ENCLOSURE 2

AUSTIN AIR BIOLOGY
Environmental Testing & Consulting

April 30th , 2025

Bush, Rudnicki & Shelton
Attn: Jake L. Robinson
2525 Ridgmar Blvd. Suite #430
Fort Worth, Texas 76116

Re: **Mold Testing and Assessment**
[redacted]
AAB Project #: 225-066

As per your request, Austin Air Biology ("AAB") has performed an air testing event and assessment at the above referenced property. The purpose of the assessment was to determine the concentrations of airborne fungi spores within the structure, perform moisture scans and visual inspections of the interior surfaces, and review the previous inspection reports (H5 Consulting dated 6/3/24). The following paragraphs outline the findings of our assessment.

Visual Assessment & Event History/File Review:

A visual inspection and sampling was performed by Austin Air Biology staff on March 25th , 2025. The following summarizes the results of the inspection.

1. **H5 Climate Consulting, LLC (dated 6/3/24) :** According to the H5 inspection report, "Upon arrival, measured temperature and humidity. Found thermostat set to 65 degrees and satisfied. Humidity was measured at 62 percent. Thermostat fan was set to the "On" position. This will increase the relative humidity in the home. Visual inspections determined several registers grills with condensation on them. This issue particularly due to the thermostat fan running in the "On" position. There are signs of biological growth around wet area exhaust fans. With colder indoor temperatures, these fans tend to backdraft and introduce hot, humid air back into the living space providing an environment for bio growth to grow". AAB agrees with these opinions/conclusions. See attached #1.

2. **AAB Inspection**: At the time of AAB's inspection, mold growth/water damage was observed at the master bathroom vent cover/toilet water supply area, utility room vent cover, kitchen vent area and other multiple vent covers. Moisture content readings were collected from these areas; the observed readings fell within a normal range of 0 to 12%. The most likely cause of the observed stains, damage (trim movement) and mold growth is the improper usage of the HVAC system. As reported in the H5 report, the combination of the low temperature settings (65 degrees) and the HVAC fan set to the "On" position is the most likely cause of the observed damage/growth. See the attached photos.

3. **Attic HVAC System/dehumidification equipment:** At the time of AAB's inspection, the interiors of the HVAC blower unit/plenums were visually inspected; no significant mold growth was observed. The interior of the dehumidification equipment was visually inspected. No significant mold growth was observed. See the attached photos.

4. **Exterior Doorways:** At the time of AAB's inspection, mold growth was observed on wall sheet rock adjacent to multiple exterior doorways (garage, main entry and back doors). The most likely cause of the observed stains, damage (trim movement) and mold growth is the improper usage of the HVAC system (as documented in the E5 report). Moisture content readings were collected from these areas; the observed readings fell within a normal range of 0 to 12%. The combination of the low temperature settings (65 degrees) and the HVAC fan set to the "On" position is the most likely cause of the observed damage/growth. See the attached photos.

5. **IR Scans:** AAB scanned all of the interior surfaces with an FLIR C-5 IR camera, **no** significant temperature abnormalities (potential wet areas) were observed in the images of the structure.

6. **Relative Humidity and Temperature:** At the time of AAB inspection, relative humidity readings collected within the structure fell within a normal range of 50% to 52%. Note: The thermostat was set to 73 degrees with the system set to auto. See the attached photos.

Sampling & Results:

A total of (9) spore trap cassette samples and (3) surface samples were collected within and outside the structure. Two spore trap cassette samples were collected outside the structure to determine the naturally occurring background fungi concentrations. The remaining samples were collected inside the structure. The samples were transported to EMSL of Dallas, Texas for analysis under strict chain-of-custody procedures.

According to the analysis, the total fungi count in the **outside** air at the time of the inspection was an average of **740** spores per cubic meter ("S/m^3") of air. **The inside total fungi spore counts fell within a range of 13 to 27 S/m^3 of air. See the attached chart.**

Surface Sample Results:
Type: Swab
ID: SW-1
Loc: Master Toilet Water Line
Results: *Cladosporium*

Type: Swab
ID: SW-2
Loc: Master Toilet Ceiling
Results: *Cladosporium*

Type: Swab
ID: SW-3
Loc: Entry Doorway
Results: *Cladosporium*

Conclusions:

In general, the industry standard calls for total fungi/genus counts within structures to be one-half to one-third the counts outside the structure. Using this standard, based on the outside total/genus spore counts, **the air quality at all test locations falls within a normal range.**

The surfaces sample results/fungi type is consistent with excessive condensation at vent covers, exhaust fans, plumbing wall penetrations and exterior doorways. The most likely cause of the observed mold growth is the conditions reported in the H5 report.

The location and the amount of mold growth have not significant changed when compared to the conditions reported in the H5 report. The most likely reason for this consistency is that the conditions that caused the mold growth (excessive humidity – due to improper HVAC usage) no longer exist.

Recommendations:

1. According to State of Texas mold regulations, any non-licensed contractor can remove areas of mold growth, which are less than 25 contiguous square feet. At the time of AAB's Inspection, no growth areas exceeded the 25 contiguous square feet rule.

Upon review of the report, please feel free to contact us should you have any questions and/or comments. We appreciate this opportunity to provide services on your project.

Best Regards,

David M. Stegmann
Texas Mold Assessment Consultant License # 0236
Expires: 01/20/24
Attachments

Attachment 1 - ES Inspection – Field Observations
Attachment 2 Photos
Attachment 3 - Lab Reports/Charts
Attachment 4 - Protocol

Attachment 1

ES Inspection Report

Conditions in the Attic

Temperature

Relative Humidity

Dew Point

Conditions Outside

Temperature

Relative Humidity

Dew Point

Observations

Comments

Upon arrival, measured temperature and humidity. Found thermostat set to 65 degrees and satisfied. Humidity was measured at 62 percent. Thermostat fan was set to the "ON" position. This will increase the relative humidity in the home.

Visual inspections determined several register grills with condensation on them This is particularly due to the thermostat fan running in the "ON" position.
There were signs of biological growth around wet area exhaust fans. With colder indoor temperatures, these fans tend to backdraft and introduce hot, humid air back into the living space providing an environment for bio growth to grow. Only secondary bathroom was observed to have an inline backdraft damper installed.

Once in the attic, found the supply and return ducts for the dehumidifier swapped and causing warm air to push out of return near front bedrooms. Controller for the dehumidifier was out of calibration.

Missing insulation on a small section of the refrigerant line in the attic.

Observed 2 exhaust ducts abandoned in the attic. They are sealed at this time be recommended to be removed.

Kitchen vent exhaust pipe is larger than the pipe penetrating the roof. This is resulting in a difficult opportunity to seal pipe correctly. The vent pipe size needs to be consistent from vent fan to exterior termination.

The makeup air for the kitchen vent was not wired in. There should be a device that opens the damper while the kitchen vent is active.
The makeup air damper and duct can be removed entirely if the kitchen vent is under 400CFM.

Photos

Attachment 2

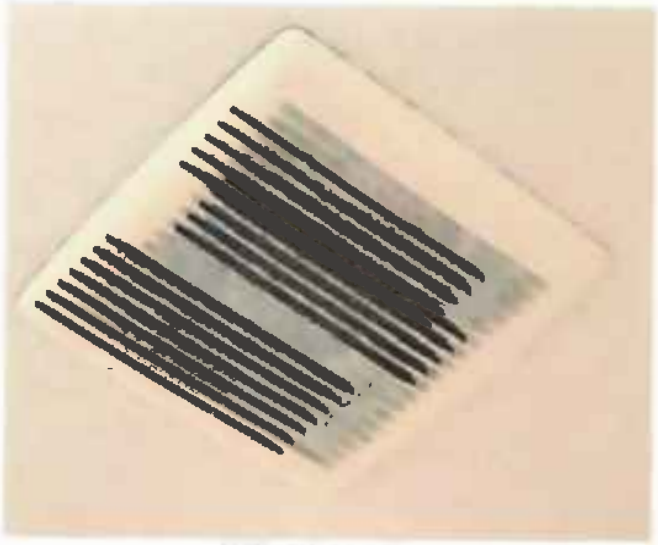
Photos

Temperature / Relative Humidity - start of inspection

Water Stains - Kitchen & Living Room Vent

Water Stains - Kitchen & Living Room Vent

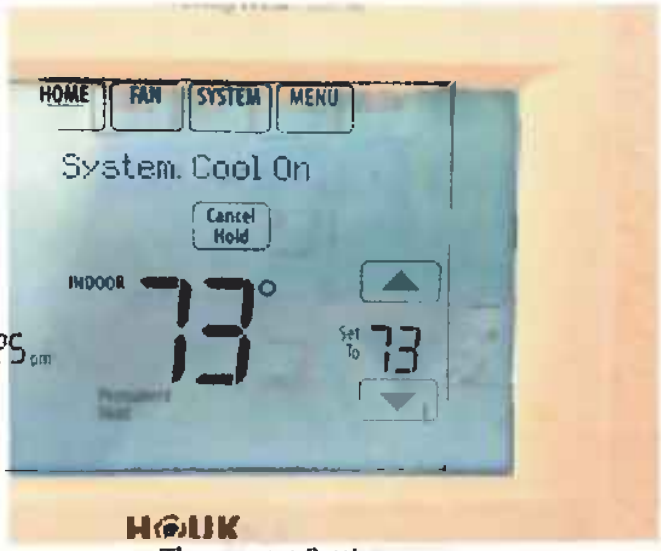
Exterior Door Trim



Utility Room Vent

Master Bath Vent

Master Bath Water Supply



Thermostat Setting

Temperature & Relative Humidity - End

Normal Moisture Content - Master Bath

Normal Moisture Content - Master Bath

Normal Moisture Content - Exterior Door Trim

Exterior Door Trim

Exterior Door Trim

Exterior Door Trim

Typical Conditions - HVAC System

Typical Conditions - HVAC System

Typical Conditions - HVAC System

Typical Conditions - Dehumidifier

Plenum - HVAC

Plenum - HVAC

Interior - Dehumidifier

IR Images

Attachment 3

Lab Reports/Charts

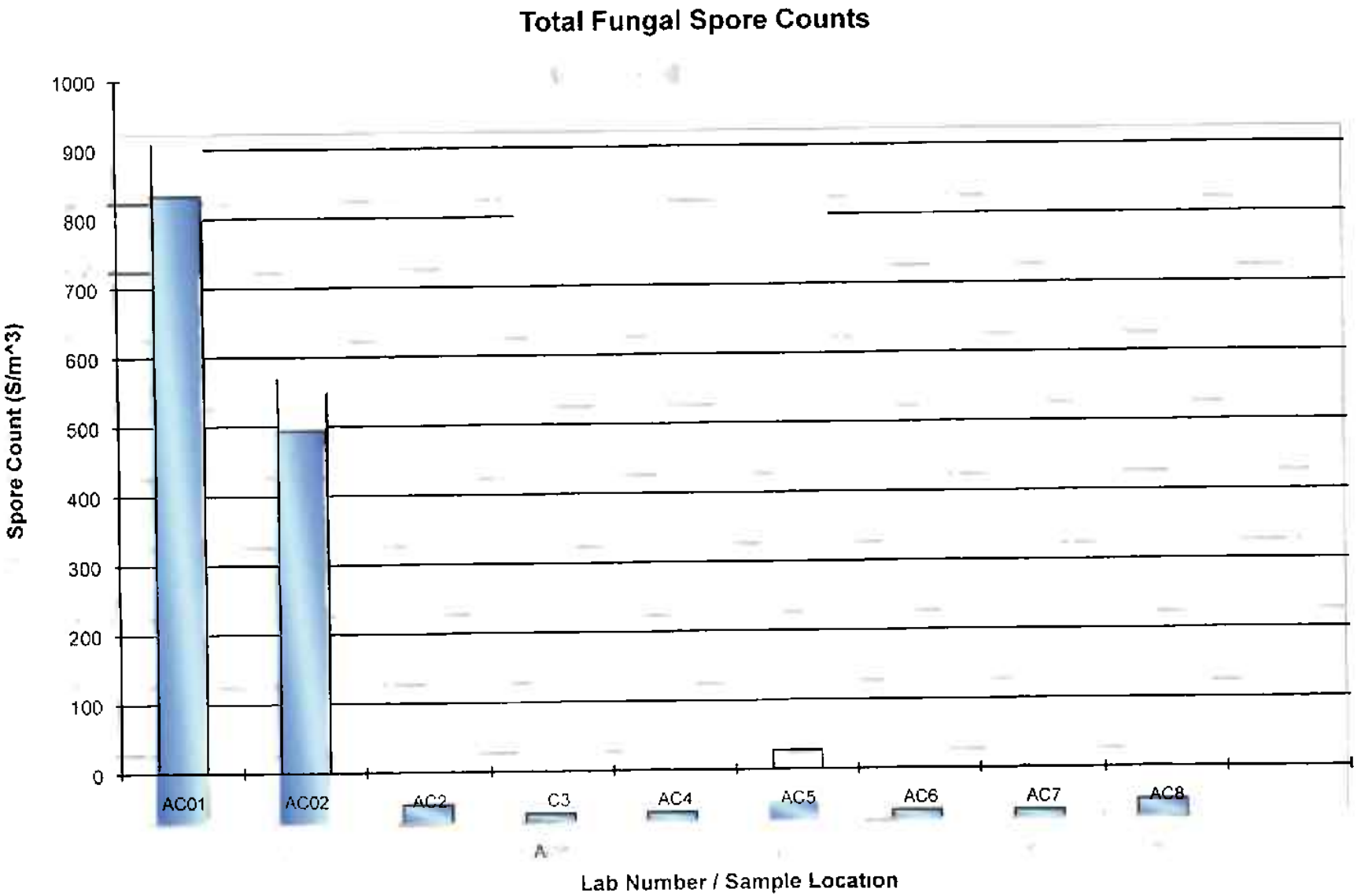
Sample Location Index

Sample ID	Lab Number	Location	Sample Type
AC01	1	Outside	AC
AC02	2	Kitchen/Living	AC
AC2	3	Formal Living	AC
AC3	4	Office - Bar	AC
AC4	5	Master	AC
AC5	6	Upstairs S BDr	AC
AC6	7	Casita	AC
AC7	8	Garage Apt.	AC
AC8	9	Detected Garage Apt.	AC
SW-1	1	Master Toilet Wall	SW
SW-2	2	Master Bathroom Ceiling	SW
SW-3	3	Entry Doorway Wall	SW

Sample Types:

AC	Spore Trap
CP	Air Sample - Culture Plate
TP	Surface Sample - Tape
SW	Surface Sample - Swab
B	Bulk Sample

AAB Project # : 225-066



AAB Project # 225-066

eurofins

Built Environment Testing

Report for:

David Stegmann
Austin Air Biology
2303 Bonita St.
Austin, TX 78703

Regarding: Eurofins Built Environment Testing Central, LLC
Project: 225-066
EML ID: 4002452

Approved by:

Dates of Analysis:
Spore trap analysis: 03-27-2025

Business Unit Manager
Scott Ward

Service SOPs: Spore trap analysis (EB-MY-S-1038)
AIHA LAP, LLC accredited service, Lab ID #157714

All samples were received in acceptable condition unless noted in the Report Comments portion in the body of the report. Due to the nature of the analyses performed, field blank correction of results is not applied. The results relate only to the samples as received and tested. Information supplied by the client which can affect the validity of results: sample air volume.

Eurofins Built Environment Testing Central, LLC's LabServe® reporting system includes automated fail-safes to ensure that all AIHA LAP, LLC quality requirements are met and notifications are added to reports when any quality steps remain pending.

Eurofins Built Environment Testing Central, LLC
3113 Red Bluff Road, Pasadena, TX 77503
713-290-0223 www.eurofinsus.com/Built

Client: Austin Air Biology
C/O: David Stegmann
Re: 225-066

Date of Sampling: 03-25-2025
Date of Receipt: 03-26-2025
Date of Report: 03-27-2025

SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

Location:	AC01: Bout			AC02: Font		
Comments (see below)	None			A		
Lab ID-Version‡:	19915311-1			19915312-1		
Analysis Date:	03/27/2025			03/27/2025		
	raw ct.	% read	spores/m3	raw ct.	% read	spores/m3
Alternaria	2	100	27			
Ascospores	14	25	750	3	25	160
Basidiospores	2	25	110	3	25	160
Chaetomium						
Cladosporium				1/15	25/100	250
Curvularia						
Epicoccum						
Fusarium						
Myrothecium						
Nigrospora						
Other colorless						
Penicillium/Aspergillus types†						
Pithomyces						
Rusts						
Smuts, Periconia, Myxomycetes	2	100	27			
Stachybotrys						
Stemphylium						
Torula						
Ulocladium						
Zygomycetes						
Ba...ound debris (1-4+)	3+			2+		
Hyphal fragments/m3	< 13			< 13		
Pollen/m3	< 13			< 13		
Skin cells (1-4+)	3+			2+		
Sample volume (liters)	75			75		
§ TOTAL SPORES/m3			910			570

Comments: A) 15 of the raw count *Cladosporium* spores were present as a single clump.

Spore types listed without a count or data entry were not detected during the course of the analysis for the respective sample, indicating a raw count of <1 spore.
† The spores of *Aspergillus* and *Penicillium* (and others such as *Acremonium*, *Paecilomyces*) are small and round with very few distinguishing characteristics. They cannot be differentiated by non-viable sampling methods. Also, some species with very small spores are easily missed, and may be undercounted.
††Background debris indicates the amount of non-biological particulate matter present on the trace (dust in the air) and the resulting visibility for the analyst. It is rated from 1+ (low) to 4+ (high). Counts from areas with 4+ background debris should be regarded as minimal counts and may be higher than reported. It is important to account for samples volumes when evaluating dust levels.

The analytical sensitivity is the spores/m^3 divided by the raw count, expressed in spores/m^3, per spore and per sample.

For more information regarding analytical sensitivity, please contact QA by calling the laboratory.
‡ A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".
§ Total Spores/m3 has been rounded to two significant figures to reflect analytical precision.

Eurofins Built Environment Testing Central, LLC
3113 Red Bluff Road, Pasadena, TX 77503
713-290-0223 www.eurofinsus.com/Built

Client: Austin Air Biology
C/O: David Stegmann
Re: 225-066

Date of Sampling: 03-25-2025
Date of Receipt: 03-26-2025
Date of Report: 03-27-2025

SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

Location:	A Kitchen			AC3: Master		
Comments (see below)	None			None		
Lab ID-Version‡:	19915313-1			19915314-1		
Analysis Date:	03/27/2025			03/27/2025		
	raw ct.	% read	spores/m3	raw ct.	% read	spores/m3
Alternaria						
Ascospores	1	100	13			
Basidiospores						
Chaetomium						
Cladosporium						
Curvularia						
Epicoccum	1	100	13	1	100	13
Fusarium						
Myrothecium						
Nigrospora						
Other colorless						
Penicillium/Aspergillus types†						
Pithomyces						
Rusts						
Smuts, Periconia, Myxomycetes						
Stachybotrys						
Stemphylium						
Torula						
Ulocladium						
Zygomycetes						
Background debris (1-4+)	4+			3+		
Hyphal fragments/m3	< 13			< 13		
Pollen/m3	< 13			< 13		
Skin cells (1-4+)	4+			3+		
Sample volume (liters)	75			75		
§ TOTAL SPORES/m3			27			13

Comments:

Spore types listed without a count or data entry were not detected during the course of the analysis for the respective sample, indicating a raw count of <1 spore.
† The spores of *Aspergillus* and *Penicillium* (and others such as *Acremonium, Paecilomyces*) are small and round with very few distinguishing characteristics. They cannot be differentiated by non-viable sampling methods. Also, some species with very small spores are easily missed, and may be undercounted.
††Background debris indicates the amount of non-biological particulate matter present on the trace (dust in the air) and the resulting visibility for the analyst. It is rated from 1+ (low) to 4+ (high). Counts from areas with 4+ background debris should be regarded as minimal counts and may be higher than reported. It is important to account for samples volumes when evaluating dust levels.

The analytical sensitivity is the spores/m^3 divided by the raw count, expressed in spores/m^3, per spore and per sample.

For more information regarding analytical sensitivity, please contact QA by calling the laboratory.
‡ A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x"
§ Total Spores/m3 has been rounded to two significant figures to reflect analytical precision.

Eurofins Built Environment Testing Central, LLC
3113 Red Bluff Road, Pasadena, TX 77503
713-290-0223 www.eurofinsus.com/Built

Client: Austin Air Biology
C/O: David Stegmann
Re: 225-066

Date of Sampling: 03-25-2025
Date of Receipt: 03-26-2025
Date of Report: 03-27-2025

SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

Location:	AC4: Master Bath			AC5: ovie Room		
Comments (see below)	None			None		
Lab ID-Version‡:	9915315-1			19915316-1		
Analysis Date:	03/27/2025			03/27/2025		
	raw ct.	% read	spores/m3	raw ct.	% read	spores/m3
Alternaria						
Ascospores						
Basidiospores	1	100	13	2	100	27
_haetomium						
Cladosporium						
Curvularia						
Epicoccum						
Fusarium						
Myrothecium						
Nigrospora						
Other colorless						
Penicillium/Aspergillus types†						
Pithomyces						
Rusts						
Smuts, Periconia, Myxomycetes						
Stachybotrys						
Stemphylium						
Torula						
Ulocladium						
Zygomycetes						
Background debris (1-4+)	3+			3+		
Hyphal fragments/m3	< 13			< 13		
Pollen/m3	< 13			< 13		
Skin cells (1-4+)	3+			3+		
Sample volume (liters)	75			75		
§ TOTAL SPORES/m3			13			27

Comments:

Spore types listed without a count or data entry were not detected during the course of the analysis for the respective sample, indicating a raw count of <1 spore.
† The spores of *Aspergillus* and *Penicillium* (and others such as *Acremonium*, *Paecilomyces*) are small and round with very few distinguishing characteristics. They cannot be differentiated by non-viable sampling methods. Also, some species with very small spores are easily missed, and may be undercounted.
††Background debris indicates the amount of non-biological particulate matter present on the trace (dust in the air) and the resulting visibility for the analyst. It is rated from 1+ (low) to 4+ (high). Counts from areas with 4+ background debris should be regarded as minimal counts and may be higher than reported. It is important to account for samples volumes when evaluating dust levels.

The analytical sensitivity is the spores/m^3 divided by the raw count, expressed in spores/m^3, per spore and per sample.

For more information regarding analytical sensitivity, please contact QA by calling the laboratory.
‡ A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".
§ Total Spores/m3 has been rounded to two significant figures to reflect analytical precision.

Eurofins Built Environment Testing Central, LLC
3113 Red Bluff Road, Pasadena, TX 77503
713-290-0223 www.eurofinsus.com/Built

Client: Austin Air Biology
C/O: David Stegmann
Re: 225-066

Date of Sampling: 03-25-2025
Date of Receipt: 03-26-2025
Date of Report: 03-27-2025

SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

Location:	AC6: Front DR			AC7: Mid Dr		
Comments (see below)	None			None		
Lab ID-Version‡:	19915317-1			19915318-1		
Analysis Date:	03/27/2025			03/27/2025		
	raw ct.	% read	spores/m3	raw ct.	% read	spores/m3
Alternaria						
Ascospores				1	100	13
Basidiospores	1	100	13			
Chaetomium						
Cladosporium						
Curvularia						
Epicoccum						
Fusarium						
Myrothecium						
Nigrospora						
Other colorless						
Penicillium/Aspergillus types†						
Pithomyces						
Rusts						
Smuts, Periconia, Myxomycetes						
Stachybotrys						
Stemphylium						
Torula						
Ulocladium						
Zygomycetes						
Background debris (1-4+)	2+			3+		
Hyphal fragments/m3	< 13			< 13		
Pollen/m3	< 13			< 13		
Skin cells (1-4+)	2+			3+		
Sample volume (liters)	75			75		
§ TOTAL SPORES/m3			13			13

Comments:

Spore types listed without a count or data entry were not detected during the course of the analysis for the respective sample, indicating a raw count of <1 spore.
† The spores of *Aspergillus* and *Penicillium* (and others such as *Acremonium*, *Paecilomyces*) are small and round with very few distinguishing characteristics. They cannot be differentiated by non-viable sampling methods. Also, some species with very small spores are easily missed, and may be undercounted.
††Background debris indicates the amount of non-biological particulate matter present on the trace (dust in the air) and the resulting visibility for the analyst. It is rated from 1+ (low) to 4+ (high). Counts from areas with 4+ background debris should be regarded as minimal counts and may be higher than reported. It is important to account for samples volumes when evaluating dust levels.

The analytical sensitivity is the spores/m^3 divided by the raw count, expressed in spores/m^3, per spore and per sample.

For more information regarding analytical sensitivity, please contact QA by calling the laboratory.
‡ A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".
§ Total Spores/m3 has been rounded to two significant figures to reflect analytical precision.

Eurofins Built Environment Testing Central, LLC
3113 Red Bluff Road, Pasadena, TX 77503
713-290-0223 www.eurofinsus.com/Built

Client: Austin Air Biology
C/O: David Stegmann
Re: 225-066

Date of Sampling: 03-25-2025
Date of Receipt: 03-26-2025
Date of Report: 03-27-2025

SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

Location:	AC8: Utility R		
Comments (see below)	None		
Lab ID-Version‡:	199153‡ 1		
Analysis Date:	03/27/2025		
	raw ct.	% read	spores/m3
Alternaria			
Ascospores	1	100	13
Basidiospores			
Chaetomium			
Cladosporium			
Curvularia			
Epicoccum			
Fusarium			
Myrothecium			
Nigrospora			
Other colorless			
Penicillium/Aspergillus types†			
Pithomyces			
Rusts			
Smuts, Periconia, Myxomycetes	1	100	13
Stachybotrys			
Stemphylium			
Torula			
Ulocladium			
Zygomycetes			
Background debris (1-4+)	2+		
Hyphal fragments/m3	13		
Pollen/m3	< 13		
Skin cells (1-4+)	2+		
Sample volume (liters)	75		
§ TOTAL SPORES/m3			27

Comments:

Spore types listed without a count or data entry were not detected during the course of the analysis for the respective sample, indicating a raw count of <1 spore.
† The spores of *Aspergillus* and *Penicillium* (and others such as *Acremonium, Paecilomyces*) are small and round with very few distinguishing characteristics. They cannot be differentiated by non-viable sampling methods. Also, some species with very small spores are easily missed, and may be undercounted.
††Background debris indicates the amount of non-biological particulate matter present on the trace (dust in the air) and the resulting visibility for the analyst. It is rated from 1+ (low) to 4+ (high). Counts from areas with 4+ background debris should be regarded as minimal counts and may be higher than reported. It is important to account for samples volumes when evaluating dust levels.

The analytical sensitivity is the spores/m^3 divided by the raw count, expressed in spores/m^3, per spore and per sample.

For more information regarding analytical sensitivity, please contact QA by calling the laboratory.
‡ A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".
§ Total Spores/m3 has been rounded to two significant figures to reflect analytical precision.

eurofins

Built Environment Testing

Report for:

David Stegmann
Austin Air Biology
2303 Bonita St.
Austin, TX 78703

Regarding: Eurofins Built Environment Testing Central, LLC
Project: 225-066
EML ID: 4002452

Approved by:

Dates of Analysis:
Direct microscopic exam (Qualitative): 03-27-2025

Business Unit Manager
Scott Ward

Service SOPs: Direct microscopic exam (Qualitative) (EM-MY-S-1039)
AIHA LAP, LLC accredited service, Lab ID #157714

All samples were received in acceptable condition unless noted in the Report Comments portion in the body of the report. Due to the nature of the analyses performed, field blank correction of results is not applied. The results relate only to the samples as received and tested.

Eurofins Built Environment Testing Central, LLC's LabServe® reporting system includes automated fail-safes to ensure that all AIHA LAP, LLC quality requirements are met and notifications are added to reports when any quality steps remain pending.

Eurofins Built Environment Testing Central, LLC
3113 Red Bluff Road, Pasadena, TX 77503
713-290-0223 www.eurofinsus.com/Built

Client: Austin Air Biology
C/O: David Stegmann
Re: 225-066

Date of Sampling: 03-25-2025
Date of Receipt: 03-26-2025
Date of Report: 03-27-2025

DIRECT MICROSCOPIC EXAMINATION REPORT

Background Debris and/or Description	Miscellaneous Spores Present*	MOLD GROWTH: Molds seen with underlying mycelial and/or sporulating structures†	Other Comments††	General Impression
Lab ID-Version‡: 19915308-1, Analysis Date: 03/27/2025: Swab sample SW-1: Master Toilet				
Scant	None	2+ *Cladosporium* species (spores, hyphae)	None	Mold growth
Lab ID-Version: 19915309-1, Analysis Date: 03/27/2025: Swab sample SW-2: Master Toilet Ceiling				
Scant	None	3+ *Cladosporium* species (spores, hyphae)	None	Mold growth
Lab ID-Version: 19915310-1, Analysis Date: 03/27/2025: Swab sample SW-3: Entry Door				
Scant	None	2+ *Cladosporium* species (spo res, hyphae)	None	Mold growth

* Indicative of normal conditions, i.e. seen on surfaces everywhere. Includes basidiospores (mushroom spores), myxomycetes, plant pathogens such as ascospores, rusts and smuts, and a mix of saprophytic genera with no particular spore type predominating. Distribution of spore types seen mirrors that usually seen outdoors.

† Quantities of molds seen growing are listed in the MOLD GROWTH column and are graded <1+ to 4+, with 4+ denoting the highest numbers.

†† Some comments may refer to the following: Most surfaces collect a mix of spores which are normally present in the outdoor environment. At times it is possible to note a skewing of the distribution of spore types, and also to note "marker" genera which may indicate indoor mold growth. Marker genera are those spore types which are present normally in very small numbers, but which multiply indoors when conditions are favorable for growth.

‡ A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".
The limit of detection is < 1+ when mold growth is detected.

For additional information necessary for the interpretation of the results, all readers are advised to refer to the document "Direct Exam Details Page" which is available on our website at:
www.emlab.com/services/mold-testing/direct-microscopic-exam-qualitative/

Attachment 4

Protocol

Mold Remediation Protocol

[redacted]

Introduction:

Based on a visual inspection and testing by Austin Air Biology ("AAB") on March 25th , 2025 – mold affected doorway trim (interior trim) was observed at all exterior doorways, mold affected sheet rock was observed at the master bathroom ceiling, master toilet water supply valve and adjacent to the kitchen/living/utility vent covers. Water damage trim was observed adjacent to the kitchen vent hood. The most likely cause of he observed damage is improper usage of the HVAC system. The following Protocol outlines the recommended scope of work to be performed to investigate and if necessary, remediate the affected areas.

This Mold Remediation Protocol ("Protocol") is based on a visual inspection of the affected areas and sampling data collected by AAB. The full extent of the affected areas was not specifically delineated and may extend beyond the areas identified in this Protocol. The Protocol may be amended during the course of the project should additional areas of affected materials be identified. This Work Plan is an adaptation of the New York City Department of Health "G[illegible]" and was prepared in accordance with TDLR, "[illegible]" ("TMARR").

This Mold Remediation Protocol has been prepared by Mr. David M. Stegmann of Austin Air Biology. MAC license #0236 (exp. 1/20/26)

David M. Stegmann — 4-30-25 (date)

Project Terminology:

Project Area - This defines the portion of the structure or structures covered by this Protocol. For this project, the Project Area encompasses structure.

Work Area - The Work Area is the specific area within the Project Area, which is as follows:

Work Area 1: - Entire House

Other terms utilized in this Protocol correspond to those outlined in Section 295.302, of the TMARR.

A. Regulatory Requirements:

A.1. Based on AAB's inspection, at this time, the **visible** total square feet of mold-affected materials located within each work area is **less than 25 contiguous** square feet. **This may change when the walls are exposed.**

DMS

B. Remediation Activities:
This Protocol outlines the general methods and procedures to be used for removal of mold contaminated and/or water damaged building materials within the Project Area.

B.1. Building materials involved, but not limited to sheet rock, insulation, trim and structural materials.

B.2. The project shall be performed in accordance with this Protocol and with applicable OSHA, Federal, State and local municipality requirements and/or building codes. This should also include the most current lead based paint regulations.

B.3. The contractor will be responsible for obtaining all permits required for the work to be performed.

B.4. Electricity is available at the work site.

C. Pre-Bid Meeting:
C.1. Not applicable to this project.

D. Personal Protective Equipment:
D.1. All persons performing remediation activities and/or entering a Work Area during remediation activities shall wear protective disposable coveralls with head covering, rubber gloves or rubber coated gloves, non-skid footwear or foot coverings, eye protection and respiratory protection.

D.2. A minimum of half-face air purifying respirators with dual HEPA filters shall be used during all activities performed during the course of this project.

D.3. Each worker must perform positive and negative air pressure fit test each time a respirator is put on or as respirator designs permit. No one wearing a beard or other facial hair which will prevent a proper respirator seal shall be allowed to wear a respirator or enter a Work Area.

E. Work Area Remediation Preparation:
E.1. The contractor shall isolate the Work Areas. The Work Areas shall be marked clearly with as per TMARR rules. The Work Area shall encompass the entire area, which contains affected materials and potentially affected materials.

E.2. Cover and seal off all HVAC vent covers.

E.3. All surfaces within Work Area shall be wiped down (with a biocide) and HEPA vacuumed.

E.4 The contractor shall establish Work Area containment barriers (living space work areas only). Barriers shall be constructed of a minimum 6-mil true thickness, fire-rated polyethylene sheeting. Fire-rated polyethylene sheeting will be certified by the Underwriters Laboratory (UL) as being fire retardant. Contractor shall construct containment barriers in a fashion, which minimizes damage to walls, floors and ceilings.

E.5. The contractor shall construct a decontamination unit at the entrance to each living space Work Area.

Alternatively, should access to a Work Area be obtained directly from the exterior of the structure (i.e. through an exterior door or a window), only a single airlock is necessary. However, airlock shall be sealed at the end of each workday.

E.6. The contractor shall establish containment of the Project Area by supplying sufficient negative pressure ventilation units equipped with HEPA filters. The number of negative pressure units to be provided shall be determined to allow a minimum of four (4) air changes per hour in the Project Area.

E.7. At all times during the course of this project, the relative humidity within the structure shall be kept below 50%. Contractor is responsible for providing an adequate number and size of de-humidifiers in the structure to keep the relative humidity below the 50% level at all points within the structure.

E.8. The contractor is responsible for providing carbon monoxide monitors and smoke detectors within the Project Area at all times when workers and/or occupants are present within the structure.

E.9. Cleaning procedures to be utilized for this project shall be as outlined below.

Non-porous surfaces - Surfaces shall by cleaned by HEPA vacuuming, wiping/cleaning with a surfactant/detergent solution, and a final HEPA vacuuming. This process is considered the minimum cleaning required. Additional cleaning/wiping may be necessary for heavily soiled surfaces.

Porous surfaces - With the exception of clothing and linens, cleaning of porous surfaces such as upholstery, carpeting, rugs and draperies, shall be performed by thoroughly HEPA vacuuming all surfaces.

Clothing & Linens - Clothing and linens shall be cleaned by laundering according to manufacturer's recommendations. When cleaning in-place is specified, clothing and linens may be HEPA vacuumed or laundered based on cost considerations.

Use of any biocide or other chemical product by the Contractor during the course of the project shall be used in accordance with the manufacturer's instructions and only after review and approval of the product by the owner and/or occupant of the structure.

DMS

F. Remediation:

The following paragraphs outline remediation guidelines for the specific Work Areas covered by this Protocol.

F.1.1. **Work Area #1:** All Living Areas

- **Install HEPA units throughout the structure.**
- **Install temporary containments as needed.**
- **HVAC System:** Remove and clean all vent covers. Clean all vent buckets (replace vent buckets if needed). If mold affected ceiling sheet rock is observed (adjacent to the vent covers) – remove affected ceiling sheet rock.
- **All Vents (Master Bathroom, Utility and Kitchen Vent Hood):** Remove the vent covers and clean. Remove all mold affected ceiling wall sheet. Clean the vent ductwork as needed. Remove the water damage trim adjacent to the kitchen vent hood.
- **Exterior Doorways:** Pull the interior trim and inspect the newly exposed wall sheet rock. If mold growth is observed - remove the wall sheet rock until clean materials are observed (approximately 1 foot in all directions).
- **Master Toilet Area:** Remove the wall sheet rock adjacent to the water supply line.
- **Other Areas:** Inspect the remaining plumbing penetration areas (vanities, kitchen and toilet areas). If mold affected wall sheet rock are observed, removed additional wall materials adjacent to the penetration covers.
- All Work Areas: Clean (HEPA vacuum) and treat (with a biocide) all exposed structural materials/surfaces.
- All Areas: After Final Clean - Encapsulate all exposed structural materials.

General Guidelines for All Work Areas:

G.1. Removed materials shall be placed in disposal bags or wrapped in plastic sheeting and sealed within the containment area. Heavy or sharp objects which may potential puncture/break through bags or sheeting shall be double bagged or wrapped. Disposal bags or sheeting shall be a minimum of 6-mil true thickness polyethylene. The outside of each bag or bundle shall be HEPA vacuumed or wiped with a bleach solution (10% bleach) prior to removal from the containment area.

DMS

G.2. Any mold contaminated structural materials but not water-damaged materials may be left in-placed; however, mold contamination must be controlled. Method of control will be determined by consultant based upon specific condition encountered. Contractor shall contact consultant immediately if this condition arises.

G.3. No structural material shall be removed which would result in a compromise of the structural integrity of the building.

G.4. After removal and/or cleaning of all affected materials, all surfaces within the containment area shall be wiped with a biocide or bleach solution and/or HEPA vacuumed.

G.5. Once final clearance within the containment area is obtained, the containment barriers shall be removed and restoration activities proceed. Materials to be replaced shall be of the same type and quality as the adjoining materials and/or at the direction of the owner.

H. Final Clearance

H.1. Final clearance of the containment area shall be determined by visual inspection and air monitoring and/or surface samples collected by an independent air quality professional.

H.1.1. Clearance of each main work area will be determined by collection of a minimum of one surface & air sample per work area.

H.1.2. Clearance criteria for air samples is as follows:
Total spore count and individual genus spore counts of the indoor samples shall in general be equal to the corresponding outdoor spore counts. A minimum of one outdoor air sample shall be collected for each indoor air sampling event.

H.1.3. Clearance criteria for surface samples is as follows:
Surface samples which identify less than "moderate" amounts of mold spores and which do not indicate the mold is actively growing shall be considered sufficient to determine clearance of the Work Area.

H.2. After the final cleaning process, the negative air equipment shall be change to scrub mode for 48 hours prior to clearance testing/inspections.

CONSUMER MOLD INFORMATION SHEET

State rules require licensed mold assessors and remediators to give a copy of this Consumer Mold Information Sheet to each client and to the property owner, if not the same person, before starting any mold-related activity [16 TAC 78.70].

How does Texas regulate businesses that do testing for mold or that do mold cleanup?
The Department of Licensing and Regulation (TDLR) regulates such businesses in accordance with the Texas Occupations Code, Chapter 1958. Under the **Texas Mold Assessment and Remediation Rules (rules)** (16 Tex. Admin. Code, Chapter 78), all companies and individuals who perform mold-related activities in Texas must be licensed by TDLR unless exempt. (See Page 2 regarding owner exemptions.) Individuals must meet certain qualifications, have required training, and pass a state exam and criminal history background check in order to be issued a license. Applicants for a mold remediation worker registration must have training and pass a criminal history background in order to be registered by TDLR. Laboratories that analyze mold samples must also be licensed and meet certain qualifications. The rules set minimum work practices and procedures and also require licensees to follow a code of ethics. To prevent conflicts of interest, the rules also prohibit a licensee from conducting both mold assessment and mold remediation on the same project. While the rules regulate the activities of mold licensees when they are doing mold-related activities, the rules do not require any property owner or occupant to clean up mold or to have it cleaned up.

How can I know if someone is licensed?
A licensed individual is required to carry a current TDLR license certificate with the license number on it. A search tool and listings of currently licensed companies and individuals can be found at: https://www.tdlr.texas.gov/LicenseSearch/.

What is "mold assessment?"
Mold assessment is an inspection of a building by a **mold assessment consultant** or **technician** to evaluate whether mold growth is present and to what extent. Samples may be taken to determine the amount and types of mold that are present; however, sampling is not necessary in many cases. When mold cleanup is necessary a licensed mold assessment consultant can provide you with a **mold remediation protocol.** A protocol must specify the estimated quantities and locations of materials to be remediated, methods to be used and clearance criteria that must be met.

What is meant by "clearance criteria?"
Clearance criteria refer to the level of "cleanliness" that must be achieved by the persons conducting the mold cleanup. It is important to understand and agree with the mold assessment consultant prior to starting the project as to what an acceptable clearance level will be, including what will be acceptable results for any air sampling or surface sampling for mold. There are no national or state standards for a "safe" level of mold. Mold spores are a natural part of the environment and are always present at some level in the air and on surfaces all around us.

What is "mold remediation?"
Mold remediation is the cleanup and removal of mold growth from surfaces and/or contents in a building. It also refers to actions taken to prevent mold from growing back. Licensed **mold remediation contractors** must follow a mold remediation protocol as described above and their own **mold remediation work plan** that provides specific instructions and/or standard operating procedures for how the project will be done.

Before a remediation project can be deemed successful, a mold assessment consultant must conduct a **post-remediation assessment.** This is an inspection to ensure that the work area is free from all visible mold and wood rot, the project was completed in compliance with the remediation protocol and remediation work plan, and that it meets all clearance criteria that were specified in the protocol. The assessment consultant must give you a **passed clearance report** documenting the results of this inspection. If the project fai ls clearance.

further remediation as prescribed by a consultant will be necessary.

What is a Certificate of Mold Damage Remediation?
No later than the 10th day after a mold remediation project stop date, the remediation contractor must sign and give you a **Certificate of Mold Damage Remediation.** The licensed mold assessment consultant who conducted the post-remediation assessment must also sign the certificate. The consultant must truthfully state on the certificate that the mold contamination identified for the project has been remediated and whether the underlying cause of the mold has been corrected. (That work may involve other types of professional services that are not regulated by the mold rules, such as plumbing or carpentry.) Receiving a certificate documenting that the underlying cause of the mold was remediated is an advantage for a homeowner. It prevents an insurer from making an underwriting decision on the residential property based on previous mold damage or previous claims for mold damage. If you sell your property, the law requires that you provide the buyer a copy of all certificates you have received for that property within the preceding five years.

How is a property owner protected if a mold assessor or remediator does a poor job or damages the property?
The rules require licensees to have commercial general liability insurance in the amount of at least $1 million, or to be self-insured, to cover any damage to your property. Before hiring anyone, you should ask for proof of such insurance coverage. You may wish to inquire if the company carries additional insurance, such as professional liability/errors and omissions (for consultants) or pollution insurance (for contractors), that would provide additional recourse to you should the company fail to perform properly.

How is my confidentiality protected if I share personal information about myself with a company?
Under the code of ethics in the rules, to the extent required by law, licensees must keep confidential any personal information about a client (including medical conditions) obtained during the course of a mold-related activity. Further, you may be able to negotiate a contract to include language that other personal information be kept confidential unless disclosure "is required by law." However, licensees are required to identify dates and addresses of projects and other details that can become public information.

How do I file a complaint about a company?
Anyone who believes a company or individual has violated the rules can file a complaint with TDLR. For information on this process, call 1-800-803-9202, or complete the online complaint form at https://www.tdlr.texas.gov/complaints/.

Can property owners do mold assessment or remediation on their own property without being licensed?
Yes. A homeowner can take samples for mold or clean it up in the home without a license. An owner, or a managing agent or employee of an owner of a residential property is not required to be licensed, **unless** the property has 10 or more residential dwelling units. For non-residential properties, an owner or tenant, or a managing agent or employee of an owner or tenant, is not required to be licensed to do mold assessment or remediation on property owned or leased by the owner or tenant, **unless** the mold contamination affects a total surface area of 25 contiguous square feet or more. Please refer to 16 TAC §78.30 for further details on exceptions and exemptions to licensing requirements.

For more information about mold and the Texas Mold Assessment and Remediation Rules, contact:
Texas Department of Licensing and Regulation
Mold Assessors and Remediators
P.O. Box 12057, Austin, TX 78711
Phone: 512-463-6599 or 800-803-9202
www.tdlr.texas.gov