

May 9, 2016

Mr. Marty Foutch Facilities Director Bixby Public Schools 109 N. Armstrong Bixby, OK 74008

RE: Bixby Northeast Elementary and Intermediate – 25% IAQ

Liberty OHM File Number 15-183

CC: Richard Walters

Maintenance Department

Dear Mr. Foutch:

On April 25th, 2016, Liberty OHM conducted quality assurance testing at Bixby North Elementary. A total of 25% of the rooms were selected and tested at random for indoor air quality (spore count).

Findings

On April 25th, 12 classrooms, for a total of 25% of Bixby Northeast Elementary and Intermediate, were selected at random and tested. The ratio of total indoor/outdoor airborne mold concentrations was elevated in Room W101 on the day of testing.

The following observations were noted:

- In Room W101 of Bixby Northeast Elementary and Intermediate elevated concentrations of the water intrusion/indicator mold Ulocladium were found.
- A re-test and inspection of this room was conducted on May 2nd, 2016, to verify whether or not any condition exists that would need follow-up repairs, cleaning or abatement.
- The inspection did not reveal any significant findings. No visible mold was found on the day of the follow-up inspection. No carpet staining, water stained ceiling tiles or other concerns were noted in Room W101. Air quality results on this day revealed normal indoor air quality conditions.

IAQ Results – Quality Assurance Testing – Bixby Northeast Elementary and Intermediate

Survey Date: April 25th and May 2nd, 2016

Report Date: May 9th, 2016

Page 2

Table 1 shows the results of the air samples taken from the selected rooms on April 25^{th} during normal school hours. Table 2 shows the results of the air samples taken from the follow-up inspection conducted on May 2^{nd} .

Recommendations

• No recommendations are provided at this time.

Disclaimer

Liberty OHM makes no assertion as to the health risks associated with the levels reported in this report. We make no correlation that the levels reported are safe for occupancy or do not pose a risk from exposure. We advise you, our client to consult with an Occupational Health or other qualified physician for additional information and guidance.

If you have questions or need additional information, please let me know.

Sincerely,

Dylan Albert, B.S. EHS Consultant Liberty OHM

Tylan alw

Jack Kerr, B.S.

EHS Project Manager

Liberty OHM

Page 3

Table 1 **Bixby Northeast Elementary and Intermediate** 25% Random Air Monitoring Survey Date: April 25th, 2016

Location	Total spores/m3	Species Species	Raw count	Calc. count	% of total
1: Outside	6,100	Basidiospores	115	3,100	50
Reference - Pre	,	Cladosporium	76	2,000	33
IAQ		Ascospores	29	770	13
		Smuts, Periconia, Myxomycetes	12	80	1
		Penicillium/Aspergillus types	3	80	1
		Epicoccum	3	20	< 1
		Curvularia	3	20	< 1
		Other brown	2	13	< 1
		Oidium	2	13	< 1
		Torula	1	7	< 1
		Pithomyces	1	7	< 1
		Cercospora	1	7	< 1
		Alternaria	1	7	< 1
2: Computer Lab	350	Cladosporium	5	130	38
_		Basidiospores	3	80	23
		Penicillium/Aspergillus types	2	53	15
		Bipolaris/Drechslera group	4	27	8
		Alternaria	3	20	6
		Smuts, Periconia, Myxomycetes	2	13	4
		Other brown	2	13	4
		Epicoccum	2	13	4
3: W102	33	Basidiospores	1	27	80
		Smuts, Periconia, Myxomycetes	1	7	20

Page 4

Table 1 **Bixby Northeast Elementary and Intermediate** 25% Random Air Monitoring Survey Date: April 25th, 2016

A: W104 270 Penicillium/Aspergillus types 2 53 20			Survey Butter riprin 20 3, 2010		~ •	0 (0
4: W104 270	Location	Total	Species	Raw	Calc.	% of
Bipolaris/Drechslera group Smuts, Periconia, Myxomycetes 4 27 10		spores/m3	-	count	count	total
Smuts, Periconia, Myxomycetes 4 27 10	4: W104	270	Penicillium/Aspergillus types	2	53	20
Basidiospores			Bipolaris/Drechslera group	8	53	20
Ascospores Alternaria Other brown Other br			Smuts, Periconia, Myxomycetes	4	27	10
Alternaria Other brown Ulocladium 1 7 3 Torula Nigrospora Epicoccum Arthrinium 1 7 3 S: W101 650 Cladosporium Ulocladium Basidiospores Alternaria Other brown Epicoccum Bepicoccum Basidiospores Alternaria Other brown Bepicolillium/Aspergillus types Bipolaris/Drechslera group Arthrinium Cladosporium Basidiospores Alternaria Deficitlium/Aspergillus types Bipolaris/Drechslera group Basidiospores Bipolaris/Drechslera group Basidiospores Bipolaris/Drechslera group Basidiospores Cladosporium Basidiospores Bipolaris/Drechslera group Basidiospores Bipolaris/Drechslera group Basidiospores Bipolaris/Drechslera group Basidiospores Bipolaris/Drechslera group Bipolaris/Bi			Basidiospores	1	27	10
Other brown 3 20 8 Ulocladium 1 7 3 3 7 3 1 7 3 3 1 7 3 3 1 7 3 1 7 3 1 7 3 1 7 3 1 7 3 1 7 3 1 7 3 1 7 3 1 7 3 1 7 3 1 7 3 1 7 3 1 7 3 1 7 3 1 7 3 1 7 3 1 7 3 1 7 3 1 1 7 3 1 1 7 3 1 1 1 1 1 1 1 1 1			Ascospores	1	27	10
Ulocladium 1			Alternaria	4	27	10
Torula 1 7 3 Nigrospora 1 7 3 7 3 Epicoccum 1 7 3 3 7 3 3 7 3 3 7 3 3			Other brown	3	20	
Nigrospora 1			Ulocladium	1	7	
Epicoccum			Torula	1	7	3
Arthrinium 1			Nigrospora	1	7	3
5: W101 650 Cladosporium Ulocladium Basidiospores 10 67 10 Basidiospores 2 53 8 Alternaria 7 47 7 Other brown 6 40 6 Epicoccum 6 40 6 Penicillium/Aspergillus types 1 27 4 Smuts, Periconia, Myxomycetes 3 20 3 Bipolaris/Drechslera group 3 20 3 Arthrinium 2 13 2 Oidium 1 7 1 6: W112 130 Penicillium/Aspergillus types 1 27 20 Cladosporium 1 27 20 Basidiospores 1 27 20 Other brown 3 20 15 Bipolaris/Drechslera group 2 13 10 Smuts, Periconia, Myxomycetes 1 7 5 Epicoccum 1 7 5			Epicoccum	1	7	3
Ulocladium 10 67 10 Basidiospores 2 53 8 Alternaria 7 47 7 Other brown 6 40 6 Epicoccum 6 40 6 Penicillium/Aspergillus types 1 27 4 Smuts, Periconia, Myxomycetes 3 20 3 Bipolaris/Drechslera group 3 20 3 Arthrinium 2 13 2 Oidium 1 7 1 6: W112 130 Penicillium/Aspergillus types 1 27 20 Cladosporium 1 27 20 Basidiospores 1 27 20 Other brown 3 20 15 Bipolaris/Drechslera group 2 13 10 Smuts, Periconia, Myxomycetes 1 7 5 Epicoccum 1 7 7 Epicoccum 2 Epicoccum 2 7 Epicoccum			Arthrinium	1	7	3
Basidiospores	5: W101	650	Cladosporium	12	320	49
Alternaria 7 47 7 Other brown 6 40 6 Epicoccum 6 40 6 Penicillium/Aspergillus types 1 27 4 Smuts, Periconia, Myxomycetes 3 20 3 Bipolaris/Drechslera group 3 20 3 Arthrinium 2 13 2 Oidium 1 7 1 6: W112 130 Penicillium/Aspergillus types 1 27 20 Cladosporium 1 27 20 Basidiospores 1 27 20 Other brown 3 20 15 Bipolaris/Drechslera group 2 13 10 Smuts, Periconia, Myxomycetes 1 7 5 Epicoccum 1 7 5			<mark>Ulocladium</mark>	<mark>10</mark>		<mark>10</mark>
Other brown 6 40 6 Epicoccum 6 40 6 Penicillium/Aspergillus types 1 27 4 Smuts, Periconia, Myxomycetes 3 20 3 Bipolaris/Drechslera group 3 20 3 Arthrinium 2 13 2 Oidium 1 7 1 6: W112 130 Penicillium/Aspergillus types 1 27 20 Cladosporium 1 27 20 Basidiospores 1 27 20 Other brown 3 20 15 Bipolaris/Drechslera group 2 13 10 Smuts, Periconia, Myxomycetes 1 7 5 Epicoccum 1 7 5			Basidiospores	2	53	8
Epicoccum Penicillium/Aspergillus types Smuts, Periconia, Myxomycetes Bipolaris/Drechslera group Arthrinium Oidium 1 7 1 6: W112 130 Penicillium/Aspergillus types Cladosporium Basidiospores Other brown Sipolaris/Drechslera group Bipolaris/Drechslera group Smuts, Periconia, Myxomycetes Epicoccum 1 4 27 20 20 20 21 27 20 2			Alternaria	7	47	7
Penicillium/Aspergillus types 1 27 4 Smuts, Periconia, Myxomycetes 3 20 3 3 20 3 3 3 20 3 3 3 3 3 3 3 3 3			Other brown	6	40	6
Smuts, Periconia, Myxomycetes 3 20 3 3 20 3 3 20 3 3 3 20 3 3 3 3 3 3 3 3 3			Epicoccum	6	40	6
Bipolaris/Drechslera group 3 20 3 Arthrinium 2 13 2 2 2 3 3 2 2 3 3			Penicillium/Aspergillus types	1	27	4
Arthrinium 2 13 2 13 2			Smuts, Periconia, Myxomycetes	3	20	3
Arthrinium 2 13 2 1			Bipolaris/Drechslera group	3	20	3
6: W112				2	13	2
Cladosporium 1 27 20 Basidiospores 1 27 20 Other brown 3 20 15 Bipolaris/Drechslera group 2 13 10 Smuts, Periconia, Myxomycetes 1 7 5 Epicoccum 1 7 5			Oidium	1	7	1
Basidiospores 1 27 20 Other brown 3 20 15 Bipolaris/Drechslera group 2 13 10 Smuts, Periconia, Myxomycetes 1 7 5 Epicoccum 1 7 5	6: W112	130	Penicillium/Aspergillus types	1	27	20
Other brown Bipolaris/Drechslera group Smuts, Periconia, Myxomycetes Epicoccum 3 20 15 21 13 10 7 5 25			Cladosporium	1	27	20
Bipolaris/Drechslera group 2 13 10 Smuts, Periconia, Myxomycetes 1 7 5 Epicoccum 1 7 5			Basidiospores	1	27	20
Smuts, Periconia, Myxomycetes 1 7 5 Epicoccum 1 7 5			Other brown	3	20	15
Epicoccum 1 7 5			Bipolaris/Drechslera group	2	13	10
			Smuts, Periconia, Myxomycetes	1	7	
Arthrinium 1 7 5			Epicoccum	1	7	
			Arthrinium	1	7	5

Page 5

Table 1 **Bixby Northeast Elementary and Intermediate** 25% Random Air Monitoring Survey Date: April 25th, 2016

Location	Total spores/m3	Species	Raw count	Calc. count	% of total
7: W109	40	Penicillium/Aspergillus types	1	27	67
		Smuts, Periconia, Myxomycetes	1	7	17
		Bipolaris/Drechslera group	1	7	17
8: E103	1,600	Cladosporium	31	830	51
		Basidiospores	18	480	30
		Ascospores	4	110	7
		Penicillium/Aspergillus types	2	53	3
		Smuts, Periconia, Myxomycetes	5	33	2
		Alternaria	5	33	2
		Scopulariopsis	1	27	2
		Torula	3	20	1
		Other brown	2	13	1
		Other colorless	1	7	< 1
		Nigrospora	1	7	< 1
		Epicoccum	1	7	< 1
		Cercospora	1	7	< 1
		Bipolaris/Drechslera group	1	7	< 1
9: E104	160	Cladosporium	2	53	33
		Basidiospores	2	53	33
		Penicillium/Aspergillus types	1	27	17
		Other brown	2	13	8
		Smuts, Periconia, Myxomycetes	1	7	4
		Bipolaris/Drechslera group	1	7	4
10: E201	230	Basidiospores	4	110	46
		Penicillium/Aspergillus types	2	53	23
		Cladosporium	1	27	11
		Ascospores	1	27	11
		Smuts, Periconia, Myxomycetes	2	13	6
		Curvularia	1	7	3

Page 6

Table 1 **Bixby Northeast Elementary and Intermediate** 25% Random Air Monitoring Survey Date: April 25th, 2016

Location	Total spores/m3	Species	Raw count	Calc. count	% of total
11: Science	110	Basidiospores	2	53	47
		Cladosporium	1	27	24
		Ascospores	1	27	24
		Smuts, Periconia, Myxomycetes	1	7	6
12: W208	93	Cladosporium	1	27	29
		Basidiospores	1	27	29
		Smuts, Periconia, Myxomycetes	2	13	14
		Epicoccum	1	7	7
		Bipolaris/Drechslera group	1	7	7
		Arthrinium	1	7	7
		Alternaria	1	7	7
13: W211	67	Cladosporium	2	53	80
		Other brown	1	7	10
		Alternaria	1	7	10
14: Post Outside	6,100	Basidiospores	53	3,700	60
Reference		Cladosporium	65	1,700	28
		Ascospores	12	320	5
		Epicoccum	17	110	2
		Penicillium/Aspergillus types	3	80	1
		Smuts, Periconia, Myxomycetes	8	53	1
		Alternaria	7	47	1
		Curvularia	5	33	1
		Other brown	3	20	< 1
		Pithomyces	1	7	< 1
		Cercospora	1	7	< 1
		Arthrinium	1	7	< 1

IAQ Results – Quality Assurance Testing – Bixby Northeast Elementary and Intermediate

Survey Date: April 25th and May 2nd, 2016

Report Date: May 9th, 2016

Page 7

Table 2 Bixby Northeast Elementary and Intermediate 25% Random Air Monitoring – Follow-up Sampling Survey Date: May 2nd, 2016

Total Raw Calc. % of Location **Species** spores/m3 count count total Penicillium/Aspergillus types 1: W-101 40 2 13 33 Other brown 1 7 17 Epicoccum 1 7 17 Cladosporium 7 1 17 Bipolaris/Drechslera group 7 1 17 2: Outside 8,100 Basidiospores 163 4,300 54 Reference Ascospores 113 3,000 37 Cladosporium 22 590 7 Penicillium/Aspergillus types 2 53 1 3 Cercospora 20 < 1 Other colorless 2 13 < 1 Smuts, Periconia, Myxomycetes 1 7 < 1 Other brown 1 7 < 1 Alternaria 1 7 < 1



APPENDIX A LABORATORY RESULTS



Report for:

Dylan Albert Liberty OHM 1211 E 39th St Tulsa, OK 74105

Regarding: Project: 15-183; Bixby NE Elem

EMĹ ID: 1530356

Approved by:

Operations Manager Joshua Cox

Service SOPs: Spore trap analysis (EM-MY-S-1038) AIHA-LAP, LLC accredited service, Lab ID #102297

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

Dates of Analysis:

Spore trap analysis: 04-28-2016

EMLab P&K ("the Company") shall have no liability to the client or the client's customer with respect to decisions or recommendations made, actions taken or courses of conduct implemented by either the client or the client's customer as a result of or based upon the Test Results. In no event shall the Company be liable to the client with respect to the Test Results except for the Company's own willful misconduct or gross negligence nor shall the Company be liable for incidental or consequential damages or lost profits or revenues to the fullest extent such liability may be disclaimed by law, even if the Company has been advised of the possibility of such damages, lost profits or lost revenues. In no event shall the Company's liability with respect to the Test Results exceed the amount paid to the Company by the client therefor.

EMLab P&K's LabServe® reporting system includes automated fail-safes to ensure that all AIHA-LAP, LLC quality requirements are met and notifications are added to reports when any quality steps remain pending.

Client: Liberty OHM
C/O: Dylan Albert
Re: 15-183; Bixby NE Elem
Date of Sampling: 04-25-2016
Date of Receipt: 04-26-2016
Date of Report: 04-28-2016

SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

Location:		1:				2:				3:				4: W104					
	Outsid	de Reference	e - Pre l	[AQ		Computer	Lab			W102				W104					
Comments (see below)		None				None				None				None					
Lab ID-Version‡:		7085731-	-1			7085732	-1			7085733	-1			7085734-1					
Analysis Date:		04/28/202				04/28/20	16			04/28/20				04/28/20					
Sample volume (liters)		150				150				150				150					
Background debris (1-4+)††		3+				4+				3+				4+					
	Count	Count/m3	DL/m3*	%	Count	Count/m3	DL/m3*	%	Count	Count/m3	DL/m3*	%	Count	Count/m3	DL/m3*	%			
Hyphal fragments	8	53	7	n/a	13	87	7	n/a					9	60	7	n/a			
Pollen	14	93	7	n/a	2	13	7	n/a					4	27	7	n/a			
§ TOTAL FUNGAL SPORES	249	6,100	n/a	100	23	350	n/a	100	2	33	n/a	100	28	270	n/a	100			
Alternaria	1	7	7	< 1	3	20	7	6					4	27	7	10			
Arthrinium													1	7	7	3			
Ascospores	29	770	27	13									1	27	27	10			
Basidiospores	115	3,100	27	50	3	80	27	23	1	27	27	80	1	27	27	10			
Bipolaris/Drechslera group					4	27	7	8					8	53	7	20			
Cercospora	1	7	7	< 1															
Chaetomium																			
Cladosporium	76	2,000	27	33	5	130	27	38											
Curvularia	3	20	7	< 1															
Epicoccum	3	20	7	< 1	2	13	7	4					1	7	7	3			
Nigrospora													1	7	7	3			
Oidium	2	13	7	< 1															
Other brown	2	13	7	< 1	2	13	7	4					3	20	7	8			
Penicillium/Aspergillus types	3	80	27	1	2	53	27	15					2 53 27						
Pithomyces	1	7	7	< 1															
Smuts, Periconia, Myxomycetes	12	80	7	1	2	13	7	4	1	7	7	20	4	27	7	10			
Stachybotrys																			
Torula	1	7	7	< 1									1	7	7	3			
Ulocladium													1	1 7 7					

Comments:

Spore types listed without a count or data entry were not detected during the course of the analysis for the respective sample, indicating a raw count of <1 spore.

The analytical sensitivity is the spores/m³ divided by the raw count, expressed in spores/m³. The limit of detection is the analytical sensitivity (in spores/m³) multiplied by the sample volume (in liters) divided by 1000 liters.

Aerotech Laboratories, Inc EMLab ID: 1530356, Page 2 of 5

^{*}The DL/m3 has been rounded to a whole number.

^{††}Background debris indicates the amount of non-biological particulate matter present on the trace (dust in the air) and the resulting visibility for the analyst. It is rated from 1+ (low) to 4+ (high). Counts from areas with 4+ background debris should be regarded as minimal counts and may be higher than reported. It is important to account for samples volumes when evaluating dust levels.

[‡] A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

[§] Total Fungal Spores has been rounded to two significant figures to reflect analytical precision.

Client: Liberty OHM
C/O: Dylan Albert
Re: 15-183; Bixby NE Elem
Date of Sampling: 04-25-2016
Date of Receipt: 04-26-2016
Date of Report: 04-28-2016

SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

Location:		5: W101				6: W112				7: W109				8: E103					
C																			
Comments (see below)		None				None			None					None					
Lab ID-Version‡:		7085735	-1			7085736	-1			7085737-	-1			7085738-1					
Analysis Date:		04/28/20	16			04/28/20	16			04/28/20	16			04/28/20	16				
Sample volume (liters)		150				150				150				150					
Background debris (1-4+)††		4+				3+				3+				2+					
6	Count	Count/m3	DL/m3*	%	Count	Count/m3	DL/m3*	%	Count	Count/m3	DL/m3*	%	Count	Count/m3	DL/m3*	%			
Hyphal fragments	14	93	7	n/a	3	20	7	n/a	1	7	7	n/a	4	27	7	n/a			
Pollen	8	53	7	n/a					1	7	7	n/a	5	33	7	n/a			
§ TOTAL FUNGAL SPORES	53	650	n/a	100	11	130	n/a	100	3	40	n/a	100	76	1,600	n/a	100			
Alternaria	7	47	7	7									5	33	7	2			
Arthrinium	2	13	7	2	1	7	7	5											
Ascospores													4	110	27	7			
Basidiospores	2	53	27	8	1	27	27	20					18	480	27	30			
Bipolaris/Drechslera group	3	20	7	3	2	13	7	10	1	7	7	17	1	7	7	< 1			
Cercospora													1	7	7	< 1			
Chaetomium																			
Cladosporium	12	320	27	49	1	27	27	20					31	830	27	51			
Epicoccum	6	40	7	6	1	7	7	5					1	7	7	< 1			
Nigrospora													1	7	7	< 1			
Oidium	1	7	7	1															
Other brown	6	40	7	6	3	20	7	15					2	13	7	1			
Other colorless													1	7	7	< 1			
Penicillium/Aspergillus types	1	27	27	4	1	27	27	20	1	27	27	67	2 53 27 3						
Scopulariopsis													1 27 27 2						
Smuts, Periconia, Myxomycetes	3	20	7	3	1	7	7	5	1	7	7	17	5	33	7	2			
Stachybotrys																			
Torula													3	20	7	1			
Ulocladium	10	67	7	10															

Comments:

Spore types listed without a count or data entry were not detected during the course of the analysis for the respective sample, indicating a raw count of <1 spore.

The analytical sensitivity is the spores/m³ divided by the raw count, expressed in spores/m³. The limit of detection is the analytical sensitivity (in spores/m³) multiplied by the sample volume (in liters) divided by 1000 liters.

§ Total Fungal Spores has been rounded to two significant figures to reflect analytical precision.

Aerotech Laboratories, Inc EMLab ID: 1530356, Page 3 of 5

^{*}The DL/m3 has been rounded to a whole number.

^{††}Background debris indicates the amount of non-biological particulate matter present on the trace (dust in the air) and the resulting visibility for the analyst. It is rated from 1+ (low) to 4+ (high). Counts from areas with 4+ background debris should be regarded as minimal counts and may be higher than reported. It is important to account for samples volumes when evaluating dust levels.

[‡] A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

Client: Liberty OHM
C/O: Dylan Albert
Re: 15-183; Bixby NE Elem
Date of Sampling: 04-25-2016
Date of Receipt: 04-26-2016
Date of Report: 04-28-2016

SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

Location:		9: E104				10: E201				11: Science	<u>.</u>		12: W208						
Comments (see below)		None				None				None				W 208 None					
Lab ID-Version‡:		7085739				7085740				7085741	-1			7085742-1					
Analysis Date:		04/28/20				04/28/20				04/28/20				04/28/20					
Sample volume (liters)		150				150				150				150					
Background debris (1-4+)††		3+				1+				1+				3+					
8 1 1 1 1 ()	Count	Count/m3	DL/m3*	%	Count	Count/m3	DL/m3*	%	Count	Count/m3	DL/m3*	%	Count	Count/m3	DL/m3*	%			
Hyphal fragments	2	13	7	n/a					1	7	7	n/a	3	20	7	n/a			
Pollen																			
§ TOTAL FUNGAL SPORES	9	160	n/a	100	11	230	n/a	100	5	110	n/a	100	8	93	n/a	100			
Alternaria													1	7	7	7			
Arthrinium													1	7	7	7			
Ascospores					1	27	27	11	1	27	27	24							
Basidiospores	2	53	27	33	4	110	27	46	2	53	27	47	1	27	27	29			
Bipolaris/Drechslera group	1	7	7	4									1	7	7	7			
Chaetomium																			
Cladosporium	2	53	27	33	1	27	27	11	1	27	27	24	1	27	27	29			
Curvularia					1	7	7	3											
Epicoccum													1 7 7 7						
Other brown	2	13	7	8															
Penicillium/Aspergillus types	1	27	27	17	2	53	27	23											
Smuts, Periconia, Myxomycetes	1	7	7	4	2	13	7	6	1	7	7	6	2	13	7	14			
Stachybotrys																			

Comments:

Spore types listed without a count or data entry were not detected during the course of the analysis for the respective sample, indicating a raw count of <1 spore.

The analytical sensitivity is the spores/m³ divided by the raw count, expressed in spores/m³. The limit of detection is the analytical sensitivity (in spores/m³) multiplied by the sample volume (in liters) divided by 1000 liters.

§ Total Fungal Spores has been rounded to two significant figures to reflect analytical precision.

Aerotech Laboratories, Inc EMLab ID: 1530356, Page 4 of 5

^{*}The DL/m3 has been rounded to a whole number.

^{††}Background debris indicates the amount of non-biological particulate matter present on the trace (dust in the air) and the resulting visibility for the analyst. It is rated from 1+ (low) to 4+ (high). Counts from areas with 4+ background debris should be regarded as minimal counts and may be higher than reported. It is important to account for samples volumes when evaluating dust levels.

[‡] A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

Client: Liberty OHM
C/O: Dylan Albert
Date of Sampling: 04-25-2016
Date of Receipt: 04-26-2016
Date of Report: 04-28-2016

SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

Location:		13:				14:						
		W211				Post Outside Refer	rence					
Comments (see below)		None				None						
Lab ID-Version‡:		7085743-1		7085744-1								
Analysis Date:		04/28/2016	Ó		04/28/2016							
Sample volume (liters)		150			150							
Background debris (1-4+)††		2+			3+							
, , , ,	Count	Count/m3	DL/m3*	%	Count	Count/m3	DL/m3*	%				
Hyphal fragments	2	13	7	n/a	7	47	7	n/a				
Pollen					13	87	7	n/a				
§ TOTAL FUNGAL SPORES	4	67	n/a	100	176	6,100	n/a	100				
Alternaria	1	7	7	10	7	47	7	1				
Arthrinium					1	7	7	< 1				
Ascospores					12	320	27	5				
Basidiospores					53	3,700	69	60				
Cercospora					1	7	7	< 1				
Chaetomium												
Cladosporium	2	53	27	80	65	1,700	27	28				
Curvularia					5	33	7	1				
Epicoccum					17	110	7	2				
Other brown	1	7	7	10	3	20	7	< 1				
Penicillium/Aspergillus types					3 80 27							
Pithomyces					1 7 7							
Smuts, Periconia, Myxomycetes					8 53 7							
Stachybotrys												

Comments:

Spore types listed without a count or data entry were not detected during the course of the analysis for the respective sample, indicating a raw count of <1 spore.

The analytical sensitivity is the spores/m³ divided by the raw count, expressed in spores/m³. The limit of detection is the analytical sensitivity (in spores/m³) multiplied by the sample volume (in liters) divided by 1000 liters.

§ Total Fungal Spores has been rounded to two significant figures to reflect analytical precision.

Aerotech Laboratories, Inc EMLab ID: 1530356, Page 5 of 5

^{*}The DL/m3 has been rounded to a whole number.

^{††}Background debris indicates the amount of non-biological particulate matter present on the trace (dust in the air) and the resulting visibility for the analyst. It is rated from 1+ (low) to 4+ (high). Counts from areas with 4+ background debris should be regarded as minimal counts and may be higher than reported. It is important to account for samples volumes when evaluating dust levels.

[‡] A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

Phoenix, AZ: 1501 West Knudsen Drive, Phoenix, AZ 85027 * (800) 651-4802 Martton, NJ: 3000 Lincoln Drive East, Suite A Martton, NJ 08053 (866) 871-1984

LEVEL WEATHER | Fog | Rain | Snow | Wind | Clear Moderate None Heavy

Shorline Ct. Ste 203, S. San Francisco, CA 94080 * (865) 886-6653 S. San Francisco, CA: www.EMLabPK.com CHAIN OF CUSTODY & EMLab FOK Phone/Email:918- 845-0122 / Dylan@libertyohm.com Company: Liberty OHM (12589) PO Number: Project ID Contact: Dylan Albert Zip Code: Project Desc.: CP - Contact Plate SAS - Surface Air Sampler A1S - Andersen BC - BioCassette Sample ID ح 6 9 TO SEE PROJECT INFORMATION -ξ COMPUTER ٤ 701 のけなも 102 ر م Science 6 Date & Time: ۵ 9 P - Potable Water Allergenco, Burkard... ST - Spore Trap: Zefon, NP - Non-Potable Weter Leteronie-Description 5 Z ₩, G F ړ S 51/5 . . Q-Other: SW - Swab edat-1 CONTACT INFORMATION B-8uk 0 Special Instructions:Please E-Mail Results to Dylan@libertyohm.com Address: 1211 E. 39th St., Tulsa, OK 74105 STD - Standard (DEFAULT) WH - Weekend/Holiday SD - Same Business Day Rush ND - Next Business Day 出土の数 SO-Soil D - Dust Type Sample (Below) TURN AROUND TIME CODES - (TAT) 5 (Above) હ 6000 0 to 2 WARELINGUISHED BY : Volume/Area 200 Of a 126 Please alert us in advance of weekend analysis needs. Rushes received after 2pm or o received the next business day weekends, will be considered (Time of day, Temp, RH, etc. C NOTES 1 DATE & TIME 911 Non-C Spore Fungl - Spare Trap Analysis ES. Spore Trap Analysis - Other particles Direct Microscopic Exam (Qualitative) RECEIVED BY Quantitative Spore Count Direct Exem 001530356 1-Media Surfaco Fungi (Gerrus ID + Asp. spp.) 2-Media Surface Fungi (Genus ID + Asp. 3-Media Suriaco Fungi (Genus ID + Asp. Culturable Air Fungi (Genus ID + Aso. spp.)) (2) (3) (4) (4 Gram Stain and Counts (Culturable Air and Surface Bacte Legionella culture Total Coliform, E.coli (Presence/Absence) Membrane Filtration (Please specify organism) DATE & TIME MPN Bacteria (Please specify organism) xes) QuantiTray - Şewege Screen Asbastos Analysis - PCM Airborne Fiber Count (NIOSH 740 Requests Asbestos Analysis - PLM (EPA method 600/R-93-116) PCR (please specify lost)

By submitting this Chain of Custody, you agree to be bound by the terms and conditions set forth at www.emlabpk.com/terms.html Copyright © 2002-2009 EMLsb 부용K

\circ

WWW. EMLabPK.com

By submitting this Chain of Custody, you agree to be bound by the terms and conditions set forth at www.emlebpk.com/terms.html

SAS - Surface Air Samplet P - Potable Water

CP - Contact Plete

NP - Non-Potable Water

0 - Offier. **B** - Bulk BC - BloCasselle "

A1S - Andersen

ST - Spore Trap: Zefon, Allergenco, Burkard...

T - Tape

D - Dust

THE RELINQUISHED BY

DATE & TIME

RECEIVED BY.

DATE & TIME

SW - Swab SO - Soil



Report for:

Jack Kerr Liberty OHM 1211 E 39th St Tulsa, OK 74105

Regarding: Project: 15-183; Bixby Northeast Elem. And Inter.

EML ID: 1533962

Approved by:

Operations Manager Joshua Cox

Service SOPs: Spore trap analysis (EM-MY-S-1038) AIHA-LAP, LLC accredited service, Lab ID #102297

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

Dates of Analysis:

Spore trap analysis: 05-05-2016

EMLab P&K ("the Company") shall have no liability to the client or the client's customer with respect to decisions or recommendations made, actions taken or courses of conduct implemented by either the client or the client's customer as a result of or based upon the Test Results. In no event shall the Company be liable to the client with respect to the Test Results except for the Company's own willful misconduct or gross negligence nor shall the Company be liable for incidental or consequential damages or lost profits or revenues to the fullest extent such liability may be disclaimed by law, even if the Company has been advised of the possibility of such damages, lost profits or lost revenues. In no event shall the Company's liability with respect to the Test Results exceed the amount paid to the Company by the client therefor.

EMLab P&K's LabServe® reporting system includes automated fail-safes to ensure that all AIHA-LAP, LLC quality requirements are met and notifications are added to reports when any quality steps remain pending.

Client: Liberty OHM
C/O: Jack Kerr
Date of Sampling: 05-02-2016
Date of Receipt: 05-03-2016
Date of Report: 05-03-2016
Date of Report: 05-05-2016

SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

Location:		1:				2:							
		W-101				Outside Referen	ce						
Comments (see below)		None				None							
Lab ID-Version‡:		7104128-1			7104129-1								
Analysis Date:		05/05/2016			05/05/2016								
Sample volume (liters)		150			150								
Background debris (1-4+)††		2+			2+								
	Count	Count/m3	DL/m3*	%	Count	Count/m3	DL/m3*	%					
Hyphal fragments					1	7	7	n/a					
Pollen	1	7	7	n/a	1	7	7	n/a					
§ TOTAL FUNGAL SPORES	6	40	n/a	100	308	8,100	n/a	100					
Alternaria					1	7	7	< 1					
Ascospores					113	3,000	27	37					
Basidiospores					163	4,300	7 n. 00 n/a 10 7 < 00 7 < 00 27 3 00 27 5						
Bipolaris/Drechslera group	1	7	7	17									
Cercospora					3	20	7	< 1					
Chaetomium													
Cladosporium	1	7	7	17	22	590	27	7					
Epicoccum	1	7	7	17									
Other brown	1	7	7	17	1	7	7	< 1					
Other colorless					2 13 7								
Penicillium/Aspergillus types	2	13	7	33									
Smuts, Periconia, Myxomycetes		<u> </u>			1 7 7								
Stachybotrys													

Comments:

Spore types listed without a count or data entry were not detected during the course of the analysis for the respective sample, indicating a raw count of <1 spore.

The analytical sensitivity is the spores/m³ divided by the raw count, expressed in spores/m³. The limit of detection is the analytical sensitivity (in spores/m³) multiplied by the sample volume (in liters) divided by 1000 liters.

§ Total Fungal Spores has been rounded to two significant figures to reflect analytical precision.

Aerotech Laboratories, Inc EMLab ID: 1533962, Page 2 of 2

^{*}The DL/m3 has been rounded to a whole number.

^{††}Background debris indicates the amount of non-biological particulate matter present on the trace (dust in the air) and the resulting visibility for the analyst. It is rated from 1+ (low) to 4+ (high). Counts from areas with 4+ background debris should be regarded as minimal counts and may be higher than reported. It is important to account for samples volumes when evaluating dust levels.

[‡] A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

San Brung, CA: 1150 Baylill Drive, #100, San Brang, CA 94060 1(806) 888-6653	Phoenix, AZ: 1501 West Knudsen Jaive, Phoenix, AZ 85027 * (600) 651-4602	Hew Jersey: 3000 Lincoln Drive East, Suits A, Madlon, NJ 09053 * (866) 877-4884	For A lessamence company	www.EMLabPK.com	CHAIN OF CUSTODY AND ENTIRE DRIK	
	[Hoavy D D D D			Nome .	Weather: Fog Ren Snow Wind Clear	
Bulk	Swall Swall					
-	1	i no1533962				
	и Кеди	ı				

 $a_{\alpha \beta} = a_{\beta \alpha \beta} \log (a_{\beta \beta})^{-1/2} m$

ļ										12	· /	Sample [C	PC Number	Project Zip Code;	Project Description:	Project ID		Phone: 918	Contact , Tad	Сопраду: СП			Hew Jersey: 300 Phoenix, AZ: 15/ San Romo Car	CHAIN OF CUSTO
					•					Outside Reference	41-101	Description .	Sampled Br. TLJK		Bixby Mortheast Elen. a	15-183	PROJECT INFORMATION	918-742-1569	Jack Keen	Liberty OffM (12589)	CON		Hew Jonesy: 3000 Lincoln Drive East, Suite A, Madlon, NJ 09053 * (866) 871-1984 Phoenix, AZ: 1501 West Knudsen drive, Phoenix, AZ 85027 * (600) 651-4602 Son Romo, Certista Reskib Crise Esta Son Romo, Ce deleat * 1866 988 4863	ODY A
				_						}-	87	Sample Type (Relate)	7 X	5/2/16	as I Take.				Spacial Instructions:	Address: 1211 F. 39th St Tisks, OK 74105 USA	CONTACT INFORMATION		(866) 871-1584 651-4602	EMLab P&K
						_		<u> </u>		- -	2	TAT (Above)	WH-We	SD - Sam	ND-Hed	8 - OE 3	n.			Sa Telya, O	QN			₹ ~
										۲	1501	Total Volume I Area (es sputrate)	WH - Weeken I Holiday;	SD – Same Business Day Rush	ND - Hea Business Oay	SED - Stendard (NEE/ULT)	TURN AROUND TIME CODES (TAT)			K 74105 USA		-	Hoavy	Reather :
			•								2.0	Notes (Time of day, Temp. Rev. etc.)	Heeleid alkaysa Noos.	next byslaces dig. Fluado alest us in advance of	protor on weekends, will be considered received the	Rusikos received aller 7	CODES (TAT)							Fog Rán Snow What Clear
												Fungi	- Soc	7.	Analyi	 615			اً	l	<u></u>			
		밁	믜								뫼	-			is – Ojk Exem (<u> </u>								
	3				<u> </u>						<u> </u>	_		_	Cosint ungl (G				n l			4	- 2 6 5	<u></u>
		밁		밁					믉	틧	밁	2-Med	do Su	face F	ungi (Ge ungi (Ge	orxis l	0 - 4	sp. sp	p.]			\exists	0	-
j		팊	ğ			블	ᇦ		칅			Cultur	able A	ir Fim;	ji (Genu	rs ID +	Агр.	spp.)				_	0015	
<u> </u>		닖	님	븳	님	片	片		님		뷥		Slam rella c		es (Cut	limahle	ı Vit 8	Surfa	ce Ra	cteria)		53396	
]		밁	밁	밁	믈			믬		믬	밁				oli (Pre a (spec								25	
ļ		듥	릵		믉			릵	릐	릐	릵	MPN	Bacler	ta (spe	cify.orga	an sm)		·						
֓֟֝֝֝֟֝֟֝֝֟֝֝֟֝֝֟֝֝֟ ֓֞֞֞֞֞֞֞֞֞֞֞֞֓֓֓֓֓֞֞֓֓֓֓֓֓֓֓֓֓	=						믜	믜	니.				•••••	*****	go Scro -PCM		ne Fil	er Co	क्षार विश	OSH ((490)			
[믜	릐						릐		밁				- PLM	(EPA	metha	or 600	R-93-	116)			r Requests	
1		비	뷥		니			뷥	닖	비	붑	PCR (specif	y testi:					·		_		SE SE	

By submitting this Chain of Custody, you agree to be bound by the terms and conditions set foot at http://www.sgdatu.org/cls/gealn/socvescents.html

J. C. S. J.

A15 - Anderson SAS - Surface Air Sampler CP - Contact Plate

SAMPLE TYPE CODES

\$1 - Spare Trey: Zelon,
Aleegemon, Blackerd ...

P - Pouzzie Wazzer

T—Tepe SW2—Swsb

D-Dust

RELINGUISHED BY

DATESTIME

RECEIVED BY

DATE & TIME

NP - Non-Potable Water

0-Other

Copyright © 2002-2013 ENLast PEK