



Environmental Backgrounder

Asbestos

Overview

Asbestos is the name of a group of naturally occurring minerals that separate into strong, microscopic fibers that are heat-resistant, odorless, and very durable. These qualities have made asbestos extremely useful in construction and industry.

Between 1900 and 1980, some 30 million tons of asbestos were used commercially in the United States. It was used most widely from the end of World War II until the early 1970s, when its use began to decline. Asbestos use in this country decreased from 240,000 metric tons in 1984 to 84,700 metric tons in 1987.

Asbestos has been used in construction for thermal and acoustical insulation, fire-proofing, roofing and flooring felts, vinyl floor tiles, pipe insulation, cement piping, and as decoration on exposed surfaces. It also is used in friction products such as brakes in trucks and automobiles.

The potential for an asbestos-containing product to release fibers depends on several factors, including the location of the asbestos and how friable (easily crushed or pulverized) it is. Friable asbestos is likely to emit microscopic fibers when it is disturbed. The fibrous or fluffy spray-applied asbestos materials used in many buildings are generally more friable than materials such as vinyl floor tiles.

Health Concerns

Asbestos tends to break down into a dust of tiny fibers that remain suspended in the air for long periods of time and can be easily inhaled. Because of their durability, these fibers can remain in the body for years. In general, asbestos-related diseases have a latency period of 20 to 40 years after exposure. We are currently seeing asbestos-caused diseases in some workers who were exposed to asbestos during World War II.

Lung cancer is the most frequently seen asbestos-caused disease and is more likely to occur if the

exposed person is a smoker. Mesothelioma, an incurable cancer of the chest and abdominal membranes, can also be caused by the inhalation of asbestos. So far, mesothelioma has been associated with exposure only to asbestos. Other cancers, mostly of the digestive tract, have been attributed to asbestos exposure.

Asbestos also causes asbestosis, a chronic disease of the lungs that makes breathing progressively more difficult and can lead to death.

Federal Approach

Because of the overwhelming scientific evidence regarding the adverse effects of asbestos on public health and the environment, EPA has taken a series of actions since 1972 to eliminate public exposure to asbestos. These include a ban on sprayed and troweled-on uses of asbestos, a ban on the use of asbestos to wrap pipes, regulations on the removal, transport, and disposal of asbestos, and the establishment of a program requiring every primary and secondary school in the country to inspect for asbestos by May 9, 1989. EPA proposed a ban and phase-out of most uses of asbestos in 1986 and plans to take final action on that proposal in early 1989. (For a complete chronology of past, current, and planned efforts, see the section on EPA Action.)

The Law

The Toxic Substances Control Act (TSCA) gives EPA the authority to prohibit or limit the amount of any chemical substance or mixture that can be manufactured, processed, or distributed in commerce if EPA finds that it presents an unreasonable risk to public health or the environment. Substantial scientific evidence about the health effects of asbestos has resulted in a wide variety of EPA actions.

The Asbestos School Hazard Abatement Act (ASHAA) of 1984 authorizes EPA to provide aid to financially needy schools to abate severe asbestos problems. EPA has made federal loans and grants available to help both public and private primary and secondary schools with abatement of friable asbestos. Since 1985, EPA has distributed over \$160 million in federal funds for asbestos abatement projects in the nation's schools. In 1989 EPA will distribute another \$47.5 million for this purpose.

The Asbestos Hazard Emergency Response Act (AHERA), which was signed into law in October 1986, called for EPA to issue regulations by October 1987 requiring all primary and secondary schools in the United States to inspect for friable and non-friable asbestos by a certified inspector. Schools are required to develop and implement plans for assessing asbestos in school

buildings and taking appropriate corrective actions. Each school must complete its inspection and submit a written asbestos management plan to its state AHERA designee by October 12, 1988, or by May 9, 1989, if the school receives an extension to this deadline from their state. AHERA authorizes EPA to take enforcement action against contractors who lack the training and certification to properly engage in abatement activities.

The Asbestos Information Act of 1988, signed into law on October 31, 1988, will require manufacturers of asbestos or asbestos-containing materials to submit specific information about their products to EPA for publication. Having this information available at the initiation of a lawsuit will prevent delays caused by the search for the actual asbestos manufacturer. Manufacturers whose products are not present in a building that is cited in a specific case will be spared involvement in lengthy and costly legal proceedings.

EPA Action

PAST EFFORTS

- 1972 Listed asbestos as a hazardous air pollutant.
- 1973 Set a standard of "no visible emissions" for the milling of asbestos, the manufacturing of asbestos products, and the demolition of buildings. Prohibited the spray application for most uses of friable materials containing more than one percent of asbestos.
- 1974 Issued water effluent guidelines for asbestos manufacturing point sources and new source performance standards.
- 1975 Extended the "no visible emissions" standard to waste collection and disposal.
- 1978 Prohibited most friable, sprayed-on asbestos.
- 1979 Initiated a technical assistance program to help schools identify and control friable asbestos-containing materials.

Announced Agency's intention to consider regulating commercial uses of asbestos.

- 1980 Listed asbestos as a hazardous waste in proposed rules.

Proposed rule for schools to identify and notify EPA of any friable asbestos in schools.

Proposed a rule under TSCA requiring the reporting of production and exposure data on asbestos.

- 1982 Issued final rule on the identification and notification on friable asbestos-containing materials in schools.

Issued final rule under TSCA requiring the reporting of production and exposure data on asbestos.

- 1984 Conducted national survey of public buildings to determine the extent of asbestos-containing materials.

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- 1985 Made first distribution of annual ASHAA loans and grants to financially needy schools.
- 1986 Proposed the ban and phase-out of most asbestos products and the uses of asbestos.
Distributed second round of ASHAA funds to schools.
Began developing a regulation to carry out the newly enacted Asbestos Hazard Emergency Response Act. EPA used the "regulation negotiation" process, which calls for including all interested and affected constituencies in the actual development of the regulation.
- 1987 Proposed and subsequently finalized regulations for AHERA implementation which were distributed to public and private schools.
Distributed third round of ASHAA funds to schools.
Developed and finalized Model Accreditation Plan.
- 1988 Distributed grants totaling \$15 million to states for AHERA inspections and management plans.
Distributed fourth round of ASHAA funds to schools.
Submitted report to Congress on asbestos in public and commercial buildings, which proposed a three-year program of increased guidance, technical assistance, and enforcement of current regulations.
Provided training to AHERA state designees and EPA's Regional Asbestos Coordinators on proper AHERA implementation.
Appointed an Asbestos Ombudsman at EPA headquarters to respond to citizen concerns, questions, and complaints about asbestos-in-schools issues.
Provided schools with AHERA implementation support in the form of guidance materials, a nationwide teleconference, and technical assistance.
Approved over 400 training courses for accreditation of asbestos consultants.

More Information

EPA has established a hotline for citizens to call for further information or publications about its asbestos activities. This hotline can be reached on (202) 554-1404.

Citizens with concerns, questions, and complaints about asbestos-in schools can call the Asbestos Ombudsman on the toll-free number 1-800-368-5888. In the Washington DC area, the Ombudsman can be reached on 557-1938.