



HYGIENETECH

Hygiene Technologies International, Inc.

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August 8, 2016

California State Board of Equalization
450 N Street
Sacramento, California 94279

Document No. 21607001.2

Attention: Vince Paul

Regarding: 11th Floor Eastern Quadrant

Dear Mr. Paul:

On July 12, 2016, Lakhpreet Sandhu, Industrial Hygienist, with Hygiene Technologies International, Inc., (HygieneTech), visited Cubicle 85 located on the eastern side of the 11th Floor to perform exposure potential air sampling for total fungi at the request of the California State Board of Equalization (BOE) in response to an employee concern regarding indoor air quality at that location. The survey findings, along with the analytical data and conclusions, appear below.

On the survey date, air samples were collected for total (viable and nonviable) fungi analyses using a Zefon brand Bio-Pump™ equipped with Air-O-Cell® cassettes. The samples were subsequently analyzed for fungi (including yeasts, molds, rusts, smuts, and mushrooms) by trained and experienced microbiologists at a laboratory accredited by the American Industrial Hygiene Association (AIHA) and that successfully participates in the AIHA Environmental Microbiology Proficiency Analytical Testing (EMPAT) Program. The airborne fungi assessment analytical data with supporting and background information appear in the enclosed table.

As presented in Table 21607001-2, the airborne spore count datum recorded outdoors showed fungal spore types such as *Alternaria*, ascospores, basidiospores, *Chaetomium*, *Cladosporium*, colorless spores typical of *Penicillium* and *Aspergillus* species, *Oidium*, other brown, rusts, smuts, *Stachybotrys*, *Stemphylium*, and *Torula*, with *Cladosporium* predominating. In the indoor area tested, the datum showed that airborne fungal spores were detected at low airborne concentrations. The fungal spore types found indoor included *basidiospores* and other brown. The distribution of fungal spore types detected in the surveyed area was consistent with those found outdoors and the overall datum within the tested area was well below the overall outdoor datum recorded. These data are considered unremarkable and are not believed to pose a health risk beyond that posed by the outdoor environment where exposures to airborne fungi are expected.

Be advised that the data provided in this report only represent limited fungal growth exposure potentials that existed at the time the survey was performed and at the precise sample location indicated, the latter of which were selected based on the available background information provided. Note that fungal growth

Mr. Vince Paul
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exposure potentials may change due to changes in environmental conditions (such as those caused by water intrusion), use of mechanical systems, or other factors.

If you have any comments or questions regarding the information contained in this correspondence, please feel free to contact our offices directly at (310) 370-8370.

Sincerely,

HYGIENE TECHNOLOGIES INTERNATIONAL, INC.



Kenny K. Hsi, CIH
Technical Director

HYGIENE TECHNOLOGIES INTERNATIONAL, INC.

APPENDIX A



CLIENT: California State Board of Equalization
450 N Street
Sacramento, California 94279

TABLE 21607001-2
AIRBORNE TOTAL FUNGI RESULTS
11TH FLOOR
450 N STREET
SACRAMENTO, CALIFORNIA
JULY 12, 2016

Results reported in spores per cubic meter of air (spores/M³)

SAMPLE NUMBER	21607001-2 TM01OUT	21607001-2 TM02		
SAMPLING LOCATION/ACTIVITIES	Outdoors; about 25 feet northeast of the building main entrance; approximately five feet above ground/Normal outdoor activities	11 th Floor; Column L18 area; Cubicle 85; about center; approximately five feet above floor/Sampling activities only	This column intentionally left blank	This column intentionally left blank
START/STOP	11:23:00/11:28:00	11:33:00/11:38:00		
SAMPLE TIME	5 minutes	5 minutes		
Alternaria	40			
Ascospores	210			
Basidiospores	430	53		
Botrytis				
Chaetomium	40			
Cladosporium	1,100			
Curvularia				
Epicoccum				
Myrothecium				
Nigrospora				
Oidium	13			
Other brown	13	13		
Other colorless				
Penicillium/Aspergillus types	650			
Pithomyces				
Rusts	67			
Smuts (Periconia, Myxomycetes)	130			
Stachybotrys	13			
Stemphylium	13			
Torula	67			
Ulocladium				
Zygomycetes				
Hyphal fragments	67	13		
Background debris*	3+	3+		
TOTAL**	2,800	67		

*Background debris is an indication of the amount of non-biological particulate matter present on the slide and is graded (from least to greatest) as 1+ to 4+.

**Note that all reported counts have been rounded to no more than two significant figures based on the sampling and analytical methods used, and therefore the total count may not equal the sum of the individual counts in a column.

Client: Hygiene Technologies International, Inc.
 C/O: Mr. Kenny Hsi, Mr. Lakhpreet Sandhu
 Re: 21607001-2; 11th Floor Air Sampling

Date of Submittal: 07-12-2016
 Date of Receipt: 07-12-2016
 Date of Report: 07-13-2016

MoldSCORE™: Spore Trap Report

Outdoor Sample: 21607001-2 TM01OUT

Fungi Identified	Outdoor sample spores/m3				Raw count	Spores/m3
	<100	1K	10K	>100K		
Generally able to grow indoors*						
Alternaria					3	40
Bipolaris/Drechslera group					ND	< 13
Chaetomium					3	40
Cladosporium					20	1,100
Curvularia					ND	< 13
Nigrospora					ND	< 13
Other brown					1	13
Penicillium/Aspergillus types†					28	650
Stachybotrys					1	13
Stemphylium					1	13
Torula					5	67
Seldom found growing indoors**						
Ascospores					4	210
Basidiospores					8	430
Oidium					1	13
Rusts					5	67
Smuts, Periconia, Myxomycetes					10	130
Total						2,760

Location: 21607001-2 TM02

Fungi Identified	Indoor sample spores/m3				Raw count	Spores/m3
	<100	1K	10K	>100K		
Generally able to grow indoors*						
Alternaria					ND	< 13
Bipolaris/Drechslera group					ND	< 13
Chaetomium					ND	< 13
Cladosporium					ND	< 13
Curvularia					ND	< 13
Nigrospora					ND	< 13
Other brown					1	13
Penicillium/Aspergillus types†					ND	< 13
Stachybotrys					ND	< 13
Torula					ND	< 13
Seldom found growing indoors**						
Ascospores					1	53
Basidiospores					ND	< 13
Rusts					ND	< 13
Smuts, Periconia, Myxomycetes					ND	< 13
Total						67

MoldSCORE‡			Score
100	200	300	
			100
			100
			100
			100
			100
			100
			105
			100
			100
			100
			100
			105
			100
			100
Final MoldSCORE			105

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MoldSCORE™: Spore Trap Report

* 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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 Date of Report: 07-13-2016

MoldSTAT™: Supplementary Statistical Spore Trap Report

Outdoor Summary: 21607001-2 TM01OUT:

Species detected	Outdoor sample spores/m3				Typical outdoor ranges (North America)	Freq. %
	<100	1K	10K	>100K		
Alternaria				40	7 - 40 - 570	44
Ascospores				210	13 - 210 - 6,200	76
Basidiospores				430	13 - 430 - 23,000	92
Chaetomium				40	7 - 13 - 160	10
Cladosporium				1,100	27 - 480 - 9,900	90
Oidium				13	7 - 13 - 210	11
Other brown				13	7 - 20 - 130	25
Penicillium/Aspergillus types				650	13 - 160 - 2,600	67
Rusts				67	7 - 22 - 360	20
Smuts, Periconia, Myxomycetes				130	7 - 53 - 950	64
Stachybotrys				13	7 - 13 - 440	3
Stemphylium				13	7 - 13 - 93	3
Torula				67	7 - 13 - 170	9
Total				2,800		

The "Typical outdoor ranges" and "Freq. %" columns show the typical low, medium, and high spore counts per cubic meter the frequency of occurrence for the given spore type. The low, medium, and high values represent the 2.5, 50, and 97.5 percent values when the spore type is detected. For example, if the low value is 53 and the frequency of occurrence is 63%, it would mean that we typically detect the given spore type on 63 percent of all outdoor samples and, when detected, 2.5% of the time it is present in levels below 53 spores/m3.

Indoor Samples

Location: 21607001-2 TM02

% of outdoor total spores/m3	Friedman chi-square* (indoor variation)	Agreement ratio** (indoor/outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)
Result: 2%	dF: N/A Result: N/A Critical value: N/A Inside Similar: N/A	Result: 0.2667	dF: 13 Result: 0.3242 Critical value: 0.4780 Outside Similar: No	Score: 105 Result: Low
Species Detected	Spores/m3			
	<100	1K	10K	>100K
Basidiospores				53
Other brown				13
Total				67

* The Friedman chi-square statistic is a non-parametric test that examines variation in a set of data (in this case, all indoor spore counts). The null hypothesis (H0) being tested is that there is no meaningful difference in the data for all indoor locations. The alternative hypothesis (used if the test disproves the null hypothesis) is that there is a difference between the indoor locations. The null hypothesis is rejected when the result of the test is greater than the critical value. The critical value that is displayed is based on the degrees of freedom (dF) of the test and a significance level of 0.05.

** An agreement ratio is a simple method for assessing the similarity of two samples (in this case the indoor sample and the outdoor summary) based on the spore types present. A score of one indicates that the types detected in one location are the same as that in the other. A score of zero indicates that none of the types detected indoors are present outdoors. Typically, an agreement of 0.8 or higher is considered high.

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MoldSTAT™: Supplementary Statistical Spore Trap Report

*** The Spearman rank correlation is a non-parametric test that examines correlation between two sets of data (in this case the indoor location and the outdoor summary). The null hypothesis (H0) being tested is that the indoor and outdoor samples are unrelated. The alternative hypothesis (used if the test disproves the null hypothesis) is that the samples are similar. The null hypothesis is rejected when the result of the test is greater than the critical value. The critical value that is displayed is based on the degrees of freedom (dF) of the test and a significance level of 0.05.

**** MoldSCORE™ is a specialized method for examining air sampling data. It is a score between 100 and 300, with 100 indicating a greater likelihood that the airborne indoor spores originated from the outside, and 300 indicating a greater likelihood that they originated from an inside source. The Result displayed is based on the numeric score given and will be either Low, Medium, or High, indicating a low, medium, or high likelihood that the spores detected originated from an indoor source. EMLab P&K reserves the right to, and may at anytime, modify or change the MoldScore algorithm without notice.

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 ranges" are based on the results of the analysis of samples delivered to and analyzed by 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. With the statistical analysis provided, as with all statistical comparisons and analyses, false-positive and false-negative results can and do occur. EMLab P&K hereby disclaims any liability for any and all direct, indirect, punitive, incidental, special or consequential damages arising out of the data contained in, or any actions taken or omitted in reliance upon, this report.

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Date of Report: 07-13-2016

MoldRANGE™: Extended Outdoor Comparison

Outdoor Location: 21607001-2 TM01OUT

Fungi Identified	Outdoor data	Typical Outdoor Data for: July in California† (n‡=19366)						Typical Outdoor Data for: The entire year in California† (n‡=230447)					
		very low	low	med	high	very high	freq %	very low	low	med	high	very high	freq %
Generally able to grow indoors*													
Alternaria		13	13	27	67	110	61	13	13	27	65	110	53
Bipolaris/Drechslera group		7	13	13	27	53	14	7	13	13	27	53	12
Chaetomium		8	13	13	27	46	25	8	13	13	27	48	19
Cladosporium		160	270	670	1,500	2,400	98	110	210	610	1,700	2,800	97
Curvularia		7	13	13	31	53	8	7	13	13	27	53	6
Nigrospora		7	13	13	27	40	7	7	13	13	27	53	9
Other brown		13	13	13	40	53	36	13	13	13	40	53	34
Penicillium/Aspergillus types		53	93	210	590	960	85	53	100	210	610	1,000	84
Stachybotrys		8	13	13	40	80	5	7	13	13	33	67	4
Stemphylium		7	13	13	27	40	12	7	13	13	27	40	9
Torula		8	13	13	40	67	15	8	13	13	40	67	11
Seldom found growing indoors**													
Ascospores		13	40	80	210	370	68	27	53	110	370	750	71
Basidiospores		38	53	160	370	640	89	53	80	260	1,000	2,400	93
Oidium		13	13	13	40	67	21	13	13	13	50	80	19
Rusts		13	13	13	53	80	28	13	13	13	53	87	26
Smuts, Periconia, Myxomycetes		13	13	44	120	200	71	13	13	40	110	200	68
§ TOTAL SPORES/m3	2,800												

†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.

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Report for:

Mr. Kenny Hsi, Mr. Lakhpreet Sandhu
Hygiene Technologies International, Inc.
3625 Del Amo Boulevard, Suite 180
Torrance, CA 90503-8370

Regarding: Project: 21607001-2; 11th Floor Air Sampling
EML ID: 1567729

Approved by:

Technical Manager
Louise White

REVISED REPORT

Dates of Analysis:
Spore trap analysis: 07-19-2016

Service SOPs: Spore trap analysis (EM-MY-S-1038)
AIHA-LAP, LLC accredited service, Lab ID #179768

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.

EMLab P&K'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.

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C/O: Mr. Kenny Hsi, Mr. Lakhpreet Sandhu
Re: 21607001-2; 11th Floor Air SamplingDate of Submittal: 07-12-2016
Date of Receipt: 07-12-2016
Date of Report: 07-13-2016**SPORE TRAP REPORT: NON-VIABLE METHODOLOGY**

Location:	21607001-2 TM01OUT		21607001-2 TM02	
Comments (see below)	A		None	
Lab ID-Version‡:	7268954-2		7268955-2	
Analysis Date:	07/19/2016		07/19/2016	
	raw ct.	spores/m ³	raw ct.	spores/m ³
Alternaria	3	40		
Ascospores	4	210		
Basidiospores	8	430	1	53
Chaetomium	3	40		
Cladosporium	20	1,100		
Fusarium				
Myrothecium				
Nigrospora				
Oidium	1	13		
Other brown	1	13	1	13
Other colorless				
Penicillium/Aspergillus types†	28	650		
Pithomyces				
Rusts	5	67		
Smuts, Periconia, Myxomycetes	10	130		
Stachybotrys	1	13		
Stemphylium	1	13		
Torula	5	67		
Ulocladium				
Zygomycetes				
Background debris (1-4+)††	3+		3+	
Hyphal fragments/m ³	67		13	
Pollen/m ³	110		13	
Skin cells (1-4+)	1+		2+	
Sample volume (liters)	75		75	
§ TOTAL SPORES/m³		2,800		67

Comments:A) 21 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, 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/m³ divided by the raw count, expressed in spores/m³. The limit of detection is the analytical sensitivity (in spores/m³) multiplied by the sample volume (in liters) divided by 1000 liters.

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.

