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 School District - 5; IAQ testing
EML ID: 3484877

Approved by:

Technical Manager
Ariunaa Jalsrai

Dates of Analysis:
Spore trap analysis: 12-20-2023

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'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.

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 School District - 5; IAQ testing

Date of Sampling: 12-15-2023
Date of Receipt: 12-16-2023
Date of Report: 12-20-2023

SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

Location:	36911868: A-214 (affected)			36911834: DE-122 (affected)		
Comments (see below)	None			None		
Lab ID-Version‡:	16998169-1			16998170-1		
Analysis Date:	12/20/2023			12/20/2023		
	raw ct.	% read	spores/m3	raw ct.	% read	spores/m3
Ascospores						
Basidiospores	2	25	110	4	25	210
Botrytis						
Chaetomium						
Cladosporium						
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			110		
Pollen/m3	< 13			< 13		
Skin cells (1-4+)	1+			1+		
Sample volume (liters)	75			75		
§ TOTAL SPORES/m3			110			210

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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Date of Sampling: 12-15-2023
Date of Receipt: 12-16-2023
Date of Report: 12-20-2023

SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

Location:	36911966: outside		
Comments (see below)	None		
Lab ID-Version‡:	16998171-1		
Analysis Date:	12/20/2023		
	raw ct.	% read	spores/m3
Ascospores	1	25	53
Basidiospores	9	25	480
Botrytis			
Chaetomium			
Cladosporium	18	25	960
Curvularia	1	25	53
Epicoccum			
Fusarium			
Myrothecium			
Nigrospora			
Other colorless			
Penicillium/Aspergillus types†			
Pithomyces			
Rusts			
Smuts, Periconia, Myxomycetes	1	25	53
Stachybotrys			
Stemphylium			
Torula			
Ulocladium			
Zygomycetes			
Background debris (1-4+)††	1+		
Hyphal fragments/m3	110		
Pollen/m3	< 13		
Skin cells (1-4+)	< 1+		
Sample volume (liters)	75		
§ TOTAL SPORES/m3			1,600

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.

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EML ID: 3484877

Approved by:

Technical Manager
Ariunaa Jalsrai

Dates of Analysis:
Spore trap analysis: 12-20-2023

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

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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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Date of Sampling: 12-15-2023
Date of Receipt: 12-16-2023
Date of Report: 12-20-2023

SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

Location:	36911868: A-214 (affected)		36911834: DE-122 (affected)		36911966: outside	
Comments (see below)	None		None		None	
Lab ID-Version‡:	16998169-1		16998170-1		16998171-1	
Analysis Date:	12/20/2023		12/20/2023		12/20/2023	
	raw ct.	spores/m3	raw ct.	spores/m3	raw ct.	spores/m3
Ascospores					1	53
Basidiospores	2	110	4	210	9	480
Bipolaris/Drechslera group						
Botrytis						
Chaetomium						
Cladosporium					18	960
Curvularia					1	53
Epicoccum						
Fusarium						
Myrothecium						
Nigrospora						
Other colorless						
Penicillium/Aspergillus types†						
Pithomyces						
Rusts						
Smuts, Periconia, Myxomycetes					1	53
Stachybotrys						
Stemphylium						
Torula						
Ulocladium						
Zygomycetes						
Background debris (1-4+)††	1+		1+		1+	
Hyphal fragments/m3	< 13		110		110	
Pollen/m3	< 13		< 13		< 13	
Skin cells (1-4+)	1+		1+		< 1+	
Sample volume (liters)	75		75		75	
§ TOTAL SPORES/m3		110		210		1,600

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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Date of Sampling: 12-15-2023
Date of Receipt: 12-16-2023
Date of Report: 12-20-2023

MoldRANGE™: Extended Outdoor Comparison

Outdoor Location: 36911966, outside

Fungi Identified	Outdoor data	Typical Outdoor Data for: December in Pennsylvania† (n‡=2117)						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	-	7	7	13	33	53	16	10	13	40	93	160	44
Bipolaris/Drechslera group	-	7	7	13	27	47	2	7	7	13	33	53	10
Chaetomium	-	7	7	13	31	53	3	7	7	13	27	40	3
Cladosporium	960	44	53	130	370	640	73	53	130	590	2,000	3,600	84
Curvularia	53	7	7	13	33	49	4	7	8	17	53	84	16
Nigrospora	-	7	7	13	27	53	7	7	7	13	44	67	17
Penicillium/Aspergillus types	-	33	53	130	370	640	48	53	53	210	590	1,000	49
Stachybotrys	-	7	7	17	300	510	1	7	7	13	45	170	< 1
Torula	-	7	7	13	27	53	3	7	11	13	47	67	7
Seldom found growing indoors**													
Ascospores	53	27	53	110	370	750	62	53	130	610	2,000	3,400	81
Basidiospores	480	53	110	370	1,400	3,000	95	110	250	1,900	7,900	15,000	96
Rusts	-	7	7	13	33	53	8	7	13	27	53	110	21
Smuts, Periconia, Myxomycetes	53	7	13	27	53	80	50	13	13	40	110	200	62
§ TOTAL SPORES/m3	1,600												

†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: 36911966 outside

Fungi Identified	Outdoor sample spores/m3 <100 1K 10K >100K	Raw count	Spores/ m3
Generally able to grow indoors*			
Alternaria		ND	< 13
Bipolaris/Drechslera group		ND	< 13
Chaetomium		ND	< 13
Cladosporium		18	960
Curvularia		1	53
Nigrospora		ND	< 13
Penicillium/Aspergillus types†		ND	< 13
Stachybotrys		ND	< 13
Torula		ND	< 13
Seldom found growing indoors**			
Ascospores		1	53
Basidiospores		9	480
Rusts		ND	< 13
Smuts, Periconia, Myxomycetes		1	53
Total			**1,600**

Location: 36911868 A-214 (affected)

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		2	110		109
Rusts		ND	< 13		100
Smuts, Periconia, Myxomycetes		ND	< 13		100
Total			**107**	**Final MoldSCORE**	**109**

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Date of Report: 12-20-2023

MoldSCORE™: Spore Trap Report

Location: 36911834 DE-122 (affected)

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		4	210		117
Rusts		ND	< 13		100
Smuts, Periconia, Myxomycetes		ND	< 13		100
Total			**213**	**Final MoldSCORE**	**117**

* 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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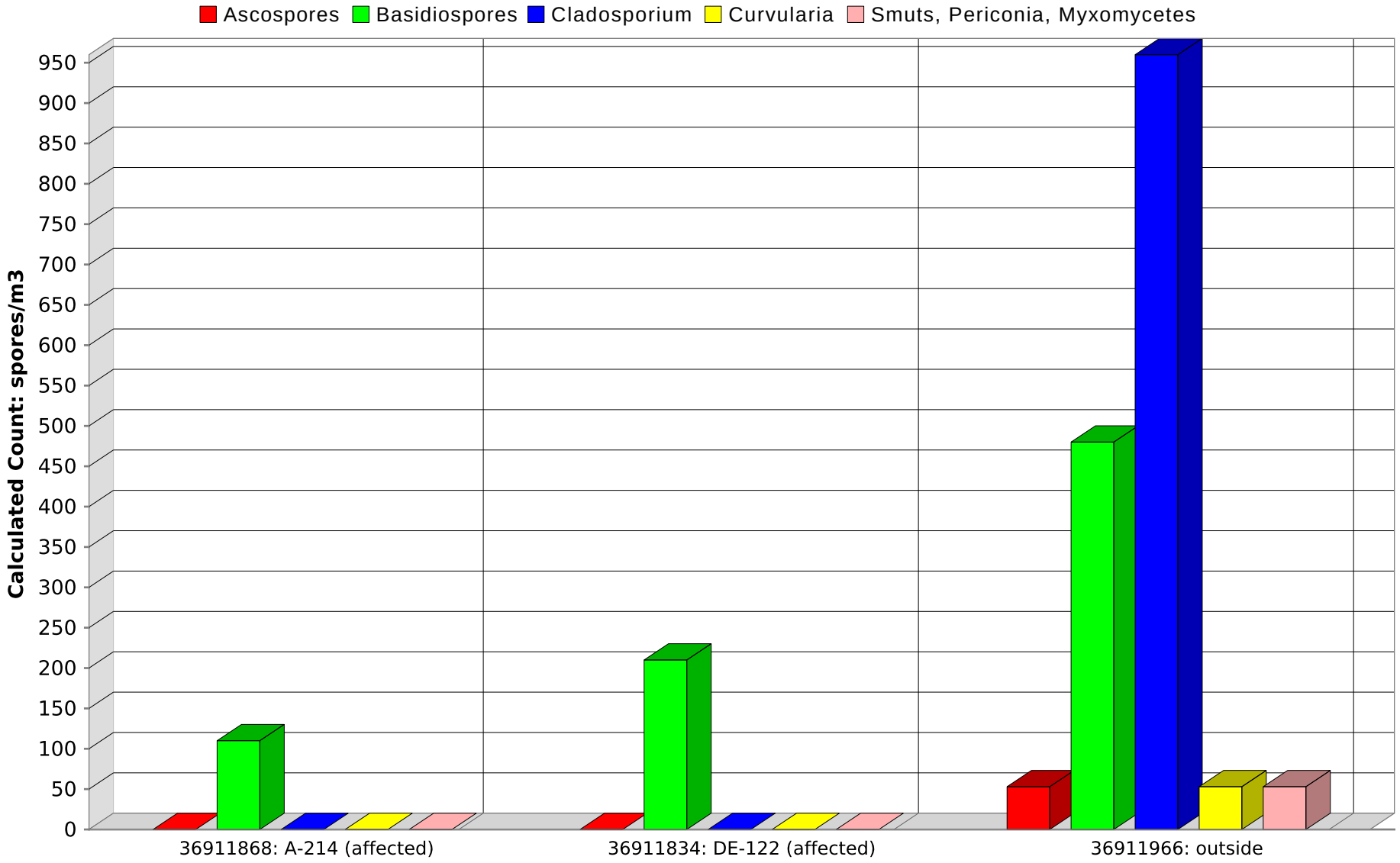
SPORE TRAP REPORT: NON-VIABLE METHODOLOGY



Comments:

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