

MOLD
is **GOLD**



or IS

BY JEFF SLIVKA

***“Mold is gold.”
That’s what a recent
article published by the
American Bar
Association asserted.
The article went on to
tell how some
attorneys are building
multi-million-dollar
practices based on
the mold dilemma.¹***

***Furthermore,
legal experts are
predicting that mold
will surpass the
magnitude of asbestos
claims that have
plagued manufacturers,
owners, insurers, and
others for the past
two decades.***

No one can deny that “toxic” mold is a major issue for most of the players in our industry. But, the statement that “Mold is gold” begs the question, “For whom?”

I’m not sure anyone can provide a definitive answer to that question. However, this article will address some of the common issues being raised about these distinctive fungi.

It’s Back!

Actually, it never left. Mold has always been here, plaguing society since biblical times. For instance:

- In the mid-1800s, a fungus was blamed for Ireland’s Great Potato Famine, which resulted in the deaths of nearly 750,000 people.
- In the 1940s, thousands of people in the Soviet Union died, allegedly from eating grain that contained mold.
- In 2001, a Texas homeowner was awarded \$32 million for property damage caused by mold and for the mental anguish associated with the presence of “toxic” mold in her home. (Texas has seen the number of mold claims increase more than six-fold in the past year.)
- In New York, 125 tenants sued the owners of an apartment building for \$8 million, alleging personal injury and property damage from mold in the building.
- In Florida, Martin County sued the architect and builders for construction defects on a \$13 million courthouse project. Fifteen workers became sick from mold. The result: Double the original cost.
- In Illinois, a class action suit was brought against a school district for allegedly exposing children to “toxic” mold.

Mold is everywhere – and, more and more frequently, it’s in the courtroom.

it?

Mold 101

WHAT IS MOLD?

Molds are part of the fungus family, which also includes mildew, yeasts, and mushrooms. This family of organisms serves a very useful purpose, breaking down organic matter and recycling it for future use by plants and animals.² Mold can be found in every ecological environment in the world – in soil, on trees, in buildings, virtually anywhere that the following three conditions exist:

- Temperatures between 40-100°F
- Constant moisture
- A food source (cellulose or carbon-based material)

Take away any one of these conditions and mold growth ceases.

WHEN IS MOLD “TOXIC?”

Unfortunately, many fungi and molds release highly toxic gases as by-products of their primary and secondary metabolic processes. Some do it when they consume certain organic materials. For example, mold growing on wallpaper often releases toxic arsine gas if the wallpaper contains arsenic pigments for coloring. (That’s why it’s important to identify a mold’s host material.)

Other types of molds release toxins naturally as they grow. And, don’t think that mold stops being hazardous just because it stops growing:

When it comes to indoor air quality, the greatest risk period begins as the mold “dries out.”

Why? Because as mold dries, it releases spores into the environment, which can cause or exacerbate such breathing problems as allergies and asthma. Furthermore, those spores, if dispersed onto damp areas, will begin to grow new mold.

Which Specific Molds Are “Toxic?”

The majority of molds pose little or no health risks to humans; some, however, do. The two most often in the headlines are *Stachybotrys* and *Aspergillus*. (Both of these have many variations; for simplicity, I will refer to them in general terms.)

STACHYBOTRYS

Stachybotrys, also called Black Mold, is a greenish-black fungus found worldwide. It is *mycotoxic* (producing substances toxic to humans which inhibit or prevent the growth of other organisms) and *saprophytic* (feeding off organic material).

Stachybotrys colonizes particularly well in materials that are high in cellulose. This includes certain building materials, such as drywall or gypsum board, fiberboard, ceiling tiles, wooden structures, even books and papers that are continually moist or water-damaged.

Since Stachybotrys produces potent toxins, exposure to this particular mold can have an adverse affect on the central nervous system and upper and lower respiratory tract. In addition, it can cause eye and skin irritation, chronic fatigue, and have adverse reproductive effects.³

But, Stachybotrys is not the only culprit responsible for the increased mold-awareness of health and environmental professionals, state and federal agencies, and of course, the media . . .

ASPERGILLUS

In May 2001, bricklayers at the Albert Einstein Medical Center in Philadelphia were removing the exterior facade of one of the buildings to identify the source of water leaks. During the normal course of their work, the workers uncovered what they called “a black horsehair-like” substance growing on the interior wallboard.

Three of the workers were hospitalized shortly after it was discovered that the horsehair-like substance contained a variety of molds and fungi, including Stachybotrys and Aspergillus (another “toxic” fungus).

Aspergillus is a ubiquitous fungus with characteristics similar to Stachybotrys. It has similar effects on human health, with one big difference:

Aspergillus is documented to have a fatality rate as high as 75% in people with compromised immune systems, such as people with a low white blood cell count due to bone marrow transplants, cancer treatments, AIDS, and major burns.





12 THINGS YOU SHOULD KNOW ABOUT MOLD

1. Exposure to elevated levels of molds can cause serious health problems. Those most susceptible include young children, the elderly, those with compromised immune systems, and other sensitive individuals.
2. Mold spores can cause health problems even if the spores are dead.
3. Potential problems include allergic reaction, respiratory and sinus problems, asthma, cold and flu-like symptoms, headache, fatigue, trouble concentrating, and memory loss.
4. Many molds have the potential to cause health problems including *Alternaria*, *Aspergillus*, *Chaetomium*, *Cladosporium*, *Fusarium*, *Penicillium*, and *Stachybotrys*. (Remember: Just because you can't pronounce it, doesn't mean it can't harm you.)
5. Mold spores are very common outdoors; there is no practical way to eliminate all mold spores indoors.
6. Mold requires an organic food source (such as cloth, plasterboard, or wood) and a moisture source to grow. Mold can begin to grow if any organic material remains wet for more than 48 hours.
7. To eliminate mold, eliminate moisture: Fix the source of the water problem and/or reduce indoor humidity levels to 30-60%.
8. Clean and dry any damp or wet building materials and furnishings within 24-48 hours to prevent mold growth.
9. Mold growth is often a visible sign of a structural defect that allows moisture to intrude into a building.
10. Mold can grow undetected inside wall spaces, behind and under cabinets, under carpet, and inside HVAC systems.
11. The best way to abate mold growth indoors is to remove the impacted materials. Cleaning the surface of a material with mold growth may not always kill the mold, especially if mold is growing on porous materials like plasterboard or wood.
12. Cleaning large areas of mold growth can cause airborne levels of spores to increase up to 10,000 times that of background levels, resulting in acute exposure to those doing the cleanup if personal protective equipment is not worn.

References: The EPA's Indoor Air-Mold Resources Web Site (www.epa.gov/iaq/molds/moldresources.html) and the Mold Services Group (www.molddoctors.com).

For that reason, *Aspergillus* poses an increasingly common threat to hospitals and other health care facilities.

The Health Implications

The health implications associated with “toxic” mold are debated on a daily basis. However, the debate does not center on mold itself. The experts agree that mold has been a likely cause of typical allergic reactions in humans for many years. Furthermore, mold spores are known to worsen asthmatic and other respiratory symptoms.

The debate lies in the reference to mold as being “toxic” or lethal. According to the Centers for Disease Control, there are few documented cases in which “toxic” molds (those containing mycotoxins) have caused such health conditions as pulmonary hemorrhage, kidney and liver failure, or death.

THE CLEVELAND CASE

The jury is still out on whether or not there is a causal link between the presence of “toxic” mold and life-threatening health conditions, although there have been instances where “toxic” mold was initially identified as having been a contributing factor.

One such case occurred in 1993. In Cleveland, nine out of 36 infants from homes in a specific area of the city died from pulmonary hemorrhage. After extensive investigation, the EPA and the Cleveland Department of Health speculated that *Stachybotrys* was responsible. However, the association of *Stachybotrys* with the deaths of those infants has never been definitively proved or disproved, even after additional studies. So, the question remains, was it or wasn't it this “toxic” mold?

PART OF THE PROBLEM

People react to mold spores in different ways based on:

- The type of mold
- The environment (indoors/outdoors)
- Individual tolerances

Because of these variables, it's difficult to establish the maximum/minimum mold levels or spore concentrations deemed “hazardous” to human health. That's why, unlike many hazardous substances with federally mandated permissible exposure limits (PELs), mold has none. (A PEL, broadly defined, is the airborne concentration of a substance that, if exceeded for a period of time, will have adverse effects on human health.)



MOLD SPORES can cause **HEALTH PROBLEMS** even if the **SPORES** are **DEAD**.

LEGISLATIVE ACTION

Some states, including California, Connecticut, Indiana, Michigan, New Jersey, and New York, have been proactive in addressing the mold issue.

For instance, last October, California Governor Gray Davis signed the “Toxic Mold Protection Act.” Among other things, it requires the creation of a task force to establish mold PELs for indoor environments. It also requires written disclosure of the presence of mold in excess of PELs from sellers or lessors of residential, commercial, or industrial properties.

On the national front, John Conyers, Jr. (D-OH) recently introduced HR 5040 (or the Melina Bill). Also known as the “United States Toxic Mold Safety and Protection Act of 2002,” this bill focuses primarily on residential construction and contains the following mandates:

- Research on the health effects of mold
- Professional standards for mold abatement
- Changes in construction methods and materials
- Mold inspections for property transfers
- Creation of a federal insurance pool

You can be sure that other states (as well as non-residential contractors) will be watching to see how Congress decides to deal with the “toxic” mold issue. (Two Web sites that follow legislative issues regarding mold are www.moldupdate.com and www.toxic-mold-tort-news-online.com.)

The Real Problem Is Water

Although mold has been around for centuries, some believe it has the potential to be one of the most prolific environmental problems of our times.

Most contractors will agree, however, that the real problem isn't the mold: The real problem is water. Prevent water from coming in and condensation from occurring, and the mold problem is solved.

That simple, yet that hard.

WHO'S RESPONSIBLE?

Both fungal and bacterial microbiological contamination usually result from either water entering a building's envelope or high relative humidity inside a building. Typical entryways include leaking exteriors, sewage backups, and improperly sized air-conditioning units that don't remove enough humidity from the air during the cooling process.

Industry experts are in agreement that the owner, contractor, and A/E firm must all share in the responsibility or liability associated with “wet buildings.” For instance:

- Owners may be held liable as a result of poor operation and/or maintenance of the building.
- A/E firms can be held liable for:
 - Designing faulty HVAC-systems
 - Failing to consider the impact of local climates on the building envelope
 - Specifying materials that restrict the building's ability to “breathe,” such as certain types of paint as opposed to vinyl sidings
- Contractors can subject themselves to liability in many ways, including:
 - Incorrectly installing the HVAC system
 - Exposing construction materials to moisture during the construction process

This actually happened to a contractor in Washington, D.C. Drywall was exposed to water during the construction of a 10,000-square-foot day-care center for children of Senate employees. *Stachybotrys* mold was later found growing on the sheathing inside the building. The remediation efforts (which included replacing the contaminated components) only took 2-3 weeks; however, this delayed the project for more than a year.

ONE OTHER CONCERN

In addition to the factors already mentioned, inadequate installation of exterior insulated finish systems (EIFS) can cause a contractor headaches, such as in the previously mentioned case of the Martin County Courthouse in Florida.



Fungal growth was found inside the building in the early 1990s. The building had a leaking EIFS on the upper two of four levels. Water penetrated the building envelope and caused substantial mold growth.

It cost about \$13 million to erect the building in the late 1980s. Costs for remediation and reconstruction in the mid-1990s were nearly \$26 million, and included rent for relocated occupants, legal fees, and a built-out fourth floor.

PLENTY OF PROBLEMS, NO REMEDIAL STANDARDS

In the early 1990s, the Business Council on Indoor Air conducted a study of 695 commercial buildings. The study revealed that 35% of these commercial buildings had mold/mildew and fungal growth.

That was over 10 years ago. Unfortunately, after more than a decade, there are guidelines produced by the EPA and various states, *but there are no national industry standards for remediating microbiological contamination*, making this a very controversial topic among experts in the field. So, how can contractors protect themselves?

An Ounce of Prevention ...

There are ways of controlling mold growth. Some may sound simple, but are really complex. ("Keep the building dry" falls in this category.) The following list of suggestions is not exhaustive, but it's a start.

1) INCREASE AWARENESS

Recognize the fact that mold and fungal growth is an issue and train employees in this particular area. Work with your entire organization to develop mold awareness programs – not unlike the lead- and asbestos-awareness programs used throughout the industry.

Also, it makes sense to engage the expertise of an environmental firm or certified industrial hygienist (CIH) with experience in this area.

2) DEVELOP PREVENTION PROGRAMS

Prevention programs should be developed to educate project and building owners on both mold issues and on proper

maintenance of the structure. These programs should include regular mold/mildew inspections for visible signs of mold, moisture, leaks, spills, etc. on walls, ceilings, bathrooms, pipes, basements, mechanical rooms, etc.

In addition, the programs need to address response techniques. For example, in the event that concentrations of mold are found, who is responsible for clean up? How will smaller "patches" of mold be handled? What different steps are necessary for hard vs. textured surfaces?

3) IMPROVE QA/QC

Contractors should review their current quality assurance/quality control (QA/QC) programs. (If none exist, you know where you have to start!)

Upper management should recognize the importance of QA/QC and the impact such programs have on the bottom line – both positive and negative.

These programs should detail how the organization will strictly follow each project's plans or specifications, along with containing strict guidelines for changes to the "as-builts." Programs like this will ensure that the design professionals are signing off on any changes that can be remotely traced back to water intrusion, and that the entire process is documented.

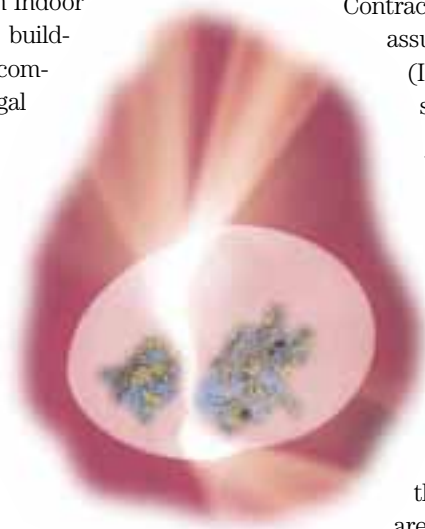
Along those same lines, establish a peer review process of the mechanical systems throughout each building, as well as constructability reviews on every building's envelope.

Some building owners and contractors are even using *infrared imaging* to locate warm-water areas in the building envelope. This can be an effective way to catch water before it creates conditions that are conducive to mold growth.

4) UNDERSTAND HOW SYSTEMS INTERACT

Review how various systems interact within each building and how they are affected by the climatological zones in which the building is located. This is especially important when deciding on the placement of vapor retarders and drainage planes.

For example, considering both the different hydrothermal and rain zones in the U.S., there could be a wide variety of



permutations of a building's exterior. Couple that with the possibility that architects may only have to comply with a single building code, and the stage is set for water problems.

5) STORE MATERIALS PROPERLY

When it comes to construction materials, proper storage or timely delivery is a must to prevent water damage or moisture from accumulating on those materials.

It is crucial to protect lumber and drywall from the elements so damp or moist materials are not used in the building process. And, it is just as critical to ensure that construction sequencing allows adequate time for the building to dry before it is completely enclosed.

6) USE THE RIGHT PRODUCTS

Consideration should be given to the types of products that are being used on the jobsite. There are some, including paint and caulk, that retard or even prevent mildew/mold growth. Investigate the availability and cost associated with such products to see if they can be incorporated into your company's projects.

7) STRUCTURE CONTRACTS CORRECTLY

When it comes to construction contracts, two major points need to be made:

First, in the event mold is currently present on a retro-fit, demolition, or any other project, the contractor should present the owner with an *environmental indemnity*, which essentially holds the contractor harmless in the event lawsuits ensue as a result of the existing mold. The indemnity is only as good as the financial strength of the indemnitor, but it can be a solid first line of defense.

Second, the contract should establish who will perform mold remediation (or any environmental work) when it arises. The contract should spell out whether the contractor or the owner is responsible for the abatement and the hiring of a qualified subcontractor.

Note: In today's environment, it is prudent risk management for contractors to include these two points in all contracts, regardless of the known presence of mold.

8) QUALIFY SUBCONTRACTORS

In the event your company is directly subcontracting with a mold abatement firm, first double-check its credentials. Mold abatement presents tremendous revenue opportunities; however, any firm with a Web site can claim it has the experience necessary to do the work.

Don't be too sure. Request Statements of Qualification (SOQ), project experience, and a "mold training certificate" indicating the firm can perform the work. (To get a feel for the magnitude of this issue, try searching for "mold abatement" on the Internet – you'll be amazed at the number of responses!)

The Insurance Dilemma

The insurance industry has also seen its share of mold-related problems. Experts estimate that insurance companies paid out over \$600 million in mold-related claims in 2001, and the 2002 numbers will be even more staggering.

So, what's the dilemma? Insurance companies are in business to pay claims, and it appears they are paying for mold. But, that's today, and change is on the horizon.

GENERAL LIABILITY INSURANCE POLICIES

As we all know, GL policies contain pollution exclusions. Some of these exclusions are "absolute," providing limited pollution coverage; some are "total," attempting to exclude all pollution exposures; and some fall into the category of "manuscripted" exclusions, which are developed by individual insurance carriers and offer fragmented coverage with time-sensitive reporting provisions.

The Definition Determines the Coverage

The exclusions are actually secondary in determining whether or not mold coverage exists. In most GL policies, the definition of the word "pollutant" determines if mold is a pollutant and if coverage exists. Here is a typical definition:

Pollutants mean any solid, liquid, gaseous, or thermal irritant or contaminant (including smoke, vapor, soot, fumes, acids, alkalis, chemicals and waste). Waste includes materials to be recycled, reconditioned, or reclaimed.





...INSURANCE COMPANIES paid out over \$600 million in **MOLD-RELATED CLAIMS** in 2001... the 2002 NUMBERS will be even more STAGGERING.

Is it any wonder that, with little or no case law, courts and carriers are having a tough time determining whether or not mold is considered a “pollutant” under the GL policy?

What’s Happening Now

Some carriers are denying coverage, saying they never intended to provide coverage for mold because it is a pollutant. Others are paying mold claims as a subsequent damage resulting from water intrusion or construction defects. And, others are applying sub-limits and paying for the claims, but substantially reducing their payout.

What’s Likely to Happen

The tide appears to be turning: *GL carriers appear to be trending toward excluding mold specifically (with a “clarifying endorsement”) and pushing mold claims onto pollution liability policies.*

This is partially supported by the fact that nearly every state insurance department has seen, approved, or disapproved a mold or microbial-matter exclusion. These exclusions will most likely be seen when policies renew, and the likelihood of “buying back” the coverage is slim. But, what about existing GL policies that are not “clarified?”

Determining Factors

Three factors will come into play when determining coverage under an unmodified GL policy:

- The definition of “pollutant”
- The state in which the entity submitting the claim resides
- The pollution exclusion

If the definition of pollutant includes “solid irritant,” the chances are good that mold will fall under the definition, if the “pollutant” was “released, dispersed, discharged, etc.”

The states will also play a major role in determining coverage. With no case law, courts will refer to similar cases with such constituents as lead, asbestos, and carbon monoxide.

One issue that comes into play by the courts having to rely on similar case law is “traditional environmental pollution.” The debate here centers on whether or not the insured is in the business of environmental services.

States are usually split on this issue. Some will only apply the pollution exclusion if the insured is performing environmental services; others will read the policy in plain terms, applying the exclusion regardless of the insured’s type of business.

Guessing the outcome of future cases based on other constituent cases is comparable to betting at the track. Since virtually no mold case law exists, there is no way to accurately and definitively predict how mold claims under a GL policy will be serviced.

ENVIRONMENTAL LIABILITY INSURANCE POLICIES

The environmental insurance marketplace is taking an approach similar to GL carriers, which is to exclude coverage via the “clarifying endorsement.” However, under unendorsed policies, it would probably be difficult for the carrier to decline mold claims. Therefore, if the policy is unmodified, mold is probably covered.

Note: Any company that believes it has coverage for mold under its pollution policy should get *clarification in writing* from the carrier as to the kind of mold coverage it has.

Unlike GL carriers, environmental carriers will provide an opportunity for contractors and owners to buy back coverage, based on four major factors:

- Mold awareness programs

In a recent CFMA survey, mold was the most frequently mentioned new insurance policy exclusion at 29%, followed by EIFS at 18%.

According to the Web site www.environmental-law.net, one reason for the proliferation of mold lawsuits is the use of cheaper building materials (such as plywood or plasterboard), which are more prone to breed molds when wet.

- Mold prevention programs
- Loss history relative to mold and water intrusion or damage
- The type of services performed

Be Prepared

If your company is pursuing mold coverage or has a pollution policy slated for renewal, you can be sure questions will be asked relative to these factors. It would be wise to proactively establish such programs, rather than have this come as a recommendation from your insurance carrier.

Still, even with the proper programs in place, carriers may sub-limit mold coverage, providing a cap of \$25,000 or \$1,000,000 for mold, regardless of the limit of liability shown on the declarations page of the policy. They may also apply a higher deductible, apply some type of co-insurance clause, or limit coverage to just property damage.

Also, if mold coverage is provided under the contractor's pollution liability (CPL) policy, chances are the coverage will be *claims-made*, as opposed to the occurrence-based coverage that has become prevalent in recent years. There is nothing wrong with claims-made coverage as long as it is continually purchased. And remember: Everything is variable, depending on the carrier.

Who's the Biggest Risk?

Right now, in the eyes of insurance carriers, mechanical/HVAC contractors are among those with the highest risk, since they are responsible for the built mechanical systems.

However, both non-residential and residential builders/developers also qualify as high-risk contractors because they are responsible for their buildings' envelopes. And, mold coverage for contractors that apply EIFS or synthetic stucco is practically non-existent. Carriers are too nervous about the issue.

In other words, regardless of the quality of a company's mold awareness and prevention programs, depending on the project, insurance coverage for mold may not even be an option.

So, Where Is the Gold?

Well, we're back where we started. If, in fact, "Mold is gold," the question is, "For whom?"

It's *not* the people who have lost their homes or their health.

It's *not* the insurance companies that never intended to cover losses related to mold, yet are paying out millions of dollars in claims.

It's *not* the contractors, who increasingly are caught in the middle and being squeezed from all sides.

One could easily choose the attorneys, who win their clients thousands, hundreds of thousands, and even millions of dollars in settlements, and then take their 20%. But, if not for them, who would help the seriously and wrongfully injured?

The answers and solutions to mold-related questions and issues will, no doubt, be much clearer a few years from now. By then, case law will be established and we'll know much more about the toxicological effects of mold on humans.

Until then, remember to keep things dry... **BP**

JEFF SLIVKA is Director of Environmental Business for Gallagher Environmental Risk & Insurance in King of Prussia, Pennsylvania.

Formerly Vice President of the Engineering & Construction Business Unit of XL Environmental (formerly ECS, Inc.), Jeff has more than 13 years' experience in environmental insurance and risk management issues specific to the construction industry.

Jeff holds a BS in Geology from Bloomsburg University in Bloomsburg, Pennsylvania, as well as an Associate in Risk Management (ARM) from the Insurance Institute of America.

A speaker on environmental insurance issues for various industries, he has authored many articles, including a 1996 article on environmental liability for *CFMA Building Profits*. Jeff is a member of AGC and serves on AGC's National Risk Management Committee.

Phone: 610-768-8007
E-Mail: jeff_slivka@ajg.com
Web Site: www.ajg.com

Endnotes

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