Treadway, David

From:

Treadway, David

Sent:

Monday, October 19, 2020 9:56 AM

To: Cc:

Greenwell, Tim; Cox, Kimberly Castagnino, Kim; Jones, Steven

Subject:

Limited Mold Assessment Room 425

Mr. Greenwell,

Good morning. My name is David Treadway and I am the Environmental Coordinator for the district. This email is in regards to the results of the limited mold assessment in Rm 425. Ensolum LLC conducted a limited mold assessment in Room 425 on September 17th per a campus request. 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 Room 425 was 3.1% of the outdoor levels. Utilizing this theory, the indoor concentration levels were well within the acceptable guidelines for areas with filtered or air conditioned air. I have spoken with the zone manager about the stained ceiling tiles in the room and he will follow up about any possible roof leaks in that room. Please let me know if you or your team have any questions.

Sincerely,
David Treadway
LISD Environmental Coordinator



September 22, 2020

Lewisville Independent School District 340 Lake Haven Lewisville, Texas 75057 Attn: Mr. David Treadway

Re:

Limited Mold Assessment Liberty Elementary School – Room 425 5600 Quail Run Flower Mound, TX 75022 Ensolum Proposal No. P01A.1288.105

Ensolum, LLC (Ensolum) was retained by the Lewisville Independent School District (LISD) to perform limited mold assessment services within room 425 of Liberty Elementary School located at 5600 Quail Run in Flower Mound, 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

Mold Assessment Consultant MAC1444 EXP: 10/09/2021

Darren G. Bowden

Principal

MAC0321 EXP: 2/14/2022

Sandan Stanley

1.0 INTRODUCTION

Ensolum was retained by Mr. David Treadway, LISD, to complete a Limited Mold Assessment within room 425 of Liberty Elementary School located at 5600 Quail Run in Flower Mound, 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.

Mr. Clinton S. Jech completed the on-site investigation on September 17, 2020. 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 room 425. Visible water damage was observed in the following locations:

	VISIBLE W	ATER DAMAGE
LOCATION	DATE	EXPLANATION
Room 425	9-17-2020	Visible water damaged ceiling tiles

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

TEMPERA	TURE, REL	ATIVE HUMIDITY	& SPECIFIC HU	JMIDITY
LOCATION	DATE	Temperature: F	Relative Humidity	Specific Humidity
Exterior, Southwest	9-17-2020	87	52	98
Exterior, Southeast	9-17-2020	93	37	91
Room 425	9-17-2020	74	43	54

Area air samples were collected with Zefon Air-O-Cell 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 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	Exterior, Southwest								
2	Exterior, Southeast								
3	Room 425								

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 in the room were considerably lower and were qualitatively similar to 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 this day. However, the specific humidity should be lowered to less than 60%.

APPENDIX A ANALYTICAL DATA



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: Liberty ES Room 425

Project #: 01A.1288.105

Sample Type: Spore Trap, Non-cultured

Test Method: Mold: ASTM D7391-20 - Standard Profile

Lab Job No.: 20F-09917

Report Date: 09/21/2020

Sample Date: 09/17/2020

Spore Trap Type: Zefon - Air-O-Cell

Page 1 of 3

On 9/17/2020, 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, Southwest	Basidiospores	13733	44%	
	* See Analytical Notes report for	Cladosporium	10600	34%		
	furth	further details	Myxomycete / Periconia / Rust / Smut	1280	4%	
			Aspergillus / Penicillium	1040	3%	
			Ascospores	986	3%	
			Coprinus group	826	3%	
			Agaricales group	640	2%	
			Curvularia	333	1%	
			Hyphal / Spore Fragments - Dematiaceous	267	<1%	
			Drechslera / Bipolaris / Helminthosporum / Exserohilum group	253	<1%	
			Cercospora / Pseudocercospora	227	<1%	
			Fusarium	187	<1%	
			Alternaria	160	<1%	
			Pithomyces	67	<1%	
			Diatrypaceae	67	<1%	
			Ganoderma	67	<1%	
			Torula	53	<1%	
			Epicoccum	40	<1%	
			Nigrospora	40	<1%	
			Helicomyces	27	<1%	
			Pyricularia	27	<1%	
			Hyphal / Spore Fragments - Hyaline	27	<1%	
			Cerebella / Monodictys / Acrodictys	13	<1%	
			Total:	30960	100%	



2051 Valley View Lane

IAQ Mold Report

Summary

TDLR License No.: LAB0117 AIHA EMPAT ID: 102577

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

Client:

Ensolum, LLC

Project:

Liberty ES Room 425

Project #:

01A.1288.105

Sample Type: Spore Trap, Non-cultured

Test Method: Mold: ASTM D7391-20 - Standard Profile

Lab Job No.: 20F-09917

Report Date: 09/21/2020

Sample Date: 09/17/2020

Spore Trap Type: Zefon - Air-O-Cell

Page 2 of 3

On 9/17/2020, 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	Concer spores/cu	ntration bic meter
2	75	Exterior, Southeast	Basidiospores	11500	45%
		* See Analytical Notes report for	Cladosporium	7134	28%
		further details	Agaricales group	1320	5%
			Aspergillus / Penicillium	1093	4%
			Coprinus group	733	3%
			Ascospores	640	3%
		Diatrypaceae	573	2%	
			Myxomycete / Periconia / Rust / Smut	493	2%
			Cercospora / Pseudocercospora	493	2%
			Fusarium	213	<1%
			Drechslera / Bipolaris / Helminthosporum / Exserohilum group	213	<1%
			Hyphal / Spore Fragments - Dematiaceous	213	<1%
			Alternaria	213	<1%
			Curvularia	107	<1%
			Epicoccum	107	<1%
			Nigrospora	93	<1%
			Ganoderma	53	<1%
			Pithomyces	53	<1%
			Torula	40	<1%
			Pyricularia	13	<1%
			Tetraploa	13	<1%
			Helicomyces	13	<1%
			Hyphal / Spore Fragments - Hyaline	13	<1%
			Chaetomium	13	<1%
			Pestalotia / Pestalotiopsis	13	<1%
			Cerebella / Monodictys / Acrodictys	13	<1%
			Total:	25375	100%



2051 Valley View Lane

IAQ Mold Report

Summary

TDLR License No.: LAB0117

AIHA EMPAT ID: 102577

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

Ensolum, LLC Client:

Project: Liberty ES Room 425

Project #: 01A.1288.105

Sample Type: Spore Trap, Non-cultured

Test Method: Mold: ASTM D7391-20 - Standard Profile

Lab Job No.: 20F-09917

Report Date: 09/21/2020

Sample Date: 09/17/2020

Spore Trap Type: Zefon - Air-O-Cell

Page 3 of 3

On 9/17/2020, 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	Concentratio	
3	75	Room 425	Basidiospores	547	56%
			Cladosporium	240	25%
			Aspergillus / Penicillium	53	5%
			Agaricales group	40	4%
			Coprinus group	27	3%
			Ascospores	27	3%
			Hyphal / Spore Fragments - Dematiaceous	13	1%
			Myxomycete / Periconia / Rust / Smut	13	1%
			Curvularia	13	1%
			Total:	973	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. Volume, area, and/or weight is provided by the customer. Moody Labs assumes no responsibility for the qualifications of personnel performing sampling and/or interpretations of this data.

Christine Sauri Analyst(s):

Lab Director: Heather Lopez

Lab Director: Bruce Crabb

Thank you for choosing Moody Labs

Approved Signatory:

Approved Signatory:

Benne Vall

ing Moody Labs

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Data Detail

2051 Valley View Lane

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

Client:

Ensolum, LLC

Project:

Liberty ES Room 425

Project #:

01A.1288.105

Sumple 2 Jper

Sample Type: Spore Trap, Non-cultured

Test Method: Mold: ASTM D7391-20 - Standard Profile

AIHA EMPAT ID: 102577

TDLR License No.: LAB0117

Lab Job No.: 20F-09917

Report Date: 09/21/2020

Sample Date: 09/17/2020

Spore Trap Type: Zefon - Air-O-Cell

Sample ID:	1					2					3				
Location:	Exterior, Southwest					Exterior, Southeast				Room 425					
Media Expires On:	Mar 2021							Mar 2	2021		Mar 2021				
Notes Included:	See Analytical Notes					S	ee Analyti	ical Note	es						
Volume:	75						75	5				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	48	13	640	2%	640	99	13	1320	5%	1300	3	13	40	4%	40
Alternaria	12	13	160	<1%	160	16	13	213	<1%	210					
Ascospores	74	13	986	3%	990	48	13	640	3%	640	2	13	27	3%	30
Aspergillus / Penicillium	78	13	1040	3%	1000	82	13	1093	4%	1100	4	13	53	5%	50
Basidiospores	103	133	13733	44%	14000	115	100	11500	45%	12000	41	13	547	56%	550
Cercospora / Pseudocercospora	17	13	227	<1%	230	37	13	493	2%	490					
Cerebella / Monodictys / Acrodictys	1	13	13	<1%	10	1	13	13	<1%	10					
Chaetomium						1	13	13	<1%	10					
Cladosporium	106	100	10600	34%	11000	107	67	7134	28%	7100	18	13	240	25%	240
Coprinus group	62	13	826	3%	830	55	13	733	3%	730	2	13	27	3%	30
Curvularia	25	13	333	1%	330	8	13	107	<1%	100	1	13	13	1%	10
Diatrypaceae	5	13	67	<1%	70	43	13	573	2%	570					
Drechslera / Bipolaris / Helminthosp	19	13	253	<1%	250	16	13	213	<1%	210					
Epicoccum	3	13	40	<1%	40	8	13	107	<1%	100					
Fusarium	14	13	187	<1%	190	16	13	213	<1%	210					
Ganoderma	5	13	67	<1%	70	4	13	53	<1%	50					
Helicomyces	2	13	27	<1%	30	1	13	13	<1%	10					
Hyphal / Spore Fragments - Dematia	20	13	267	<1%	270	16	13	213	<1%	210	1	13	13	1%	10
Hyphal / Spore Fragments - Hyaline	2	13	27	<1%	30	1	13	13	<1%	10					
Myxomycete / Periconia / Rust / Sm	96	13	1280	4%	1300	37	13	493	2%	490	1	13	13	1%	10
Nigrospora	3	13	40	<1%	40	7	13	93	<1%	90					
Pestalotia / Pestalotiopsis						1	13	13	<1%	10					
Pithomyces	5	13	67	<1%	70	4	13	53	<1%	50					
Pyricularia	2	13	27	<1%	30	1	13	13	<1%	10					
Stachybotrys															
Tetraploa						1	13	13	<1%	10					
Torula	4	13	53	<1%	50	3	13	40	<1%	40					
TOTALS	706		30960	100%	31000	728		25375	100%	25000	73		973	100%	970
Analyst			Christine	e Sauri				Christin	e Sauri				Christin	e Sauri	
Analysis Date	9/18/2020					9/18/2020				9/18/2020					
Debris Rating			3			2						2			
Debris Composition															
Fibers			1/:	5		1/5				1/5					
Inorganic/Other			3/	5		2/5						1/			
Insect Parts			1/:	5			1/5					0/			
Pollen			2/	5				1/	5				0/		
Skin/Dander			1/	5				1/	5				1/	5	



Data Detail

2051 Valley View Lane

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

AIHA EMPAT ID: 102577

TDLR License No.: LAB0117

Client:

Ensolum, LLC

Project:

Liberty ES Room 425

Project #:

01A.1288.105

Report Date: 09/21/2020 **Sample Date:** 09/17/2020

Lab Job No.: 20F-09917

Sample Type: Spore Trap, Non-cultured

Spore Trap Type: Zefon - Air-O-Cell

Test Method: Mold: ASTM D7391-20 - Standard Profile

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.

End of Data Detail section

20F-09917

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Analytical Notes

2051 Valley View Lane

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

Client: Project: Ensolum, LLC

Liberty ES Room 425

Project #:

01A.1288.105

Sample Type: Spore Trap, Non-cultured

Test Method: Mold: ASTM D7391-20 - Standard Profile

Spore Trap Type: Zefon - Air-O-Cell

Lab Job No.: 20F-09917 Report Date: 09/21/2020

Sample Date: 09/17/2020

TDLR License No.: LAB0117

AIHA EMPAT ID: 102577

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

1: Exterior, Southwest

Notes:

Please note: the minimum reporting limit for Basidiospores is 133 spores / cubic meter. When

comparing results to other samples, use calculated results, not raw numbers.

Please note: the minimum reporting limit for Cladosporium is 100 spores / cubic meter. When

comparing results to other samples, use calculated results, not raw numbers.

Sample No

2: Exterior, Southeast

Notes:

Please note: the minimum reporting limit for Basidiospores is 100 spores / cubic meter. When

comparing results to other samples, use calculated results, not raw numbers.

Please note: the minimum reporting limit for Cladosporium is 67 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.



Analytical Notes

2051 Valley View Lane

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TDLR License No.: LAB0117 AIHA EMPAT ID: 102577

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

Client: Project:

Ensolum, LLC

Liberty ES Room 425

Project #:

01A.1288.105

Sample Type: Spore Trap, Non-cultured

Report Date: 09/21/2020

Sample Date: 09/17/2020

Spore Trap Type: Zefon - Air-O-Cell

Lab Job No.: 20F-09917

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Test Method: Mold: ASTM D7391-20 - Standard Profile

Page 2 of 3

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: ASTM D7391-20: 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 D7391-20.

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.

Moody Labs

IAQ Mold Report

Analytical Notes

2051 Valley View Lane

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

Client: Ensolum, LLC

Project: Liberty ES Room 425

Project #: 01A.1288.105

Sample Type: Spore Trap, Non-cultured

Test Method: Mold: ASTM D7391-20 - Standard Profile

Lab Job No.: 20F-09917 **Report Date:** 09/21/2020

Sample Date: 09/17/2020

Spore Trap Type: Zefon - Air-O-Cell

Page 3 of 3

TDLR License No.: LAB0117

AIHA EMPAT ID: 102577

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 # 102571







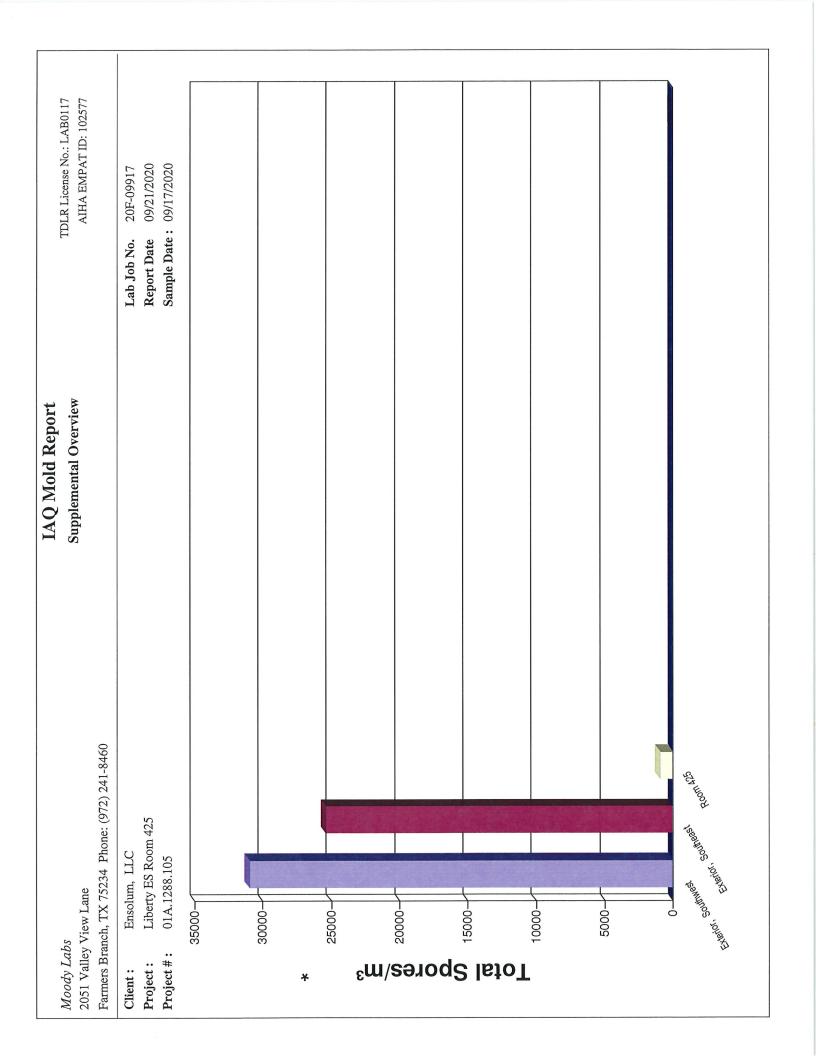




End of Analytical Notes section 20F-09917



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Torula TDLR License No.: LAB0117 AIHA EMPAT ID: 102577 Pyricularia Pithomyces 09/21/2020 Sample Date: 09/17/2020 20F-09917 Nigrospora Myxomycete / Periconia / Rust / Smut Lab Job No. Report Date ☐ Average Reference 2 Hyphal / Spore Fragments - Hyaline Hyphal / Spore Fragments - Dematiaceous Average Reference 2 = Exterior, Southeast Helicomyces Ganoderma Supplemental Overview IAQ Mold Report Fusarium Epicoccum Exterior, Southwest Exserohilum group Drechslera / Bipolaris / Helminthosporum / Average Reference 1 Diatrypaceae Curvularia Coprinus group Cladosporium Cerebella / Monodictys / Acrodictys Cercospora / Pseudocercospora Farmers Branch, TX 75234 Phone: (972) 241-8460 Sample Basidiospores Average Reference 1 = Exterior, Southwest Muillioin9 \ Penicillium Liberty ES Room 425 Ensolum, LLC 01A.1288.105 Ascospores 2051 Valley View Lane Alternaria Agaricales group Project #: Project: 8000 2000 16000 14000 12000 10000 9000 4000 Client:

Torula TDLR License No.: LAB0117 AIHA EMPAT ID: 102577 Pyricularia Pithomyces Sample Date: 09/17/2020 09/21/2020 20F-09917 Nigrospora Myxomycete / Periconia / Rust / Smut Lab Job No. Report Date ☐ Average Reference 2 Hyphal / Spore Fragments - Hyaline Hyphal / Spore Fragments - Dematiaceous Average Reference 2 = Exterior, Southeast Helicomyces Ganoderma Supplemental Overview IAQ Mold Report Fusarium Epicoccum Exterior, Southeast Exserohilum group Drechslera / Bipolaris / Helminthosporum / Average Reference 1 Diatrypaceae Curvularia Coprinus group Cladosporium Cerebella / Monodictys / Acrodictys Cercospora / Pseudocercospora Farmers Branch, TX 75234 Phone: (972) 241-8460 Sample Basidiospores Average Reference 1 = Exterior, Southwest Aspergillus / Penicillium Liberty ES Room 425 Ensolum, LLC 01A.1288.105 Ascospores 2051 Valley View Lane Alternaria Agaricales group Project #: Project: Client: 16000 14000 12000 10000 8000 0009 4000 2000

Torula TDLR License No.: LAB0117 AIHA EMPAT ID: 102577 Pyricularia Pithomyces Sample Date: 09/17/2020 09/21/2020 20F-09917 Nigrospora Myxomycete / Periconia / Rust / Smut Report Date Lab Job No. ☐ Average Reference 2 Hyphal / Spore Fragments - Hyaline Hyphal / Spore Fragments - Dematiaceous Average Reference 2 = Exterior, Southeast Helicomyces Ganoderma Supplemental Overview IAQ Mold Report Fusarium Epicoccum Exserohilum group Room 425 Drechslera / Bipolaris / Helminthosporum / Average Reference 1 Diatrypaceae Curvularia Coprinus group Cladosporium Cerebella / Monodictys / Acrodictys Cercospora / Pseudocercospora Farmers Branch, TX 75234 Phone: (972) 241-8460 Sample Sample Basidiospores Average Reference 1 = Exterior, Southwest Aspergillus / Penicillium Liberty ES Room 425 Ensolum, LLC 01A.1288.105 Ascospores End of Supplemental Overview section 2051 Valley View Lane Alternaria Agaricales group Project #: Project: 16000 Client: 14000 12000 10000 8000 9000 4000 2000 20F-09917

APPENDIX B

DEFINITIONS AND LIMITATIONS



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.