HYGIENETECH
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October 20, 2009

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

Document No. 20910001.2

Attention: David Gau

Regarding: Limited Indoor Air Quality Survey
14TH Floor Pre-Occupancy Assessment

Dear Mr. Gau:

On October 7, 2009, industrial hygienists with Hygiene Technologies International, Inc. (HygieneTech) conducted a limited indoor air quality survey on the 14th 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 14th Floor subsequent to fungal growth remediation and other renovation work performed under the direction of the State of California Department of General Services (DGS) on that floor. 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 – 14TH 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

OCTOBER 20, 2009

1.0 BACKGROUND

On October 7, 2009, industrial hygienists with Hygiene Technologies International, Inc. (HygieneTech) conducted a limited indoor air quality survey on the 14th 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 14th Floor subsequent to fungal growth remediation and other renovation work performed under the direction of the State of California Department of General Services (DGS) on that floor. During the survey, a variety of samples were collected and direct-reading instruments were used to assess the general indoor air quality on the 14th 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. Direct-reading instruments were also 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 14th 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; 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. Note that new carpet had been installed and fresh paint had been applied throughout the floor in the weeks preceding the survey dates.

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 20910001-13 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 20910001-8.

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 20910001-9.

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 20910001-10.

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 20910001-11.

3.5 Airborne 4-Phenylcyclohexene

Area air samples for 4-phenylcyclohexene were collected by the mini-canisters that were equipped with 6 hour regulators, 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 20910001-12.

3.6 Airborne Volatile Organic Compounds

Direct-reading air measurements for VOCs were also recorded at various locations on the 14th 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 stationary locations 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*, *Nigrospora*, *Oidium*, other brown, rusts, smuts, *Stemphylium*, and/or *Torula*, with *Cladosporium* predominating. Indoors, the ambient data showed that airborne fungal spores were either not detected at or above the laboratory analytical detection limit or were detected at low airborne concentrations that included one or more of the following common fungal spore types: *Cladosporium*, colorless spores typical of *Penicillium* and *Aspergillus* species, other brown, and/or smuts. 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 not detected at or above the laboratory detection limit of 0.003 f/cc. 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

4.0 DISCUSSION (CONTINUED)

4.3 Airborne Total Dust (Continued)

does not produce ill effects in most persons. In fact, these so-called *nuisance dusts* have a long 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 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 detected at levels of 0.008 and 0.009 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 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 Formaldehyde of 0.75 ppm, as defined in Title 8 of the California Code of Regulations, Section 5155 (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 October 7, 2009, the direct-reading results indicated that CO_2 was detected at levels ranging from 522 to 649 ppm on the 14th 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 October 7, 2009, the air temperatures ranged between 71.7 and 75.9 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).

Relative humidity data were recorded indoors at levels ranging from 24.2 to 27.6 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 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 $C0_2$ levels 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 October 7, 2009, air temperatures ranged between 71.7 and 75.9 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). Relative humidity data were recorded indoors at levels ranging from 24.2 to 27.6 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.

5.4 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 14th 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 is potentially required within the core of the 14th Floor due to known fungal growth reservoirs confirmed in similar areas on other floors 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 14th Floor. Until such time that these confirmed fungal growth and perhaps other unknown reservoirs are remediated within the structure, it is highly likely that complaints related to fungal growth-like 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.

6.3 Air temperatures levels on the 14th Floor should be adjusted to the appropriate ranges recommended by ASHRAE for occupant comfort.

6.0 RECOMMENDATIONS (CONTINUED)

6.4 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 14th 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.

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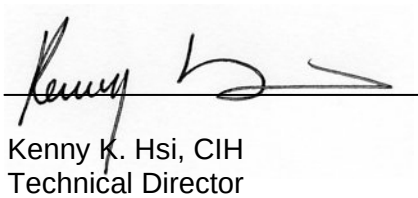
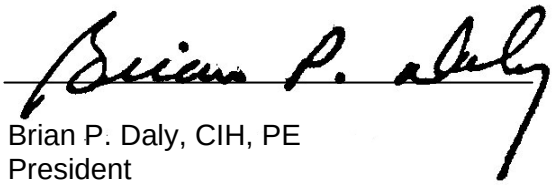


Kenny K. Hsi, CIH
Technical Director

Date: October 20, 2009



Brian P. Daly, CIH, PE
President

Date: October 20, 2009

HYGIENE TECHNOLOGIES INTERNATIONAL, INC.

APPENDIX A

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

TABLE 20910001-8
AIRBORNE TOTAL FUNGI RESULTS
14TH FLOOR
SACRAMENTO, CALIFORNIA
OCTOBER 7, 2009

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

SAMPLE NUMBER	20910001-TM01OUTKT	20910001-TM02KT	20910001-TM03KT	20910001-TM04KT
SAMPLING LOCATION/ACTIVITIES	Outdoors; about 25 feet north of building; approximately five feet above ground/Normal outdoor activities	Column K22 area; entry way to Cubicle 074; approximately five feet above floor/Sampling activities only	Between columns M22 and L22; about five feet east of entry way to Cubicle 079; approximately five feet above floor/Sampling activities only	Column N22 area; about three feet west of entry way to Cubicle 095; approximately five feet above floor/Sampling activities only
START/STOP	10:40:00/10:45:00	10:58:00/11:03:00	11:00:00/11:05:00	11:09:00/11:14:00
SAMPLE TIME	5 minutes	5 minutes	5 minutes	5 minutes
Alternaria	40			
Ascospores	110			
Aureobasidium				
Basidiospores	590			
Bipolaris/Drechslera group				
Botrytis				
Chaetomium	13			
Cladosporium	3,300	53	40	53
Curvularia				
Epicoccum				
Fusarium				
Nigrospora	40			
Oidium	13			
Other brown		13		
Penicillium/Aspergillus types	1,700			
Rusts	13			
Smuts, Periconia, Myxomycetes	190	13		
Stachybotrys				
Stemphylium				
Torula				
Trichocladium				
Ulocladium				
Zygomycetes				
Hyphal fragments	210	<13	<13	<13
Background debris*	4+	1+	<1+	<1+
TOTAL**	5,900	80	40	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+.

**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.

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TABLE 20910001-8
AIRBORNE TOTAL FUNGI RESULTS
14TH FLOOR
SACRAMENTO, CALIFORNIA
OCTOBER 7, 2009

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

	20910001-TM05KT	20910001-TM06KT	20910001-TM07KT	20910001-TM08KT
SAMPLING LOCATION/ACTIVITIES	Column N20 area; Cubicle 127.01; about center; approximately five feet above floor/Sampling activities only	Column N18 area; entry way to Cubicle 100.01; approximately five feet above floor/Sampling activities only	Area between columns M18 and L18; entry way to Cubicle 016; about center; approximately five feet above floor/Sampling activities only	Column K18 area; about five feet east of entry way to Cubicle 024; approximately five feet above floor/Sampling activities only
START/STOP	11:11:00/11:16:00	11:15:00/11:20:00	11:17:00/11:22:00	11:23:00/11:28:00
SAMPLE TIME	5 minutes	5 minutes	5 minutes	5 minutes
Alternaria				
Ascospores				
Aureobasidium				
Basidiospores				
Bipolaris/Drechslera group				
Botrytis				
Chaetomium				
Cladosporium			40	
Curvularia				
Epicoccum				
Fusarium				
Nigrospora				
Oidium				
Other brown				
Penicillium/Aspergillus types				27
Rusts				
Smuts, Periconia, Myxomycetes				
Stachybotrys				
Stemphylium				
Torula				
Trichocladium				
Ulocladium				
Zygomycetes				
Hyphal fragments	<13	<13	<13	<13
Background debris*	1+	1+	1+	<1+
TOTAL**	<13	<13	40	27

*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.

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TABLE 20910001-8
AIRBORNE TOTAL FUNGI RESULTS
14TH FLOOR
SACRAMENTO, CALIFORNIA
OCTOBER 7, 2009

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

SAMPLE NUMBER	**20910001-TM09KT**	**20910001-TM10OUTKT**		
SAMPLING LOCATION/ACTIVITIES	Column K20 area; entry way to Cubicle 044; about center; approximately five feet above floor/Sampling activities only	Outdoors; about 25 feet east of building; approximately five feet above ground/Normal outdoor activities	This column intentionally left blank	This column intentionally left blank
START/STOP	11:24:00/11:29:00	11:45:00/11:50:00		
SAMPLE TIME	5 minutes	5 minutes		
Alternaria		53		
Ascospores		210		
Aureobasidium				
Basidiospores		750		
Bipolaris/Drechslera group				
Botrytis				
Chaetomium		13		
Cladosporium	93	1,400		
Curvularia				
Epicoccum		13		
Fusarium				
Nigrospora		67		
Oidium				
Other brown		13		
Penicillium/Aspergillus types		1,200		
Rusts		13		
Smuts, Periconia, Myxomycetes		640		
Stachybotrys				
Stemphylium		13		
Torula		13		
Trichocladium				
Ulocladium				
Zygomycetes				
Hyphal fragments	13	270		
Background debris*	1+	4+		
TOTAL**	93	4,500		

*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.

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Sacramento, California 94279

TABLE 20910001-9
14TH FLOOR
AIRBORNE FIBERS RESULTS
SACRAMENTO, CALIFORNIA
OCTOBER 7, 2009

NAME/ REFERENCE	LOCATION/ ACTIVITIES	PPE USED	SAMPLE NUMBER	START/ STOP	SAMPLE TIME	CONTAMINANT	RESULTS (f/cc)	PEL (f/cc)
Area Sample	Column N20 area; Cubicle 121.01; approximately five feet above floor/Sampling activities only	N/A	20910001-103LS	07:51/ 11:56	245 minutes	Fibers	**< 0.003**	0.1
Area Sample	Column K20 area; Cubicle 031; approximately five feet above floor/Sampling activities only	N/A	20910001-104LS	07:56/ 11:57	241 minutes	Fibers	**<0.003**	0.1
Area Sample	Area between columns M18 and L18; Cubicle 005; approximately five feet above floor/Sampling activities only	N/A	20910001-105LS	11:58/ 15:58	240 minutes	Fibers	**<0.003**	0.1
Area Sample	Column M22 area; Cubicle 080; approximately five feet above floor/Sampling activities only	N/A	20910001-106LS	12:00/ 16:00	240 minutes	Fibers	**<0.003**	0.1
Blank	N/A	N/A	20910001-107LS 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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APPENDIX A

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450 N Street
Sacramento, California 94279

TABLE 20910001-10
14TH FLOOR
AIRBORNE TOTAL DUST RESULTS
SACRAMENTO, CALIFORNIA
OCTOBER 7, 2009

NAME/ REFERENCE	LOCATION/ ACTIVITIES	PPE USED	SAMPLE NUMBER	START/ STOP	SAMPLE TIME	CONTAMINANT	RESULTS (mg/M^3)	PEL (mg/M^3)
Area Sample	Column K20 area; Cubicle 031; approximately five feet above floor/Sampling activities only	N/A	20910001-108LS	08:39/ 12:40	241 minutes	Total Dust	**<0.21**	10
Area Sample	Column M22 area; Cubicle 080; approximately five feet above floor/Sampling activities only	N/A	20910001-109LS	08:41/ 12:41	240 minutes	Total Dust	**<0.21**	10
Area Sample	Column N20 area; Cubicle 121.01; approximately five feet above floor/Sampling activities only	N/A	20910001-110LS	08:45/ 12:46	241 minutes	Total Dust	**<0.21**	10
Area Sample	Area between columns M18 and L18; Cubicle 005; approximately five feet above floor/Sampling activities only	N/A	20910001-111LS	08:48/ 12:48	240 minutes	Total Dust	**<0.21**	10
Blank	N/A	N/A	20910001-112LS 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

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APPENDIX A

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Board of Equalization
450 N Street
Sacramento, California 94279

TABLE 20910001-11
14TH FLOOR
AIRBORNE FORMALDEHYDE RESULTS
SACRAMENTO, CALIFORNIA
OCTOBER 7, 2009

NAME/ REFERENCE	LOCATION/ ACTIVITIES	PPE USED	SAMPLE NUMBER	START/ STOP	SAMPLE TIME	CONTAMINANT	RESULTS (ppm)	PEL (ppm)
Area Sample	Column K20 area; Cubicle 031; approximately five feet above floor/Sampling activities only	N/A	20910001-113LS	13:36/ 14:51	75 minutes	Formaldehyde	**0.008**	0.75
Area Sample	Column M22 area; Cubicle 080; approximately five feet above floor/Sampling activities only	N/A	20910001-114LS	13:38/ 14:53	75 minutes	Formaldehyde	**0.009**	0.75
Area Sample	Column N20 area; Cubicle 121.01; approximately five feet above floor/Sampling activities only	N/A	20910001-115LS	13:40/ 14:55	75 minutes	Formaldehyde	**0.008**	0.75
Area Sample	Area between columns M18 and L18; Cubicle 005; approximately five feet above floor/Sampling activities only	N/A	20910001-116LS	13:42/ 14:57	75 minutes	Formaldehyde	**0.008**	0.75
Blank	N/A	N/A	20910001-117LS Blank	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.

APPENDIX A

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

TABLE 20910001-12
14TH FLOOR
AIRBORNE 4-PHENYLCYCLOHEXENE
SACRAMENTO, CALIFORNIA
OCTOBER 7, 2009

NAME/ REFERENCE	LOCATION/ ACTIVITIES	PPE USED	SAMPLE NUMBER	START/ STOP	SAMPLE TIME	CONTAMINANT	RESULTS (ppbv)	PEL (ppm)
Area Sample	Column K20 area; Cubicle 031; approximately four feet above floor/Sampling activities only	N/A	20910001-101LS	07:46/ 13:46	360 minutes	4-Phenylcyclohexene	**<1.0**	N/A
Area Sample	Column N20 area; Cubicle 121.01; approximately four feet above floor/Sampling activities only	N/A	20910001-102LS	07:47/ 13:47	360 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: California State
Board of Equalization
450 N Street
Sacramento, California 94279

TABLE 20910001-13
DIRECT-READING RESULTS
14TH FLOOR
SACRAMENTO, CALIFORNIA
OCTOBER 7, 2009

LOCATION/SITE ACTIVITIES	SAMPLE TIME	CONTAMINANT	RESULTS (ppm)	COMMENTS
Southern quadrant; approximately five feet above floor/Sampling activities only	15:17/15:22	Volatile Organic Compounds	ND < 0.1	N/A
Eastern quadrant; approximately five feet above floor/Sampling activities only	15:25/15:30	Volatile Organic Compounds	ND < 0.1	N/A
Western quadrant; approximately five feet above floor/Sampling activities only	15:31/15:36	Volatile Organic Compounds	ND < 0.1	N/A
Northern quadrant; approximately five feet above floor/Sampling activities only	15:37/15:42	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
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: 20910001

Date of Receipt: 10-07-2009
Date of Report: 10-08-2009

SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

Location:	20910001-TM01OUTKT		20910001-TM02KT		20910001-TM03KT		20910001-TM04KT	
Comments (see below)	None		None		A		None	
Lab ID-Version‡:	2610076-1		2610077-1		2610078-1		2610079-1	
	raw ct.	spores/m3	raw ct.	spores/m3	raw ct.	spores/m3	raw ct.	spores/m3
Alternaria	3	40						
Arthrinium								
Ascospores*	2	110						
Aureobasidium								
Basidiospores*	11	590						
Bipolaris/Drechslera group								
Botrytis								
Chaetomium	1	13						
Cladosporium	61	3,300	1	53	3	40	1	53
Curvularia								
Epicoccum								
Fusarium								
Myrothecium								
Nigrospora	3	40						
Oidium	1	13						
Other brown			1	13				
Penicillium/Aspergillus types†	31	1,700						
Pithomyces								
Rusts*	1	13						
Smuts*, Periconia, Myxomycetes*	14	190	1	13				
Stachybotrys								
Stemphylium								
Torula								
Ulocladium								
Background debris (1-4+)††	4+		1+		< 1+		< 1+	
Hyphal fragments/m3	210		< 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		5,900		80		40		53

Comments: A) The 3 raw count *Cladosporium* spores were present as a single clump.

* 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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Client: Hygiene Technologies International, Inc.:
Northern California
C/O: Mr. Wesley Frey
Re: 20910001

Date of Receipt: 10-07-2009
Date of Report: 10-08-2009

SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

Location:	20910001-TM05KT		20910001-TM06KT		20910001-TM07KT		20910001-TM08KT	
Comments (see below)	B		B		A		C	
Lab ID-Version‡:	2610080-1		2610081-1		2610082-1		2610083-1	
	raw ct.	spores/m3	raw ct.	spores/m3	raw ct.	spores/m3	raw ct.	spores/m3
Alternaria								
Arthrinium								
Ascospores*								
Aureobasidium								
Basidiospores*								
Bipolaris/Drechslera group								
Botrytis								
Chaetomium								
Cladosporium					3	40		
Curvularia								
Epicoccum								
Fusarium								
Myrothecium								
Nigrospora								
Oidium								
Other brown								
Penicillium/Aspergillus types†							2	27
Pithomyces								
Rusts*								
Smuts*, Periconia, Myxomycetes*								
Stachybotrys								
Stemphylium								
Torula								
Ulocladium								
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		< 13		< 13		40		27

Comments: B) No spores detected. A) The 3 raw count *Cladosporium* spores were present as a single clump. C) The 2 raw count *Penicillium/Aspergillus* type spores were present as a single clump.

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

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Client: Hygiene Technologies International, Inc.:
Northern California
C/O: Mr. Wesley Frey
Re: 20910001

Date of Receipt: 10-07-2009
Date of Report: 10-08-2009

SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

Location:	20910001-TM09KT		20910001-TM10OUTKT	
Comments (see below)	D		None	
Lab ID-Version‡:	2610084-1		2610085-1	
	raw ct.	spores/m3	raw ct.	spores/m3
Alternaria			4	53
Arthrinium				
Ascospores*			4	210
Aureobasidium				
Basidiospores*			14	750
Bipolaris/Drechslera group				
Botrytis				
Chaetomium			1	13
Cladosporium	4	93	27	1,400
Curvularia				
Epicoccum			1	13
Fusarium				
Myrothecium				
Nigrospora			5	67
Oidium				
Other brown			1	13
Other colorless				
Penicillium/Aspergillus types†			23	1,200
Pithomyces				
Rusts*			1	13
Smuts*, Periconia, Myxomycetes*			48	640
Stachybotrys				
Stemphylium			1	13
Torula			1	13
Ulocladium				
Zygomycetes				
Background debris (1-4+)††	1+		4+	
Hyphal fragments/m3	13		270	
Pollen/m3	< 13		53	
Skin cells (1-4+)	< 1+		< 1+	
Sample volume (liters)	75		75	
§ TOTAL SPORE/m3		93		4,500

Comments: D) 3 of the raw count *Cladosporium* spores were present as a single clump.

* 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.

HYGIENE TECH

Hygiene Technologies International, Inc.

3625 Del Amo Boulevard, Suite 180
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(310) 370-2474 FAX
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000588924

Request For Analysis

Project Number/Purchase Order: 20910001 Date Submitted: 10/7/09

Project Contact: Wes Frey Turnaround Required: 24hrs

Lab Destination: EMLab Lab Contact: Sample Recvg

SAMPLE ID	VOLUME	MEDIA	ANALYSIS REQUESTED
20910001 TM01OUTKT	7 SL	AirCell	Spore Trap Analysis
TM02IKT			
TM03IKT			
TM04IKT			
TM05IKT			
TM06KT			
TM07KT			
TM08KT			
TM09KT			
TM10OUTKT			

Special Instructions:

1. **Sampled by:** Kenneth Tse 10/7/09 11:50 **Received by:**
2. **Relinquished by:** Kenneth Tse 10/7/09 14:00 **Received by:** [illegible] on 10/7/9 @ 14:00
3. **Relinquished by:** [illegible] on 10/7/9 @ 14:20 **Received by:** Brandon Tiedan 10/7/09 @ 1420

Please include signature, date, and time

Lab Use Only: