HYGIENETECH
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September 1, 2009

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

Document No. 20908001.4

Attention: David Gau

Regarding: Limited Indoor Air Quality Survey
24TH Floor Pre-Occupancy Assessment

Dear Mr. Gau:

On August 17, 2009, industrial hygienists with Hygiene Technologies International, Inc. (HygieneTech) conducted a limited indoor air quality survey on the 24th Floor of the State of California State Board of Equalization (BOE) building located at the above mentioned address. This survey was performed in response to BOE's need to reoccupy the floor in order to accommodate proposed repair/remediation work by the State of California Department of General Services (DGS) within the building. At the time of the survey, various samples were collected and direct-reading instruments were used to assess the general indoor air quality. I have enclosed our report, which included general observations, sample and direct-reading results, a discussion of the data, conclusions, and recommendations.

If you have any comments or questions regarding the information contained in this report, please do not hesitate to contact our offices directly at (310) 370-8370.

Sincerely,

HYGIENE TECHNOLOGIES INTERNATIONAL, INC.

Brian P. Daly, CIH, PE
President

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LIMITED INDOOR AIR QUALITY SURVEY
PRE-OCCUPANCY ASSESSMENT – 24TH FLOOR

450 N STREET
SACRAMENTO, CALIFORNIA

PREPARED FOR:

STATE OF CALIFORNIA
BOARD OF EQUALIZATION
450 N STREET
SACRAMENTO, CALIFORNIA

PREPARED BY:

HYGIENE TECHNOLOGIES INTERNATIONAL, INC.
3625 DEL AMO BOULEVARD, SUITE 180
TORRANCE, CALIFORNIA

SEPTEMBER 1, 2009

1.0 BACKGROUND

On August 17, 2009, industrial hygienists with Hygiene Technologies International, Inc. (HygieneTech) conducted a limited indoor air quality survey on the 24th Floor of the State of California State Board of Equalization (BOE) building located at 450 N Street in Sacramento, California. This survey was performed in response to BOE's need to reoccupy the floor in order to accommodate proposed repair/remediation work by the State of California Department of General Services (DGS) within the building. During the survey, a variety of samples were collected and direct-reading instruments were used to assess the general indoor air quality on the 24th Floor of the subject building. Various air samples were collected in order to assess fungal growth exposure potentials. In addition, air samples were collected throughout the floor for fibrous dust, 4-phenylcyclohexene, formaldehyde, and total dust analysis and direct-reading instruments were used to determine airborne volatile organic compounds (VOCs), carbon dioxide (CO_2), air temperature, and relative humidity.

2.0 OBSERVATIONS

The interior building materials of the 24th Floor included, but were not limited to, metal window frames; painted gypsum board and/or metal windowsills; metal doorjambs and door frames; painted gypsum board walls in the general work areas; tile covered walls and painted gypsum board ceilings in the restrooms; suspended 2' by 4' ceiling tiles and or gypsum board ceilings in the general work areas; wall-to-wall carpeting in the general work areas, hallways and elevator lobby areas; and ceramic or vinyl tile flooring in the restrooms and break rooms.

The floor was unoccupied on the survey dates but was furnished with typical office desks, upholstered chairs, shelves, fabric covered cubicles, and other general office items.

3.0 SAMPLING AND ANALYSIS

Air samples were collected and 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. Other samples were collected for airborne fibers, 4-phenylcyclohexene, formaldehyde, and total dust determinations using SKC® brand Airchek® 52 sampling pumps and the appropriate sampling media. Pump flow rates were established and verified using a BIOS DryCal DC-Lite primary flow meter. Those samples were collected and analyzed along with blanks (identical sampling media through which no air was drawn) at laboratories accredited by the American Industrial Hygiene Association (AIHA) through successful participation in the National Institute for Occupational Safety and Health (NIOSH) Proficiency Analytical Testing Program. Direct-reading instruments were used to determine airborne VOC levels, the results of which appear in Table 20908001-18 in Appendix A of this report. A discussion of the airborne CO_2 data, along with air temperature and relative humidity results, appears in Section 4.0 of this report. Additional information concerning the specific sampling and analytical methods appears below.

3.0 SAMPLING AND ANALYSIS (CONTINUED)

3.1 Airborne Total Fungi

Air samples for airborne total (viable and nonviable) fungi determinations were collected using a Zefon brand Bio-Pump™ equipped with Air-O-Cell™ cassettes. All such samples were collected at various indoor locations and two samples were collected outdoors on for comparison purposes. The resultant data, which are presented in spores per cubic meter of air (spores/M^3), appear in Table 20908001-13.

3.2 Airborne Fibrous Dust

Area air samples for fibrous dust were collected at stationary locations on 25-millimeter diameter, 0.8-micrometer pore size, mixed cellulose ester filters. The samples were analyzed by phase contrast microscopy (PCM) in accordance with the NIOSH Method 7400. These data are presented in fibers per cubic centimeter (f/cc) of air in Table 20908001-14.

3.3 Airborne Total Dust

Area air samples for total dust determination were collected at stationary locations on filter cassettes containing pre-weighed 37-millimeter diameter, polyvinyl chloride filters having a pore size of five micrometers. The samples were analyzed by gravimetric method in accordance with the NIOSH Method 0500. These data are presented in milligrams per cubic meter of air (mg/M^3) and appear in Table 20908001-15.

3.4 Formaldehyde

Area air samples were collected for formaldehyde determinations using DNPH silica gel sorbent tubes. The analyses were performed by high performance liquid chromatography using an ultraviolet detector in accordance with a modified NIOSH Method 2016. These data are presented in parts per million (ppm) and appear in Table 20908001-16.

3.5 Airborne 4-Phenylcyclohexene

Area air samples for 4-phenylcyclohexene were collected by the mini-canisters hat were calibrated by and received from Galson Laboratories, and each sample was analyzed by gas chromatography with mass spectrometry detection (GC-MS) in accordance with the modified OSHA PV2120/U.S. EPA Method TO15. These data are presented in parts per billion volume (ppbv) and appear in Table 20908001-17.

3.6 Airborne Volatile Organic Compounds

Direct-reading air measurements for VOCs were also recorded at various locations on the 24th Floor using a RAE Systems, Inc. Mini-RAE 2000 photoionization detector, which is capable of detecting a wide variety of unsaturated hydrocarbons at airborne concentrations ranging from 0.1 to 10,000 parts per million (ppm). Prior to the survey, this instrument was calibrated using a 100-ppm isobutylene gas standard. These data are presented in ppm.

3.0 SAMPLING AND ANALYSIS (CONTINUED)

3.7 Airborne Carbon Dioxide

Direct-reading air measurements for airborne CO_2 concentration was recorded at a stationary location using a Telaire® 7001 Carbon Dioxide and Temperature Monitor along with the HOBO® data logger. The data are presented in ppm.

3.8 Air Temperature and Relative Humidity

Air temperature and relative humidity data were recorded at a stationary location using a Telaire® 7001 Carbon Dioxide and Temperature Monitor along with the HOBO® data logger.

4.0 DISCUSSION

4.1 Airborne Total Fungi

The airborne total fungi data showed mostly common spore types outdoors such as *Alternaria*, ascospores, basidiospores, *Chaetomium*, *Cladosporium*, colorless spores typical of *Penicillium* and *Aspergillus* species, *Epicoccum*, rusts, smuts, *Stachybotrys*, *Torula*, and/or *Ulocladium*, with basidiospores or *Cladosporium* predominating. Indoors, the ambient data showed low airborne concentrations of common fungal spores that included one or more of the following: basidiospores, *Cladosporium*, and/or colorless spores typical of *Penicillium* and *Aspergillus* species. Indoors, the distribution of fungal spore types detected in the surveyed areas was consistent with those found outdoors, and the overall data within the tested areas were well below the overall data recorded outdoors. These data are not believed to pose a health risk beyond that posed by the outdoor environment where exposures to airborne fungi are expected.

4.2 Airborne Fibrous Dust

The data recorded in the surveyed areas indicated that airborne fibrous dusts were either not detected above the laboratory detection limits of 0.003 ppm or was detected at a level of 0.005 ppm. Because the samples were collected at stationary locations at approximate breathing zone height, the resultant data are expected to represent building occupant *exposure potentials* for those persons working in or passing through the areas monitored. These data, which are expected to represent employee *exposure potentials* to fibers of various types, including man-made and natural mineral fibers, cellulosics (paper or wood composition), gypsum, and other fibrous dusts common in the environment, are well below the current Cal-OSHA 8-hour TWA PEL for asbestos fibers of 0.1 f/cc, the most restrictive exposure limit for fibrous dusts.

4.3 Airborne Total Dust

Common dust that is typically identified in buildings usually contains a wide variety of materials including, but not limited to, gypsum crystals, cellulosic particles, fiberglass fragments, mineral grains from soil, fungi spores, fine glass fibers, textile and wood fibers, iron or steel fragments, dead skin cells, insect parts, animal dander, and pollens. Generally, exposure to low levels of such materials does not produce ill effects in most persons. In fact, these so-called *nuisance dusts* have a long

4.0 DISCUSSION (CONTINUED)

4.3 Airborne Total Dust (Continued)

history of little adverse effect to the lungs and are not known to produce significant diseases or toxic effects, such as collagen (scar tissue) formation, when exposure are kept under reasonable control.

The data recorded in the surveyed areas showed that airborne total dust was not detected at or above the respective laboratory analytical detection limits indicated. Because the samples were collected at stationary locations at approximate breathing zone height, the resultant data are expected to represent building occupant *exposure potentials* for those persons working in or passing through the areas monitored. These data are well below the State of California, Department of Industrial Relations, Division of Occupational Safety and Health (Cal-OSHA) 8-hour time-weighted average (TWA) permissible exposure limit (PEL) for total dust of 10 mg/M^3, as defined in Title 8 of the California Code of Regulations, Section 5155 (T8, CCR § 5155). Note that these data are also well below the American Conference of Governmental Industrial Hygienists 8-hour TWA threshold limit value (TLV-TWA) for particulate (not otherwise classified) of 10 mg/M^3; the U.S. Environmental Protection Agency (EPA) National Ambient Air Quality Primary Standard of 0.26 mg/M^3 (24-hour standard); and the American Society of Heating, Refrigerating, and Air-Conditioning Engineers, Inc. (ASHRAE) theoretical value for non-occupational environments of 1/10 of the TLV.

4.4 Formaldehyde

The data recorded in the surveyed areas indicated that airborne formaldehyde was not detected at or above the respective laboratory analytical detection limits of 0.005 ppm. Because these samples were collected at stationary locations at approximate breathing zone height, the resultant data are expected to represent building occupant *exposure potentials* for those persons working in or passing through the areas monitored. These data are well below the Cal-OSHA 8-hour TWA PEL for Formaldehyde of 0.75 ppm, as defined in T8, CCR § 5155.

4.5 Airborne 4-Phenylcyclohexene

The airborne data indicated that 4-phenylcyclohexene was not detected at or above the laboratory analytical detection limit of 1.0 ppbv. Although current standards or guidelines have not been established for 4-phenylcyclohexene at the time of this report, all such data are considered unremarkable.

4.6 Airborne Volatile Organic Compounds

With the use of a direct-reading photoionization detector, VOCs in most locations were not detected at or above the instrument detection limit of 0.1 ppm. Because these data were recorded at stationary locations at approximate breathing zone height, the results are expected to represent building occupant *exposure* potentials for those persons occupying or passing through the areas monitored. These data were well below the surrogate Cal-OSHA PELs that are often used for comparative purposes regarding VOC exposures, such as those for gasoline, hexane, and varnish makers and painters (VM&P) naphtha.

4.0 DISCUSSION (CONTINUED)

4.7 Airborne Carbon Dioxide

On August 17, 2009, the direct-reading results indicated that CO_2 was detected at levels ranging from 454 to 513 ppm on the 24th Floor. While these data were somewhat higher than the expected outdoor CO_2 levels, which generally range between 320 and 350 ppm, they are considered normal for indoor environments and they are all well below the Cal-OSHA 8-hour TWA PEL for CO_2 of 5000 ppm (T8, CCR, § 5155). They are also below the level of 1000 ppm, which is essentially equivalent to the recommended upper limit for building occupant comfort and odor control established by ASHRAE (not greater than 700 ppm above the outdoor CO_2 value) as stated in ASHRAE 62-2001.

Based on historic studies performed by HygieneTech, building occupant complaints of "stuffy" air often begin when CO_2 levels exceed 800 ppm. HygieneTech has also found that some sensitive persons may experience discomfort, including eye irritation and headache, when CO_2 levels reach 1,000 ppm. Such symptoms are not believed to be the result of an unhealthful exposure to CO_2; rather, they are thought to be the result of exposure to other common indoor air pollutants which, if not exhausted and/or diluted, can accumulate over time.

4.8 Air Temperature and Relative Humidity

On August 17, 2009, the air temperatures ranged between 75.2 and 78.7 degrees Fahrenheit (°F). Based on the experience of HygieneTech, the air temperatures perceived as comfortable by most persons in office environments, and recommended by ASHRAE for occupant comfort, range between 68.0 and 74.5°F (winter) and 73.0 and 79.0°F (summer). The air temperatures recorded in the surveyed areas were within the comfort range recommended for the summer months.

Relative humidity data were recorded indoors at levels ranging from 33.8 to 36.7 percent. Such levels were well within the 20 to 60 percent relative humidity level range recommended by ASHRAE for occupant comfort. Note that HygieneTech recommends that the relative humidity in buildings not exceed 50 percent in order to limit the potential for fungal growth.

5.0 CONCLUSIONS

5.1 The airborne total fungi data recorded in the surveyed areas showed airborne fungi levels that were well below those recorded outdoors and therefore considered unremarkable. These data are not believed to pose a health risk beyond that posed by the outdoor environment where exposures to airborne fungi are expected.

5.2 The airborne total and fibrous dust, 4-phenylcyclohexene, formaldehyde, VOC, and $C0_2$ recorded during the survey were unremarkable. Collectively, the data were well below applicable Cal-OSHA 8-hour TWA PELs and/or other occupational, non-occupational, ASHRAE, or foreign guidelines. The data are not expected to represent conditions that pose a measurable health risk to the building occupants.

5.0 CONCLUSIONS (CONTINUED)

5.3 On August 17, 2009, air temperatures ranged between 75.2 and 78.7 °F. Based on the experience of HygieneTech, the air temperatures perceived as comfortable by most persons in office environments, and recommended by ASHRAE for occupant comfort, range between 68.0 and 74.5°F (winter) and 73.0 and 79.0°F (summer). The air temperatures recorded in the surveyed areas were within the comfort range recommended for the summer months. Relative humidity data were recorded indoors at levels ranging from 33.8 to 36.7 percent, levels that were well within the 20 to 60 percent relative humidity level range recommended by ASHRAE for occupant comfort. Note that HygieneTech recommends that the relative humidity in buildings not exceed 50 percent in order to limit the potential for fungal growth.

5.4 Be advised that the data provided in this report only represent fungal growth exposure potentials that existed at the time the survey was performed and at the precise sample locations only, the latter of which were selected based on the available background information provided. Note that fungal growth and exposure potentials may change due to changes in environmental conditions (such as those caused by water intrusion), use of mechanical systems, or other factors. Also be advised that additional fungal growth may exist at one or more locations in the structure that were not specifically assessed during the survey.

6.0 RECOMMENDATIONS

All such recommendations are based strictly on the assessment information and analytical data that were available to HygieneTech at the time this report was prepared. Be advised that, in order to establish data that accurately reflects all the fungal growth sites on the 24th Floor, additional assessment evaluations may be required as more information is known regarding the history of water intrusion episodes in discrete building areas.

6.1 Additional fungal growth remediation will likely be required on the 24th Floor due to known fungal growth reservoirs confirmed during destructive testing, as stated by LaCroix Davis, LLC in their *California State Board of Equalization Building Assessment – Final Report* dated February 29, 2009. The purpose of this assessment was to allow the BOE to safely reoccupy the 24th Floor as a swing space while ongoing repair/remediation work take place on other currently occupied floors. Until such time these confirmed fungal growth and perhaps other unknown reservoirs are remediated, it is highly likely that complaints related to fungal growth related odors, which has been a common concern on several floor, will continue to be an issue. The HygieneTech investigation into the odor complaints, conclusions, and recommendations can be found in HygieneTech Document No. 20903001.1 dated May 4, 2009.

6.2 If not yet established, an accurate record of all air monitoring results should be maintained in accordance with Cal-OSHA regulation found in T8, CCR § 3204. All affected employees should be informed that the *exposure potential* data in this report exist and that those persons, or their representatives, have a right to access relevant exposure data and medical records.

6.0 RECOMMENDATIONS (CONTINUED)

6.3 Also be advised that the exposure data recorded during the survey may not be sufficiently broad to adequately assess the suitability of the indoor air quality for all individuals, particularly those who are extremely sensitive to certain chemical and/or biological substances or for those individuals with immune system deficiencies. Although not expected, if persons occupying or passing through the 24th Floor do experience non-specific ill effects of unknown etiology, then those affected should be referred to a medical professional in order to determine or specify the possible cause(s) of such reactions. If more information becomes available, further investigation and air monitoring may be warranted.

HYGIENE TECHNOLOGIES INTERNATIONAL, INC.

Date: September 1, 2009

Kenny K. Hsi, CIH
Technical Director

Date: September 1, 2009

Brian P. Daly, CIH, PE
President

HYGIENE TECHNOLOGIES INTERNATIONAL, INC.

APPENDIX A

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

TABLE 20908001-13
AIRBORNE TOTAL FUNGI RESULTS
24TH FLOOR
SACRAMENTO, CALIFORNIA
AUGUST 17, 2009

Results reported in spores per cubic meter of air (spores/M^3)

SAMPLE NUMBER	20908001-TM201OUTKT	20908001-TM202KT	20908001-TM203KT	20908001-TM204KT
SAMPLING LOCATION/ACTIVITIES	Outdoors; about 20 feet east of building; approximately five feet above ground/Normal outdoor activities	Law library; Room 2408; about center; approximately five feet above floor/Sampling activities only	Southwestern corner; Room 2420; about center; approximately five feet above floor/Sampling activities only	Southeastern corner; Room 2411; about center; approximately five feet above floor/Sampling activities only
START/STOP	10:22:00/10:27:00	10:40:00/10:45:00	10:42:00/10:47:00	10:48:00/10:53:00
SAMPLE TIME	5 minutes	5 minutes	5 minutes	5 minutes
Alternaria	53			
Ascospores	590			
Aureobasidium				
Basidiospores	1,500			
Bipolaris/Drechslera group				
Botrytis				
Chaetomium	13			
Cladosporium	1,200			
Epicoccum	27			
Fusarium				
Ganoderma				
Microsporum				
Myrothecium				
Nigrospora				
Penicillium/Aspergillus types	930	53	210	53
Pithomyces				
Rusts	13			
Scopulariopsis				
Smuts (Periconia, Myxomycetes)	310			
Stachybotrys	13			
Stemphylium				
Torula	53			
Trichoderma				
Ulocladium	27			
Unidentified mitosporic fungi				
Unidentified zygomycetes				
Hyphal fragments	310	<13	<13	<13
Background debris*	3+	1+	1+	1+
TOTAL	4,700	53	210	53

*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+.

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TABLE 20908001-13
AIRBORNE TOTAL FUNGI RESULTS
24TH FLOOR
SACRAMENTO, CALIFORNIA
AUGUST 17, 2009

Results reported in spores per cubic meter of air (spores/M^3)

SAMPLE NUMBER	**20908001-TM205KT**	**20908001-TM206KT**	**20908001-TM207KT**	**20908001-TM208KT**
SAMPLING LOCATION/ACTIVITIES	Eastern quadrant; Room 2444; about center; approximately five feet above floor/Sampling activities only	Northern quadrant; Room 2441A; about center; approximately five feet above floor/Sampling activities only	Northern quadrant; Room 2427; about five feet south of room 2436 entry door; about center; approximately five feet above floor/Sampling activities only	Northwestern corner; Room 2429; about center; approximately five feet above floor/Sampling activities only
START/STOP	10:49:00/10:54:00	10:57:00/11:02:00	10:57:00/11:02:00	11:04:00/11:09:00
SAMPLE TIME	5 minutes	5 minutes	5 minutes	5 minutes
Alternaria				
Ascospores				
Aureobasidium				
Basidiospores	53			
Bipolaris/Drechslera group				
Botrytis				
Chaetomium				
Cladosporium		53		
Epicoccum				
Fusarium				
Ganoderma				
Microsporum				
Myrothecium				
Nigrospora				
Penicillium/Aspergillus types	53			
Pithomyces				
Rusts				
Scopulariopsis				
Smuts (Periconia, Myxomycetes)				
Stachybotrys				
Stemphylium				
Torula				
Trichoderma				
Ulocladium				
Unidentified mitosporic fungi				
Unidentified zygomycetes				
Hyphal fragments	<13	<13	<13	<13
Background debris*	1+	1+	1+	1+
TOTAL	110	53	<13	<13

*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+.

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TABLE 20908001-13
AIRBORNE TOTAL FUNGI RESULTS
24TH FLOOR
SACRAMENTO, CALIFORNIA
AUGUST 17, 2009

Results reported in spores per cubic meter of air (spores/M^3)

SAMPLE NUMBER	**20908001-TM209KT**	**20908001-TM210OUTKT**		
SAMPLING LOCATION/ACTIVITIES	Western quadrant; Room 2448; about center; approximately five feet above floor/Sampling activities only	Outdoors; about 15 feet north of building; approximately five feet above floor/Normal outdoor activities only	This column intentionally left blank	This column intentionally left blank
START/STOP	11:05:00/11:10:00	11:18:00/11:23:00		
SAMPLE TIME	5 minutes	5 minutes		
Alternaria		40		
Ascospores		110		
Aureobasidium				
Basidiospores		590		
Bipolaris/Drechslera group				
Botrytis				
Chaetomium		40		
Cladosporium		1,900		
Epicoccum				
Fusarium				
Ganoderma				
Microsporum				
Myrothecium				
Nigrospora				
Penicillium/Aspergillus types	53	1,300		
Pithomyces				
Rusts		27		
Scopulariopsis				
Smuts (Periconia, Myxomycetes)		670		
Stachybotrys				
Stemphylium				
Torula		13		
Trichoderma				
Ulocladium				
Unidentified mitosporic fungi				
Unidentified zygomycetes				
Hyphal fragments	<13	190		
Background debris*	1+	3+		
TOTAL	53	4,700		

*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+.

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Sacramento, California 94279

TABLE 20908001-14
24TH FLOOR
AIRBORNE FIBERS RESULTS
SACRAMENTO, CALIFORNIA
AUGUST 17, 2009

NAME/ REFERENCE	LOCATION/ ACTIVITIES	PPE USED	SAMPLE NUMBER	START/ STOP	SAMPLE TIME	CONTAMINANT	RESULTS (f/cc)	PEL (f/cc)
Area Sample	Eastern quadrant; Room 2445; about center; approximately five feet above floor/Sampling activities only	N/A	20908001-F101	09:09/ 13:10	241 minutes	Fibers	**<0.003**	0.1
Area Sample	Southern quadrant; Law library; Room 2408; at eastern end; about center; approximately five feet above floor/Sampling activities only	N/A	20908001-F102	09:17/ 13:17	240 minutes	Fibers	**0.005**	0.1
Area Sample	Western quadrant; Room 2422; about center; approximately five feet above floor/Sampling activities only	N/A	20908001-F103	13:17/ 17:18	241 minutes	Fibers	**<0.003**	0.1
Area Sample	Northern quadrant; Room 2427; about five feet south of Room 2435 entry door; approximately five feet above floor/Sampling activities only	N/A	20908001-F104	13:20/ 17:21	241 minutes	Fibers	**<0.003**	0.1
Blank	N/A	N/A	20908001-F105 Blank	N/A	N/A	Fibers	All data blank corrected	N/A

LEGEND

PPE: Personal protective equipment
N/A: Not applicable
PEL: Cal-OSHA 8-hour time-weighted average permissible exposure limit

<: Less than
f/cc: Fibers per cubic centimeter of air

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Sacramento, California 94279

TABLE 20908001-15
24TH FLOOR
AIRBORNE TOTAL DUST RESULTS
SACRAMENTO, CALIFORNIA
AUGUST 17, 2009

NAME/ REFERENCE	LOCATION/ ACTIVITIES	PPE USED	SAMPLE NUMBER	START/ STOP	SAMPLE TIME	CONTAMINANT	RESULTS (mg/M^3)	PEL (mg/M^3)
Area Sample	Eastern quadrant; Room 2445; about center; approximately five feet above floor/Sampling activities only	N/A	20908001-TD101	09:07/ 13:07	240 minutes	Total Dust	**<0.21**	10
Area Sample	Southern quadrant; Law library; Room 2408; at eastern end; about center; approximately five feet above floor/Sampling activities only	N/A	20908001-TD102	09:15/ 13:17	242 minutes	Total Dust	**<0.21**	10
Area Sample	Western quadrant; Room 2422; about center; approximately five feet above floor/Sampling activities only	N/A	20908001-TD103	09:23/ 13:26	243 minutes	Total Dust	**<0.21**	10
Area Sample	Northern quadrant; Room 2427; about five feet south of Room 2435 entry door; approximately five feet above floor/Sampling activities only	N/A	20908001-TD104	13:10/ 17:11	241 minutes	Total Dust	**<0.21**	10
Blank	N/A	N/A	20908001-TD105 Blank	N/A	N/A	Total Dust	All data blank corrected	N/A

LEGEND

PPE: Personal protective equipment
N/A: Not applicable
mg/M^3: Milligrams per cubic meter

<: Less than
PEL: Cal-OSHA 8-hour time-weighted average permissible exposure limit

HYGIENE TECHNOLOGIES INTERNATIONAL, INC.

APPENDIX A

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Board of Equalization
450 N Street
Sacramento, California 94279

TABLE 20908001-16
24TH FLOOR
FORMALDEHYDE
SACRAMENTO, CALIFORNIA
AUGUST 17, 2009

NAME/ REFERENCE	LOCATION/ ACTIVITIES	PPE USED	SAMPLE NUMBER	START/ STOP	SAMPLE TIME	CONTAMINANT	RESULTS (ppm)	PEL (ppm)
Area Sample	Eastern quadrant; Room 2445; about center; approximately five feet above floor/Sampling activities only	N/A	20908001-C101	13:54/ 15:09	75 minutes	Formaldehyde	**<0.005**	0.75
Area Sample	Southern quadrant; Law library; Room 2408; at eastern end; about center; approximately five feet above floor/Sampling activities only	N/A	20908001-C102	13:58/ 15:13	75 minutes	Formaldehyde	**<0.005**	0.75
Area Sample	Northern quadrant; Room 2427; about five feet south of Room 2435 entry door; approximately five feet above floor/Sampling activities only	N/A	20908001-C103	15:17/ 16:42	75 minutes	Formaldehyde	**<0.005**	0.75
Area Sample	Western quadrant; Room 2422; about center; approximately five feet above floor/Sampling activities only	N/A	20908001-C104	15:18/ 16:43	75 minutes	Formaldehyde	**<0.005**	0.75
Blank	N/A	N/A	20908001-C105BLANK	N/A	N/A	Formaldehyde	All data blank corrected	N/A

LEGEND

PPE: Personal protective equipment
N/A: Not applicable
ppm: Parts per million

<: Less than
PEL: Cal-OSHA 8-hour time-weighted average permissible exposure limit

HYGIENE TECHNOLOGIES INTERNATIONAL, INC.

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450 N Street
Sacramento, California 94279

TABLE 20908001-17
24TH FLOOR
AIRBORNE 4-PHENYLCYCLOHEXENE
SACRAMENTO, CALIFORNIA
AUGUST 17, 2009

NAME/ REFERENCE	LOCATION/ ACTIVITIES	PPE USED	SAMPLE NUMBER	START/ STOP	SAMPLE TIME	CONTAMINANT	RESULTS (ppbv)	PEL (ppbv)
Area Sample	Southern quadrant; Law Library; Room 2408; at eastern end; about center; approximately five feet above floor/Sampling activities only	N/A	20908001-M101	09:41/ 17:41	480 minutes	4-Phenylcyclohexene	**<1.0**	N/A
Area Sample	Northern quadrant; Room 2427; about five feet south of room 2435 entry door; approximately five feet above floor/Sampling activities only	N/A	20908001-M102	09:45/ 17:45	480 minutes	4-Phenylcyclohexene	**<1.0**	N/A

LEGEND

PPE: Personal protective equipment
N/A: Not applicable
PPBV: Parts per billion volume

<: Less than
PEL: Cal-OSHA 8-hour time-weighted average permissible exposure limit

HYGIENE TECHNOLOGIES INTERNATIONAL, INC.

APPENDIX A

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

TABLE 20908001-18
DIRECT-READING RESULTS
24TH FLOOR
SACRAMENTO, CALIFORNIA
AUGUST 17, 2009

DATE	LOCATION/SITE ACTIVITIES	SAMPLE TIME	CONTAMINANT	RESULTS (ppm)	COMMENTS
08-17-09	Northern quadrant; approximately five feet above floor/Sampling activities only	14:15/ 14:20	Volatile Organic Compounds	ND<0.1	N/A
08-17-09	Eastern quadrant; approximately five feet above floor/Sampling activities only	14:21/ 14:26	Volatile Organic Compounds	ND<0.1	N/A
08-17-09	Southern quadrant; approximately five feet above floor/Sampling activities only	14:27/ 14:32	Volatile Organic Compounds	ND<0.1	N/A
08-17-09	Western quadrant; approximately five feet above floor/Sampling activities only	14:33/ 14:38	Volatile Organic Compounds	ND<0.1	N/A

LEGEND

ND: Not detected
<: Less than
N/A: Not applicable
ppm: Parts per million

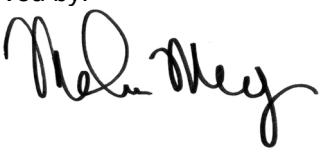
EMLab P&K

Report for:

Mr. Wesley Frey
Hygiene Technologies International, Inc.: Northern California
3625 Del Amo Boulevard, Suite 180
Torrance, CA 90503-8370

Regarding: Project: 20908001
EML ID: 571751

Approved by:



Lab Manager
Malcolm Moody

Dates of Analysis:
Spore trap analysis: 08-19-2009

Project SOPs: Spore trap analysis (I100000)

EMLab P&K
880 Riverside Parkway, West Sacramento, CA 95605
(866) 888-6653 Fax (650) 829-5852 www.emlab.com

Client: Hygiene Technologies International, Inc.:
Northern California
C/O: Mr. Wesley Frey
Re: 20908001

Date of Receipt: 08-18-2009
Date of Report: 08-19-2009

SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

Location:	20908001 TM201OUTKT		20908001 TM202KT		20908001 TM203KT		20908001 TM204KT	
Comments (see below)	A		None		None		None	
Lab ID-Version‡:	2535701-1		2535702-1		2535703-1		2535704-1	
	raw ct.	spores/m3	raw ct.	spores/m3	raw ct.	spores/m3	raw ct.	spores/m3
Alternaria	4	53						
Arthrinium								
Ascospores*	11	590						
Aureobasidium								
Basidiospores*	29	1,500						
Bipolaris/Drechslera group								
Botrytis								
Chaetomium	1	13						
Cladosporium	22	1,200						
Curvularia								
Epicoccum	2	27						
Fusarium								
Myrothecium								
Nigrospora								
Other colorless								
Penicillium/Aspergillus types†	46	930	1	53	4	210	1	53
Pithomyces								
Rusts*	1	13						
Smuts*, Periconia, Myxomycetes*	23	310						
Stachybotrys	1	13						
Stemphylium								
Torula	4	53						
Ulocladium	2	27						
Zygomycetes								
Background debris (1-4+)††	3+		1+		1+		1+	
Hyphal fragments/m3	310		< 13		< 13		< 13	
Pollen/m3	27		< 13		< 13		< 13	
Skin cells (1-4+)	< 1+		< 1+		< 1+		< 1+	
Sample volume (liters)	75		75		75		75	
§ TOTAL SPORE/m3		4,700		53		210		53

Comments: A) 38 of the raw count *Penicillium/Aspergillus* type spores were present as a clump of 16 and a clump of 22 spores.

* Most of these spore types are not seen with culturable methods (Andersen sampling), although some may appear as non-sporulating fungi. Most of the basidiospores are "mushroom" spores while the rusts and smuts are plant pathogens.
† 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 Limit of Detection is the product of a raw count of 1 and 100 divided by the percent read. The analytical sensitivity (counts/m3) is the product of the Limit of Detection and 1000 divided by the sample volume.
‡ A "Version" greater than 1 indicates amended data.
§ Total Spores/m3 has been rounded to two significant figures to reflect analytical precision.

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Re: 20908001

Date of Receipt: 08-18-2009
Date of Report: 08-19-2009

SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

Location:	20908001 TM205KT		20908001 TM206KT		20908001 TM207KT		20908001 TM208KT	
Comments (see below)	B		None		C		C	
Lab ID-Version‡:	2535705-1		2535706-1		2535707-1		2535708-1	
	raw ct.	spores/m3	raw ct.	spores/m3	raw ct.	spores/m3	raw ct.	spores/m3
Alternaria								
Arthrinium								
Ascospores*								
Aureobasidium								
Basidiospores*	1	53						
Bipolaris/Drechslera group								
Botrytis								
Chaetomium								
Cladosporium			1	53				
Curvularia								
Epicoccum								
Fusarium								
Myrothecium								
Nigrospora								
Other colorless								
Penicillium/Aspergillus types†	4	53						
Pithomyces								
Rusts*								
Smuts*, Periconia, Myxomycetes*								
Stachybotrys								
Stemphylium								
Torula								
Ulocladium								
Zygomycetes								
Background debris (1-4+)††	1+		1+		1+		1+	
Hyphal fragments/m3	< 13		< 13		< 13		< 13	
Pollen/m3	< 13		< 13		< 13		< 13	
Skin cells (1-4+)	< 1+		< 1+		1+		< 1+	
Sample volume (liters)	75		75		75		75	
§ TOTAL SPORE/m3		110		53		< 13		< 13

Comments: B) The 4 raw count *Penicillium/Aspergillus* type spores were present as a single clump. C) No spores detected.

* Most of these spore types are not seen with culturable methods (Andersen sampling), although some may appear as non-sporulating fungi. Most of the basidiospores are "mushroom" spores while the rusts and smuts are plant pathogens.
† 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.
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‡ A "Version" greater than 1 indicates amended data.
§ Total Spores/m3 has been rounded to two significant figures to reflect analytical precision.

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Re: 20908001

Date of Receipt: 08-18-2009
Date of Report: 08-19-2009

SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

Location:	20908001 TM209KT		20908001 TM210OUTKT	
Comments (see below)	None		D	
Lab ID-Version‡:	2535709-1		2535710-1	
	raw ct.	spores/m3	raw ct.	spores/m3
Alternaria			3	40
Arthrinium				
Ascospores*			2	110
Aureobasidium				
Basidiospores*			11	590
Bipolaris/Drechslera group				
Botrytis				
Chaetomium			3	40
Cladosporium			36	1,900
Curvularia				
Epicoccum				
Fusarium				
Myrothecium				
Nigrospora				
Other colorless				
Penicillium/Aspergillus types†	1	53	46	1,300
Pithomyces				
Rusts*			2	27
Smuts*, Periconia, Myxomycetes*			50	670
Stachybotrys				
Stemphylium				
Torula			1	13
Ulocladium				
Zygomycetes				
Background debris (1-4+)††	1+		3+	
Hyphal fragments/m3	< 13		190	
Pollen/m3	< 13		53	
Skin cells (1-4+)	< 1+		< 1+	
Sample volume (liters)	75		75	
§ TOTAL SPORE/m3		53		4,700

Comments: D) 28 of the raw count *Penicillium/Aspergillus* type spores were present as a clump of 13 and a clump of 15 spores.

* Most of these spore types are not seen with culturable methods (Andersen sampling), although some may appear as non-sporulating fungi. Most of the basidiospores are "mushroom" spores while the rusts and smuts are plant pathogens.
† 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.
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Re: 20908001

Date of Receipt: 08-18-2009
Date of Report: 08-19-2009

MoldRANGE™: Extended Outdoor Comparison

Outdoor Location: 20908001 TM201OUTKT

Fungi Identified	Outdoor data	Typical Outdoor Data by Date† Month: August				Typical Outdoor Data by Location‡ State: CA			
	spores/m3	low	med	high	freq %	low	med	high	freq %
Generally able to grow indoors*									
Alternaria	53	7	40	560	67	7	27	230	57
Bipolaris/Drechslera group	-	7	13	270	26	7	13	120	13
Chaetomium	13	7	13	130	14	7	13	120	19
Cladosporium	1,200	53	800	12,000	97	53	640	6,700	97
Curvularia	-	7	27	810	30	7	13	230	7
Epicoccum	27	7	20	280	31	7	13	160	20
Nigrospora	-	7	13	230	22	7	13	170	8
Penicillium/Aspergillus types	930	27	270	3,400	85	33	210	2,500	85
Stachybotrys	13	7	13	380	3	7	13	270	5
Torula	53	7	13	160	16	7	13	150	12
Ulocladium	27	7	13	93	6	7	13	93	9
Seldom found growing indoors**									
Ascospores	590	13	210	5,800	83	13	110	1,900	71
Basidiospores	1,500	13	430	22,000	96	13	210	7,000	93
Rusts	13	7	20	350	28	7	13	250	28
Smuts, Periconia, Myxomycetes	310	7	53	1,000	77	8	40	490	70
TOTAL SPORES/M3	4,729								

† The Typical Outdoor Data by Date represents the typical outdoor spore levels across North America for the month indicated. The last column represents the frequency of occurrence. The low, medium, and high values represent the 2.5, 50, and 97.5 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, 2.5% 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.

‡ The Typical Outdoor Data by Location represents the typical outdoor spore levels for the region indicated for the entire year. As with the Typical Outdoor Data by Date, the four columns represent the frequency of occurrence and the typical low, medium, and high concentration values for the spore type indicated. These values are updated periodically, and if enough data is not available to make a statistically meaningful assessment, it is indicated with a dash.

*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.

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 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, EMLab P&K may not have received and tested a representative number of samples for every region or time period. 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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Date of Receipt: 08-18-2009
Date of Report: 08-19-2009

MoldRANGE™: Extended Outdoor Comparison

Outdoor Location: 20908001 TM210OUTKT

Fungi Identified	Outdoor data	Typical Outdoor Data by Date† Month: August				Typical Outdoor Data by Location‡ State: CA			
	spores/m3	low	med	high	freq %	low	med	high	freq %
Generally able to grow indoors*									
Alternaria	40	7	40	560	67	7	27	230	57
Bipolaris/Drechslera group	-	7	13	270	26	7	13	120	13
Chaetomium	40	7	13	130	14	7	13	120	19
Cladosporium	1,900	53	800	12,000	97	53	640	6,700	97
Curvularia	-	7	27	810	30	7	13	230	7
Epicoccum	-	7	20	280	31	7	13	160	20
Nigrospora	-	7	13	230	22	7	13	170	8
Penicillium/Aspergillus types	1,300	27	270	3,400	85	33	210	2,500	85
Stachybotrys	-	7	13	380	3	7	13	270	5
Torula	13	7	13	160	16	7	13	150	12
Ulocladium	-	7	13	93	6	7	13	93	9
Seldom found growing indoors**									
Ascospores	110	13	210	5,800	83	13	110	1,900	71
Basidiospores	590	13	430	22,000	96	13	210	7,000	93
Rusts	27	7	20	350	28	7	13	250	28
Smuts, Periconia, Myxomycetes	670	7	53	1,000	77	8	40	490	70
TOTAL SPORES/M3	4,690								

† The Typical Outdoor Data by Date represents the typical outdoor spore levels across North America for the month indicated. The last column represents the frequency of occurrence. The low, medium, and high values represent the 2.5, 50, and 97.5 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, 2.5% 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.

‡ The Typical Outdoor Data by Location represents the typical outdoor spore levels for the region indicated for the entire year. As with the Typical Outdoor Data by Date, the four columns represent the frequency of occurrence and the typical low, medium, and high concentration values for the spore type indicated. These values are updated periodically, and if enough data is not available to make a statistically meaningful assessment, it is indicated with a dash.

*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.

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Client: Hygiene Technologies International, Inc.:
Northern California
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Re: 20908001

Date of Receipt: 08-18-2009
Date of Report: 08-19-2009

MoldSTAT™: Supplementary Statistical Spore Trap Report

Outdoor Summary: 20908001 TM201OUTKT:

Species detected	Outdoor sample spores/m3 <100 1K 10K >100K	Typical outdoor ranges (North America)	Freq. %
Alternaria	53	7 - 27 - 400	52
Ascospores	590	13 - 160 - 4,600	76
Basidiospores	1,500	13 - 320 - 15,000	91
Chaetomium	13	7 - 13 - 130	12
Cladosporium	1,200	27 - 520 - 8,900	93
Epicoccum	27	7 - 17 - 320	25
Penicillium/Aspergillus types	930	26 - 210 - 2,500	80
Rusts	13	7 - 17 - 310	22
Smuts, Periconia, Myxomycetes	310	7 - 40 - 850	69
Stachybotrys	13	7 - 13 - 370	3
Torula	53	7 - 13 - 160	11
Ulocladium	27	7 - 13 - 93	6
Total	4,729		

The "Typical outdoor ranges" and "Freq. %" columns show the typical low, medium, and high spore counts per cubic meter and the frequency of occurrence for the given spore type. The low, medium, and high values represent the 2.5, 50, and 97.5 percentile values when the spore type is detected. For example, if the low value is 53 and the frequency of occurence 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: 20908001 TM202KT

% of outdoor total spores/m3	Friedman chi-square* (indoor variation)	Agreement ratio** (indoor/outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)
Result: 1%	dF: 7 Result: 2.6111 Critical value: 14.0671 Inside Similar: Yes	Result: 0.1538	dF: 12 Result: 0.5420 Critical value: 0.4965 Outside Similar: Yes	Score: 107 Result: Low

Species Detected	Spores/m3 <100 1K 10K >100K
Penicillium/Aspergillus types	53
Total	53

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MoldSTAT™: Supplementary Statistical Spore Trap Report

Location: 20908001 TM203KT

% of outdoor total spores/m3	Friedman chi-square* (indoor variation)	Agreement ratio** (indoor/outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)
Result: 4%	dF: 7 Result: 2.6111 Critical value: 14.0671 Inside Similar: Yes	Result: 0.1538	dF: 12 Result: 0.5420 Critical value: 0.4965 Outside Similar: Yes	Score: 127 Result: Low

Species Detected	Spores/m3 <100 1K 10K >100K
Penicillium/Aspergillus types	210
Total	210

Location: 20908001 TM204KT

% of outdoor total spores/m3	Friedman chi-square* (indoor variation)	Agreement ratio** (indoor/outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)
Result: 1%	dF: 7 Result: 2.6111 Critical value: 14.0671 Inside Similar: Yes	Result: 0.1538	dF: 12 Result: 0.5420 Critical value: 0.4965 Outside Similar: Yes	Score: 107 Result: Low

Species Detected	Spores/m3 <100 1K 10K >100K
Penicillium/Aspergillus types	53
Total	53

Location: 20908001 TM205KT

% 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: 7 Result: 2.6111 Critical value: 14.0671 Inside Similar: Yes	Result: 0.2857	dF: 12 Result: 0.6783 Critical value: 0.4965 Outside Similar: Yes	Score: 105 Result: Low

Species Detected	Spores/m3 <100 1K 10K >100K
Basidiospores	53
Penicillium/Aspergillus types	53
Total	106

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Date of Receipt: 08-18-2009
Date of Report: 08-19-2009

MoldSTAT™: Supplementary Statistical Spore Trap Report

Location: 20908001 TM206KT

% of outdoor total spores/m3	Friedman chi-square* (indoor variation)	Agreement ratio** (indoor/outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)
Result: 1%	dF: 7 Result: 2.6111 Critical value: 14.0671 Inside Similar: Yes	Result: 0.1538	dF: 12 Result: 0.5839 Critical value: 0.4965 Outside Similar: Yes	Score: 103 Result: Low

Species Detected	Spores/m3 <100 1K 10K >100K
Cladosporium	53
Total	53

Location: 20908001 TM207KT

% of outdoor total spores/m3	Friedman chi-square* (indoor variation)	Agreement ratio** (indoor/outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)
Result: < 1%	dF: 7 Result: 2.6111 Critical value: 14.0671 Inside Similar: Yes	Result: 0.0000	dF: N/A Result: N/A Critical value: N/A Outside Similar: N/A	Score: 100 Result: Low

Species Detected	Spores/m3 <100 1K 10K >100K
None Detected	N/A

Location: 20908001 TM208KT

% of outdoor total spores/m3	Friedman chi-square* (indoor variation)	Agreement ratio** (indoor/outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)
Result: < 1%	dF: 7 Result: 2.6111 Critical value: 14.0671 Inside Similar: Yes	Result: 0.0000	dF: N/A Result: N/A Critical value: N/A Outside Similar: N/A	Score: 100 Result: Low

Species Detected	Spores/m3 <100 1K 10K >100K
None Detected	N/A

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Re: 20908001

Date of Receipt: 08-18-2009
Date of Report: 08-19-2009

MoldSTAT™: Supplementary Statistical Spore Trap Report

Location: 20908001 TM209KT

% of outdoor total spores/m3	Friedman chi-square* (indoor variation)	Agreement ratio** (indoor/outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)
Result: 1%	dF: 7 Result: 2.6111 Critical value: 14.0671 Inside Similar: Yes	Result: 0.1538	dF: 12 Result: 0.5420 Critical value: 0.4965 Outside Similar: Yes	Score: 107 Result: Low

Species Detected	Spores/m3 <100 1K 10K >100K
Penicillium/Aspergillus types	53
Total	53

* 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.

*** 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&Kreserves 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.

EMLab P&K
880 Riverside Parkway, West Sacramento, CA 95605
(866) 888-6653 Fax (650) 829-5852 www.emlab.com

Client: Hygiene Technologies International, Inc.:
Northern California
C/O: Mr. Wesley Frey
Re: 20908001

Date of Receipt: 08-18-2009
Date of Report: 08-19-2009

MoldSTAT™: Supplementary Statistical Spore Trap Report

Outdoor Summary: 20908001 TM210OUTKT:

Species detected	Outdoor sample spores/m3 (<100 / 1K / 10K / >100K)	Typical outdoor ranges (North America)	Freq. %
Alternaria	40	7 - 27 - 400	52
Ascospores	110	13 - 160 - 4,600	76
Basidiospores	590	13 - 320 - 15,000	91
Chaetomium	40	7 - 13 - 130	12
Cladosporium	1,900	27 - 520 - 8,900	93
Penicillium/Aspergillus types	1,300	26 - 210 - 2,500	80
Rusts	27	7 - 17 - 310	22
Smuts, Periconia, Myxomycetes	670	7 - 40 - 850	69
Torula	13	7 - 13 - 160	11
Total	4,690		

The "Typical outdoor ranges" and "Freq. %" columns show the typical low, medium, and high spore counts per cubic meter and the frequency of occurrence for the given spore type. The low, medium, and high values represent the 2.5, 50, and 97.5 percentile values when the spore type is detected. For example, if the low value is 53 and the frequency of occurence 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: 20908001 TM202KT

% of outdoor total spores/m3	Friedman chi-square* (indoor variation)	Agreement ratio** (indoor/outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)
Result: 1%	dF: 7 Result: 2.6111 Critical value: 14.0671 Inside Similar: Yes	Result: 0.2000	dF: 9 Result: 0.5792 Critical value: 0.5833 Outside Similar: No	Score: 106 Result: Low

Species Detected	Spores/m3 (<100 / 1K / 10K / >100K)
Penicillium/Aspergillus types	53
Total	53

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MoldSTAT™: Supplementary Statistical Spore Trap Report

Location: 20908001 TM203KT

% of outdoor total spores/m3	Friedman chi-square* (indoor variation)	Agreement ratio** (indoor/outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)
Result: 4%	dF: 7 Result: 2.6111 Critical value: 14.0671 Inside Similar: Yes	Result: 0.2000	dF: 9 Result: 0.5792 Critical value: 0.5833 Outside Similar: No	Score: 124 Result: Low

Species Detected	Spores/m3 <100 1K 10K >100K
Penicillium/Aspergillus types	210
Total	210

Location: 20908001 TM204KT

% of outdoor total spores/m3	Friedman chi-square* (indoor variation)	Agreement ratio** (indoor/outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)
Result: 1%	dF: 7 Result: 2.6111 Critical value: 14.0671 Inside Similar: Yes	Result: 0.2000	dF: 9 Result: 0.5792 Critical value: 0.5833 Outside Similar: No	Score: 106 Result: Low

Species Detected	Spores/m3 <100 1K 10K >100K
Penicillium/Aspergillus types	53
Total	53

Location: 20908001 TM205KT

% 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: 7 Result: 2.6111 Critical value: 14.0671 Inside Similar: Yes	Result: 0.3636	dF: 9 Result: 0.5417 Critical value: 0.5833 Outside Similar: No	Score: 104 Result: Low

Species Detected	Spores/m3 <100 1K 10K >100K
Basidiospores	53
Penicillium/Aspergillus types	53
Total	106

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MoldSTAT™: Supplementary Statistical Spore Trap Report

Location: 20908001 TM206KT

% of outdoor total spores/m3	Friedman chi-square* (indoor variation)	Agreement ratio** (indoor/outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)
Result: 1%	dF: 7 Result: 2.6111 Critical value: 14.0671 Inside Similar: Yes	Result: 0.2000	dF: 9 Result: 0.6542 Critical value: 0.5833 Outside Similar: Yes	Score: 102 Result: Low

Species Detected	Spores/m3 <100 1K 10K >100K
Cladosporium	53
Total	53

Location: 20908001 TM207KT

% of outdoor total spores/m3	Friedman chi-square* (indoor variation)	Agreement ratio** (indoor/outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)
Result: < 1%	dF: 7 Result: 2.6111 Critical value: 14.0671 Inside Similar: Yes	Result: 0.0000	dF: N/A Result: N/A Critical value: N/A Outside Similar: N/A	Score: 100 Result: Low

Species Detected	Spores/m3 <100 1K 10K >100K
None Detected	N/A

Location: 20908001 TM208KT

% of outdoor total spores/m3	Friedman chi-square* (indoor variation)	Agreement ratio** (indoor/outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)
Result: < 1%	dF: 7 Result: 2.6111 Critical value: 14.0671 Inside Similar: Yes	Result: 0.0000	dF: N/A Result: N/A Critical value: N/A Outside Similar: N/A	Score: 100 Result: Low

Species Detected	Spores/m3 <100 1K 10K >100K
None Detected	N/A

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MoldSTAT™: Supplementary Statistical Spore Trap Report

Location: 20908001 TM209KT

% of outdoor total spores/m3	Friedman chi-square* (indoor variation)	Agreement ratio** (indoor/outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)
Result: 1%	dF: 7 Result: 2.6111 Critical value: 14.0671 Inside Similar: Yes	Result: 0.2000	dF: 9 Result: 0.5792 Critical value: 0.5833 Outside Similar: No	Score: 106 Result: Low

Species Detected	Spores/m3 <100 1K 10K >100K
Penicillium/Aspergillus types	53
Total	53

* 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.

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*** 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.

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Date of Report: 08-19-2009

MoldSCORE™: Spore Trap Report

Outdoor Sample: 20908001 TM201OUTKT

Fungi Identified	Outdoor sample spores/m3 <100 1K 10K >100K	Raw count	Spores/ m3
Generally able to grow indoors*			
Alternaria		4	53
Bipolaris/Drechslera group		ND	< 13
Chaetomium		1	13
Cladosporium		22	1,200
Curvularia		ND	< 13
Epicoccum		2	27
Nigrospora		ND	< 13
Penicillium/Aspergillus types†		46	930
Stachybotrys		1	13
Torula		4	53
Ulocladium		2	27
Seldom found growing indoors**			
Ascospores††		11	590
Basidiospores††		29	1,500
Rusts		1	13
Smuts, Periconia, Myxomycetes††		23	310
Total			**4,729**

Location: 20908001 TM202KT

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†		1	53		107
Stachybotrys		ND	< 13		100
Torula		ND	< 13		100
Seldom found growing indoors**					
Ascospores††		ND	< 13		100
Basidiospores††		ND	< 13		100
Rusts		ND	< 13		100
Smuts, Periconia, Myxomycetes††		ND	< 13		100
Total			**53**	**Final MoldSCORE**	**107**

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MoldSCORE™: Spore Trap Report

Location: 20908001 TM203KT

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†		4	210		127
Stachybotrys		ND	< 13		100
Torula		ND	< 13		100
Seldom found growing indoors**					
Ascospores††		ND	< 13		100
Basidiospores††		ND	< 13		100
Rusts		ND	< 13		100
Smuts, Periconia, Myxomycetes††		ND	< 13		100
Total			**210**	**Final MoldSCORE**	**127**

Location: 20908001 TM204KT

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†		1	53		107
Stachybotrys		ND	< 13		100
Torula		ND	< 13		100
Seldom found growing indoors**					
Ascospores††		ND	< 13		100
Basidiospores††		ND	< 13		100
Rusts		ND	< 13		100
Smuts, Periconia, Myxomycetes††		ND	< 13		100
Total			**53**	**Final MoldSCORE**	**107**

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MoldSCORE™: Spore Trap Report

Location: 20908001 TM205KT

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†		4	53		105
Stachybotrys		ND	< 13		100
Torula		ND	< 13		100
Seldom found growing indoors**					
Ascospores††		ND	< 13		100
Basidiospores††		1	53		102
Rusts		ND	< 13		100
Smuts, Periconia, Myxomycetes††		ND	< 13		100
Total			**106**	**Final MoldSCORE**	**105**

Location: 20908001 TM206KT

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		1	53		103
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††		ND	< 13		100
Rusts		ND	< 13		100
Smuts, Periconia, Myxomycetes††		ND	< 13		100
Total			**53**	**Final MoldSCORE**	**103**

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MoldSCORE™: Spore Trap Report

Location: 20908001 TM207KT

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††		ND	< 13		100
Rusts		ND	< 13		100
Smuts, Periconia, Myxomycetes††		ND	< 13		100
Total			**N/A**	**Final MoldSCORE**	**100**

Location: 20908001 TM208KT

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††		ND	< 13		100
Rusts		ND	< 13		100
Smuts, Periconia, Myxomycetes††		ND	< 13		100
Total			**N/A**	**Final MoldSCORE**	**100**

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Location: 20908001 TM209KT

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†		1	53		107
Stachybotrys		ND	< 13		100
Torula		ND	< 13		100
Seldom found growing indoors**					
Ascospores††		ND	< 13		100
Basidiospores††		ND	< 13		100
Rusts		ND	< 13		100
Smuts, Periconia, Myxomycetes††		ND	< 13		100
Total			**53**	**Final MoldSCORE**	**107**

*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.

††Most of these spore types are not seen with culturable methods (Anderson sampling), although some may appear as non-sporulating fungi. Most of the basidiospores are "mushroom" spores.

‡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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MoldSCORE™: Spore Trap Report

Outdoor Sample: 20908001 TM210OUTKT

Fungi Identified	Outdoor sample spores/m3 <100 1K 10K >100K	Raw count	Spores/ m3
Generally able to grow indoors*			
Alternaria		3	40
Bipolaris/Drechslera group		ND	< 13
Chaetomium		3	40
Cladosporium		36	1,900
Curvularia		ND	< 13
Nigrospora		ND	< 13
Penicillium/Aspergillus types†		46	1,300
Stachybotrys		ND	< 13
Torula		1	13
Seldom found growing indoors**			
Ascospores††		2	110
Basidiospores††		11	590
Rusts		2	27
Smuts, Periconia, Myxomycetes††		50	670
Total			**4,690**

Location: 20908001 TM202KT

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†		1	53		106
Stachybotrys		ND	< 13		100
Torula		ND	< 13		100
Seldom found growing indoors**					
Ascospores††		ND	< 13		100
Basidiospores††		ND	< 13		100
Rusts		ND	< 13		100
Smuts, Periconia, Myxomycetes††		ND	< 13		100
Total			**53**	**Final MoldSCORE**	**106**

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Location: 20908001 TM203KT

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†		4	210		124
Stachybotrys		ND	< 13		100
Torula		ND	< 13		100
Seldom found growing indoors**					
Ascospores††		ND	< 13		100
Basidiospores††		ND	< 13		100
Rusts		ND	< 13		100
Smuts, Periconia, Myxomycetes††		ND	< 13		100
Total			**210**	**Final MoldSCORE**	**124**

Location: 20908001 TM204KT

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†		1	53		106
Stachybotrys		ND	< 13		100
Torula		ND	< 13		100
Seldom found growing indoors**					
Ascospores††		ND	< 13		100
Basidiospores††		ND	< 13		100
Rusts		ND	< 13		100
Smuts, Periconia, Myxomycetes††		ND	< 13		100
Total			**53**	**Final MoldSCORE**	**106**

EMLab P&K
880 Riverside Parkway, West Sacramento, CA 95605
(866) 888-6653 Fax (650) 829-5852 www.emlab.com

Client: Hygiene Technologies International, Inc.:
Northern California
C/O: Mr. Wesley Frey
Re: 20908001

Date of Receipt: 08-18-2009
Date of Report: 08-19-2009

MoldSCORE™: Spore Trap Report

Location: 20908001 TM205KT

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†		4	53		104
Stachybotrys		ND	< 13		100
Torula		ND	< 13		100
Seldom found growing indoors**					
Ascospores††		ND	< 13		100
Basidiospores††		1	53		104
Rusts		ND	< 13		100
Smuts, Periconia, Myxomycetes††		ND	< 13		100
Total			**106**	**Final MoldSCORE**	**104**

Location: 20908001 TM206KT

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		1	53		102
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††		ND	< 13		100
Rusts		ND	< 13		100
Smuts, Periconia, Myxomycetes††		ND	< 13		100
Total			**53**	**Final MoldSCORE**	**102**

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Re: 20908001

Date of Receipt: 08-18-2009
Date of Report: 08-19-2009

MoldSCORE™: Spore Trap Report

Location: 20908001 TM207KT

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††		ND	< 13		100
Rusts		ND	< 13		100
Smuts, Periconia, Myxomycetes††		ND	< 13		100
Total			**N/A**	**Final MoldSCORE**	**100**

Location: 20908001 TM208KT

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††		ND	< 13		100
Rusts		ND	< 13		100
Smuts, Periconia, Myxomycetes††		ND	< 13		100
Total			**N/A**	**Final MoldSCORE**	**100**

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Northern California
C/O: Mr. Wesley Frey
Re: 20908001

Date of Receipt: 08-18-2009
Date of Report: 08-19-2009

MoldSCORE™: Spore Trap Report

Location: 20908001 TM209KT

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†		1	53		106
Stachybotrys		ND	< 13		100
Torula		ND	< 13		100
Seldom found growing indoors**					
Ascospores††		ND	< 13		100
Basidiospores††		ND	< 13		100
Rusts		ND	< 13		100
Smuts, Periconia, Myxomycetes††		ND	< 13		100
Total			**53**	**Final MoldSCORE**	**106**

*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.

††Most of these spore types are not seen with culturable methods (Anderson sampling), although some may appear as non-sporulating fungi. Most of the basidiospores are "mushroom" spores.

‡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.

HYGIENE TECH
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3625 Del Al
Torrance, California 90503-1643
(310) 370-8370
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000571751

Request For Analysis

Project Number/Purchase Order: 20908001 Date Submitted: 8/17/09

Project Contact: Wes Frey Turnaround Required: 24hrs

Lab Destination: EMLab Lab Contact: Sample Receiving

SAMPLE ID	VOLUME	MEDIA	ANALYSIS REQUESTED
20908001 TM210OUTKT	75L	AirOkell	Spore Trap Analysis
TM202KT			
TM203KT			
TM204KT			
TM205KT			
TM206KT			
TM207KT			
TM208KT			
TM209KT			
TM210OUTKT			

Special Instructions:

1. **Sampled by:** Kenneth Tse 8/17/09 @ 5:00PM **Received by:**
2. **Relinquished by:** Kenneth Tse 8/17/09 @ 5:00PM **Received by:** [illegible] on 8/17/09 @ 16:15
3. **Relinquished by:** [illegible] on 8/17/09 @ 16:15 **Received by:** Brandon Dugan 8/18/09 @ 0830

Please include signature, date, and time

Lab Use Only: