

## **Mold: A Growth Industry**

**By Michael Majchrzak, P.E., G.E.**

What's everywhere, organic, likes water and air, and presents environmental consultants with the newest environmental concern since asbestos? That's right, mold, as shown by a dramatic increase in litigation.

Mold has joined the ranks of asbestos, MTBE, and other contaminants as the newest contaminant the environmental consulting industry is facing. Plus, it's a potential contaminant that can easily reappear with the reoccurrence of water intrusion and the right growth conditions!

Newspapers are full of articles describing families affected by mold in their homes. There's no clear scientific evidence to link mold exposure and negative health effects for any particular age, group, sex, or exposure level. Mold does not discriminate between rich or poor nor young and old.

It has destroyed million-dollar homes of celebrities like Erin Brokovich and Ed McMann, and forced the relocation of families living in HUD subsidized housing. The legal industry has responded by filing personal claims suits blaming mold for client illnesses and property damage. In this legal feeding frenzy, plaintiffs' favorite food is insurance companies, developers, property management firms, contractors, and engineering consultants for negligence and failure to act.

What allows the legal industry to have such an appetite? It's the absence of regulatory guides coupled with each individual's immune system sensitivity to mold. Because there are no prescribed regulations that specify exposure or dosing levels, no exposure limits have been developed. Without exposure limits it's easier to make a claim and pursue legal action based on an individuals' sensitivities.

### **The Opportunity**

But while mold is a problem to some, are there business opportunities for environmental and other consultants, while keeping risk under control? Definitely! In fact, with the environmental consulting industry experiencing only 2 to 3 percent growth, mold presents an opportunity for this industry to increase revenues in a marketplace that has been stagnant.

Environmental consultants typically inspect, sample, test, assess, investigate, oversee, and provide recommendations. Consultants identify causation, qualify and quantify the absence or presence of contaminants, develop corrective measures, and provide oversight monitoring during and after corrective measures.

But environmental consultants are not medical experts! So we are not qualified to render recommendations associated with human health or illnesses associated with mold and should, at all times, avoid inquiries regarding these matters. In addition, we, and our clients, need to recognize that with the proper conditions, mold can grow back within 72 hours. Therefore our assessments are limited to the specific time the work is being performed.

Other consultants can also provide investigative data in mold evaluations. Geotechnical engineers can be involved to assess underground water sources, civil engineers to assessing adequate drainage, material engineers to evaluate appropriate materials, and special inspection services to assist during mitigation.

So, where are the business opportunities? Any place where there is standing water. Clients can be developers, property managers, insurance companies, homeowners, attorneys, commercial properties owners, and contractors.

### **Regulatory Oversight**

Our clients and potential new clients cannot avoid addressing mold. Several states, including California, Texas, and New York, have introduced legislation to address the growing concern over mold.

The most extensive legislation is the Toxic Mold Protection Act (SB 732) which requires the California Department of Health Services (DHS) to consider the feasibility of adopting permissible exposure limits (PELs) to molds in indoor environments. If deemed feasible, the DHS must adopt specific regulations to protect the public health from toxic mold.

In the process of adopting specific regulations, this law requires that the DHS conduct studies, consider specific delineated criteria, and consult with professional and medical experts to arrive at PELs to mold that will protect the public health and avert adverse health risks to a subgroup that is a meaningful portion of the general population.

This law is significant because it also requires that any person who sells or rents residential real property, or sells commercial property, must provide a written disclosure to the potential buyer or renter. The disclosure must include the presence and location of mold-containing or mold-infested construction materials in the building, heating, ventilation, and HVAC system, or surrounding environments, as well as the potential health risks that may result from exposure to mold.

Although there are no prescribed regulations that specify exposure or dosing levels, there are general guidelines or protocols that aid in our assessments of mold. Some of these include:

- ❑ American Industrial Hygiene Association “Field Guide for the Determination of Biological Contaminants”
- ❑ New York City “Guidelines on Assessment and Remediation of Fungi in Indoor Environments”
- ❑ Canadian Guidelines “Fungal Contamination in Public Buildings: A Guide to Recognition and Management”
- ❑ USEPA Guidelines “Mold Remediation in Schools and Commercial Buildings”
- ❑ ACGIH Guideline “Bioaerosols-Assessment and Control”
- ❑ ACGIH Guideline “Field guide for the Determination of Biological Contaminants in Environmental Samples”

- ❑ “Institute of Inspection, Cleaning and Restoration Certification Standards and Reference Guide for Professional Water Damage Restoration”
- ❑ National Air Duct Cleaners Association, General Specifications for the Cleaning of Commercial HVAC Systems

### **Causative Factors**

In approaching mold, we must acknowledge that mold exists everywhere. Most of us ingest mold every day. And some mold even tastes good. So while there are good molds that provide us with lifesaving medicines and tasty beer and cheese, a small number can be extremely toxic and even deadly.

Mold cannot be eliminated. As consultants, we should not be evaluating the health risks of different mold types and concentrations. Consultants should approach the assessment by first comparing the presence and concentration of mold within the building environment with the ambient environment surrounding the building, and then locating the cause. The ambient environment surrounding the building will most likely contain mold. However, due to wind, atmospheric conditions, and environmental effects, the impact to humans are generally insignificant.

When outside environmental microorganisms invade our indoor habitat and find favorable conditions due to flooding, water intrusion, or a defective HVAC system, abnormal health problems can and often do emerge. This is especially true for newer buildings that are required by governmental codes to be more energy efficient or “tight

In most cases, the cause for the growth of mold is water. Uncontrolled moisture is the most prevalent cause of building deterioration, and it leads ultimately to the destruction of materials, finishes, and eventually structural components. Environmental moisture can be controlled to provide the levels of moisture necessary for human comfort as well as longevity of building materials and furnishings.

Not only do HVAC systems control heating and cooling of buildings, but the systems also regulate the amount of moisture in the building. The challenge to building owners and building professionals is to understand and manage the patterns of moisture movement, but not eliminate it.

There is never a single answer to a moisture problem. Diagnosis and treatment will differ depending on where the building is located, climatic and soil conditions, groundwater effects, and local building construction practices.

Diagnosing and treating the cause of moisture problems requires looking at both the localized damage and understanding the performance of the entire building and site. Moisture is notorious for traveling far from the source. And moisture movement within concealed areas of buildings makes accurate diagnosis of the source and path difficult.

Obvious deficiencies, such as broken pipes, clogged gutters, or cracked surfaces should always be corrected promptly. For more complicated problems, several months of evaluation could be required to complete a full diagnosis.

### **How To Start**

*So what does it take to do Mold? There are no federal regulations covering professional indoor-air services (with the exception of asbestos, lead or radon). Some professional organizations, such as the American Board of Industrial Hygiene (ABIH) offer certifications, but certification is not legally required. Start with an Industrial Hygienist. Most have college degrees in engineering or the natural sciences, supplemented by specialized Industrial Hygiene training. Since industrial hygienists are trained to evaluate environment contamination investigations. In addition, because they have fundamental training in ventilation engineering, environmental health, toxicology and microbiology, they can assist in determining when and what input from other professions would be most beneficial.*

### **Risk Management**

Management of risk is essential if you provide mold services. Environmental consulting liabilities associated with mold can be adequately managed. Procedures, protocols, methodologies, and strategies used in conducting specialty mold services are some of the keys environmental consultants should use to manage legal liabilities.

Only qualified and experienced individuals should be involved in providing specialty mold services. Environmental consultants can manage their liabilities by preparing concise proposal and reports that explain the assessment or characterization strategies (typically, based on a phased approach), describe the methodologies, procedures and protocols used, present only the information generated from the services rendered, and qualify the findings. Communication with our clients about the limit of our services is essential.

Whether they know it or not, even your current clients have already being impacted by mold, and they are looking for responsive consultants to assist them. And there are many new ones that will soon be impacted by the new regulations.

So if you have the necessary professional qualifications, recognize the risks involved, and implement effective risk mitigation controls, mold may represent a business opportunity for you. But you'll need to be constantly aware of the evolving regulatory framework for these services to be certain you are meeting the "standard of care" in the locale of your work.

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