

Indiana IAQ

March/April 2011 Issue

About Indiana IAQ:

This is *the* newsletter for those interested in Indoor Air Quality (IAQ). This newsletter is developed from the many questions and concerns received from its readers. Information is collected and applied this way to the articles published.

Who can write in? Anyone! Contractors, mitigation technicians, restoration and remediation technicians, real estate professionals, banks, doctors, lawyers, insurance professionals, investors, anyone with an interest in IAQ.

To submit an idea for an article, write to:
IndianaIAQ@solutionsiec.com.

Inside this issue:

EMSL Microbiologist Con- 2
tributes to the Identifica-
tion of Six New Species of
Hamigera

Contact Information 4



As Seen on TV

I was recently gifted an hour's break from studies, reporting and surveys when I came across a home improvement show on television. The host of the show appeared to have an extensive background in construction and was walking through some concerns a couple of new home buyers were having with their new home—when the host turns to the camera and begins a lecture on how home inspectors failed to find these problems, noting in their reports that they were not responsible for anything unseen, and outlining how they were not doing anything to investigate beyond the obvious.



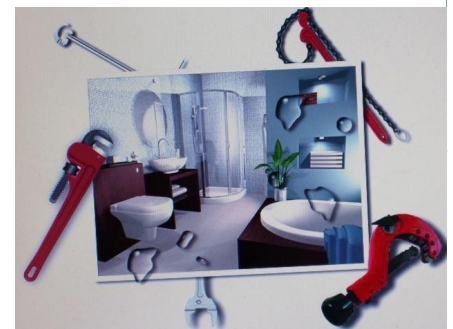
I had no argument there. I, myself, have worked behind many a home inspector who failed to report on various plumbing and microbiological problems in the home. I could easily see how someone could be upset with an incomplete survey of their home prior to a purchase—especially when they are relying on the inspectors to know what they are talking about.

Then came the host's pre-work comments on what they were going to be fixing ("*plumbing in the basement bathroom...*") and who was going to be doing the work ("*only licensed plumbers and carpenters...*"). Being a bit of a home improvement geek, I decided to spend my hour off to watch other people work. That time off quickly became inspiration for this newsletter. (For those of you interested, yes—I did take notes during the program.)

No sooner had the host and his crew of plumbers gotten into tearing out the bathroom in this home's basement had they soon discovered that the problems in this home went far beyond just a few pieces of leaking sewer plumbing. They found:

- That the supply plumbing was run and tied together in a maze of long runs that extended up and down the various levels of the structure before coming back into the main supply plumbing (the host, then, determined that demolition would have to include other areas of the structure);
- That they had not secured the work area, which allowed for the excess sewage water to run from their work station into the adjacent (finished) rooms of the basement (the host, then, determined that demolition would have to include other areas of the structure);

(read more on page 2)



EMSL Microbiologist Contributes to the Identification of Six New Species of Hamigera

Six new species of *Hamigera*, a fungus closely related to *Penicillium*, were identified by a group of scientists including Dr. Zeljko Jurjevic, a Senior Mycologist from the corporate headquarters of EMSL Analytical, Inc. Other members of the group included molecular geneticist Dr. Stephen Peterson from the USDA, Peoria, IL, Fernando Vega from the USDA, Beltsville, MD, and Alberto Stchigel, Josep Guarro and Gerald Bills researchers from different institutes in Spain. The six new species of *Hamigera* were named *Hamigera fusca*, *Hamigera inflata*, *Hamigera insecticola*, *Hamigera pallida*, *Hamigera paravellanea*, *Hamigera terricola*. The discovery of these six new species helped clarify confusion over the genus *Hamigera* that has been unresolved for over a cen-

ture. *Hamigera* has been isolated from the air, soil, textiles, animal dung and on certain insects. They are primarily decomposers but they can be implicated in food spoilage due to their thermo-tolerant and osmo-tolerant nature. The research has been published in the July-August 2010 issue of *Mycologia*, volume 102(4) pages 847-64.

“Dr. Jurjevic’s contribution to fungal taxonomy is a source of pride for us at EMSL,” reported Jason Dobranic, Ph.D., National Director of Microbiology at EMSL Analytical. *“Research is continuing to improve what we know and understand about the microbes that live around us. This kind of basic research is especially important in order for us to ultimately understand the effects of microbes on indoor air quality and human health,”* Dobranic continued.

EMSL has been dedicated to research and

development since its inception in 1981. The laboratory is one of the nation’s largest and fastest growing providers of environmental microbiology and chemistry analytical services. For more information on laboratory services and products provided by EMSL please call (800) 220-3675, visit www.emsl.com or email info@emsl.com.

Author: EMSL Analytical, Inc. is a nationally recognized and locally focused provider of quality environmental and materials testing services and products. The company has an extensive list of accreditations. For more information on EMSL Analytical, Inc. visit their website at www.emsl.com or call (800) 220-3675 .

As Seen on TV

(CONTINUED FROM PAGE 1)

- That there was mold growing inside the walls of the demolished room (the host, then, determined that demolition would have to include other areas of the structure); and,
- That this project would not meet the deadline that he had promised the home owners (because he had determined that the work included other areas of the structure beyond what they assumed initially).

This is where my curiosity began to get the best of me. I was like a little kid engrossed in his favorite superhero’s story of overcoming great odds to morally and ethically defeat evil. Would the host bring in an indoor environmental consultant, assess the building’s indoor environmental quality, bring in professional remediators, and show the whole world how to perform a sewage and mold remediation project correctly?!?!?

Uhh—no.

The host turned to the camera, repeated what we already had seen, brought in the home owners and told



them to move out—then began demolishing the home *without* an environmental review, *without* protecting his workers with personal protective equipment, *without* securing the

work areas from further cross contamination, *without* bringing in professional microbiological remediators, and *without* an experienced knowledge of remediating microbiologicals himself (as was obvious by the way they went about their work).

As is the case away from the television cameras, the home owners were beside themselves, not knowing what to say, how to respond, and in disbelief that something requiring so much work could have been overlooked in the home inspection of the home. They quietly and with a disappointed heart grabbed a few belongings and left their home while this show’s host and his two man crew (of a plumber and a carpenter) went about tearing everything up.

And, yes, they tore up a large portion of the structure. . .

(read more on page 3)

As Seen on TV

(CONTINUED FROM PAGE 2)

The basement was completely removed—carpeting, carpet cushion, gypsum board walls and ceilings, insulation, wall framing, all electrical devices, all of the plumbing, and, yet, none of the furniture was thrown away. (Actually, the show never did address what happened to the furniture and when/if it ever came back to the home.)

Upstairs fared a little better—only half of the living room, dining room and a quarter of the kitchen was removed. (The furniture in these rooms remaining in these rooms.)

I should clarify something here. Demolition was performed like this—not because of mold or actual sewage leaking into the upper level of the structure or in the ceilings of the basement but because the plumbing and electrical was run improperly. However, during the course of this work I noted several incidences where workers would walk from the sewage infested basement into the main level of the structure, carrying debris on their shoes back and forth *and* no critical barriers were erected to keep dust and other debris from getting airborne and into the Heating, Ventilation and Air Conditioning (HVAC) system or occupants' respiratory tract.

Now, I realize that there are some of you out there reading this saying, “*So what’s the big deal?*” And, that question is why I decided to make this story the subject of my newsletter.

Besides the obvious:

- The home owners having to leave their home, and
- The extent to which their home was demolished and left in need of reconstruction.

There were the not so obvious—and completely overlooked—safety and health concerns.



Mold? Yes. There was plenty of it on the backside of the carpets (in the basement) and on some of the wall boards around the basement’s shower.



Aspergillus fumigatus

There were other problems to consider too.

The lists of microorganisms and contaminants that can be found in sewage and pollute a building are numerous. They range from fungi, bacteria, protozoa to dangerous viruses. Sewage, or black water, may also be contaminated with pollutants that contain residuals from medicines, household cleaners and industrial waste.

One of the main dangers from sewage contamination comes from the ingestion or inhalation of infected materials. As certain microorganisms grow they may release contaminants into the air (this is also the case when a flooded area is disturbed during post flood cleaning). Also anyone that touches any contaminated services runs the risk of ingesting contaminants by touching their mouths and rubbing their eyes.

Several of the most commonly tested sewage indicator organisms include Bacteroides, E. coli, fecal strep, and Enterococci. All of these are types of bacteria that are typically found in high numbers in the intestinal tracks of mammals, including humans.



Genus Escherichia

The risks associated with sewage spills include exposure to infectious microorganisms and endotoxins contained in some of the bacteria. These biological contaminants can cause gastro-intestinal illness.

(read more on page 4)



"Don't let problems with poor indoor air quality take control of your life. Empower yourself with SOLUTIONS—Indoor Environmental Consulting—today!"

(877) 624-7185

We're on the web!
www.SolutionsIEC.com

SOLUTIONS IEC is a truly experienced business that, with over seventeen years of mitigation, restoration, remediation and hygiene practices, can assist you in determining the Category and Condition of the damaged structure; develop a protocol that is real and specific to the structure; and can provide expertise beyond just an inspector's role. Our staff of professionals have been recognized in both indoor environmental consulting (Council-certified Indoor Environmental Consultants) and microbial remediation supervision (Council-certified Microbial Remediation Supervisors) - two of the most prestigious awards in the industry today! Don't let poor IAQ take control of your life. Empower yourself with SOLUTIONS—Indoor Environmental Consulting—today!

Serving the Indiana and Illinois states!



As Seen on TV

(CONTINUED FROM PAGE 3)

This is why it is so important to look beyond general contracting licenses and find peer-reviewed, accredited and board-awarded professionals, capable of (1) assessing the damages actually in need of remediation and identifying potential health and safety risks and (2) remediating (or remedying) the confirmed problems in accordance with your indoor environmental consultant's (assessor) protocol (or scope of work). As we presented in our April 2010 issue of Indiana IAQ, never hire an all-in-one company to do both of these things. Conflict of interest practices dictate that your indoor environmental consultant and microbial remediator are two different companies with no financial gain in the other's work. (See the April 2010 issue on our website by going to www.solutionsiec.com and clicking on 'our newsletter' from the menu on your left.)

Hiring a qualified sewage contamination inspector should consist of more than just hiring a remediation technician to clean the things up you can see.

- During a sewage contamination inspection a surface-by surface investigation should be performed to determine if sewage indicator organisms or endotoxins are present. Air testing should be conducted for the presence of endotoxins. Bulk sampling of affected materials and testing of any standing water should also be included.
- If sewage contamination is discovered a written evaluation describing the locations, extent of contamination and recommendations for corrective actions should be given.

Depending on what the investigator

discovers they may recommend the building owner hire a remediation contractor to remove and clean any contaminated materials that pose a threat to occupant health.

It is important when hiring a professional to conduct the inspection that only experienced and qualified professionals perform this important task. Be sure to also verify that any samples that are taken are taken to be analyzed by an accredited independent laboratory.

Author: Jason Yost, CIEC, CMRS, CSDS, WRT, and IN Licensed Asbestos Inspector, is owner of SOLUTIONS IEC, and has been in the cleaning, restoration, remediation, mitigation, and IAQ industry for over eighteen years. Jason is a member of the Indoor Air Quality Association and a board member of the American Council for Accredited Certification. Visit Jason's IAQ PRO.FILE at: www.iaqa.org/profile_agreement.asp?id=223.