WINNING STRATEGIES FOR LITIGATING A TOXIC MOLD CASE

Materials Prepared From Presentation at:

Litigating Construction Defect Claims
American Conference Institute
June 21 - 22, 2001
Sheraton San Diego Hotel and Marina
San Diego, California

Materials Prepared By:

Shamus P. O'Meara
952.806.0438
SPO@Johnson-Condon.com

Dale O. Thornsjo
952.806.0498
DOT@Johnson-Condon.com

JOHNSON & CONDON, P.A.
7235 OHMS LANE • MINNEAPOLIS, MINNESOTA 55439-2152
TELEPHONE: 952.831.6544 • FACSIMILE: 952.831.1869

Arif Quraishi, CEO

Institute for Environmental Assessment, Inc.
9201 West Broadway, Suite 600
Brooklyn Park, MN 55445
763.315.7900 **F** 800.233.9513
F FAX 763.315.7920
www.indoorairqualityconsulting.com

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* The Authors acknowledge Mr. Mark R. Azman and Mr. Morgan A. Godfrey of Johnson & Condon, P.A. as Co-Authors of these materials. The Presenters also wish to express their appreciation to Ms. Lindsey J. Beck of Johnson & Condon, P.A. for her invaluable contributions to these materials.

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Portions of these materials were presented as part of the session entitled "Winning Strategies for Litigating a Toxic Mold Case: A Multi-Perspective Roundtable" at the "Litigating Construction Defect Claims" seminar sponsored by the American Conference Institute held on June 21, 2001, in San Diego, California.

INTRODUCTION

I. Video Clip.

A. Moldy Schools: Are You Getting Sick?
ABC World News Tonight, April 18, 2001

II. Commentary.

In the past, concern about air quality and how its affects human biology focused primarily on outdoor air pollution. Historically, air quality debates focused on matters such as smog in our cities, and the effects of deforestation caused by acid rain. However, science's ability to detect smaller and more minute levels of materials in air and water, a more focused application of advanced medicine to public health, and a greater acceptance of stricter building and construction standards and codes has shifted air quality discussions from the atmosphere to the air inside the structures where the American public spends as much as 90 percent of its time.[1]

This evolution has given rise to a wide divergence of opinion about how, if at all, indoor air quality impacts public health and property values. Certain advocates contend that people, particularly the young, the old, those who are chemically sensitive, or those who are suffering from asthma or immune deficiency problems, become ill from exposure to indoor air contaminants such as mold (fungi), bacteria, chemicals embedded in construction materials, tobacco, and office and cleaning products. Phrases such as "Sick Building Syndrome" or "Building Related Illness" have been coined to describe the phenomenon of illness due to questionable indoor air quality. Buildings with "lower" indoor air quality are

said to cause occupant absences, a lack of productivity of the persons who otherwise use the structure, and increased health care costs.

Others stress that, while there may be some merit to some of these observations when applied to certain isolated circumstances, any widespread effects are, at best, temporary, and end when the persons involved leave the structure in question. Therefore, the epidemic claimed by some may well be exaggerated, overblown, and driven by incentives unrelated to health. The Attendees today will be privy to a discussion of these divergent views.

Mold is the latest substance of widespread concern in the indoor air quality debate. Mold is naturally occurring and ubiquitous. Mold can occur in buildings as a result of such common events such as an increase in the level of humidity, premature sprinkler activation, and poor construction practices resulting in water infiltration. The mere presence of mold in a building, however, does not necessarily translate into a public health concern. Instead, "heightened" levels of certain types of molds giving off specific mycotoxins in energy efficient buildings have sensitized the public in a way not likely seen since asbestos. Simply put, a more tightly constructed building can result in less air circulation, which, in turn, can increase the incidence of indoor air particulates such as mold.[2]

The mere presence of mold, and specifically certain types of mold, can alter a claim's character from a simple water infiltration claim to one demanding as much in compensation as was expended to construct the building. While other learned colleagues will provide the

Attendees with a Plaintiffs' perspective, these materials will address the Defendants' view of the indoor air quality issues raised by "toxic" mold, and provide some suggestions on how to focus the analysis on insight, not innuendo, and science instead of speculation.

THE SCIENCE AND MEDICINE OF MOLD

I. What is Mold / Fungi?

Fungi are multi-cellular organisms that feed on and decompose organic material. Fungi are very similar to plants in that they are associated with soils. However, fungi belong to their own kingdom. Approximately 70,000 species of fungi have been positively identified including mushrooms, mildew, mold3, and puff balls. Fungi are important to our environment because they decompose dead organic materials to recycle nutrients back into the eco system and help in the production of food, antibiotics, and other chemicals.

Fungi are ubiquitous and can be found in all indoor and outdoor environments, even though the specific types of fungal organisms may vary due to different environmental conditions.

Even though fungi play a positive role in our eco system, they can become a problem due to there potential to cause disease in agricultural products and harm plants, animals, and humans. In addition, depending on environmental conditions, fungi can grow on or in

buildings and building furnishings, and can potentially expose the building occupants to high levels of fungal spores, their bioeffluents and certain mycotoxins.

In most cases, fungal contamination occurs in buildings due to either moisture intrusion or condensation problems in mechanical ventilation systems or building envelopes. Fungi require an organic food source and water to grow and multiply. When fungi are supplied with a carbon source such as glucose, they can synthesize their own proteins, most amino acids, and vitamins if nitrogen and essential minerals are available. Carbon sources for mold/fungi in an indoor environment include skin flakes, paper on sheetrock, fatty acids, soap residue, plants, and food products.

Since buildings contain many organic food sources, moisture control becomes the key factoring preventing and remediating fungal contamination.

II. Types of Mold

While the categories and concentrations of mold in the environment vary by geographical region, some of the more common types include Aspergillus (most common), Alternaria, Bipolaris, Chaetomium, Cladosporium, Fusarium, Penecillium, Paecilomyes, and Stachybotrys.

Aspergillus flavus and Aspergillus parasitcus produce the mycotoxin aflatoxin B_1. Aflatoxin B_1 has been seen in foods, and therefore is found in the human diet. Many foods in several food groups contain some level of aflatoxin B_1(vegetables [peas and corn ears],

starches and grains [bread, rice, grain, sorgum and wheat] and dairy [cheese and milk]). Aflatoxin has been reported as a cause of liver cancer. However, these strains of Aspergillus are not typically seen in indoor air situations.

Stachybotrys seems to be the mold of greatest concern to public health officials. Stachybotrotoxicosis is the disease resulting from high exposures to this type of mold. Early Stachybotrotoxicosis was reported in the 1930s in Eastern Europe and Russia in association with hemorrhaging horses. Straw containing mold also reportedly caused skin rashes, bloody noses, and breathing problems for farm workers. Recent indoor air studies involving Stachybotrys have failed to validly and scientifically prove that mere exposure to this strain of mold actually causes human illness. Stachybotrys is black and slimy in texture, and requires an ongoing water source, or extremely high humidity, to grow. Stachybotrys does not usually become airborne because of its texture; however, if detected in the air, its detection may mean that the strain has been present for some time.

Ironically, fungi can produce various volatile organic compounds (VOCs) such as alcohols, ketones, hydrocarbons and aromatics. These microbial VOCs, (MVOCs) often have distinct musty "mold" odors. However, mere odor does not mean that the exposure is *per se* toxic.

III. How Does Fungal Growth Occur?

For fungal growth to occur on building materials, a number of factors have to be in place. These include:

- Appropriate temperature and oxygen (same as humans)
- Nutrient source (sheetrock, ceiling tiles, skin flakes, etc.)
- Moisture

Once fungal growth occurs, the spores can be easily disseminated into the indoor environment either by physical disturbance or through natural air currents. Because fungi can grow on substances with very low moisture content, uncontrolled removal of fungal contamination can lead to additional growth and further bioamplification.

IV. Is Mold Toxic? What Does Mold Do to the Body?

The phenomenon of fungal exposure and health effects is not new. In the past, health concerns related to fungal exposures has been limited to specific occupations/exposure situations. A number of hypersensitivity diseases have been linked to exposure to specific fungal organisms. Examples include Farmers Lung (Aspergillus Umbrosus/Fumigatus), Maize Grain Hypersensitivity (Aspergillus Flavus), and Woodworkers Lung (Alternaria).

Common allergic diseases caused or exacerbated by fungal exposure include allergic rhinitis, sinusitis, asthma, and allergic skin diseases. Even though significant anecdotal information exists linking non-occupational exposure to fungal organisms and health

problems, purified allergens have only been recovered from very few fungi, and these have not been fully characterized. Due to these medical/scientific limitations, it is impossible to draw a causal link between exposure and health problems.

Apart from irritation and allergic symptom/disease, infection can occur from exposure to certain fungal organisms. Even though infection is not a common occurrence, except in certain highly susceptible populations, it is important to note that a number of fungi have been associated with infectious diseases (Histoplasmosis, Aspergillosis).

Toxic reaction can also be a concern with exposure to certain fungi. Many mycotoxins have been identified to be harmful to humans and animals when inhaled, ingested, or when they come into skin contact. Mycotoxins are usually nonvolatile, and exposure mainly occurs with exposure to fungal spores containing mycotoxins. A wide variety of symptoms have been related to toxic effects of fungi and include skin rashes, flu-like symptoms, headaches, fatigue, and central nervous symptom disorders.

Due to the fact that health effects of fungal exposure are dependent on various factors (i.e. type of fungal organisms, the dose, pre-existing medical condition/susceptibility, and concurrent exposures), the simple presence of fungal growth does not entitle a person to compensation or lead to a characterization of a building as damaged. However, fungal growth in a building should be viewed as a potential hazard and appropriate remedial steps implemented.

V. The Dose-Response Relationship

Simply because mold is a "new" issue does not mean that traditional tests of medical reliability should be abandoned. While levels of mycotoxins and molds can be measured with great accuracy in many cases, the mere presence of mycotoxins or molds does not mean that any symptom is, by definition, caused by mold. To date, science has not been able to establish specific threshold levels (with one exception relating to eye and throat irritation) beyond which symptoms or illness will occur. However, it appears that, like many other substances, there is a dose-response relationship between exposure (amount over time) and the body's response. Further, there does not seem to be any correlation between neurological symptoms such as fatigue or inattention and low levels of mold exposure.

PERSONAL INJURY CLAIMS

I. Is the Plaintiff's Environment Toxic: Sick Building Syndrome and Building Related Illness:

Indoor air quality is affected by climate outside of the building, how the building sits on the particular property, the building's architecture and mechanical systems, how the building was built, and the materials and people in the building.[3] The term "Sick Building Syndrome" has been defined by the Environmental Protection Agency (EPA) as describing "situations in which building occupants experience acute health and comfort effects that appear to be linked to time spent in a building, but no specific illness or cause can be

identified."[4] In contrast, the term "Building Related Illness" is defined as "symptoms of diagnosable illness which are identified and can be attributed directly to airborne building contaminants."[5]

II. What is Allegedly Causing the Building to be Sick:

A. Ventilation:

Reduced building ventilation can be a significant precursor to the development and proliferation of an indoor air quality situation involving mold. Two factors, one historic, and one construction-related, seem to interact to make reduced air ventilation almost a precursor to the development of mold, especially when moisture infiltration is not an issue. Each of these factors creates some interesting finger-pointing when a claim is presented.

In the early and mid 1900's, buildings either had no ventilation standards, or the standards were of such a volume that perceived problems were not noticeable. However, just as the national highway speed limit was a victim of the 1973 oil embargo, regulators sought to save energy by reducing ventilation standards in buildings. In addition, other evolving standards called for more airtight buildings. As a practical matter, it was generally thought that the inability to access outside air was a good thing, particularly in cities with air pollution concerns. This did not necessarily turn out to be so.

Construction counsel are familiar with claims arising from deficient heating, ventilating, and air conditioning (HVAC) systems. HVAC deficiencies can be caused by, for example, the system's faulty design or construction, or improper maintenance.

In either event, increased humidity levels can result if the reduced ventilation is either not compensated for by efficiencies in the structure, or addressed in the design, construction or maintenance phases of the building's life. It is these increased moisture levels which promote mold growth.[6]

B. Indoor Chemical Contaminants:

Most commercial and office buildings in use today contain various types of adhesive, carpeting, upholstery, manufactured wood product, copy machine, pesticide, or cleaning agent. Each of these products may contain varying levels of irritants or other contaminants which have no association with mold, but which may be a confounding agent involved with the Plaintiff's sensitivity.

C. Outdoor Chemical Contaminants:

While the entire object of air-tight buildings has been to eliminate the outdoor atmosphere from the structure, there may be certain buildings where outdoor chemical contaminants may play a role in a differential determination of what is possibly causing the Plaintiff's symptoms. Car exhausts, plumbing or septic systems, or nearby noxious

operations can be potential sources of agents which might be causing the Plaintiff's symptoms instead of the mold concentrations in the building.

D. Biological Contaminants (Bioaerosols).

Biological contaminants include not only mold, but bacteria, pollen, and viruses. All of these biological contaminants have the potential to be present in a building. Therefore, when evaluating a building, counsel should consider whether any of these additional contaminants may be a more accurate cause of a Plaintiff's symptoms.

Mold can be found in areas where stagnant water or moisture has accumulated, including ducts, humidifiers, drain pans, false ceilings and behind walls. Damaged walls or ceilings, poorly constructed additions to the building, and leaking or broken pipes can be potential sources for the moisture infiltration.[7]

As noted above, however, the mere presence of mold in an indoor air environment does not mean that liability exists. Mold is found almost everywhere. Except in the most exceptional cases, mold only becomes a health problem if spores enter the air, and are then inhaled in massive numbers.[8] This is the dose-response relationship.

III. Is There a Sufficient Level of Mold Exposure to Cause the Plaintiff's Condition?

Because science has not been able to establish specific threshold levels beyond which symptoms or illness will occur, Plaintiffs are not able to point to a specific epidemiologic defined level which has been exceeded to show a *prima facie* case of cause and effect. This

leaves Plaintiffs to imply from case studies and animal studies, that there are corresponding threshold levels beyond which will cause sickness. However, these studies are just as suspect in their application to mold cases as they are in other areas of litigation science and medicine. Mycotoxin animal inhalation studies measure acute effects at high exposure levels, and do not therefore logically equate to human low-level exposures. In fact, according to one medical expert, the data from these studies actually show that physiologic mechanisms may be able to address the toxicity if the specific dose involved is administered over a longer length of time than when the same massive dose is administered in a single instant.[9] Therefore, these studies actually support the proposition that there is a threshold level for molds which must be exceeded before mold can cause symptoms.

IV. Are People "Sick?"

A. Indicators of Sick Building Syndrome Include:

1. Building occupant complaints of: headaches; eye, nose, or throat irritation; dry cough; dry or itchy skin; dizziness and nausea; difficulty in concentrating; fatigue; and sensitivity to odors.

2. Cause of symptoms is unknown.

3. Most of complainants report relief soon after leaving the building.[10]

B. The Difficulty of Linking Symptoms to a Specific Cause:

Since mold has been escalated in the public's mind as "the" source for illness in building occupants, defense counsel must respond to the "presumption" with a presentation

of all of the more common and likely reasons why the Plaintiff is symptomatic. For example, while in other cases there may not be a doubt that the Plaintiff suffers from a very specific and objective disease process (e.g., cancer, which is not proven to be airborne mold-related), in a mold case, many other elements can be present in a variety of buildings which can be a factor in the Plaintiff's condition.

The playing field for the defense begins to be tipped if numerous individuals complain that a common building in which each spends a significant amount of time is causing all of the occupants to have the same symptomology. Plaintiffs can claim that the building occupants themselves create their own epidemiological cohort from which it can be definitively proven that all are suffering the same illness. In these cases, it is difficult to claim that all of the Claimants are blatantly lying or part of a mass hysteria. However, the subtle peer pressures placed on co-workers can be a source of a sympathetic response, even if unintended.[11]

V. Defense Perspective

From a defense perspective, mold cases:

> "ha[ve] become particularly troublesome because the defendants in these claims are not the chemical companies, who are experienced and well-equipped to deal with such personal injury suits. Rather, defendants include builders, subcontractors, architects, municipalities and homeowner insurers whose attorneys have rarely dealt with toxic injury allegations. Furthermore, the science of these matters is sufficiently convoluted and complex to confuse even the most experienced physicians, most of whom have never heard of mold toxins, and seasoned attorneys. These cases, moreover, are being

> championed by prolific authors whose scientific positions are often extreme, but whose extensive writings and lectures have engendered respect in this relatively new and unpopulated field."[12]

Despite this unfamiliarity, construction counsel can rely upon some of the more traditional defense strategies utilized in the typical construction case to address a mold case. For example, the construction counsel's liability defense investigation undertaken immediately following a construction-related incident also translates nicely into the forensic investigation to determine the cause of a mold condition. This includes (1) acting promptly to investigate the building for sources of mold, and (2) identifying potentially responsible parties for the condition and your client's legal relationship with each party. Then, the construction counsel can take a page from the defense strategy utilized by the toxic exposure defense counsel to (3) develop the "medical defense" to the alleged medical process at issue, and whether this particular Plaintiff's medical condition was actually caused by the mold condition. A common theme in each of these areas is the prompt and efficient retention of the proper expert for each aspect of the case.

A. Building Investigation:

1. Expert Considerations:

Construction counsel are experienced in retaining experts to determine the source of a building defect involved in litigation. Some of these experts are invaluable in the defense of the mold case as well. For example, a mechanical engineer, architect, HVAC contractor,

or plumbing contractor can be invaluable in identifying internal moisture pathways, the construction of the building and its mechanical systems, and whether the work performed by the subcontractor was proper under the circumstances. External pathway and work issues can appropriately be addressed by persons such as an architect, structural engineer, roofer or window expert. Where maintenance was negligent or inadequate, an expert with ties to a building management association such as an American Association of Physical Plant Administrator may be of great assistance to show poor maintenance practices. In addition, experts knowledgeable in damage calculations may be appropriate if the case calls for such an individual.

However, because of the greater likelihood that the alleged source of the "contamination" may not be evident (and may not exist), additional experts may be invaluable to prove that the building (as opposed to the Plaintiff) is not "sick" or "ill" at all. In order to show that toxins are not present or are not an issue, the defense counsel may wish to retain a Certified Industrial Hygienist (CIH) to test the building air to confirm whether molds or other substances are airborne in the first place. The CIH may require the assistance of an Environmental Microbiologist and/or microbiological laboratory to properly identify the mold and/or mycotoxin (if present). If suspect substances are present, the CIH should be able to provide an estimate of the length of time the suspect exposures have been occurring, and at what levels. This information should provide the medical expert with the

foundation needed to show that the particular mold involved is not a source of the Plaintiff's problems, either because the mold is not a cause of the Plaintiff's condition, or that the dose is insufficient to be a cause the Plaintiff's purported biologic response. In a proper case, the CIH may also need to survey some of the building occupants to determine if others have experienced the same symptoms as the Plaintiff.

2. Performing the Building's Mold Assessment:[13]

a. Background.

The American Conference of Governmental Industrial Hygienists (ACGIH) has developed the "Bioaerosols Assessment and Control" document that provides a comprehensive approach to conducting a fungal building assessment. Four basic steps are delineated in the ACGIH protocol and include the following phases:

- Phase I – Data Collection. Gather basic information about the building, including health information regarding potential complaint history of the building as it relates to IAQ problems and history of water intrusion or moisture problems.

- Phase II – Formulation of Theory. Based on the initial data collection, initial theories can be developed to help determine/identify fungal problems, moisture intrusion and health concerns.

- Phase III – Testing of Theory. Site visits, physical evaluation of the building, health surveys and environmental testing are all critical components of a comprehensive assessment. This phase will help the investigator either confirm or reject the theories developed in Phase II. Critical components of this phase include:

- Inspection of heating, ventilation and air conditioning (HVAC) systems to determine if the HVAC systems are a potential source or a pathway for potential exposure.

- Ambient air quality testing may also be valuable at this stage and should include temperature, relative humidity, carbon dioxide and pressure differential between different areas.

b. Fungal Testing.

Testing in many situations is critical for quantitatively documenting the fungal contamination of building products and furnishings. However, before sampling is started, it is important that a plan is developed that identifies the reason for the testing, procedures and type of testing to be conducted, and the quality assurance/quality control procedures to be employed during the entire testing process.

Some of the key factors in ensuring quality testing include:

- Documentation of the environmental conditions during testing.
- Justification/explanation of the type of media to be used for analysis.
- Collection and analysis process, if appropriate, and control samples.
- The specific locations of testing along with the time and date of testing.
- The person/organization responsible for the analysis and their qualifications.
- Analytical methods used for the testing/analysis.
- Standards and guidelines to which the results will be compared.

Following the aforementioned steps will ensure collection of valuable data to help identify and remediate fungal problems.

c. Spoliation Considerations:

While investigating the building, the possible need to remediate the suspected mold should not be ignored. Higher concentrations or different mold species than found outdoors may suggest an excess mold concentration and indicate an internal source of mold growth. If remediation is considered, counsel must address whether evidence will be destroyed as part of the process, as this will raise spoliation issues. There is an inherent conflict between the need to conserve evidence and the need to remediate in a time frame appropriate under the circumstances.

B. Identification of Responsible Parties:

Whether a Plaintiff is actually ill or not, a fair focus on all the issues requires an assessment of what entities or persons should be part of the claim or litigation process. Therefore, just as in more traditional construction cases, an early and comprehensive assessment of potentially liable parties should be performed. Potential parties to consider include those typically considered in construction matters such as the general contractor, project manager, architect, and mechanical or other subcontractors. However, because proper maintenance can be a large issue in mold cases, the owner, building manager,

maintenance contractors, and others associated with the ongoing care of the building should also be considered in assessing fault.

Despite the potential adversarial relationship between Co-Defendants, these parties should not allow their differences to prohibit certain Joint Defense activities also seen in more typical construction cases. Prompt communication with possible Co-Defendants addressing the feasibility of a joint defense on certain issues (at least on the medical issues) and consideration of an informal information exchange could be beneficial in the long run.

C. Investigation of the Plaintiffs:

Here, as in the other areas, the traditional investigation and defense tools utilized by construction counsel can also be utilized in part to determine whether the Plaintiff's claim is valid, and, if so, to what extent. Prompt collection of relevant documents, including school, healthcare and employment records may allow counsel to develop a pre-exposure baseline, and then compare that baseline to the Plaintiff's current alleged conditions or complaints. However, even more so than in the more traditional construction-related injury case, a careful analysis of where, how and under what circumstances the Plaintiff lives will greatly aid in determining whether the Plaintiff's alleged condition is exposure-related, or associated with some other activity such as a recent hobby, a new pet, a new location where the Plaintiff frequents, etc. However, if counsel considers testing alternative locations where the Plaintiff might possibly be exposed to other toxic substances, counsel should be ready

to accept the negative inference that the particular site at issue might be a cause of the Plaintiff's condition if the testing at the alternative site fails to yield elevated mold exposures.

Finally, because the nature of a mold-caused body reaction is generally transient, counsel should consider the use of medical specialists with expertise in fields such as allergy or neuropsychology to determine whether the Plaintiff is actually sensitive to the particular mold at issue, or to prove that the Plaintiff is not cognitively impaired because of mold exposures. Further, counsel should not rule out challenging the Plaintiff's medical expert under the appropriate *Daubert* standard.

PROPERTY DAMAGE CLAIMS

I. Introduction:

The dynamics of mold are very different when the issue addressed is a claim of an injured building as opposed to claims of an injured person. Mold property damage claims are driven more by regulation than medicine. Nonetheless, the financial impact can actually be greater on a building owner or construction entity because of possible coverage ramifications present in property damage matters as compared to the bodily injury fact patterns.

This section summarizes some of the issues which arise in a mold property damage claim. As will be seen, many of the building and liability investigations involved here mirror those performed in the bodily injury context. However, the measure of the damage, whether in a first party or third party context, can be quite different given the requirements involved with evolving mandatory remediation procedures, and the diminution of value faced by a moldy building.

II. Compromise of Building Integrity:

The typical mold property damage case usually begins as a result of moisture infiltration during specific construction or repair projects, the result of some natural phenomenon occurring in connection with water (storms, floods), or arises from everyday neglect of the property (through, for example, the failure to caulk). Each of these events can compromise the building's ability to keep moisture out of the structure. The result is the moisture which infiltrates becomes the final element needed for mold to blossom.

As seen above, there may be certain health reasons to remove mold from a building. In addition to the health reasons, mold should be remediated simply to eliminate the insidious deterioration of the material on which the mold resides. Failure to remediate a large mold colony can result in dry wall crumbling, ceiling tiles coming loose, and, in worse case scenarios, entire walls collapsing.

III. Control and Remediation of Fungal Contamination.

State and federal agencies have been very active in developing guidelines for the control and remediation of fungal contamination. In March 2001 the U.S. EPA published the "Mold Remediation in Schools and Commercial Buildings" document that provides valuable insight on remediation procedures. The key to resolving fungal contamination is to not only remove the fungal growth, but to also resolve the moisture problem.

Due to the complex nature of fungal cleanup, it is important that professionals experienced in this field develop customized plans and techniques.

A. Remediation Controls.

Development of control strategies are important to limit building occupant exposure, cross contamination and worker exposure. Depending on the quantity and extent of fungal growth, the following approaches should be considered:

Small Areas of Growth (up to 8 square feet)

- Clean up can be conducted by maintenance personnel.
- Basic training should be provided for cleaning, personal protection and health effects.
- Individuals performing the work should be free of medical conditions that can be exacerbated with exposure.
- Materials to be removed should be sprayed down with a 10% bleach solution to reduce dust (avoid using bleach on materials that can be corroded).
- Materials to be removed should be immediately placed in sealed plastic bags.

- Surrounding areas should be wet wiped.
- Materials should be disposed of in the regular waste stream.

Larger Isolated Areas (up to 30 square feet)

In addition to the methods described in the aforementioned small area remediation, the following additional precautions should be taken:

- Construct local area containment using plastic sheeting.
- Utilize HEPA vacuum to place the containment under negative pressure.
- Materials should be double-bagged in 6-mil polyethylene.

Large Scale Remediation

Due to significant concerns regarding exposure, it is important that techniques used for asbestos abatement be utilized during large-scale remediation projects. At a minimum, the following procedures should be followed:

- Personnel trained in hazardous materials should be used on all large-scale fungal remediation projects.
- The entire affected area should be sealed with two layers of polyethylene sheeting.
- The containment should be placed under negative air.
- Appropriate decontamination units should also be constructed for entry and exit into the affected area.
- HEPA vacuuming and wet wiping procedures should be utilized before tear down.

- All workers should use respiratory and personal protection.
- Air monitoring should be considered to ensure that cross contamination is not occurring.

B. Personnel Protection:

In addition to various engineering controls being used to limit exposure appropriate personal protection is also recommended. As a general guide, the following protection should be considered:

- Appropriate respirators based on the hazard and the engineering controls utilized. Half-face respirators with HEPA cartridges are commonly used during fungal abatement projects.
- Gloves, eye protection (especially if bleach or other disinfectants are used) should be provided.
- Full body suits should be worn for large-scale projects.

C. United States Environmental Protection Agency Guidelines:

In March, 2001, the EPA's Indoor Environments Division of the Office of Air and Radiation published guidelines for the remediation/cleanup of mold and moisture problems in schools and commercial buildings. These guidelines include measures designed to protect the health of building occupants and remediators. The guidelines were designed primarily for building managers, custodians, and others who are responsible for commercial building and school maintenance. These Guidelines can be found at www.epa.gov/iaq/molds/graphics/moldremediation.pdf.

IV. Because the Building Owner Will Take a Pro-Active Approach in Pursuing Its Property Damage Claim, the Defense Should Do the Same:

The building owner is the typical claimant in mold property damage cases. The owner may initially turn to its Insurer to seek first party coverage for the loss under its all-risk policy. This can be problematic because, as seen below in the coverage section, more and more first party policies are listing mold as an excluded loss, even if another more proximate and efficient cause of the loss is involved in the claim. Therefore, the owner may easily find itself without a financial pool of funds to remediate the mold condition.

This will cause the Owner to look to possible Defendants for compensation for the loss. Depending on how the infiltration occurred, the list of possible tort targets could be the general contractor, subcontractors, architects, project managers or building management or maintenance professionals. In addition to these targets' possible tort liability, the Owner may also have contractual indemnification arrangements with one or more of the entities which, depending on state law, could have the effect of shifting the risk of a moisture infiltration loss to third parties.

In order to evaluate the Defendant's possible exposure as soon as possible, counsel should gather as much information about the structure and any infiltration problems at the building. As soon as possible, receiving information from the Owner on how the infiltration occurred, the moisture's infiltration pathways, and the extent of mold involved will allow an early assessment as to whether the resulting mold is in fact caused by the fact pattern claimed

by the Owner, or whether other problems unrelated to the liability claimed is a cause of the mold condition. In addition, early requests to have the Owner preserve the condition of the building so your experts can inspect the structure's condition will place the Owner on notice of possible spoliation defenses, and allow the Defense expert to see and assess the actual building condition. If the Owner for some reason does not have control over the building, be sure that the entity exercising control over the building also has notice of the Defense's request to preserve evidence.

Preservation of evidence will likely not be possible for long lengths of time in mold cases. Therefore, it is incumbent on the Defense to retain the right set of experts to evaluate the liability issues involved in the claim, and the damages claimed by the Owner. These experts could be qualified in fields from architecture to Design or Structural Engineering, or from Building Contracting to Remediation and Repair Contracting, depending on the scope of the claim involved.

A swift and proper response to a property damage claim can quickly develop the bases for the defenses which could be used to oppose the Owner in the claim. Some of these defenses could include:

- The Owner's failure to properly maintain the building;
- The Owner's failure to take proper measures to mitigate its damages through proper or timely remediation or otherwise;
- Statute of Limitations and Statute of Repose defenses;

- The failure of the Owner's case to show that its claim is based on valid, scientific principles (such as gravity); and
- That others are liable, not your client.

INSURANCE COVERAGE

I. Introduction

Historically, construction claims have been some of the more complex matters handled by the insurance industry. Issues such as the number of potential parties, the various contractual relationships between the parties, and a determination of whether the loss is actually covered, all necessitate that these cases receive an early and detailed defense and coverage analysis.

This approach does not change when the issues addressed are mold claims. The same early and detailed analysis applied to the construction claim will serve well in analyzing the coverage issues raised by mold.

II. Fact Pattern

Large commercial buildings are at risk for water infiltration at the time of construction, once construction is completed, and during times when the building is undergoing significant repairs or remodeling. Under a hypothetical fact pattern, a large commercial structure is leased to various office tenants. The building's Owner contracts with an Architect to design an addition, and to oversee a re-roofing project on the present

structure. The Owner contracts with a General Contractor to build the addition, and to replace the present roof. The General Contractor hires various Subcontractors to perform some of the work called for in the Owner/General Contractor Contract, including the roof replacement. Typical American Institute of Architects ("AIA") or Associated General Contractor ("AGC") Contracts are utilized between the Owner and the Architect, the Owner and the General Contractor, and between the General Contractor and the Roofing Subcontractor.

During the roof replacement portion of the Project, water infiltrates into both the original building and the building addition over a three week time period. The infiltration is ultimately discovered following a heavy weekend downpour which has caused additional amounts of water to enter the present building and addition. While some of the damage is readily apparent, other damage is latent in that water entering the building in the three weeks before the downpour has infiltrated into closed areas of the structure and addition, and, even prior to the weekend downpour, caused mold to blossom in these areas.

Prior to the Project's commencement, the structure was covered by the Owner's first-party "all risk" policy. No additional first-party coverage, whether by separate coverage or by endorsement, was procured as part of the Project. The Owner holds a standard Commercial General Liability ("CGL") policy to cover tort losses. The General Contractor also holds a standard CGL policy to which the Contractor adds the Owner as an additional

named insured. In addition, the General Contractor purchased an Owners & Contractor's Protective Liability ("OCP") Policy naming the Owner as the named insured. The Roofing Subcontractor also holds a CGL policy which does not include any other entities as additional insureds. Each of the Owner's, the General Contractor's, and the Roofing Subcontractor's CGL coverages include contractual liability coverage for "insured contracts."

The Owner discovers the water infiltration on a Monday morning following the heavy weekend rainfall. However, it is ultimately determined that the majority of the resulting mold arose from water infiltration occurring prior to the heavy weekend rain. The Owner does not report the loss to its first-party property damage carrier until approximately ten days after the discovery, but immediately informs the General Contractor of the infiltration.

III. Coverage Considerations

A. First Party Coverage

1. General Property Coverage:

    a. Use of the pre-existing property coverage may cut off an Owner's First-Party Carrier's subrogation rights against liable Third Parties.

2. Specific Coverages such as Additional Property Damage Endorsements, Fire, or Builder's Risk:

a. Procuring additional First-Party coverages may allow the additional specific First-Party coverage to subrogate against potentially liable tortfeasors, providing the subrogation is not in violation of any applicable "anti-subrogation" rule.

b. When does the coverage end as to what parts of the Project?

3. Other Insurance That Expressly or by Category Names the Insured as an Additional Named Insured:

a. It is possible that the General Contractor (and all Sub-contractors?) may have been endorsed onto the Owner's pre-existing First-Party property coverage or additionally procured First-Party coverage as an additional named insured.

b. If the Insured is covered under more than one policy, even if the policies are different types of coverage (i.e. first-party and third-party), an Other Insurance analysis may be applicable.

4. Is There Coverage Under the First-Party Policy?

a. Specified Coverages or "All-Risk;"

b. Potentially Applicable Exclusions:

i. Fungi, mold or dry rot exclusions;

ii. Water exclusions;

iii. Defective Maintenance, Workmanship, Design or Construction;

- however, exclusion's exception may provide coverage for loss or damage caused by a covered cause of loss *resulting from* faulty maintenance, workmanship, etc;

iv. Hidden or Latent Defect Exclusion:

- while language excludes damages caused directly or indirectly from, among other conditions, "mold," some Courts limit the exclusion's effect, whether by use of an exclusion's exception or focus on the fact pattern;

c. Concurrent Cause Issues:

i. What is the level of "exclusion language" available under each of the sections of exclusions?

- wholly excludes coverage even if the excluded cause is remote? (Exclusions which do not cover damage "caused directly or indirectly

by" . . . whether or not other covered concurrent causes contributed);

- wholly excludes coverage only if the excluded cause is predominant? ("Overriding Cause");
- partially excludes coverage for the portion of the loss caused by the excluded cause?
- Does an ensuing clause revive coverage?

B. Third Party Liability Policies

1. The Insured's Own Liability Coverage:

a. Prima Facie Coverage Issues:

i. "Trigger:" "Property Damage" or "Bodily Injury" Within the Policy Period;

ii. "Loss of Use."

b. Potential Applicable Exclusions:

i. "Absolute" Pollution Exclusion;

ii. "Business Risk" Exclusions: Is there "Damage to Other Property?"

- "Your Product;"

- "Your Work" and the "Subcontractor" Exception;
- "Impaired Property;"

iii. Care, Custody or Control Exclusion;

iv. Joint Venture;

v. Contractual Liability Exclusion.

- Does an "Insured Contract" include a breach of a duty to procure insurance?

2. Other Third Party Coverages that expressly or by category name the Insured as an additional named Insured:

a. Example: the Owner's additional named insured status on the General Contractor's liability policy.

B. "Coverages" May Be Available to the Insured Through its Contractual Relationships with a Third Party:

1. An Indemnification Clause may be enforceable if coverage was procured to insure the obligation.

2. Coverage May Not be Available for Some of the Insured's Contractual Promises:

a. Does one of the construction contracts signed by the Insured require it to procure coverage to insure an indemnity obligation? If so, and if coverage was not procured, Anti-Indemnification Statutes such as found in Minn. Stat. Ch. 337 allows the prospective Indemnitee to assert a breach of contract claim against the Insured for failing to procure the coverage to insure an indemnity obligation. However, such an obligation to procure insurance, because it is not an indemnification agreement, may not be an "insured contract" for the purposes of the exception to the contractual liability exclusion.

C. Confirm Whether Subrogation or Other Recovery Rights are Viable:

1. Is There a Waiver of Subrogation Provision?

   a. AIA Form 201 Section 11.4.7 contains a "Waivers of Subrogation" provision which may limit the extent of subrogation to that involving the "Work."

2. Is the Liable Third Party Solvent and/or Insured?

   a. Be Sure to Obtain the Policies Insuring the Liable Third Party.

BIBLIOGRAPHY

O'Meara, S. and Godfrey, M., *INDOOR AIR QUALITY AND SCHOOLS: The Issue, Applicable Standards, Remediation* (1999).

United States Environmental Protection Agency, Indoor Environments Division, Office of Air and Radiation, *Mold Remediation in Schools and Commercial Buildings* (March 2001).

Ronald E. Gots, M.D., Ph.D. *Mold and Mold Toxins: The Newest Toxic Tort*, Journal of Controversial Medical Claims, February 2001.

Thornsjo, D. and O'Meara, S., *CONSTRUCTION LITIGATION DEFECTS: Defense & Coverage Considerations in Construction Mold Cases*, Northwest Claim Seminar (2000).

Lesley King O'Neal, Rory C. Ryan, and Gregory J. Johansen, *Sick Building Claims*, The Construction Lawyer, January 2000.

New York City Department of Health, Bureau of Environmental & Occupational Disease and Epidemiology, *Guidelines on Assessment and Remediation of Fungi in Indoor Environments* (November 2000).

McMaster Institute of Environment and Health, McMaster University / Ontario Ministry of Health, Public Health Branch, *Expert Panel on Fungal Contamination Indoors* (1999).

Thornsjo, D., *Commercial General Liability Policies: Environmental Claims* at 23, 1995 Minnesota Trial Lawyers Association/Minnesota Defense Lawyers Association Insurance Law Conference.

Minnesota Department of Health, Draft Document, *Recommended Best Practices for Mold Investigations in Minnesota Schools*.

Endnotes

1. U.S. Environmental Protection Agency, Office of Air and Radiation. Report to Congress on Indoor Air Quality, Volume II: Assessment and Control of Indoor Air Pollution, pp. I, 4-14. EPA 400-1-89-001C, 1989. See also Indoor Pollutants, Report of Committee on Indoor Pollutants, Board on Toxicology and Environmental Health Hazards, Assembly of Life Sciences, National Research Council (1981) (on average, employed men spend 90% of day (21.7h) indoors, whereas married housewives spend 95% of the day (22.8h) indoors (citing Ott, W. R. Human Activity Patterns: A Review of the Literature for Air Pollution Exposure Estimation. SIMS Technical Report. Stanford, Cal.: Stanford University, Department of Statistics (to be published)).

2. Id. (In the 1970's and 1980's, the design standard for the amount of fresh air that should enter occupied spaces was 5 cfm per person); American Society for Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) 1973. ASHRAE Standard 62-73: *Standards for Natural and Mechanical Ventilation.* New York: ASHRAE. See also Occupational Safety & Health Administration, U.S.Department of Labor, OSHA Technical Manual, Directive No. TED 1-0.15A, § 3, ch. 2 (effective January 20, 1999).

3. Indoor Air Quality Tools For Schools, IAQ Coordinator's Guide at Environmental Protection Agency § 5 (Understanding IAQ Problems) March 23, 1998.

4. Id.

5. Indoor Air Facts No. 4 (revised), Sick Building Syndrome, Office of Radiation and Indoor Air (6607J) (April 1991).

6. Molds in the Environment, Centers for Disease Control and Prevention (CDC)--National Center for Environmental Health (NCEH)--Factsheet (April 3, 1997).

7. Id.

8. Id.

9. Gots, Ronald E., M.D., Ph.D. *Mold and Mold Toxins: The Newest Toxic Tort*, 8 Journal of Controversial Medical Claims 1, 3 (February 2001).

10. Indoor Air Facts No. 4 (revised), Sick Building Syndrome, Office of Radiation and Indoor Air (6607J) (April 1991).

11. O'Neal, Lesley King, Ryan, Rory C., and Johansen, Gregory J., *Sick Building Claims*, The Construction Lawyer, January, 2000.

12. Gots, Endnote 10 *supra* at 1.

13. While several comments in this session focus on the property damage claims which may arise out of mold issues, the approach and procedure underscore the scope and depth in which a comprehensive environmental analysis may need to be performed to provide the Jury with fact and not fiction.