Chestertown Armory

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Owner, Valor Mold Removal

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Valor Mold live on Fox morning news
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WET SUMMER CREATES MORE MOLD
MLB
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3:25 / 4:11

Misrepresentations in Demolition Application

- “Remediation has…no assurance of success”

- pg. 2

- “It is highly probable that mold has infiltrated the existing building material, making it resistant to successful remediation”

- pg. 7

- “It is the professional opinion of Sussex Environmental that the building has serious moisture and mold issues that, even if cleaned, **will not guarantee issues will not return due to block and concrete construction**.”

- pg. 7

"It is the professional opinion of Sussex Environmental that the building has serious moisture and mold issues that, even if cleaned, will not guarantee issues will not return due to block and concrete construction."

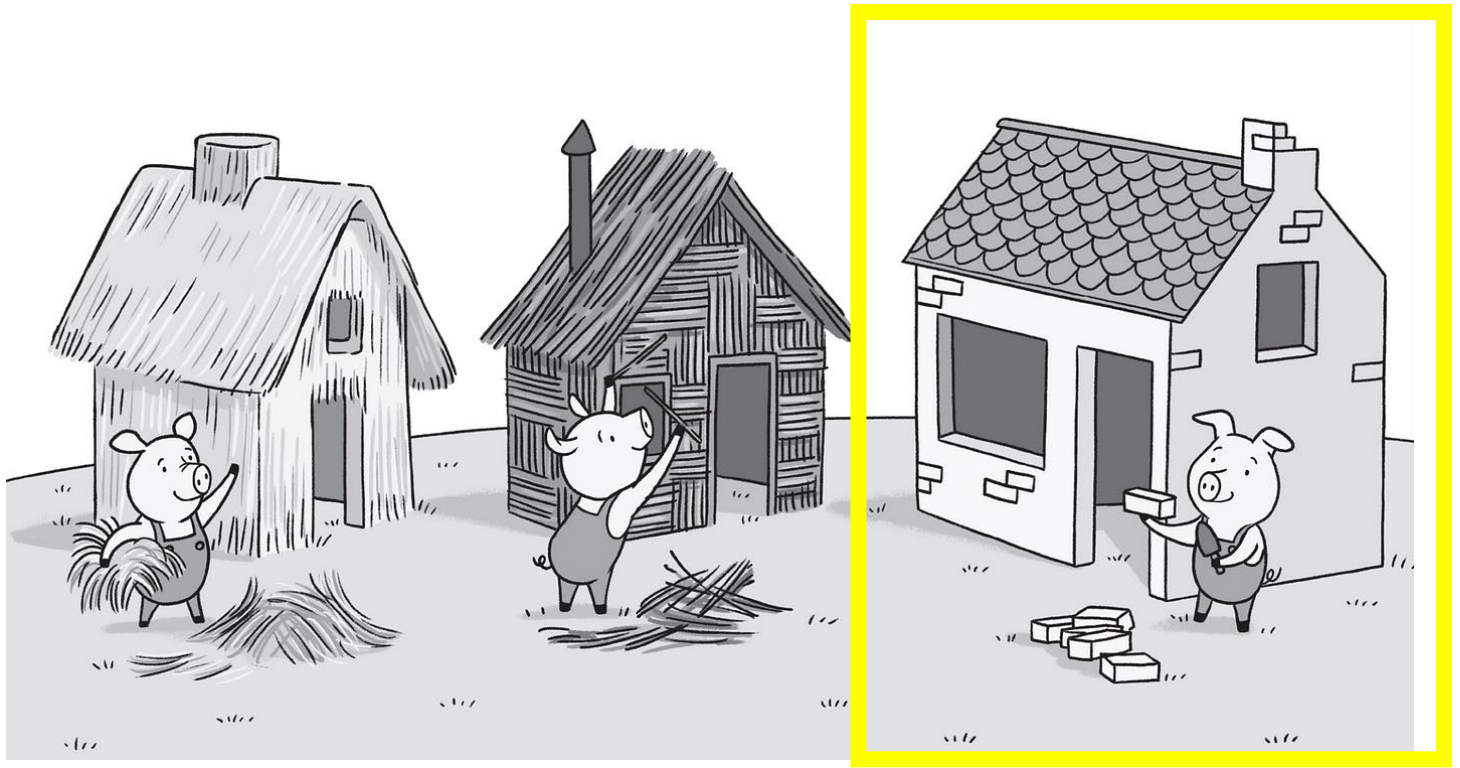
- The armory's existing foundation and walls are the **most** resilient material to mold growth

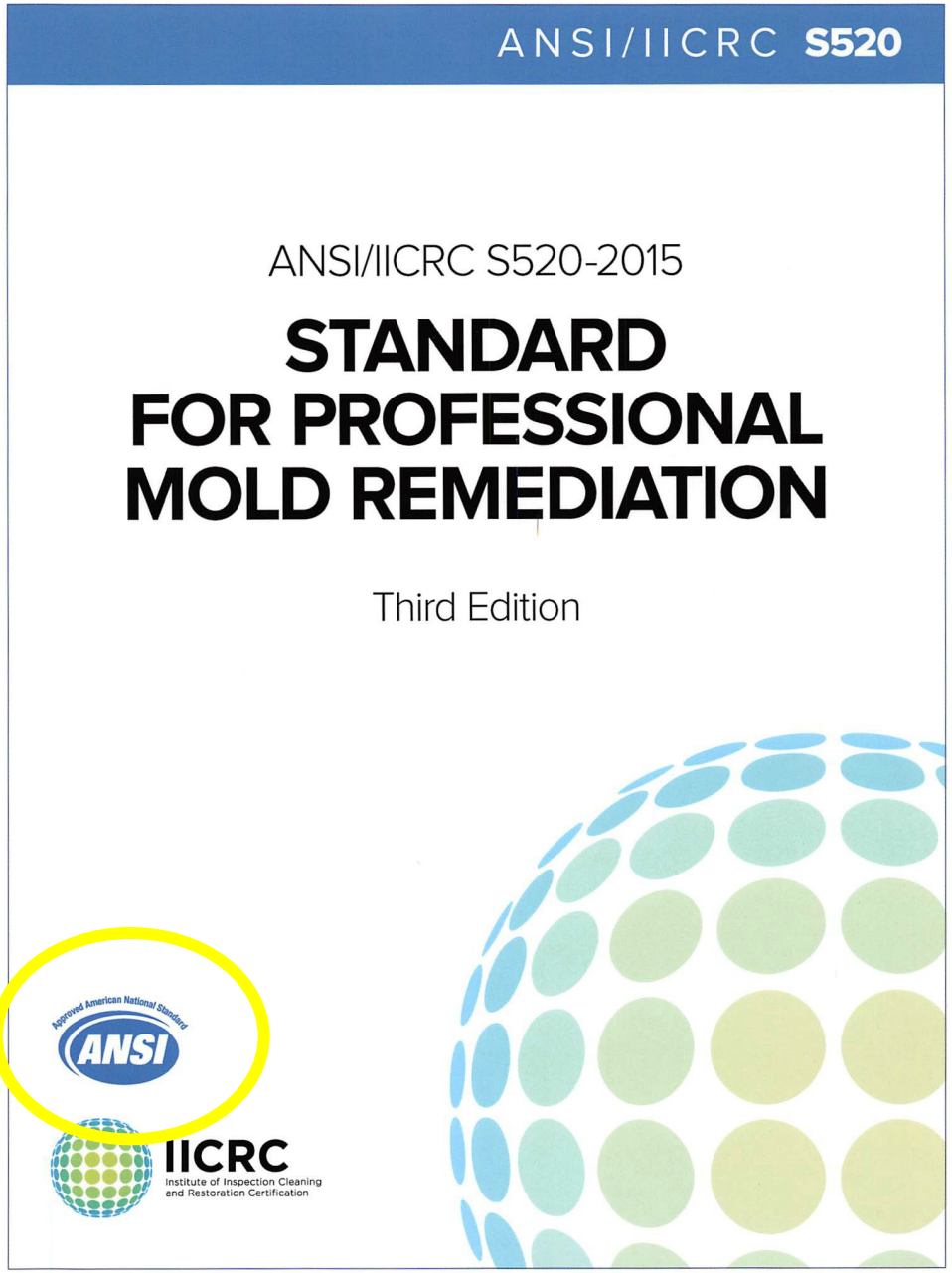
- If the moisture issues aren't fixed, then the new building will have the exact same mold problems too

(and it'll likely be worse, due to modern construction practices)

Armory Construction

- Built in 1931
- Core structure is either concrete or kiln-fired clay





"Pecking" order in the US:

1. Federal regulations (none for mold)
2. Private industry standards (ANSI)
3. Guidelines (EPA, CDC, etc…)

The remediation of different building materials depends on their porosity, their Condition (1, 2, or 3), and their structural integrity. Additionally, remediation methods can depend on the exposed substrates. Careful evaluation of materials containing layers with multiple porosities (composite materials) is appropriate. The following table represents the generally accepted remediation procedures for building materials affected by Condition 3 mold contamination. Contaminated materials should be carefully evaluated before attempting mold remediation. If structural components have been compromised and need to be removed, a qualified structural engineer should be involved in decisions to remove such components.

Porosity*	Materials	Remediation
Porous	drywall, ceiling tiles, insulation, particle board, medium-density fiberboard (MDF), carpet and similar porous materials	discard
Semi-porous	wood, brick, plaster, block, concrete, plywood, oriented strand board (OSB) and other semi-porous materials	abrasive methods: wire brushing, sanding, media blasting, or other appropriate methods.
Non-porous	glass, metal, laminate, plastic, porcelain, ceramic and other non-porous materials	surface cleaning: damp wiping, HEPA-vacuuming, or other appropriate methods.

*S520 definitions for the purposes of this table:

Porous: Building materials that easily absorb or adsorb moisture and, if organic, can easily support fungal growth

Semi-porous: Building materials that absorb or adsorb moisture slowly and, if organic, can support fungal growth

Non-porous: Building materials that do not absorb or adsorb moisture or have been surface treated and do not easily support fungal growth

Phase 3: Demolition

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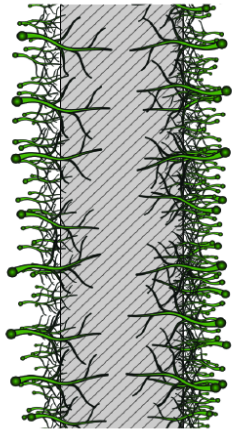
Porous materials
There is no way to make moldy drywall, insulation or carpet safe again. From the EPA to the CDC, everyone agrees those materials must be thrown away.

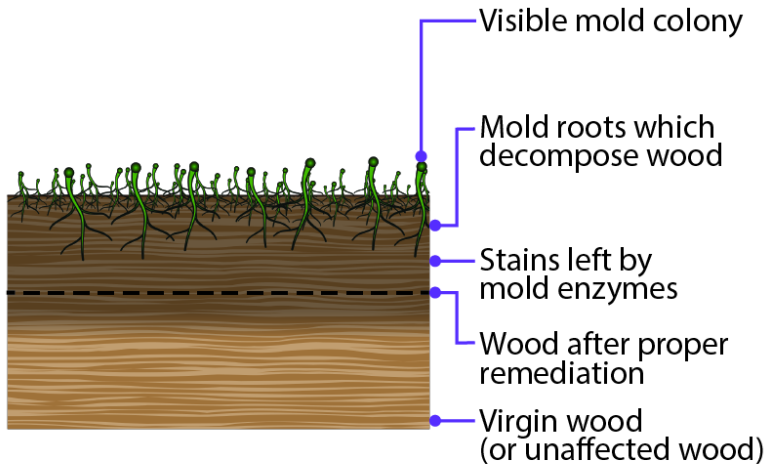
Semi-porous
Per the "Bible" of the mold industry (IICRC S-520), moldy wood, concrete and plaster can be salvaged if the mold is physically stripped out by sanding, wire brushing or blasting. However many companies take a massive shortcut - using chemicals to bleach the color out of the mold. It looks clean so they get away with it but the health hazard is still there.

Hidden Hazard

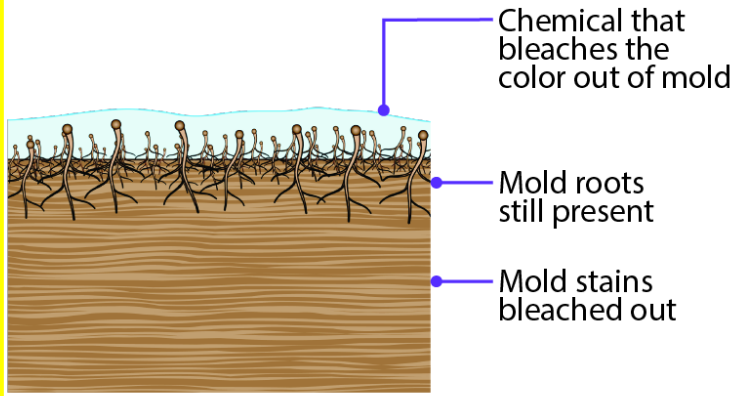


Mold is typically 3-4 times worse on the backside you can't see.

Mold In Wood



Chemical Short Cut



2nd Mold Inspection Findings

- “Indoor air samples revealed extremely high levels of airborne mold” - pg. 141

- The actual lab results weren’t included in the Demolition Application, but assume they are bad

Why Is Proper Mold Removal Needed?

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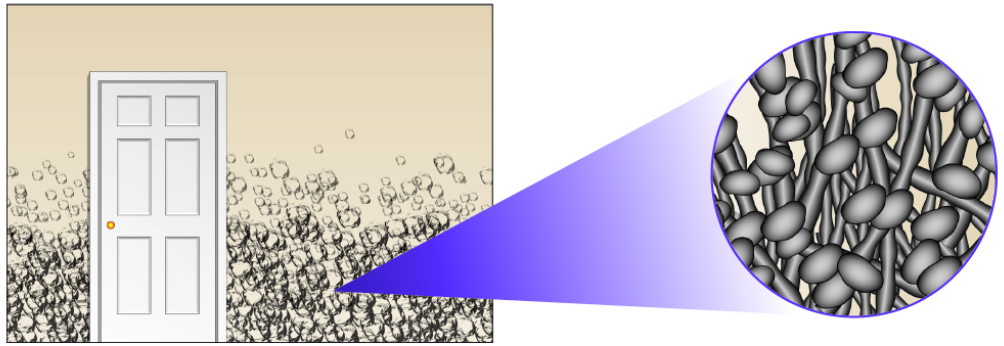
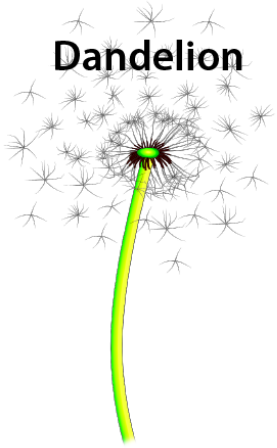
To protect you from microscopic mold spores. Mold is nature's recycling program. It reclaims dead trees and plants which, unfortunately, is what we build our houses with. A mold colony grows, like ivy, across wet surfaces to digest anything organic – wood, drywall and dust for example - and mold spores are its seeds. Some health problems stem from the mold colony but most are caused by spores.



Dandelion

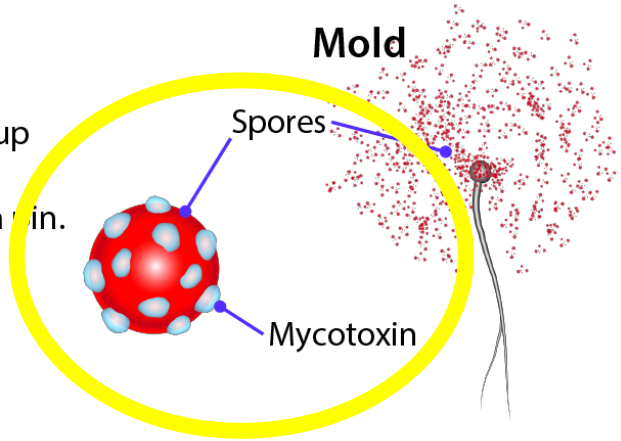


Dandelion vs Mold

Just like a dandelion, mold spores grow on a stalk up from the colony. Mold spores are 1/10 the size of a human hair and 250,000 spores fit on the head of a pin.

If the mold colony is touched, cleaned, torn out or disturbed, then millions of spores float off and contaminate the area.

Mold



Why Is Mold A Concern?

Mold can cause a huge variety of health problems. Some problems appear immediately. Some only emerge after prolonged exposure. The worst are reactions are commonly called mold sensitization or Chronic Inflammatory Response Syndrome (CIRS). This is typically a life-long condition where the body overreacts to small amounts of mold. It's triggered by 1 or 2 large mold exposures or repeated exposures to small amounts of mold.

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3 Health Reactions To Mold

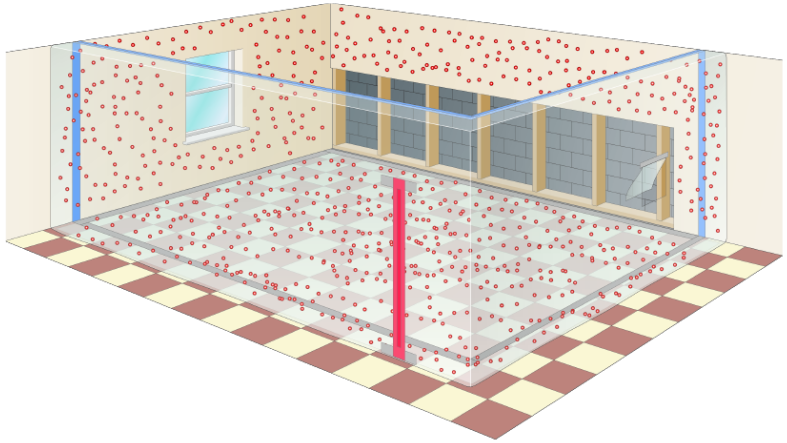
Health Effect	Caused By	Symptoms
Allergic Reaction 80 %	- mold colony fragments - mold spores	runny nose, sneezing, rash, headaches, asthma
Chemical Exposure 10% Toxic Response 10% (to 25%)	- mVOC's (off-gassing of active mold colony) - mycotoxins that coat every mold spore	loss of memory, fatigue, personality change, aches, vomiting, cramps, dizziness, sore throat
Fungal Infection Less than 1%	- inhalation or exposure to spores	death, fever, pain, flu-like symptoms, rash

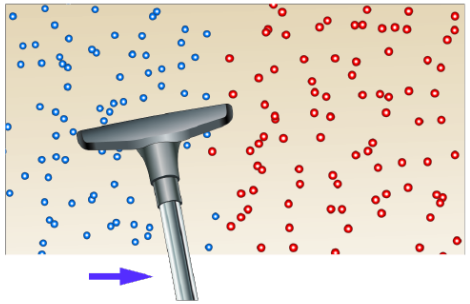
Phase 4: Immaculate Cleaning

After demolition, there are no visible mold colonies but the containment is still teeming with mold spores.

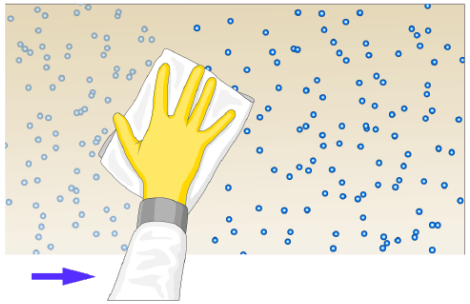
Like dust, mold spores are only airborne for a few hours before they cling to ceilings and walls but mainly they settle on the floor.

Immaculate cleaning is a 3 step process that removes mold spores and mycotoxins.

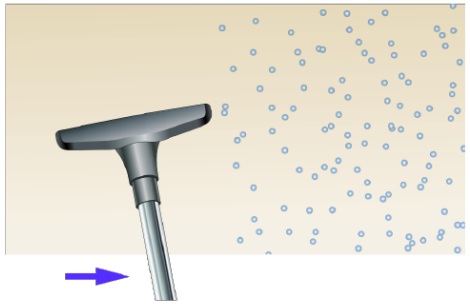




Step 1: HEPA Vacuum
Mold spores are removed by vacuuming every square inch of the containment area using a vacuum specially built for mold removal–*not* a store bought HEPA vacuum.



Step 2: Damp Wipe
Mycotoxins are very sticky so they remain behind. Its bond with the surface is broken by damp wiping every square inch with a special mixture.



Step 3: HEPA Vacuum Again
The "free" mycotoxins are then HEPA vacuumed up.

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S520 Mold Standard - verbatim part 1

- Physically removing mold is the *primary* means of remediation. Mold contamination should be physically removed from the structure, systems and contents…
- Attempts to kill, encapsulate or inhibit mold instead of proper source removal generally are not adequate

Section 4.4

Principles of Mold Remediation – Contamination Removal

Page 18

This is mentioned *literally* 10 times in the S520

S520 Mold Standard - verbatim part 2

Killing microorganisms with biocides (aka anti-microbials) does **not** typically destroy their antigenic or toxigenic properties

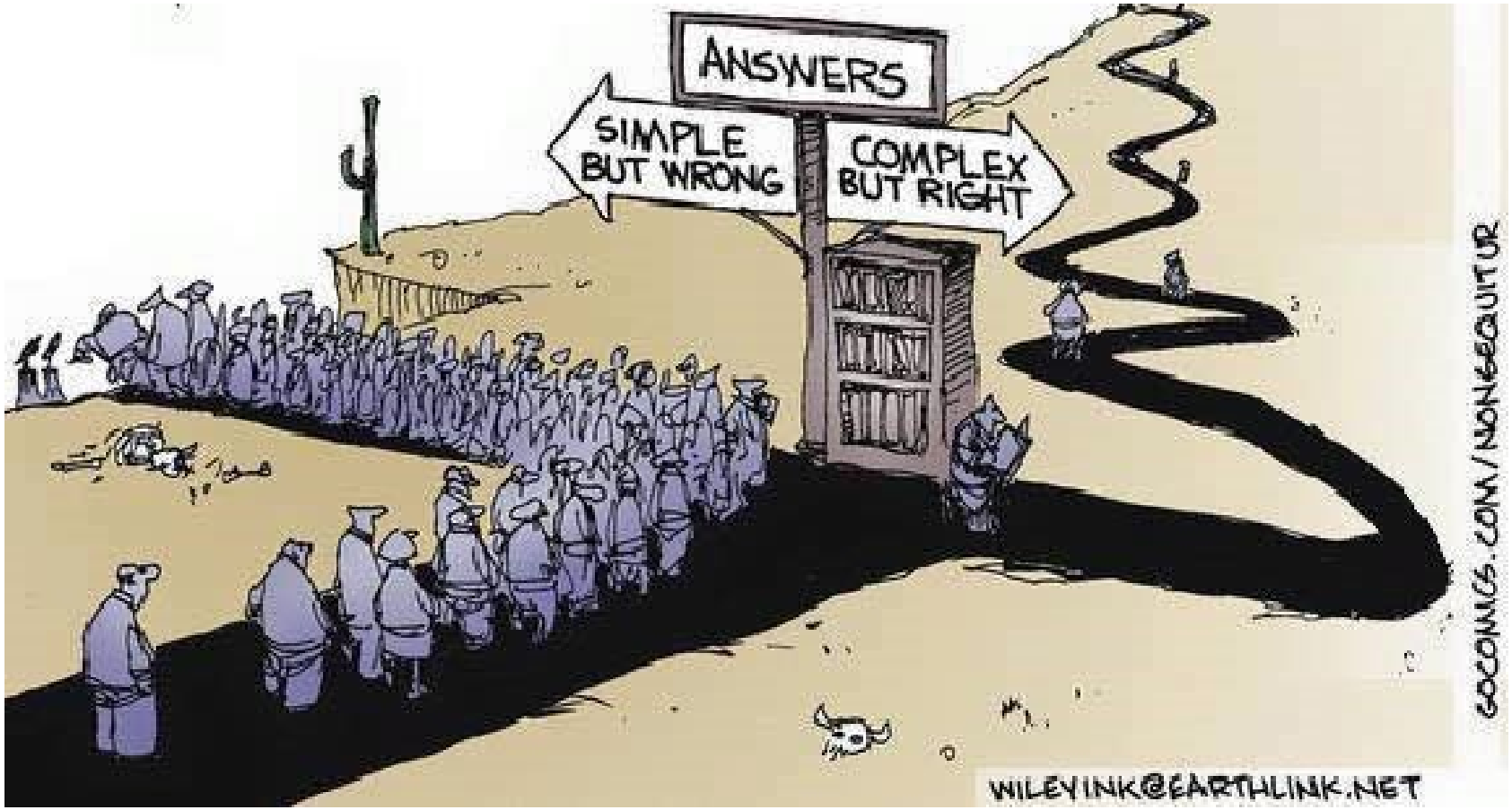
Section 12.2.9

Structural Remediation – Clean Up

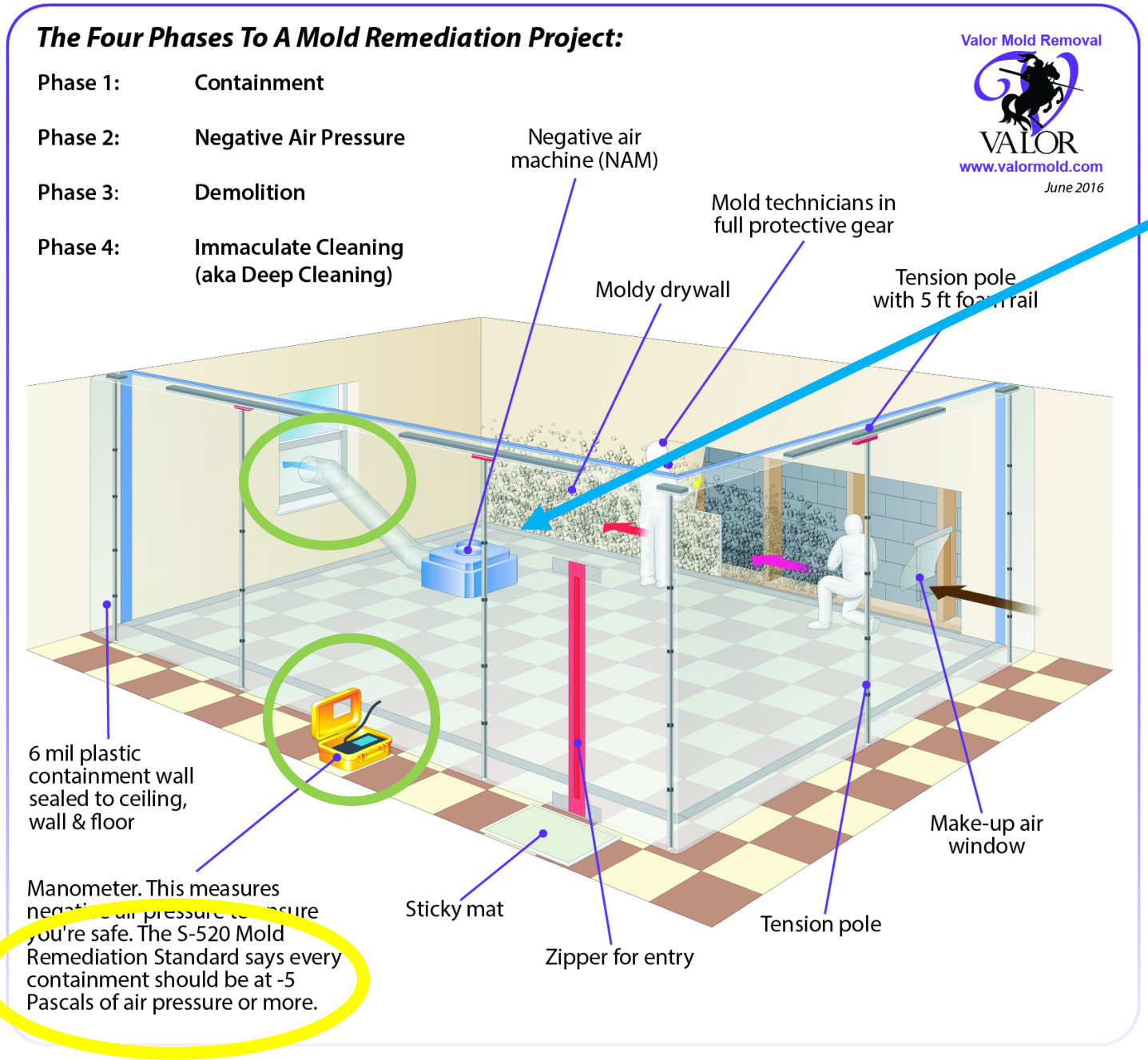
Page 50

Translation: kill it all you want…but the mold's allergens and mycotoxins are still there

Occam’s Razor does *not* apply to mold



Questions



Generic name is Air Filtration Device (AFD)

AFD with a duct on the exhaust is a Negative Air Machine (NAM)

AFD with no duct is an Air Scrubber

Seeing the term “Air Scrubber” in a remediator’s proposal is a red flag your containment will have no pressure

Phases 1 & 2: Containment And Negative Air Pressure

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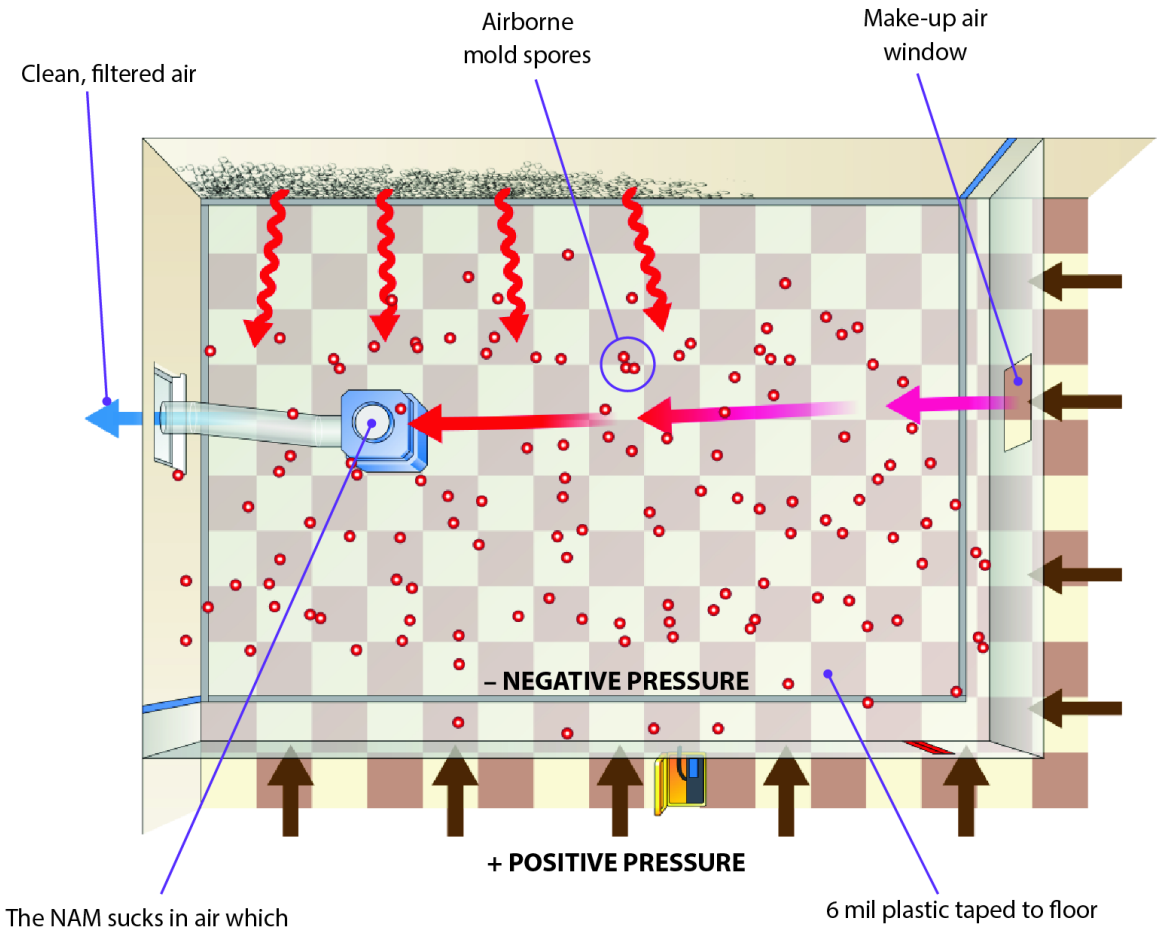
The containment and negative air pressure are critical because it keeps the mold spores trapped until we can clean them up. Compared to typical airborne levels of 1,000 mold spores or less, they easily skyrocket to 500,000 during demolition – even when there's less than 10 square feet of mold!



InstaScope average airborne spore count for a normal room in DC metro area:
4,600

InstaScope range for airborne spore counts DURING remediation:
1.5 million to 4 million

Airborne spore counts skyrocket 326 to 869 times higher during remediation!