EMLab P&K
A TestAmerica Company

Report for:

Mr. Doug Woodbury
State of Washington - DCF
1115 Washington Street, SE
OB2 Service Level
Olympia, WA 98501

Regarding: Project: WA. ST. Pritchard Bldg; IAQ Office Areas
EML ID: 1129158

Approved by:

Technical Manager
Michelle Seidl

Dates of Analysis:
Direct microscopic exam (Qualitative): 10-21-2013

Service SOPs: Direct microscopic exam (Qualitative) (1039)

EMLab P&K
19515 North Creek Pkwy N, #100, Bothell, WA 98011
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Client: State of Washington - DCF
C/O: Mr. Doug Woodbury
Re: WA. ST. Pritchard Bldg; IAQ Office Areas

Date of Sampling: 10-07-2013
Date of Receipt: 10-18-2013
Date of Report: 10-21-2013

DIRECT MICROSCOPIC EXAMINATION REPORT

Background Debris and/or Description	Miscellaneous Spores Present*	MOLD GROWTH: Molds seen with underlying mycelial and/or sporulating structures†	Other Comments††	General Impression
Lab ID-Version‡: 5098793-1, Analysis Date: 10/21/2013: Tape sample PR-1: Tape - dust sample, rm 117				
Heavy	Few	None	None	Normal trapping
Lab ID-Version: 5098795-1, Analysis Date: 10/21/2013: Tape sample PR-2: Tape - dust sample, rm 102				
Moderate	Few	None	None	Normal trapping
Lab ID-Version: 5098797-1, Analysis Date: 10/21/2013: Tape sample PR-3: Tape - dust sample, rm 104				
Heavy	Variety	None	None	Normal trapping
Lab ID-Version: 5098799-1, Analysis Date: 10/21/2013: Tape sample PR-4: Tape - dust sample, rm 106 East				
Moderate	Variety	None	None	Normal trapping

* Indicative of normal conditions, i.e. seen on surfaces everywhere. Includes basidiospores (mushroom spores), myxomycetes, plant pathogens such as ascospores, rusts and smuts, and a mix of saprophytic genera with no particular spore type predominating. Distribution of spore types seen mirrors that usually seen outdoors.

† Quantities of molds seen growing are listed in the MOLD GROWTH column and are graded 1+ to 4+, with 4+ denoting the highest numbers.

†† Some comments may refer to the following: Most surfaces collect a mix of spores which are normally present in the outdoor environment. At times it is possible to note a skewing of the distribution of spore types, and also to note "marker" genera which may indicate indoor mold growth. Marker genera are those spore types which are present normally in very small numbers, but which multiply indoors when conditions are favorable for growth.

‡ 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".

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EML ID: 1129158

Approved by:

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Dates of Analysis:
Spore trap analysis: 10-21-2013

Service SOPs: Spore trap analysis (1038)
AIHA-LAP, LLC accredited service, Lab ID #178599

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Re: WA. ST. Pritchard Bldg; IAQ Office Areas

Date of Sampling: 10-07-2013
Date of Receipt: 10-18-2013
Date of Report: 10-21-2013

SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

Location:	19000120: Air-o-cell rm 117, center of room			19000108: Air-o-cell between rm 102-106		
Comments (see below)	None			None		
Lab ID-Version‡:	5098801-1			5098803-1		
Analysis Date:	10/21/2013			10/21/2013		
	raw ct.	% read	spores/m3	raw ct.	% read	spores/m3
Alternaria						
Ascospores				2	25	110
Basidiospores	1	25	53	3	25	160
Chaetomium						
Cladosporium	2	25	110			
Epicoccum						
Fusarium						
Myrothecium						
Nigrospora						
Oidium						
Other colorless						
Penicillium/Aspergillus types†				2	25	110
Pithomyces						
Rusts						
Smuts, Periconia, Myxomycetes						
Stachybotrys						
Stemphylium						
Torula						
Ulocladium						
Zygomycetes						
Background debris (1-4+)††	3+			2+		
Hyphal fragments/m3	80			< 13		
Pollen/m3	< 13			13		
Skin cells (1-4+)	1+			1+		
Sample volume (liters)	75			75		
§ TOTAL SPORES/m3			160			370

Comments:

Spore types listed without a count or data entry were not detected during the course of the analysis for the respective sample.
† 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 then reported. It is important to account for samples volumes when evaluating dust levels.

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.

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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Client: State of Washington - DCF
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Re: WA. ST. Pritchard Bldg; IAQ Office Areas

Date of Sampling: 10-07-2013
Date of Receipt: 10-18-2013
Date of Report: 10-21-2013

SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

Location:	18998273: Air-o-cell dining rm area 1st flr			18998199: Air-o-cell outside air		
Comments (see below)	None			A		
Lab ID-Version‡:	5098805-1			5098807-1		
Analysis Date:	10/21/2013			10/21/2013		
	raw ct.	% read	spores/m3	raw ct.	% read	spores/m3
Alternaria				4	100	27
Ascospores	4	25	210	142	25	3,800
Basidiospores	13	25	690	304	25	8,100
Chaetomium						
Cladosporium	1	25	53	20/17	25/100	650
Fusarium						
Myrothecium						
Nigrospora						
Oidium				1	100	7
Other colorless						
Penicillium/Aspergillus types†	3	25	160	34/15	25/100	1,000
Pithomyces						
Rusts						
Smuts, Periconia, Myxomycetes	2	100	27	9	100	60
Stachybotrys						
Stemphylium						
Torula						
Ulocladium						
Zygomycetes						
Background debris (1-4+)††	2+			2+		
Hyphal fragments/m3	13			7		
Pollen/m3	< 13			< 7		
Skin cells (1-4+)	< 1+			< 1+		
Sample volume (liters)	75			150		
§ TOTAL SPORES/m3			1,100			14,000

Comments: A) 17 of the raw count *Cladosporium* spores were present as a single clump. 15 of the raw count *Penicillium/ Aspergillus* type spores were present as a single clump.

Spore types listed without a count or data entry were not detected during the course of the analysis for the respective sample.
† 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 then reported. It is important to account for samples volumes when evaluating dust levels.

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.

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

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Olympia, WA 98501

Regarding: Project: WA. ST. Pritchard Bldg; IAQ Office Areas
EML ID: 1129158

Approved by:

Technical Manager
Michelle Seidl

Dates of Analysis:
Spore trap analysis other particles-Supplement: 10-21-2013

Service SOPs: Spore trap analysis other particles-Supplement (1038)
AIHA-LAP, LLC accredited service, Lab ID #178599

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Date of Report: 10-21-2013

OTHER BIOLOGICAL PARTICLES REPORT: NON-VIABLE METHODOLOGY

Location:	19000120: Air-o-cell rm 117, center of room		19000108: Air-o-cell between rm 102-106		18998273: Air-o-cell dining rm area 1st flr		18998199: Air-o-cell outside air	
Comments (see below)	None		None		None		None	
Lab ID-Version‡:	5098802-1		5098804-1		5098806-1		5098808-1	
	raw ct.	particles/m3	raw ct.	particles/m3	raw ct.	particles/m3	raw ct.	particles/m3
POLLEN								
Alder (Alnus)			1	13				
Mulberry (Morus)								
Oak (Quercus)								
Other								
Pine (Pinaceae)								
Ragweed (Ambrosieae)								
Sycamore (Platanus)								
OTHER PLANT								
Algae			2	27				
Diatoms								
Fern, moss, etc. spores							2	13
Other (wood, trichomes, etc.)	13	170	5	67	3	40	7	47
OTHER PARTICLES:								
ANIMAL								
Epithelial (skin) cells	90	4,800	32	1,700	16	210	5	33
Hair								
Insect parts								
Mites								
FUNGI								
Hyphal fragments	6	80			1	13	1	7
NON-BIOLOGICAL								
Cellulose fibers	1	13						
Glass fiber			1	13			1	7
Starch particles	4	53	4	53	2	27		
Synthetic fibers	32	430	9	120	6	80	1	7
Background debris (1-4+)†	3+		2+		2+		2+	
Sample volume (liters)	75		75		75		150	

Comments:

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.

Carbonaceous particles include soot and other combustion products. In most instances a detailed analysis of soot can be accomplished using scanning electron microscopy.

Note: Interpretation is left to the company and/or persons who conducted the field work.

† Background debris is an indication of the amounts of non-biological particulate matter present on the slide (dust in the air) and is graded from 1+ to 4+ with 4+ indicating the largest amounts. To evaluate dust levels it is important to account for differences in sample volume.

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Regarding: Project: WA. ST. Pritchard Bldg; IAQ Office Areas
EML ID: 1129158

Approved by:

Technical Manager
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Dates of Analysis:
Quantitative spore count direct exam: 10-21-2013

Service SOPs: Quantitative spore count direct exam (1041 (previously I100006))

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QUANTITATIVE SPORE COUNT REPORT

Location:	PR-1: Tape - dust sample, rm 117		PR-2: Tape - dust sample, rm 102		PR-3: Tape - dust sample, rm 104		PR-4: Tape - dust sample, rm 106 East	
Comments (see below)	None		None		None		None	
Sample type	Tape sample		Tape sample		Tape sample		Tape sample	
Lab ID-Version‡:	5098794-1		5098796-1		5098798-1		5098800-1	
Analysis Date:	10/21/2013		10/21/2013		10/21/2013		10/21/2013	
	raw ct.	spores/unit	raw ct.	spores/unit	raw ct.	spores/unit	raw ct.	spores/unit
Alternaria								
Arthrinium								
Ascospores			1	23	10	230	5	110
Aureobasidium								
Basidiospores	2	45	5	110	62	1,400	38	860
Bipolaris/Drechslera group								
Botrytis								
Chaetomium								
Cladosporium	2	45	1	23	3	68	6	140
Curvularia								
Epicoccum					1	23	2	45
Fusarium								
Myrothecium								
Nigrospora								
Other colorless								
Penicillium/Aspergillus types†			1	23	17	390	9	200
Pithomyces					1	23	1	23
Rusts	1	23	1	23				
Smuts, Periconia, Myxomycetes					3	68		
Stachybotrys								
Stemphylium								
Torula								
Ulocladium								
Zygomycetes								
Background debris (1-4+)††	3+		3+		3+		3+	
Sample size	1		1		1		1	
Unit	1 in2		1 in2		1 in2		1 in2	
§ TOTAL SPORES/UNIT		110		200		2,200		1,400

Comments:

† 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 is an indication of the amount of non-biological particulate matter present on the slide (dust in the air) and is graded from 1+ to 4+ with 4+ indicating the largest amounts. This background material is also an indication of visibility for the analyst and resultant difficulty reading the slide. For example, high background debris may obscure the small spores such as the *Penicillium/Aspergillus* group. Counts from areas with 4+ background debris should be regarded as minimal counts and may actually be higher than reported.
‡ 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/unit has been rounded to two significant figures to reflect analytical precision.
Spore types listed without a count or data entry were not detected during the course of the analysis for the respective sample.