finds "unnecessary and impracticable" within the meaning of 5 U.S.C. 553(b).

PART 1910—[CORRECTED]

PART 1926—[CORRECTED]

Accordingly, the preamble to FR Doc. 86-13674 published in 51 FR 22612-22790, June 20, 1986, is corrected to read as follows:

Corrections to the preamble:

1. On page 22629, column 1, line 5, "[Platek et al., Ex. 84-240]" is corrected to read "[Platek et al., Ex. 84-230]".

2. On page 22631, column 1, last paragraph, line 12, "or" is corrected to read "of".

3. On page 22651, Table 7, line entry for A/C pipe under column 5, "0.01-1.21" is corrected to read "0.01-1.81".

4. On page 22655, Table 12, line entry for total under column 2, "764.228" is corrected to read "746.228".

5. On page 22666, column 1, Table 24, is corrected to read:

Industry	Total cancer deaths
Primary Manufacturing:	
A/C Pipe	0.06
A/C Sheet	0.14
Friction Materials	3.39
Textiles	0.16
Floor Tile	<0.01
Gaskets and Packings	0.12
Paper	0.04
Coatings and Sealants	0.39
Plastics	0.09
Secondary Manufacturing:	
A/C Sheet	0.16
Friction Materials	0.48
Gaskets and Packings	0.70
Textiles	0.11
Plastics	0.17
Automotive Remanufacturing	0.74
Services:	
Automotive Repair	30.15
Ship Repair	4.29
Construction:	
New Construction	0.36
Asbestos Abatement	0.66
Demolition	0.23
Building Renovation	22.15
Routine Maintenance in Commercial and Residential Buildings	9.80
Routine Maintenance in General Industry	0.34
Total	74.72

Source: U.S. Department of Labor, OSHA, Office of Regulatory Analysis.

6. On page 22666, column 2, Table 25, is corrected to read:

Industry	Total cancer deaths avoided
Primary Manufacturing:	
A/C Pipe	0.07
A/C Sheet	0.16
Friction Materials	4.00
Textiles	0.18
Floor Tile	0.02
Gaskets and Packings	0.13
Paper	0.06
Coatings and Sealants	0.48
Plastics	0.11
Secondary Manufacturing:	
A/C Sheet	0.18
Friction Materials	0.65
Gaskets and Packings	0.88
Textiles	0.12
Plastics	0.29
Automotive Remanufacturing	0.90
Services:	
Automotive Repair	39.25
Ship Repair	4.61
Construction:	
New Construction	0.61
Asbestos Abatement	0.76
Demolition	0.23
Building Renovation	22.49
Routine Maintenance in Commercial and Residential Buildings	11.23
Routine Maintenance in General Industry	0.39
Total	87.80

Source: U.S. Department of Labor, OSHA, Office of Regulatory Analysis.

7. On page 22668, Table 27, line entry for A/C sheet under column 2, "1,260.6" is corrected to read "1,260.0".

8. On page 22668, Table 28, line entry for ship repair under column 2, "3918.5" is corrected to read "3,919".

9. On page 22676, column 2, second complete paragraph, lines 16 and 17, delete "disposable protective clothing".

10. On page 22685, column 3, line 1, "50 mm—long cowl extension" is corrected to read "50 mm electrically conductive extension cowl".

11. On Page 22685, column 3, lines 5 and 6, "1pm" signifying liters per minute, is corrected to read "lpm".

12. On page 22686, column 1, third paragraph, lines 4 and 5, "50 mm extension cowl" is corrected to read "50mm electrically conductive extension cowl".

13. On page 22686, column 1, fourth paragraph, lines 4, 7, 10 and 18, "1pm" signifying liters per minute is corrected to read "lpm".

14. On page 22688, column 2, line 25, "importane" is corrected to read "importance".

15. On page 22702, column 3, line 17, "felf" is corrected to read "felt".

16. On page 22706, column 2, second complete paragraph, lines 13 and 14, "[e.g., paragraphs (e)(6), (i)(4), and (j)(1)(i)" is corrected to read "[e.g., paragraphs (e)(6), (j)(1)(i), and (j)(2)(i)]".

17. On page 22706, column 3, second complete paragraph, the last sentence is corrected to read "These employers are also required to ensure that these employees observe strict decontamination procedures before they leave the worksite".

18. On page 22713, column 3, line 8 from bottom of page, "quarterly" is corrected to read "semi-annual".

19. On page 22715, column 2, line 12, "paragraph (g)(l)(i)" is corrected to read "paragraph (g)(1)(i)".

20. On page 22715, column 2, line 18, "Paragraph (g)(l)(i)(G)" is corrected to read "Paragraph (g)(1)(i)(G)".

21. On page 22715, column 2, second complete paragraph, line 1, "paragraph

(g)(l)(ii)" is corrected to read "paragraph (g)(1)(ii)".

22. On page 22717, column 1, line 13, "paragarph" is corrected to read "paragraph".

23. On page 22717, column 1, second complete paragraph, lines 2 and 3, "Respiratory Protection" is corrected to read "respiratory protection".

24. On page 22721, column 1, first complete paragraph, line 1, "Primary" is corrected to read "primary".

25. On page 22725, column 3, line 14, "paragraph (1)(i)" is corrected to read "paragraph (l)(1)".

26. On page 22725, column 3, second complete paragraph, line 2, "paragraph (1)(2)" is corrected to read "paragraph (l)(2)".

27. On page 22726, column 1, line 5, "paragraph (1)(2)" is corrected to read "paragraph (l)(2)".

28. On page 22726, column 2, line 18, "appropriations" is corrected to read "appropriateness".

29. On page 22726, column 3, first complete paragraph, line 1, "Paragraph (m)(l)(i)" is corrected to read "Paragraph (m)(1)(i)".

30. On page 22730, column 3, third complete paragraph, lines 1 through 5, are corrected to read "The time period required for retention of exposure records is 30 years and for medical records, duration of employment plus 30 years. These retention periods are consistent with those in the OSHA records access rule § 1910.20 (m)(1)(iii) and (m)(2)(iii)".

Accordingly, Parts 1910 and 1926 are amended as set forth below:

PART 1910—OCCUPATIONAL SAFETY AND HEALTH STANDARDS

1. The authority citation for Part 1910 continues to read as follows:

Authority: Secs. 4, 6, and 8 of the Occupational Safety and Health Act, 29 U.S.C. 653, 655, 657; Walsh-Healey Act, 41 U.S.C. 35 et seq.; Service Contract Act of 1965, 41 U.S.C. 351 et seq.; Pub. L. 91-54, 40 U.S.C. 333; Pub. L. 85-742, 33 U.S.C. 941; National Foundation on Arts and Humanities Act, 20 U.S.C. 951 et seq.; Secretary of Labor's Orders 12-71 (36 FR 8754), 8-76 (41 FR 25059), or 9-83 (48 FR 35736); and 29 CFR Part 1911.

2. 29 CFR 1910.1001 is amended as follows:

a. In paragraph (g)(2)(ii)(B), Table 1, the first entry in the right hand column which reads, "Half-mask air-purifying respirator equipped with high-efficiency filters.", is revised to read "Half-mask air-purifying respirator, other than a disposable respirator, equipped with high-efficiency filters.".

b. In paragraph (j)(5)(i), the language following the last comma is revised to read "or a combination of these minerals at or above the action level and ensure their participation in the program.".

c. In paragraph (j)(5)(iii)(G), "paragraph (1)" is revised to read "paragraph (l)".

d. In paragraph (j)(5)(iii)(H), "A review" is revised to read "The content".

e. In paragraph (o)(2)(vi), "paragraph (1)" is revised to read "paragraph (l)".

Appendix A to § 1910.1001—[Amended]

f. In Appendix A, in the first paragraph, "paragraph (f)" is revised to read "paragraph (d)".

g. In Appendix A, under "*Sampling and Analytical Procedure*", item 2., "50-mm extension cowl" is revised to read "50-mm electrically conductive extension cowl".

h. In Appendix A, under "*Sampling and Analytical Procedure*", item 13.b., "Count all particles as asbestos, tremolite," is revised to read "In the absence of other information, count all particles as asbestos, tremolite,".

Appendix B to § 1910.1001—[Amended]

i. In Appendix B, under "*Asbestos, Tremolite, Anthophyllite, and Actinolite Sampling and Analysis Method*", in the "Flow rate" paragraph, "l/min" signifying liters per minute, is revised to read "L/min", the four times it appears.

j. In Appendix B, under "*Asbestos, Tremolite, Anthophyllite, and Actinolite Sampling and Analysis Method*", in the "Equipment" section, item 1., "50-mm extension cowl" is revised to read "50-mm electrically conductive extension cowl".

k. In Appendix B, under "*Sampling*", item 4., the left side of the equation "t_{min}" is revised to read "$t_{minimum}$".

l. In Appendix B, under "*Sampling*", in the *Note*, "sampler" is revised to read "sample".

m. In Appendix B, under "*Calculations*", item 21., the equation is revised to read:

$$E = \frac{(F/n_f) - (B/n_b)}{A_r} \text{ fibers/mm}^2$$

where:
n_f = number of fields in submission sample
n_b = number of fields in blank sample

Appendix C to § 1910.1001—[Amended]

n. In Appendix C, under "I. *Isoamyl Acetate Protocol*", item I.C.15., remove the last two sentences.

o. In Appendix C, under "II. *Saccharin Solution Aerosol Protocol*", item II.C.10.v., "loudly" is revised to read "aloud".

p. In Appendix C, under "II. *Saccharin Solution Areosol Protocol*", item II.C.14., "IAA" is revised to read "saccharin solution aerosol".

q. In Appendix C, under "III. *Irritant Fume Protocol*", item III.A., "combination of high-efficiency and acid-gas cartridges" is revised to read "high-efficiency cartridge".

r. In Appendix C, under "III. *Irritant Fume Protocol*", item III.B.8.v., "Reading it" is revised to read "Repeating it after the test conductor (keeping eyes closed)".

s. In Appendix C, under "III. *Irritant Fume Protocol*", item III.B.12., "IAA" is revised to read "irritant fume".

t. In Appendix C, under "III. *Irritant Fume Protocol*", item III.C.3.c., "particular" is revised to read "particulate".

u. In Appendix C, under "III. *Irritant Fume Protocol*", item III.C.4.a., "Norton" is revised to read "North".

v. In Appendix C, under "III. *Irritant Fume Protocol*", item III.C.5.e., is revised to read "*Reading (R).* The test subject (keeping eyes closed) shall repeat after the test conductor the 'rainbow passage' at the end of this section. The subject shall talk slowly and aloud so as to be heard clearly by the test conductor or monitor.".

w. In Appendix C, under "III. *Irritant Fume Protocol*", item III.C.6., delete "(See paragraph 4.h.)".

x. In Appendix C, under "III. *Irritant Fume Protocol*", item III.C.11., in the first sentence, delete "in".

Appendix E to § 1910.1001—[Amended]

y. In Appendix E, under "Interpretation and Classification of Chest Roentgenograms—Mandatory", item (a) is revised to read "(a) Chest roentgenograms shall be interpreted and classified in accordance with a professionally accepted Classification system and recorded on an interpretation form following the format of the CDC/NIOSH (M) 2.8 form. As a minimum, the content within the bold lines of this form (items 1 through 4) shall be included. This form is not to be submitted to NIOSH.".

Appendix F to § 1910.1001—[Amended]

z. In Appendix F, under "A. *Enclosed Cylinder/HEPA Vacuum System Method*", second paragraph, third sentence, "The brake assembly isolation cylinder is available from Nilfisk Company and comes", is revised to read

"One company manufactures the brake assembly isolation cylinder".

aa. In Appendix F, under "A. *Enclosed Cylinder/HEPA Vacuum System Method*", footnote 1, is deleted.

bb. In Appendix F, under "C. *Information on the Effectiveness of Various Control Measures*", in the preferred methods" section, first paragraph, the word "below" which ends the second sentence, is revised to read "above".

Appendix G to § 1910.1001—[Amended]

cc. In Appendix G, under "IV. *Disposal Procedures and Cleanup*", item IV.A., the word "is" after actinolite is revised to read "are".

dd. In Appendix G, under "IV. *Disposal Procedures and Cleanup*", item IV.C., "logs" is revised to read "bags".

Appendix H to § 1910.1001—[Amended]

ee. In Appendix H, under "IV. *Surveillance and Preventive Considerations*", the first sentence in the second paragraph, is revised to read "The employer is required to institute a medical surveillance program for all employees who are or will be exposed to asbestos, tremolite, anthophyllite, actinolite or a combination of these minerals at or above the action level (0.1 fiber per cubic centimeter of air).".

§ 1910.1001 [Amended]

ff. The OMB Control Number is added at end of § 1910.1001 to read as follows:

[Information collection requirements contained in paragraphs § 1910.1001 (d)(2), (d)(3), (d)(5), (d)(7), (f)(2), (g)(3) (i), (j)(5), (l), and (m) were approved by the Office of Management and Budget under Control No. 1218-0133]

PART 1926—SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION

3. The authority citation for Part 1926 continues to read as follows:

Authority: Secs. 4, 6, 8, Occupational Safety and Health Act of 1970, 29 U.S.C. 653, 655, 657; Sec. 107, Contract Work Hours and Safety Standards Act (Construction Safety Act), 40 U.S.C. 333, and Secretary of Labor's Orders 12-71 (36 FR 8754), 8-76 (41 FR 25059), or 9-83 (48 FR 35736), as applicable. Sections 1926.53(c) and 1926.58 also issued under 29 CFR 1911.

4. 29 CFR 1926.58 is amended as follows:

a. In paragraph (b), under "Renovation", insert "or" after "anthophyllite,".

b. In paragraph (e)(6)(iv), add "[Refer to Appendix G.]" after the last sentence.

c. In paragraph (f)(2)(i), insert "or" after the first time "anthophyllite," appears.

d. In paragraph (h)(2)(iii)(B), Table D-4, the first entry in the right hand column which reads "Half-mask air-purifying respirator equipped with high-efficiency filters." is revised to read "Half-mask air-purifying respirator, other than a disposable respirator, equipped with high efficiency filters.".

e. In paragraph (h)(4)(ii), "Table 1" is revised to read "Table D-1".

f. In paragraph (k)(3)(i), "minerals in excess of the action level" is revised to read "minerals at or above the action level".

g. Paragraph (k)(3)(ii) is revised to read "Training shall be provided prior to or at the time of initial assignment [unless the employee has received equivalent training within the previous 12 months] and at least annually thereafter".

h. In paragraph (k)(3)(iii)(F), delete "and".

i. In paragraph (k)(3)(iii)(G), "requirements." is revised to read "requirements; and".

j. In paragraph (k)(3)(iii)(H), "A review" is revised to read "The content".

k. In paragraph (o)(1), change "[insert date 30 days from publication in the Federal Register]" to "July 21, 1986".

l. In paragraph (o)(2)(i), change "[insert date 210 days from publication in the Federal Register]" to "January 16, 1987".

Appendix A to § 1926.58—[Amended]

m. In Appendix A, under "*Sampling and Analytical Procedure*", item 2., "50-mm extension cowl" is revised to read "50-mm electrically conductive extension cowl".

n. In Appendix A, under "*Sampling and Analytical Procedure*", item 13.b., "Count all particles as asbestos, tremolite." is revised to read, "In the absence of other information, count all particles as asbestos, tremolite.".

o. In Appendix A, under "*Quality Control Procedures*", item 2., in the first sentence, "that as a minimum includes participation of" is revised to read "that, as a minimum, includes participation of".

Appendix B to § 1926.58—[Amended]

p. In Appendix B, under "*Asbestos, Tremolite, Anthophyllite, and Actinolite Sampling and Analysis Method*", in the "Flow rate" paragraph "l/min" signifying liters per minute , is revised to read "L/min" the four times it appears.

q. In Appendix B, under *Asbestos, Temolite, Anthophyllite, and Actinolite Sampling and Analysis Method*", in the "Equipment" section, item 1., "50-mm extension cowl" is revised to read "50-mm electrically conductive extension cowl".

r. In Appendix B, under "*Sampling*", item 4., the left side of the equation "t_{min}" is revised to read "$t_{minimum}$".

s. In Appendix B, under "*Sampling*", item 6., "sampler" is revised to read "sample".

t. In Appendix B, under "*Sample Preparation*", item 10.d., "in unsufficient" is revised to read "is insufficient".

u. In Appendix B, under "*Calculations*", item 21., the equation is revised to read:

$$E = \frac{(F/n_f) - (B/n_b)}{A_f} \text{ fibers/mm}^2$$

where:
n_f = number of fields in submission sample
n_b = number of fields in blank sample

Appendix C to § 1926.58—[Amended]

v. In Appendix C, under "I. *Isoamy [Acetate Protocol]*", item I.C.15., remove the last two sentences.

w. In Appendix C, under "II. *Saccharin Solution Aerosol Protocol.*" item II.C.14., "IAA" is revised to read "saccharin solution aerosol".

x. In Appendix C, under "III. *Irritant Fume Protocol*", item III.A., "combination of high-efficiency and acid-gas cartridges", is revised to read "high-efficiency cartridge".

y. In Appendix C, under "III. *Irritant Fume Protocol*", item III.B.8.v., "Reading it" is revised to read "Repeating it after the test conductor (keeping eyes closed)".

z. In Appendix C, under "III. *Irritant Fume Protocol*", item III.B.12., "IAA" is revised to read "irritant fume".

aa. In Appendix C, under "III. *Irritant Fume Protocol*", item III.C.3.c., "particular" is revised to read particulate".

bb. In Appendix C, under "III. *Irritant Fume Protocol*", item III.C.4.a., "Norton" is revised to read "North".

cc. In Appendix C, under "III. *Irritant Fume Protocol*", item III. C.4.a.(2), insert "of" after "pressure".

dd. In Appendix C, under "III. *Irritant Fume Protocol*", item III.C.5.e., are revised to read "Reading (R). The test subject (keeping eyes closed) shall repeat after the test conductor the 'rainbow passage' at the end of this section. The subject shall talk slowly and aloud so as to be heard clearly by the test conductor or monitor.".

ee. In Appendix C, under "III. *Irritant Fume Protocol*", item III.C.6., delete "(See paragraph 4.h.)".

Appendix E to § 1926.58—[Amended]

ff. In Appendix E, under *"Interpretation and Classification of Chest Roentgenograms—Mandatory"*, item (a) is revised to read "(a) Chest roentgenograms shall be interpreted and classified in accordance with a professionally accepted classification system and recorded on an interpretation form following the format of the CDC/NIOSH (M) 2.8 form. As a minimum, the content within the bold lines of this form (items 1 through 4) shall be included. This form is not be submitted to NIOSH.".

gg. In Appendix F, under *"HEPA-Filtered Vacuum"*, fourth sentence, delete "Nilfisk of America, Inc. * ," and the corresponding footnote.

hh. In Appendix F, under *"Exhaust Air Filtration System"*, fourth sentence, delete "Micro Trap, Inc., * ".

ii. In Appendix F, under *"Exhaust Air Filtration System"*, fifth sentence, "Micro-Trap * " is revised to read "these".

Appendix G to § 1926.58—[Amended]

jj. In Appendix G, in the first paragraph, reference to "paragraphs (e)(6) and (f)(2)(ii)(B) of § 1926.58" is revised to read "paragraphs (e)(6), (j)(1)(i) and (j)(2)(i) of § 1926.58".

kk. In Appendix G, under *"Glove Bag Equipment and Supplies"*, item 7, delete "dust".

Appendix H to § 1926.58—[Amended]

ll. In Appendix H, under "IV. *Disposal Procedures and Cleanup*", item IV.C., "logs" is revised to read "bags".

§ 1926.58 [Amended]

mm. The OMB Control Number is added at the end of § 1926.58 to read as follows:

(Information collection requirements contained in paragraphs § 1926.58 (f)(2), (f)(3), (f)(6), (h)(3)(i), (k)(3), (k)(4), (m), and (n) were approved by the Office of Management and Budget under Control No. 1218-0134)

Signed at Washington, DC, this 5th day of May, 1987.

John A. Pendergrass,

Assistant Secretary of Labor, Occupational Safety and Health.

FR Doc. 87-10652 Filed 5-11-87; 8:45 am]

BILLING CODE 4510-26-M

DEPARTMENT OF DEFENSE

Department of the Air Force

32 CFR Part 818a

Personal Commercial Affairs

AGENCY: Department of the Air Force, DOD.

ACTION: Final rule.

SUMMARY: The Department of the Air Force has revised its rule on Personal Commercial Affairs to implement Department of Defense (DOD) Directive 1344.7, February 13, 1986 (32 CFR Part 43). This revision updates DOD policies covering the conduct of private commercial solicitation and sales on Air Force installations.

EFFECTIVE DATE: June 11, 1987.

FOR FURTHER INFORMATION CONTACT: MSgt Richard R. Hollett, HQ AFMPC/DPMASC, Randolph AFB, TX 78150-6001, telephone (512) 652-3996.

SUPPLEMENTARY INFORMATION: The Department of the Air Force published a notice of proposed rulemaking on personal commercial affairs in the Federal Register on March 25, 1987 (52 FR 9499). No comments were received.

The Department of the Air Force has determined that this regulation is not a major rule as defined by Executive Order 12291, is not subject to the relevant provisions of the Regulatory Flexibility Act of 1980 (Pub. L. 96-354), and does not contain reporting or recordkeeping requirements under the criteria of the Paperwork Reduction Act of 1980 (Pub. L. 96-511).

List of Subjects in 32 CFR Part 818a

Federal buildings and facilities, Life insurance, Military personnel.

Therefore, 32 CFR Part 818a is revised to read as follows:

PART 818A—PERSONAL COMMERCIAL AFFAIRS

Subpart A—Introduction

Authority: 10 U.S.C. 8012.

Note.—This part is derived from Air Force Regulation 211-16.

Subpart A—Introduction

§ 818a.0 Purpose.

This part sets policy for private commercial solicitation and sales on Air Force installations. It is designed to safeguard and promote the welfare and interests of military personnel as consumers. It requires commanders to be sure that all commercial soliciting and selling of all types of insurance, securities, and other goods, services, and commodities are monitored and controlled. This rule applies to all Air Force installations. It does not apply to the USAF Reserve or the Air National Guard. It implements 32 CFR Part 43 (Department of Defense (DOD) Directive 1344.7, February 13, 1986).

§ 818a.1 References.

(a) Part 806 of this chapter.
(b) AFR 34-4, Morale, Welfare, and Recreation (MWR) Basic Responsibilities, Policies, and Practices-Private Organizations.
(c) Part 818 of this chapter.
(d) AFR 40-735, Civilian Conduct and Responsibility.
(e) Part 818b of this chapter.
(f) AFR 110-27, Preventive Law Program.
(g) AFR 145-15, Air Force Commissary Store Regulation.
(h) AFR 147-7, Army and Air Force Exchange Service (AAFES) General Policies.
(i) AFR 170-32, Personal Financial Management Program (PFMP).
(j) Federal Reserve Board Regulation Z.
(k) Federal Personnel Manual.

Note.—Part 806 of this chapter states the basic policies and instructions governing the disclosure of records and tells members of the public what they must do to inspect or obtain copies of the material referenced herein.

§ 818a.2 Terms explained.

(a) *Agent.* An individual who receives pay as a salesperson or whose pay is dependent on volume of sales of a product or products.

Staphylococcus aureus; and skin and soft tissue infections including cellulitis, pyoderma, dermatitis, wound infections, and abscesses caused by susceptible strains of *Staphylococcus aureus.*

(ii) *Amount.* 10 milligrams per pound of body weight, twice daily.

(2) For use in cats as follows:

(i) *Indications for use.* For treating skin and soft tissue infections including abscesses, wound infections, cellulitis, and dermatitis caused by susceptible strains of *Pasteurella multocida, Staphylococcus aureus, Staphylococcus epidermidis,* and *Streptococcus* spp.

(ii) *Amount.* 10 milligrams per pound of body weight, once daily.

(3) *Limitations.* Discard unused portion of reconstituted product after 14 days. Treatment should continue for 48 hours after animal is afebrile or asymptomatic. If no response after 3 days, discontinue treatment and reevaluate therapy. Not for use in animals raised for food production. Safe use in pregnant or breeding animals has not been established. Federal law restricts this drug to use by or on the order of a licensed veterinarian.

Dated: July 12, 1988.

Richard H. Teske,

Deputy Director, Center for Veterinary Medicine.

[FR Doc. 88-16298 Filed 7-19-88; 8:45 am]

BILLING CODE 4160-01-M

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21 CFR Part 558

New Animal Drugs for Use in Animal Feeds; Monensin

AGENCY: Food and Drug Administration.

ACTION: Final rule.

SUMMARY: The Food and Drug Administration (FDA) is amending the animal drug regulations to remove that portion of the regulations reflecting approval of a new animal drug application (NADA) held by Central Soya Co., Inc. The NADA provides for the use of a Type A medicated article containing 255.5 or 281.7 grams of monensin per ton for making Type C medicated feeds for broiler chickens. Elsewhere in this issue of the Federal Register, FDA is withdrawing approval of the NADA.

EFFECTIVE DATE: August 1, 1988.

FOR FURTHER INFORMATION CONTACT: Mohammad I. Sharar, Center for Veterinary Medicine (HFV-216), Food and Drug Administration, 5600 Fishers Lane, Rockville, MD 20857, 301-443-4093.

SUPPLEMENTARY INFORMATION: In a notice published elsewhere in this issue of the Federal Register, FDA is withdrawing approval of Central Soya Co., Inc.'s NADA 119-546. The NADA provides for manufacturing Type A medicated articles for export which contain 255.5 or 281.7 grams of monensin per ton for use in making Type C medicated feeds for broiler chickens. The feeds are used as an aid in the prevention of coccidiosis. This document removes 21 CFR 558.355(b)(10), which reflects approval of the NADA.

List of Subjects in 21 CFR Part 558

Animal drugs, Animal feeds.

Therefore, under the Federal Food, Drug, and Cosmetic Act and under authority delegated to the Commissioner of Food and Drugs and redelegated to the Center for Veterinary Medicine, Part 558 is amended as follows:

PART 558—NEW ANIMAL DRUGS FOR USE IN ANIMAL FEEDS

1. The authority citation for 21 CFR Part 558 continues to read as follows:

Authority: Sec. 512, 82 Stat. 343-351 (21 U.S.C. 360b); 21 CFR 5.10 and 5.83.

§ 558.355 [Amended]

2. Section 558.355 *Monensin* is amended by removing paragraph (b)(10) and reserving it.

Dated: July 12, 1988.

Richard H. Teske,

Deputy Director, Center for Veterinary Medicine.

[FR Doc. 88-16294 Filed 7-19-88; 8:45 am]

BILLING CODE 4160-01-M

DEPARTMENT OF LABOR

Occupational Safety and Health Administration

29 CFR Parts 1910 and 1926

[Docket No. H-330]

Occupational Exposure to Asbestos, Tremolite, Anthophyllite, and Actinolite

AGENCY: Occupational Safety and Health Administration, Labor.

ACTION: Extension of partial stay and amendment of final rule.

SUMMARY: OSHA is hereby extending the partial administrative stay of the revised final standards for occupational exposure to asbestos, tremolite, anthophyllite and actinolite for general industry (§ 1910.1001) and construction (§ 1926.58), insofar as they apply to occupational exposure to non-asbestiform tremolite, anthophyllite and actinolite. The current partial stay, originally set to expire on April 21, 1987 and extended until July 21, 1988, is being further extended until July 21, 1989 to allow OSHA to conduct supplemental rulemaking limited to the issue of whether non-asbestiform tremolite, anthophyllite and actinolite should continue to be regulated in the same standard as asbestos, or should be treated in some other way. OSHA also is making minor conforming amendments to notes to the affected standards.

DATES: The partial stay of §§ 1910.1001 and 1926.58 is extended until July 21, 1989.

FOR FURTHER INFORMATION CONTACT: Mr. James Foster, Director, Office of Information and Consumer Affairs, OSHA, U.S. Department of Labor, Room N3647, 200 Constitution Avenue, NW., Washington, DC 20210. Telephone (202) 523-8151.

SUPPLEMENTARY INFORMATION: In June 1986, OSHA issued revised standards governing occupational exposure to asbestos, tremolite, anthophyllite and actinolite for general industry and construction which were to be effective on July 21, 1986. (See 51 FR 22612 *et seq.*, June 20, 1986).

On October 17, 1986 OSHA issued a partial stay of the revised standards insofar as they apply to occupational exposure to non-asbestiform tremolite, anthophyllite and actinolite, in order to enable the Agency to review new submissions raising questions about the appropriateness of regulating these minerals in the revised asbestos standards, and to allow sufficient time to reopen the rulemaking record and conduct supplemental rulemaking proceedings limited to this issue (51 FR 37002).

OSHA extended the stay until July 21, 1988 in a notice published on April 30, 1987. (52 FR 15722). At that time OSHA stated that it was beginning to draft a notice of proposed rulemaking and was collecting data relating to the issue of whether and how to regulate these non-asbestiform minerals including the feasibility of regulating all impacted industries. The length of the initial partial stay had proven inadequate for the Agency to complete the rulemaking procedures contemplated because of the variety of the impacted industries.

Because of the problems described in the previous notice, OSHA now anticipates that it can publish a notice of proposed rulemaking concerning how to regulate rulemaking concerning how to regulate the non-asbestiform minerals in October 1988. Thus, the stay extension

announced in this notice is necessary to continue to collect and analyze sufficient health and feasibility data, to draft a supplemental rulemaking proposal and to complete the rulemaking called for. The agency believes, based on its current priorities and the estimates of agency staff and contractors, that the extension announced in this notice, *i.e.* until July 21, 1989, realistically reflects the time needed to conclude supplemental rulemaking on the regulation of non-asbestiform tremolite, anthophyllite and actinolite.

As was the case with the initial partial stay, the 1972 standard governing occupational exposure to asbestos (redesignated 29 CFR 1910.1101) will remain in effect to the extent of the stay during the period of the extension.

The full text of the stay with respect to these non-asbestiform minerals was published in the October 17, 1986 Federal Register (51 FR 37002).

With respect to the extension of the partial stay, OSHA finds that advance notice and opportunity for comment are impractical and unnecessary within the meaning of 5 U.S.C. 553 in view of the limited duration of the extension and the continued applicability of the 1972 standard (29 CFR 1910.1101) to cover the gaps in coverage created by the partial stay.

The minor amendments to the notes to 29 CFR 1910.1001, 1910.1101, and 1926.58, similarly are made without advance notice and opportunity for comment. OSHA finds such process unnecessary and impracticable in that the changes merely reference the extension of the stay and restate the applicability of the 1972 standard.

No evidentiary issues are involved.

List of Subjects in 29 CFR Parts 1910 and 1926

Asbestos, Occupational safety and health.

Authority and Signature

This document was prepared under the direction of John A. Pendergrass, Assistant Secretary of Labor for Occupational Safety and Health, U.S. Department of Labor, 200 Constitution Avenue NW., Washington, DC, 20210.

It is issued pursuant to sections 4, 6(b), 8(c) and 8(g) of the Occupational Safety and Health Act of 1970 (29 U.S.C. 653, 655, 657), section 107 of the Contract Work Hours and Safety Standards Act (Construction Safety Act) (40 U.S.C. 333), the Longshore and Harbor Workers' Compensation Act (33 U.S.C. 941), 29 CFR Part 1911, Secretary of Labor's Order No. 9–83 (48 FR 35736), and 5 U.S.C. 551 *et seq.*

Signed at Washington, DC, this 14th day of July, 1988.

John A. Pendergrass,

Assistant Secretary for Occupational Safety and Health.

Amended Standards

Part 1910 of Title 29 of the Code of Federal Regulations is hereby amended as follows:

PART 1910—[AMENDED]

1. The authority citation for Subpart Z of Part 1910 continues to read as follows:

Authority: Secs. 6 and 8, Occupational Safety and Health Act, 29 U.S.C. 655, 657; Secretary of Labor's Orders Nos. 12–71 (36 FR 8754), 8–76 (41 FR 25059, or 9–83 (48 FR 35736), as applicable; and 29 CFR Part 1911.

Section 1910.1000 Tables Z–1, Z–2, Z–3 also issued under 5 U.S.C. 653.

Section 1910.1000 not issued under 29 CFR Part 1911, except for "Arsenic" and "Cotton Dust" listings in Table Z–1.

Section 1920.1002 not issued under 29 U.S.C. 655 or 29 CFR Part 1911; also issued under 5 U.S.C. 553.

Section 1910.1003 through 1910.1018 also issued under 29 U.S.C. 653.

Section 1910.1025 also issued under 29 U.S.C. 653 and 5 U.S.C. 556.

Section 1910.1043 also issued under 5 U.S.C. 551 *et seq.*

Sections 1910.1045 and 1970.1047 also issued under 29 U.S.C. 653.

Section 1910.1499 and 1910.1500 also issued under 5 U.S.C. 553.

§ 1910.1001 [Amended]

2. Section 1910.1001 is hereby amended by revising the note after Appendix H to § 1910.1001 to read as follows:

Note: Pursuant to an administrative stay effective July 21, 1986, published on October 17, 1986, (51 FR 37002) extended to July 21, 1988, (52 FR 15722), and to July 21, 1989 (at 53 FR ____ July 20, 1988) enforcement of this section is stayed as it applies to non-asbestiform tremolite, anthophyllite and actinolite. During the period and to the extent of this stay, the 1972 standard governing occupational exposure to asbestos (redesignated as 29 CFR 1910.1101) will remain in effect.

3. Section 1910.1101 is hereby amended by revising the note preceding § 1910.1101 (a) to read as follows:

§ 1910.1101 Asbestos.

Note: This section applies in lieu of the revised standards governing occupational exposure to asbestos, tremolite, anthophyllite, and actinolite (29 CFR 1910.1001; 29 CFR 1926.58), during the period and to the extent that the revised standards have been partially stayed. (See 51 FR 37002, Oct. 17, 1986, 52 FR 15722, Apr. 30, 1987, and 53 FR ____ July 20, 1988, for a description of the stay).

Part 1926 of the Code of Federal Regulations is hereby amended as follows:

PART 1926—[AMENDED]

Subpart D—[Amended]

4. The authority citation for Subpart D of Part 1926 continues to read as follows:

Authority: Secs. 4, 6, and 8, Occupational Safety and Health Act of 1970, 29 U.S.C. 653, 655, 657; sec. 107, Contract Work Hours and Safety Standards Act (Construction Safety Act), 40 U.S.C. 333, and Secretary of Labor's Orders 12–71 (36 FR 8754), 8–76 (41 FR 25059), or 9–83 (48 FR 35736), as applicable. Sections 1926.55(c) and 1926.58 also issued under 29 CFR Part 1911.

§ 1926.58 [Amended]

5. Section 1926.58 is hereby amended by revising the note after Appendix I to § 1926.58 to read as follows:

Note: Pursuant to an administrative stay effective July 21, 1986, published October 17, 1986 (51 FR 37002), extended to July 21, 1988 (at 52 FR 15722, Apr. 30, 1987) and to July 21, 1989 (at 53 FR ____ July 20, 1988) enforcement of this section is stayed as it applies to non-asbestiform tremolite, anthophyllite and actinolite. During the period and to the ex of this stay, the 1972 standard governing occupational exposure to asbestos (redesignated as 29 CFR 1910.1101) will remain in effect.

[FR Doc. 88–16251 Filed 7–19–88; 8:45 am]

BILLING CODE 4510–26

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 81

[Region II Docket No. 85; FRL–3414–1]

Designation of Areas for Air Quality Planning—Section 107 Attainment Status Designations for the State of New Jersey; Correction

AGENCY: Environmental Protection Agency.

ACTION: Final rule.

SUMMARY: EPA is correcting errors in the New Jersey Section 107(d) attainment status designations for carbon monoxide (CO) which appeared in the Federal Register on March 3, 1978 (43 FR 8962). These corrections insert omitted footnotes indicating that EPA has designated an entire city or borough as being in non-attainment of the CO standard, in place of New Jersey's not attainment designation of only the Central Business District of the city or borough. In addition, EPA is correcting the omission of two New Jersey Air

EPA WORKER PROTECTION RULE 40 CFR 763.320, 121

40 CFR 763.91 of AHERA extends the EPA's Worker Protection Rule found at 40 CFR 763.121 to maintenance and custodial personnel in schools who perform O & M activities but who are not covered by OSHA's construction standard or an asbestos regulation under an OSHA approved STATE plan. 40 CFR 763.121 basically establishes a permissible exposure limit (PEL) of 0.2 fibers per cubic centimeter (f/cc) over an 8-hour period for abatement project workers exposed to airborne asbestos and an action level of 0.1 f/cc which triggers a variety of worker protection practices, such as air monitoring, regulated work areas, engineering and work practice controls, respiratory protection and protective clothing, hygiene facilities and practices, worker training, medical surveillance, and recordkeeping requirements.

Minor amendments were made to 40 CFR 763.121 effective January 15, 1988 to correct typographical errors and clarify the language in the regulations. The amendments are attached.

[FR Doc. 88-821 Filed 1-14-88; 8:45 am]
BILLING CODE 6560-50-M

40 CFR Part 763

[OPTS-62050A; FRL-3215-5]

Asbestos Abatement Projects; Worker Protection; Technical Amendment

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule; Technical amendment.

SUMMARY: This document makes corrections to the final rule for Asbestos Abatement Projects; Worker Protection (40 CFR Part 763) which appeared in the Federal Register of February 25, 1987 (52 FR 5618).

DATE: This technical amendment is effective January 15, 1988.

FOR FURTHER INFORMATION CONTACT: Edward A. Klein, Director, TSCA Assistance Office (TS-799), Environmental Protection Agency, Rm. E-543, 401 M Street SW., Washington, DC 20460, Telephone: (202) 554-1404

SUPPLEMENTARY INFORMATION: On February 25, 1987 (52 FR 5618), the Environmental Protection Agency (EPA) issued a final rule titled "Asbestos Abatement Projects; Worker Protection." The EPA rule adopted many of the provisions of the Occupational Safety and Health Administration's (OSHA) rule titled "Occupational Exposure to Asbestos, Tremolite, Anthophyllite and Actinolite; Final Rules" published on June 20, 1986 (51 FR 22612). On May 12, 1987 (52 FR 17752), OSHA published technical amendments to their above cited rule. In reviewing the OSHA technical amendment notice, EPA found that some of the OSHA amendments are applicable to the EPA "Asbestos Abatement Projects; Worker Protection." Accordingly, EPA is issuing this notice to make technical amendments corresponding to OSHA's technical amendments and to correct minor typographical errors in the EPA "Asbestos Abatement Projects; Worker Protection" rule.

Accordingly, the preamble to FR Doc. 87-3645 published in 52 FR 5618-5650 February 25, 1987, is corrected as follows: Corrections to the preamble:

1. On page 5618, column 3, third full paragraph, two lines from the bottom, "Units V.C" is corrected to read "Units I.V.C".

2. On page 5619:

a. Column 1, line 2, "V.C." is corrected to read "I.V.C.".

b. Column 2, first full paragraph, under "B. *Air Monitoring*", line 20, "Unit V.C" is corrected to read "Unit I.V.C.".

c. Column 3, second full paragraph, line 1, "Section 763.121(e)(6)(iv)" is corrected to read "Section 763.121(e)(6)(iii)(B)".

3. On page 5620, column 3, under "I. *Housekeeping*", line 1, "Section 763.121(1)" is corrected to read "Section 763.121".

4. On page 5621, column 2, second full paragraph, line 16, "Section 763.122(a)(1)" is corrected to read "Section 763.122(a)".

5. On page 5622, column 3, first full paragraph, line 15, "safe" is corrected to read "same".

6. On page 5623, column 2, first full paragraph, line 4, insert "million" after "$4.2".

List of Subjects in 40 CFR Part 763

Asbestos, Environmental protection, Hazardous substances, Health and safety, Recordkeeping and reporting requirements

Dated: December 31, 1987.

Victor J. Kimm,

Acting Assistant Administrator, Office of Pesticides and Toxic Substances.

PART 763—[AMENDED]

Therefore, 40 CFR Part 763 is amended as follows:

1. The authority citation for Part 763 continues to read as follows:

Authority: 15 U.S.C. 2605 and 2607(c). Subpart E also issued under 15 U.S.C. 2641, 2643, 2646, and 2647.

§ 763.121 [Amended]

2. In § 763.121:

a. In paragraph (h)(2)(iv), in Table 1, line 2 under the "Required respirator" column, insert "other than a disposable respirator" before "equipped".

b. In paragraph (k)(3)(i), line 4, "asbestos in excess of the action level" is revised to read "asbestos at or above the action level".

c. Paragraph (k)(3)(ii) is revised to read as follows: "Training shall be provided prior to or at the time of initial assignment, [unless the employee has received equivalent training within the previous 12 months] and at least annually thereafter."

d. In paragraph (k)(3)(iii)(G), line 2 is revised to read "requirements: and".

e. In paragraph (k)(3)(iii)(H), line 1, "A review" is revised to read "The content".

f. In paragraph (m)(3)(i), line 2, "D, E, and I" is corrected to read "D and E".

Appendix A to § 763.121—EPA/OSHA Reference Method—Mandatory

3. Under *"Sampling and Analytical Procedure"*:

a. Item 2., line 3, "50-mm extension cowl" is revised to read "50-mm electrically conductive extension cowl."

b. Item 13.b., line 1, "Count all particles" is revised to read "In the absence of other information, count all particles".

Appendix B to § 763.121—Detailed Procedure for Asbestos Sampling and Analysis—Non-Mandatory

4. Under *"Detailed Procedure for Asbestos Sampling and Analysis—Non-Mandatory,"* in the "Flow rate" entry, "l/min" signifying liters per minute, is revised to read "L/min", the four times it appears.

5. Under *"Equipment,"* item 1., line 2, "50-mm extension cowl" is revised to read "50-mm electrically conductive extension cowl".

6. Under *"Sampling"*:

a. Item 4., in the equation on the left side, "min" is revised to read "minimum".

b. In the *note*, last line, "sampler" is revised to read "sample".

7. Under *"Calculations,"* item 21., the equation is revised to read:

$$E = \frac{(F/n_f - (B/n_b)\ \text{fibers/mm}^2}{A_f}$$

where:

n_f—number of fields in submission sample

n_b—number of fields in bulk sample

Appendix C to § 763.121—Qualitative and Quantitative Fit Testing Procedures—Mandatory

8. Under "I. *Isoamyl Acetate Protocol*":

a. In "C. *Fit test.*" item 15., remove the last two sentences.

b. Item 20.(3), "prothesis" is corrected to read "prosthesis".

9. Under "II. *Saccharin Solution Aerosol Protocol*":

a. Item 14., line 2, "LAA" is revised to read "saccharin solution aerosol".

b. Item 20.(3), line 2, "prothesis" is corrected to read "prosthesis".

10. Under "III. *Irritant Fume Protocol*":

a. Paragraph (A), line 4, "combination of high-efficiency and acid gas cartridges" is revised to read "high-efficiency cartridge."

b. Item 8.v., line 3, "Reading it" is revised to read "Repeating it after the test conductor (keeping eyes closed)".

c. Item 12., line 2, "LAA" is revised to read "irritant fume".

d. Item C.3.c., line 3, "particular" is revised to read "particulate".

e. Item C.4.a., line 5, "Norton" is revised to read "North".

f. Item C.4.a.(2), line 2, *"negative pressure slight* is revised to read *"negative pressure of slight."*

g. Item C.5.e., is revised to read *"Reading (R).* The test subject (keeping eyes closed) shall repeat after the test conductor the 'rainbow passage' at the end of this section. The subject shall talk slowly aloud so as to be heard clearly by the test conductor or monitor."

h. In item C.5.h., line 2, delete "perform".

i. In item C.6., delete "(see paragraph 4.h)".

Appendix E to § 763.121—Interpretation and Classification of Chest Roentgenograms—Mandatory

11. Paragraph (a) is revised to read as follows: "Chest roentgenograms shall be interpreted and classified in accordance with a professionally accepted classification system and recorded on an interpretation form following the format of the CDC/NIOSH (M) 2.8 form. As a minimum, the content within the boldlines of this form (items 1 through 4) shall be included. This form is not to be submitted to NIOSH."

[FR Doc. 88-631 Filed 1-14-88; 8:45 am]

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FEDERAL COMMUNICATIONS COMMISSION

47 CFR Parts 0 and 90

[GEN Docket No. 87-112, FCC 87-359]

Public Safety Radio Services, Assignment of Frequencies

AGENCY: Federal Communications Commission.

ACTION: Final rule.

SUMMARY: The Commission has adopted rules and technical standards for use of the 821–824/866–869 MHz bands by public safety licensees. These rules are included in the National Plan for Public Safety, which is contained in this Report and Order. In addition to the issuance of technical guidelines for the use of this spectrum, the National Plan also provides direction to local, state, and federal authorities in the development of regional public safety plans.

EFFECTIVE DATE: February 16, 1988.

FOR FURTHER INFORMATION CONTACT: Marty Liebman, Policy and Planning Branch, Land Mobile and Microwave Division, Private Radio Bureau, (202) 632–6497 or Fred Thomas, Frequency Allocation Branch, Spectrum Engineering Division, Office of Engineering and Technology (202) 653–8112.

SUPPLEMENTARY INFORMATION: This is a summary of the Commission's *Report and Order*, GEN Docket No. 87–112, adopted November 24, 1987, and released December 13, 1987.

The full text of this Commission decision is available for inspection and copying during normal business hours in the FCC Dockets Branch (Room 230), 1919 M Street, NW., Washington, DC 20554. The complete text of this decision may also be purchased from the Commission's copy contractor, International Transcription Service, (202) 857–3800, 2100 M Street NW., Suite 140, Washington, DC 20037.

Summary of Report and Order

1. This Report and Order establishes the policies and rules for a national plan for public safety services (The National Plan). In particular, it sets forth the service rules and technical standards for the 821–824/866–869 MHz bands which the Commission allocated for public safety use in 1986. In adopting this