

OSHA's New Asbestos Standards Tighten Exposure Levels, Controls

PLAINTIFF'S EXHIBIT

UC-1724

The tough new rules affect thousands of businesses in industry and construction

Strict employer requirements designed to minimize worker exposure to the health hazards of asbestos, tremolite, anthophyllite and actinolite have been enacted by the Occupational Safety and Health Administration.

The standards (one for general industry and one for construction-related activities), which became effective July 21, also reduce the permissible exposure limits (PEL) by a factor of 10.

The agency pulled no punches in explaining why its regulation is so demanding. It "is aware of no instance in which exposure to a toxic substance has more clearly demonstrated detrimental health effects on humans than has asbestos exposure."

Asbestos causes life-threatening problems when its airborne fibers are inhaled. Lung cancer, according to OSHA, is the greatest health risk for American asbestos workers. Other diseases linked to asbestos exposure include mesothelioma (cancer of the esophagus, stomach, colon, rectum, kidney, larynx and pharynx) as well as lung and respiratory diseases.

WORKERS AFFECTED. According to government figures, approximately 570,052 workers in general industry and 746,228 in the construction industry are exposed to asbestos. An estimated 286,608 firms in general industry, mostly in service and repair, are potentially affected by the new standard. Affected industries are primary and secondary manufacturing, automotive brake and clutch repair, shipbuilding, ship repair and construction.

The revised asbestos standard will not have any significant economic impact, OSHA claims, nor will it impose an adverse impact on small firms, with the possible exceptions of secondary gasket manufacturing and renovation activities in construction.

OSHA says that substitute materials for asbestos are now available at little or no increase in cost, and that compliance with the 0.2 f/cc PEL "is feasible in most industries most of the time through the use of wet methods, engineering controls and good house-

By John Brady, Editor-in-Chief,
Asbestos Compliance Encyclopedia,
Madison, Conn.

Timetable of Compliance Deadlines— OSHA Asbestos Standard

Published in *Federal Register*: June 20, 1986. Effective date: July 21, 1986

General Industry Standard—29 CFR Sec. 1910.1001

1. **Respiratory protection:** July 21, 1986
(If eight-hour TWA exposure exceeds 2.0 f/cc.)
Nov. 17, 1986
(If eight-hour TWA exposure is between PEL of 0.2 f/cc and 2.0 f/cc.)
Jan. 16, 1987
(For those using powered air-purifying respirators.)
2. **Employee information and training:** Oct. 20, 1986
(By this date and at least annually thereafter.)
3. **Exposure monitoring:** Oct. 20, 1986
(Not required if testing that meets the new standard was done after Dec. 20, 1985, or if objective data proves that exposure is below the action level.)
4. **Regulated areas:** Nov. 17, 1986
(Areas with exposures above PEL must be separated, visibly identified, restricted.)
5. **Medical surveillance:** Nov. 17, 1986
(Unless records show employee had exam within past year. In any event, exposed workers must be examined annually.)
- 6a. **Construction plans:** Jan. 16, 1987
(For changing room, shower, lavatory, lunchroom.)
- 6b. **Construction plans completed:** July 20, 1987
(Unless an independent engineering firm verifies that engineering controls and work practices reduce exposures below PEL by July 20, 1988. If these don't reduce exposure levels below PEL, then construction that will reduce exposures below PEL must be completed within one year after the controls were installed.)
7. **Written compliance program:** July 20, 1987

Construction Standard—29 CFR Sec. 1926.58

New provisions—compliance must be achieved by Jan. 16, 1987

Source: *Asbestos Compliance Encyclopedia*, Business & Legal Reports, Madison, Conn.

keeping practices." There are some operations, however, such as some textile and building repair activities where respiratory protection also must be used to comply with the PEL.

Government figures project that the reduced PEL will prevent 75 cancer deaths per year, principally in automotive repair and building renovation. It estimates that this increased protection will cost approximately \$460 million in annual compliance costs. The majority of these costs will occur in the construction industry (\$352 million), about 60 percent of which will be for vacuums and respira-

tors. The major expense for general industry is for engineering controls such as ventilation and solvent spray.

COMMENTS ON STANDARD. Virtually all participants in OSHA's rule-making proceedings agreed that "the evidence linking asbestos exposure to dire health effects was compelling and required OSHA to reduce the old PEL" of 2.0 fibers per cubic centimeter to 0.2 f/cc. Industry, labor and public health supported the reduction of the PEL to at least 0.2, while other participants, primarily the Asbestos Information Association of North America, urged a higher proposed



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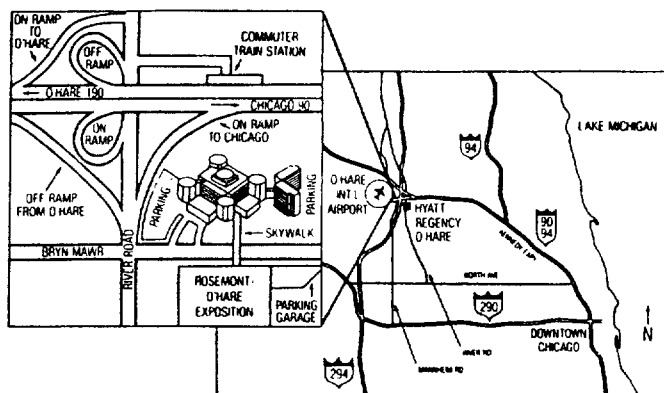
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Asbestos Rule Aims at Auto Shops

The Occupational Safety and Health Administration (OSHA) ruled in July that auto service stations working on brake and clutch repairs must reduce levels of asbestos within the workplace.

An estimated 285,000 auto repair shops are expected to be affected by this ruling, which applies to garages where the average asbestos level is above 0.2 fibers per cubic centimeter of air in an eight-hour time-weighted period.

Workplaces with 0.1 f/cc can impose safety standards or undergo strict surveillance measures. The ruling became law on July 21, but garages and auto body shops have until Jan. 21 to develop and install a method to control asbestos.

With more than half of all auto brake linings containing asbestos, nearly 1 million auto mechanics are believed to be exposed to the dangerous substance each year. Repeated exposure to asbestos can increase the risk of lung cancer, asbestosis and gastrointestinal cancer, according to the Environmental Protection Agency.

OSHA and the EPA have recommended two methods of asbestos control: the enclosed cylinder/HEPA vacuum system method and the compressed air/solvent method.

The vacuum method uses a wheel-shaped cylinder that encloses the wheel assembly, while isolating and removing the microscopic asbestos particles. The cylinder is connected to a special HEPA filtered vacuum cleaner for collection of the toxic asbestos fibers.

The solvent method of asbestos removal loosens the asbestos-containing residue and captures the airborne particles in the solvent mist, which is then wiped with a rag.

—By Jill Pollack, Representative, Nilfisk of America Inc., Malvern, Pa.

level of 0.5 f/cc.

The AIA based its recommendations on three factors: that 0.5 f/cc is the lowest level technologically feasible; that the risk from asbestos becomes insignificant at 0.5 f/cc; and that smoking is an important factor in the risk of asbestos-related disease and efforts to reduce smoking would make a 0.5 f/cc PEL sufficiently protective. OSHA disagreed

Lung cancer is the greatest risk for asbestos workers.

with each of these reasons, citing the preponderance of scientific evidence it had gathered in developing the standard.

Most commentators on the proposed standard were opposed to OSHA's proposal to give respiratory protection the same priority as engineering and work practice controls. As an example, Dr. Marton Corn of Johns Hopkins University and the former head of OSHA, said, "Engineering controls are at the top of the 'hierarchy of controls' because they fail with less frequency than other types of controls."

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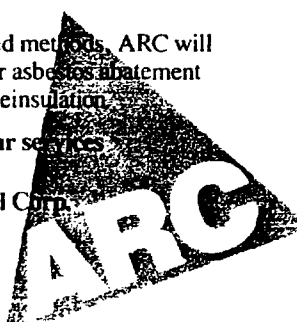
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Other organizations agreed with OSHA's position. A Texaco spokesperson said: "It has been our experience that control methods which are more cost-effective, but equally safeguarding, will be provided when the employer has the flexibility to select the means of controlling exposure."

Despite the differing opinions on this issue, OSHA's final regulation states that "the use of respiratory protection" shall be used as a supplement when "feasible engineering controls... are not sufficient to reduce employee exposure."

SEPARATE STANDARDS. OSHA developed separate standards and hit the construction industry hard with its tough approach toward asbestos regulation because of its higher risk and because of the variable nature of construction activities.

Construction work often is performed by short-term employees at multi-employer sites. Work is frequently done outdoors in temporary work areas. The construction standard's requirements—particularly for engineering controls and hygiene facilities—reflect these conditions.

The standards' requirements begin with monitoring employee exposure by taking air samples. Airborne fibers above the action or permissible exposure levels trigger the standards' other requirements.

Monitoring must be repeated at least every six months in industrial applications; daily for construction unless employees wear positive-pressure, air-supplying respirators. Exceptions are permitted in both cases, based on objective and historical data.

PERMISSIBLE LIMITS. Because the health risks from asbestos are so serious, OSHA not only strengthened the exposure regulation by dropping it from 2.0 f/cc to 0.2 f/cc (on

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an eight-hour time-weighted average), it also set an action level of 0.1 f/cc. The new standard's monitoring, training and medical-surveillance requirements are initiated at the action level, not the PEL.

Employers are required to implement a written program showing how engineering, work practice controls and respirators (where permitted) will reduce employee exposure to or below the limit. OSHA-affected employees and designated employee representatives may examine and copy these programs. The programs must be available by July 20, 1987.

OSHA also requires that medical examinations be performed before employees are assigned to industrial jobs in which they will be exposed to asbestos above the action level. The construction standard mandates medical surveillance for employees who must wear negative-pressure respirators or who are exposed above the action level for 30 or more days a year.

Medical exams, which must be repeated annually, emphasize respiratory and cardiovascular tests, and OSHA has developed a respiratory health questionnaire that employees must complete when examined.

ASBESTOS WORK AREAS. OSHA tries to minimize the number of employees exposed by requiring that asbestos work areas be marked off and, in some cases, enclosed. Major construction involving asbestos must be done in a negative-pressure enclosure, supervised by a trained person.

In all cases, employee access to asbestos work areas is restricted, and signs that include the word "DANGER" and warnings of asbestos' cancer hazards are required. Warning labels with similar wording are required on all containers of asbestos-containing materials.

Both standards emphasize engineering controls as the best way to reduce exposure. Exhaust ventilation and dust collection systems, wet methods of handling and removing asbestos, and vacuums with high-efficiency particulate air (HEPA) filters are among the key controls recommended by OSHA to minimize release of airborne fibers. Substitution of materials is another possibility.

The standards also include such prohibitions as any type of blowing of asbestos, and using employee rotation as a means of compliance.

Housekeeping also is an effective control, and the industrial standard requires keeping surfaces as free as possible from asbestos dust. Both standards require quick cleanup of spills and dis-

posal of asbestos-contaminated materials in sealed, impermeable containers.

PROTECTIVE EQUIPMENT. When engineering controls are not enough, OSHA requires employees to wear respirators and to receive training in their use and limits.

Protective clothing also must be provided, and OSHA has developed detailed procedures to prevent employees from carrying asbestos fibers on their

street clothes and into their homes. Both the construction and industry standards have strict requirements for laundering contaminated work clothes, making employers responsible for alerting laundry workers to the hazards of asbestos and to strict safety procedures.

The regular standard calls for clean change rooms, with separate storage facilities for street and work clothes. Em-

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employers also must provide showers for employees to use before putting on street clothes and provide separate lunch rooms with a positive-pressure filtered air supply.

The agency recognizes that this could be difficult at construction sites, and therefore requires them to have clean areas (not necessarily rooms) for changing. Showers do not have to be adjacent to the work area, but eating areas must have exposure limits below the action level.

The standards stress the employer's responsibility for good hygiene, including no eating, drinking, smoking or applying cosmetics in asbestos work areas.

Such hygiene precautions are just one part of the training that the

**Training must cover
all aspects of
asbestos hazards.**

standard requires for all employees exposed above the action level. This may be part of the company's overall training program, but training must specifically cover all aspects of asbestos hazards and safety—including informing employees of the extra risk of smoking and working with asbestos. Training must be repeated annually.

RIGHT-TO-KNOW. In line with OSHA's growing Right-to-Know emphasis, employees must be given written reports on the results of monitoring and physical exams. Employers must maintain all such records as long as the employee works there plus 30 following years, and must also keep data that supports any exemptions they claim from the standards' requirements.

Appendices to both standards include some mandatory regulations such as required methods for air sampling and analysis and for respirator fit testing. Medical-surveillance questionnaires and interpretations of chest X-rays also are mandatory. The informational appendices provide useful background on asbestos and, particularly in the construction standard, detailed explanations of materials and procedures to meet the standard's requirements and minimize employee exposure to asbestos.

While both standards became effective July 21, 1986, the start-up dates for their various requirements are staggered to give employers an opportunity to develop programs and controls. ■