THE CARLSON REPORT

Straight Talk on Environmental Issues January/February 2002

Air Quality: the Focus Shifts Indoors

Mold is an Emerging Concern

Since Americans spend 90% of their time indoors, it's no wonder that indoor air quality is becoming a major health and wellness issue. And it's not consoling to note that recent studies have shown that the level of many airborne pollutants may be 25 to 100 times higher indoors than outdoors.

Building owners and managers have learned to deal with the perils of asbestos, lead, radon, and even tobacco smoke. Now attention is being turned to a more elusive, yet prevalent substance: mold.

A report from the Independent Insurance Agents of America says, "toxic tort claims appear to be the newest bonanza for plaintiffs' lawyers." Houston-based GAB Robins North America, Inc, an investigative/adjusting firm, says they are handling 6 to 7 mold claims a day and have hired their ninth staff microbiologist. Last year there were none on staff.

Big Insurance Settlements

Settlements have been staggering. A state court in Austin, Texas recently awarded a homeowner $32.1 million for the insurer's failure to properly handle a mold claim. The insurer, State Farm Lloyds, has stopped accepting new homeowners or other property insurance business in the state of Texas after incurring losses of $504 million through the first eight months of 2001. Almost $60 million was paid as a result of toxic mold infestation in a Florida county courthouse to cover a host of expenses from building repairs, to relocation expenses, to workers' claims.

Nor is the government sitting idly by. California Governor Gray Davis signed SB 732, California's Toxic Mold Protection Act of 2001, into law on October 7, 2001. The new law requires California's Department of Health Services to develop permissible limits to mold exposure and standards for identification and remediation of "toxic" molds. The law also requires sellers of commercial or industrial properties to disclose the known presence of mold that exceeds those permissible limits or constitutes an infestation. Other states are keeping an eye on California and may well follow suit.

Health Effects Uncertain

The wild card in all this is that no one knows for sure whether, or how much mold actually adversely affects human health. Even the Center for Disease Control has gingerly set foot on both sides of the issue. In 1994, they issued a study that showed an "epidemiological association" between pulmonary hemosiderosis in infants and water damaged homes containing a toxic fungus, or mold, called *Stachybotrus chartarum*. Later, the CDC backed away from such a definitive link. But mold has long been linked to allergies, and circumstantial evidence leads many to believe various strains of molds are linked to asthma, skin rashes, damage to lungs, and the central nervous system—even brain damage. While scientific testing on such links slowly continues, litigation speeds ahead, and concern spreads.

In an informal poll conducted by Carlson Environmental, Inc., one third of the building managers who responded acknowledged that they have recently encountered tenant complaints concerning headaches, dizziness or other physical symptoms that tenants attribute to indoor air quality and, in response, have taken steps to modify building operations or maintenance. A recent national poll found that 17% of building managers had experienced a problem with Indoor Air Quality (IAQ). And the World Health Organization stated that one in three buildings in America are "sick."

How Sick is Your Building?

Reports of "toxic" mold and "sick buildings" often inspire panic among tenants and occupants. How worried should you be?

"Don't panic," says George Benda, President of the Chelsea Group. "There are a lot of people entering the marketplace whose goal is to generate panic and fear around indoor air quality issues. If someone is fomenting hysteria, seek out another approach."

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But short of panic, there is much that can and should be done. Professional help may be in order. "Most problems relate to long-term issues in a building that become lightning rod events," says Benda. "Stay calm, gather information, and bring in professionals who can accurately determine the level and type of contamination." Then you'll not waste time and money while failing to solve the core problem. The first step is to do a complete and thorough investigation of the building, from top to bottom, looking for likely causes.

Benda said in commercial buildings indoor air quality is adversely affected by many factors, a common one being the release of chemicals into the environment from new carpeting or furniture or from the cleaning fluids used to maintain the property. Inadequate or faulty ventilation is another major cause of poor air quality.

Controlling Moisture is Key

But the most frequent cause of problems is water intrusion. "This might be from structural or plumbing failure," says Benda. "Or it could be caused by humid conditions over a long period of time." Along with moisture comes mold.

Controlling the spread of mold early makes good financial sense because the cost of an outbreak can include investigation expenses, testing costs, containment and remediation expenses, abatement and mitigation expenses, direct damage claims, loss of use claims, relocation expenses, diminution of value claims, medical expenses, loss of earnings potential, emotional distress and mental anguish.

Benda's advice breaks it down to these basics: "Learn resilient building techniques. Employ good science."

What to Do

Will following ASHRAE[1] guidelines lead to a resilient building? In Benda's opinion, "Regarding ventilation, yes. But for avoiding moisture, no. Additional caution needs to be taken beyond what ASHRAE indicates." He recommends the following three steps:

#1: Reduce the sources of moisture in the building. Every building is its own situation and demands its own game plan for prevention of IAQ problems. Newer buildings have been more susceptible to mold. Experts point to the increased use of plasterboard and plywood, which are more prone to growing mold when wet. Also, energy management controls may actually add to the level of moisture. Airtight building designs lower fuel costs but also trap moisture and reduce ventilation. Set controls with mold in mind.

#2. Practice diligence after events of moisture intrusion. After a flood or pipe burst, take special caution to clean up the entire affected area. Replace or repair damaged walls, ceilings, floors and furniture as well as addressing the cause of the event. Floods usually cause less long-term problem than continual seepage, leaks, moisture buildup says Benda. "Floods usually get adequate and appropriate attention. If they're cleaned up properly the damage is over and behind you. It's the continuing seepage, dripping, moisture buildup that is more often a culprit in indoor air quality incidents."

#3. Watch for new products: Benda says he is "encouraged to see many advances in technology to detect, clean up, and ultimately prevent mold problems." For example, commercial products manufacturers are coming out with biostatic and biocidal surfaces that will reduce the incidence of mold growth. This should have a big impact on prevention in the future. (Learn more about such products at www.invironment.com.)

Contacts

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Links and Resources

USEPA, Indoor Environments Division
www.epa.gov/iaq/

California Department of Health Services
Indoor Air Quality Program
www.cal-iaq.org

US Environmental Protection Agency
"Mold Remediation in Schools and Commercial Buildings"
www.epa.gov/iaq/molds/index.html

National Association of Mutual Insurance Companies
An insurance industry website and chat room.
www.moldupdate.com

[1] ASHRAE, the American Society of Heating, Refrigerating and Air-Conditioning Engineers, sets uniform methods for testing and rating equipment and establishes accepted practices for the HVAC industry, such as the design of energy efficient buildings. Standards 62, *Ventilation for Acceptable Air Quality*, and 55, *Thermal Environmental Conditions for Human Occupancy*, address indoor air quality issues (www.ashrae.org).