



Liberty OHM

August 19th, 2015

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

CC: Jarred Doubrava
Operations Support Manager/District Safety Coordinator

RE: Focused Inspection of:
• **Bixby Northeast Elementary and Intermediate**

Dear Mr. Foutch:

On August 4th, 2015, Liberty OHM visited Northeast Elementary and Intermediate to conduct quality assurance testing. The testing at the above location was in response to concerns expressed from staff of Bixby Public Schools.

The following observations were noted:

- Approval for inspections/sampling was relayed to Liberty OHM through Jarred Doubrava pertaining to selected rooms at Northeast Elementary and Intermediate. Liberty OHM was asked to conduct quality assurance sampling of six preselected rooms. The rooms selected for testing were W-101, W-104, W-109, W-112, W-211 and the first floor computer lab. An inspection of each room randomly selected was conducted. No signs of water intrusion or damage were present.
- Air samples taken on this day revealed significantly elevated concentrations of the water intrusion/indicator mold *Penicillium*/*Aspergillus* in three or six samples taken. Rooms W-104, W-112, and the first floor computer lab revealed elevated concentrations of *Penicillium*/*Aspergillus*. Other rooms selected revealed normal environmental airborne fungi present with no concentrations above the outside reference sample. The source of the elevated concentrations of *Penicillium*/*Aspergillus* is thought to be due to elevated humidity, caused by an excess of outdoor air introduced to the rooms through faulty air handling systems. These sampling results can be found in Table 1 below.

Recommendations

1. For areas not addressed to this point in time where elevated concentrations of Penicillium/Aspergillus were found, a thorough cleaning and sanitization should be performed on all surfaces throughout the room.
2. Air scrubbers should be placed in each during cleaning and for 48 hours following cleaning.
3. A review of the air handling systems should be conducted to ensure proper functioning in maintaining outside air control and limiting humidity introduced to the each area.

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,

A handwritten signature in black ink, appearing to read "Jack Kerr", is written over a light blue horizontal line.

Jack Kerr
EH&S Project Manager
Liberty OHM

Table 1 Bixby Northeast Elementary and Intermediate Spore Trap Analysis Sampling Date: 8/4/2015					
Location	Total spores/m3	Species	Raw count	Calc. count	% of total
1: 1 Computer Lab 1st Floor	27,000	Penicillium/Aspergillus types	406	27,000	99
		Cladosporium	12	80	< 1
		Pithomyces	5	33	< 1
		Ascospores	5	33	< 1
		Bipolaris/Drechslera group	3	20	< 1
		Smuts, Periconia, Myxomycetes	1	7	< 1
		Rusts	1	7	< 1
		Curvularia	1	7	< 1
		Cercospora	1	7	< 1
		Basidiospores	1	7	< 1
2: 2 W-101	1,200	Penicillium/Aspergillus types	109	730	58
		Pithomyces	23	150	12
		Cladosporium	20	130	11
		Basidiospores	14	93	7
		Curvularia	5	33	3
		Smuts, Periconia, Myxomycetes	4	27	2
		Ascospores	4	27	2
		Bipolaris/Drechslera group	3	20	2
		Alternaria	3	20	2
		Nigrospora	2	13	1
3: 3 W-104	98,000	Penicillium/Aspergillus types	368	98,000	100
		Cladosporium	18	120	< 1
		Ascospores	5	33	< 1
		Pithomyces	3	20	< 1
		Smuts, Periconia, Myxomycetes	1	7	< 1
		Bipolaris/Drechslera group	1	7	< 1
4: 4 W-109	230	Penicillium/Aspergillus types	28	190	80
		Pithomyces	2	13	6
		Ascospores	2	13	6
		Curvularia	1	7	3
		Cladosporium	1	7	3
		Bipolaris/Drechslera group	1	7	3

Table 1 Bixby Northeast Elementary and Intermediate Spore Trap Analysis Sampling Date: 8/4/2015					
Location	Total spores/m3	Species	Raw count	Calc. count	% of total
5: 5 W-112	1,800	Penicillium/Aspergillus types	239	1,600	91
		Basidiospores	8	53	3
		Cladosporium	6	40	2
		Bipolaris/Drechslera group	4	27	2
		Alternaria	3	20	1
		Pithomyces	2	13	1
		Ascospores	2	13	1
6: 6 W-211	1,100	Penicillium/Aspergillus types	55	370	33
		Pithomyces	48	320	29
		Cladosporium	27	180	16
		Ascospores	12	80	7
		Bipolaris/Drechslera group	8	53	5
		Basidiospores	6	40	4
		Curvularia	5	33	3
		Alternaria	3	20	2
		Smuts, Periconia, Myxomycetes	2	13	1
		Nigrospora	2	13	1
7: 7 Outside Reference	3,900	Cladosporium	287	1,900	49
		Penicillium/Aspergillus types	113	750	19
		Ascospores	100	670	17
		Basidiospores	46	310	8
		Cercospora	12	80	2
		Smuts, Periconia, Myxomycetes	11	73	2
		Pithomyces	7	47	1
		Curvularia	5	33	1
		Alternaria	4	27	1
		Torula	1	7	< 1
		Rusts	1	7	< 1
		Bipolaris/Drechslera group	1	7	< 1



Liberty OHM

APPENDIX A

LABORATORY RESULTS



Report for:

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

Regarding: Project: 14-257; Bixby Northeast Elem and Inter
EML ID: 1403774

Approved by:

Dates of Analysis:
Spore trap analysis: 08-07-2015

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.

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.

Client: Liberty OHM
C/O: Jack Kerr
Re: 14-257; Bixby Northeast Elem and Inter

Date of Sampling: 08-04-2015
Date of Receipt: 08-05-2015
Date of Report: 08-07-2015

SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

Location:	1: 1 Computer Lab 1st Floor				2: 2 W-101				3: 3 W-104				4: 4 W-109			
Comments (see below)	None				None				None				None			
Lab ID-Version‡:	6459743-1				6459744-1				6459745-1				6459746-1			
Analysis Date:	08/07/2015				08/07/2015				08/07/2015				08/07/2015			
Sample volume (liters)	150				150				150				150			
Background debris (1-4+)††	3+				3+				3+				2+			
	Count	Count/m3	DL/m3*	%	Count	Count/m3	DL/m3*	%	Count	Count/m3	DL/m3*	%	Count	Count/m3	DL/m3*	%
Hyphal fragments	3	20	7	n/a	6	40	7	n/a	1	7	7	n/a	1	7	7	n/a
Pollen																
§ TOTAL FUNGAL SPORES	436	27,000	n/a	100	187	1,200	n/a	100	396	98,000	n/a	100	35	230	n/a	100
Alternaria					3	20	7	2								
Ascospores	5	33	7	< 1	4	27	7	2	5	33	7	< 1	2	13	7	6
Basidiospores	1	7	7	< 1	14	93	7	7								
Bipolaris/Drechslera group	3	20	7	< 1	3	20	7	2	1	7	7	< 1	1	7	7	3
Cercospora	1	7	7	< 1												
Chaetomium																
Cladosporium	12	80	7	< 1	20	130	7	11	18	120	7	< 1	1	7	7	3
Curvularia	1	7	7	< 1	5	33	7	3					1	7	7	3
Nigrospora					2	13	7	1								
Penicillium/Aspergillus types	406	27,000	67	99	109	730	7	58	368	98,000	270	100	28	190	7	80
Pithomyces	5	33	7	< 1	23	150	7	12	3	20	7	< 1	2	13	7	6
Rusts	1	7	7	< 1												
Smuts, Periconia, Myxomycetes	1	7	7	< 1	4	27	7	2	1	7	7	< 1				
Stachybotrys																

Comments:

Spore types listed without a count or data entry were not detected during the course of the analysis for the respective sample.

The analytical sensitivity is the spores/m3 divided by the raw count. The limit of detection is the analytical sensitivity multiplied by the sample volume divided by 1000.

*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 then 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: Jack Kerr
Re: 14-257; Bixby Northeast Elem and Inter

Date of Sampling: 08-04-2015
Date of Receipt: 08-05-2015
Date of Report: 08-07-2015

SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

Location:	5: 5 W-112				6: 6 W-211				7: 7 Outside Reference			
Comments (see below)	None				None				None			
Lab ID-Version‡:	6459747-1				6459748-1				6459749-1			
Analysis Date:	08/07/2015				08/07/2015				08/07/2015			
Sample volume (liters)	150				150				150			
Background debris (1-4+)††	2+				2+				3+			
	Count	Count/m3	DL/m3*	%	Count	Count/m3	DL/m3*	%	Count	Count/m3	DL/m3*	%
Hyphal fragments					1	7	7	n/a	1	7	7	n/a
Pollen												
§ TOTAL FUNGAL SPORES	264	1,800	n/a	100	168	1,100	n/a	100	588	3,900	n/a	100
Alternaria	3	20	7	1	3	20	7	2	4	27	7	1
Ascospores	2	13	7	1	12	80	7	7	100	670	7	17
Basidiospores	8	53	7	3	6	40	7	4	46	310	7	8
Bipolaris/Drechslera group	4	27	7	2	8	53	7	5	1	7	7	< 1
Cercospora									12	80	7	2
Chaetomium												
Cladosporium	6	40	7	2	27	180	7	16	287	1,900	7	49
Curvularia					5	33	7	3	5	33	7	1
Nigrospora					2	13	7	1				
Penicillium/Aspergillus types	239	1,600	7	91	55	370	7	33	113	750	7	19
Pithomyces	2	13	7	1	48	320	7	29	7	47	7	1
Rusts									1	7	7	< 1
Smuts, Periconia, Myxomycetes					2	13	7	1	11	73	7	2
Stachybotrys												
Torula									1	7	7	< 1

Comments:

Spore types listed without a count or data entry were not detected during the course of the analysis for the respective sample.

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