Industrial Hygiene Technical Bulletin

No. 83-4

Date: 1983 November 16

RE: EMERGENCY TEMPORARY STANDARD FOR ASBESTOS - 0.5 FIBERS/CC

OSHA has enacted an emergency temporary standard (ETS) for asbestos effective 1983 November 4, with a final rule to follow within six months. Attached please find a copy of the amendment to the standard.

Alcoa set an internal limit of 0.5 fibers/cc in June of this year, as well as instituting training requirements, medical surveillance criteria, etc. (refer to IH Technical Bulletin 83-3). Therefore, the ETS should have minimal impact on our operations.

Please note, however, that more stringent respirator selection requirements exist under the ETS and will most likely appear also in the revised final rule. Reusable or single use air purifying respirators are acceptable for concentrations not to exceed 5 fibers/cc. Full facepiece air purifying respirators or powered air purifying respirators are acceptable for concentrations up to 50 fibers/cc.

Posting of warning signs and training of all employees exposed above the PEL of 0.5 fibers/cc are required by OSHA through the ETS. Please contact me at extension 2597 if you need assistance acquiring training material or appropriate warning signs.

Joan E. Sander

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JES:bep

Attachment

cc: H. D. Belk, M.D., Pittsburgh - 6
G. J. Crouth, Pittsburgh - 7
P. A. Haas, Pittsburgh - 20
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Industrial Hygiene Division (Pgh. and EHL)
Industrial Hygiene Technicians

PLAINTIFF'S EXHIBIT AL-1633

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respirators, and to assure that all such employees participate in the program and are informed of specified categories of information. OSHA considers this provision to be "necessary" within the meaning of section 6(c) of the Act, to reduce the grave danger faced by asbestos exposed employees. The absence of a training program requirement in the asbestos standard has been pointed out as one of the serious deficiencies of the current standard. OSHA believes that participation in an adequate training program is essential for the protection of employees because most protective provisions enlist the employee as an active participant. For example, many employees handling asbestos depend on effective work practices. Without training in applying these work practices, employee protection would be inadequate. Where the employee plays a more passive role in his protection such as where engineering controls are relied on, training is also essential, because the employee must know the sources of workplace asbestos contamination, and the health hazards of asbestos exposure, in order to assess his own exposure situation and to help recognize when engineering controls are not operating properly. Certainly where housekeeping plays an important role in control, instruction about housekeeping methods, for example, frequ vacuuming, is essential. Perhaps most importanly, where employee protection depends upon respirator use, OSHA's experience shows that training employees in the use, fitting and limitations of respirators is critical to the effectiveness of respirator protection. Accordingly this requirement applies where airborne concentrations are reasonably expected to exceed 0.5 f/cc, even if employees use respirators to reduce breathing zone concentrations and thereby comply with the ETS.

As set forth in paragraph (k)(4) the employer must inform the employee of the health effects of asbestos exposure; the relationship between asbestos and smoking in producing lung cancer; the operations exposing employees to asbestos fibers and necessary protective steps to minimize exposure; the purpose, proper use, fitting instructions and limitations of respirators, and the contents of all the provisions of the Asbestos Standard at 1910.1001.

5. *Paragraph (k)(5) Respiratory protection during the ETS.* The ETS adds a new paragraph (k)(5) which includes a table which ties respirator selection to the 0.5 f/cc PEL. Under the ETS, the concentration cut-offs for various kinds of respirators are multiples of the reduced PEL of 0.5 f/cc, rather than multiples of the previous 2 f/cc permissible limit. For example, approved air purifying respirators may be used only where asbestos concentrations are not expected to exceed 5 f/cc (10 x the PEL). Before the ETS, because the PEL was 2 f/cc, such respirators could be used where asbestos concentrations would not have exceeded 20 f/cc (10 x the PEL of 2 f/cc).

Similarly, powered air purifying respirators may be used where asbestos concentrations do not exceed 100 times the PEL, which at the new level of 0.5 f/cc is 50 f/cc. Previously, employers could have used such respirators at concentrations up to 200 f/cc.

It is likely that the main impact of the reduced PEL on respirator choice will be in operations and industries where exposure levels are between 5 f/cc and 20 f/cc. Formerly, employees exposed in this range could use half-mask air purifying respirators; now they must be protected by a powered air purifying respirator or a full facepiece respirator, or they may use a supplied air respirator.

6. *Paragraph (k)(6). Warning signs during the ETS.* The ETS requires that legible signs warning of the health hazards of asbestos be displayed at locations where airborne concentrations of asbestos fibers exceed the reduced exposure limit of 0.5 f/cc. No specific legend is required signs for newly posted during the ETS. OSHA wishes to make as practicable as possible the rapid posting of signs, especially in workplaces where there has been previous non-compliance and in areas where asbestos concentrations were formerly below the 2.0 f/cc PEL.

XI. Public Participation

Interested persons are invited to submit written data, views and arguments with respect to the revisions to the asbestos standard made by the ETS. These comments must be postmarked on or before January 3, 1984 and sent to the Docket Officer, Docket No. H-033C, Occupational Safety & Health Administration, U.S. Department of Labor, 200 Constitution Avenue, NW., Room S-6212, Washington, D.C. 20210.

The data, views and arguments that are submitted will be available for public inspection and copying at the above address. All timely written submissions will be made a part of the record of the proceeding.

List of Subjects in 29 CFR Part 1910

Occupational safety and health, Asbestos, Health, Emergency temporary standard, Cancer.

Authority and Signature

This document was prepared under the direction of Thorne G. Auchter, Assistant Secretary of Labor for Occupational Safety and Health, U.S. Department of Labor, 200 Constitution Avenue, NW, Washington, DC 20210. Pursuant to Sections 6(b), 6(c), 8(c) and 8(g) of the Act, 29 CFR 1910.1001 is amended by adding a new paragraph (k) as set forth below.

(Secs. 6(b), 6(c), 8(c) and 8(g), Pub. L. 91-596, 84 Stat. 1593, 1599, 1600; 29 U.S.C. 655, 657; Sec. 107, Pub. L. 91-54, 83 Stat. 96 (40 U.S.C. 333); 29 CFR Part 1911; Secretary of Labor's Order No. 9-83 (48 FR 35736))

Signed at Washington, D.C., this 2nd day of November 1983.

Thorne G. Auchter,

Assistant Secretary of Labor.

PART 1910—[AMENDED]

Section 1910.1001 of Part 1910 of Title 29 of the Code of Federal Regulations is hereby amended by adding a new paragraph (k) reading as follows:

§ 1910.1001 Asbestos.

* * * * *

(k) *Emergency temporary standard effective November 4, 1983.*—(1) *Scope.* This emergency temporary standard is issued pursuant to section 6(c) of the Act and applies to all workplaces where employees may be exposed to asbestos in all industries covered by the Act, including, general industry, construction and maritime. Except to the extent modified by this emergency temporary standard all provisions of § 1910.1001 remain in effect.

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

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

(4) *Employee information and training.*—(i) As soon as possible, but not later than thirty (30) days from the effective date of this emergency temporary standard, the employer shall institute a training program for all employees exposed to airborne concentrations of asbestos in excess of

0.5 f/cc. without regard to the use of respirators and shall assure their participation in the program during the effective period of this emergency temporary standard.

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

(A) The health effects associated with asbestos exposure;

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

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

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

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

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

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

TABLE 1

Respiratory Protection

For Airborne Concentrations of Asbestos.

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

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

(Secs. 6(b), 8(c), 8(c) and 8(g), Pub. L. 91-596, 84 Stat. 1593, 1599, 1600; 29 U.S.C. 655, 657; Sec. 107, Pub. L. 91-54, 83 Stat. 96 (40 U.S.C. 333); 29 CFR Part 1911, Secretary of Labor's Order No. 9-83 (48 FR 35736))

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FROM S. A. KRAFT

LAFAYETTE WORKS

EDD SC TO MEMORANDUM
EEB DEH
TEB CD
RMJ PW
JEG LMN
EDS
BEP

1983 November 22

RE: OSHA'S RECENT EMERGENCY TEMPORARY STANDARD ON ASBESTOS

Effective 1983-11-04 OSHA issued an emergency temporary standard on asbestos. Although this is called "temporary," it will become part of the existing standard following all the necessary legal happenings. OSHA feels that the seriousness of the program required issuance of the ETS immediately. The major changes that went into effect are:

1. Lowering the permissible exposure limit to 0.5 fibers per cubic centimeter from 2.0 fibers per cubic centimeter and lowering the action level to 0.1 fiber per cubic centimeter.

2. Changing the emphasis on the methods of compliance permitted to achieve the new level

3. Requiring the establishment of a training program within 30 days.

→ As we emphasized at the recent Industrial Hygiene Managers Conference in Pittsburgh, asbestos will continue to be an issue and a potential health concern for some time to come. Because of this, documentation of exposure levels is increasingly important. The new level of 0.5 fiber/cc is much more difficult to accurately measure. Sampling and analytical methods will need to be improved. Currently, the only way available to improve our sampling method is to increase the frequency of sampling and to increase the amount or volume of air sampled. The laboratory
→ at ATC will be working to improve the analytical method which may involve the purchase of some very expensive equipment such as an electron microscope.

The new emergency standard also places increased importance on the use of correct respiratory protection. For this reason and the fact that the limit was lowered by a factor of four, we will
→ need to monitor additional job classifications (such as truck repair) to assure that these individuals are not being over exposed and should be wearing respiratory protection. We need to continue to monitor others such as Carpenters, Brickmasons, Laborers and Electricians to assure that they are wearing proper respiratory protection for the particular tasks that they are
→ performing. We also need to consider area monitoring around

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places that have duct work or pipes covered with friable asbestos to determine where we should begin removing this old asbestos insulation (ie: basement of main office building and between preheaters in-ingot).

→ Training will need increased emphasis. We have until the 4th of December to complete the training which must include the following:

1. The health effects associated with asbestos exposure.
2. The relationship between asbestos and smoking in producing lung cancer.
3. The nature of operations which could result in asbestos exposure and necessary prc ctive steps to minimize exposure.
4. The purpose, proper use, fitting instructions and limitations of respirators.
5. A review of the original standard and the temporary standard.

→ Although the Mechanical Maintenance Department has covered the first
→ three areas, they must still go over the final two. Electrical Maintenance has not covered any of these aspects. Some type of formal training program should begin in both departments as soon as possible. Written handling procedures, material safety data sheets, and training booklets are available. Copies of both standards are also available from the industrial hygiene department as well as assistance in developing an effective training program for use in safety meetings.

S. A. Kraft
Industrial Hygienist

SAK:cfr

cc: All Superintendents & Managers
R. E. Rumbarger/J. Sander - Pgh. 6