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## A COMPREHENSIVE OVERVIEW OF THE MOLD REMEDIATION INDUSTRY

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Although not widely recognized in the public mainstream, dealing with mold contamination indoors has evolved into a specialty industry. This evolution, from common construction nuisance to specialty remediation service, has been noticed by many individuals in the cleaning, restoration, hazardous materials, and industrial hygiene fields. The legal community has not missed this progression toward a uniform treatment of mold contamination in buildings.

One of the reasons that the general public is largely unaware of the transition going on in the mold remediation industry is that the changes have been occurring very rapidly. Five years ago there was very little recognition that mold exposure could pose a serious health threat, so there was little emphasis on treating mold as a unique contaminant. It was less than three years ago that mold exposure cases began to create a buzz in the legal community and a subsequent splash in the media. With few exceptions, mold remediation training courses have sprung into existence in the last two years. These have fueled a growth in technological advancements, impacting the industry.

Despite all the technological advances the mold remediation industry today still resembles its earlier forms. Its basic components have served as the nucleus for development over the last few years. It is possible to use the analogy of a wheel to organize and describe the diverse factors that impact mold remediation. Figure 1 provides summary information in a wheel format.

What is clear from Figure 1 is that the many pieces of the mold remediation process have to interact smoothly to roll along. The wheel analogy can be stretched to fit mold remediation by remembering the experience of the Ford Explorer and Firestone tires. As that situation graphically demonstrated, under the right conditions the failure of a single component in a wheel assembly can have catastrophic consequences. That is why it is so important for individuals in the mold remediation field, or those contemplating entering the field, to have a good understanding of the major components that must work together during a remediation project.

Though the wheel analogy is beneficial to conceptualizing the industry, it is important to make the distinction that a physical product is not being sold in the mold remediation business. Unlike the wheel assembly for a car, mold remediation is a service and expertise is the product. As such, anyone who enters the field must be vigilant in ensuring that the product continues to be of high quality. This point seems to be especially confusing to many currently involved in the mold remediation industry because there is no single federal or state regulatory standard that everyone can point to as the baseline for an organization's performance. Nevertheless, contractors and service providers are in peril if they think that an absence of state or federal standards implies that there is no industry standard of care.

One of the biggest misconceptions in the mold remediation field today is that liability issues and litigation are driving the industry. Although liability and litigation are important considerations, the legal community is not setting the standard of care. Lawyers are only clarifying and interpreting the standard of care that is already in place but scattered about in various scientific and industry documents. To emphasize this important point in our training class, a chart was put together which provides a summary of key areas of agreement in the mold remediation industry. These items were summarized from seven basic documents that are used throughout the industry, including technical publications from the American Conference of Governmental Industrial Hygienist (ACGIH), the Institute of Inspection, Cleaning, and Restoration Certification (IICRC), as well as local and federal documents such as the New York City Guidelines and the EPA Mold Remediation Guidelines for Schools and Commercial Buildings. This chart is organized so that the specific sections of the various documents that support industry-wide areas of agreement can be quickly located. Currently, the chart has 24 points of general intersection. Eight specific examples are given here to help the reader understand just how much overall agreement there is in the industry today.

- Rapid drying of water intrusion is recommended to prevent mold growth (within 48 hours).
- Fungal contamination of interior surfaces is unacceptable from a health/hygiene standpoint.
- Interior fungal growth should be physically removed.
- Respirators and other personal protective equipment should be used during all remediation projects.
- Engineering controls should be progressively more stringent as the size of the remediation increases.
- Large projects involve more than 100 square feet of fungal growth.
- Containment barriers, negative pressure, HEPA air filtration, and decontamination areas should be used for large remediation projects.
- Professionals should be used to interpret sample data.

Even if individuals are aware of the many factors that impact mold remediation (the components of our wheel assembly) and understand the basic areas of agreement (similar to the underlying expectation that wheel assemblies have to be safe for use on a specific type of vehicle), an important connection still has to be made by the individual consultant or contractor. How does the mold remediation professional, whose product is their expertise, manipulate the various components to apply the standard of care to a particular project?

Until there is more detailed guidance in the form of regulatory standards, it is clear that the mold remediation professional must make these individual project decisions based on education. This is why education serves as the hub of the wheel in Figure 1. It is important to note that in the context of this article, the term education is not limited strictly to formal classes or certification training. Education for the mold remediation professional must include a mixture of professional training courses, self study, communication with other professionals in the field, participation in industry conferences, and mentoring from more experienced consultants and contractors whenever possible.

Anyone who is skeptical that such education forms the center of today's mold remediation wheel need only look at the information provided by the American Conference of Governmental Industrial Hygienists, the American Industrial Hygiene Association, the EPA, Health Canada, and the New York City Department of Health. All of these organizations recommend the use of trained personnel for large

mold remediation projects. An underlying tenet of the documents from all those organizations is not only that trained professionals understand the specifics of how to deal with mold remediation challenges, but that they are able to put mold remediation into proper perspective. For the mold remediation industry to continue to advance, professional practitioners must be knowledgeable enough to present compelling information that does not emphasize extremes. In our training classes, we characterize it as finding the center ground between the *mold minimizers* and the *fungiphobics*. In other words, mold remediation professionals should not downplay the potential health impacts of mold contamination, nor should they suggest in potential contamination situations that the occupants run screaming from the building.

Once mold remediation professionals understand that the industry revolves around education and that they are being called upon to apply a somewhat general industry standard of care to specific situations, they quickly realize the value of comprehensive and effective training programs. This leads to questions about how to identify a training course or educational experience that will help an organization succeed in the industry and that isn't an infomercial for a specific laboratory, consultant, or system of engineering controls.

Asking for detailed answers to the following four questions will help both newcomers and veterans choose appropriate mold remediation training:

- Does the course focus on principles and techniques that can be adapted to a variety of situations as compared to specific recipes for how every single project should be completed?
- Does the educational experience provide comprehensive information for continued self-study?
- Does the class incorporate information from multiple recognized sources but do it in such a way that there is a coherent framework on which the information sources can build?
- Does the educational experience infuse the proper philosophy of protecting crew members, occupants, and building structures in all aspects of the presentation?

Of course there are a number of other questions that can help a person decide if a specific mold remediation course is for them (*i.e.*, amount of hands-on activities, limitations on the number of students, etc.). However, even great training that emphasizes the wrong points will end up having a negative impact on individuals and organizations involved in the mold remediation business.

To go back to our wheel analogy, remember that many of the same factors that can lead to wheel or tire failure are present in mold remediation projects. If the project is unbalanced (for example, too much emphasis on air sample results rather than visually clean areas), it can lead to a project that is not run safely. Everyone knows that tires have to be properly inflated. Similarly, mold remediation projects that are conducted under the pressure of unreasonable client expectations have a greater probability of failure, and projects conducted at excessive speed bring unforeseen and expensive problems.

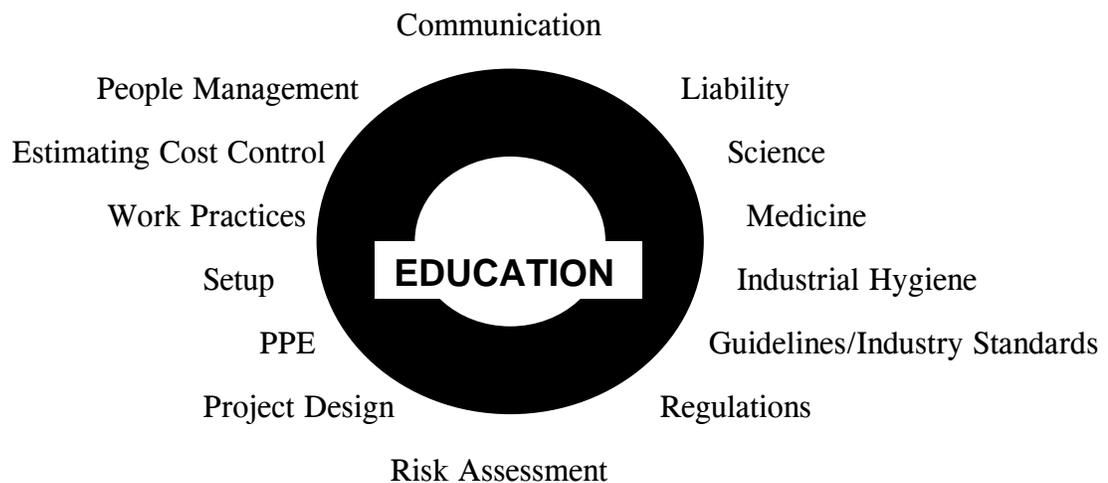
With all of these potential pitfalls, it may seem impossible to complete mold remediation work properly and cost-efficiently. The good news is that a mold remediation firm can be successful by keeping in mind four core principles:

- Be able to see and understand the big picture.

- Never be satisfied with the amount of knowledge you have. Continue your formal and informal education in this area. This is critical since new products and ideas are constantly evolving from the industry.
- Effectively review project design, setup, and work efforts.
- Be sure to have all aspects of the process balanced.

It is comforting to know that Ford is still selling SUVs and Firestone is still selling tires. With proper diligence and common sense, mold remediation professionals can avoid a blowout on the road to success.

Figure 1  
Components of the Mold Remediation Wheel



### About the Author

*Michael A. Pinto, CSP, CMP, is chief executive officer of Wonder Makers Environmental, Inc. Mr. Pinto is the author of over 140 published articles and several books including, *Fungal Contamination: A Comprehensive Guide for Remediation*. He completed his course work in environmental engineering and holds numerous other certifications in the environmental and safety areas. Michael can be reached at 269-382-4154 or [map@wondermakers.com](mailto:map@wondermakers.com).*

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