IF YOU DON'T UNDERSTAND MOLD REMEDIATION, GET OUT OF THE INDUSTRY!

I am generally a reasonable and calm individual; maybe because of my analytical nature and training as an engineer. But even I can reach a frustration point — especially after being involved with three projects in the space of a few days, all of which were prime examples of incompetence in the mold remediation industry. So let me turn frustration into education by relaying some of our recent experiences.

All Aspects of the Mold Remediation Process

The overarching difficulty appears to be that many people who are advertising and performing mold related services still do not understand that there is a standard of care in the industry that defines acceptable practices. It is also clear that it is not just contractors who are guilty of providing services that are just plain nutty, but consultants and industrial hygienists as well. Actions based on ignorance are hurting individuals and the industry in all phases of mold remediation work from initial inspection right on through to remediation and post-remediation testing. The following situations fit this pattern with serious problems during initial inspection, an inability to turn inspection results into a reasonable action plan, and poor decision-making regarding close-out of a remediation project.

A Complicated Situation

There is no doubt that inspecting a building to identify sources of fungal contamination can be a challenging experience. Inspections of large, multi-faceted commercial buildings demand a blend of appropriate training, experience and practical sense. Inspectors must be aware of project complexities beyond the core objective of properly identifying visible and hidden mold. The inspection described here is a classic example of a mold investigation that was complicated by a variety of important occupant and owner concerns. A brief summary of some of the more significant factors impacting the situation include:

1. The inspection was being conducted in a critical use facility that operates 24/7.
2. The building occupants perform precision activities on which the safety of thousands of people depends.
3. The managers of the structure have a four-year history of underestimating the mold and moisture problems, despite a number of previous inspections and remediation activities.

4. Previous remediation attempts were conducted in a fashion that was so clearly outside of the standard of care that they resulted in the evacuation of the structure and medical treatment of seven individuals for mold and chemical exposure.
5. Occupants are represented by a union that is well informed on mold remediation issues and they have environmental experts to assist them.
6. Sensitized workers have presented to their employer independent medical evidence of illnesses related to their time spent in the structure.
7. Previous inspections have identified visual fungal contamination in areas already remediated and air sample results indicate contamination from sources inside the building.

Inspection Madness

The first clue that there might be problems came when the building owner hired investigators involved in the building's previous evaluations. This could appear to be a positive development since the inspectors would be aware of the historical challenges in the building. However, their involvement would bode ill for this project because these investigators demonstrated ignorance about mold and basic building function by stating things in their previous reports such as, "The elevator in the building where fungal contamination was found on the shaft walls was **not** a conduit for moving contamination throughout the structure."

Concerns about the inspectors' competency were quickly reinforced by their decision to evaluate the extent of the mold in wall cavities by cutting out large sections of gypsum wallboard despite the risk of cross contamination these activities presented unless substantial engineering controls were in place. Nor could the investigators claim ignorance about the potential for their work to cause such problems because in an earlier report they had downplayed the importance of finding *Stachybotrys* in building air samples by explaining that the disturbance of sections of wall panels during the inspection was the likely source of those toxigenic spores.

In addition, the inspectors chose to ignore a sampling strategy submitted by the union, which included the use of a mold remediation contractor to isolate areas of drywall that would be disturbed and keep the immediate areas under negative pressure. Incredibly, no engineering controls such as isolation barriers were used to minimize exposure to mold-contaminated materials. This decision was made despite clear guidance in multiple documents that contribute to the mold remediation industry's standard of care.

For example, the investigators chose to ignore the following:

- "Extracting several wall plugs in an enclosed indoor environment may pose sufficient hazard to warrant the assistance of a remediation contractor in containing the inspection

sites and accessing the inspection area. An alternative would be to use a glovebag or mini-enclosure with an attached HEPA vacuum and/or a negative air machine with HEPA filter. Either type of engineering control would minimize any disruption of mold particulate secondary to the investigation. Particular caution should be taken in high rise buildings, where stack and/or other pressure effects can cause significant airflows inward from openings in wall cavities to occupied areas." (AIHA: Recognition, Evaluation, and Control of Indoor Mold, page 78, Section 6.7)

- "Where visible or suspected mold growth is present or potentially disturbed, immediate containment, other engineering controls and personal protective equipment should be considered during the inspection process." (IICRC: S520 Standard and Reference Guide for Professional Mold Remediation, Standard page 36, section 10.4)
- "Invasive inspection procedures that involve cutting, drilling or demolition may release airborne contaminants. This hazard should be reflected in the inspection procedures. Protections include isolating the inspection area, directing the HEPA vacuum to the target area during invasive procedures, and properly sealing penetrations after inspection. A general HEPA vacuuming of the inspection area may be appropriate if the inspection uncovers high mold concentrations." (RIA: Recommended Professional Practice for Remediation of Mold Contamination in Building Interiors, item 9)
- "Larger inspection holes, especially where mold contamination has been determined to be extensive, requires containment or other protective measures if the space is to be re-occupied before doing repairs." (Health Canada: Fungal Contamination in Public Buildings: Health Effects and Investigation Methods, page 39)

Lipstick on a Pig

Here in the heartland of the United States, people might refer to a situation where someone incorporates a few safety items in order to look concerned, but avoids meaningful controls as "putting lipstick on a pig." This "pig" of an inspection was not enhanced by the application of lipstick. The inspection experts justified their decision to disturb large amounts of building finish materials containing fungal contamination without the benefit of critical barriers over supply and return ductwork, isolation barriers at doorways, drop cloths under areas where walls were being cut or the establishment of negative pressure by employing "appropriate safety measures." Despite the fact that the inspection protocols called for them to remove hundreds of square feet of wallboard on multiple floors, the only safety precautions used were an air scrubber and a "HEPA vacuum."

The inspection proceeded using a shop vac with an auxiliary HEPA filter. Apparently, the investigators did not know that there is a difference between HEPA-rated filter material and a HEPA vacuum that has been tested as a unit to ensure that it is removing 99.97 percent of small particulates. The canister of a professional HEPA vacuum is sealed so that air exhausts only

through the filter system. Canisters on a typical shop vacuum are not sealed in this fashion. As a result, it is likely that spores and contaminated dust were being dispersed by, rather than captured in, the shop vacuum used by the inspectors.

If the inspectors had read any of a number of industry guidance documents they would have found industry protocols such as:

- "Only well-constructed professional HEPA vacuums should be used in mold remediation projects. Regular shop-type or standard consumer vacuums should not be used for remediation, because they are not designed to prevent mold spores and fragments from passing through the equipment and re-entering the air." (IICRC: S520 Standard and Reference Guide for Professional Mold Remediation, Standard page 42, section 12.1.5)
- "Some units marketed to the general commercial or residential markets as containing HEPA filters do not achieve HEPA levels of filtration, due to leakage around filters or seals." (IICRC: S520, Reference Guide page 114, section 12.1.4)

The decision to use the shop vac during cutting of mold-contaminated drywall was made worse by a surprising display of unprofessionalism by one of the inspectors. At several points during the inspection when the vacuum was not operating properly because the filters were clogged with the fine drywall dust created by the cutting, the inspector solved the problem by putting an opened garbage bag on the floor in front of the intake of the air scrubber and banging the shop vac's HEPA filter on the floor so the dust would be sucked into the scrubber. In doing so, he demonstrated ignorance of basic industrial hygiene realities by "cleaning" a filter in such a way that it contaminated the area where the cleaning was done and cross-contaminated the filter so that subsequent uses of the vacuum spewed microscopic debris into the area where it was used.

Careless Use of the Air Scrubber

In addition to issues with the shop/HEPA vacuum, there was also inappropriate use of an air filtration device in the inspection areas. The inspectors' attempt to use an air scrubber to capture spores, drywall dust, and other contamination created by their work was rendered ineffective and dangerous by their careless use of the equipment.

Since they did not have the benefit of a negative pressure enclosure the position of the air scrubber in each inspection area was critical. On many occasions the air scrubber was positioned near the work. However, there were times when the scrubber was in the way of the work performed by the inspectors, so it was pushed out of the way. In these instances, there appeared to be no regard for the direction of the exhaust from the machine. Sometimes the exhaust was directed toward, rather than away from, the contaminated areas, including wall cavities and

recently removed materials that were resting on the floor with visible contamination. This caused an uncontrolled dispersal of contaminated dust into the atmosphere of several rooms.

Again, a review of industry documents would have been helpful in avoiding such problems:

> "When using an AFD as an air scrubber, care should be taken to prevent positive pressurization of the contaminated area, thereby causing a release of contaminants into unaffected parts of the building." (IICRC: S520 Standard, page 41, section 12.1.4)

No Regard for Personal Safety

Numerous building occupants confirmed that the inspectors did not wear personal protective equipment (PPE) during this investigation. According to the industry's standard of care, individuals conducting a mold inspection that involves invasive activities to determine the extent of hidden fungal contamination must wear PPE. The minimum PPE recommended by numerous sources includes full-body coverings, gloves and respiratory protection. The purpose of the PPE is two-fold: to protect the inspector and to prevent cross contamination. Personal protective equipment should be changed as an inspector moves from one area to another in order to avoid cross contamination.

This violation of accepted industry practice regarding personal protective equipment was exacerbated by a number of activities during the inspection. For example, the inspector used his ungloved finger to wipe across potentially contaminated surfaces as a means to determine whether or not suspect materials were mold. At various times this same technique was used to classify whether the material was actively growing or dormant, as well as whether it was old or new mold. This useless inspection technique was not even applied consistently. At one point the inspector declared that because the suspect material did not smear it was not mold. He later said that because a material smeared it was not mold.

There are many industry references that condemn such practices, but the bluntest warning is found in the EPA document entitled, *Mold Remediation in Schools and Commercial Buildings*. In the inspection portion of that document it clearly states, "Do not touch mold or moldy items with bare hands." (Page 4)

A Dereliction of Duty

Such blatantly inappropriate activities raise an important question: "If the inspectors don't care about their own personal safety, how can we expect them to be concerned about the safety of others in the building?" In this case the answer was clear – the inspectors did not care about the health of the occupants. Over the course of the week during the inspection, 11 employees

reported illnesses such as upper airway irritation, increase in asthma symptoms, severe eye irritation, and more serious problems that have been linked to mold exposure.

Sadly, this was not a comedy routine by three stooges as a gag for a conference of industry professionals, but the actual procedures developed and implemented by three different consultants who are Certified Industrial Hygienists (CIH). Individuals who work toward or obtain that certification are bound by a code of ethics that includes: "First and foremost, ABIH certificants and candidates give priority to health and safety interests related to the protection of people."

Certified Industrial Hygienists also agree to "follow appropriate health and safety procedures, in the course of performing professional duties, to protect clients, employers, employees and the public from conditions where injury and damage are reasonably foreseeable." Finally, CIHs are to "recognize the limitations of one's professional ability and provide services only when qualified."

In this case it appears that we have a perfect trifecta of ethical violations, which injured some of the occupants of the building. Both the facility managers and the contract consultants are to blame for the situation and the resulting black eye on the mold remediation industry.

From Assessment to Actions

It is important that concerns about inappropriate activities in the industry do not degenerate into an unproductive rant. That is why case studies, in order to be educational, must point out aspects of the industry standard of care that should have been followed or alternate approaches that could have been taken. Each of us learns from our own unique mistakes, and we would be wise to learn from others' mistakes as well. It is in that spirit that I present this second mold-related case study.

Even if an acceptable inspection is completed, inspection results need to be translated into a reasonable action plan. That is where a breakdown occurred in this case study. We were contacted by a mold remediation contractor who was in the midst of performing remediation on a community of 138 townhomes where the stucco and stone veneers had failed. The homes had issues with improper application of the exterior siding material, flashing, and roofing. By the time we were called in all exterior remediation had been completed and the contractor was addressing damage to the interiors, which, in some instances, required mold remediation.

In units where carpeting had gotten wet along outside walls, the environmental company issuing the scope of work told the remediation contractor that removal of two feet of carpet along the wall was required. Since the units were seven years old, matching the carpet would have been nearly impossible, meaning that all carpeting in any damaged room would have to be replaced.

As a practical example of the dilemma that this policy posed the contractor cited a recent job that required removal of about nine square feet of carpet in the corner of a living room. If this small piece was removed in order to meet the two-foot mandate the carpet on the entire first floor would have to be replaced since the floor plan was wide open with a continuous run of carpet.

The contractor indicated that the remediation crew was experienced enough to know that they had to cut and remove all water-damaged padding during this process. Even so, he wondered if there were ways to successfully clean carpet as part of the remediation. The remediation contractor went on to note that he had questioned the environmental company about the requirement for carpet removal and was told that there is no successful method for cleaning mold-contaminated carpet. He concluded by noting that although it was not his decision or his money on the line, it seemed that there must be options to deal with the situation more realistically and still fall within the standard of care.

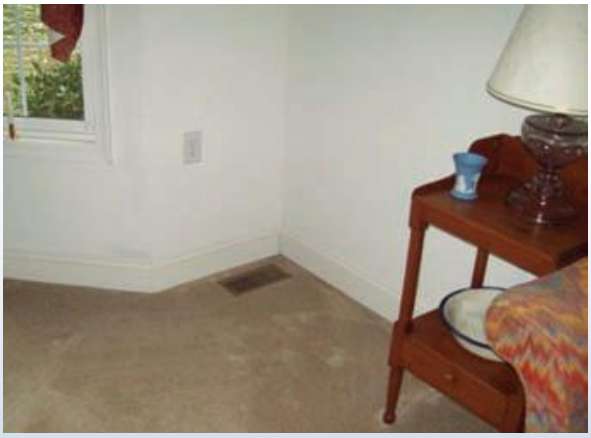

Photo 1: This corner of the living room was part of a mold remediation project caused by water infiltration through the exterior stucco and stone. Although little damage is visible, the need for remediation of fungal contamination in the wall cavity was verified during the exterior demolition of the leaking siding. Notice the supply register in the floor. Debris and discoloration around the register initially led the hygienist to require the removal of two feet of carpet along the wall.

Even though a number of houses suffered similar problems, the level of contamination in most of the homes being remediated was minimal because of the intelligent approach used by the mold remediation contractor.

Each scope of work was based on the extent of damage/discoloration found on the back of drywall during exterior remediation. Replacement of any exterior finish material was coupled with cleaning, treating and sealing of sheathing/framing members that were water stained or impacted with mold growth. In those cases a detailed exploration of the inside of the wall cavity was also conducted. Part of the sheathing and the insulation were removed from the outside in order to minimize the amount of debris that would be created during the interior remediation process. As an extra precaution, the back surface of the interior drywall was sealed with an antimicrobial encapsulant at the same time. This minimizes exposure when interior work is done.

Confusing Mold Contamination with Visible Mold Growth

From the contractor's brief description it sounded as if the hygienist might be getting several definitions and directions from the standard of care mixed up. While it is a universal guideline within the industry that porous materials with visible fungal growth should be physically removed, we frequently come across individuals in the mold remediation arena who do not know about the details of the S520 standard produced by the Institute of Inspection Cleaning and

Restoration Certification (IICRC). In that document, titled *Standard and Reference Guide for Professional Mold Remediation*, two situations related to fungal contamination are described as Condition 2 and Condition 3.

The IICRC S520 standard describes Condition 2 as "an indoor environment which is primarily contaminated with settled spores that were dispersed directly or indirectly from a condition three area, and which may have traces of actual growth." (page 17) It does not matter whether the dispersion was by air or by water movement. So, even if the carpets were wet but do not have substantive visible fungal growth, they are considered to be part of the area and materials that are designated as Condition 2.

Condition 3, on the other hand, is an environment "contaminated with the presence of actual mold growth and associated spores. Actual growth includes growth that is active or dormant, visible or hidden." (page 17)

Explaining to the contractor this distinction and assessment of the different areas and materials is crucial. If the carpet has substantial fungal growth visible then it should be classified as Condition 3. In such cases, removing the impacted areas of carpet and an appropriate boundary area, such as a two-foot swath, is appropriate. If that results in total carpet removal, then so be it. However, if the carpet is in proximity to the impacted wallboard but is not showing mold or mushroom growth, it should be assessed as Condition 2. Condition 2 materials, even porous materials, can be cleaned. To support this I encouraged the contractor to direct the hygienist to section 14.3.4.1 of the S520 on pages 55 & 56 entitled "Cleaning Porous Contents" for confirmation and specific guidance.

Photo 2: Staining on the subfloor in the area shown in photo 1 clearly indicates that the water infiltration was coming from the wall cavity. There was no discoloration around the supply vent that would indicate that the discoloration on top of the carpet was mold growth from water on all sides of the register.

I went on to commend the contractor on his training and common sense – which were right on the money. If the carpet is near wallboard with fungal growth but does not show visible mold, a hygienist should either sample it to determine if it is impacted or assess it as Condition 2. If there is no visible growth on the carpet, even on the back side when it is released to get it out of the way of the remediation of the gypsum board, then it can and should be saved.

Proper Cleaning

If it is determined that the carpet qualifies as Condition 2 rather than Condition 3, the most appropriate restoration technique would be to conduct a thorough HEPA vacuuming of the carpet prior to the remediation work. Then it should be released and moved out of the way during the isolation and remediation of the damaged drywall. During the remediation process the carpet pad should be cut, disposed of, and replaced just to make sure that it is not a continuing source of bacterial or fungal contamination. This process would allow the contractor to observe, clean, and, if necessary, seal the subfloor.

After the remediation of Condition 3 materials is complete and the contractor has successfully met his predetermined clearance criteria, he will removed the decontamination chamber and isolation barriers from the work area. At that time replacement carpet pad can be installed. The carpet should then be reinstalled and subjected to a HEPA sandwich cleaning, which includes:

- HEPA vacuuming
- Hot water extraction and drying
- A final HEPA vacuuming

The remediation contractor on this job agreed with my assessment that while this process may be a bit labor intensive, it is generally less expensive than replacing the carpet in an entire room or level. As a favor to the homeowner, and in an effort to build goodwill after they have had to deal with a mold contamination problem, I suggested that the contractor consider cleaning the carpets in the entire room or floor. This is generally a very modest add-on cost, particularly if the truck mount unit is on site for the hot water extraction of the carpet that is being HEPA sandwich cleaned.

A Team Effort

When the contractor presented this approach to the industrial hygienist an adjustment in scope was initially agreed upon as an experiment. Carpet that did not have visible fungal growth but was in the immediate vicinity of remediation work was cleaned by HEPA vacuuming prior to the start of the interior remediation. Then the carpet was sealed in plastic during remediation to protect it from additional contamination. During the post-remediation clearance inspection the hygienist collected tape samples from the previously cleaned carpet. The laboratory results for mold spores or other evidence of fungal growth such as hyphae or fruiting bodies were negative.

During this discussion the contractor was able to educate the hygienist and even offered an explanation for his confusion. He pointed out that a floor-mounted supply vent was located in the living room remediation area directly on top of the carpet (see photos). Because of the age of the homes the contractor speculated that the hygienist was reacting to a visual inspection in which he

saw the black/dark residue that accumulates at supply registers over time if ductwork is not clean. In such situations, the carpet fibers act as a collection device for debris from the HVAC system and the general air in the house. When that condition occurs in an area close to water damage it is easy to mistake the discoloration for mold growth.

In this particular case, a common sense approach by the contractor lead to asking a simple question. The education of the contractor and hygienist that resulted was supported by references to documents critical to the industry standard of care. The belief that there was a more reasonable solution to the situation was further supported by field experimentation and testing. As a result, the contractor and consultant were able to avoid giving the mold remediation industry a bad name by way of expensive decisions that do nothing to protect the workers, occupants, or property!

Photo 3: Removal of the mold impacted drywall revealed the new sheathing board that had been installed during the exterior portion of the remediation project. Removing the blown-in and cellulose insulation from the outside and later replacing it with foam board insulation substantially reduced the amount of mess and cleaning that was necessary during the interior phase of the remediation.

Complicated and Protracted Cases

Although it can happen in any area of the restoration and remediation industry, situations involving fungal contamination oftentimes seem to be a magnet for disagreements and potential litigation. In part, this is because the mold remediation industry is controlled by a standard of care rather than a clearly defined regulation. In this type of environment it is important for all involved parties to have a clear understanding of their role and responsibilities.

The Standard and Reference Guide for Professional Mold Remediation, recently revised by the Institute of Inspection Cleaning and Restoration Certification (known as the IICRC S520),

emphasizes that conflicts can occur during fungal remediation projects. An entire section of the standard is devoted to discussing these conflicts, and it indicates that they are generally the results of a limitation, complexity, or complication that was not anticipated or was improperly communicated. To avoid conflicts remediation contractors are encouraged to develop project-specific work plans that address basic activities such as:

- Containment
- Pressure differentials
- Hazardous or regulated materials
- Safety and health provisions
- Contents
- Removal and handling of contaminated materials
- Detailed cleaning
- Disposal
- Post-remediation evaluation
- Post-remediation verification
- Containment removal

While "canned" work plans usually have basic information on the first eight items, many boilerplate documents are severely deficient when it comes to last three. This deficiency can be especially vexing for contractors who bid on a limited scope of work and then find themselves caught in a disagreement about the extent of insurance coverage or areas of responsibility between the homeowner or a condominium association. Without clear language in the contract that allows them to meet specific post-remediation clearance criteria and then remove their containment and equipment from the site, contractors can be caught in the no man's land of being finished but unable to leave.

A Third Case Study

Although contractors may claim to be the innocent party in situations that turn litigious between building owners and occupants, they are not blameless if they do not clearly spell out their procedures for concluding the work and leaving the site. This third case study involved a protracted water intrusion and mold remediation situation in a townhouse. When the owner informed the townhouse association of a leak from around the chimney and their responsibility to address the problem since the moisture intrusion originated from the exterior of the structure, it triggered a series of events:

- The association tasked a handyman with correcting the problem, but he actually made the leak worse.
- The association retained a mold remediation contractor to conduct tests and write a protocol for proper remediation.

- After receiving the report and protocol the association did not hire the remediation contractor to fix the problems but instead contracted with a maintenance company that did not follow the protocol or industry standards for dealing with fungal contamination.
- The association's insurance company brought in a mold inspector who confirmed that there was cross contamination of mold throughout most of the home.
- A contractor with some mold training was retained to address the water and mold issues. The contractor erected a containment and proceeded with remediation in the living room and basement, including removal of flooring and sub-floor near the chimney.
- Due to ongoing disputes between the homeowner and the association and the lack of clear closeout procedures in the contract, the remediation company left the job site with the barriers in place but no negative air machines or other engineering controls operational.
- The homeowners have contacted the contractor and the association on numerous occasions to complain about breaches in the containment barriers.

Our organization was hired to evaluate the existing situation. The conditions we observed were distressing since the project was neither finished nor secure. Some of the more blatant problems included:

1. Numerous pieces of furniture wrapped in plastic or covered with drop cloths to prevent disturbance of contamination that had been identified on the contents.
2. Isolation barriers in place in the first floor and lower floor.
3. Signs affixed to the isolation barriers on the first and lower floors stating, "Authorized Personnel Only, Warning, Mold Remediation in Process".
4. Zippered entry doors were built into the isolation walls and one of the zippers was missing. Isolation barriers were delaminating due to heat and/or age.
5. A number of rips and tears in the plastic isolation barriers on both the first floor and the lower level.
6. A number of finish materials and furnishings inside the containment that should have been removed or covered prior to remediation work, including chairs, carpet, and cabinets.
7. Two negative air machines on site but neither one was operating. Neither unit had plastic coverings on the intake or on the exhaust ports as would be standard practice for such equipment following the completion of remediation.
8. An opening in the lower floor window where an exhaust hose from a negative air machine had been vented. The window opening had been sealed with painter's tape and plastic but a large gap was present.

9. Fungal residue in a number of places, including rotted wood studs under the sub-floor beneath the chimney, and stained structural members in a number of locations.

Know Your Endpoint Before You Begin – and Communicate it to All Parties

One of the items that we stress in the mold remediation classes offered through Wonder Makers Environmental is the importance of the contractor understanding the endpoint of every project before work begins. In addition to the contractor understanding that endpoint, the other parties involved in the project also need to be on board with the criteria that determines when a project is completed. As I noted at the beginning of this article, the mold remediation industry is controlled by a standard of care rather than regulations. As such, there is no government-ordained criteria such as a Permissible Exposure Limit or Clean Air Standard that is universally accepted as a minimal goal for remediation activities. The IICRC S520 document recommends that the area be returned to a "normal fungal ecology", but the term is defined in a comparative rather than uniform way (*i.e.*, normal fungal ecology is determined based on the type and history of the structure, geographic area, season, out-of-doors fungal concentrations, etc.).

With limited help from the documents that make up the standard of care and the secondary complications associated with contractors conducting their own post-remediation *evaluation* with the potential of an independent third party involved with a post-remediation *verification*, a successful conclusion to a mold remediation project can be elusive unless these issues are clearly addressed ahead of time. Although all of these potential pitfalls at the end of a project have been discussed in reference documents, training manuals and industry publications, and have been debated vigorously at seminars, many contractors still proceed with mold remediation projects without a clear understanding of the specific goals of the project.*

A Small Sample of Many Problems

I hope that these case studies and the emphasis on the reality of a standard of care for the mold remediation industry get you to think about your operations. Serious mistakes are being made in the industry on a daily basis related to site inspections, development of work plans, the actual implementation of mold remediation projects, and successfully closing out the work. Most of these problems have already been addressed in a number of industry forums, yet they are repeated by unprofessional contractors who do not keep current with remediation standards. Industry professionals who care about their clients and the future of this business are the ones who have to speak up in such situations and stop this abuse.

*Note: The Restoration Industry Association has offered some useful guidance in dealing with the challenge of developing a uniform approach to close-out procedures for mold remediation projects. A standardized project evaluation, or clearance criteria, which leaves the work area

cleaner than a normal fungal ecology was unanimously endorsed by the Environmental Council in 2007. Contact the author for additional details or a copy of the criteria.

About the Author

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