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Asbestos in Existing Joint Compound: How to Manage the Exposure During Renovations

Knowing the asbestos content of the joint compound and other materials in an older building that may be purchased or leased can save you from a transaction requiring expensive abatement prior to renovation or alteration

Chubb Global Risk Advisors

Joint compound, also known as spackle, mud, patching, or drywall compound, is typically used to fill holes and seal gaps between sheets of wallboard or drywall to create a smooth surface prior to the application of paint.

The Environmental Protection Agency's Asbestos National Emission Standards for Hazardous Air Pollutants (NESHAP) regulation[1] requires asbestos inspections to identify asbestos containing materials (ACMs) prior to the start of building renovations. These inspections often reveal asbestos-containing joint compound present on associated wallboard materials in older buildings. The presence of asbestos can result in unanticipated abatement costs and potential scheduling and project completion delays. Understanding this potential exposure and the way to address it can help building owners and construction managers manage and reduce the impact on project costs and schedules.

Ban on Asbestos in Joint Compound – 1977

In 1977, the U.S. Consumer Product Safety Commission[2] (CPSC) announced the ban of consumer patching compounds that contain asbestos, a known human carcinogen. Given this announcement, it is reasonable to expect that non-asbestos containing joint compound would have been used in interior and new construction projects in the years following this ban. However, the only way to be certain is to have the materials tested by a certified inspector and analyzed by an accredited laboratory. This is because:

- The CPSC notes that the ban does not apply to joint compound that was "sold solely for industrial use in non-consumer environments"
- Existing stockpiles or unregulated imports of asbestos containing joint compound may have resulted in the banned compound being used in buildings after 1977

In addition to joint compound, there are more than 3,000 other known products that may contain asbestos.

The list below includes some of the materials where asbestos is commonly found in older buildings:

- Vinyl asbestos floor tile, sheet flooring and mastics
- Boiler and pipe insulation and fittings
- Ductwork and thermal tape products
- Roofing felts, shingles and flashing
- Corrugated sheets
- Fire doors
- Spray-applied insulation
- Ceiling tiles
- Plaster and decorative wall coating materials
- Conduits for electrical wire

Building owners or managers have options if asbestos is discovered in the wallboard system. These options, however, depend on the test results received from a licensed laboratory and the extent of a planned renovation.

If the Asbestos Content Found in Your Building is Less Than 1%

When the laboratory reports a result less than 1% asbestos, the joint compound material can be classified as a "non-asbestos containing" material for the purposes of compliance with federal, as well as most state and local, environmental regulations. However, building owners or operators must still comply with several categories of requirements.

Work Practices

The EPA's NESHAP regulation does not apply to materials that are less than 1% asbestos. However, the federal Occupational Safety and Health Administration (OSHA) maintains that even materials that do not meet the definition of an asbestos containing material (greater than 1% asbestos) can release airborne asbestos fibers. For this reason, certain

precautions set out in the OSHA Asbestos in Construction Standard[3] are universally applied to all work with asbestos. OSHA work practices, such as using wet methods for removal, ensuring prompt clean-up of waste, and wearing respiratory protection, are required for the handling and removal of materials with any asbestos content. These practices are also required for removal of materials containing any level of asbestos. In California, materials with greater than 0.1% asbestos are considered asbestos-containing construction materials (ACCM), and regulations that are more stringent than those found in other states apply. The California Department of Industrial Relations has specific work practices that must be followed when work may impact ACCM during renovation.[4]

Hazard Communication

Under the OSHA Hazardous Communication Standard 29 CFR 1910.1200, the building owner has a responsibility to inform contractors performing renovation or demolition that their work may disturb surfaces containing asbestos or involve asbestos containing materials so that they can protect their workers.

Asbestos Operations and Maintenance (O&M) Plan

If the renovation plans for a structure do not call for material to be removed, a best practice is to include all asbestos containing materials (with greater than or less than 1% asbestos content) in an Asbestos Operations and Maintenance (O&M) plan. This plan should identify locations where asbestos is present and establish procedures for employee exposure prevention, including notification to outside contractors and service personnel working in the building.

If the Asbestos Content Found in Your Building is Greater than 1% and the Materials are to be Removed

The owner or the operator of the renovation or demolition operation is required to notify the appropriate delegated entity (often a state agency) before beginning any demolition or renovations of buildings that contain a certain threshold amount of any regulated asbestos-containing material. The discovery of joint compound that contains greater than 1% asbestos will typically need asbestos abatement of every square foot of wall and ceiling where wallboard is to be renovated. The OSHA regulations for engineering controls, worker protection and hazard communication discussed above apply in this situation as well.

There are, however, several strategies building owners or operators may consider prior to beginning an abatement project. These strategies, described below, can serve as alternatives to the abatement requirement under the appropriate circumstances.

Strategies to Consider Prior to an Abatement

- Did the licensed inspector 'point count' the original sample that showed a greater than 1% concentration?[5] Point-counting is a more precise method of analysis and can sometimes reveal that layers of materials are less than 1% asbestos. If that is the case, the materials may be reclassified at a less-than-1% asbestos level.
- Is laboratory compositing an option? Laboratory compositing of drywall and joint compound may be allowed in some states or local jurisdictions. However, an inspector should check with the regulators for methods that comply with requirements for characterizing demolition waste or determining notification requirements under NESHAP in his jurisdiction.[6] If the combined material asbestos percentage is lower than the amount considered to be an asbestos-containing material, compositing of materials may be a possibility for reducing disposal costs in some states or local jurisdictions where it is allowed. Appropriate work practices would still need to be followed, and waste materials still need to be labeled and handled in accordance with OSHA regulations.

- Do the same requirements apply if renovations are minor? The short answer is not necessarily. For minor renovations such as hanging a sign on a wall with asbestos-containing joint compound, a building owner or manager may be able to conduct an annual negative exposure assessment (NEA). Keep in mind that the renovation must only have minor impacts on the asbestos-containing material and the building owner or manager must prove that airborne exposures do not exceed the OSHA permissible exposure limit (PEL) or excursion limit.[7] A licensed abatement contractor, using trained personnel and effective engineering controls, can also assist a general contractor to drill holes in small areas where the alteration will only have a minor asbestos impact.

Conclusion

The continued presence of asbestos in building materials such as joint compound that were commonly used in construction and renovations prior to 1980 make it imperative that building owners and managers carefully assess this exposure when undertaking a planned renovation. Understanding how current regulations apply and what testing and remediation options are available before the start of the project can help building owners and operators to take the necessary steps to comply with the law, keep workers safe, and manage associated costs.

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To understand more about how Chubb Global Risk Advisors' licensed asbestos inspectors, project monitors, management planners, and project designers can help you during renovations or in the development and implementation of asbestos management programs, please contact us today.

Globalriskadvisors@chubb.com
866.357.3797 (toll-free)

www.chubb.com/CGRA

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