

INSIDIOUS INVADER

Mold could replace asbestos as major threat in buildings

BY SANDY LOY

Environmentally, mold has become the new asbestos. What we do about it now will make a difference for generations.

Mold may be the single greatest challenge facing the construction industry. It appears likely that mold exposure inside of structures will worsen. It is the construction industry's job, along with building designers and users, to keep that from happening.

Mold is a complex issue with consequences that require complex remedies. To prevent mold, we must understand not only what it is but why it is a growing problem in buildings, literally and figuratively.

For years, asbestos, an effective inorganic fire retardant, was put in buildings to make them safer. Today, it is known that asbestos is a health hazard if fibers are airborne and breathed. The key word is inorganic. Asbestos doesn't grow. Unless released into the air, it doesn't move. Once found, it can be contained -- carefully, using specific procedures.

Mold is alive. It grows. It hides. Mold likes the dark. It loves moisture, and it creates health issues we are still learning to understand. Mold can generate itself without warning inside the walls of new or old construction. Often the symptoms or signs of mold come to light only after contaminated air causes illness.

In 2003, the Greene County school board and system investigated reports of children becoming ill at Ottway Elementary School. A particular mold spore above acceptable levels was discovered. The building was decontaminated. Weeks later, another test showed mold was back. Moisture was prone to accumulate in the 70-year-old mold source is untraceable or the cost of repairs exceeds replacement cost.

There are numerous cases of buildings being closed and decontaminated or demolished after only months or years of operation, some here in East Tennessee. More reports of mold lead to more news about mold and thus more concern and awareness of mold.

In some quarters there is a school of thought suggesting that scare tactics are being used to create demand for mold abatement services. Similar attitudes surfaced when asbestos became an environmental issue. We now know asbestos is a true danger. So is mold.

Today's lifestyles, improved building technology and energy concerns may be contributors in making internal mold



potential worse than ever. Mold has always been with us, but years ago people left their windows open in warm months. Heating was with wood stoves and fireplaces. Ventilation substituted for air conditioning, which brought fresh air into homes and buildings. Construction was not as air tight as required today, so structures "breathed." Moisture was more prone to evaporate or be drafted out by the change in air flow and temperature.

Today we have better sealants to caulk around cracks and the joints between adjoining construction materials. We use vapor barriers to keep moisture out, but they also block fresh air and hold stale air inside. If moisture sneaks in, it has a better chance than ever to become a mold problem.

A contributing factor may be that, while we have these wonderful materials to help us seal buildings and conserve energy, numerous building construction components are in the hands of poorly trained and less skilled labor forces.

Significant building projects are divided among 20-25 subcontractors, each with their own specialty and hopefully -- but not necessarily -- trained employees. Electrical; heat, ventilation and air-conditioning; and plumbing trades are regulated to ensure trained craftsmen are doing the work. Dozens of other trades are not regulated or licensed.

Each subcontractor's responsibility on a construction project starts and stops someplace, and opportunities for problems exist at every transition from one subcontractor to another. These transition points must be coordinated so that installation is executed exactly to manufacturer's instructions. If not, there

is a potential for water or moisture to penetrate and for mold to find a world of warm, dark spaces in which to grow.

We must recognize the reality of this threat in existing buildings and deal with them as they are discovered. Additionally, we must mitigate the potential for this problem in new structures by raising the standards of the contractors and construction managers, the people who directly impact the quality of how we build. This may require more stringent licensing laws and tougher qualification standards.

Private facilities have a limited number of people liable for the results of exposure to indoor pollutants. For public buildings, taxpayers bear the burden. Any building, private or public, must be built with the highest standards -- and not just on paper. Better engineering and specifications do not immediately translate into better buildings with safer air.

The solution is better management and accountability of the people building the structures themselves. Field supervision by qualified, highly trained builders and professional construction managers must ensure that each piece of the complex puzzle comes together as planned or designed.

Our society cannot accept poorly installed construction by inadequately trained workers under infrequent supervision. This is not government's role alone. Building inspectors cannot be on every project site 10 hours a day. The key is professional construction managers who keep watch over the whole structure.

If ever the saying, "An ounce of prevention is worth a pound of cure," were true, it applies to mold. As a society, we can act or we can wait and be forced to act. It's our choice.



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