

OBLIGATIONS OF EMPLOYER
under
STANDARDS FOR EXPOSURE TO ASBESTOS DUST
29 C.F.R. § 1910.93a

I. Fiber Ceilings. The permissible asbestos fiber (longer than 5 micrometers) airborne concentration limits to which any employee may be exposed are:

- A. 5 fibers per cubic centimeter of air on a time weighted-average (TWA) over an 8-hour day.
- B. 10 fibers per cubic centimeter of air at any one time.

Note: References herein to "limits" or "fiber limits" refer to the above limits.

II. Methods of Meeting these Exposure Limits

- A. Engineering controls. Compliance must be primarily through engineering controls such as use of exhaust ventilation and dust collection systems, enclosures, and other such means.
- B. Respirators, shift rotation, etc. Respirators and shift rotation and other such means can be used to meet employee exposure limits only in the very limited situations specified in the regulations. See Paragraph VII of this outline on respirators.

III. Local Exhaust Systems

A. When required

- 1. With all hand and power tools which may produce or release asbestos fibers in excess of limits. (Saws, scorers, abrasive wheels, drills, etc.)
- 2. Where necessary to keep within the asbestos fiber limits.

- B. What required. Must be designed, constructed, installed and maintained in accordance with American National

Standard Fundamentals Governing the Design and Operation of Local Exhaust Systems, ANSI Z9.2-1971. Copies can be obtained from:

American National Standards Institute
1430 Broadway
New York, N. Y. 10018

IV. Removal from Containers - Cement, etc.

A. Products subject to this requirement:

asbestos cement
mortar
coating
grout
plaster
similar material containing asbestos

B. Procedure. Must be either:

1. wet
2. enclosed, or
3. ventilated

sufficiently to prevent airborne fibers in excess of the limits.

V. Spraying, Demolition or Removal

A. Special equipment and procedures are required for protection of employees engaged in spraying asbestos or removal of asbestos insulation or removal or demolition of equipment or structures insulated with asbestos. The requirements are:

1. Approved respiratory equipment must be used.
2. Special clothing must be supplied and used if the 10 fiber ceiling is exceeded.
3. Change rooms are required in some instances.
4. Two separate lockers or containers for each employee's work clothes and street clothes are required.

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5. Special laundering requirements are imposed.

B. The respiratory equipment must be -

1. continuous flow or pressure demand, supplied-air type, and

2. approved by the Bureau of Mines or NIOSH

a. The Committee will obtain a list of presently approved items

3. Employer must also establish a respirator program in accordance with American National Practices for Respiratory Protection, ANSI Z88.2-1969.

C. Special clothing requirement.

1. Items required are:

Whole body clothing (coveralls or shirt and pants)
Head covering
Gloves
Foot coverings

2. In view of laundering requirements, use of throw-away paper articles should be investigated. See Paragraph IV of this outline for laundering requirements.

D. Change rooms and separate clothes lockers or containers may be required. See Paragraph VI of this outline.

VI. Change Rooms, Separate Clothes Containers and Laundering

A. Change rooms are required

1. At "any fixed place of employment,"

2. For "employees working regularly at the place,"

3. If exposure to airborne asbestos fibers exceeds either the 5 fiber TWA or the 10 fiber limit.

Comment: A construction site is not considered to be a "fixed place of employment."

Note that change rooms are required only in the places and under the conditions described above.

- B. Clothes Containers. Where a change room is required, the employer must furnish a locker or container for the employee's street clothes and a separate locker or container for his work clothes. The separate containers must be sufficiently separated as to prevent contamination of the street clothes. Separate plastic clothing bags will meet this requirement.

C. Laundrying of "Asbestos Contaminated Clothing"

1. Extent of employer's obligation. OSHA Office of Standards interprets the regulation to require employer to launder any special clothing he is required to furnish but not any other clothing.
2. Employer laundrying of special clothing. Employer must:
 - a. Transport in sealed impermeable bag
 - b. Affix following label to bag:

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

- c. Notify laundry that laundrying must be done in a manner that will not cause release of airborne fibers in excess of limits.

VII. Respirators

- A. Generally. Respirators cannot be used to obtain compliance with exposure limits unless specifically authorized by regulations.
- B. When authorized.
1. During time needed to install engineering controls and work practices required by the regulations.

2. In work situations where the required engineering controls and work practices are technically not feasible or feasible to an extent insufficient to meet exposure limits. (This would include spraying, demolition and removal. See Paragraph V.)
3. In emergencies.

C. Kinds to Use

1. Must be approved by:
 - a. Bureau of Mines, or
 - b. NIOSH
2. Air purifying - can be used where concentrations are reasonably expected not to exceed 10 times the limits.
3. Powered-air purifying. Where concentration expected to exceed 10 times but not 100 times exposure limits
4. Supplied-air, continuous flow or pressure demand. Concentrations above 100 times limits.

D. Respirator Program. If use respirators, must establish a program in accord with American National Practices for Respiratory Protection, ANSI Z88.2-1969.

E. Employee with Respirator Problems:

1. Will not be given work requiring respirator if:
 - a. Physician, based on most recent examination, determines:
 - (1) Employee cannot "function normally wearing a respirator," or
 - (2) Safety or health of the employee or other employees will be impaired by his use of respirator.
2. Will (1) be rotated to a different job or (2) be allowed to transfer to a different position in

the same geographical area with same seniority, status and rate of pay if such position is available and he is able to perform the duties required. (The validity of this requirement should not be assumed. Anyone faced with the problem may want to check with his counsel.)

VIII. Caution Signs and Labels

A. Signs

1. Must be displayed at each location where asbestos fibers "may be" in excess of limits.
2. Must conform to size, lettering and other minute details specified in the regulation.
3. Must be posted at all approaches to area containing excess concentrations.
4. The Committee recommends that NICA make arrangements whereby signs meeting the requirements of the regulations can be purchased from a central source.

B. Labels

1. Must be affixed to "all raw materials, mixtures, scrap, waste, debris and other products containing asbestos fibers, or to their containers."
2. Exception: Where fibers have been modified by a bonding agent, coating or other material "so that during any reasonably foreseeable use, handling, storage, disposal, processing or transportation" airborne fibers in excess of limits will not be released.
3. Labels must be in following form:

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

4. The Committee recommends that NICA make arrangements whereby labels meeting the requirements of the regulations can be purchased from a central source.

IX. Monitoring Amount of Airborne Asbestos Fibers

A. When required

1. By December 6, 1972
2. At least every 6 months thereafter

B. Where required

1. "Every place of employment where asbestos fibers are released."
2. Comment: The regulations were apparently drafted with plant operations in mind. Because it is difficult to apply them to the contracting business, the Committee met with the OSHA Office of Standards in Washington to obtain a workable interpretation as applied to a contractor. We were advised that a contractor would be required to monitor each function. Thus, for example, the cutting of calcium silicate on a particular job would be monitored. If this contractor had three other jobs in which this same operation was performed, using the same tools, the same material and under substantially the same conditions, it would not be necessary to monitor this same function at each of the other job sites. However, if a contractor has more than one branch or operating unit from which employees were hired and operations conducted, each of these branches or operating units would be considered to be a "place of employment" and the cutting of calcium silicate would have to be monitored on at least one job handled out of each such branch or operating unit. The cutting of calcium silicate is simply an example and the above comments are applicable to every other operation in which asbestos fibers are released.

C. Where samples collected from -

1. Personal. "within the breathing zone of the employees."

2. Environmental. " * * * areas * * * representative of airborne concentrations of asbestos fibers which may reach the breathing zone of the employees."
- D. Sampling Frequency and Pattern. "such frequency and pattern as to represent with reasonable accuracy the levels of exposure of the employees." Frequency must be sufficient to show 8-hour time weighted average.
- E. Method of Sampling. Membrane filter of 0.8 micrometer porosity mounted in an open-face filter holder.
- F. Practical suggestions on equipment and procedures:
1. Industry program. The Committee is exploring the possibility of making available, on a purely voluntary basis, a program that would enable contractors to comply with the monitoring requirements. The arrangement under consideration would include (1) conducting a school to train several people in each region or area to operate the monitoring equipment and take the necessary samples, (2) identifying and making arrangements with persons (microscopists) qualified to examine and evaluate the samples, and (3) making this arrangement available to any contractor who wishes to hire the person doing the monitoring and the microscopist at the per unit charge each would make.

For those contractors who desire to devise their own program, the Committee will furnish, as soon as we can, a list of monitoring equipment and supplies that are suitable and the names and locations of any microscopists known to the Committee.

G. Records

1. Duty to keep. Must keep records of all required personal and environmental monitoring.
2. Time - 3 years.
3. Employee access. Employee and former employee has access to records showing "employee's own exposure."

H. Notice of excess exposure

1. Duty - Employer must give to employee

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2. Form - written.
3. Time - as soon as practicable but not later than 5 days after employee is found to have been so exposed.
4. Corrective action - must "timely" notify employee what action is taken.

X. Medical Exams

A. Furnished by - employer.

B. When -

1. Preplacement. Within 30 calendar days of first employment in occupation exposed to airborne asbestos fibers.
 - a. How ascertain this?
2. Jan. 31, 1973. Every employee on or before this date.
3. Annual. After Jan. 31, 1973, must provide annual exam.
4. Termination of employment. Must have examination with each employer.
5. Exceptions. Examination is not required "if adequate records show that the employee has been examined * * * within the past 1-year period."
 - a. A card signed by the doctor and issued to the employee could serve as the necessary record.

C. Medical Records

1. Maintenance. Employer must "cause to be maintained"
2. Period - At least 20 years.
3. Access -
 - a. Assist. Sec. of Labor.

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b. Director of NIOSH.

c. Authorized medical consultants of above.

d. Employee's physician on request of employee.

e. Employer.

D. Duty of Employee to take Exam

1. While no ruling has been issued on this matter, the Office of Standards has advised that the Act and regulations do not impose a duty on the employee to take an examination. This would be a matter of employment policy and any contractual agreement.

E. Industry Program. As indicated in its Report, the Committee recommends that arrangements be made for a program which would be available to any contractor. This would eliminate the necessity of each contractor setting up his own program, although he could do so if he wished.

XI. Timetable

A. Do now -

1. Use necessary engineering controls to comply with 5 fiber TWA and 10 fiber ceiling. Keep in mind that TWA limit drops to 2 fibers on 7-1-76.
2. Use local exhaust system with all saws, etc., that may produce excess fibers.
3. Wet all asbestos containing material for handling, mixing, etc., unless usefulness of product would be diminished.
4. In removing asbestos cement, mortar, coating, grout, plaster or similar material containing asbestos from containers, you must (a) wet, (b) enclose or (c) ventilate sufficiently to prevent fibers above limits.
5. In spraying, removal and demolishing operations:

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- a. Have employees use (1) prescribed respirator and (2) special clothing.
 - b. Furnish special clothing.
 - c. Place special clothing in impermeable bags, attach caution label and comply with laundering requirements.
 - d. Have an approved respirator program.
 - e. If at a "fixed place of employment," provide change rooms and separate clothing lockers or containers for employees "working regularly at the place."
- 6. Post caution signs at locations where concentrations of fibers may exceed limits.
 - 7. Place caution labels on all raw materials, waste, etc.
 - 8. Keep all external surfaces free of accumulations which, if dispersed, would cause excessive airborne fibers.
- B. When you employ a worker whom you have not previously employed.
 - 1. Provide physical within 30 calendar days unless records show he has been examined pursuant to regulations within the preceding year.
- C. Every time you terminate an employee
 - 1. Provide physical exam unless records show he had one in past year.
- D. On or before December 6, 1972.
 - 1. Have completed monitoring of every place of employment where asbestos fibers are released.
- E. On or before January 31, 1973
 - 1. Provide or make available physical exams for all covered employees.

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