



# RISK BULLETIN

## Managing Asbestos-Containing Materials In Industrial And Commercial Facilities

### WHAT IS ASBESTOS?

Asbestos is the name given to a group of naturally occurring minerals including chrysotile, amosite, crocidolite, tremolite, anthophyllite, and actinolite. These minerals were widely used in the past due to properties of heat resistance and durability. Asbestos can be found in thermal system insulation, fireproofing, spray-on insulation, wallboard, floor tiles, roofing materials, welding curtains, cement, furnace bricks, brake and clutch linings, and other building and thermal-resistant materials. In 1989, the US Environmental Protection Agency (US EPA) attempted to ban most uses of asbestos. This ban was overturned in federal court in 1991. As a result, products containing asbestos may still be encountered in the environment today.



### WHO CAN BE EXPOSED TO ASBESTOS?

Many businesses, which formerly manufactured asbestos products such as pipe and boiler insulation and brake shoes, exposed their work force to asbestos on a daily basis. Today, workers potentially exposed to asbestos include asbestos abatement workers, plumbers, water utility workers, heating and air conditioning contractors, electricians, and carpenters. Individuals working or living in buildings containing deteriorated asbestos pipe insulation or other surfacing materials such as plaster, sprayed on fire-proofing and floor tiles can also potentially be exposed.

### WHY IS ASBESTOS DANGEROUS?

Asbestos can cause serious health problems. If inhaled, asbestos can cause lung diseases, which can disrupt the normal function of the lungs. Three specific diseases are linked to asbestos exposure. They include asbestosis (a fibrous scarring of the lungs), lung cancer and mesothelioma (a cancer of the lining of the chest or the wall of the abdominal cavity). These diseases do not appear immediately after inhalation of the asbestos fibers; rather, they may take 20 years or more before symptoms appear.

### ASBESTOS REGULATIONS AND BEST MANAGEMENT PRACTICES

In the United States, asbestos is regulated by the US EPA in 40 CFR 763 and in 40 CFR 61, and by the Occupational Safety and Health Administration (OSHA) in 29 CFR Parts 1910.1001, 1926.1101, and 1915.1001. The US EPA regulates asbestos in a number of areas such as use of asbestos in commercial products, asbestos in schools, and asbestos control during renovation/demolition activities. OSHA regulations cover workers who may encounter ACM during mining, processing, manufacturing, maintenance or abatement activities. Given the extensive federal regulatory requirements as well as state and local requirements, there are several Best Management Practices (BMPs) owners/operators should utilize to minimize the risk of harmful exposures to their staff, tenants, and the general public. These consist of identification, management and abatement.

### IDENTIFICATION

Owners of commercial buildings are required by 29 CFR 1910.1001(j)(2) to determine the presence, location, and quantity of asbestos-containing materials (ACMs) and/or potentially asbestos-containing materials (PACMs). ACMs and PACMs should be identified by a qualified, usually licensed, contractor. Some states have licensing programs and others do not. Consult individual state statutes to determine if your state has licensing requirements. The contractor will take samples and determine if certain materials contain asbestos, and in what concentrations. Any material that contains asbestos in quantities greater than 1 percent is regulated as ACM. The findings should be summarized on a map or easily-readable document which describes the location of ACM in the building. Most consultants will also provide guidance on the likelihood of the ACM becoming airborne (friable). Building owners are obligated to inform occupants of the presence of ACM and their location.

### MANAGEMENT

Asbestos is not a health concern until it becomes airborne. For that reason, materials that are readily made airborne, such as deteriorated pipe insulation or sprayed-on insulation in high traffic areas, are considered friable and should be abated. Conversely, nonfriable ACM, such as floor tiles beneath a carpet, insulated pipes in a wall cavity, and intact wallboard not commonly in contact with personnel are best managed in place. If ACMs are to be managed in place, an Asbestos Operations and Maintenance (O&M) Plan should be developed with an Asbestos Plan Manager appointed to oversee O&M activities such as routine maintenance and minor repairs in areas of concern. Asbestos-containing materials should be identified, labeled, monitored and repaired to reduce potential exposures in facilities. Activities that may involve disturbing asbestos should be conducted “wet” and portable equipment should be equipped with dust-collection attachments. Containment areas should be erected to prevent asbestos dust from migrating to occupied areas of buildings or areas adjacent to construction sites. The EPA publications *Managing Asbestos in Place: A Building Owner’s Guide to Operations and Maintenance Programs* (“Green Book”) and *Guidance for Controlling Asbestos Containing Material in Buildings* (“Purple Book”) provide additional guidance in these areas.

### ABATEMENT

If a facility owner determines that abatement is the best alternative to deal with ACM, or if extensive renovations or demolition is to be performed, very specific regulations must be followed. OSHA regulates worker exposure to asbestos under 29 CFR 1910.1001 and 29 CFR 1926.1101. The current standards limit employee exposures to airborne asbestos to a Permissible Exposure Limit (PEL) of 0.1 fibers per cubic centimeter (f/cc) as an eight hour time-weighted average with an Excursion Limit of 1.0

f/cc for 30 minutes. Exceeding the PEL triggers a set of provisions for exposure control and medical monitoring. These provisions include personal protective equipment, respiratory protection, employee exposure monitoring, training, medical surveillance and recordkeeping.

Asbestos operations are classified by the US EPA as Class I through Class IV. Class I operations are the most potentially hazardous and include the removal of sprayed-on or troweled-on surfacing ACM and thermal system insulation. Class II operations include the removal of non-thermal systems ACM such as floor tiles or roofing materials. Class III operations include maintenance and repair activities where ACM may be disturbed. Class IV activities are custodial activities where ACM debris is handled. Employees who perform Class I through IV operations must receive extensive training in accordance with EPA guidelines. All contractors performing work which may disturb ACM as well as facility personnel performing Class III O&M work must receive this training from qualified individuals.

Most states require abatement contractors to be licensed. Building owners should require contractors to provide licenses, training records for the employees performing the work, references, and proof of valid general liability and pollution insurance. Generally, asbestos remediation contractors will erect a containment area to prevent migration of asbestos fibers. Contractors also generally take personal, workspace, and perimeter air samples to determine potential exposures. Once completed, the area of abatement will have

clearance samples taken from surfaces and air to prove the abatement was successful and the space is safe to occupy.

All ACM wastes should be disposed of in accordance with federal and state solid waste regulations at a permitted facility, following all packaging (double bagging, etc.) and labeling requirements. These wastes must be properly classified and taken to appropriate disposal facilities in accordance with US EPA (40 CFR Subchapter I) and state-specific solid and hazardous waste regulations. ACM wastes must typically be managed as a non-hazardous industrial waste and disposed at a permitted asbestos waste landfill.



### CONCLUSION

Building owners should first determine if ACM is present in their facility. If so, the first option is to manage it in place by implementing an effective O&M plan. If the material is friable or otherwise must be removed, qualified personnel under strict supervision should perform the abatement.

*The information contained herein is intended for informational purposes only and does not constitute legal advice. For legal advice, seek the services of a competent attorney. Any descriptions of insurance provisions are general overviews only.*

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