# MOLD TAKES HOLD

## Design and Construction Industry is Affected by Mold Issues
## Why is it so Hard to Get it Right ?

By Wm. Chip D'Angelo
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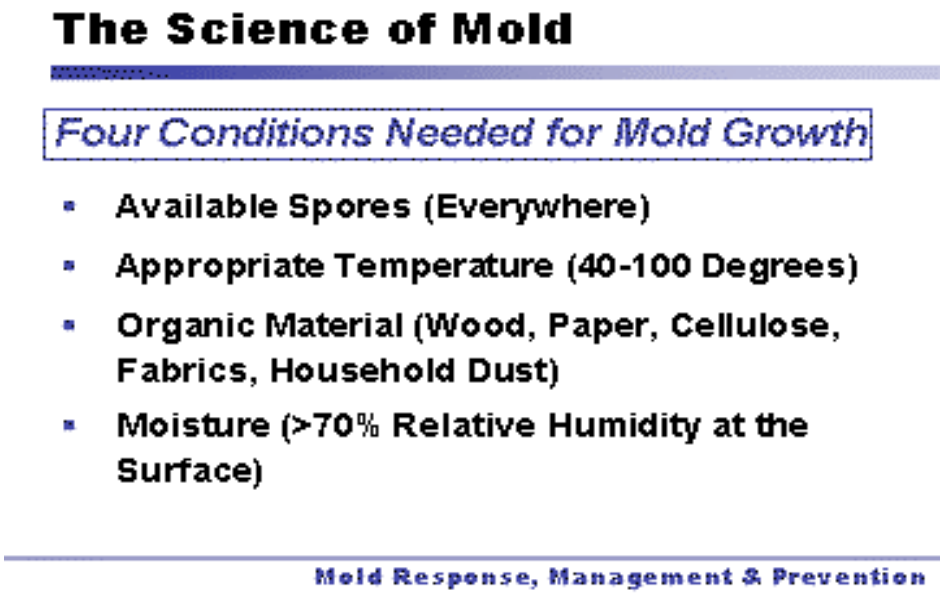
The design and construction industry is overwhelmed with stories about mold. Is it a hoax, or reality? Is it naturally occurring or caused by the tightening of buildings to increase energy efficiencies? Can designers and constructors be held liable for the costs if mold is detected, or is insurance coverage in place for protection? The answer is yes to all of these questions. Why? Because mold is here to stay.

We all know that mold is a naturally occurring fungus that has been growing in and on buildings for centuries., and continues to do so. It has crept into the media with a great deal of sensation. It has been fed by high profile celebrity's cases. It has proliferated the strategy rooms of plaintiffs' attorneys, and many courtrooms, architect's design studios and contractor's estimating rooms nationwide. It is now appearing on the financial statements of design & construction companies and the balance sheets of public and private real estate firms. Designers and contractors are being sued. Insurance companies have denied or limited coverage. The reality of mold can no longer be ignored.

The furor over mold in our buildings has grown primarily out of concern for its potential health effects to occupants, especially the very young and elderly, the asthmatics and those with low tolerance and sensitivity to allergens. The debate continues unabated. Recent reports by Dr. Bryan Hardin, former deputy director of the National Institute for Occupational Safety and Health (NIOSH) and assistant surgeon general of the United States, concludes that, "Current scientific evidence does not support the proposition that human health has been adversely affected by inhaled mycotoxins [mold] in home, school, or office environments".



However, this theory has not prevented or diminished the increasing number of construction claims and lawsuits, affecting the designers, builders, and owners of all types of properties. Litigation has resulted in expensive defense costs and multimillion-dollar awards. Research shows that over 2000 lawsuits were filed nationwide in 2002 alone against the design, construction and real estate community for mold resulting from building and construction defects. In addition to the hard costs to defend, there are soft costs associated with these claims. Developers have significantly slowed condominium construction in California, adversely affecting jobs and the economy. As a preventative measure , designers of residential properties and homebuilders are installing new products to prevent mold growth, which increases costs to the consumer. Insurers to the industry have perhaps, suffered the most, and will likely seek higher future premiums to recover theses costs. The Insurance Information Institute reports that insurance companies paid out $ 2.5 billion in mold related claims in 2002, doubling the cost from the year before.

Many blame the media for this crisis. In fact, since 2000 there have been over 10,000 articles using the term "toxic mold". Publications like the *Wall Street Journal*, the *New York Times*, *Forbes*, *Time Magazine* and *Engineering News Record* have all reported on the "toxicity" of mold. Celebrities like Ed McMahon and Erin Brockovich have helped bring the issue to the front page. The popular news-based show, *48 Hours*, recently aired a frightening documentary. All of this has aided in the shaping of public perception, which has become reality.

As press coverage and threat of lawsuits increased, the design & construction community began looking for answers. The legal community faces a dilemma, as the legal debate is as contradictory as the medical arguments. The laboratory testing industry and industrial hygiene consultants, left with little to do as asbestos continues to be safely abated or encapsulated, have seized the moment. Soon there was a flurry of seminars, all costly, that urged the troubled attendee of the great need to diagnose property with extensive air and surface sampling. When done correctly, these procedures are costly. No real regulatory standards exist.

Mold spores are prominent everywhere, both indoors and out. Sampling a mold covered surface and the air around it does little more than produce a file that the claimant and plaintiff's attorney may gain access to and use against you. When mold is visible, remediation or removal is certainly the correct protocol and necessitates that a specialty contractor be retained. Since there are no licensing or certification requirements, and there is a wide array of capabilities, quality and pricing to choose from. Only a licensed, bonded and insured firm should do the work, however these too are costly (This sentence makes no sense in consideration of the "no licensing or certification requirements… so change it or delete it). Technical guidelines have appeared from the US EPA and local agencies. Opponents say they are too onerous whileothers claim that they are ineffective. The New York City Department of Health, Bureau of Environmental & Occupational Disease Epidemiology has published the *Guidelines on Assessment and Remediation of Fungi in Indoor Environments*, which has become recognized as a good "industry practice" document. The Associated General Contractors of America (AGC) has also issued its own document to guide its members. The Federal Government and many states

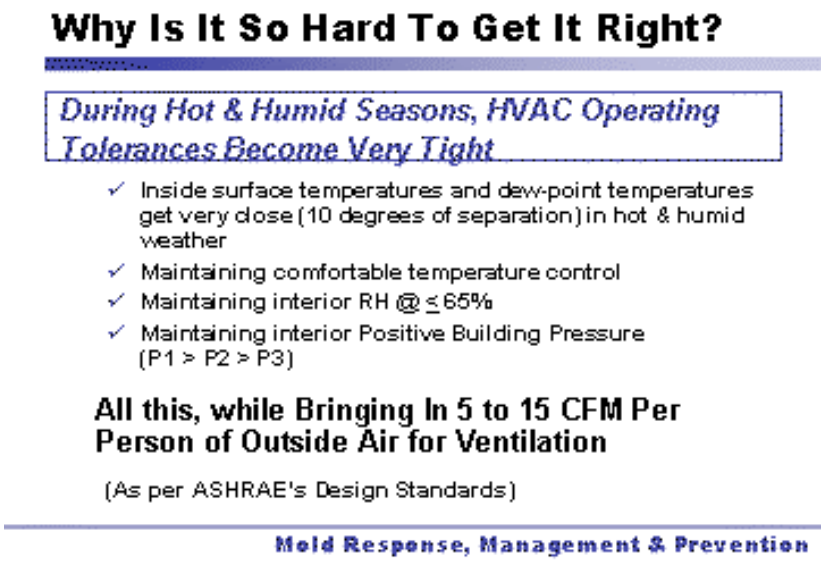
have now also taken up the cause. In March the "Toxic Mold Safety & Protection Act" was reintroduced by United States Rep. John Conyers (D-Mich.). At last count, over 17

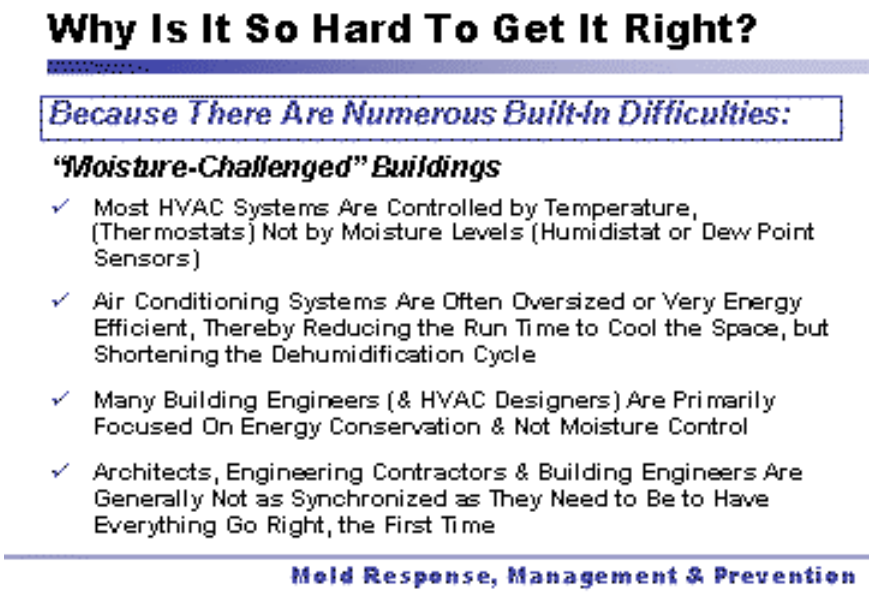
States have introduced some sort of mold legislation. The majority of these include fees to the State when to perform mold related work.

Currently, the design, construction, and real estate industry is now bearing all of the costs associated with the mold issue, including training, prevention, testing, new work practices and materials, on their P/L statements. In the event of a claim, defense and damages costs are either expensed or capitalized. As more and more of these construction claims become significant, some even achieving class action status, the impact to the real estate asset is noteworthy, especially in the publicly traded real estate investment companies (REITs). Morgan Stanley, in a recent Industry Overview on the Multi-Family REIT sector, has raised concerns that "mold could pose a serious [*financial*] threat to multi-family REITs and other real estate companies" They assert that remediation costs could reach upwards of $ 25,000 per apartment unit. They also profile a single property in Florida where $ 30.8 million in water infiltration/mold charges have been taken on the balance sheet. This case appears to have originated from a design and construction sequencing issue.

Once viewed simply as a part of nature, responsible for natural degradation and other important uses and functions, mold has become a serious issue to the construction and real estate industries. The threat is such that executives of these companies should not avoid or ignore the issue. Construction and real estate executives should seek the assistance of professional building defect experts. Unfortunately, issues like mold do not typically make the desk of the CEO until the bottom line is impacted. This has been the case in many firms, and, when left unaddressed, can become more than the nuisance of a black spot on the wall, it has the potential of developing into significant red ink on the financial statement.

Design and construction firms should be taking proactive steps to protect their projects and their firms from claims. Most mold claims are a result of a design, construction or building operations and management inadequacies. It is difficult to get it right




The design community is one of the key players in preventing mold claims in buildings. New designs need special focus on the roof, envelope, plumbing and HVAC systems. Preventing excess moisture and controlling humidity are the keys to preventing mold growth. The analysis of building products, their composition and placement, should be taken into consideration, as well as exploring the many new products and coatings available to prevent micro-biological growth. The proper commissioning of the HVAC system is also essential. Every new design should undergo an IAQ design review.

The construction community too must take a proactive approach. As the "nuts and bolts" component of the building team, the constructor is in a unique position to add significant

value to the designer's plans. He knows from experience the realities of the building process. "Is the design constructable?" "Is it the most effective and efficient way to build while avoiding moisture and mold potential?" If not, will the sub-contractors try to cut corners during construction to speed up production which may inadvertently compromise the integrity of the structure, i.e. allow moisture to infiltrate and not escape resulting in the condition we are trying to avoid?

Simply put, every Owner wants to get his product to market faster and cheaper. Everyone on the project team is squeezed to build faster and cheaper. The reality of the mold issue requires interaction of designer, constructor and end-user early and often to avoid potential future problems. When performed correctly, design constructability reviews will address potential problems when they are easiest to resolve; when they are on paper, not when staring at a multi-million dollar building with an unintentional "mold finish" which may cost hundreds of thousands to resolve. Constructability must be viewed holistically. Honest input during the design phase is not only invaluable, it is imperative. Designer, constructor and end-use operator must review all the building components, how they will be constructed, where they will be constructed and how they intend to be maintained. One size does not fit all. Components that may be less expensive to purchase and construct may not offer ease of maintenance and repair in future years. Building systems that focus on energy conservation rather than moisture control in locations where humidity is the norm will in all likelihood develop conditions where mold is allowed to proliferate causing numerous problems for those responsible to maintain them.

Too often in the rush to complete the design and get the building into construction, the designer forgets to consider the long term effects of his work and the simple fact that occupants years in the future will be living and working in a space that he created, including one of the most important products of that creation, the air quality. He has an obligation to get it right.

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