

**RESPONSE TO DRAFT OF PROPOSED MOLD RULES AS REQUESTED BY
JESSICA ESCOBAR, ASSISTANT GENERAL COUNSEL, JULY 7, 2022**

You have requested that I as a member of the Strategic Planning Committee and a Texas licensed mold assessment consultant, to provide you with a response to the changes proposed to the TDLR Mold Program that were provided by Ms. Jessica Escobar, Assistant General Counsel to the Texas Department of Licensing and Regulation, by email dated July 7, 2022. The following is responsive to that request.

My opinions are based on (i) 22 years of mold investigation experience in the state of Texas (ii) more than 5000 mold investigations including, but not limited to residences, commercial buildings, hospitals, government buildings, court houses and a former President of the United States and (iii) more than 15 years as a designated expert by defendants and plaintiffs in cases of arbitration and/or court litigation. The following should be read and considered in its entirety. For clarity, the proposed language appears hereinafter first and my response immediately thereafter. Consequences resulting from the adoption of the proposed changes and conclusions appear at the end.

Proposed Changes

“§78.10 Definitions “The following words and terms when used in this chapter shall have the following meanings unless the context clearly indicates otherwise.”

Proposed Language

“(XX) Building thermal envelope--The basement walls, exterior walls, floor, roof and any other building element that enclose conditioned spaces.”

Response

The term “building element” in the proposed definition needs to be defined. Without definition, the term is vague and likely to be interpreted differently by others leading to potential litigation over its meaning. I object to the proposed language and reserve further opinion until my response is considered and I can consider the reply. Additionally, the impact of moisture and the requirement for effective vapor barriers need to be included in the definition.

Proposed Language

“(XX) Cause—To be defined.”

Response

All language changes, definitions and use of terms and words should be concurrently defined to avoid confusion, changes in meaning and unintended consequences by their use. I object to the lack of a definition for the term “Cause”. The meaning of any defined term /words could change when used together with other defined terms/words so the context, definition(s) and manner in which used should be considered together. I reserve my opinion until a definition for “Cause” has been developed.

Proposed Language

“(XX) Conditioned space – An area, room nor space that is enclosed within the building thermal envelope and that is directly heated or cooled or that is indirectly heated or cooled. Spaces are indirectly heated or cooled where they communicate thru openings with conditioned spaces, where they are separated from conditioned spaces by uninsulated walls, floors, or ceilings or where they contain uninsulated ducts, piping or other sources of heating or cooling.”

Response

The proposed language includes “uninsulated walls, floors, or ceilings or where they contain uninsulated ducts, piping or other sources of heating or cooling” is unacceptable as its use prevents assessment for mold hidden in a building’s interior rooms, HVAC duct chases, wall, floor and ceiling cavities that can impact the breathing space and cause occupant illness and degradation of the building. Since mold is microscopic in size and sometime colorless, significant mold growth that can be harmful to occupants and property can be present without being visible. See American Industrial Hygiene Association (“AIHA”) publication **Recognition, Evaluation, and Control of Indoor Mold**, Copyright 2020, below. See also Environmental Protection Agency (“EPA”) publication **Mold Remediation in Schools and Commercial Buildings**, EPA 402-K-01-001, March 2001 below.

Proposed Language

“(11) Contiguous – An area sharing a common border.”

Response

This definition is unacceptable because its use combined with the purposed definition of “Total surface area”, restricts remediation of mold to only what is visible. Mold is microscopic in size; therefore, significant mold growth can be present without being visible and remediation of mold growth hidden inside the walls that can migrate into the breathing space and cause occupant illness is completely ignored.

Proposed Language

“(18) Indoor air—Air within the building thermal envelope in conditioned spaces normally occupied by persons in the building. Indoor air specifically excludes air in wall and building cavities, attics and crawl spaces.”

Response

The purposed definition of “Indoor air” is unacceptable because it is intended to prevent mold assessment of wall cavities for mold growth that can migrate into the breathing space and cause occupant health effects.

Proposed Language

“(43) Survey—An activity undertaken in a building to determine the presence, location, or quantity of indoor mold or to determine the underlying cause(s) contributing to indoor mold contamination, whether by visual or physical examination or by collecting samples of potential mold for analysis.”

Response

This definition is unacceptable because it limits mold assessment to surface sampling of suspect mold growth and totally excludes air sampling to determine the levels of mold in the evaluation site, thereby eliminating testing of the air to determine occupant health exposure and/or potential moisture and mold damage to the building. This totally defies the purpose of mold investigations and the protection of the public for the adverse health effects of mold under Sec. 1958.051. GENERAL POWERS AND DUTIES. “The executive director shall administer and enforce this chapter to protect the public from the adverse health effects of mold.” Added by Acts 2003, 78th Leg., ch. 205, Sec. 1, eff. Sept. 1, 2003.

The proposed definitions “Building Thermal Envelope, Conditions Space, Indoor Air, and Survey” are unacceptable because their use clearly prevents the mold consultant from testing wall cavities, thereby failing to do what the Texas Mold Assessment and Remediation Rules were originally created to do “...provide needed standards and oversight for the public’s first line of defense against the proven, harmful effects of some types of mold”. (HB 329 House Research Organization bill analysis, 2003) The bottom line for the public if these definitions are adopted is “You can have mold in the interior walls of your house but that doesn’t count even though the CDC, EPA, World Health organization, ASTM, AIHA, IICRC S520 and numerous other authoritative organizations say otherwise.

Proposed Language

“(44) Total surface area—The contiguous area that needs to be cleaned or removed to remediate visible mold contamination.”

Response

This definition is unacceptable because its use combined with the purposed definition for total surface area restricts remediation of mold to only what is visible. Mold is microscopic in size and unless colonized, cannot be seen by the naked eye.

“§78.30 Exceptions and Exemptions

- (a) - (b) (No changes)
- (c) - Proposed changes eliminate this subsection in its entirety.

Response

Eliminating the language of subsection (c) could be interpreted to mean unlicensed persons or entities can perform mold remediation regardless of the amount of mold. This proposed change is unacceptable because it is unclear and needs to be clarified.

“§78.100 Minimum Work Practices and Procedures for Mold Assessment

- (a)-(c) (No changes.)
- (d) Sampling and data collection. If samples for laboratory analysis are collected during the assessment:
 - (1) Sampling must be performed according to methods established by ASTM International, the National Institute for Occupational Safety and Health, The American Industrial Hygiene Association, or the Occupational and Health Administration;
 - (2) (No changes)
 - (3) proper sample documentation and data collection information must be recorded for each sample, including;
 - (A) the type of sampling device used;
 - (B) the sampling method or specific steps used to collect the sample;
 - (C) the sample identification code or number;
 - (D) each location and material sampled;
 - (E) the date collected;
 - (F) the order in which the samples were collected;
 - (G) the name of the person who collected the samples;
 - (H) the project name or number; and
 - (4) Proper chain of custody procedures must be used;
 - (5) Samples must be analyzed by a laboratory licensed under §78.62; and

- (6) An assessor must verify the presence of mold growth through a secondary methodology if a sample appears to reveal the presence of mold that the assessor concludes would require remediation and shall identify all methodologies used in the assessment report.”

Response

Although 78.100 sets a standard for minimum practices and procedures for mold assessment, the proposed changes are intended to create maximum work practices and procedures and are effectively changing the scope and purpose of the rules without changing the language of 78.100 (a) Scope and (b) Purpose.

The proposed changes are unacceptable because their use restricts the mold consultant’s ability to assess anything other than a surface “material sampled”.

The standard Chain of Custody form provided by TDLR licensed mold laboratories identifies the Name of Company submitting the samples, Client Name and Address, Date Collected, Sample Type, Analysis Type i.e. Spore Trap, Air Sample Analysis, Direct Exam Surface Sample, Culturable Air / Surface Samples – 7-10 days, Sample ID, Sample Location, Analysis Type, Area, Volume (of air) and Notes, Relinquish Date and Time that is signed by the Consultant.

Proposed requirement A, C, E, G and H are suggested to obfuscate B, D, and F. The use of “B” would require the COC forms to be changed. “D” uses the “Material Samples, omits “Air Sampling”. The use of Air Sampling is critical to mold assessment. There is no value to “F”, therefore, it should be excluded.

Consequences of Proposed Changes to § 78.10 and § 78.100 if Adopted

1. The proposed changes are inconsistent with the definition of “Purpose” as defined in §78.100 (b) adopted effective November 1, 2017, 42 TexReg 4619.
2. The proposed changes are inconsistent with the definition of “Scope” as defined in §78.100 (a) adopted effective November 1, 2017, 42 TexReg 4619.
3. The proposed changes are inconsistent with Sec. 1958.002. SCOPE OF AUTHORITY. “(a) This chapter applies only to the regulation of mold-related activities that effect indoor air quality, including a mold-related activity performed by a third party for compensation at a property owned or operated by a governmental entity.”
4. The proposed changes are inconsistent with Sec. 1958.051. GENERAL POWERS AND DUTIES. “The executive director shall administer and enforce this chapter to protect the public from the adverse health effects of mold.” Added by Acts 2003, 78th Leg., ch. 205, Sec. 1, eff. Sept. 1, 2003.

5. The proposed changes are inconsistent with Sec. 1958.054. RULES REGARDING PERFORMANCE STANDARDS AND WORK PRACTICES. “The commission by rule shall establish minimum performance standards and work practices for conducting a mold assessment or mold remediation in this state.”
6. Under the proposed changes, the mold assessment consultant would not be able to give a “passed” clearance report or sign the Texas Department of Insurance of Certificate of Mold Damage Remediation because the MAC cannot say with reasonable certainty that mold has been remediated.

Many authoritative organizations including, but not limited to the EPA, IICRC, ASTM, National Institute for Occupational Safety and Health, American Industrial Hygiene Association, World Health Organization (“WHO”) have reported that spores from hidden mold growth can migrate into the living space and cause health effects.

The following information regarding Mold Toxins (Mycotoxins) is published in the EPA publication **Mold Remediation in Schools and Commercial Buildings**. “Many symptoms and human health effects attributed to inhalation of mycotoxins have been reported including: mucous membrane irritation, skin rash, nausea, immune system suppression, acute or chronic liver damage, acute or chronic central nervous system damage, endocrine effect, and cancer.

Conclusions

The original Administrative Rules of the Texas Department of Licensing and Regulation, 16 Texas Administrative Code were created with input from Gregory Becker, Texas Association for Indoor Air Quality and TDH Mold Task Force Assessment Guidance Committee; David Brown, Indoor Air Quality Association; Gary Caldwell, International Association of Mold Remediation Specialist; Katherine Giaramita, Servicemaster Clean Disaster Restoration Services; James Killian, Farmers Insurance Group; Jerry Lauderdale; David Mintz, Texas Apartment Association; Scot Norman, Texas Association of Builders; (On committee substitute:) Stephen Pape, Texas Air Conditioning Contractors Association. The adopted rules were based on then current science and their use remain constructive and serves the public well.

The proposed changes to the Administrative Rules of the Texas Department of Licensing and Regulation, 16 Texas Administrative Code, Chapter 78 shifts away from the original purpose of protecting public health to ignoring public health by dramatically limiting mold assessment to only that which is visible, allowing only surface sampling and preventing air testing to determine occupant mold exposure and hidden mold growth. If changes were needed to modernize the rules and regulations to conform to the latest scientific findings on mold in buildings and their related air quality, they would be reasonable; however, the proposed changes are contrary to recent findings and opinions that would benefit the public. These proposed revisions make it considerably more difficult for a mold assessment consultant to perform the tasks historically assigned to them to protect the health of the public. The proposed rules sacrifice the health and welfare of Texas citizens and are in direct conflict with the requirements of the Texas Occupations Code and other Texas laws, rules, and regulations.

The EPA publication Mold Remediation in Schools and Commercial Buildings specifically cites the presence of hidden mold as follows: “It is possible that mold may be growing on hidden surfaces, such as the back side of drywall, wallpaper, or paneling, the top of ceiling tiles, the underside of carpets and pads, etc.” Eliminating the interior walls from investigation by a mold assessment consultant removes one of the most common and overlooked locations for hidden mold, the back side of drywall, thereby, subjecting the public to molds that can cause health effects.

I have not seen any published argument as to why the proposed changes are needed much less why the changes would benefit the public which is directed by Sec. 1958.051 of the Texas Occupations Code. In fact, the proposed changes are designed to inhibit the work of mold assessment consultants in identifying mold growth by changing and narrowing definitions of the areas where their work may be performed thereby eliminating the locations where mold may be present.

Any change in law, whether it be a code, administrative rule or regulation is championed by those who benefit from the change and will be criticized by those who have suffered health effects, property damage and financial loss by the change. Balancing those competing interests is the work of the political bodies that are charged with that responsibility. The Texas Mold Assessment and Remediation Rules were originally created and should remain to “...provide needed standards and oversight for the public’s first line of defense against the proven, harmful effects of some types of mold”. (HB 329 House Research Organization bill analysis, 2003)

According to the Centers for Disease Control and Prevention (“CDC”) “Exposure to materials and structures contaminated with mold should be assumed to present a potential health risk regardless of the type of mold. Risk for illness does not necessarily vary with the type of mold or the extent of contamination.”

As a mold assessment consultant that has inspected the home of a former President of the United States, I do not know how I could protect the health of the President and First Lady using these proposed changes.

Respectfully submitted,

Linda K. Lauver
MAC 0405

Reference Information

American Industrial Hygiene Association (AIHA) Recognition, Evaluation, and Control of Indoor Mold – 2nd Edition Copyright 2020

- **Section 6.6 “Inspection for Hidden Mold”**
Hidden mold growth is of significance because mold particulate (spores, mycelial fragments, etc.) has the potential to migrate into occupied areas and result in fungal particulate exposures to occupants.
- **Section 17.5.1 “Definition”**
Hidden mold is defined as concealed visible colonizing growth of filamentous fungi on building materials or contents that is within the building enclosure but is concealed from view during a normal walk-through inspection. Hidden mold may be active, dormant, or no viable colonization. It may be concealed by building surfaces, structural systems, mechanical systems, electrical systems, furnishing, or fixtures. Hidden mold may occur in HVAC systems, in interior or exterior walls, or in building cavities. Condensation within building assemblies can promote significant hidden mold growth without outward appearance on exposed building surfaces.
- **Section 17.5.2 “The need to Remediate Hidden Mold”**
In 2019, the consensus is that hidden growth should be effectively cleaned or removed. Mold is damage and areas with hidden mold are much more vulnerable to regrow in the event of future wetting events. Further, many government agencies and professional associations have referenced growth in wall cavities as a potential health problem and recommend that wall cavities not be overlooked during remediation.
- **Section 17.5.4 “Property Damage Resulting from Hidden Mold Growth”**
Regardless of the potential health risks and indoor exposure levels, hidden mold growth implies decomposition of building materials. Moisture barriers can be deteriorated. Integrity of fire-rated gypsum board assemblies might be compromised. Structural components can be degraded. Hidden growth suggests a hidden moisture problem that might cause continued growth. Even if moisture sources are corrected, previously colonized surfaces with abundant residual spore levels are more susceptible to recurrent growth at lower moisture levels than clean surfaces.

National Institute for Occupational Safety and Health

- Building dampness problems frequently occur because of suboptimal design, construction, and commissioning (assessing the building’s construction and operation prior to occupancy) of new buildings.

Environmental Protection Agency (“EPA”) publication **Mold Remediation in Schools and Commercial Buildings**, EPA 402-K-01-001, March 2001.

“Hidden Mold

In some cases, indoor mold growth may not be obvious. It is possible that mold may be growing on hidden surfaces, such as the back side of dry wall, wallpaper, or paneling, the top of ceiling tiles, the underside of carpets and pads, etc. Possible locations of hidden mold can include pipe chases and utility tunnels (with leaking or condensing pipes), walls behind furniture (where condensation forms), condensate drain pans inside air handling units, porous thermal or acoustic liners inside ductwork, or roof materials above ceiling tiles (due to roof leaks or insufficient insulation). Some building materials, such as dry wall with vinyl wallpaper over it or wood paneling, may act as vapor barriers, trapping moisture underneath their surfaces and thereby providing a moist environment where mold can grow. You may suspect hidden mold if a building smells moldy, but you cannot see the source, or if you know there has been water damage and building occupants are reporting health problems. Investigating hidden mold problems may be difficult and will require caution when the investigation involves disturbing potential sites of mold growth – make sure to use PPE. For example, removal of wallpaper can lead to a massive release of spores from mold growing on the underside of the paper. If you believe that you may have a hidden mold problem, you may want to consider hiring an experienced professional. If you discover hidden mold, you should revise your remediation plan to account for the total area affected by mold growth.”