

DATE: December 18, 2018

TO: David Lyons, Director of Purchasing

SUBJECT: LISD Admin-Purchasing - IAQ - Initial Contact - Philip Talbert's office

Sharon Haney asked me about Air Testing Philip Talbert's office. She said that were concerns about the air in Philip Talbert's office and was causing issues.

I have setup a Work Order, and a P.O. to have the office Air Tested. Ensolum, LLC will be doing the Air Test on a day that it is not raining and above 60 degrees outside.

If you have any questions, please contact me.

Thanks,

Paul

Paul Siddall

Maintenance Energy Auditor (IAQ)

Facility Services

Lewisville ISD

340 Lake Haven Rd

Lewisville, TX 75057

Cell: 469-446-8882

DATE: January 8, 2019

TO: David Lyons, Director of Purchasing

SUBJECT: LISD ADMIN - Purchasing - IAQ - Air Test Results - Phillip Talbert's Office

On Thursday 12/20, Ensolum LLC Air tested Phillip Talbert's Office. It is typically assumed that indoor spore levels in an area with filtered or air-conditioned air, and activity levels associated with schools average below the outdoor levels. Data from the airborne fungi sampling indicated that the total indoor concentration of mold/fungi in Phillip Talbert's Office, was 6.9% of the outdoor levels. Utilizing this theory, the indoor concentrations are well within the acceptable guidelines for areas with filtered air or air conditioning. However, due to the presence of 1 raw count of *Stachybotrys*, additional sampling will be done for a higher level of confidence. In 30 days, I will request another Air Test. If you have any questions, please call me.

Thanks,
Paul

Paul Siddall
Maintenance Energy Auditor (IAQ)
Facility Services
Lewisville ISD
340 Lake Haven Rd
Lewisville, TX 75057

DATE: April 3, 2019

TO: David Lyons,

SUBJECT: LISD ADMIN - Procurement and Contracts - IAQ - Air Re-Test Results -
Phillip Talbert's Office

On Friday /29, Ensolum LLC Air Retested Phillip Talbert's Office. It is typically assumed that indoor spore levels in an area with filtered or air-conditioned air, and activity levels associated with schools' average below the outdoor levels. Data from the airborne fungi sampling indicated that the total indoor concentration of mold/fungi in Phillip Talbert's Office, was 14.2% of the outdoor levels. Utilizing this theory, the indoor concentrations are well within the acceptable guidelines for areas with filtered air or air conditioning. If you have any questions, please call me.

Thanks,

Paul

Paul Siddall
Maintenance Energy Auditor (IAQ)
Facility Services
Lewisville ISD
340 Lake Haven Rd
Lewisville, TX 75057



January 2, 2019

Lewisville Independent School District
340 Lake Haven
Lewisville, Texas 75057
Attn: Mr. Paul Siddall

Re: **Mold Assessment Report**
Administration Building – Phillip Talbert's Office
1565 W Main Street
Lewisville, Texas
Project Number: 01A1288001

Ensolum, LLC (Ensolum) was retained to perform limited mold assessment services for Phillip Talbert's Office within the Administration Building located at 1565 W. Main Street in Lewisville, Texas. Enclosed is the report, including analytical data.

Ensolum appreciates this opportunity to be of service and looks forward to our continued work together. Please contact the undersigned with any questions or concerns you may have.

Sincerely,

Clinton S. Jech, MAC
Manger, Field Services
MAC1444 EXP: 10/9/2019

Darren G. Bowden
Principal
MAC0321 EXP: 2/15/20

1.0 INTRODUCTION

Ensolum was retained by Mr. Paul Siddall, LISD, to complete a Limited Mold Assessment of Phillip Talbert's Office within the Administration Building addressed at 1565 W. Main Street, Lewisville, Texas. The purpose of this investigation was to determine if elevated concentrations of airborne fungal spores and structures were present within the above-referenced office.

Mr. Clinton S. Jech completed the on-site investigation on December 20, 2018. The Limited Mold Assessment was performed in response to a complaint of possible indoor air quality issues within the office.

2.0 PROCEDURE

Ensolum visually inspected accessible areas of the office. No Visible water damage or odors were observed in the following locations:

VISIBLE WATER DAMAGE		
LOCATION	DATE	EXPLANATION
Phillip Talbert's Office	12-20-2018	N/A

It is possible that water-damaged building materials are present within the adjacent areas but were not reasonably accessible due to access limitations.

Following the inspection of potential water-damaged building materials, Ensolum conducted a moisture investigation in the identified areas to determine if nonvisible water-damaged materials and other building materials within the investigation area were present. The moisture investigation was completed with a GE Protimeter BLD5364 moisture meter on accessible porous and semi-porous building materials in each area of concern. At the time of investigation, monitored building materials did not exhibit elevated moisture concentrations in comparison with similar and non-affected building materials in the structure and standard scientific guidelines.

Representative Relative Humidity readings were collected and recorded using a Vaisala HM40 Humidity and Temperature Meter. Measurements recorded during the investigation are listed in the chart below:

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TEMPERATURE, RELATIVE HUMIDITY & SPECIFIC HUMIDITY				
LOCATION	DATE	Temperature: F	Relative Humidity	Specific Humidity
Phillip Talbert's Office	10-29-2018	73.0°	28.7%	35.0

Area air samples were collected with Allergenco-D spore trap cassettes and analyzed for airborne fungal spores and structures. The spore traps were affixed to a calibrated Buck Bioair™ bioaerosol sampling pump. Samples were collected at a rate of 15 liters per minute. Indoor air sample(s) were collected for a five (5) minute period of time (75 liters) at a height of approximately five (5) feet above finished floor (AFF). Outdoor air samples were collected for a five (5) minutes period of time (75 liters) at a height of approximately five (5) feet above level ground. American Conference of Governmental Industrial Hygienists (ACGIH) guidelines were followed for the sample collection. Fungal air samples were collected in the following areas:

SPORE TRAP LOCATIONS	
SAMPLE NUMBER	LOCATION
1	Outdoor
2	Outdoor
3	Office

3.0 RESULTS

Currently, there are no regulatory standards for airborne fungal contamination. Therefore, results of the fungal analysis are compared against scientific guidelines. Bioaerosol samples are evaluated by comparing the indoor samples against the outdoor sample. The same types of fungi should be found in both the indoor and outdoor samples. Should higher fungal concentrations occur in the indoor sample(s) or complaint areas, this generally indicates there is a source of fungal growth in the area. The types of fungi are also evaluated-the same types/genus of fungi should be present in both the indoor/complaint and outdoor/non-complaint samples.

The results of the fungal air samples collected were evaluated. The indoor air sample collected yielded one raw count of *Stachybotrys* that was not identified in the exterior samples.

4.0 CONCLUSIONS

The results of the samples collected were not elevated. However, due to the presence of *Stachybotrys*, additional sampling may be considered for a higher level of confidence.

APPENDIX A

Analytical Data



TDLR License No.: LAB0117

AIHA EMPAT ID: 102577

Client : Ensolum, LLC

Lab Job No. : 18F-16141

Project : Administration Building, Philip Talbert's Office

Report Date : 12/26/2018 5:34 PM

Project # : 01A1288.001

Sample Date: 12/20/2018

Sample Type: Spore Trap, Non-cultured

Spore Trap Type: Allergenco D

Test Method: Mold: ASTM D7391-17e1 - Standard Profile

Page 1 of 3

On 12/20/2018, three (3) samples were submitted by Clint Jech of Ensolum, LLC (located at 2351 W. Northwest Hwy Suite #1203, Dallas, TX 75220) for Spore Trap, Non-cultured mold analysis. This report consists of three sections; a summary section, a data detail section, and an analytical notes section.

Sample Number	Volume (liters)	Sample Description	Identification	Concentration spores/cubic meter		
1	75	Exterior, Southeast	Cladosporium	2679	45%	
			Basidiospores	893	15%	
			Myxomycete / Rust / Smut	680	11%	
			Hyphal / Spore Fragments - Dematiaceous	666	11%	
			Aspergillus / Penicillium	627	11%	
			Hyphal / Spore Fragments - Hyaline	107	2%	
			Ascospores	93	2%	
			Alternaria	53	<1%	
			Drechslera / Bipolaris group	27	<1%	
			Fusarium	27	<1%	
			Ulocladium / Stemphylium	13	<1%	
			Curvularia	13	<1%	
			Cercospora	13	<1%	
			Coprinus group	13	<1%	
			Nigrospora	13	<1%	
			Spegazzinia	13	<1%	
			Pithomyces	13	<1%	
			Total:		5943	100%



IAQ Mold Report

Summary

TDLR License No.: LAB0117

AIHA EMPAT ID: 102577

2051 Valley View Lane

Farmers Branch, TX 75234 Phone: (972) 241-8460

Client : Ensolum, LLC

Project : Administration Building, Philip Talbert's Office

Project # : 01A1288.001

Sample Type: Spore Trap, Non-cultured

Test Method: Mold: ASTM D7391-17e1 - Standard Profile

Lab Job No. : 18F-16141

Report Date : 12/26/2018 5:34 PM

Sample Date: 12/20/2018

Spore Trap Type: Allergenco D

Page 2 of 3

On 12/20/2018, three (3) samples were submitted by Clint Jech of Ensolum, LLC (located at 2351 W. Northwest Hwy Suite #1203, Dallas, TX 75220) for Spore Trap, Non-cultured mold analysis. This report consists of three sections; a summary section, a data detail section, and an analytical notes section.

Sample Number	Volume (liters)	Sample Description	Identification	Concentration spores/cubic meter
2	75	Exterior, Southwest	Cladosporium Basidiospores Myxomycete / Rust / Smut Aspergillus / Penicillium Hyphal / Spore Fragments - Dematiaceous Ascospores Hyphal / Spore Fragments - Hyaline Agaricales group Nigrospora Drechslera / Bipolaris group Total:	2079 50% 613 15% 453 11% 360 9% 347 8% 227 5% 67 2% 13 <1% 13 <1% 13 <1% 4185 100%
3	75	Philip Talbert's Office	Aspergillus / Penicillium Hyphal / Spore Fragments - Dematiaceous Basidiospores Curvularia Cladosporium Stachybotrys Myxomycete / Rust / Smut Ascospores Total:	173 42% 80 19% 67 16% 27 7% 27 7% 13 3% 13 3% 13 3% 413 100%



IAQ Mold Report

Summary

TDLR License No.: LAB0117

AIHA EMPAT ID: 102577

2051 Valley View Lane

Farmers Branch, TX 75234 Phone: (972) 241-8460

Client : Ensolum, LLC**Project :** Administration Building, Philip Talbert's Office**Project # :** 01A1288.001**Sample Type:** Spore Trap, Non-cultured**Test Method:** Mold: ASTM D7391-17e1 - Standard Profile**Lab Job No. :** 18F-16141**Report Date :** 12/26/2018 5:34 PM**Sample Date:** 12/20/2018**Spore Trap Type:** Allergenco D

Page 3 of 3

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Sample Number	Volume (liters)	Sample Description	Identification	Concentration spores/cubic meter

Results may not be reported except in full. Data contained in this test report relates only to the samples tested. This report does not express or imply interpretation of the results contained herein. Interpretation should be made by a qualified professional.

Moody Labs assumes no responsibility for the manner in which these samples were collected or handled prior to being received at this laboratory. Moody Labs assumes no responsibility for the qualifications of personnel performing sampling and/or interpretations of this data.

Analyst(s): Rebecca Lutz**Lab Director :** Heather Lopez**Lab Director :** Bruce Crabb**Approved Signatory :****Approved Signatory :**

Thank you for choosing Moody Labs

SMLMS v12.95

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IAQ Mold Report

Data Detail

TDLR License No.: LAB0117

AIHA EMPAT ID: 102577

2051 Valley View Lane

Farmers Branch, TX 75234 Phone: (972) 241-8460

Client : Ensolum, LLC**Project :** Administration Building, Philip Talbert's Office**Project # :** 01A1288.001**Sample Type:** Spore Trap, Non-cultured**Test Method:** Mold: ASTM D7391-17e1 - Standard Profile**Lab Job No. :** 18F-16141**Report Date :** 12/26/2018 5:34 PM**Sample Date:** 12/20/2018**Spore Trap Type:** Allergenco D

This report consists of three sections; a summary section, a data detail section, and an analytical notes section. Results may not be reported except in full.

Sample ID:	1					2					3				
Location:	Exterior, Southeast					Exterior, Southwest					Philip Talbert's Office				
Media Expires On:	Dec 2019					Dec 2019					Dec 2019				
Notes Included:															
Volume:	75					75					75				
	raw ct.	RL	spores/m³	%total	spores/m³ SF	raw ct.	RL	spores/m³	%total	spores/m³ SF	raw ct.	RL	spores/m³	%total	spores/m³ SF
Agaricales group						1	13	13	<1%	10					
Alternaria	4	13	53	<1%	50										
Ascospores	7	13	93	2%	90	17	13	227	5%	230	1	13	13	3%	10
Aspergillus / Penicillium	47	13	627	11%	630	27	13	360	9%	360	13	13	173	42%	170
Basidiospores	67	13	893	15%	890	46	13	613	15%	610	5	13	67	16%	70
Cercospora	1	13	13	<1%	10										
Chaetomium															
Cladosporium	201	13	2679	45%	2700	156	13	2079	50%	2100	2	13	27	7%	30
Coprinus group	1	13	13	<1%	10										
Curvularia	1	13	13	<1%	10						2	13	27	7%	30
Drechslera / Bipolaris group	2	13	27	<1%	30	1	13	13	<1%	10					
Fusarium	2	13	27	<1%	30										
Hyphal / Spore Fragments - Dematiace	50	13	666	11%	670	26	13	347	8%	350	6	13	80	19%	80
Hyphal / Spore Fragments - Hyaline	8	13	107	2%	100	5	13	67	2%	70					
Memnoniella															
Myxomycete / Rust / Smut	51	13	680	11%	680	34	13	453	11%	450	1	13	13	3%	10
Nigrospora	1	13	13	<1%	10	1	13	13	<1%	10					
Pithomyces	1	13	13	<1%	10										
Spegazzinia	1	13	13	<1%	10										
Stachybotrys											1	13	13	3%	10
Ulocladium / Stemphylium	1	13	13	<1%	10										
TOTALS	446		5943	100%	5900	314		4185	100%	4200	31		413	100%	410
Analyst	Rebecca Lutz					Rebecca Lutz					Rebecca Lutz				
Analysis Date	12/26/2018					12/26/2018					12/26/2018				
Debris Rating	2					2					4				
Debris Composition															
Fibers	1/5					1/5					3/5				
Inorganic/Other	2/5					2/5					4/5				
Insect Parts	1/5					0/5					0/5				
Pollen	0/5					0/5					0/5				
Skin/Dander	2/5					1/5					3/5				

End of Data Detail section

18F-16141

SMLMS v12.95

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IAQ Mold Report

Analytical Notes

TDLR License No.: LAB0117

AIHA EMPAT ID: 102577

2051 Valley View Lane

Farmers Branch, TX 75234 Phone: (972) 241-8460

Client : Ensolum, LLC

Project : Administration Building, Philip Talbert's Office

Project # : 01A1288.001

Sample Type: Spore Trap, Non-cultured

Test Method: Mold: ASTM D7391-17e1 - Standard Profile

Lab Job No. : 18F-16141

Report Date : 12/26/2018 5:34 PM

Sample Date : 12/20/2018

Spore Trap Type: Allergenco D

Page 1 of 2

This report consists of three sections; a summary section, a data detail section, and an analytical notes section. Results may not be reported except in full.

NOTE: No abnormalities or exceptions noted during analysis. All samples suitable for analysis.

NOTE: No discernable field blanks were included with this sample set.

Methods

Method: ASTM D7391-17e1: Categorization and Quantification of Airborne Fungal Structures in an Inertial Impaction Sample by Optical Microscopy.

Samples are read at 100% unless noted. Partial readings may be employed when concentrations are elevated. Use final spore concentrations, not raw spore counts, for interpretation of results.

Calculation: Spores/cubic meter = (Raw spore count)*(RL)

Note: RL (Reporting Limit) is based upon 1 raw spore count.

Moody Labs recommends two significant figures for calculated values based on ASTM D7391-17e1.

This report must not be used by the customer to claim product certification, approval, or endorsement by AIHA, ISO, or any agency of the Federal Government.

Debris Rating Key

0 - No linear trace detected

1 - Trace particulate/debris

2 - Light particulate/debris

3 - Moderate particulate/debris.

4 - Substantial particulate/debris

5 - Extensive particulate/debris

6 - Field blank

10 - Hold Sample

11 - Modified Analysis per Client Instructions

NOTE: Particulate/debris are defined as skin, fibers, pollen grains, insect parts, fungal and/or other non-fungal particles.



IAQ Mold Report

Analytical Notes

TDLR License No.: LAB0117

AIHA EMPAT ID: 102577

2051 Valley View Lane

Farmers Branch, TX 75234 Phone: (972) 241-8460

Client : Ensolum, LLC

Project : Administration Building, Philip Talbert's Office

Project # : 01A1288.001

Sample Type: Spore Trap, Non-cultured

Test Method: Mold: ASTM D7391-17e1 - Standard Profile

Lab Job No. : 18F-16141

Report Date : 12/26/2018 5:34 PM

Sample Date : 12/20/2018

Spore Trap Type: Allergenco D

Page 2 of 2

This report consists of three sections; a summary section, a data detail section, and an analytical notes section. Results may not be reported except in full.



SBA WOSB
Woman Owned Small Business



End of Analytical Notes section

18F-16141

Moody Labs
2051 Valley View Lane
Farmers Branch, TX 75234 Phone: (972) 241-8460

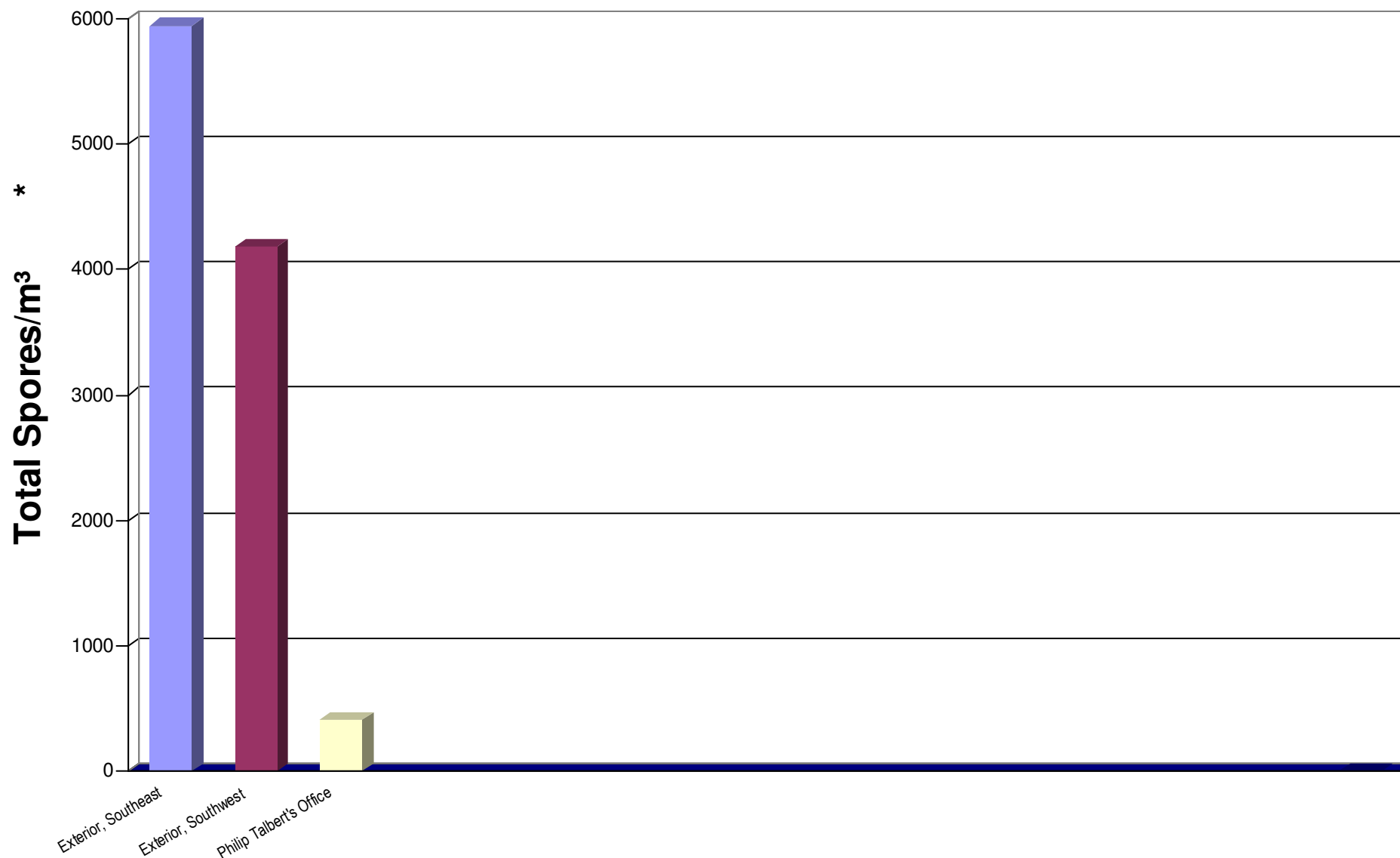
IAQ Mold Report

Supplemental Overview

TDLR License No.: LAB0117
AIHA EMPAT ID: 102577

Client : Ensolum, LLC
Project : Administration Building, Philip Talbert's Office
Project # : 01A1288.001

Lab Job No. 18F-16141
Report Date 12/26/2018 5:34 PM
Sample Date : 12/20/2018





2051 Valley View Lane
Farmers Branch, TX 75234 Phone: (972) 241-8460

IAQ Mold Report

Supplemental Overview

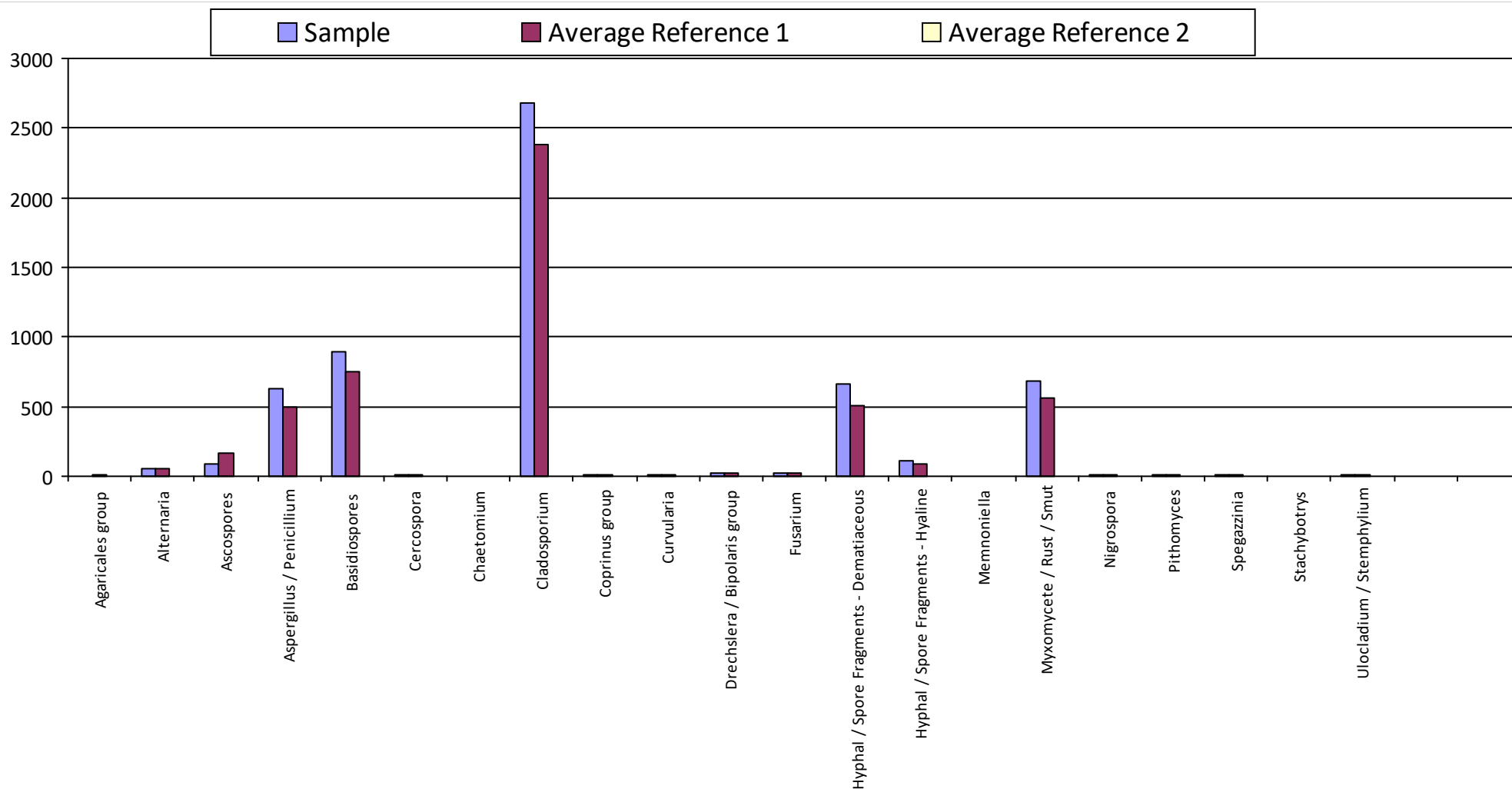
TDLR License No.: LAB0117

AIHA EMPAT ID: 102577

Client : Ensolum, LLC
Project : Administration Building, Philip Talbert's Office
Project # : 01A1288.001

Exterior, Southeast

Lab Job No. 18F-16141
Report Date 12/26/2018 5:34 PM
Sample Date : 12/20/2018



Average Reference 1 = Exterior, Southeast, Exterior, Southwest



2051 Valley View Lane
Farmers Branch, TX 75234 Phone: (972) 241-8460

IAQ Mold Report

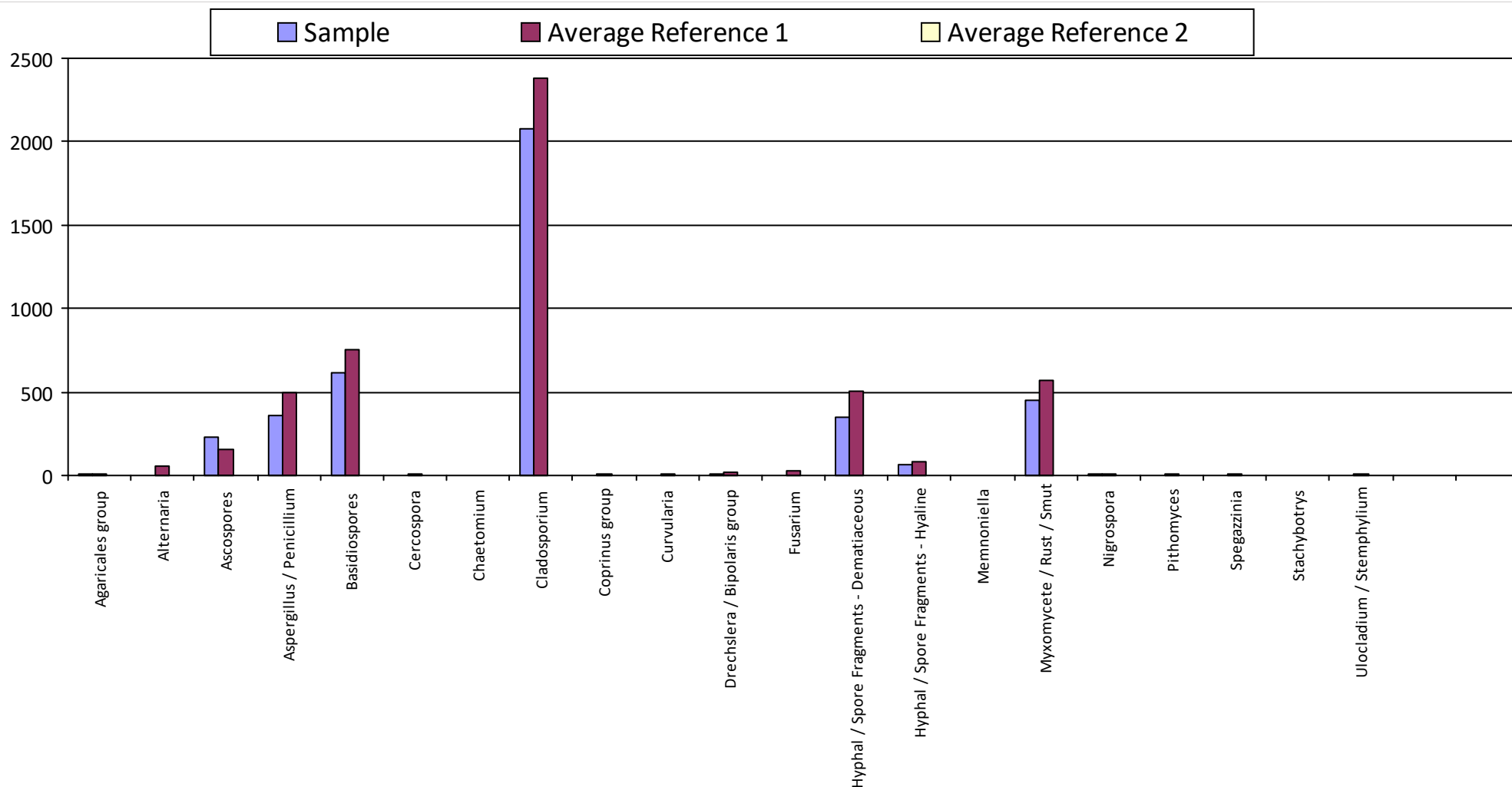
Supplemental Overview

TDLR License No.: LAB0117
AIHA EMPAT ID: 102577

Client : Ensolum, LLC
Project : Administration Building, Philip Talbert's Office
Project # : 01A1288.001

Exterior, Southwest

Lab Job No. 18F-16141
Report Date 12/26/2018 5:34 PM
Sample Date : 12/20/2018



Average Reference 1 = Exterior, Southeast, Exterior, Southwest



2051 Valley View Lane
Farmers Branch, TX 75234 Phone: (972) 241-8460

IAQ Mold Report

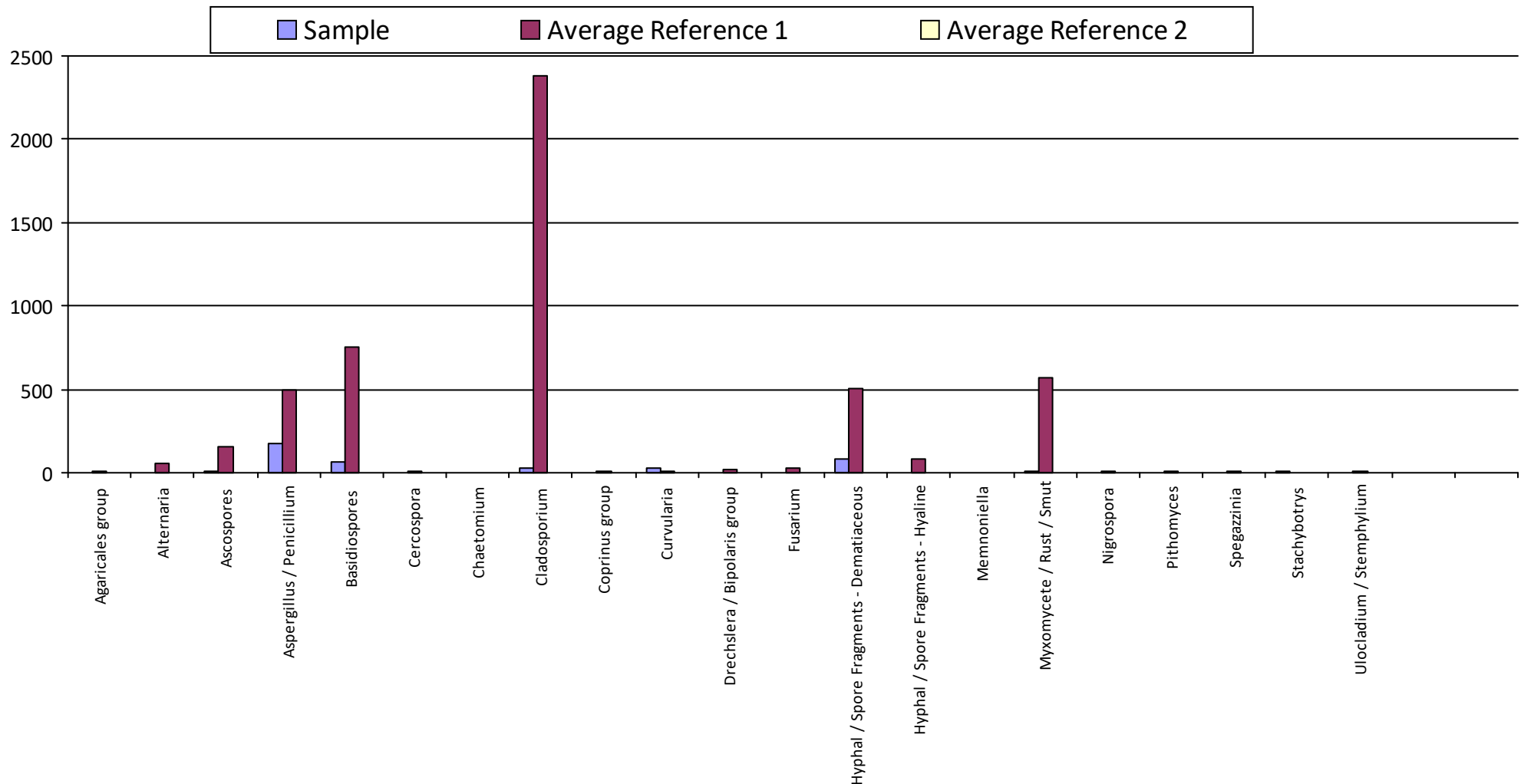
Supplemental Overview

TDLR License No.: LAB0117
AIHA EMPAT ID: 102577

Client : Ensolum, LLC
Project : Administration Building, Philip Talbert's Office
Project # : 01A1288.001

Philip Talbert's Office

Lab Job No. 18F-16141
Report Date 12/26/2018 5:34 PM
Sample Date : 12/20/2018



Average Reference 1 = Exterior, Southeast, Exterior, Southwest

APPENDIX B

DEFINITIONS AND LIMITATIONS



ENSOLUM

Mold Services Definitions & Limitations

Ensolum performed services in accordance with generally accepted practices of the profession undertaken in similar services at the same time and in the same geographical area. No other warranties, express or implied, apply to the services hereunder or the final report.

Ensolum's services and any report have been prepared on behalf of and for the exclusive use of the Client solely for its use and reliance in assessing the presence of mold in the Investigation Areas of the site. The Client was the only party to which Ensolum explained the risks and limitations of the services and was solely involved in shaping the scope of services. Accordingly, reliance on this report by any other party may involve assumptions leading to an unintended interpretation of findings and opinions. With the consent of the Client, Ensolum may offer reliance to third parties or contract with other parties to develop findings and opinions related to such party's unique risk management concerns. Notwithstanding the foregoing, reliance by any and all third parties upon this deliverable, Ensolum's services or any subsequent report shall be limited in the aggregate to the fair market value of the services provided by Ensolum.

"Limited Mold Assessment". This deliverable uses the term "Limited Mold Assessment" to denote that Ensolum's mold assessment services are limited: (i) to certain portions of the building structure (e.g., the Investigation Areas), by non-destructive sampling methodologies, and/or by access limitations to building materials or components within the Investigation Area(s). In contrast to a "Limited Assessment" is a comprehensive assessment would involve destructive sampling methods with the assessment to be conducted throughout the entire building structure.

Time sensitive. One must keep in mind that mold assessments are essentially a "snap shot in time," and the results are only relevant at the time of site reconnaissance. Because mold, when biologically active, is a living organism, its presence is influenced and controlled by environmental conditions. Mold assessments, therefore, are "time sensitive" in that the presence and concentration of mold and similar organisms in building structures or in the air is directly influenced by environmental conditions (such as humidity, moisture, nutrients and substrates), whether natural or caused by man, which conditions may vary significantly over relatively short periods of time.

Methodologies. Currently, mold assessment methodologies and protocols in Texas are governed by persuasive guidelines (rather than promulgated federal/state or local regulations). Presently, there is no data that supports a threshold limit or dose-response relationship for exposure to mold aeroallergens, individual pathogens, opportunistic pathogens and/or mycotoxins. The Occupational Safety and Health Administration (OSHA), the National Institute of Occupational Safety and Health (NIOSH) and other non-governmental associations, have not yet established permissible exposure limits (PELs), recommended exposure limits (RELs), or other limit values for fungi. Because no limit values presently exist, Ensolum will not and cannot represent that the site contains no harmful microbes, mold, fungi, or their metabolites, or other latent conditions beyond those identified by the limited scope of this mold assessment.



Findings limited. Findings in an LMA are limited due to the nature of the information obtained such as a visual reconnaissance of readily accessible areas of building structures, interview information, anecdotal information, and limited sampling data derived from one or more specific sampling events. Ensolum cannot warrant the accuracy of prior or subsequent information/data, reports and services performed by other firms at the Site. Ensolum assumes no responsibility or liability for errors in information or data provided by or through the client or third party sources. Ensolum's services are not to be construed as legal or medical interpretation or advice.

Moisture Intrusion Limitation. Ensolum performs mold assessment services and is not a moisture intrusion, HVAC, plumbing or building envelope specialist. However, during the course of conducting its mold assessment services, Ensolum will report observed areas of apparent moisture intrusion. Ensolum does not and will not investigate the cause or causes of such observed moisture intrusion. In the event apparent moisture intrusion is observed, Ensolum will recommend that the client contact a specialist (i.e., plumbing contractor, building envelope specialist, HVAC contractor, water intrusion specialist, etc.) to assist the client in determining the specific cause or causes of the moisture intrusion and remedial options.

Certificate of Mold Damage Remediation (CMDR). For mold remediation projects (above certain size thresholds), applicable Texas law (i.e., Texas Occupation Code Section 1958.54 and T.A.C. Section 295.397 (the Texas Mold Assessment and Remediation Rules), requires that a "Certificate of Mold Damage Remediation" be issued by the Mold Remediation Contractor upon successful completion of the project. This certificate must be provided to property owners no later than the 10th day after the date on which the mold remediation is completed at a property. The Mold Remediation Certificate issued by the Mold Remediation Contractor must include a certification by the Mold Assessor that the mold remediation project has been successfully completed in accordance with the mold remediation protocol.

Be advised that Ensolum's issuance of a CMDR upon successful completion of a Mold Remediation project does not mean, warrant or otherwise guarantee that mold will not be subsequently found in any portion of an Investigation Area or the Site. In the event that Ensolum is engaged to render services in connection with a mold remediation project, ENSOLUM will require Client to provide to Ensolum written documentation that all sources of moisture which contributed to the presence of mold in the Investigation Area have been fully remediated and corrected prior to achieving clearance.



April 3, 2019

Lewisville Independent School District
340 Lake Haven
Lewisville, Texas 75057
Attn: Mr. Paul Siddall

Re: **Mold Assessment Report - Retest**
Administration Building – Phillip Talbert's Office
1565 W Main Street
Lewisville, Texas
Project Number: 01A1288001

Ensolum, LLC (Ensolum) was retained to perform limited mold assessment services for Phillip Talbert's Office within the Administration Building located at 1565 W. Main Street in Lewisville, Texas. Enclosed is the report, including analytical data.

Ensolum appreciates this opportunity to be of service and looks forward to our continued work together. Please contact the undersigned with any questions or concerns you may have.

Sincerely,

Tod L. McLellan, MAC
Mold Assessment License: MAC1361
Exp. Date: 03/08/2020

Darren G. Bowden
Principal
MAC0321 EXP: 2/15/2020

1.0 INTRODUCTION

Ensolum was retained by Mr. Paul Siddall, LISD, to complete a Limited Mold Assessment of Phillip Talbert's Office within the Administration Building addressed at 1565 W. Main Street, Lewisville, Texas. The purpose of this investigation was to determine if elevated concentrations of airborne fungal spores and structures were present within the above-referenced office.

Mr. Tod L. McLellan completed the on-site investigation on March 29, 2019. The Limited Mold Assessment was performed in response to a complaint of possible indoor air quality issues within the office.

2.0 PROCEDURE

Ensolum visually inspected accessible areas of the office. No Visible water damage or odors were observed in the following locations:

VISIBLE WATER DAMAGE		
LOCATION	DATE	EXPLANATION
Phillip Talbert's Office	3-29-2019	N/A

It is possible that water-damaged building materials are present within the adjacent areas but were not reasonably accessible due to access limitations.

Following the inspection of potential water-damaged building materials, Ensolum conducted a moisture investigation in the identified areas to determine if nonvisible water-damaged materials and other building materials within the investigation area were present. The moisture investigation was completed with a GE Protimeter BLD5364 moisture meter on accessible porous and semi-porous building materials in each area of concern. At the time of investigation, monitored building materials did not exhibit elevated moisture concentrations in comparison with similar and non-affected building materials in the structure and standard scientific guidelines.

Representative Relative Humidity readings were collected and recorded using a Vaisala HM40 Humidity and Temperature Meter. Measurements recorded during the investigation are listed in the chart below:

TEMPERATURE, RELATIVE HUMIDITY & SPECIFIC HUMIDITY				
LOCATION	DATE	Temperature: F	Relative Humidity	Specific Humidity
Phillip Talbert's Office	3-29-2019	72.7°	53.4%	64.08
Outdoor (West)	3-29-2019	71.4°	60.6%	69.81
Outdoor (South)	3-29-2019	70.4°	62.2%	69.22

Area air samples were collected with Allergenco-D spore trap cassettes and analyzed for airborne fungal spores and structures. The spore traps were affixed to a calibrated Buck Bioair™ bioaerosol sampling pump. Samples were collected at a rate of 15 liters per minute. Indoor air sample(s) were collected for a five (5) minute period of time (75 liters) at a height of approximately five (5) feet above finished floor (AFF). Outdoor air samples were collected for a five (5) minutes period of time (75 liters) at a height of approximately five (5) feet above level ground. American Conference of Governmental Industrial Hygienists (ACGIH) guidelines were followed for the sample collection. Fungal air samples were collected in the following areas:

SPORE TRAP LOCATIONS	
SAMPLE NUMBER	LOCATION
245217	Phillip Talbert's Office
245239	Outdoor (West)
245238	Outdoor (South)

3.0 RESULTS

Currently, there are no regulatory standards for airborne fungal contamination. Therefore, results of the fungal analysis are compared against scientific guidelines. Bioaerosol samples are evaluated by comparing the indoor samples against the outdoor sample. The same types of fungi should be found in both the indoor and outdoor samples. Should higher fungal concentrations occur in the indoor sample(s) or complaint areas, this generally indicates there is a source of fungal growth in the area. The types of fungi are also evaluated-the same types/genus of fungi should be present in both the indoor/complaint and outdoor/non-complaint samples.

The results of the fungal air samples collected were evaluated. The indoor sample was quantitatively and qualitatively similar to the outdoor samples.

4.0 CONCLUSIONS

The results of the samples collected were within guidelines on the day of the assessment.

APPENDIX A

Analytical Data



Chain of Custody

Lab Job # 19F.03549 After A3Lab Job # Std

Lab Job # _____

Please call in advance for immediate, after-hour, & weekend pricing & availability.

Page 1 of 1**ASBESTOS PLM**Bulk ☐ Immediate ☐ 1 day ☐ 2 day ☐ 3 day ☐ 5 day
☐ Analyze All ☐ Positive Stop**PCM Air (7400)**☐ Immediate ☐ 1 day ☐ 2 day ☐ 3 day ☐ 5 day
Analyze Blanks ☐ Yes ☐ No**TOTAL DUST(0500/0600)**☐ 1 day ☐ 2 day**ASBESTOS TEM**Air AHERA Method ☐ ☐ 6 hr ☐ 12 hr ☐ 24 hr
Air 7402 (Modified) ☐ 1 day ☐ 2 day ☐ 3 day
Bulk ☐ 1 day ☐ 2 day ☐ 3 day ☐ 5 day
Water/Wipe/Micro Vac ☐ 1 day ☐ 2 day ☐ 3 day
Analyze Blanks ☐ Yes ☐ No**MOLD**Direct Exam ☐ Immed ☐ 1 day ☐ 2 day ☐ 5 day
Standard Air ☐ Immed ☐ 1 day ☒ 2 day ☐ 5 day
Expanded Air ☐ Immed ☐ 1 day ☐ 2 day ☐ 5 day
Culture** ☐ 10-14 days
Analyze Blanks ☐ Yes ☐ No

Turnaround of Culture Samples subject to Culture Growth

BACTERIA**Colony Counts (CC) ☐ 3 day ☐ 5 day
CC + Gram Stain ☐ 3 day ☐ 5 day
Coliform & E. coli (P/A) ☐ 2-3 day
Legionella ☐ 14 days**OTHER:** _____Billing Company / City: Ensolum/Dallas# of Samples: 3Submitter's Company: Ensolum, LLC.Sample Date: 3-27-14Submitter's Name: Tod McLellan MAC1361Project #: 01A1233001Project: Lewisville ISD- Admin BuildingPhone #: 682-225-3050Contact Information: Name: Tod McLellan

Mobile #: _____

E-mail Results to: Jcolson@ensolum.com & Tmclellan@ensolum.com

Fax #: _____

Invoice Address: 2351 W. Northwest Hwy. Suite 1203, Dallas, TX

P.O. #: _____

Please review paperwork and samples before submitting to lab. Unsealed / Improperly packaged / damaged / expired samples or excessive administrative requests may incur additional fees

Notes: _____

Sample #	Sample Description	Vol. / Area (if applicable)	Location / Notes
245217	Phillip Talbert's Office	75L	
245237	Outdoor (west)	1	
245238	Outdoor (south)	75L	

Released By: <u>[Signature]</u>	Date / Time: <u>3-27-14/1330</u>	Received By: <u>[Signature]</u>	Date / Time: <u>3/27/14 2:12pm</u>
Released By: _____	Date / Time: _____	Received By: _____	Date / Time: _____



IAQ Mold Report

Summary

TDLR License No.: LAB0117

AIHA EMPAT ID: 102577

2051 Valley View Lane

Farmers Branch, TX 75234 Phone: (972) 241-8460

Client : Ensolum, LLC

Project : Lewisville ISD - Admin Building

Project # : 01A1288001

Sample Type: Spore Trap, Non-cultured

Test Method: Mold: ASTM D7391-17e1 - Standard Profile

Lab Job No. : 19F-03549

Report Date : 04/01/2019 9:59 PM

Sample Date: 03/29/2019

Spore Trap Type: Allergenco D

Page 1 of 2

On 3/29/2019, three (3) samples were submitted by Tod McLellan of Ensolum, LLC (located at 2351 W. Northwest Hwy Suite #1203, Dallas, TX 75220) for Spore Trap, Non-cultured mold analysis. This report consists of three sections; a summary section, a data detail section, and an analytical notes section.

Sample Number	Volume (liters)	Sample Description	Identification	Concentration spores/cubic meter
245217	75	Phillip Talberts Office	Aspergillus / Penicillium Basidiospores Myxomycete / Rust / Smut Cladosporium Ascospores Hyphal / Spore Fragments - Dematiaceous Total:	320 69% 53 11% 27 6% 27 6% 27 6% 13 3% 467 100%
245239	75	Outdoor (West) * See Analytical Notes report for further details	Ascospores Basidiospores Aspergillus / Penicillium Cladosporium Hyphal / Spore Fragments - Dematiaceous Periconia Coprinus group Myxomycete / Rust / Smut Total:	1648 50% 853 26% 387 12% 347 11% 13 <1% 13 <1% 13 <1% 13 <1% 3287 100%



IAQ Mold Report

Summary

TDLR License No.: LAB0117

AIHA EMPAT ID: 102577

2051 Valley View Lane

Farmers Branch, TX 75234 Phone: (972) 241-8460

Client : Ensolum, LLC**Project :** Lewisville ISD - Admin Building**Project # :** 01A1288001**Sample Type:** Spore Trap, Non-cultured**Test Method:** Mold: ASTM D7391-17e1 - Standard Profile**Lab Job No. :** 19F-03549**Report Date :** 04/01/2019 9:59 PM**Sample Date:** 03/29/2019**Spore Trap Type:** Allergenco D

Page 2 of 2

On 3/29/2019, three (3) samples were submitted by Tod McLellan of Ensolum, LLC (located at 2351 W. Northwest Hwy Suite #1203, Dallas, TX 75220) for Spore Trap, Non-cultured mold analysis. This report consists of three sections; a summary section, a data detail section, and an analytical notes section.

Sample Number	Volume (liters)	Sample Description	Identification	Concentration spores/cubic meter
245238	75	Outdoor (South)	Ascospores Basidiospores Aspergillus / Penicillium Diatrypaceae Cladosporium Myxomycete / Rust / Smut Hyphal / Spore Fragments - Dematiaceous Hyphal / Spore Fragments - Hyaline Epicoccum Chaetomium Alternaria Total:	1306 47% 813 29% 360 13% 107 4% 93 3% 40 1% 27 <1% 13 <1% 13 <1% 13 <1% 13 <1% 2798 100%

Results may not be reported except in full. Data contained in this test report relates only to the samples tested. This report does not express or imply interpretation of the results contained herein. Interpretation should be made by a qualified professional.

Moody Labs assumes no responsibility for the manner in which these samples were collected or handled prior to being received at this laboratory. Moody Labs assumes no responsibility for the qualifications of personnel performing sampling and/or interpretations of this data.

Analyst(s): K. Tye

Lab Director : Heather Lopez

Lab Director : Bruce Crabb

Approved Signatory :

Approved Signatory :

Thank you for choosing Moody Labs

SMLMS v13.13



IAQ Mold Report

Data Detail

TDLR License No.: LAB0117

AIHA EMPAT ID: 102577

2051 Valley View Lane
Farmers Branch, TX 75234 Phone: (972) 241-8460

Client : Ensolum, LLC
Project : Lewisville ISD - Admin Building
Project # : 01A1288001
Sample Type: Spore Trap, Non-cultured
Test Method: Mold: ASTM D7391-17e1 - Standard Profile

Lab Job No. : 19F-03549
Report Date : 04/01/2019 9:59 PM
Sample Date: 03/29/2019
Spore Trap Type: Allergenco D

This report consists of three sections; a summary section, a data detail section, and an analytical notes section. Results may not be reported except in full.

Sample ID:	245217					245239					245238				
Location:	Phillip Talberts Office					Outdoor (West)					Outdoor (South)				
Media Expires On:	Dec 2019					Dec 2019					Dec 2019				
Notes Included:						See Analytical Notes									
Volume:	75					75					75				
	raw ct.	RL	spores/m³	%total	spores/m³ SF	raw ct.	RL	spores/m³	%total	spores/m³ SF	raw ct.	RL	spores/m³	%total	spores/m³ SF
Alternaria											1	13	13	<1%	10
Ascospores	2	13	27	6%	30	103	16	1648	50%	1600	98	13	1306	47%	1300
Aspergillus / Penicillium	24	13	320	69%	320	29	13	387	12%	390	27	13	360	13%	360
Basidiospores	4	13	53	11%	50	64	13	853	26%	850	61	13	813	29%	810
Chaetomium											1	13	13	<1%	10
Cladosporium	2	13	27	6%	30	26	13	347	11%	350	7	13	93	3%	90
Coprinus group						1	13	13	<1%	10					
Diatrypaceae											8	13	107	4%	100
Epicoccum											1	13	13	<1%	10
Hyphal / Spore Fragments - Dematiace	1	13	13	3%	10	1	13	13	<1%	10	2	13	27	<1%	30
Hyphal / Spore Fragments - Hyaline											1	13	13	<1%	10
Memnoniella															
Myxomycete / Rust / Smut	2	13	27	6%	30	1	13	13	<1%	10	3	13	40	1%	40
Periconia						1	13	13	<1%	10					
Stachybotrys															
TOTALS	35		467	100%	470	226		3287	100%	3300	210		2798	100%	2800
Analyst	K. Tye					K. Tye					K. Tye				
Analysis Date	4/1/2019					4/1/2019					4/1/2019				
Debris Rating	4					3					3				
Debris Composition															
Fibers	2/5					1/5					2/5				
Inorganic/Other	3/5					2/5					2/5				
Insect Parts	1/5					1/5					1/5				
Pollen	2/5					3/5					3/5				
Skin/Dander	3/5					2/5					1/5				

End of Data Detail section
19F-03549

SMLMS v13.13



IAQ Mold Report

Analytical Notes

TDLR License No.: LAB0117

AIHA EMPAT ID: 102577

2051 Valley View Lane

Farmers Branch, TX 75234 Phone: (972) 241-8460

Client : Ensolum, LLC

Project : Lewisville ISD - Admin Building

Project # : 01A1288001

Sample Type: Spore Trap, Non-cultured

Test Method: Mold: ASTM D7391-17e1 - Standard Profile

Lab Job No. : 19F-03549

Report Date : 04/01/2019 9:59 PM

Sample Date : 03/29/2019

Spore Trap Type: Allergenco D

Page 1 of 2

This report consists of three sections; a summary section, a data detail section, and an analytical notes section. Results may not be reported except in full.

Samples Analyzed

Sample No: 245239 : Outdoor (West)

Notes: Please note: the minimum detection limit for Ascospores is 16 spores / cubic meter. When comparing results to other samples, use calculated results, not raw numbers.

Field Blanks

No discernable field blanks were submitted with this set of samples.

NOTE: All remaining samples suitable for analysis.

Methods

Method: ASTM D7391-17e1: Categorization and Quantification of Airborne Fungal Structures in an Inertial Impaction Sample by Optical Microscopy.

Samples are read at 100% unless noted. Partial readings may be employed when concentrations are elevated. Use final spore concentrations, not raw spore counts, for interpretation of results.

Calculation: Spores/cubic meter = (Raw spore count)*(RL)

Note: RL (Reporting Limit) is based upon 1 raw spore count.

Moody Labs recommends two significant figures for calculated values based on ASTM D7391-17e1.

This report must not be used by the customer to claim product certification, approval, or endorsement by AIHA, ISO, or any agency of the Federal Government.

Debris Rating Key

0 - No linear trace detected

1 - Trace particulate/debris

2 - Light particulate/debris

3 - Moderate particulate/debris.

4 - Substantial particulate/debris

5 - Extensive particulate/debris

6 - Field blank

10 - Hold Sample

11 - Modified Analysis per Client Instructions

NOTE: Particulate/debris are defined as skin, fibers, pollen grains, insect parts, fungal and/or other non-fungal particles.



IAQ Mold Report

Analytical Notes

TDLR License No.: LAB0117

AIHA EMPAT ID: 102577

2051 Valley View Lane

Farmers Branch, TX 75234 Phone: (972) 241-8460

Client : Ensolum, LLC

Project : Lewisville ISD - Admin Building

Project # : 01A1288001

Sample Type: Spore Trap, Non-cultured

Test Method: Mold: ASTM D7391-17e1 - Standard Profile

Lab Job No. : 19F-03549

Report Date : 04/01/2019 9:59 PM

Sample Date : 03/29/2019

Spore Trap Type: Allergenco D

Page 2 of 2

This report consists of three sections; a summary section, a data detail section, and an analytical notes section. Results may not be reported except in full.



SBA WOSB
Woman Owned Small Business



End of Analytical Notes section

19F-03549

Moody Labs
2051 Valley View Lane
Farmers Branch, TX 75234 Phone: (972) 241-8460

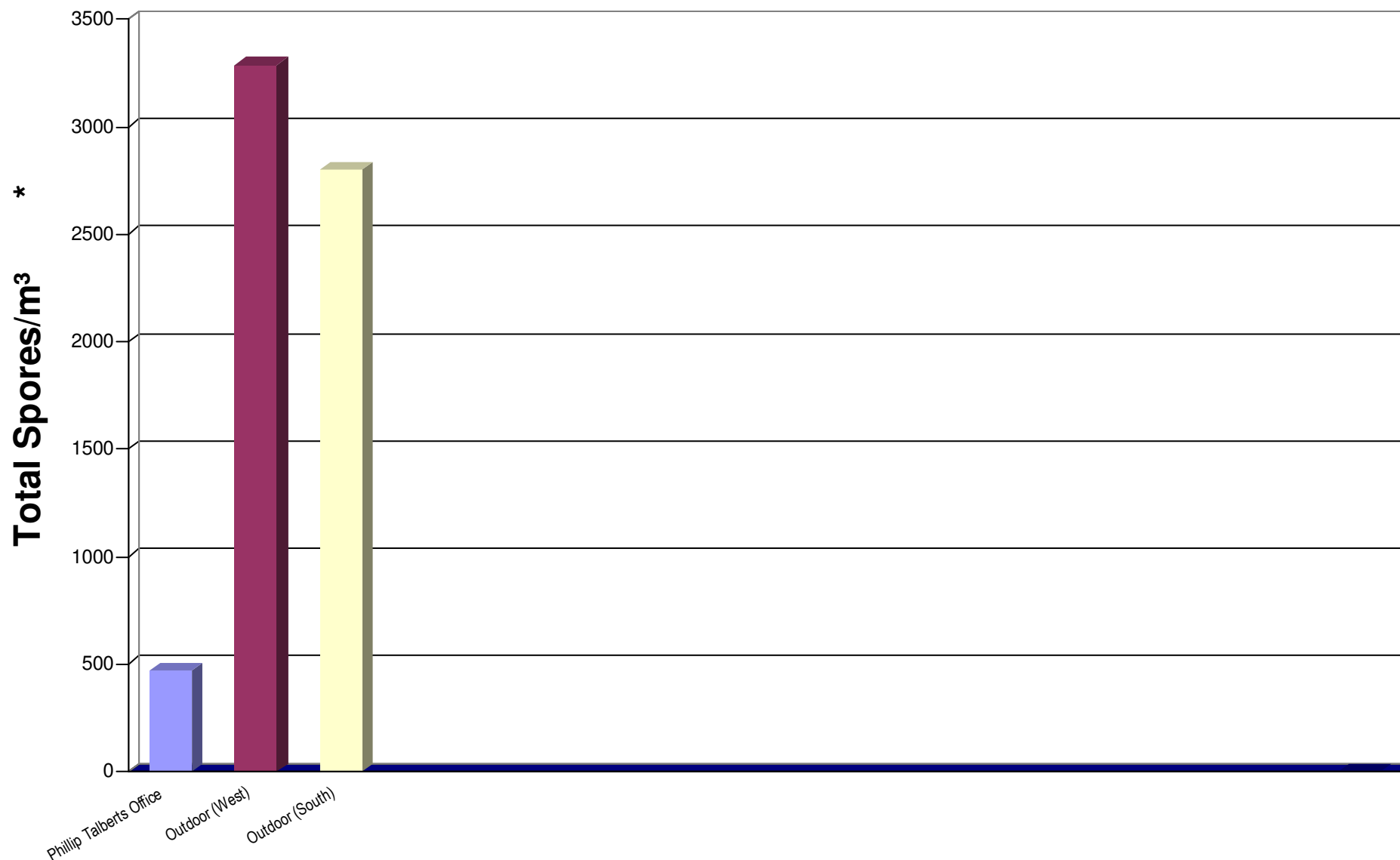
IAQ Mold Report

Supplemental Overview

TDLR License No.: LAB0117
AIHA EMPAT ID: 102577

Client : Ensolum, LLC
Project : Lewisville ISD - Admin Building
Project # : 01A1288001

Lab Job No. 19F-03549
Report Date 04/01/2019 9:59 PM
Sample Date : 03/29/2019





2051 Valley View Lane
Farmers Branch, TX 75234 Phone: (972) 241-8460

IAQ Mold Report

Supplemental Overview

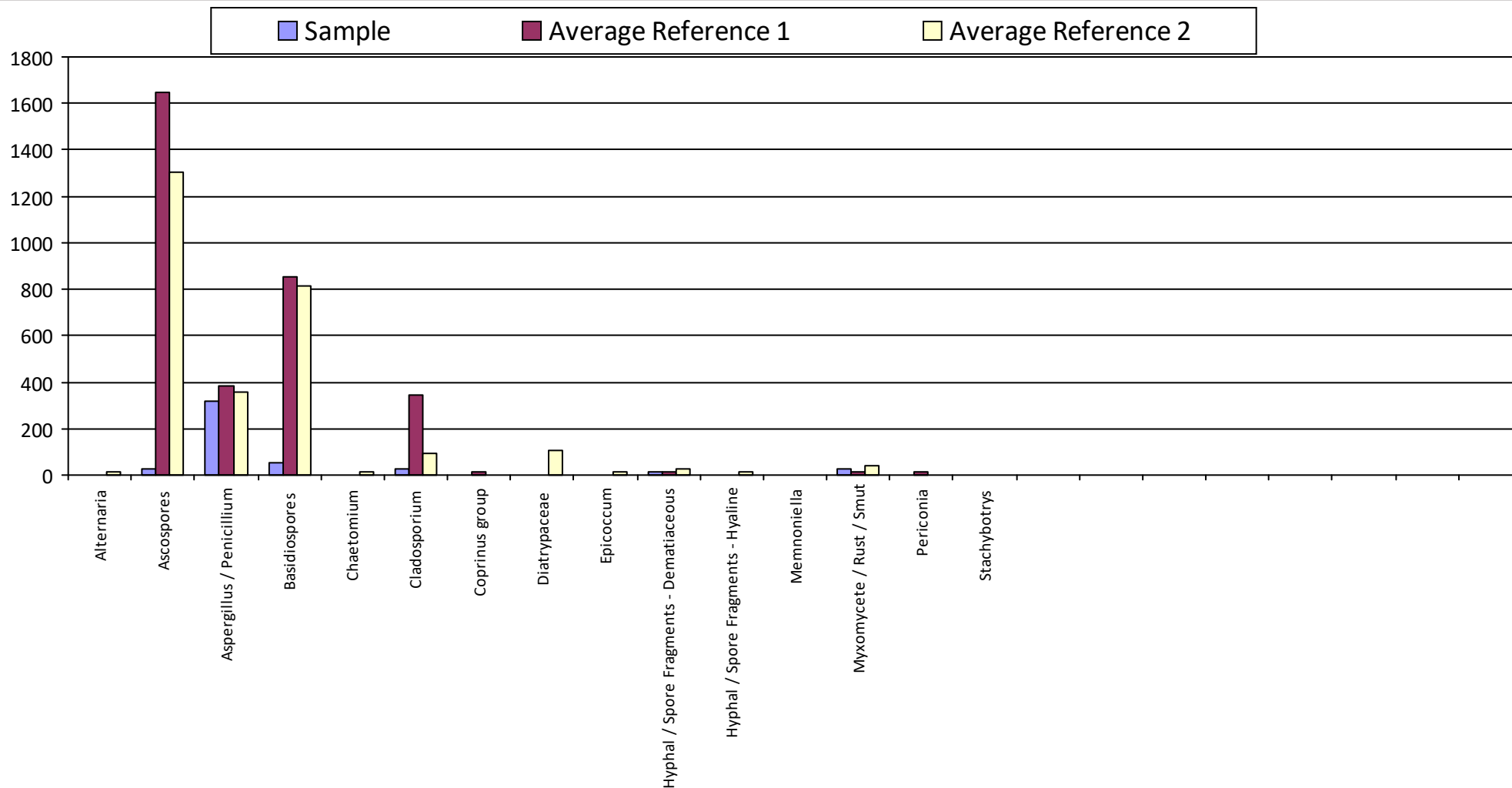
TDLR License No.: LAB0117

AIHA EMPAT ID: 102577

Client : Ensolum, LLC
Project : Lewisville ISD - Admin Building
Project # : 01A1288001

Phillip Talberts Office

Lab Job No. 19F-03549
Report Date 04/01/2019 9:59 PM
Sample Date : 03/29/2019



Average Reference 1 = Outdoor (West)

Average Reference 2 = Outdoor (South)



2051 Valley View Lane
Farmers Branch, TX 75234 Phone: (972) 241-8460

IAQ Mold Report

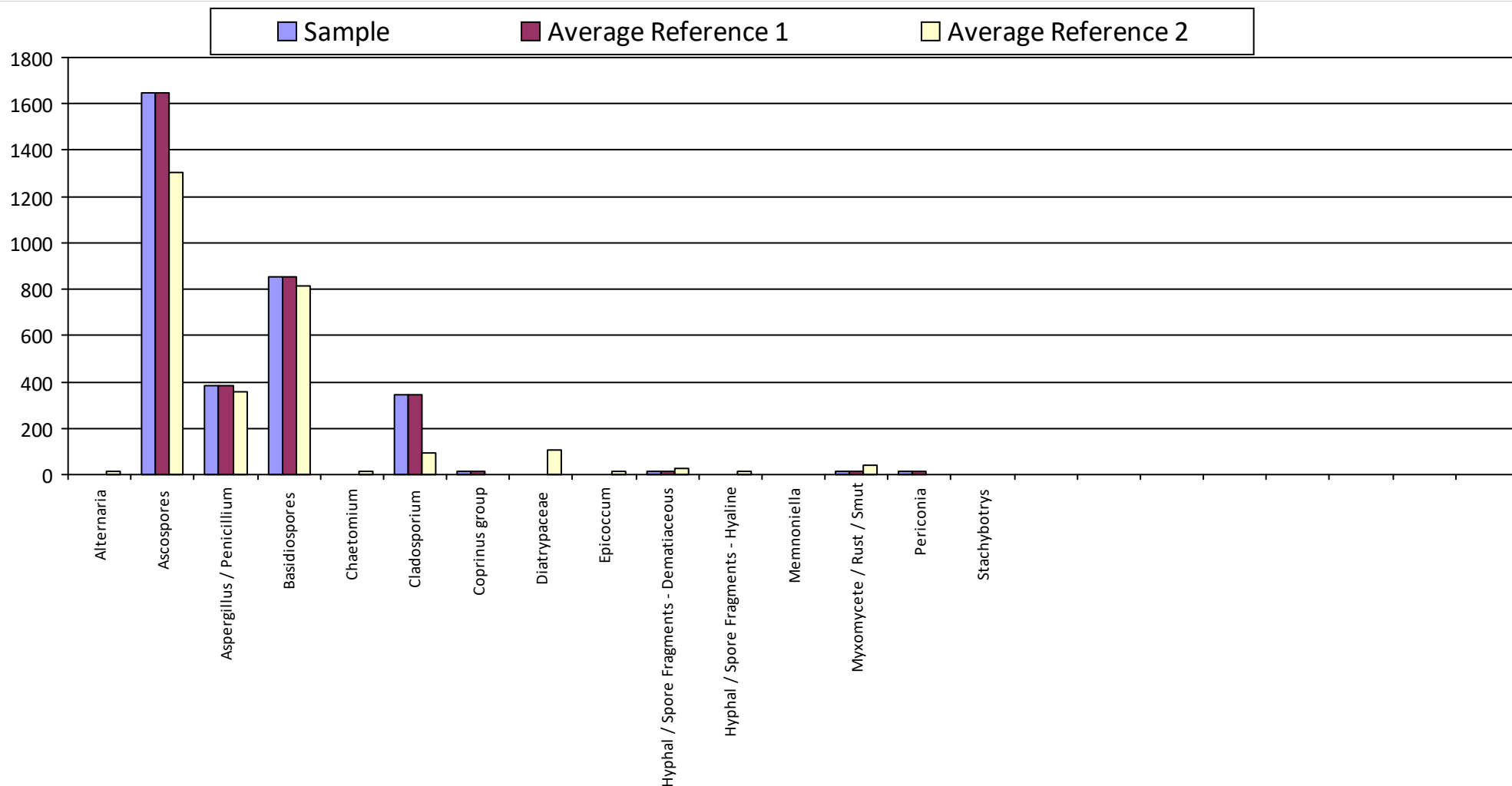
Supplemental Overview

TDLR License No.: LAB0117
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Client : Ensolum, LLC
Project : Lewisville ISD - Admin Building
Project # : 01A1288001

Lab Job No. 19F-03549
Report Date 04/01/2019 9:59 PM
Sample Date : 03/29/2019

Outdoor (West)



Average Reference 1 = Outdoor (West)

Average Reference 2 = Outdoor (South)



2051 Valley View Lane
Farmers Branch, TX 75234 Phone: (972) 241-8460

IAQ Mold Report

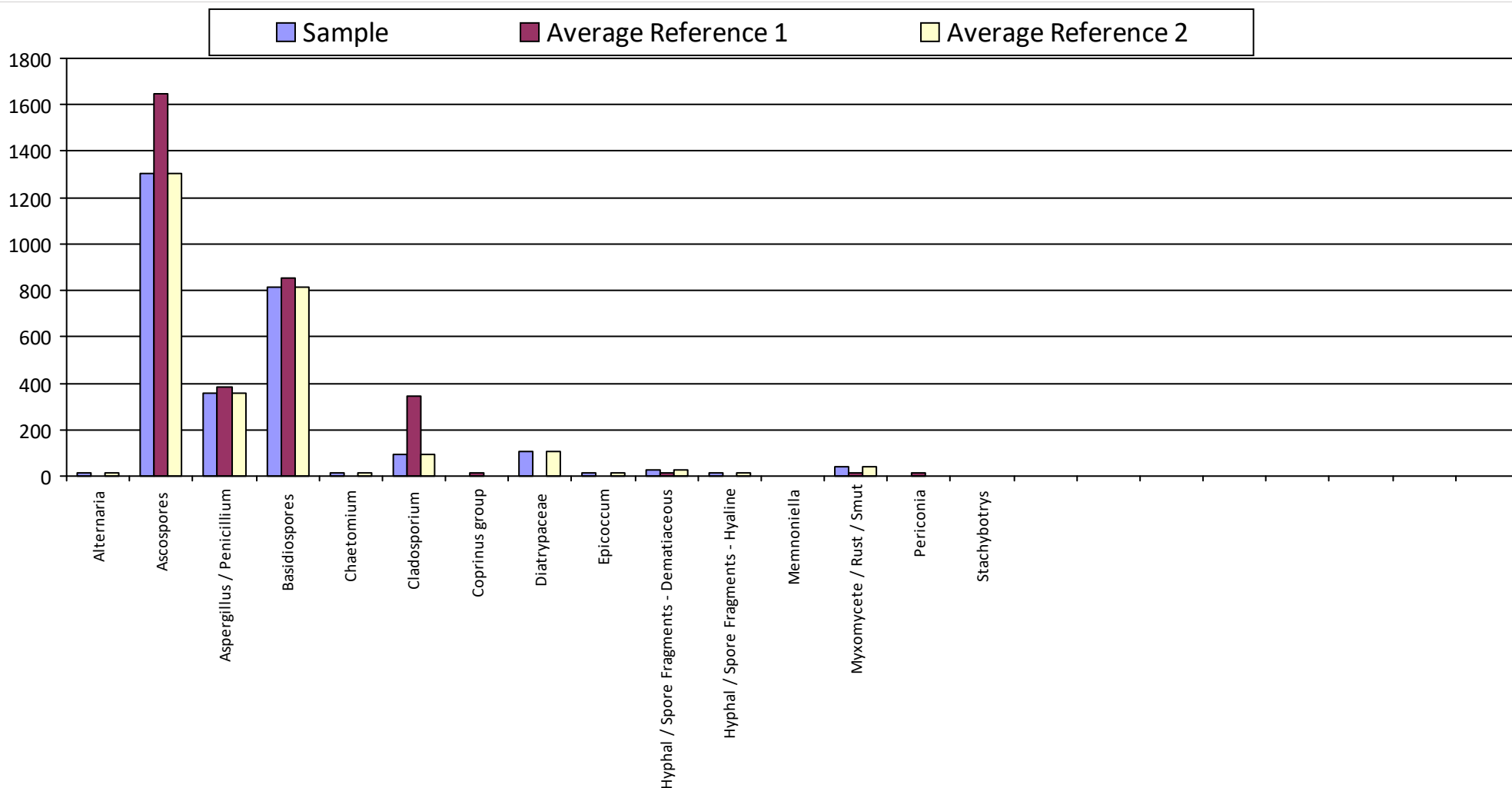
Supplemental Overview

TDLR License No.: LAB0117
AIHA EMPAT ID: 102577

Client : Ensolum, LLC
Project : Lewisville ISD - Admin Building
Project # : 01A1288001

Lab Job No. 19F-03549
Report Date 04/01/2019 9:59 PM
Sample Date : 03/29/2019

Outdoor (South)



Average Reference 1 = Outdoor (West)

Average Reference 2 = Outdoor (South)

APPENDIX B

DEFINITIONS AND LIMITATIONS



ENSOLUM

Mold Services Definitions & Limitations

Ensolum performed services in accordance with generally accepted practices of the profession undertaken in similar services at the same time and in the same geographical area. No other warranties, express or implied, apply to the services hereunder or the final report.

Ensolum's services and any report have been prepared on behalf of and for the exclusive use of the Client solely for its use and reliance in assessing the presence of mold in the Investigation Areas of the site. The Client was the only party to which Ensolum explained the risks and limitations of the services and was solely involved in shaping the scope of services. Accordingly, reliance on this report by any other party may involve assumptions leading to an unintended interpretation of findings and opinions. With the consent of the Client, Ensolum may offer reliance to third parties or contract with other parties to develop findings and opinions related to such party's unique risk management concerns. Notwithstanding the foregoing, reliance by any and all third parties upon this deliverable, Ensolum's services or any subsequent report shall be limited in the aggregate to the fair market value of the services provided by Ensolum.

"Limited Mold Assessment". This deliverable uses the term "Limited Mold Assessment" to denote that Ensolum's mold assessment services are limited: (i) to certain portions of the building structure (e.g., the Investigation Areas), by non-destructive sampling methodologies, and/or by access limitations to building materials or components within the Investigation Area(s). In contrast to a "Limited Assessment" is a comprehensive assessment would involve destructive sampling methods with the assessment to be conducted throughout the entire building structure.

Time sensitive. One must keep in mind that mold assessments are essentially a "snap shot in time," and the results are only relevant at the time of site reconnaissance. Because mold, when biologically active, is a living organism, its presence is influenced and controlled by environmental conditions. Mold assessments, therefore, are "time sensitive" in that the presence and concentration of mold and similar organisms in building structures or in the air is directly influenced by environmental conditions (such as humidity, moisture, nutrients and substrates), whether natural or caused by man, which conditions may vary significantly over relatively short periods of time.

Methodologies. Currently, mold assessment methodologies and protocols in Texas are governed by persuasive guidelines (rather than promulgated federal/state or local regulations). Presently, there is no data that supports a threshold limit or dose-response relationship for exposure to mold aeroallergens, individual pathogens, opportunistic pathogens and/or mycotoxins. The Occupational Safety and Health Administration (OSHA), the National Institute of Occupational Safety and Health (NIOSH) and other non-governmental associations, have not yet established permissible exposure limits (PELs), recommended exposure limits (RELs), or other limit values for fungi. Because no limit values presently exist, Ensolum will not and cannot represent that the site contains no harmful microbes, mold, fungi, or their metabolites, or other latent conditions beyond those identified by the limited scope of this mold assessment.



Findings limited. Findings in an LMA are limited due to the nature of the information obtained such as a visual reconnaissance of readily accessible areas of building structures, interview information, anecdotal information, and limited sampling data derived from one or more specific sampling events. Ensolum cannot warrant the accuracy of prior or subsequent information/data, reports and services performed by other firms at the Site. Ensolum assumes no responsibility or liability for errors in information or data provided by or through the client or third party sources. Ensolum's services are not to be construed as legal or medical interpretation or advice.

Moisture Intrusion Limitation. Ensolum performs mold assessment services and is not a moisture intrusion, HVAC, plumbing or building envelope specialist. However, during the course of conducting its mold assessment services, Ensolum will report observed areas of apparent moisture intrusion. Ensolum does not and will not investigate the cause or causes of such observed moisture intrusion. In the event apparent moisture intrusion is observed, Ensolum will recommend that the client contact a specialist (i.e., plumbing contractor, building envelope specialist, HVAC contractor, water intrusion specialist, etc.) to assist the client in determining the specific cause or causes of the moisture intrusion and remedial options.

Certificate of Mold Damage Remediation (CMDR). For mold remediation projects (above certain size thresholds), applicable Texas law (i.e., Texas Occupation Code Section 1958.54 and T.A.C. Section 295.397 (the Texas Mold Assessment and Remediation Rules), requires that a "Certificate of Mold Damage Remediation" be issued by the Mold Remediation Contractor upon successful completion of the project. This certificate must be provided to property owners no later than the 10th day after the date on which the mold remediation is completed at a property. The Mold Remediation Certificate issued by the Mold Remediation Contractor must include a certification by the Mold Assessor that the mold remediation project has been successfully completed in accordance with the mold remediation protocol.

Be advised that Ensolum's issuance of a CMDR upon successful completion of a Mold Remediation project does not mean, warrant or otherwise guarantee that mold will not be subsequently found in any portion of an Investigation Area or the Site. In the event that Ensolum is engaged to render services in connection with a mold remediation project, ENSOLUM will require Client to provide to Ensolum written documentation that all sources of moisture which contributed to the presence of mold in the Investigation Area have been fully remediated and corrected prior to achieving clearance.