



# Liberty OHM

---

January 30<sup>th</sup>, 2013

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

**RE: Bixby North Elementary - 25% IAQ  
Liberty OHM File Number 12-179**

**CC: Jarred Doubrava  
Operations Support Manager/District Safety Coordinator**

Dear Mr. Foutch:

On January 23<sup>rd</sup>, 2013, 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 January 23<sup>rd</sup>, 16 classrooms, for a total of 25% of Bixby North Elementary, were selected at random and tested. The ratio of total indoor/outdoor airborne mold concentrations was slightly elevated in room 212 on the day of testing.

The following observations were noted:

- In classroom 212 of North Elementary a small amount of the water intrusion/indicator mold *Stachybotrys* was found. We typically do not see this mold present in indoor samples unless the environment has been historically subjected to excessive moisture.
- A re-test and inspection of room 212 and associated HVAC closet was conducted on January 28<sup>th</sup> to verify whether or not any condition exists that would need follow-up repairs, cleaning or abatement. The inspection revealed no signs of water intrusion or damage. No carpet staining was observed. Baseboards were pulled back and a visual inspection was performed. No signs of wet conditions or visible mold were observed. No stained ceiling tiles were observed. We believe the *Stachybotrys* found on January 23<sup>rd</sup> was of environmental origin and was not originated in the classroom. Possible sources

of how the mold entered the room could have been on the bottom of shoes or the opening and closing of outside doors/windows. We will continue to monitor this room on our next visit to North Elementary.

- In all other rooms selected for testing on January 23<sup>rd</sup>, no visible mold or water intrusion/damage was found.

Recommendations are provided below.

Table 1 shows the results of the air samples taken from the selected rooms on January 23<sup>rd</sup>.

Table 2 shows the results of the air samples taken from room 212 on January 28<sup>th</sup>.

### **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,

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

Jack Kerr  
EH&S Consultant  
Liberty OHM

IAQ Results – Quality Assurance Testing – Bixby North Elementary

Survey Date: January 23<sup>rd</sup>, 2013

Report Date: January 30<sup>th</sup>, 2013

Page 3

<b>Table 1</b> <b>Bixby North Elementary</b> <b>25% Random Air Monitoring</b> <b>Sampling Date: January 23<sup>rd</sup>, 2013</b>					
<b>Location</b>	<b>Total spores/m3</b>	<b>Species</b>	<b>Raw count</b>	<b>Calc. count</b>	<b>% of total</b>
1: Outside Reference Pre	1,400	Basidiospores	50	670	48
		Penicillium/Aspergillus types	37	490	36
		Cladosporium	8	110	8
		Smuts, Periconia, Myxomycetes	4	53	4
		Ascospores	2	27	2
		Other brown	1	13	1
		Nigrospora	1	13	1
		Epicoccum	1	13	1
2: Room 101	760	Penicillium/Aspergillus types	21	280	37
		Cladosporium	15	200	26
		Basidiospores	6	80	11
		Other brown	4	53	7
		Alternaria	4	53	7
		Smuts, Periconia, Myxomycetes	2	27	4
		Curvularia	2	27	4
		Bipolaris/Drechslera group	2	27	4
		Epicoccum	1	13	2
3: Room 105	990	Cladosporium	33	440	45
		Penicillium/Aspergillus types	22	290	30
		Basidiospores	7	93	9
		Other brown	6	80	8
		Epicoccum	2	27	3
		Smuts, Periconia, Myxomycetes	1	13	1
		Pithomyces	1	13	1
		Bipolaris/Drechslera group	1	13	1
		Alternaria	1	13	1

IAQ Results – Quality Assurance Testing – Bixby North Elementary

Survey Date: January 23<sup>rd</sup>, 2013

Report Date: January 30<sup>th</sup>, 2013

Page 4

<b>Table 1</b> <b>Bixby North Elementary</b> <b>25% Random Air Monitoring</b> <b>Sampling Date: January 23<sup>rd</sup>, 2013</b>					
<b>Location</b>	<b>Total spores/m3</b>	<b>Species</b>	<b>Raw count</b>	<b>Calc. count</b>	<b>% of total</b>
4: Room 108	1,200	Cladosporium	37	490	43
		Penicillium/Aspergillus types	28	370	32
		Basidiospores	6	80	7
		Bipolaris/Drechslera group	4	53	5
		Smuts, Periconia, Myxomycetes	3	40	3
		Other brown	3	40	3
		Alternaria	3	40	3
		Epicoccum	1	13	1
		Curvularia	1	13	1
		Ascospores	1	13	1
5: Room 113	680	Penicillium/Aspergillus types	24	320	47
		Cladosporium	17	230	33
		Basidiospores	4	53	8
		Smuts, Periconia, Myxomycetes	2	27	4
		Other brown	2	27	4
		Rusts	1	13	2
		Alternaria	1	13	2
6: Room 114	230	Penicillium/Aspergillus types	9	120	53
		Cladosporium	4	53	24
		Other brown	2	27	12
		Bipolaris/Drechslera group	1	13	6
		Basidiospores	1	13	6
7: Room 121	200	Penicillium/Aspergillus types	6	80	40
		Basidiospores	4	53	27
		Epicoccum	2	27	13
		Smuts, Periconia, Myxomycetes	1	13	7
		Other brown	1	13	7
		Ascospores	1	13	7

IAQ Results – Quality Assurance Testing – Bixby North Elementary

Survey Date: January 23<sup>rd</sup>, 2013

Report Date: January 30<sup>th</sup>, 2013

Page 5

<b>Table 1</b> <b>Bixby North Elementary</b> <b>25% Random Air Monitoring</b> <b>Sampling Date: January 23<sup>rd</sup>, 2013</b>					
<b>Location</b>	<b>Total spores/m3</b>	<b>Species</b>	<b>Raw count</b>	<b>Calc. count</b>	<b>% of total</b>
8: Room 201	630	Cladosporium	17	230	36
		Penicillium/Aspergillus types	16	210	34
		Basidiospores	4	53	9
		Other brown	3	40	6
		Epicoccum	2	27	4
		Bipolaris/Drechslera group	2	27	4
		Alternaria	2	27	4
		Smuts, Periconia, Myxomycetes	1	13	2
9: Room 207	170	Penicillium/Aspergillus types	7	93	54
		Cladosporium	3	40	23
		Basidiospores	2	27	15
		Smuts, Periconia, Myxomycetes	1	13	8
10: Room 212	610	Cladosporium	15	200	33
		Penicillium/Aspergillus types	14	190	30
		Other brown	6	80	13
		Basidiospores	3	40	7
		Stachybotrys	2	27	4
		Smuts, Periconia, Myxomycetes	2	27	4
		Curvularia	2	27	4
		Epicoccum	1	13	2
		Bipolaris/Drechslera group	1	13	2
11: Room 222	330	Cladosporium	10	130	40
		Penicillium/Aspergillus types	9	120	36
		Smuts, Periconia, Myxomycetes	2	27	8
		Other brown	2	27	8
		Basidiospores	1	13	4
		Alternaria	1	13	4

<b>Table 1</b> <b>Bixby North Elementary</b> <b>25% Random Air Monitoring</b> <b>Sampling Date: January 23<sup>rd</sup>, 2013</b>					
<b>Location</b>	<b>Total spores/m3</b>	<b>Species</b>	<b>Raw count</b>	<b>Calc. count</b>	<b>% of total</b>
12: Room 226	150	Cladosporium	4	53	36
		Alternaria	3	40	27
		Penicillium/Aspergillus types	1	13	9
		Curvularia	1	13	9
		Basidiospores	1	13	9
		Ascospores	1	13	9
13: Room 229	200	Cladosporium	7	93	47
		Penicillium/Aspergillus types	5	67	33
		Alternaria	2	27	13
		Smuts, Periconia, Myxomycetes	1	13	7
14: Room 217	160	Penicillium/Aspergillus types	3	40	25
		Cladosporium	3	40	25
		Basidiospores	2	27	17
		Smuts, Periconia, Myxomycetes	1	13	8
		Epicoccum	1	13	8
		Bipolaris/Drechslera group	1	13	8
		Alternaria	1	13	8
15: Room 303	360	Cladosporium	15	200	56
		Penicillium/Aspergillus types	7	93	26
		Other brown	1	13	4
		Epicoccum	1	13	4
		Curvularia	1	13	4
		Basidiospores	1	13	4
		Alternaria	1	13	4
16: Room 306	150	Cladosporium	4	53	36
		Penicillium/Aspergillus types	2	27	18
		Basidiospores	2	27	18
		Smuts, Periconia, Myxomycetes	1	13	9
		Pithomyces	1	13	9
		Alternaria	1	13	9

<b>Table 1</b> <b>Bixby North Elementary</b> <b>25% Random Air Monitoring</b> <b>Sampling Date: January 23<sup>rd</sup>, 2013</b>					
<b>Location</b>	<b>Total spores/m3</b>	<b>Species</b>	<b>Raw count</b>	<b>Calc. count</b>	<b>% of total</b>
17: Room 310	230	Cladosporium	8	110	47
		Penicillium/Aspergillus types	6	80	35
		Other brown	1	13	6
		Curvularia	1	13	6
		Basidiospores	1	13	6
18: Outside Reference Post	920	Basidiospores	28	370	41
		Cladosporium	21	280	30
		Penicillium/Aspergillus types	15	200	22
		Smuts, Periconia, Myxomycetes	2	27	3
		Other brown	1	13	1
		Oidium	1	13	1
		Bipolaris/Drechslera group	1	13	1

IAQ Results – Quality Assurance Testing – Bixby North Elementary

Survey Date: January 23<sup>rd</sup>, 2013

Report Date: January 30<sup>th</sup>, 2013

Page 8

<b>Table 2</b> <b>Bixby North Elementary</b> <b>Re-test of Classroom 212</b> <b>Sampling Date: January 28<sup>th</sup>, 2013</b>					
<b>Location</b>	<b>Total spores/m3</b>	<b>Species</b>	<b>Raw count</b>	<b>Calc. count</b>	<b>% of total</b>
1: Outside Reference	2,800	Cladosporium	146	1,900	70
		Basidiospores	31	410	15
		Penicillium/Aspergillus types	16	210	8
		Alternaria	10	130	5
		Smuts, Periconia,	4	53	2
		Myxomycetes	1	13	< 1
		Epicoccum	1	13	< 1
		Chaetomium	1	13	< 1
		Ascospores			
2: Room 212	680	Basidiospores	25	330	49
		Cladosporium	17	230	33
		Smuts, Periconia,	2	27	4
		Myxomycetes	2	27	4
		Penicillium/Aspergillus types	2	27	4
		Bipolaris/Drechslera group	1	13	2
		Nigrospora	1	13	2
		Curvularia	1	13	2
		Alternaria			