



John Lapotaire

New Mold Assessment Standard, Hurricane Recovery, Spray Foam & More

This week we welcomed John Lapotaire of IAQ Solutions in Orlando Florida to the show to discuss: New Mold Assessment Standard, Hurricane Recovery, Spray Foam & how revised building codes that tighten homes may have unexpected consequences. It's always great to obtain field reports from John Lapotaire who both regularly works in the field and also is very involved with associations developing industry standards.

John P. Lapotaire, CIEC is a Building Envelope & Indoor Environment Consultant providing IAQ consultation for commercial and residential properties. He is a Florida Licensed Mold Assessor, a Council-certified Environmental Thermography Consultant, CETC. Council-certified Indoor Environmental Consultant CIEC. John's professional experience has led to appointments and elected positions to several international industry association committees and boards.

Nuggets mined from today's episode:

IICRC S-520 Update- John Lapotaire: The revised IICRC S-520 recently completed its public review. The consensus board is currently reviewing the comments. As any accepted comment which results in a substantial change in the document triggers another round of public review, it is highly probable that the document will undergo at least one more public review.

Changes in the revised S-520 go far beyond spring cleaning and updating. One main update is expanding Condition 2, Condition 2 cannot exist unless there is Condition 3 in the same room. Condition 2 is all opinion and cannot be supported by taking samples from two different areas and trying to connect the dots through genera even when using PCR. According to John, mold assessment and remediation are relatively easy: containment and dust control.

When Asp/Pen is found on a wall in one room and found in other room(s), it's unscientific to conclude that the Asp/Pen from the wall cross contaminated the

other surfaces. According to John, the house needs a thorough cleaning including the HVAC system.

IICRC S-530 - John Lapotaire: John predicts that the new IICRC S-530 Mold Assessment Standard will replace the ASTM D7338 (Guide for the Assessment of Fungal Growth in Buildings) because the ASTM standard is not well known, taught or widely used and the IICRC has a better marketing and delivery system.

What's expected to be contained within IICRC-S530?

Section 1 - Scope, Purpose, and Application

Section 3 - Definitions -

a. Inspection vs Assessment

Section 4 - Principles of Assessment - proposal and scope of work

a. quality control

b. identify the origin and cause

c. establish the extent of the mold

d. documentation

e. protocol

f. post-remediation criteria

g. post-remediation verification criteria

h. professional judgment

i. safety of the assessor and occupant

Section 5 - IEP Indoor Environmental Professional/Assessor Qualifications

Section 6 - Jobsite Hazard Recognition and Awareness

Section 7 - Administrative Procedures, Documents, and Risk Management -

Section 9 - Interview of MIP's -

Section 10 - Site/Building Background/History -

Section 11 - Site Assessment

b. HVAC

c. Contents

d. Structural

e. Equipment, Instruments, and Tools (previously Section 13)

f. Special Conditions

Section 12 – Origin and Cause

a. Origin and Cause of fungal growth

b. Origin and Cause of moisture source related to fungal growth

Section 13 – Sampling

- a. Sampling, if necessary, to test a specific hypothesis.

Section 14 - Report of Assessment.

- a. Documentation (Items, Observations, and Findings)

Section 15 - Remediation Protocol

- a. scope of work
- b. identified mold remediation work areas
- c. identified affected building material
- d. remediation diagram
- e. post-remediation criteria

Section 16 - Post Remediation Verification.

Mold assessment in Florida: According to John, in Florida too often mold assessment is done by taking air samples, telling the client that they have mold, telling the client what type of mold they have and telling the client to have it cleaned up according to S-520. John likens this to, “barbers who don’t know how to cut hair”. John opines, mold assessment should include “telling the client why they have mold”, determining the cause and origin of the water intrusion causing the mold problem, using a floorplan to plot the location(s) of contaminated materials which need to be removed along with the instruction to remove an extra 24” of material beyond visual contamination, advice on containment and cleaning methods.

Radio Joe advised that, DC (District of Columbia) requires determination of the cause and origin of mold.

IEPs and Consultants: As an IEP and consultant himself, Joe Hughes has consistently advocated for the use of IEPs and Consultants when necessary. Joe went on to explain that the IICRC, an organization that represents contractors, created the term Indoor Environmental Professional, the acronym IEP and the definition of an IEP.

The IICRC (2003) states that “The role of an IEP is to perform an assessment of the fungal ecology of property, systems and contents at the job site, create a sampling strategy, sample the indoor environment, interpret laboratory data and determine Condition 1, 2 and 3 status for the purpose of establishing a scope of work (pre-remediation assessment) and/or when necessary to verify the return to normal

fungal ecology.” The IICRC’s use of the term IEP in industry standards is the “IEP full employment act”.

Does the IICRC possess the needed knowledge to train IEPs? John Lapotaire, Yes, if the standards are written well enough.

John Lapotaire: In the 1990s, there were no IEPs and contractors did it all. He opined that exaggerated scopes of work and excessive remediation fees led Florida to institute licensing to separate remediators from consultants. Florida’s actions have been largely unsuccessful, Florida is the Wild West. Now assessors show up, take a few samples send them to a lab and advise the contractor to remove 24” beyond the visual boundary of contamination and charge whatever they want. Contractors can fog, use ozone. After hurricanes, assessors show up and take samples in buildings without windows and roofs and open to the environment. “Without a minimum standard of practice there is no standard of practice.” We need: Scope, Purpose, Application, Definitions, Principles of Assessment, Establish the Source of Mold, Written Protocol, Documentation, Post Remediation Verification (no heavy sampling, confirmation contaminated building materials have been removed, containment kept clean and dust free, white glove or black cloth, etc.). John doesn’t agree with zero tolerance of molds. The goal is no negative impact on remainder of building when containment is removed. We advocate use of soap, water and minimal containment.

John Lapotaire explained the selection process for IICRC standards writing. Three categories: user, producer and general interest. He has worked on standards that were completed in 3 years and standards that took 10 years to be completed. John predicts that the IICRC S-530 Mold Assessment Standard will be completed in 3 years.

The ASTM D7338 Mold Assessment Standard specified HVAC system inspection and cited NADCA HVAC cleaning standard for guidance. The IICRC S-530 will rely upon harmonized guidance in the IICRC S-590 Standard for assessing HVAC systems following a water, fire, or mold event. While some states license HVAC cleaning and assessment, in Florida mold assessors are permitted to open and inspect HVAC systems. Florida HVAC contractors prefer to have other parties perform this function.

Dealing with highly mold sensitive clients: John Lapotaire: Some very severe asthmatics, sufferers of Chronic Inflammatory Response were told or are convinced that mold is the substance causing their health problems and that their home has mold. Interview to learn and know your client. For these clients we need to go above and beyond. Sensitive folks need higher clearance criteria. We use a holistic approach of considering the 3 primary causes of IEQ problems: biological, particulate and chemical. Often the solution to the problem involves focus on multiple causes. We use particle counters, gas meters, RH and temp meters to determine if the home is producing irritants, accumulating irritants or both. We take particle counts with the HVAC on and off. We look for elevated CO² an indicator that the home is too tight.

John has found that when people think mold is killing them, he was able to solve the problem by enhancing house cleaning; adding filtration, adding ventilation based on occupants and occupant activities.

Where to find qualified IEPs: John Lapotaire: One place to start is to use the find a pro function on the AIHA.org, ACAC.org, AIHA.org websites. Interviewing IEPs is very important. Be specific with what you are asking for. If you want an assessment ask for an assessment. Be cautious: a bunch of samples won't help. Ask the right questions. ASTM has a good standard for IAQ concerns. D7297-21 Standard Practice for Evaluating Residential Indoor Air Quality Concerns.

Florida insurance issues: John Lapotaire: Insurance is unavailable in some areas of Florida. In other areas of Florida, insurance coverage limit is capped. Florida recently changed its insurance law. John opines, if you aren't abusing the system, the new law won't affect you. The AOB (Assignment of Benefits) was abused. Homeowners had no idea what work was going to be done and how much it was going to cost. Homeowners must now be kept in the loop. The industry must change; time and energy are needed to stop the abuse.

Who will pay for S-530 assessments: John Lapotaire: Assessors will be working for property owners and insurance carriers. Assessors will tell them: where the mold is, what needs to be removed, what needs to be cleaned and how to prevent mold from amplifying.

Hurricane response and repair: John Lapotaire: Some areas suffered unprecedented levels of damage that was life changing. Many large losses were

put together by January 1, 2023. Florida building and restoration contractors are good at assessing and repairing. Storm water is not automatically Category 3, Category 3 water must be established. Too much salvageable material was removed and not enough restored. The state was well prepared and emergency response was well executed. Florida restored power quickly. Central Florida avoided serious hurricane damage.

Mycotoxins in urine: John Lapotaire: Some clients are concerned about mycotoxins in their urine. Often the source of these mycotoxins is food not their indoor environment. Some clients are doing their own ERMI tests.[The Environmental Relative Moldiness Index (ERMI) is a research tool developed by EPA scientists for estimating mold contamination. Researchers can use the index to estimate the amount of mold and some of the types of mold present. ERMI has been peer reviewed for research purposes but has not been validated for non-research purposes.] The home may be an accumulator of nanograms of mycotoxins. Money spent on remediating home for mycotoxins is wasted, mycotoxins return when doors and windows are opened. Be sure you are living in a clean and healthy environment.

Spray foam insulation assessment: Assessment involves collecting many samples of the foam installation and then examining the samples to determine if the installation was done according to manufacturer's instructions and specification for cell structure, thickness, adhesion, etc.? Then investigate for health, for instance is the attic being conditioned, is the HVAC system installed in the attic, was the HVAC running during the installation, were people home during the treatment, was the property air sampled after treatment, was the property ventilated? Code requires air circulation 50 cfm/1000 sq.ft. and humidity control. Applicators that spray foam in occupied properties should be incarcerated. For odor problems, John has found that "bake-outs" and hydroxyls helped reduce odor. Fresh air ventilation may be required.

Remedial tips for Excessive VOCs or CO²:

Is the home well kept? Use particle counter, multi-gas meter or gas detection tubes to determine if the property producing or accumulating VOCs or CO²?

When everything in the home is weatherized, a high CFM HVAC system is installed and spray foam is installed tightness will result in insufficient fresh air.

This is rectified by positively pressurizing the home by introducing clean, dry air into the HVAC system and circulating throughout the home.

Spray foam particles after installation? HVAC system should be off during spray application. Spray foam creates little dust. If you touch foam and it's sticky, there is a problem.

RoundUp

- The mold industry wants to overcomplicate.
- Mold remediation is not hard.
- Mold assessment is not hard.
- Storm water is not Category 3. Category 3 water must be established.

Z-Man signing off