Limited Mold Assessment in Gym

Treadway, David <treadwayd@lisd.net>

Wed 10/25/2023 3:12 PM

To:Lawson, Stephanie <lawsons@lisd.net>;Burleson, Lisa <burlesonl@lisd.net>;Miles, Sherri <miless@lisd.net>
Cc:Johnson, Cheryl <johnsoncp@lisd.net>;Hughes, Jason <hughesjk@lisd.net>;Jones, Steven <jonessa@lisd.net>;Cashman, Jinger <cashmans@lisd.net>;Wiley, Richard <wileyr@lisd.net>

Mrs. Lawson,

Good afternoon. On 8/27/23, Ensolum LLC conducted a limited mold assessment in the gym per a campus request. It is typically assumed that indoor spore levels in an area with filtered or air-conditioned air, and activities associated with schools, average below the outdoor levels. Data from the airborne fungi sampling indicated that the total indoor concentration of mold/fungi in the **Gym** was ***10%*** and the **Gym office** was ***6%*** of the outdoor levels. Utilizing this theory, the indoor concentrations were well within acceptable guidelines for areas with filtered or air-conditioned air. The final report will be available on the LISD website. Please let me know if you have any questions.

Sincerely,
David Treadway

David Treadway
LISD Environmental Coordinator
Facility Services Department
469-446-0140

ENSOLUM

September 28, 2023

Lewisville Independent School District
1597 Edmonds Lane
Lewisville, Texas 75067
Attn: David Treadway

Re: Limited Mold Assessment Proposal
Memorial Elementary School Gym
1001 Josey Lane
Carrollton, TX 75010
LISD: CSP 2561-18
Ensolum Project No. 01A1288193

Ensolum, LLC (Ensolum) was retained by David Treadway to perform limited mold assessment services within the Gym of Memorial Elementary School located at 1001 Josey Lane in Carrollton, 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,

Nolan Domain
Mold Assessment Consultant
MAC1479

Darren G. Bowden
Principal
MAC0321 EXP: 2/15/2024

1.0 INTRODUCTION

Ensolum was retained by David Treadway, LISD, to complete a Limited Mold Assessment within the Gym of Memorial Elementary School located at 1001 Josey Lane in Carrollton, Texas. The purpose of this investigation was to determine if elevated concentrations of airborne fungal spores and structures were present within the above-referenced areas. Ensolum completed the on-site investigation on September 27, 2023. The Limited Mold Assessment was performed in response to a complaint of possible indoor air quality issues within specific areas.

2.0 PROCEDURE

Ensolum visually inspected accessible areas of the Memorial Elementary Gymnasium. Water damage was observed in the following locations:

VISIBLE WATER DAMAGE		
LOCATION	DATE	EXPLANATION
Gym Office	9/27/2023	No Visible Water Damage
Back Gym Hall	9/27/2023	No Visible Water Damage
Outdoor – Gym Door	9/27/2023	No Visible Water Damage
Outdoor - Front	9/27/2023	No Visible Water Damage

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 an Extech M0260 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 an Extech Instruments Humidity / Temperature Pen. Measurements recorded during the investigation are listed in the chart below:

TEMPERATURE, RELATIVE HUMIDITY & SPECIFIC HUMIDITY				
LOCATION	DATE	Temperature: F	Relative Humidity	Specific Humidity
Gym Office	9/27/2023	73 °F	45%	54 GPP
Back Gym Hall	9/27/2023	73 °F	49%	59 GPP
Outdoor – Gym Door	9/27/2023	98 °F	22%	59 GPP
Outdoor - Front	9/27/2023	99 °F	23%	64 GPP

Area air samples were collected with spore trap cassettes and analyzed for airborne fungal spores and structures. Samples were collected at a rate of 15 liters per minute. Indoor air sample(s) were collected for a five (5) minute period (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 (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**
ST-1	Gym Office
ST-2	Back Gym Hall
ST-3	Outdoor – Gym Door
ST-4	Outdoor - Front

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. Air testing performed using spore traps found that airborne mold spores within the investigation area were considerably lower and were qualitatively like those measured outside of the building at the time the sampling was performed.

CONCLUSIONS

Based on ENSOLUM's limited assessment and the analytical results, it appears that the indoor air quality, as it relates to airborne fungi, was within recommended guidelines on the day of the assessment.

APPENDIX A

ANALYTICAL DATA

IAQ Mold Report

Summary

Moody Labs
2051 Valley View Lane
Farmers Branch, TX 75234 Phone: (972) 241-8460
TDLR License No.: LAB0117
AIHA EMPAT ID: 102577

Client : Ensolum, LLC
Project : LISD, Memorial ES Gym
Project # : 01A.1288.197
Sample Type: Spore Trap, Non-cultured
Test Method: Mold: MLQ - 0112 - Standard Profile

Lab Job No. : 23F-11746
Report Date : 09/28/2023
Sample Date: 09/27/2023
Spore Trap Type: Zefon - Air-O-Cell

On 9/27/2023, four (4) samples were submitted by a representative of Ensolum, LLC (located at 8330 LBJ Freeway, Suite 830 8330 LBJ Freeway, Suite 830, Dallas, TX 75243) 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	
ST-1	75	Gym Office 1201	Aspergillus / Penicillium	213	23%
			Drechslera / Bipolaris / Helminthosporum / Exserohilum group	187	20%
			Cladosporium	147	16%
			Myxomycete / Periconia / Rust / Smut	107	12%
			Hyphal / Spore Fragments - Dematiaceous	80	9%
			Curvularia	53	6%
			Basidiospores	53	6%
			Hyphal / Spore Fragments - Hyaline	27	3%
			Alternaria	27	3%
			Cercospora / Pseudocercospora	13	1%
			Fusarium	13	1%
			Total:	920	100%
ST-2	75	Back Gym Hall	Aspergillus / Penicillium	440	28%
			Cladosporium	293	19%
			Curvularia	227	15%
			Hyphal / Spore Fragments - Dematiaceous	133	9%
			Basidiospores	133	9%
			Drechslera / Bipolaris / Helminthosporum / Exserohilum group	93	6%
			Alternaria	93	6%
			Myxomycete / Periconia / Rust / Smut	40	3%
			Coprinus group	40	3%
			Hyphal / Spore Fragments - Hyaline	27	2%
			Cercospora / Pseudocercospora	13	<1%
			Nigrospora	13	<1%
			Total:	1545	100%

IAQ Mold Report

Summary

Moody Labs
2051 Valley View Lane
Farmers Branch, TX 75234 Phone: (972) 241-8460
TDLR License No.: LAB0117
AIHA EMPAT ID: 102577

Client : Ensolum, LLC
Project : LISD, Memorial ES Gym
Project # : 01A.1288.197
Sample Type: Spore Trap, Non-cultured
Test Method: Mold: MLQ - 0112 - Standard Profile

Lab Job No. : 23F-11746
Report Date : 09/28/2023
Sample Date: 09/27/2023
Spore Trap Type: Zefon - Air-O-Cell

On 9/27/2023, four (4) samples were submitted by a representative of Ensolum, LLC (located at 8330 LBJ Freeway, Suite 830 8330 LBJ Freeway, Suite 830, Dallas, TX 75243) 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	
ST-3	75	Outdoor, Gym Door * See Analytical Notes report for further details	Cladosporium	3833	39%
			Basidiospores	3077	31%
			Aspergillus / Penicillium	1173	12%
			Ascospores	427	4%
			Coprinus group	293	3%
			Cercospora / Pseudocercospora	293	3%
			Hyphal / Spore Fragments - Dematiaceous	133	1%
			Myxomycete / Periconia / Rust / Smut	107	1%
			Curvularia	93	<1%
			Alternaria	93	<1%
			Fusarium	93	<1%
			Paecilomyces	67	<1%
			Drechslera / Bipolaris / Helminthosporum / Exserohilum group	53	<1%
			Ganoderma	40	<1%
			Nigrospora	27	<1%
			Hyphal / Spore Fragments - Hyaline	27	<1%
			Total:	9829	100%

IAQ Mold Report

Summary

Moody Labs
2051 Valley View Lane
Farmers Branch, TX 75234 Phone: (972) 241-8460
TDLR License No.: LAB0117
AIHA EMPAT ID: 102577

Client : Ensolum, LLC
Project : LISD, Memorial ES Gym
Project # : 01A.1288.197
Sample Type: Spore Trap, Non-cultured
Test Method: Mold: MLQ - 0112 - Standard Profile

Lab Job No. : 23F-11746
Report Date : 09/28/2023
Sample Date: 09/27/2023
Spore Trap Type: Zefon - Air-O-Cell

On 9/27/2023, four (4) samples were submitted by a representative of Ensolum, LLC (located at 8330 LBJ Freeway, Suite 830 8330 LBJ Freeway, Suite 830, Dallas, TX 75243) 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	
ST-4	75	Outdoor, Front * See Analytical Notes report for further details	Basidiospores	7400	44%
			Cladosporium	6666	39%
			Aspergillus / Penicillium	986	6%
			Coprinus group	360	2%
			Ascospores	320	2%
			Cercospora / Pseudocercospora	267	2%
			Alternaria	227	1%
			Myxomycete / Periconia / Rust / Smut	213	1%
			Drechslera / Bipolaris / Helminthosporum / Exserohilum group	133	<1%
			Fusarium	80	<1%
			Curvularia	67	<1%
			Hyphal / Spore Fragments - Dematiaceous	67	<1%
			Ganoderma	53	<1%
			Nigrospora	13	<1%
			Hyphal / Spore Fragments - Hyaline	13	<1%
			Torula	13	<1%
			Total:	16878	100%

Analyst(s): Elham Mohammadian

Lab Director : Heather Lopez — Approved Signatory : Heather Lopez

Lab Director : Bruce Crabb — Approved Signatory : Bruce Crabb

End of Summary section (23F-11746)

Thank you for choosing Moody Labs

This Page Left Intentionally Blank

IAQ Mold Report

Data Detail

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

TDLR License No.: LAB0117
AIHA EMPAT ID: 102577

Client : Ensolum, LLC
Project : LISD, Memorial ES Gym
Project # : 01A.1288.197
Sample Type: Spore Trap, Non-cultured
Test Method: Mold: MLQ - 0112 - Standard Profile

Lab Job No. : 23F-11746
Report Date : 09/28/2023
Sample Date: 09/27/2023

Spore Trap Type: Zefon - Air-O-Cell

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:	ST-1					ST-2					ST-3				
Location:	Gym Office 1201					Back Gym Hall					Outdoor, Gym Door				
Media Expires On:	Jul 2024					Jul 2024					Jul 2024				
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	2	13	27	3%	30	7	13	93	6%	90	7	13	93	<1%	90
Ascospores											32	13	427	4%	430
Aspergillus / Penicillium	16	13	213	23%	210	33	13	440	28%	440	88	13	1173	12%	1200
Basidiospores	4	13	53	6%	50	10	13	133	9%	130	100	31	3077	31%	3100
Cercospora / Pseudocercospora	1	13	13	1%	10	1	13	13	<1%	10	22	13	293	3%	290
Chaetomium															
Cladosporium	11	13	147	16%	150	22	13	293	19%	290	115	33	3833	39%	3800
Coprinus group						3	13	40	3%	40	22	13	293	3%	290
Curvularia	4	13	53	6%	50	17	13	227	15%	230	7	13	93	<1%	90
Drechslera / Bipolaris / Helminthosporum /	14	13	187	20%	190	7	13	93	6%	90	4	13	53	<1%	50
Fusarium	1	13	13	1%	10						7	13	93	<1%	90
Ganoderma											3	13	40	<1%	40
Hyphal / Spore Fragments - Dematiaceous	6	13	80	9%	80	10	13	133	9%	130	10	13	133	1%	130
Hyphal / Spore Fragments - Hyaline	2	13	27	3%	30	2	13	27	2%	30	2	13	27	<1%	30
Myxomycete / Periconia / Rust / Smut	8	13	107	12%	100	3	13	40	3%	40	8	13	107	1%	100
Nigrospora						1	13	13	<1%	10	2	13	27	<1%	30
Paecilomyces											5	13	67	<1%	70
Stachybotrys															
Torula															
TOTALS	69		920	100%	920	116		1545	100%	1500	434		9829	100%	9800
Analyst	Elham Mohammadian					Elham Mohammadian					Elham Mohammadian				
Analysis Date	9/28/2023					9/28/2023					9/28/2023				
Debris Rating	3					3					3				
Debris Composition															
Fibers	1/5					1/5					1/5				
Inorganic/Other	2/5					2/5					3/5				
Insect Parts	0/5					0/5					0/5				
Pollen	1/5					1/5					1/5				
Skin/Dander	3/5					3/5					1/5				

IAQ Mold Report

Data Detail

Moody Labs
2051 Valley View Lane
Farmers Branch, TX 75234 Phone: (972) 241-8460
TDLR License No.: LAB0117
AIHA EMPAT ID: 102577

Client : Ensolum, LLC
Project : LISD, Memorial ES Gym
Project # : 01A.1288.197
Sample Type: Spore Trap, Non-cultured
Test Method: Mold: MLQ - 0112 - Standard Profile

Lab Job No. : 23F-11746
Report Date : 09/28/2023
Sample Date: 09/27/2023

Spore Trap Type: Zefon - Air-O-Cell

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:	ST-4				
Location:	Outdoor, Front				
Media Expires On:	Jul 2024				
Notes Included:	See Analytical Notes				
Volume:	75				
	Raw Ct	RL	spores/m³	%Total	spores/m³ SF
Alternaria	17	13	227	1%	230
Ascospores	24	13	320	2%	320
Aspergillus / Penicillium	74	13	986	6%	990
Basidiospores	111	67	7400	44%	7400
Cercospora / Pseudocercospora	20	13	267	2%	270
Chaetomium					
Cladosporium	150	44	6666	39%	6700
Coprinus group	27	13	360	2%	360
Curvularia	5	13	67	<1%	70
Drechslera / Bipolaris / Helminthosporum /	10	13	133	<1%	130
Fusarium	6	13	80	<1%	80
Ganoderma	4	13	53	<1%	50
Hyphal / Spore Fragments - Dematiaceous	5	13	67	<1%	70
Hyphal / Spore Fragments - Hyaline	1	13	13	<1%	10
Myxomycete / Periconia / Rust / Smut	16	13	213	1%	210
Nigrospora	1	13	13	<1%	10
Paecilomyces					
Stachybotrys					
Torula	1	13	13	<1%	10
TOTALS	472		16878	100%	17000
Analyst	Elham Mohammadian				
Analysis Date	9/28/2023				
Debris Rating	3				
Debris Composition					
Fibers	1/5				
Inorganic/Other	3/5				
Insect Parts	0/5				
Pollen	1/5				
Skin/Dander	2/5				

End of Data Detail section
23F-11746

This Page Left Intentionally Blank

IAQ Mold Report

Analytical Notes

Moody Labs
2051 Valley View Lane
Farmers Branch, TX 75234 Phone: (972) 241-8460
TDLR License No.: LAB0117
AIHA EMPAT ID: 102577

Client : Ensolum, LLC
Project : LISD, Memorial ES Gym
Project # : 01A.1288.197
Sample Type: Spore Trap, Non-cultured
Test Method: Mold: MLQ - 0112 - Standard Profile

Lab Job No. : 23F-11746
Report Date : 09/28/2023
Sample Date : 09/27/2023
Spore Trap Type: Zefon - Air-O-Cell

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	ST-3 : Outdoor, Gym Door
Notes:	Please note: the minimum reporting limit for Cladosporium is 33 spores / cubic meter. When comparing results to other samples, use calculated results, not raw numbers. Please note: the minimum reporting limit for Basidiospores is 31 spores / cubic meter. When comparing results to other samples, use calculated results, not raw numbers.
Sample No	ST-4 : Outdoor, Front
Notes:	Please note: the minimum reporting limit for Basidiospores is 67 spores / cubic meter. When comparing results to other samples, use calculated results, not raw numbers. Please note: the minimum reporting limit for Cladosporium is 44 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.

IAQ Mold Report

Analytical Notes

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

TDLR License No.: LAB0117
AIHA EMPAT ID: 102577

Client : Ensolum, LLC
Project : LISD, Memorial ES Gym
Project # : 01A.1288.197
Sample Type: Spore Trap, Non-cultured
Test Method: Mold: MLQ - 0112 - Standard Profile

Lab Job No. : 23F-11746
Report Date : 09/28/2023
Sample Date : 09/27/2023
Spore Trap Type: Zefon - Air-O-Cell

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.

Methods

Method: MLQ - 0112 / ASTM D7391: Categorization and Quantification of Airborne Fungal Structures in an Inertial Impaction.
Sample by Optical Microscopy.
Samples are read at 100% under 400x magnification 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.

This report must not be used by the customer to claim product certification, approval, or endorsement by AIHA LAP, LLC, 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

Moody Labs
2051 Valley View Lane
Farmers Branch, TX 75234 Phone: (972) 241-8460
TDLR License No.: LAB0117
AIHA EMPAT ID: 102577

Client : Ensolum, LLC
Project : LISD, Memorial ES Gym
Project # : 01A.1288.197
Sample Type: Spore Trap, Non-cultured
Test Method: Mold: MLQ - 0112 - Standard Profile

Lab Job No. : 23F-11746
Report Date : 09/28/2023
Sample Date : 09/27/2023
Spore Trap Type: Zefon - Air-O-Cell

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.

Lab ID # 102577

End of Analytical Notes section
23F-11746

IAQ Mold Report

Analytical Notes

Moody Labs
2051 Valley View Lane
Farmers Branch, TX 75234 Phone: (972) 241-8460
TDLR License No.: LAB0117
AIHA EMPAT ID: 102577

Client : Ensolum, LLC
Project : LISD, Memorial ES Gym
Project # : 01A.1288.197
Sample Type: Spore Trap, Non-cultured
Test Method: Mold: MLQ - 0112 - Standard Profile

Lab Job No. : 23F-11746
Report Date : 09/28/2023
Sample Date : 09/27/2023
Spore Trap Type: Zefon - Air-O-Cell

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.

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

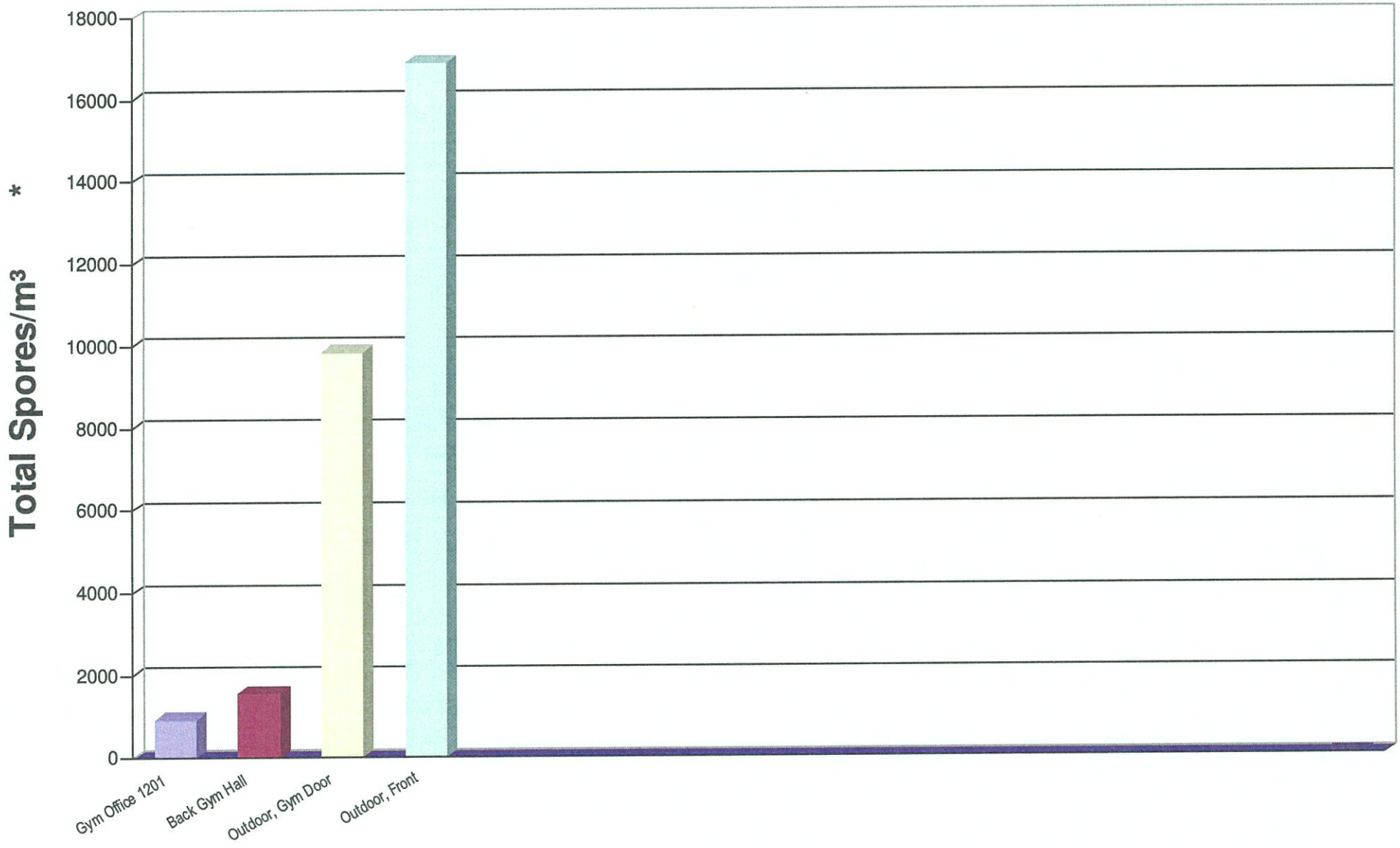
IAQ Mold Report

Supplemental Overview

TDLR License No.: LAB0117
AIHA EMPAT ID: 102577

Client : Ensolum, LLC
Project : LISD, Memorial ES Gym
Project # : 01A.1288.197

Lab Job No. 23F-11746
Report Date 09/28/2023
Sample Date : 09/27/2023



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

IAQ Mold Report

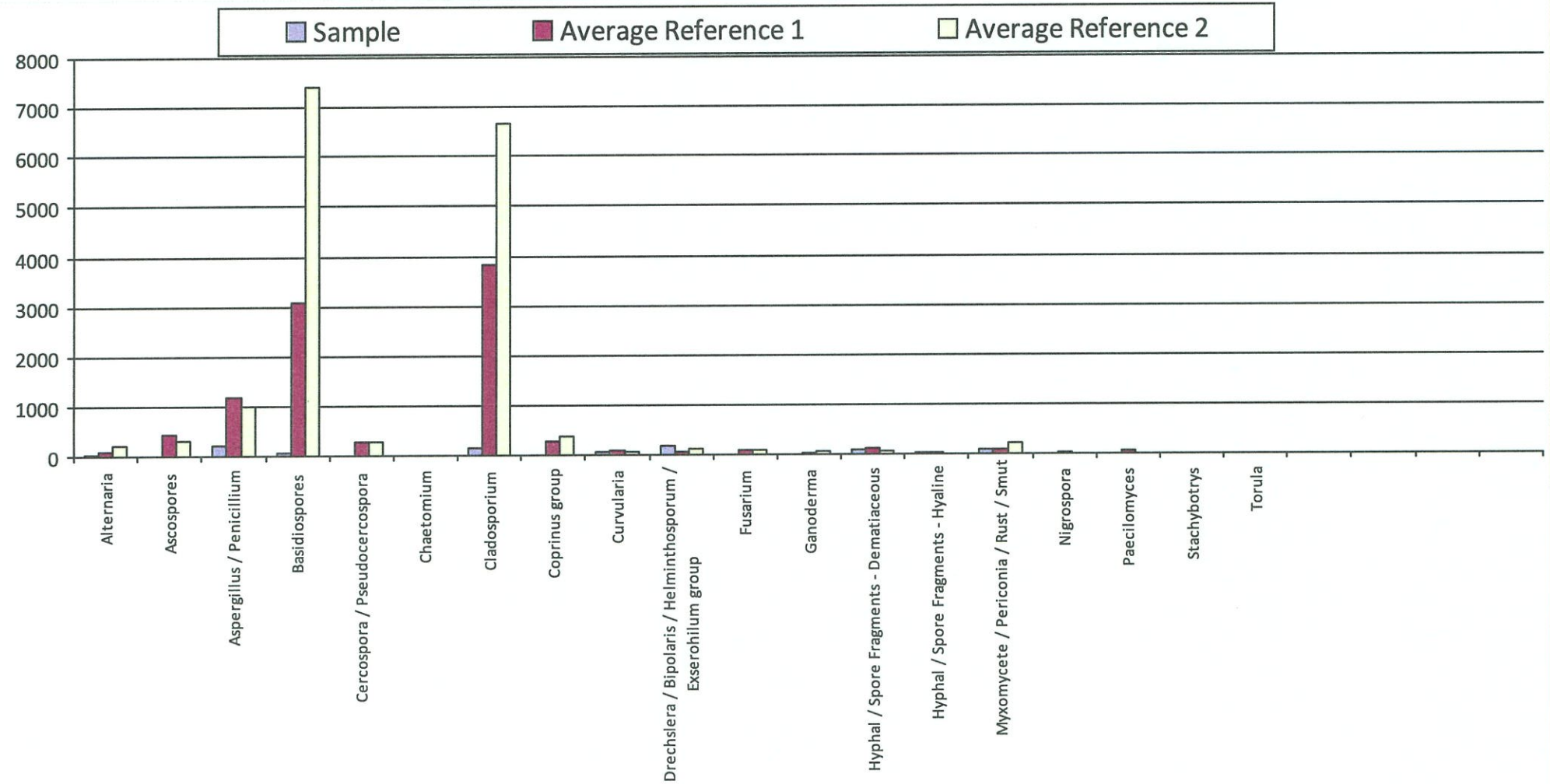
Supplemental Overview

TDLR License No.: LAB0117
AIHA EMPAT ID: 102577

Client : Ensolum, LLC
Project : LISD, Memorial ES Gym
Project # : 01A.1288.197

Gym Office 1201

Lab Job No. 23F-11746
Report Date 09/28/2023
Sample Date : 09/27/2023



Average Reference 1 = Outdoor, Gym Door

Average Reference 2 = Outdoor, Front

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

IAQ Mold Report

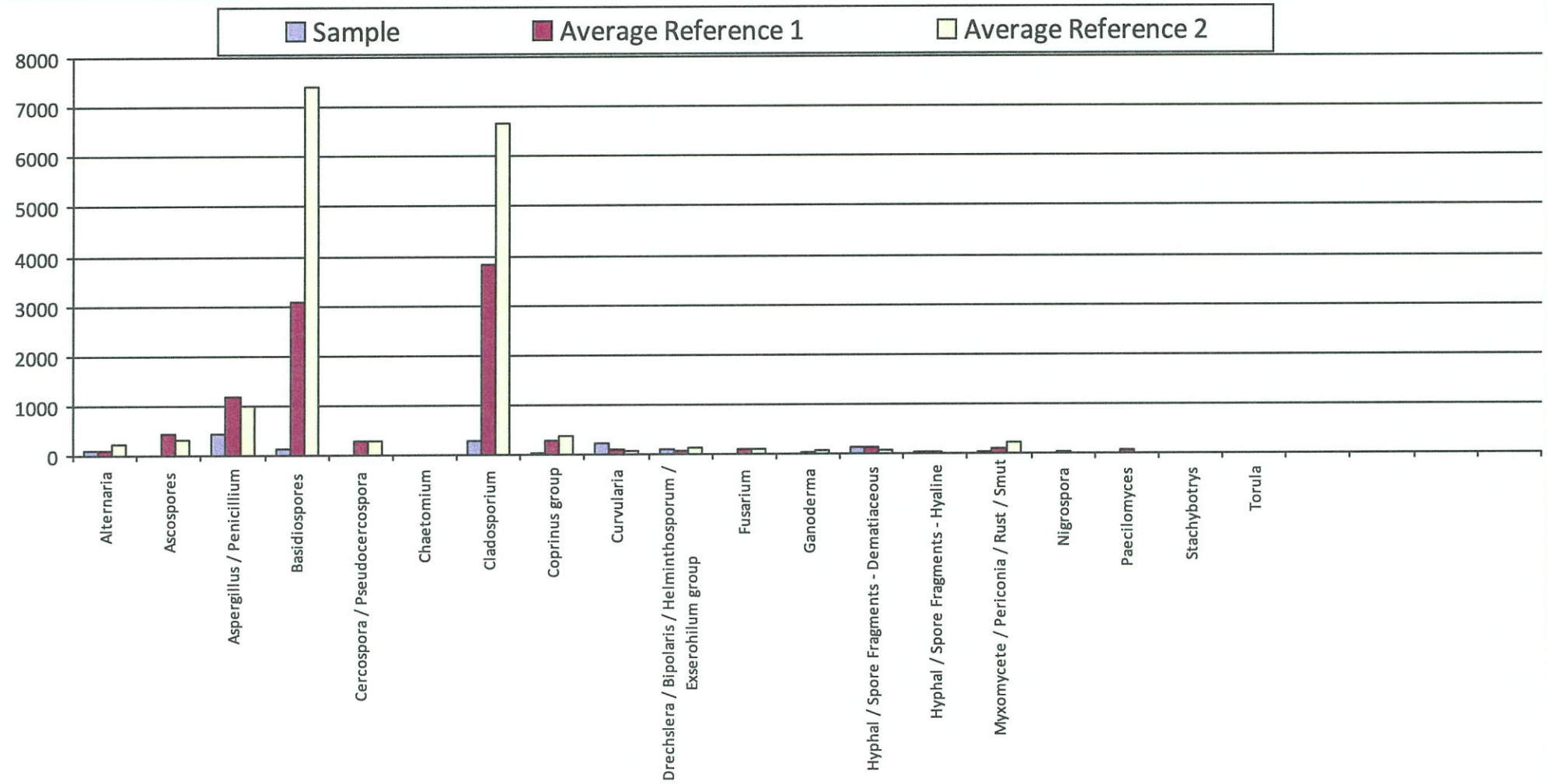
Supplemental Overview

TDLR License No.: LAB0117
AIHA EMPAT ID: 102577

Client : Ensolum, LLC
Project : LISD, Memorial ES Gym
Project # : 01A.1288.197

Back Gym Hall

Lab Job No. 23F-11746
Report Date 09/28/2023
Sample Date : 09/27/2023



Average Reference 1 = Outdoor, Gym Door

Average Reference 2 = Outdoor, Front

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

IAQ Mold Report

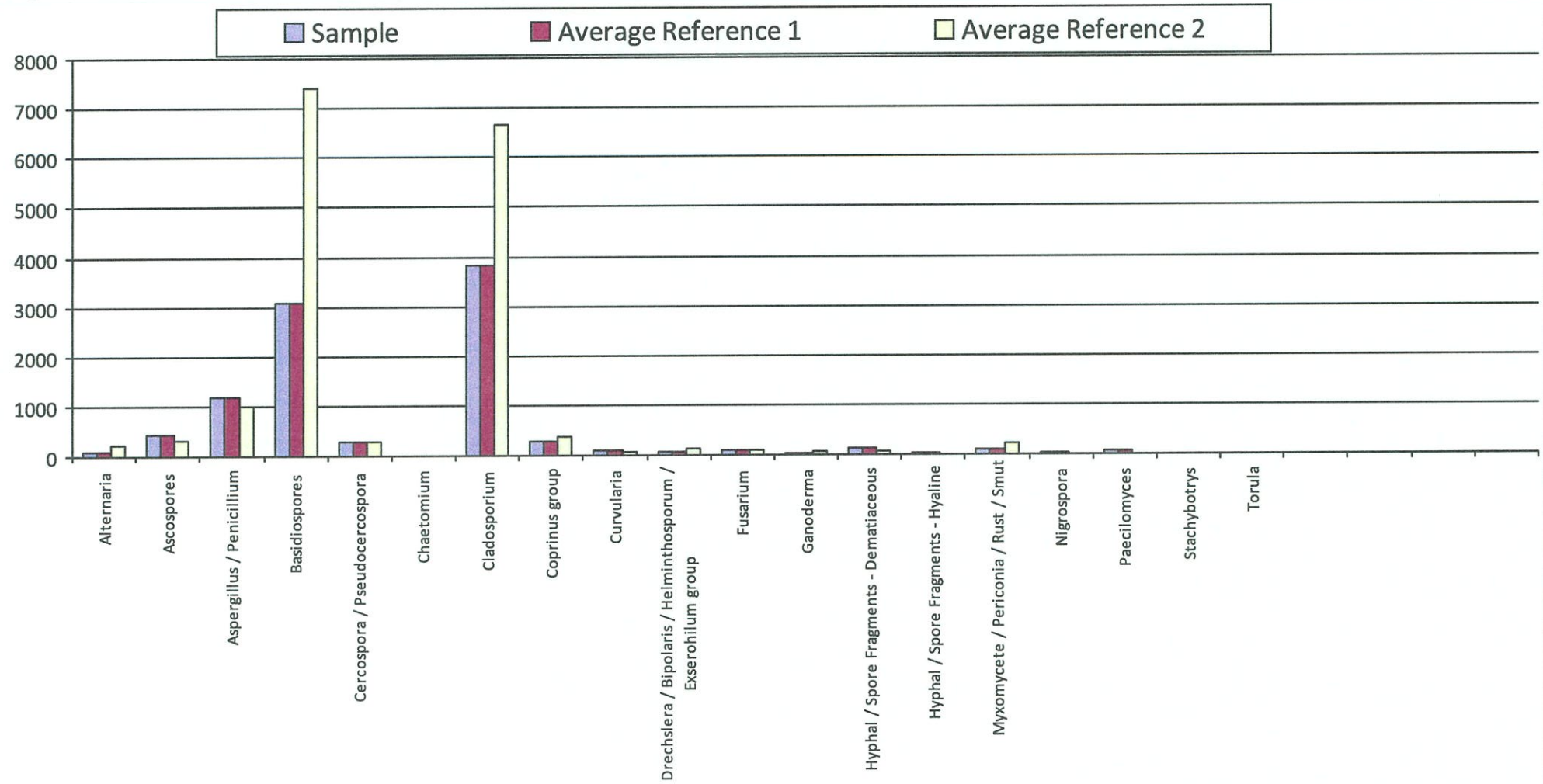
Supplemental Overview

TDLR License No.: LAB0117
AIHA EMPAT ID: 102577

Client : Ensolum, LLC
Project : LISD, Memorial ES Gym
Project # : 01A.1288.197

Outdoor, Gym Door

Lab Job No. 23F-11746
Report Date 09/28/2023
Sample Date : 09/27/2023



Average Reference 1 = Outdoor, Gym Door

Average Reference 2 = Outdoor, Front

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

IAQ Mold Report

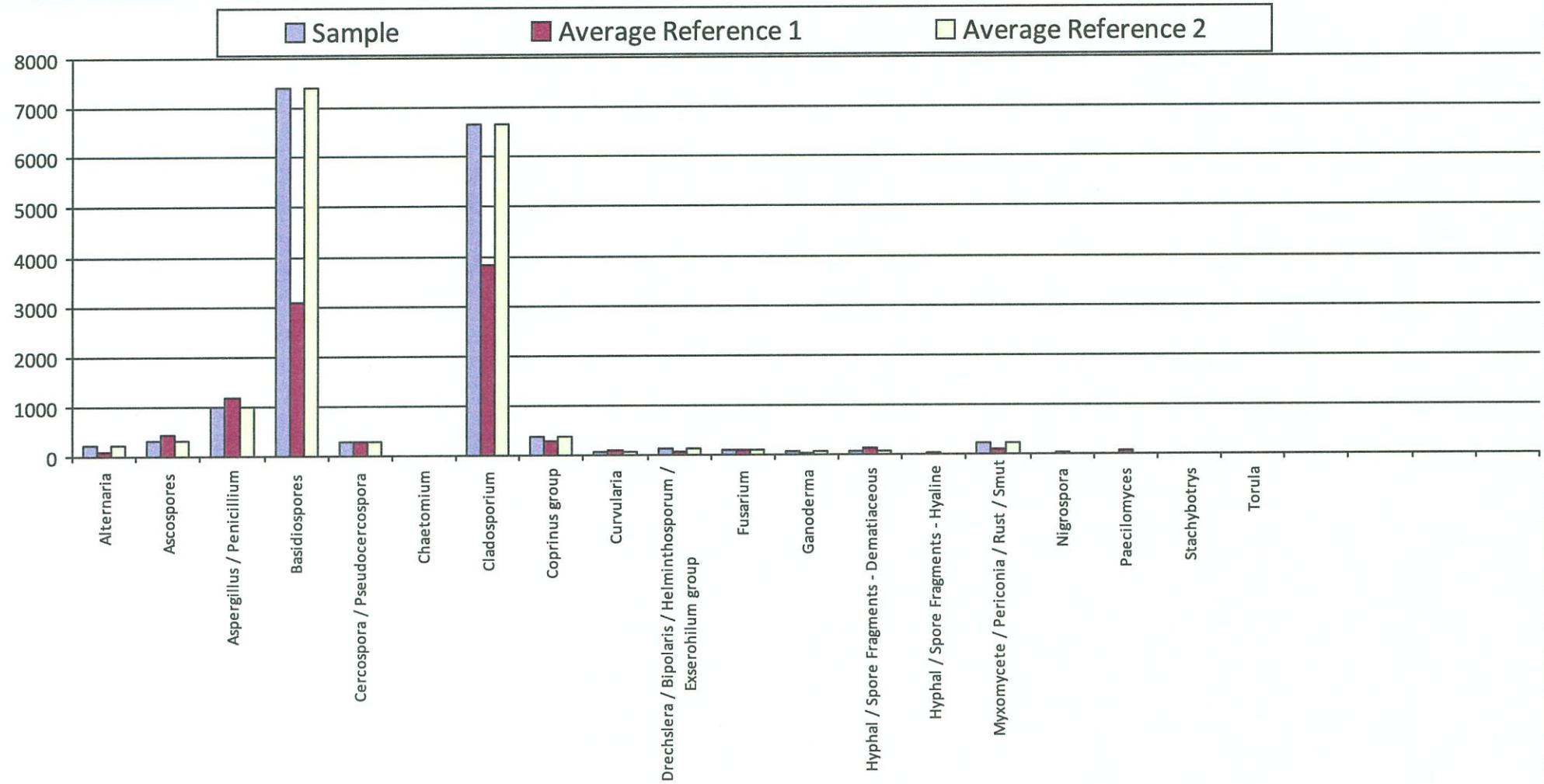
Supplemental Overview

TDLR License No.: LAB0117
AIHA EMPAT ID: 102577

Client : Ensolum, LLC
Project : LISD, Memorial ES Gym
Project # : 01A.1288.197

Outdoor, Front

Lab Job No. 23F-11746
Report Date 09/28/2023
Sample Date : 09/27/2023



Average Reference 1 = Outdoor, Gym Door

Average Reference 2 = Outdoor, Front

End of Supplemental Overview section (23F-11746)

Chain of Custody

Lab Job # 23F-11746
Lab Job # 4 Stool
Lab Job # AGC

AFTER HOURS / WEEKEND WORK: ☐ YES ☐ NO
Please call in advance for after hours / immediate pricing & availability

Page ____ of ____

ASBESTOS PLM

Bulk ☐ Immediate ☐ 1 day ☐ 2 day ☐ 3 day ☐ 5-7 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 ☐ Late Night* ☐ 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**

*Late night analysis surcharges apply

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
TPC w/ Yeast & Mold (TYMC)** ☐ 5 day
Culture** ☐ 10-14 days
Analyze Blanks ☐ **Yes** ☒ **No**

BACTERIA**

Total Plate Count (TAMC) ☐ 2 day
Coliform & E. coli (P/A) ☐ 1 day
Coliform & E. coli (Q) ☐ 1 day
Enterococci (P/A) ☐ 1 day

Please note Bateria / Mold Culture turnarounds are approximate and subject to analytical requirements

OTHER: ____

Billing Company / City: Ensolum LLC # of Samples: 4 Sample Date: 9-27-23
Project: LISD - Memorial ES Gym Project #: 01A.1288.197
Contact Information: Name: Darren / Toni Phone #: ____
E-mail Results to: Ensolum Mobile #: 214 843 9931
Invoice Address: ____ 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
ST-1	3656 1847	75	Gym office 1201
	T= 73.7 H=45.2		
ST-2	3656 1864		
	T= 73.4 H=48.7	75	Back Gym Hall
ST-3	3656 1743	75	out pool - Gym Door
	T=97.7 H= 22.2		
ST-4	3656 1758	75	out pool - Front
	T= 98.6 H=23.3		

Released By:	Date / Time:	Received By:	Date / Time:
Nolan Domain	9-27-23 13:03	Good	9/27/23 1:03pm
Released By:	Date / Time:	Received By:	Date / Time:

APPENDIX B

CONSUMER MOLD INFORMATION SHEET

CONSUMER MOLD INFORMATION SHEET

Regulation of Mold Assessment and Remediation in Texas

TEXAS Department of State Health Services

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 [25 TAC 295.306(c)] .

How does Texas regulate businesses that do testing for mold or that do mold cleanup?

The Department of State Health Services (DSHS) regulates such businesses in accordance with the Texas Occupations Code, Chapter 1958. Under the **Texas Mold Assessment and Remediation Rules (Rules)** (25 Tex. Admin. Code Sections 295.301 - 295.338), all companies and individuals who perform mold-related activities in Texas must be licensed by DSHS unless exempt. (See Page 2 regarding owner exemptions.) Applicants must meet certain qualifications, have required training, and pass a state exam in order to receive their licenses. Mold remediation workers must have training and be registered with DSHS. Laboratories that analyze mold samples must also be licensed and meet certain qualifications. The Rules set minimum work standards and 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 DSHS photo identification card with the license number on it. A search tool and listings of currently licensed companies and individuals can be found at: www.dshs.state.tx.us/mold/profession.shtm.

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. You should 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 fails clearance, further remediation as prescribed by a consultant will be necessary.

Publication #18-12049 Rev. 03/14

What is a Certificate of Mold Damage Remediation?

No later than 10 days after a mold remediation project has passed a clearance inspection, 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 actually damages the property?

The Rules require licensees to have commercial general liability insurance in the amount of $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 DSHS. For information on this process and/or to obtain the complaint form, call 1-800-293-0753, or download the form at www.dshs.state.tx.us/mold/complaint.shtm.

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 25 TAC §295.303 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 State Health Services, P.O. Box 149347, MC 1987, Austin, TX 78714-9347.
Phone: 512-834-6787 or 800-293-0753. Fax: 512-834-6726. www.dshs.state.tx.us/mold

Publication #18-12049 Rev. 03/14

APPENDIX C

DEFINITIONS AND LIMITATION

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.

APPENDIX D

LICENSES

TEXAS DEPARTMENT OF LICENSING AND REGULATION
P.O. Box 12157
Austin, Texas 78711-2157
1-800-803-9202 (512) 463-6599
www.tdlr.texas.gov

If you cut around the border of the license it will fit in a standard 5" x 7" frame.

ENSOLUM, LLC
SUITE 1203
2351 W NORTHWEST HWY
DALLAS TX 75220-4433

Mold Assessment Company

ENSOLUM, LLC

2351 W NORTHWEST HWY SUITE 1203 DALLAS

License Number: ACO1138

The entity named above is licensed by the Texas Department of Licensing and Regulation.

License Expires: February 07, 2024

Brian E. Francis
Executive Director

Mold Analysis Laboratory

MOODY LABS LLC

2051 VALLEY VIEW LN FARMERS BRANCH

License Number: LAB0117

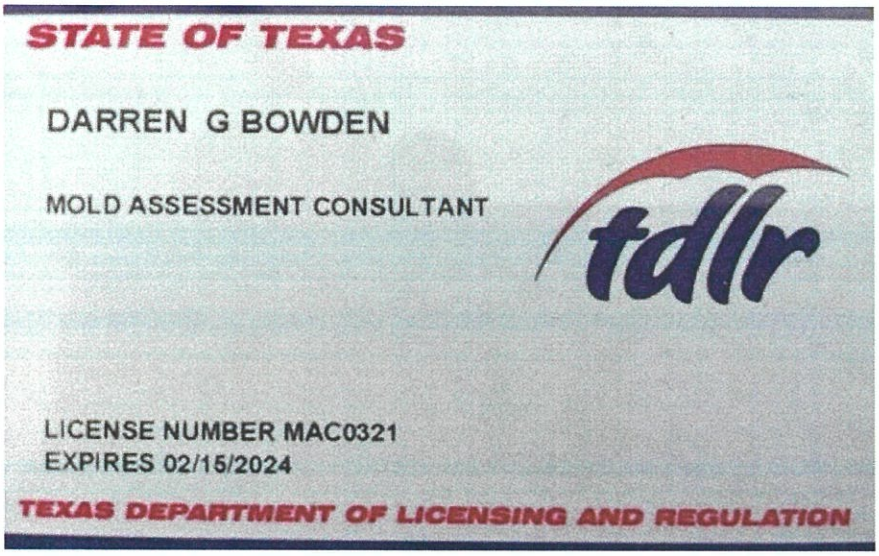
The entity named above is licensed by the Texas Department of Licensing and Regulation.

License Expires: March 01, 2024

Mike Arismendez, Jr.
Executive Director

ENSOLUM

Texas Department of Licensing and Regulation
Mold Assessment Consultant
Darren G Bowden
License No. MAC0321 Expires February 15, 2024



Rick Figueroa
Chair

Thomas F. Butler
Vice Chair

Gerald R. Callas, M.D., F.A.S.A.
Helen Callier
Nora Castañeda
Joel Garza
Gary F. Wesson, D.D.S., M.S.

Mold Assessment Consultant

NOLAN R DOMAIN

License Number: MAC1479

The person named above is licensed by the Texas Department of Licensing and Regulation.

License Expires: November 09, 2023

Brian E. Francis
Executive Director