

MOLD 101: AN OVERVIEW

In the last two years, a wave of multimillion-dollar verdicts, new legislation and media attention have portrayed mold as the next toxic tort. Building owners, builders, suppliers, and occupants have become familiar with the hazards and exposures associated with mold. This paper provides a summary overview of the basic composition of mold and conditions conducive to mold growth, common claims and parties involved in mold litigation, practical strategies for addressing and reducing mold infestation, and available insurance coverage for mold claims.

I. SITUATIONS LEADING TO A CLAIM FOR MOLD CONTAMINATION

A. What is Mold?

When most people think of mold, they envision green dusty clumps on stale bread or black spots on air conditioning vents. However, mold can appear on and inside walls, on ceilings, in air ducts, and on other structures in a variety of colors. As a microscopic organism, mold only becomes visible when numerous individual spores have accumulated. Mold spores exist virtually everywhere. Since they travel easily through the air, people and animals frequently transport mold spores from the outside environment into their homes or offices, commencing colonization. Spores can multiply by millions in just a few days. Once distributed, mold spores can lie dormant for extensive periods awaiting the ideal conditions to colonize an area.

B. Ideal Conditions for Mold Colonization

Mold can proliferate in a range of environmental conditions; however, certain stimuli accelerate mold growth. First and foremost, the presence of water or moisture in an enclosed area induces mold colonization. Controlling moisture and humidity levels is vital to preventing mold colonization. Second, mold growth peaks within a temperature range of 40 to 100 degrees Fahrenheit, and unfortunately most buildings are climate controlled to temperatures within this range. Finally, like other forms of fungi, molds live off of carbon molecules contained in plant and animal matter, including wood and other organic building materials. Therefore, mold species and other fungi flourish on water-damaged building materials.

While mold can colonize in any number of locations within a building, certain areas provide fertile grounds for infestation. Bathrooms and kitchens, because of their water sources, tend to provide dank climates perfect for mold colonization. Mold also proliferates in basements and other areas that experience repeated flooding, standing water, or excessive moisture conditions. Other conditions that stimulate mold growth include areas with elevated carbon dioxide levels, sewer systems, and areas with water flowing or dripping from above.

HVAC systems and air-conditioning units also constitute sources of mold contamination. While air conditioning units remove moisture from the air, the moisture returns to the air ducts and condenses, creating the perfect environment for mold growth: damp, cool and dark. Additionally, once colonies form in the ducts, the airflow carries the mold spores around the building, allowing for human exposure even in areas without significant mold growth.

Each of these conditions can initiate or increase mold colonization and provide the potential to adversely impact human health.

C. Health Effects Resulting from Mold Exposure

All molds have the potential to cause adverse health effects in humans. Immense variation exists among the hundreds of thousands of mold species, leading to a myriad of health impacts caused by exposure to molds. Molds adversely affect human health via two pathways: (1) an immunological reaction to the mold spores themselves, and (2) a reaction to toxins released by mold colonies. Some molds, like *Stachybotrys chartarum*, release mycotoxins that have been linked to white blood cell depletion and lowered immune response in laboratory animals.

Exposure to such mycotoxins affects different humans in drastically different ways, hindering the development of mold exposure standards. Under normal conditions, a few hundred mold spores may exist within a cubic meter; whereas, highly infested areas may contain several thousand mold spores per cubic meter of air. Some individuals experience adverse reactions upon contact with certain species of mold, while others suffer the effects of mold only after prolonged exposure to highly infested areas.

Health effects resulting from mold exposure generally occur in one of three ways: (1) infection, (2) allergic/immunologic reactions, or (3) toxic effects/responses. Infections from mold exposure can develop in numerous parts of the body. For instance, an infection in the throat will cause the coughing and bronchial congestion associated with mold exposure. Skin infections such as dermatitis or rashes are also commonly associated with mold contact. Allergic/immunologic reactions can cause a variety of symptoms including watery eyes, runny nose, sneezing, itching, coughing, nasal congestion, wheezing/asthma, headache or fatigue. The most severe health effects caused by mold occur when exposure reaches toxic levels in organs leading to conditions such as pulmonary hemorrhage, hypersensitivity pneumonitis (permanent loss of lung capacity and extreme sensitivity to exposure), histoplasmosis, new-onset asthma and Legionella. Many of these conditions tend to be permanent.

Generally, physicians categorize mold-related illnesses as either "Sick Building Syndrome" or "Building Related Illness." Individuals with generalized symptoms such as headaches, dizziness, dermatitis, fatigue, etc. are diagnosed with "Sick Building Syndrome," while those persons with symptoms that qualify as a case definable disease, such as Legionella, hypersensitivity pneumonitis or new onset asthma have a "Building Related Illness."

A significant issue exists as to which, if any, consequences of prolonged exposure to mold are permanent. If health effects resulting from exposure to mold prove temporary, the legal and financial liabilities arising from such injuries and infirmities are not likely to be of great significance. However, if the health effects are severe and permanent in nature, liabilities from such exposure can be substantial. Permanent health effects, like new-onset asthma and hypersensitivity pneumonitis, constitute a permanent disability and can give rise to substantial damages for health care costs and loss of income.

Historically, a divergence of opinion exists as to whether the consequences from prolonged mold exposure have long lasting effects. Currently, general opinion supports the claim that health consequences arising from prolonged mold exposure are merely temporary in nature and should subside in the absence of mold. On the other hand, developing evidence points to the existence of permanent health deficits linked with extended mold exposure. These discrepancies will be clarified as physicians and medical researchers continue to analyze the effects of mold exposure on human health.

While numerous patients and physicians firmly espouse the notion that mold exposure directly caused the symptoms described above, many of these links lack scientific proof of direct causation. A lack of scientific literature and studies on the effects of mold makes the epidemiological effects of mold exposure questionable at best. An additional obstacle facing physicians studying the effects of mold on humans is the great variety of responses among different individuals to the same mold exposure. This variation also makes establishing mold exposure standards extremely challenging. In turn, this lack of standards places a heavy burden upon builders, developers, and building owners to determine whether mold contamination exists, and if it presents a health risk for building occupants.

II. LEGAL EXPOSURE

A. The Recent Rise in Mold Litigation

The recent dramatic increase in mold litigation has prompted some to label mold as the next asbestos, a toxic tort with enormous implications for the insurance and construction industries. The high dollar verdicts against insurance companies, contractors, property managers, building owners, building product suppliers and even local governments involving mold, as well as new mold legislation and regulations in California, Maryland and Texas, have dramatized the financial consequences of mold infestation.

The surge in mold litigation does share some similarities with the asbestos litigation of the 1980s. Both asbestos and mold claims involve sensational press, sympathetic plaintiffs, reactive lawmakers, defendants with deep pockets, a proliferation of overnight experts, and a mobilized plaintiffs bar. However, there are several significant differences between mold and other toxic torts. There is no re-appearing culpable defendant in the present mold litigation. At this time, many mold claims alleging personal injury lack strong evidence of causation between exposure and disease. Most unlike asbestos claims, potential defendants have an opportunity to limit mold claims with pro-active steps to reduce the likelihood of water damage and eradicate excess moisture.

Most mold litigation is construction related. The infestation of mold can severely damage a building and cause bodily injury to its occupants. When this occurs, homeowners, renters and office workers may sue building owners, builders, contractors, developers, architects and insurance companies in an attempt to assign blame.

To manage mold litigation cost effectively, one must understand construction defect law and regulations, toxic tort law, medical and scientific issues associated with mold, the

construction industry, and the community in which the claim will be resolved (i.e., public perception, potential jury pool, and plaintiffs' bar).

Mold-related construction defect litigation takes many forms. Plaintiffs in indoor air quality suits may sue any entity that manufactures, constructs, designs, maintains or insures a structure where the plaintiff spends time (home or office). The plaintiffs typically claim exposure to a number of toxins, including lead, asbestos, silica, fibers, dust, some pesticides, and mold. The basis of the lawsuit is that exposure to a combination of these things has made the plaintiffs sick. In addition to personal injury claims, structures infested with mold obviously give rise to claims for property damage.

Before any plaintiff can successfully recover against a defendant, it must demonstrate causation between the defendant's act (or, in some cases, omission) and the plaintiff's injury or damage. Although the causal relationship between mold and many personal injuries is unclear, it is clear that construction and product defects may lead to water damage. Water damage is a cause of mold infestation. For this reason, construction litigation provides a convenient way to prove causation between the defendant's act and resulting property damage, leaving the plaintiffs with only the causal hurdle of whether a personal injury (i.e., illness) was caused by mold exposure.

B. Common Claims in Mold Litigation

There are a variety of legal theories that a plaintiff may allege in mold litigation. This section will highlight leading theories of recovery in mold lawsuits.

1. Negligence

The most commonly asserted claim in mold-related construction litigation and indoor air quality litigation is negligence. In a negligence claim, the plaintiff argues that the defendant failed to exercise a reasonable degree of care in its work and, as a result of the defendant's lack of care, the plaintiff suffered a harm. In mold cases, a plaintiff may allege that the defendant failed to maintain a safe environment within a structure, failed to properly install, operate or maintain the HVAC system, or failed to monitor indoor air quality. In addition, plaintiffs may sue for negligent selection or supervision of construction professionals (from contractors to HVAC installers), negligent supervision of other tenants, or negligent design of a structure.

Generally, courts hold developers, contractors, architects and others to the degree of care that is ordinarily exhibited by others in the same profession. As a defense, a defendant may offer proof of compliance with applicable laws, regulations and other industry standards. However, such compliance is not an absolute defense.

2. Strict liability

Strict liability claims are common in products liability litigation and environmental litigation. In mold cases, product manufacturers are subject to strict liability for the manufacture of a defective product. For example, a manufacturer of leaking pipes that introduce moisture to a structure would be liable for its failure.

Plaintiffs may also argue that the developer or general contractor of a building sold a product in a defective condition that was unreasonably dangerous to the purchaser (the homeowner or commercial building owner) and is therefore strictly liable for damages resulting from the unsafe product. At this time, courts are undecided as to whether a building constitutes a “product.” These claims are most likely to be successful when the plaintiff is an unsophisticated home buyer and the developer or general contractor is involved in the mass production of homes, because the developer or contractor is a repeat seller and is in a better position than the homeowner to evaluate its building materials and construction plans.

3. Breach of contract and related claims

Most building professionals use documents to facilitate and record deals. As is true for any contract, a plaintiff may bring suit based upon contract provisions such as warranty, scope of work, indemnity and any provisions relating to the final product. Plaintiffs typically assert that, by building a structure that is inhabitable due to mold infestation, the defendant breached its warranty obligations. In interpreting warranty clauses, courts focus on the distinction between a warranty for the quality of materials versus a warranty for a specific result (e.g., a completed structure with no defects). A defendant may assert disclaimers, limitations of liability or indemnity as a defense. Resolution of these cases lies in interpreting the contract.

In addition to contract claims, courts may also find implied warranties of habitability, workmanlike construction, and that a building or product is suitable for its intended use. These claims are similar to negligence claims in that the court will focus on a normal standard of care within the building industry, and then determine whether the defendant failed to exercise that level of care.

4. Fraud and misrepresentation

Fraud and misrepresentation claims involve a statement made by a defendant which is relied upon by the plaintiff to the plaintiff’s detriment. In mold cases, a plaintiff buyer might allege that a defendant seller stated that a structure was free of mold damage, when the defendant knew the structure was infested or had no idea if the structure contained mold. Fraud allegations require intent to deceive or gross negligence on the part of the defendant. A claim of misrepresentation may only require negligence, such as making a statement one believes to be true without investigating its veracity. Fraud claims are particularly worrisome for defendants because they carry the possibility of punitive or treble damages.

5. Infliction of emotional distress

In addition to the above claims, plaintiffs may allege negligent or intentional infliction of emotional distress. The plaintiff alleges that the negligence, breach of contract or warranty, fraud, misrepresentation or other tortious conduct by a defendant was extreme and outrageous conduct and caused the plaintiff emotional distress. In mold cases, a plaintiff homeowner might allege that mold infestation is so severe as to disrupt the use, comfort and security that may be reasonably be expected within one’s own home.

C. Defense Strategies for Mold Claims

Defenses to mold claims will vary case by case. However, there are a few “standard” defenses to mold claims that should be considered in any defense strategy. First, a defendant should determine whether any statutes of repose or statutes of limitations apply to the plaintiff’s claim. For example, Georgia’s statute of repose requires a plaintiff to bring an action based on a deficiency in the planning, design, specifications, supervision or observation of construction, or construction of an improvement to real property, within eight years. Georgia imposes a four-year statute of limitations on claims based on damage to property or implied contracts, and a six-year statute of limitations on claims for breach of a written contract. Actions for personal injury must be brought within two years. These statutes limit the timeframe within which a potential defendant faces legal exposure.

In addition to any statutory restrictions on the right to sue, defendants should examine all applicable construction documents for limitations. For example, if a plaintiff’s claim is based upon a building contract, the defendant should assert any exculpatory clauses or limitations of damages within the contract.

D. Damages

There are a variety of damages available to successful plaintiffs in mold litigation. In addition to traditional property damages, courts have acknowledged intangible damages such as stigma damages. Stigma damage is the diminution in property value that results from the stigma of mold infestation. Plaintiffs seeking stigma damages might also seek damages for continued medical screening and monitoring at the site to avoid a future occurrence of contamination. Plaintiffs may also seek damages related to personal injury, such as compensation for medical expenses and for pain and suffering.

Damages may be the difference between the market value of a structure as contracted for and the actual value of the project as built. Damages may also be the cost to bring a structure into compliance with contract specifications. In some cases, mold damage may be so severe that the cost of remediation is greater than the value of the infested structure. In these cases, the difference in market value is a more appropriate measure of damages than the cost of ridding the structure of mold, or the restoration cost.

Defendants should also attempt to reduce the plaintiff’s potential damages. Mold damage can be significantly reduced by prompt attention to excess water. If a plaintiff failed to promptly eliminate excess moisture and address mold contamination, defendants should seek to reduce the plaintiff’s damages for failure to mitigate or failure to provide prompt notice of the problem to the defendant.

III. PRACTICAL CONCERNS AND HANDLING MOLD CONTAMINATION

Mold contamination of a building generally involves four elements: (1) the source, (2) the HVAC system, (3) transport pathways and (4) occupants. Interaction of all four elements allows mold to rapidly spread and proliferate throughout a building. An unremediated source of moisture such as a leak or flooding is a principal cause of continued mold infestation. The HVAC system, as discussed above, provides a cool, dark, damp area for mold colonization, as well as a mode of transporting mold spores to different portions of the building. Transport

pathways, such as hallways, windows and doors, also provide methods of mold spore distribution. Lastly, the occupants of a building frequently transport mold spores throughout the building. Each of these elements contributes to the distribution of mold spores and the recurrence of mold growth in a building having existing conditions suitable for colonization.

A. Methods for Minimizing Mold Contamination

In order to minimize or avoid legal liability associated with mold contamination, building owners should address property issues that could lead to mold contamination quickly and diligently. Controlling humidity and moisture levels is vital to limiting mold proliferation. One method of controlling moisture entails running the air conditioning constantly during humid months. Installing exhaust fans in kitchens and bathrooms alleviates excess moisture and provides ventilation and air exchange. Maintaining indoor humidity below 60 percent, preferably between 30 to 50 percent, also reduces the overall occurrence of mold. Mold resistant paint and mold-killing cleansers, such as chlorine bleach, effectively eliminate existing mold. However, without removing the source of the moisture, mold will return.

If flooding or a leak occurs, the following immediate water removal actions are required:

1. Locate and remedy the source of the incoming water.
2. Determine the extent of the contamination and the water damage.
3. Remove and discard all severely water-damaged materials. Contaminated porous materials should be discarded, if possible.
4. Wet vacuum the flood site and any remaining wet materials.
5. Clean the site and any materials with a detergent water solution, and follow with a HEPA vacuum to eliminate any remaining allergens.

Once these initial responses are complete, consistent monitoring may be required to ensure mold colonization does not occur.

B. Responding to Occupants' Health Complaints

If flooding has occurred or mold contamination is suspected, special attention should be paid to occupants' health complaints. Sensitivity and communication are key to properly responding to such health complaints. All complaints should be documented and evaluated against other similar complaints from individuals occupying similar areas of the building. Occupants complaining of persistent health problems should be referred to a specialist in occupational/environmental medicine or another physician with related training and experience. These specialists possess knowledge of common responses and reactions to mold exposure that are often misdiagnosed by general practitioners. These physicians also employ the latest techniques for allergen identification, such as analyzing blood samples for antibodies to specific mold antigens. While such tests are not suitable for use in a public health or broad-based analysis, they have proven effective at identifying the source of an individual's symptoms.

Individuals with special sensitivities (such as asthma, hypersensitivity pneumonitis, severe allergies, sinusitis, immune suppression including HIV/AIDS, or other chronic inflammatory lung diseases) tend to present greater risks for adverse health impacts resulting from mold exposure. If a mold problem is identified in a building, these individuals may need to be removed to avoid further aggravation of their symptoms. Occupational/environmental physicians should determine whether an individual with special sensitivities should be removed from the area during investigation and remediation of the contamination. Typically, mold contamination does not warrant evacuation of an entire building, unless the colonization and distribution is so widespread as to be inescapable.

Communicating accurate risk information in a timely and comprehensible manner to owners and occupants of a building remains essential in properly handling mold contamination. However to avoid unnecessary concern, mold contamination should be identified and sampled prior to informing occupants of possible health risks.

C. Investigation and Sampling for Mold Contamination

If mold contamination is suspected, building owners should perform a preliminary investigation recording observations indicating mold colonization. Once the owner establishes that mold contamination exists, indoor environmental investigators should take samples using methods selected in light of the preliminary observations and health complaints.

Investigators, performing an Indoor Environmental Quality ("IEQ") Evaluation, take samples using a number of different techniques, depending upon the location of the mold infestation. A typical analysis includes air samples, swab samples and wall cavity air samples. On an initial walk-through, investigators will identify potential bioaerosol sources for sampling. These sources include HVAC system components, building materials demonstrating mold growth or water damage, and areas with above average exposure to water or humidity. Once potential source areas are located, investigators will take air samples using a sampling pump that sucks in air and runs it over agar plates where any mold present in the air can colonize. This sampling technique is non-invasive. Swab samples are taken by running cotton swabs along the inside of the HVAC system, along baseboards, on bathroom floors and other suspected locations and then placing the swab on an agar plate to allow for mold colonization. Investigators can also take samples from inside wall cavities by boring a small (approximately one-quarter inch) diameter hole just above any baseboard and inserting a capped piece of sterile tubing. Once the tubing reaches the interior of the wall cavity, the investigator can insert a rod to dislodge the cap and then attach the tubing to a similar sampling pump described above. This procedure does not cause any permanent damage to the wall.

With each of these sampling techniques it is important for investigators to sample in locations of expected mold contamination, as well as locations where mold is unlikely to exist. Investigators will also typically measure general IEQ parameters, such as temperature, relative humidity, carbon dioxide and carbon monoxide to determine if the conditions conducive for mold propagation exist. Investigators should take photographs of all locations where they took samples and photographs that reflect the general condition of the property. Investigators should also compare samples taken from inside and outside the building, as well as samples taken in complaint areas and non-complaint areas in order to determine if significant differences in the air

populations exist. Laboratories should receive viable samples within twenty-four hours to perform accurate testing. In all sampling measures, strict adherence to proper sampling procedures should be followed to ensure an accurate analysis of the mold species present.

D. Protection Against Mold Exposure

Investigators conducting the mold sampling should wear protective outerwear to prevent repeated exposure to mold spores and toxins. Mold investigators and remediators should be required to wear full-face, powered, air-purifying respirators, protective eye covering, and disposable clothing covering their entire body. This precaution limits any future liability for exposure they encountered in a building.

IV. INSURANCE STATUS OF MOLD CLAIMS

Mold damage may result in claims under a number of different types of insurance policies, depending upon the type of risk insured by the policy. Some insurance policies provide coverage for specific risks enumerated in the policy (e.g., homeowner's policy covers risk of flood or fire damage), while other policies provide coverage for all risks except those specifically excluded within the policy (e.g., property policies and contractor's completed operations policy). Policies that may provide coverage for mold-related claims include homeowner's policies, commercial general liability policies, professional errors and omissions policies, contractor's completed operations policies, environmental insurance policies, and even surety bonds.

Upon receipt of a complaint or other claim, an insured should immediately notify its direct carriers on all policies for which the potential defendant is a primary or secondary insured, to carrier of policies for which the potential defendant is an additional insured, and (if applicable) to carriers of those parties to whom the potential defendant owes an indemnity or defense. In addition to insurance carriers, the potential defendant should also immediately notify all other potentially liable parties (typically every building professional involved in a project, as well as the owner). In addition to the importance of timely notice to receiving insurance coverage, notice is also crucial in mold cases due to mold's status as a living organism that can continue to grow and expand the scope of damages as time passes.

V. CONCLUSION

The full spectrum of mold's impact on human health, toxic tort litigation, insurance coverage and the construction industry remains to be seen. With increased exposure to the dilemmas that arise from mold contamination, mold's impact on each of these areas will become clear. Scientists and public health administrators will work to set exposure standards for different species of mold. Occupational/environmental physicians should create detailed medical protocols for evaluating potential mold exposure claims, and attempt to solidify causation links between contact with mold and specific adverse health effects. Insurance policy drafters and insurance commissions should assess coverage procedures for mold claims and establish new coverage guidelines for claims arising from mold contamination. Courts will determine the extent of legal exposure faced by the construction industry, building owners, local governments, property managers and product designers.

During the interim, the best way to address mold is to prevent mold contamination, act quickly and decisively in circumstances that typically give rise to mold, and be responsive to any health complaints from individuals with potential exposure to mold before any health consequences intensify or become permanent. Preparation and awareness are key factors in winning the battle against mold.