



Mold Remediation Part 6: Controlled Demolition

DM

David Myrick

0:00

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KS

Kendra Seymour

0:42

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Hello everyone, and welcome back to our Remediation 101, series. I'm so glad you're here Now, hopefully, you've watched parts one through five, because it lays out all the steps that get us to today's topic, which is on demolition and removal. And I will say, this is where you're going to see about 100 different solutions and practices. And this is where things get confusing, I think, for consumers. And I also think this is where you see a lot of ineffective, and insufficient, and even unsafe practices happening way too often. So, David Myrick is back today to tackle this part of the process. Now I won't read his full bio, but he has been in the remediation industry for over 17 years, and is the owner of Valor Mold Removal in the Virginia, Washington, DC area. So, thank you, David, so much for being here again.

DM

David Myrick

2:10

Absolutely. My pleasure.

KS

Kendra Seymour

2:12

Let's jump right in, because this is, I always say the devil's in the details, and the devil's in the details, as people will see. So why don't you take it away?

DM

David Myrick

2:20

So, we're here at Part Six, Demolition. Now, demolition is very straightforward. I don't know, people try to make this complicated, but it's very clear. So, I talked about this in previous episodes, but everything that I talk about comes out of this book called, 'the ANSI/IICRC S520 Standard for Professional Mold Remediation.' And this ANSI symbol here, this is a big deal, right? ANSI writes the private industry standards, and in the pecking order of the US. Number one, is federal regulations—which there are none for mold. Number two, would be ANSI Standards, right? So, again, since there's no federal regulations, then the next thing down would be an ANSI Standard. So, this book is important, because if there's ever a lawsuit, this is the book the lawyers are pulling out to ask questions. You know, "Did you follow this? Why'd you deviate from it?" That kind of thing. And third down on the list, below ANSI are the guidelines, EPA, CDC. Now when...How do I phrase this? The way the EPA guidelines are written, and the CDC guidelines are written, they actually agree with the S520, so there is no confusion here. But the problem is, the guidelines are poorly written, because they don't explain what these different materials are when we're talking about remediation, and what has to be torn out, and what can be salvaged. And I'll get to that in a second. But, if you want the plain English version of the Standard, there is a reference guide, which helps break things down into more plain English—if you're going to buy one yourself. So, the Standard is full of jargon and things like that. The Reference Guide is a little bit easier to read, but the problem is, they're sold separately. So, the Standard is \$125 and the Reference Guide, I think, is \$125

KS

Kendra Seymour

4:11

And I'll jump right in just for a second, because that's the 2015. There is a new version that is supposed to be coming out, I think, at some point shortly. So, if you're listening to this, and that's not out, maybe wait for the newest version.

DM

David Myrick

4:25

Yeah, and I don't think they're going to change much in it, because they start to put out the, you know, what they're thinking of, that's up for debate. And there's nothing fundamentally changed. So, if you, even if you read the 2015, version, you're not like, you're not reading the super outdated version, where technology has passed you by or anything like that. Now, I love quoting this thing, because I'm a very skeptical person by nature. And so when people tell me stuff, I go, "Well, that's you." Right? This is what this thing says, verbatim, out of the book, "Physically removing mold is the primary means of remediation. Mold colonies

need to be physically removed. Attempts to kill..." This, second bullet point...oh, this is so, so, important. "Attempts to kill it, encapsulate it, or inhibit it, instead of removing it, are not adequate." It says this literally 10 times in the book, literally 10 times. Yet, if you're a homeowner who's in, you know, Tuscaloosa, Alabama, Eugene, Oregon, good luck. Good luck. If you talk to 100 remediators within 200 miles of you, all of them are going to talk about killing mold, and fogging, and chemical treatments. And it is completely barking up the wrong tree. It's a smoke and mirrors, right? It's just basically covering it up. It does nothing for your health. Matter of fact, most, most sensitized clients are also to have MCS, right? Multiple Chemical Sensitivity. So, you know, if chemical treatments aren't effective, right? They're not adequate, and it has the potential for hurting people, why are we using this? And that was probably the biggest eye-opening thing when I take my first training class, was, "What are you talking about." Right? The entire industry is built around killing stuff, and fogging, and treatments, and things. But if you take any formal training class, they all talk about this, right? We're not trying to kill stuff. And it was, it was almost heartbreaking, because every training class...because I go to training classes about every two or three years, and in every class, there's always a technician, or five, or 10 technicians that, you know, the light bulb goes off for them and they're calling, you know, they're calling at lunchtime, to the boss, "Hey, man, do you know that? You know this could be done better and safer?" And the boss is basically like, "Shut up. Just get your certificate and get back to work." right? We're not trying to change the way we do things. Sorry, I can go on rant about this forever.

And another thing it says is, you know, killing these...killing the mold does not destroy the antigenic or toxigenic properties. So, antigenic is another way for saying "allergies", right? So again, if you're having an allergic reaction to mold, or you're having a toxic reaction to the mycotoxins, killing it does nothing, right? I always talk about killing the mold, is like telling somebody with a peanut allergy that they need to go kill peanuts. That is stupid. You would smack them if somebody told you that, right? That's automatically knee-jerk reaction. But, with mold, you know, this is the common advice, right? "Oh, spray it. Spray with bleach. You know, you have to kill it. You have to kill it."

And I think that comes from, you know, we're so used to dealing with bacteria and viruses, where, if you kill them, then they can't infect you. So, then that math equation, that makes sense, right? You kill it, it can't infect you. Fine. With mold, we're not worried about it infecting you. I mean, can it happen? Yeah, it can. You can get a mold colony growing in your lungs or in your brain, right? It's called aspergillosis. So, it can happen, but it's very rare, right? You're talking about immune compromised people, bone marrow transplants, you know, some farmers, things like that. You know this can happen, but the vast majority of people who react to mold, they're having allergic reactions to the allergenic properties, or they're having toxic responses to the mycotoxins.

Now this is my diagram. You will notice, but you didn't notice, messed up my flow, but the Mold Standard breaks everything in your house into three categories. So, there's three categories. It's either porous material, semi-porous, or non-porous material. And, so that's what I have missing here. Is non-porous actually...ran out of room with a graphical designer. So porous, this is going to be like carpet, drywall, insulation. So, the mold embeds itself in there. It grows a root structure. And so, the problem with that is, I can't look at you

with a straight face and go, "Yes, we can restore this back to the way it was before." I can't say that. And so, if I can't say that, then guess what? We want to cut it out and throw it away. It's not salvageable. Semi porous material on the other hand, this is going to be like the most common example in American homes is wood framing. So, structural wood, the floor joists, the sub floor, wall studs, things like that. That's a semi-porous material. So, is concrete, and plaster, and things like that, right? It's a semi-porous. And so, what the mold Standard says is, "We definitely can save the wood. We just have to physically strip out this layer of mold that has grown into the wood." Now, the mold doesn't grow very deep. You're talking about maybe a 64th of an inch, to 32nd of an inch. So, it embeds itself in there. But it's not too deep. Now, we're not talking about rotted wood. That's a different topic, right? If you can poke your pencil through it, well, then. That wood is done. But, you know, again, the mold embeds itself in here, and so what the Mold Standard says is, "You can save the wood. You just have to physically abrade this top layer."

Now, I made this diagram on purpose. You'll notice that the staining of the wood, the actual appearance of it, goes deeper into the wood than the actual mold roots do. So, it is possible to have proper remediation done, where you strip the mold colonies out, but it still looks moldy. And this is where testing is very important, right? PRV testing—post-remediation verification, when you have a third-party mold tester check this material, so that way it allays any concerns that the remediation wasn't done, right. But the chemicals, the chemical shortcut, and I was trying to be very nice in this diagram. As I like to say, "The chemical snake-oil-salesman." So, if you go down to Home Depot and you buy bleach, or you buy the mold killing stuff, a lot of times, they have oxidizers mixed into them. And so, what oxidizers do, is they bleach the surface. And so, you're spraying the visible mold growth with whatever your magic-fufu juice is, and then you're wiping it. And so, what it's doing is, it's wiping off that that top layer of mold colony, and then bleaching the staining. So that way it appears to be good to the naked eye, but microscopically the mold is still there. It's still embedded into the surface. Furthermore, you've just taken a lung full of mold spores in, because you just agitated the mold colony, and you've also, too, cross-contaminated. So, who knows where those spores just went in your house? So again, you're going backwards. Now that I've said that, going back to the first slide where I talk about the ANSI Standard, and I talked about the EPA guidelines and stuff. They're written the same way. The EPA guidelines and the CDC guidelines say the same thing. They say porous materials can't be saved. The problem is, they don't explain what porous materials are. And so, to the layperson, they go, "Well, my drywall isn't porous. It's not sponge." We're going, "Oh no, it absolutely is a porous material." You know, what they're talking about, when they talk about, you can clean non-porous material by wiping the mold off with soap and water, or what have you—that's glass, metal, plastic, ceramic, porcelain, right? These are non-porous items that could be totally covered in mold, and you could totally wipe the mold off. Yes, I agree. But everything else, it has to have some kind of procedure with this. Now, one note about how to haul trash, because in the in the previous episode, in part, what was that? Part Five...we talked about engineering controls, and decon chambers, and stuff. And so people go "Great." But if you're...unless we're remediating like a room that's near a back door, where we can carry the trash directly through, like, the back doors within our containment. If we're up in your second level of the house, and we're not throwing it out the window, we have to carry the trash through your house somehow. And so, the way that's done is called

“goose necking.” Now, the mold industry didn’t make this up. This is actually borrowed from the asbestos abatement folks. This is how they move asbestos containing materials through an uncontaminated space. So, it's basically a trash bag within a trash bag. So, you're putting your moldy material in one trash bag. You're in-between the decon chamber and the containment. You are bagging it into another trash bag, and then you're goose necking, you're duct taping the smithereens out of that opening. And so, it actually looks like a goose neck, right? So there's actually a procedure to how to bag trash. And just as a side note, it was funny...one of my techs years ago, we were training them and telling them how to do gooseneck. And he was like, “Holy smokes, you guys have a procedure for how to bag trash?” You're just shocked that we get this detailed. It's like, yeah, you have to.

KS

Kendra Seymour

13:56

And you even wipe the outside of the bag, right?

DM

David Myrick

13:59

Right. So, you could HEPA vacuum it. You could wipe it. Now, there's a way to do it, so that way you don't even...it's risky. Well, I won't get into that. I won't get into that. Yes, you're supposed to wipe the bag, right? Keep it, we'll keep it simple. Now, I can't see my screen. What is this? Oh, so, going back to stripping semi-porous material. So, remember how I said that you have to physically abrade the surface? So, there's really three methods that we have to abrade the surface that's strong enough. So, there's HEPA-sanding, there's wire-brushing, and there's what's called media-blasting. So, this gets into this next part. So, HEPA-sanding. This is literally taking a sander, right? This is a power sander, electric sander, and the exhaust, instead of...when you buy this from the store, it comes with a little bag that captures like the sawdust. well, you take that off, and you take your vacuum, and you actually plug it into the back. So, these are running hand in hand. So, this thing's running, this thing is running. So, that way you're going to capture as much as you can out of that sander. That's not 100%, right? You're still going to be flinging mold spores everywhere. But instead of 100 mold spores every quarter second, maybe you're only flinging out 20, right? So, it's meant to just reduce how much is going airborne. The other method is wire-brushing. Now, wire-brushing is very labor intensive, right? There's no way to hook a HEPA-vacuum up to a wire-brush, and so we'll do wire brushing when it comes to like, concrete walls. So, if you have foundation walls, right, you have concrete block, or you have poured concrete, whatever's in your house, and you have a foundation leak, and you get that mold growth on the concrete. You can't sand it, right? You have to wire-brush it. So, and especially with concrete block, it all has, it's very porous, right? It has all these little pores to it and stuff. You can't, right. The sander is going to go right over it, so you have to wire-brush it. The other thing that we use wire-brushing on is this OSB, oriented strand board. Now, I don't know if you can make out in this picture, but it's this, this wood that you've seen. It's really come about in the past. I don't know, 20 years or so, maybe 30 years, but it looks like a mishmash of wood chips. And so, it's cheap. Builders are using it everywhere. We hate it from a mold standpoint, because it is like a mold buffet. It is absolutely covered in glucose, right? Mold grows like wildfire on it. Once it gets wet, it's permanently swollen. It never goes back to the same size it was before. So, you know,

especially, like, if this window was leaking, let's say, through a gap in the siding or something, and then it made the OSB swollen. Well, guess what? Now that gap is even bigger. So anyway, I'm going on a rant.

KS

Kendra Seymour

16:53

Replacement might be better in that case if it's do-able, yeah.

DM

David Myrick

16:55

Exactly. Especially if it's damaged from both inside and outside, right? And it's terrible stuff. I mean, I really wish at minimum plywood was used, right? Plywood is a much heartier building material against mold than OSB is. But, anyway, going back to the OSB, so microscopically, that OSB, it looks like the Grand Canyon, right? There's all these little dips, and cracks, and crevices to it. So again, when you have these little dips and cracks, if you're running a sander along top, well there's going to be areas that you're just not going to be able to get into. And so, that's where wire-brushing comes into play.

Now, on bigger projects, or if a client wants to really throw our work done, let's say, like with the OSB. We'll do what's called blasting, right? Now, the overall name for it is called media-blasting. There's many forms of it. I mean, you can blast with sandblasting is most common when people know about. In the remediation industry, we do either dry-ice blasting or soda blasting. And then there's many others. You can actually blast with walnut shell, and glass bead, and ground coffee, right? There's a story, if I got time to tell it, about ground coffee and Hurricane Katrina and Folgers. I think it was Folgers...their storage silos on the Louisiana coast. But anyway, media-blasting is hands down the most thorough method to strip mold out of wood. Because you have to realize, if you're talking about a basement, if you have an unfinished room in your basement, let's say utility room, and you go in that room and you look up, there's subfloor, and then there's floor joist. And the subfloor has all these nails poking through, and there's wires going everywhere, and where the joist meets the subfloor, it's a right angle. And so, trying to sand that point or wire-brush that point, is very difficult. And so, if a project is, let's say, 10 square feet or less of mold on the framing, then okay, we'll do it manually, right? We'll go ahead and HEPA vacuum, or HEPA sand, or wire-brush it. But if it's a bigger project, then the most efficient way, the most thorough way, hands down, is to do media-blasting. But the problem with it is it is very violent. It's very thorough, but it's very violent. And so, the fear with blasting is cross-contamination. Where we're down in the basement blasting, and there's some gap, or crack, or crevice. Where upstairs, there's clouds of baking soda or mold spores coming up into your space. So, it's very involved, right? We have to seal up the main level. We have to seal the main level floor to protect the house itself from blasting. But it's incredible. It's like power washing, right? If you've ever seen power washing, where they're taking grime off the sidewalks, it works exactly the same way. So, we took a video. Don't think before the start this video, the joists were not that black. That wasn't mold growth. We actually took black spray paint and spray painted the living heck out of them to get them to change color. Just for an example. So, it actually strips that out.

KS

Kendra Seymour

20:20

That's incredible.

DM

David Myrick

20:24

Yeah. Now you would make, we would make a lot of passes at this. So, anyway, so media-blasting. Now we'll see. We're in a project now, where laser-blasting is something that's coming up in the future. We may get into that. That would be great, because it's supposed to be the same effectiveness. It's stripping mold out of wood, but there's no cross-contamination concerns, right? It's a laser beam that goes into the wood and you get a little whisk of smoke, and that's it. So, yeah, that's the presentation on demolition.

KS

Kendra Seymour

21:02

Fascinating. Now I do have a couple follow-up questions. Of course, you had once sent me a research article, and I bring this up because it's important...and I want to reiterate that the chemicals alone aren't enough. And you shared a study that talked about, I think, was like hydrogen peroxide and a number of other things, and they tested it on wood, you know, with mold growth after, you know, treatment, and then they wait two weeks. Can you speak to that, just high level, real quick.

DM

David Myrick

21:39

Absolutely. It's a very famous study. I think it was done. It doesn't matter, anyway. And so, yeah, they were testing the effectiveness of mold inhibitors, right? And so, I want to say they used...because they used brand names. So back then, there was Sporocidin, Benefect. I can't remember. Wait, maybe Benefect wasn't part of the study. I don't think it'd been out yet. But anyway, it took all the different chemicals, all the different fungi stats, mold inhibitors, whatever you want to call them, right? It's just materials where they talk about, "Hey, spray this on and it's going to prevent mold from growing back." And what they found was after...because they were very effective. I think it was one day, and three days after, they were very effective, much more effective than the control was. But after two weeks, they grew just as much mold as the control did. And so, again, it's a siren song, right when? When companies are trying to sell you on, "Hey, we're going to spray our magic fufu juice, or we're going to encapsulate it. That's going to prevent all mold growth." It absolutely won't. It definitely comes back. You need to fix the water issue that grew the mold in the first place.

KS

Kendra Seymour

22:44

Yeah, and I'll try to link to in the show notes, or wherever you're watching this that research, because I do have that study. So, it was super fascinating. Now, this doesn't apply directly to this series, but it's a question that I'm sure people are asking themselves. Now the government or certain government websites will say, "That the average homeowner,

whoever, can clean 10 square feet of mold or less themselves.” What are your thoughts on that? I know you know a little history about. Share what you want to share. Don’t get yourself in trouble, though.

DM

David Myrick

23:21

You know, I like going to the mold nerd conferences, and where this, this 10 square foot thing came from was... it was from the original. It was from the very first mold document, I’ll say, in the US. It was the New York City guidelines, I want to say, from 1999, and it was the first document in the country that talked about mold, right? How you should handle it? What you should do? That kind of thing. And in the document, in the New York City guidelines, they say, “If there’s less than 10 square feet of mold, maintenance personnel can address it.” They didn’t say homeowners, they said maintenance personnel. And the reason I bring up the mold nerd conferences is because these people are still alive, right? And completely off the record, they will not say anything in writing. They will never put themselves out there, and I understand why. But off the record, if, you know, talk to them, go have lunch with them...they completely made that 10 square foot rule up. One of the guys counted the number of shower tiles in his shower that morning, and that’s where 10 square foot came from. It has no grounds in health or science, whatsoever.

And the problem is, when you talk about these standards, and guidelines, and stuff, the next version will oftentimes reference the prior version. And so, this is how you have this daisy chain where, you know, 25 years later, we’re still talking about this 10 square foot rule, because the internet. Google, right? It just repeats information. And the S520 actually does not delineate at all. It just says, “If there’s visible mold growth, you should have proper remediation done.” So, it does so the mold Standard doesn’t say anything about the 10 square foot rule. So, the 10 square foot rule thing only comes up in the EPA guidelines, the CDC guidelines and the crap you read on the internet. Now, let me just go back in defense of these guys. The reason they came up with the 10 square foot rule. They said...you have to realize, at the time, there was mass hysteria about mold, right? People would get a little bit of mold in their shower tile grout, and demand that their entire apartment be gutted, because they were absolutely just frightened—terrified that they were going to die for mold. And so, he said, “We had to make a line in the sand somewhere. And so that’s why we just said 10 square foot.” So, I understand where they’re coming from. They definitely had good intentions. They weren’t trying to bamboozle people. But now this thing has walked off and taking a life of its own, and, you know, trying to rein it back in, and it’s just, it’s...I really feel for homeowners, especially the mold sensitized crowd, because they’re up against so much, from a mental, emotional standpoint, trying to make sense of this. Because you come to your organization, you’re trying to understand how to protect your family or protect yourself. But the entire rest of the world is not on your side. You know, the entire internet, family and friends, plumbers, you know, trades people, things like that, you know. There’s no sympathy for these folks. And it just...it sucks.

KS

Kendra Seymour

26:27

Yeah, and I think, too, like, there's a difference between the maintenance person who probably has some sort of understanding. I would think of PPE or some processes that they could put into place. And you know, you can't make that assumption for the homeowner. You know, something you said just reminded me of another point. Something I want to reiterate is another kind of myth people hear, is that you only have to remediate professionally "black mold" and, right? And mold regardless of color. First of all, you can't identify the species by looking at the color. But mold, regardless of species, should be removed safely.

DM

David Myrick

27:11

Any visible growth. Yeah, sorry.

KS

Kendra Seymour

27:14

Yeah, no. It's just all these things that come to mind that homeowners face, and the things that they're told. And it's 100% the reason why we're doing this series. David, thank you so much for joining us.

DM

David Myrick

27:28

Absolutely.

KS

Kendra Seymour

27:29

So, now, if you're listening, I hope you come back for the next part, because this is where...this is another way that I separate the good companies from the bad. And you would think this part wouldn't be critical, but it's all about this detailed cleaning or small particle cleaning inside the containment. Lots of companies skip this, and it is a big red flag, so I hope you come back and check that out. And if you don't want to miss that episode, head on over to ChangeTheAirFoundation.org, sign up for our newsletter, because it really is the best way to get information like this directly to your inbox. And as a bonus, for everyone who signs up, there is a great Remediation At A Glance Guide. And this thing is, I call it my third child, not to offend my children. But it is picture heavy. It is written for you in layman's terms. And it's a resource for you, so that you can feel confident and comfortable when you're hiring remediation companies, and you're vetting them. So, and it's free, everything we provide is always free. So, ChangeTheAirFoundation.org, sign up for our newsletter. Thank you again, David, for being here. Everyone, thank you for listening and we'll see you next time.