eurofins | Built Environment Testing

Report for:

Brad Roberts
Berks Fire Water Restoration
1145 Commons Blvd
Reading, PA 19605

Regarding: Eurofins EPK Built Environment Testing, LLC
Project: Schuylkill Valley S.D.-4; Post IAQ Test
EML ID: 3460023

Approved by:

Technical Manager
Ariunaa Jalsrai

Dates of Analysis:
Spore trap analysis: 11-21-2023

Service SOPs: Spore trap analysis (EB-MY-S-1038)
AIHA-LAP, LLC accredited service, Lab ID #103005

Eurofins EPK Built Environment Testing, LLC
3000 Lincoln Drive East, Suite A, Marlton, NJ 08053
(866) 871-1984 www.eurofinsus.com/Built

Client: Berks Fire Water Restoration
C/O: Brad Roberts
Re: Schuylkill Valley S.D.-4; Post IAQ Test

Date of Sampling: 11-19-2023
Date of Receipt: 11-21-2023
Date of Report: 11-21-2023

SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

Location:	3691 1870: Post room D204			3691 1833: Post hallway		
Comments (see below)	None			None		
Lab ID-Version‡:	16860788-1			16860789-1		
Analysis Date:	11/21/2023			11/21/2023		
	raw ct.	% read	spores/m3	raw ct.	% read	spores/m3
Alternaria						
Ascospores						
Basidiospores	1	25	53	3	25	160
Botrytis						
Chaetomium						
Cladosporium	2	25	110			
Curvularia						
Epicoccum						
Fusarium						
Myrothecium						
Nigrospora						
Other colorless						
Penicillium/Aspergillus types†						
Pithomyces						
Rusts						
Smuts, Periconia, Myxomycetes						
Stachybotrys						
Stemphylium						
Torula						
Ulocladium						
Zygomycetes						
Background debris (1-4+)††	1+			< 1+		
Hyphal fragments/m3	< 13			< 13		
Pollen/m3	< 13			< 13		
Skin cells (1-4+)	1+			< 1+		
Sample volume (liters)	75			75		
§ TOTAL SPORES/m3			160			160

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 spores of *Aspergillus* and *Penicillium* (and others such as *Acremonium*, *Paecilomyces*) are small and round with very few distinguishing characteristics. They cannot be differentiated by non-viable sampling methods. Also, some species with very small spores are easily missed, and may be undercounted.
††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.

The analytical sensitivity is the spores/m^3 divided by the raw count, expressed in spores/m^3, per spore and per sample.

For more information regarding analytical sensitivity, please contact QA by calling the laboratory.
‡ 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 Spores/m3 has been rounded to two significant figures to reflect analytical precision.

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SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

Location:	3691 1880: Post outside		
Comments (see below)	None		
Lab ID-Version‡:	16860790-1		
Analysis Date:	11/21/2023		
	raw ct.	% read	spores/m3
Alternaria	1	100	13
Ascospores			
Basidiospores	10	25	530
Botrytis			
Chaetomium			
Cladosporium	9	25	480
Curvularia			
Epicoccum	7	100	93
Fusarium			
Myrothecium			
Nigrospora			
Other colorless			
Penicillium/Aspergillus types†			
Pithomyces	2	100	27
Rusts	1	100	13
Smuts, Periconia, Myxomycetes			
Stachybotrys			
Stemphylium			
Torula			
Ulocladium			
Zygomycetes			
Background debris (1-4+)††	1+		
Hyphal fragments/m3	< 13		
Pollen/m3	< 13		
Skin cells (1-4+)	< 1+		
Sample volume (liters)	75		
§ TOTAL SPORES/m3			1,200

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 spores of *Aspergillus* and *Penicillium* (and others such as *Acremonium*, *Paecilomyces*) are small and round with very few distinguishing characteristics. They cannot be differentiated by non-viable sampling methods. Also, some species with very small spores are easily missed, and may be undercounted.
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Service SOPs: Spore trap analysis (EB-MY-S-1038)
AIHA-LAP, LLC accredited service, Lab ID #103005

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 samples as received and tested. Information supplied by the client which can affect the validity of results: sample air volume.

Eurofins EPK Built Environment Testing, LLC ("the Company"), a member of the Eurofins Built Environment Testing group of companies, 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.
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SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

Location:	3691 1870: Post room D204		3691 1833: Post hallway		3691 1880: Post outside	
Comments (see below)	None		None		None	
Lab ID-Version‡:	16860788-1		16860789-1		16860790-1	
Analysis Date:	11/21/2023		11/21/2023		11/21/2023	
	raw ct.	spores/m3	raw ct.	spores/m3	raw ct.	spores/m3
Alternaria					1	13
Ascospores						
Basidiospores	1	53	3	160	10	530
Bipolaris/Drechslera group						
Botrytis						
Chaetomium						
Cladosporium	2	110			9	480
Curvularia						
Epicoccum					7	93
Fusarium						
Myrothecium						
Nigrospora						
Other colorless						
Penicillium/Aspergillus types†						
Pithomyces					2	27
Rusts					1	13
Smuts, Periconia, Myxomycetes						
Stachybotrys						
Stemphylium						
Torula						
Ulocladium						
Zygomycetes						
Background debris (1-4+)††	1+		< 1+		1+	
Hyphal fragments/m3	< 13		< 13		< 13	
Pollen/m3	< 13		< 13		< 13	
Skin cells (1-4+)	1+		< 1+		< 1+	
Sample volume (liters)	75		75		75	
§ TOTAL SPORES/m3		160		160		1,200

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 spores of *Aspergillus* and *Penicillium* (and others such as *Acremonium*, *Paecilomyces*) are small and round with very few distinguishing characteristics. They cannot be differentiated by non-viable sampling methods. Also, some species with very small spores are easily missed, and may be undercounted.
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The analytical sensitivity is the spores/m^3 divided by the raw count, expressed in spores/m^3, per spore and per sample.

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§ Total Spores/m3 has been rounded to two significant figures to reflect analytical precision.

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MoldRANGE™: Extended Outdoor Comparison

Outdoor Location: 3691 1880, Post outside

Fungi Identified	Outdoor data	Typical Outdoor Data for: November in Pennsylvania† (n‡=2543)						Typical Outdoor Data for: The entire year in Pennsylvania† (n‡=29386)					
	spores/m3	very low	low	med	high	very high	freq %	very low	low	med	high	very high	freq %
Generally able to grow indoors*													
Alternaria	13	7	13	27	53	80	41	10	13	40	93	160	44
Bipolaris/Drechslera group	-	7	7	13	27	40	7	7	7	13	33	53	10
Chaetomium	-	7	7	13	19	29	3	7	7	13	27	40	3
Cladosporium	480	53	110	320	980	1,900	85	53	130	590	2,000	3,600	84
Curvularia	-	7	7	13	33	53	9	7	8	17	53	84	16
Epicoccum	93	7	13	27	53	87	42	7	13	27	67	110	39
Nigrospora	-	7	7	13	27	53	17	7	7	13	44	67	17
Penicillium/Aspergillus types	-	53	67	190	510	830	50	53	53	210	590	1,000	49
Pithomyces	27	7	7	13	33	53	16	7	13	27	80	160	27
Stachybotrys	-	7	7	13	29	39	< 1	7	7	13	45	170	< 1
Torula	-	7	7	13	33	53	6	7	11	13	47	67	7
Seldom found growing indoors**													
Ascospores	-	53	80	210	640	1,200	81	53	130	610	2,000	3,400	81
Basidiospores	530	160	350	1,200	3,900	7,200	99	110	250	1,900	7,900	15,000	96
Rusts	13	7	13	20	53	87	26	7	13	27	53	110	21
Smuts, Periconia, Myxomycetes	-	13	17	53	130	220	75	13	13	40	110	200	62
§ TOTAL SPORES/m3	1,200												

†The 'Typical Outdoor Data' represents the typical outdoor spore levels for the location and time frame indicated. The last column represents the frequency of occurrence. The very low, low, med, high, and very high values represent the 10, 20, 50, 80, and 90 percentile values of the spore type when it is detected. For example, if the frequency of occurrence is 63% and the low value is 53, it would mean that the given spore type is detected 63% of the time and, when detected, 20% of the time it is present in levels above the detection limit and below 53 spores/m3. These values are updated periodically, and if enough data is not available to make a statistically meaningful assessment, it is indicated with a dash.

§ Total Spores/m3 has been rounded to two significant figures to reflect analytical precision.

* The spores in this category are generally capable of growing on wet building materials in addition to growing outdoors. Building related growth is dependent upon the fungal type, moisture level, type of material, and other factors. *Cladosporium* is one of the predominant spore types worldwide and is frequently present in high numbers. *Penicillium/Aspergillus* species colonize both outdoor and indoor wet surfaces rapidly and are very easily dispersed. Other genera are usually present in lesser numbers.

** These fungi are generally not found growing on wet building materials. For example, the rusts and smuts are obligate plant pathogens. However, in each group there are notable exceptions. For example, agents of wood decay are members of the basidiomycetes and high counts of a single morphological type of basidiospore on an inside sample should be considered significant.

‡n = number of samples used to calculate data.

Interpretation of the data contained in this report is left to the client or the persons who conducted the field work. This report is provided for informational and comparative purposes only and should not be relied upon for any other purpose. "Typical outdoor data" are based on the results of the analysis of samples delivered to and analyzed by Eurofins EMLab P&K and assumptions regarding the origins of those samples. Sampling techniques, contaminants infecting samples, unrepresentative samples and other similar or dissimilar factors may affect these results. In addition, Eurofins EMLab P&K may not have received and tested a representative number of samples for every region or time period. Eurofins EMLab P&K hereby disclaims any liability for any and all direct, indirect, punitive, incidental, special or consequential damages arising out of the use or interpretation of the data contained in, or any actions taken or omitted in reliance upon, this report.

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MoldSCORE™: Spore Trap Report

Outdoor Sample: 3691 1880 Post outside

Fungi Identified	Outdoor sample spores/m3 <100 1K 10K >100K	Raw count	Spores/ m3
Generally able to grow indoors*			
Alternaria		1	13
Bipolaris/Drechslera group		ND	< 13
Chaetomium		ND	< 13
Cladosporium		9	480
Curvularia		ND	< 13
Epicoccum		7	93
Nigrospora		ND	< 13
Penicillium/Aspergillus types†		ND	< 13
Pithomyces		2	27
Stachybotrys		ND	< 13
Torula		ND	< 13
Seldom found growing indoors**			
Ascospores		ND	< 13
Basidiospores		10	530
Rusts		1	13
Smuts, Periconia, Myxomycetes		ND	< 13
Total			**1,160**

Location: 3691 1870 Post room D204

Fungi Identified	Indoor sample spores/m3 <100 1K 10K >100K	Raw count	Spores/ m3	MoldSCORE‡ 100 200 300	Score
Generally able to grow indoors*					
Alternaria		ND	< 13		100
Bipolaris/Drechslera group		ND	< 13		100
Chaetomium		ND	< 13		100
Cladosporium		2	110		105
Curvularia		ND	< 13		100
Nigrospora		ND	< 13		100
Penicillium/Aspergillus types†		ND	< 13		100
Stachybotrys		ND	< 13		100
Torula		ND	< 13		100
Seldom found growing indoors**					
Ascospores		ND	< 13		100
Basidiospores		1	53		101
Rusts		ND	< 13		100
Smuts, Periconia, Myxomycetes		ND	< 13		100
Total			**160**	**Final MoldSCORE**	**105**

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MoldSCORE™: Spore Trap Report

Location: 3691 1833 Post hallway

Fungi Identified	Indoor sample spores/m3 <100 1K 10K >100K	Raw count	Spores/ m3	MoldSCORE‡ 100 200 300	Score
Generally able to grow indoors*					
Alternaria		ND	< 13		100
Bipolaris/Drechslera group		ND	< 13		100
Chaetomium		ND	< 13		100
Cladosporium		ND	< 13		100
Curvularia		ND	< 13		100
Nigrospora		ND	< 13		100
Penicillium/Aspergillus types†		ND	< 13		100
Stachybotrys		ND	< 13		100
Torula		ND	< 13		100
Seldom found growing indoors**					
Ascospores		ND	< 13		100
Basidiospores		3	160		113
Rusts		ND	< 13		100
Smuts, Periconia, Myxomycetes		ND	< 13		100
Total			**160**	**Final MoldSCORE**	**113**

* The spores in this category are generally capable of growing on wet building materials in addition to growing outdoors. Building related growth is dependent upon the fungal type, moisture level, type of material, and other factors. *Cladosporium* is one of the predominant spore types worldwide and is frequently present in high numbers. *Penicillium/Aspergillus* species colonize both outdoor and indoor wet surfaces rapidly and are very easily dispersed. Other genera are usually present in lesser numbers.

** These fungi are generally not found growing on wet building materials. For example, the rusts and smuts are obligate plant pathogens. However, in each group there are notable exceptions. For example, agents of wood decay are members of the basidiomycetes and high counts of a single morphological type of basidiospore on an inside sample should be considered significant.

†The spores of Aspergillus and Penicillium (and others such as Acremonium, Paecilomyces) are small and round with very few distinguishing characteristics. They cannot be differentiated by non-viable sampling methods.

‡Rated on a scale from 100 to 300. A rating less than 150 is low and indicates a low probability of spores originating inside. A rating greater than 250 is high and indicates a high probability that the spores originated from inside, presumably from indoor mold growth. A rating between 150 and 250 indicates a moderate likelihood of indoor fungal growth. MoldSCORE is NOT intended for wall cavity samples. It is intended for ambient air samples in residences. Using the analysis on other samples (like wall cavity samples) will lead to misleading results.

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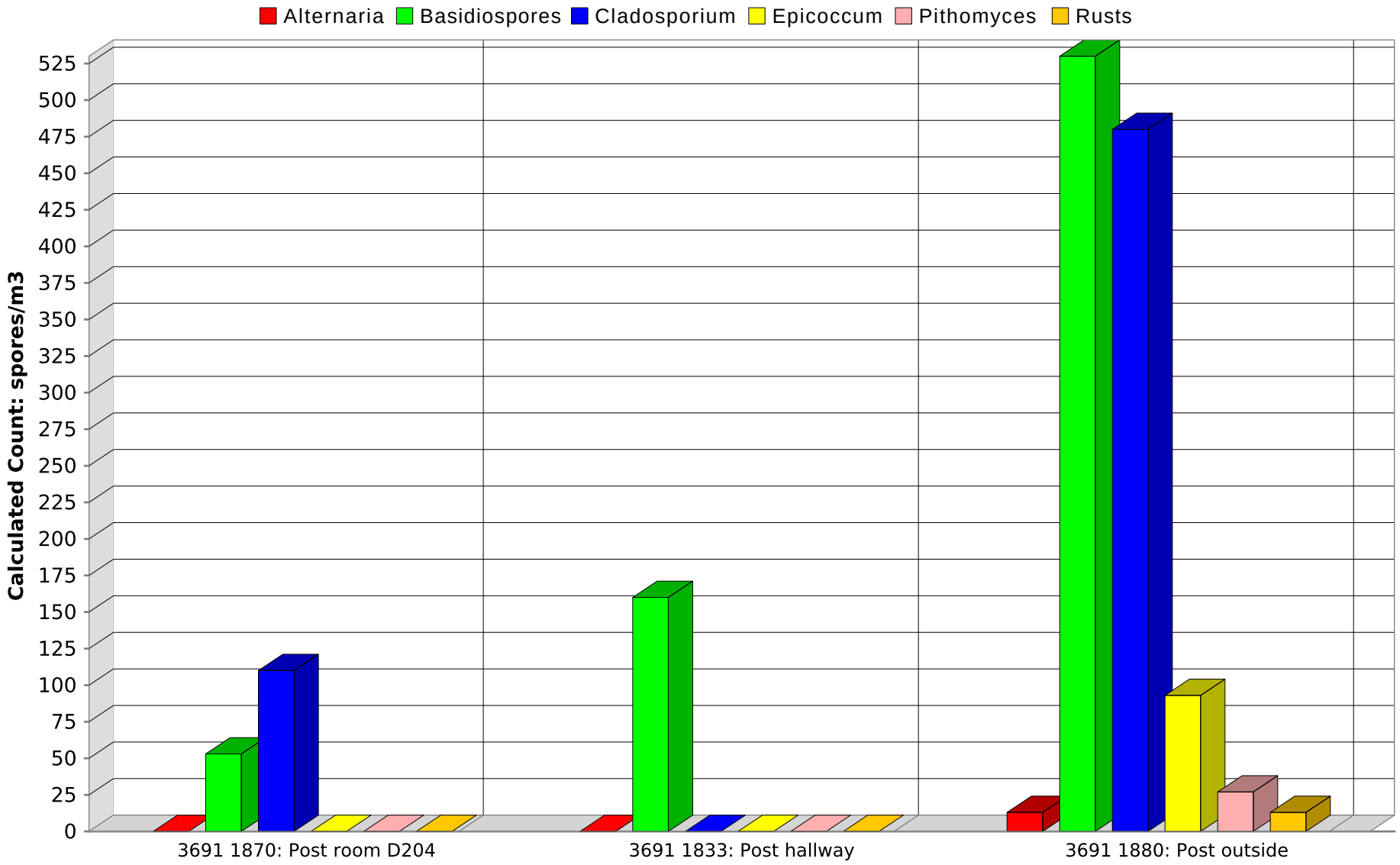
SPORE TRAP REPORT: NON-VIABLE METHODOLOGY



Comments:

Note: Graphical output may understate the importance of certain "marker" genera.