RCT WV-0090 #2

UNION CARBIDE CORPORATION TECHNICAL CENTER
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INTERNAL CORRESPONDENCE

To: See Distribution List

Date: July 22, 1986

Orig. Dept: HS&EA

Area: Industrial Hygiene

C.C. T. L. Collins
T. E. Hanning
C. P. Maxwell

Subject: Amended Asbestos Standard

On June 20, 1986 OSHA amended its present standard 29 CFR 1910.1001 for Asbestos which has gone into effect on July 21, 1986.

A summary of the changes in the health standard has been prepared by T. E. Hanning of our Health, Safety and Environmental Technology Group is attached for your review.

A significant difference in the new standard is the permissible exposure limit now reduced from 2.0 fibers per c.c. (f/c.c.) to 0.2 f/c.c. with an action level of 0.1 f/c.c., 8-hour time-weighted average (TWA8). A ceiling limit of 10 f/c.c. is no longer applicable in the amended standard.

The amended standard will result in a few changes in how we handle asbestos containing materials. These changes are mainly relative to exposure monitoring techniques (Industrial Hygiene responsibility), posting, training and protective equipment.

We will provide guidance to those groups who are involved in handling asbestos containing materials. All questions relative to compliance with this standard may be addressed to this writer.

Manhar A. Patel

Manhar A. Patel
Technical Center Industrial Hygienist

Attachment/
MAP



UCC 017456

UNION CARBIDE CORPORATION

ENGINEERING, MANUFACTURING AND TECHNOLOGY SERVICES DEPARTMENT
HEALTH, SAFETY AND ENVIRONMENTAL TECHNOLOGY
SOUTH CHARLESTON, WEST VIRGINIA

JUL 1 5 1986
C. P. MAXWELL

MEMORANDUM
July 11, 1986

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JUL 17 1986
M. A. PATEL

TO: S. W. Clark
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J. E. Neff
T. P. Raby

FROM: T. E. Hanning

SUBJECT: Final Rules for Occupational Exposure to Asbestos, Tremolite, Anthophyllite, and Actinolite (Amended Standard)

Gentlemen:

Attached is a preliminary summary of the changes between the amended subject health standard and the original asbestos standard as stated in 29 CFR 1910.1001. The amended standard was published by OSHA in the Federal Register on June 20, 1986 and will take effect on July 21, 1986.

The Safety and Health Technology Manual health operating practice SH-256 (Removal and Handling Asbestos Containing Insulation Material) will be revised to reflect the changes set forth in the amended OSHA standard.

Please call if you have further questions or comments.

Terry E. Hanning
T. E. Hanning
Ext. 5903

TEH/jc
Attachments

UCC 017457

Changes Between the Original and Amended Asbestos Occupational Health Standard

General

OSHA amends its present standard (29 CFR 1910.1001) regulating occupational exposure to asbestos by developing two final standards that apply to general industry and to construction because the differences in exposure and work place conditions in general industry and construction work sites warrant separate treatment.

UCC activities would generally fall under the revised standard for general industry.

OSHA has concluded that chemically modified asbestos should be regulated in the same manner as unmodified asbestos.

OSHA concludes that all forms of tremolite, anthophyllite and actinolite should be regulated under the revised standards.

In the final standard the action level has been set at 0.1 fibers per cubic centimeter (f/cc) which triggers the monitoring, medical, and employee information and training requirements. This action represents no real change to the standard with regard to this provision, but merely clarifies OSHA's policy.

Permissible Exposure Limit

OSHA has reduced the current 2 f/cc permissible exposure limit (PEL) to an 8-hour time-weighted average (TWA) PEL of 0.2 f/cc. This lower limit should reduce the recorded mortality from lung cancer, mesothelioma, gastrointestinal cancer, and other types of cancer due to asbestos exposure.

Ceiling Limit

The amended standards do not designate a ceiling limit for exposure to asbestos. The original standard had a ceiling limit of 10 f/cc and was met through engineering and work practice controls.

Exposure Monitoring

The table below lists the two exposure situations along with the monitoring frequency for each.

Exposure Scenario	Required Monitoring Activity
1. Below action level	1. No monitoring required
2. At or above the action level	2. Monitor exposure at least every 6 months

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The amended standard requires the employer to collect airborne asbestos samples using 25 mm diameter mixed cellulose filters and a 50 mm 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 filter samples must be prepared using acetone-triacetin clearing solution and be counted in accordance with the "A" rules contained in the NIOSH 7400 method.

Regulated Areas

The amended standard requires employers to identify as regulated areas any locations in their work places where there may be occupational exposures to airborne concentrations of asbestos above the PEL. The amended standard prohibits eating, drinking and smoking in these areas. Only authorized persons may enter regulated areas which must be clearly marked. The existing OSHA standard does not contain a provision for establishing regulated areas.

Methods of Compliance

The amended standard requires employers to institute engineering and work practice controls to reduce the exposure of employees to or below the PEL. If the employer establishes that such controls are not feasible, selected respirators may be used to supplement the engineering and work practice controls.

Respiratory Protection

Respirators may be used to limit employee exposure to asbestos in the following circumstances.

1. During the interval necessary to install or implement feasible engineering and work practice controls,

2. In work operations such as maintenance and repair activities or other activities which the employer establishes that engineering and work practice control procedures are not feasible.

3. In work situations where feasible engineering and work practice controls are not yet sufficient to reduce exposure to or below the PEL.

4. In emergencies.

These limitations on the required use of respirators are consistent with the requirements of the past asbestos standard and with good industrial hygiene practice.

Protective Work Clothing and Equipment

The final standard makes a change from the current standard to respond to the evidence developed since 1971 that asbestos is a potent human carcinogen. Protective clothing is to be supplied to employees exposed above the PEL of 0.2 f/cc.

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The final standard provides that the employer ensure that all protective clothing is removed at the end of each work shift only in change rooms. The standard emphasizes the need to assure that contaminated clothing is stored, cleaned/laundered, or disposed of in a safe manner.

The final standard clarifies that the obligation is on the employer to provide personal clothing at no cost to the employee.

The final standard also requires the employer to inform those who handle the contaminated protective clothing of the potentially harmful effects of exposure to asbestos.

Hygiene Facilities and Practices

The final standard like the existing standard reiterates the type of change room an employer must provide and the requirement that the employer prohibit the consumption of food and beverages in areas where there is exposure to toxic substances. Unlike the existing standard, the final standard requires employers to assure that employees exposed to asbestos during their work shift shower before leaving the plant and do not leave wearing work clothing.

The final standard requires employers to provide persons working in asbestos areas with filtered air lunchrooms which are readily accessible. Employers must also assure that employees wash their hands and face prior to eating or smoking and do not enter the lunch room wearing protective clothing, unless cleaned beforehand.

Communication of Hazards to Employees

The final rule for asbestos requires that legible caution signs be posted at each regulated area where occupational exposures could exceed the PEL. Signs must also be posted at all approaches to areas containing excessive concentrations of airborne asbestos fibers. Signs must bear the following:

Danger - Asbestos; Cancer and Lung Disease
Hazard - Authorized Personnel Only;
Respirators and Protective Are Required
in This Area.

The final standard is not substantially different from the present OSHA standard. The section on sign specifications simplifies the sign requirements and eliminates unnecessary detailed specifications (letter sizes and styles, spacing between lines) in favor of a more performance oriented approach.

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The amended standard also requires that all raw materials, mixtures, scrap, waste, debris, and other products containing asbestos fibers, or their containers, be labeled with the appropriate information.

Danger - Contains Asbestos
Fibers; Avoid Creating Dust;
Cancer and Lung Disease Hazard.

The new standard allows two exceptions to the labelling and material safety data sheets (MSDS) requirements; no label or MSDS is required in those instances where

- Asbestos fibers have been modified by a bonding agent provided that the manufacturing can demonstrate that during any use the employee will remain below the action level; or

- Asbestos is present in a product in concentrations less than 0.1%. The new standard updates the existing standard by providing that airborne concentrations must be kept below the action level rather than the PEL.

The final standard requires employers to provide a training program for all employees expected to be exposed to airborne asbestos at or above the action level of 0.1 f/cc.

Housekeeping

Unlike the existing standard which requires that surfaces be maintained free of accumulation of asbestos fibers if, with their dispersion, there would be an excessive concentration, the revised standard removes the ambiguous phrase of excessive concentration. Specific provisions for housekeeping are included in the final rule. Some of these are prohibiting the clean-up of asbestos dust with compressed air, dry-sweeping and dry clean-up, and prohibiting the accumulation of asbestos waste on surfaces. OSHA anticipates that compliance with this provision will entail a regular housekeeping schedule based on exposure conditions at a particular plant and the capability for emergency cleanup of spills or other unexpected source of exposure.

Medical Surveillance

The final standard requires that the medical surveillance program provide each affected employee with an opportunity for a comprehensive annual medical examination. This does not change the provisions of the existing standard. In the final standard however, OSHA believes it appropriate to trigger the medical surveillance requirements at the action level of 0.1 f/cc as an eight-hour TWA.

OSHA has also revised the time within which the employer must conduct preplacement examinations after hiring employees. The final standard requires that preplacement medical examinations be given prior to the assignment of an individual to a job exposed to concentrations of airborne asbestos. The current standard permits the employer to conduct medical examinations within the first 30 days of the hire date.

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The employer is also required to have medical examinations performed by or under the supervision of a licensed physician, provide the physician with a copy of this standard and all work practice information performed by the employer, and obtain a written signed opinion from the physician containing the results of the medical examination.

The final standard requires that x-rays be offered at 5 year intervals during the 10 years following an employee's first exposure to asbestos. After 10 years the employee's age category will determine the frequency of x-ray testing.

Record Keeping

The final rule provides that records be kept to identify the employee monitored and to reflect the employee's exposure accurately. The employer is free to keep records the most effective way. The time period required for retention of exposure records is thirty years. Employers must notify the Director in writing at least 3 months prior to the disposal of any records.

Appendices

Eight appendices are included in this final standard.

Appendix	Status
A - Reference Method for Analyzing Air Samples for Asbestos	Mandatory
B - Asbestos Sampling and Analysis by NIOSH Method 7400	Mon-mandatory
C - Qualitative and Quantitative Respirator kit testing Procedures	Mandatory
D - Medical Questionnaire Given to Employees Who May Be Exposed to asbestos	Mandatory
E - Interpretation and Classification of Chest Roentgenograms	Mandatory
F - Work Practice and Engineering Controls for Automotive Brake Repair Operations	Non-mandatory
G - General Technical Information on Asbestos	Non-mandatory
H - Medical Surveillance Guidelines	Non-mandatory

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K. W. Applegate	3001 - 1107
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R. G. Baier	3005 - 2
R. R. Banister	2000 - 4132
H. N. Baylor	3007 - 4201
L. L. Bissett	2000 - 4501
E. H. Blair	3007 - 1313
Max Blair	3001 - 219
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T. L. Collins	740 - 2320
R. A. Conway	770 - 342
G. H. Coppala	2000 - 118
H. D. Cox	6000 - 118
G. A. Coyer	3001 - 216A
D. A. Deckman	2000 - 4135
R. A. Derr	3005 - 156
C. K. Dolan	82 - 612
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J. R. Gagnon	2000 - 4228
R. E. Gardner	2000 - 2201
B. J. Garner	2000 - 2201
D. L. Garrison	2000 - 4201
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R. E. Harris	2000 - 3201
F. L. Harvey	82 - 609
D. E. Heath	2000 - 4135
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R. G. Rowe, M.D.	791 - West
R. W. Scoular	701 - 4th fl.
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