August 8, 2019

TO: ROBERT SALERNO
FACILITIES PROJECT SUPERVISOR
CALIFORNIA STATE UNIVERSITY
5151 STATE UNIVERSITY DRIVE
LOS ANGELES, CA 90032

RE: INDOOR AIR QUALITY ASSESSMENT
KING HALL BUILDING
ROOM 1064

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1.0 INTRODUCTION

On August 3, 2019, Ulises Monsalvo from Terra Environmental conducted an Indoor air quality (IAQ) assessment at the King Hall Building- Room 1064 Offices. The sampling was requested by CSULA Facilities Department to determine if a health risk to the occupants exists within the Room 1064. Consequently, Terra provided the IAQ assessment following protocols recommended by the Environmental Protection Agency (EPA) "Mold Remediation in Schools and Commercial Buildings" document. The King Hall Building- Room 1064 Offices areas were also monitored for IAQ parameters and for Particulate Dust and bulk samples of suspect asbestos containing materials were collected (see attached Limited Asbestos report).

2.0 BACKGROUND

Indoor Air quality is a serious issue in occupational settings where dust can affect our sinuses, lungs, and entire respiratory system with potentially very serious consequences. Understanding the differences in dust particles, the various types of filters available, and the latest dust measurement and dust sampling methods is essential to maintaining a safe and healthy working environment.

There are three basic categories of dust: respirable, thoracic, and inhalable (inspirable). Each type of dust exists in the air we breathe; the only difference between them is the diameter of the dust particle. Respirable dust particles are under 10 microns in diameter, thoracic dust particles are under 25 microns, and inhalable dust particles are under 100 microns in diameter. The dust sampling method varies, depending upon the type of dust to be evaluated.

3.0 SCOPE OF WORK

Terra Environmental scope of this IAQ assessment included a visual inspection of the King Hall Building- Room 1064, collection of environmental samples for particulate dust, asbestos airborne fibers, airborne mold; laboratory analysis of samples, indoor and outdoor psychrometric measurements Infra-Red thermography, Moisture content measurements and production of this written report of findings, conclusions, and recommendations.

3.01 Visual Inspection

Terra Environmental made the following general observations

- No water damage was observed on any building components, equipment, furniture, etc., within the Room 1064 offices. There were no mold-like odors.
- There is a live office plant inside the claimant's office.
- The HVAC system was operational during sample collection. The HVAC registers were inspected, and no concerns were found.
- Random representative areas/spaces were selected for Reference-sample collection.
- Minor settled dust was observed along the perimeter windows.
- There are no active water leaks.

- The Room 1064 areas, hallways and common areas are in good condition, no visible damage was observed on any building components. All samples were collected during normal business hours.

3.02 Psychometric Readings

In addition to the visual inspection, the following psychrometric measurements were collected to screen interior materials for elevated moisture content and the outside ambient conditions were measured and compared to the indoor conditions. The results of this inspection indicate the following:

Table #1 – Psychometric Readings

Measurement	Temperature	Relative Humidity	Dew Point	Mix
C1064-C Center	69.9° F	39.5%	41.4° F	38.4^{GPP}
C1064-B Center	67.0° F	38.4%	40.8° F	37.5^{GPP}
C1064-A Center	67.2° F	38.3%	41.1° F	37.9^{GPP}
C1064-D Center	68.8° F	36.9%	41.3° F	38.3^{GPP}
Hallway outside Room 1064A (Reference)	69.0° F	37.1%	41.7° F	38.9^{GPP}
Outside Air (Reference)	75.1° F	41.5%	43.3° F	43.0^{GPP}

All areas inside Room 1064 Offices (cubicles) were within the ASHRAE Guidelines for temperature. The inside temperatures ranged from 67.0 to 69.2 degrees Fahrenheit (°F), compared to 75.1° Outdoors (Reference). The temperatures were within the acceptable comfort guidelines recommended by ASHRAE. These levels were measured with the Heating, Ventilation and Air Conditioning (HVAC) System fan running (Central HVAC system). This is typical for this Room and the Room was sampled with the same conditions.

Humidity levels were < 60 % ranging from 36.9 to 39.5 percent (%), compared to the outdoor levels, of 41.5%. Typically, ASHRAE, considers relativity humidity measurements below the 60 percent and higher concentrations guideline as incapable of supporting mold growth.

3.03 Carbon Monoxide

Carbon monoxide (CO) is a poisonous, colorless, odorless and tasteless gas. Although it has no detectable odor, CO is often mixed with other gases that do have an odor. CO is a common industrial hazard resulting from the incomplete burning of material containing carbon such as natural gas, gasoline, kerosene, oil, propane, coal, or wood.

Carbon monoxide is harmful when breathed because it displaces oxygen in the blood and deprives the heart, brain and other vital organs of oxygen. Large amounts of CO can overcome the individual in minutes without warning — causing him/her to lose consciousness and suffocate.

The OSHA Permissible Exposure Limit (PEL) for CO is 50 parts per million (ppm). OSHA standards prohibit worker exposure to more than 50 parts of CO gas per million parts of air averaged during an 8-hour time period.

On August 3, 2019 the CO levels inside Room 1064 were 0.0 parts per million (PPM) as measured with a portable Multi-gas meter, Honeywell Model BW Clip4 while the Oxygen levels was 20.9%, both readings are within the OSHA recommended standards for an Indoor Environment.

4.0 SAMPLING METHODOLOGY

4.01 Asbestos

Asbestos is a mineral fiber that occurs in rock and soil. Because of its fiber strength and heat resistance asbestos has been used in a variety of building construction materials for insulation and as a fire retardant. Asbestos has also been used in a wide range of manufactured goods, mostly in building materials (roofing shingles, ceiling and floor tiles, paper products, and asbestos cement products), heat-resistant fabrics, packaging, gaskets, and coatings.

Asbestos fibers may be released into the air by the disturbance of asbestos-containing material during product use, demolition work, building or home maintenance, repair, and remodeling. There are known asbestos containing materials in the Pasadena Courthouse building, some of which were disturbed during the fire incident in the cafeteria.

Sampling methodology, sampling procedures and Laboratory

PCM: The method gives an index of airborne fibers. It is primarily used for estimating asbestos concentrations, though PCM does not differentiate between asbestos and other fibers. Use this method in conjunction with electron microscopy (e.g., Method 7402) for assistance in identification of fibers. Fibers < ca. 0.25 µm diameter will not be detected by this method. This method may be used for other materials such as fibrous glass by using alternate counting rules. The OSHA Action Level (AL) for asbestos is <0.01 fibers per cubic centimeter (<0.01 F/cc).

Procedures: Monitoring the environment for airborne asbestos requires the use of sensitive sampling and analysis procedures. The PCM samples are collected on a 25 mm three-piece cassette with ca. 50 mm electrically conductive extension cowl, cellulose ester membrane filter, 0.8 µm pore size with a portable sampling pump calibrated between 0.5 to 16 liters per minute. Terra Environmental representative calibrated the sampling pump to 14.1 LPM at the beginning and end of the sampling procedure.

Laboratory: The PCM samples were transferred following proper chain of custody protocol to AIH Laboratory, located at 2556 W Woodland Drive, Anaheim, California 92801, for analysis. The samples were analyzed by Phase Contrast Microscope (PCM) NIOSH 7400 Method.

Terra Environmental collected a total of five (5) air samples plus two blanks as required by NIOSH Method 7400. The sample analysis results revealed the following:

Table #2 – PCM Sample Results

Sample No	Location	Results	OSHA Action level 0.01 f/cc
01	Office C1064-D-North	<0.002 F/cc	PASS
02	Office C1064-D-South	<0.002 F/cc	PASS
03	Office C1064-A-Center	<0.002 F/cc	PASS
04	Office C1064-C-Center	<0.002 F/cc	PASS
05	Office C1064-B-Center	<0.002 F/cc	PASS
06	Field blank	NA	
07	Sealed Blank	NA	

Conclusion

The results of the PCM air sampling showed that no airborne asbestos appears to be present within the DA Office, 1st and 2nd floors, Thus, no immediate asbestos exposure risk is present.

4.02 Mold

Molds can be found almost anywhere; they can grow on virtually any organic substance, as long as moisture and oxygen are present. There are molds that can grow on wood, paper, carpet, foods, and insulation. When excessive moisture accumulates in buildings or on building materials, mold growth will often occur, particularly if the moisture problem remains undiscovered or unaddressed. It is impossible to eliminate all mold and mold spores in the indoor environment. However, mold growth can be controlled indoors by controlling moisture indoors.

Sampling methodology, sampling procedures and Laboratory

Procedure: The first step in properly evaluating a potential mold problem is the visual inspection. Throughout this phase Terra's Mold Inspectors are looking for three things, evidence of previous moisture intrusion, evidence of mold growth and areas with a potential for future mold infestation. An assessment typically covers the interior living space, basement, attic and crawl space.

Air sampling is the most effective method for determining whether a mold infestation is potentially creating an unsafe living environment. Our testing procedure incorporates the Zeffon Laboratory Air-O-Cell cassette. Air quality is tested by drawing 15 cubic liters of air per min and impacting the airborne particles over a glass substrate. Typically, the process runs for 5 minutes, producing a sample size of +75 cubic liters. Next, the cassette is sent to a laboratory, where the spores are identified and counted.

Laboratory: The mold air samples were transferred following proper chain of custody protocol to LA Testing, located at 520 Mission Street, South Pasadena, California 91030 for analysis. The Samples were analyzed by Air-O-Cell Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods EMSL 05-TP-003, ASTM D7391). LA Testing is inspected, licensed, and/or proficiency tested by the following: American Industrial Hygiene Association (AIHA), Environmental Microbiology Proficiency Analytical Testing (EMPAT) No. 102814.

Terra Environmental collected a total of six (6) Air-O-Cell samples. The sample analysis results revealed the following:

Table #3 – AirOcell Sample Results

Sample No.	Location	Total Spores	Results
21540599	C1064-C Center	50	Balanced
21540662	C1064-B Center	30	Balanced
21540603	C1064-A Center	20	Balanced
21540647	C1064-D Center	120	Balanced
21540602	Hallway outside Room 1064A	ND	Balanced
21538722	Outside Air	2310	Background

Conclusion

On August 6, 2019 total viable and non-viable indoor airborne spore concentrations at Room 1064 Offices ranged between 0 and 120 spores per cubic meter (spores/m^3) and lower than the background outside airborne spore concentrations 2310 spores/m^3.

Indoor mold levels were not amplified and are not suggestive of hidden mold growth. The hierarchy of the spore genera indoors was lower to the genera detected outdoors. Based on current industry ideology, these samples are therefore considered **Balanced** when indoor and outside counts are compared.

The predominantly airborne mold type indoors were *Cladosporium and Penicillium/Aspergillus types* and outdoors were *Cladosporium* species*. Cladosporium* species is the most common mold type found indoors and outdoors in Southern California

4.03 Particle matter and respirable dust

Terra conducted real-time monitoring of the concentration and particle size of airborne dust, smoke, or other forms of particulates in order to determine the quantities of fine particles dust particles. Fine particles are less than 2.5 micrometers in diameter and are caused by all types of combustion to include motor vehicles, power plants, residential wood burning, forest fires, agricultural burning and some industrial processes. On August 3, 2019, **Terra's** Industrial Hygienist, Mr. Ulises Monsalvo

and Alfred Delgadillo, performed air monitoring using an IQAir Particle Scan Pro (2008 V3 set-up in the data logging mode.

METHODOLOGY

Particulate Concentration Measurements

Real-time concentrations and particle size of airborne Particulate Matter levels were measured using the IQAir Particulate Scan Pro (2008 V3). The term Particulate Matter is a generic term given to a broad group of particles suspended in the air. These particles are found in a mixture of both solid and liquids within the atmosphere. Particulate Matter Monitors measure particles with a diameter of 2.5 micrometers or less (PM2.5). The IQAir Particle Pro Scan (2008) provided real time measurements correlated with PM2.5 fractions. The unit is fully capable of measuring particle sizes down to 0.0.

Air Quality Index (AQI)

The Air Quality Index (AQI) is used to illustrate how clean or polluted air is and the associated potential health effects. Table 4 shows the AQI values along with the associated health concerns and colors used to symbolize the different levels. Colors are used to identify the different levels of health concerns in order to make it easier for the public to associate the level of health concern to the corresponding AQI value. This index is used as a resource and comparison to moderate exterior levels of concentrations, interior observations may vary and should be evaluated by an Certified Industrial Hygienist.

TABLE 4 Air Quality Index (AQI)

Air Quality Index (AQI) Values	Levels of Health Concern	Colors
When the AQI is in this range: (Particulate levels)	…air quality conditions are:	… as symbolized by this color:
0 to 50	Good	Green
51 to 100	Moderate	Yellow
101 to 150	Unhealthy for Sensitive Groups	Orange
151 to 200	Unhealthy	Red
201 to 300	Very Unhealthy	Purple
301 to 500	Hazardous	Maroon

The different levels of health concerns are as follows:

- **Good** – Is for an AQI between 1 and 50 and is considered satisfactory air quality with air pollution possessing little or no risk.
- **Moderate** – Is for an AQI between 51 and 100 and is considered acceptable however there may be a moderate health concern for a small number of people.
- **Unhealthy for Sensitive Groups** – Is for an AQI between 101, 150 and members of sensitive groups may experience health effects.
- **Unhealthy** – Is for an AQI between 151 and 200 and is when everyone may begin to experience health effects in addition members of sensitive groups may more serious health effects.
- **Very Unhealthy** – Is for an AQI between 201 and 300 and triggers a health alert is when everyone may experience more serious health effects.
- **Hazardous** – Is for an AQI above 300 and triggers health warnings of emergency conditions and is when the entire population is more likely to be affected.

Visual Observations

At the time of the site investigation, accessible areas were visually inspected for deficiencies potentially affecting the air quality of the work areas adjacent to the work area. Table 5 represents the Pm readings at a different particle sizes on August 3, 2019.

Timestamp	Location	> 0.5 µm	> 0.7 µm	> 1.0 µm	> 2.5 µm	Level
08/03/2019 11:55:47	3	1.837	0.759	0.360	0.087	Good
08/03/2019 11:45:17	3	1.872	0.780	0.369	0.090	Good
08/03/2019 11:34:38	3	1.882	0.780	0.373	0.086	Good
08/03/2019 11:24:19	3	1.806	0.746	0.346	0.082	Good
08/03/2019 11:10:43	2	1.865	0.733	0.327	0.078	Good
08/03/2019 11:00:33	2	1.897	0.760	0.343	0.078	Good
08/03/2019 10:50:15	2	1.935	0.763	0.346	0.081	Good
08/03/2019 10:39:58	2	2.018	0.818	0.371	0.091	Good
08/03/2019 10:27:22	1	2.364	0.967	0.433	0.108	Good
08/03/2019 10:15:24	1	2.390	0.981	0.442	0.115	Good
08/03/2019 10:04:58	1	2.392	0.975	0.438	0.110	Good
08/03/2019 09:50:42	1	2.624	1.101	0.514	0.141	Good

On August 3, the measured Air quality index at the sampled locations ranged from 0.078 to 2.624 micrograms per cubic meter of air (µg/m^3) for measure particles with a diameter of 2.5 micrometers or less (PM2.5) and were below 50 µg/m^3 and is considered a satisfactory air quality with air pollution possessing little or no risk.

5.0 CONCLUSION

The site inspection and sample collection reveal dust concentrations well below the current Occupational Safety and Health Administration (OSHA) regulatory limit of 5 mg/m^3 and the more stringent American Conference of Industrial Hygiene (ACGIH) level of 3 mg/m^3. Logged data of particles indicates that there were no elevated levels of fine particles in the interior areas monitored. No measurable evidence of fine particle levels creating an unsafe environment was observed on the inspection date.

Particulate levels varied throughout the sampling areas, however all levels were maintained below 50 µg/m^3, all levels were to observed to be acceptable for occupancy.

TERRA appreciates having the opportunity to perform this IAQ Investigation at your site. If for some reason, you have any questions regarding this report, please do not hesitate to contact us.

Israel Monsalvo, CAC, CDPH-I/A & PM, CMI
Cal/OSHA-CAC #04-3551
California DPH-Certified I/A, PM # 9699

6.0 LIMITATIONS

The field observations, measurements, and research reported herein are considered sufficient in detail and scope to form a reasonable basis for limited, asbestos airborne fibers, mold and nuisance dust observation and monitoring services of this subject property. The assessment, conclusions, and recommendations presented herein are based upon the subjective evaluation of limited data. They may not represent all conditions at the subject property as they reflect the information gathered from specific locations. The findings and conclusions contained herein have been promulgated in accordance with generally accepted industrial hygiene methodology and only for the subject property described in this report.

TERRA is not licensed as medical professionals; therefore, the conclusions contained within this report do not constitute medical opinions, human health risk analysis or public health alerts. Individuals who are experiencing health related complaints should be encouraged to seek a medical opinion from a licensed medical professional. It is important that proper diagnosis of health-related complaints be made and not be confused by misdirected attention to indoor air quality issues.

6.01 Use By Third Parties

This report was prepared pursuant to the contract TERRA has with the Client. That contractual relationship included an exchange of information about the subject site that was unique and between TERRA and its client and serves as the basis upon which this report was prepared. Because of the importance of the communication between TERRA and it Client, reliance or any use of this report by anyone other than the Client, for whom it was prepared, is prohibited and therefore not foreseeable to TERRA.

6.02 Unidentifiable Conditions

This Particulate Matter Investigation has been developed to provide the client with information regarding apparent conditions relating to the subject properties. Although TERRA believes that the findings and conclusions provided in this report are reasonable, the assessment is necessarily limited to the conditions observed and to the information available at the time of the work. Due to the nature of the work, there is a possibility that there may exist conditions which could not be identified within the scope of the assessment or which were not apparent at the time of our site work. The assessment is also limited to information available from the client at the time it was conducted. It is also possible that the testing methods employed at the time of the report may later be superseded by other methods.

Attachments:

Asbestos PCM Laboratory results
Mold Laboratory results
Certifications

ASBESTOS PCM RESULTS

2556 W Woodland Dr Anaheim, CA 92801

Phone:(562) 860-2201
www.aihlab.com

PCM ASBESTOS & OTHER FIBER ANALYSIS

Client Name: Terra Environmental
Project Manager: Israel Monsalvo
Client Address: 12631 Imperial Hwy Ste A225
Santa Fe Springs, CA 90670

Client Job Number: 71900
Client Job Location: 5151 State University Dr., Los Angeles, CA 90032

Accreditation: AIHA-AAR
Batch Number: 1912173
Total Samples Submitted: 7
Total Samples Analyzed: 7
Method: NIOSH 7400
Filter Area: 385 mm^2
Microscope Field Area: 0.00785 mm^2
Blank Average Per 100: 0

Lab ID:191217301			Sample ID:803-01				Sample Type:Background			
TIME			FLOW(liters/minute)			VOLUME (Liters)	Limit of Detection	Fibers/Field	Fibers/mm^2	Fibers/CC
START	STOP	Minutes	START	STOP	Average					
08:41	10:20	99	14.1	14.1	14.10	1395.9	0.002	3/100	<7.0	<0.002

Comments:
Date Sampled: 08-03-2019 **Location:** Office C1064-D-N
Pump ID: **Activity:**
Environment: **Decon:**
Protection:

Lab ID:191217302			Sample ID:803-02				Sample Type:Background			
TIME			FLOW(liters/minute)			VOLUME (Liters)	Limit of Detection	Fibers/Field	Fibers/mm^2	Fibers/CC
START	STOP	Minutes	START	STOP	Average					
08:42	10:21	99	14.1	14.1	14.10	1395.9	0.002	2.5/100	<7.0	<0.002

Comments:
Date Sampled: 08-03-2019 **Location:** Office C1064-D-N
Pump ID: **Activity:**
Environment: **Decon:**
Protection:

Lab Notes at Page 4

2556 W Woodland Dr Anaheim, CA 92801

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PCM ASBESTOS & OTHER FIBER ANALYSIS

Client Name: Terra Environmental
Project Manager: Israel Monsalvo
Client Address: 12631 Imperial Hwy Ste A225
Santa Fe Springs, CA 90670

Client Job Number: 71900
Client Job Location: 5151 State University Dr., Los Angeles, CA 90032

Accreditation: AIHA-AAR
Batch Number: 1912173
Total Samples Submitted: 7
Total Samples Analyzed: 7
Method: NIOSH 7400
Filter Area: 385 mm^2
Microscope Field Area: 0.00785 mm^2
Blank Average Per 100: 0

Lab ID:191217303			Sample ID:803-03				Sample Type:Background			
TIME			FLOW(liters/minute)			VOLUME (Liters)	Limit of Detection	Fibers/Field	Fibers/mm^2	Fibers/CC
START	STOP	Minutes	START	STOP	Average					
08:43	10:21	98	14.1	14.1	14.10	1381.8	0.002	1/100	<7.0	<0.002

Comments:
Date Sampled: 08-03-2019 **Location:** Office C1064-D-N
Pump ID: **Activity:**
Environment: **Decon:**
Protection:

Lab ID:191217304			Sample ID:803-04				Sample Type:Background			
TIME			FLOW(liters/minute)			VOLUME (Liters)	Limit of Detection	Fibers/Field	Fibers/mm^2	Fibers/CC
START	STOP	Minutes	START	STOP	Average					
08:43	10:22	99	14.1	14.1	14.10	1395.9	0.002	2/100	<7.0	<0.002

Comments:
Date Sampled: 08-03-2019 **Location:** Office C1064-D-N
Pump ID: **Activity:**
Environment: **Decon:**
Protection:

Lab Notes at Page 4

AIH LABORATORY
2556 W Woodland Dr Anaheim, CA 92801
Phone:(562) 860-2201
www.aihlab.com

PCM ASBESTOS & OTHER FIBER ANALYSIS

Client Name: Terra Environmental
Project Manager: Israel Monsalvo
Client Address: 12631 Imperial Hwy Ste A225 Santa Fe Springs, CA 90670

Client Job Number: 71900
Client Job Location: 5151 State University Dr., Los Angeles, CA 90032

Accreditation: AIHA-AAR
Batch Number: 1912173
Total Samples Submitted: 7
Total Samples Analyzed: 7
Method: NIOSH 7400
Filter Area: 385 mm^2
Microscope Field Area: 0.00785 mm^2
Blank Average Per 100: 0

Lab ID:191217305			Sample ID:803-05				Sample Type:Background			
TIME			FLOW(liters/minute)			VOLUME (Liters)	Limit of Detection	Fibers/Field	Fibers/mm^2	Fibers/CC
START	STOP	Minutes	START	STOP	Average					
08:44	10:23	99	14.1	14.1	14.10	1395.9	0.002	1/100	<7.0	<0.002

Comments:

Date Sampled: 08-03-2019 **Location:** Office C1064-D-N

Pump ID: **Activity:**

Environment: **Decon:**

Protection:

Lab ID:191217306			Sample ID:803-06				Sample Type:Field Blank			
TIME			FLOW(liters/minute)			VOLUME (Liters)	Limit of Detection	Fibers/Field	Fibers/mm^2	Fibers/CC
START	STOP	Minutes	START	STOP	Average					
								0/100		

Comments:

Lab ID:191217307			Sample ID:803-07				Sample Type:Blank			
TIME			FLOW(liters/minute)			VOLUME (Liters)	Limit of Detection	Fibers/Field	Fibers/mm^2	Fibers/CC
START	STOP	Minutes	START	STOP	Average					
								0/100		

Comments:

2556 W Woodland Dr Anaheim, CA 92801

Phone:(562) 860-2201
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PCM ASBESTOS & OTHER FIBER ANALYSIS

Client Name: Terra Environmental
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Batch Number: 1912173
Total Samples Submitted: 7
Total Samples Analyzed: 7
Method: NIOSH 7400
Filter Area: 385 mm^2
Microscope Field Area: 0.00785 mm^2
Blank Average Per 100: 0

Analyzed by: Cameron Zimmerman **Signature:** Cameron Zimmerman **Date:** 08-06-2019

Reviewed by: Zubair Ahmed **Signature:** **Date:** 08-06-2019

The client is responsible for interpretation and use of the test results. AIH Laboratory is not responsible of final results which is dependent on volume collected by non-AIH Laboratory personnel. Limit of detection is 7 fibers/mm^2. All results have been blank corrected. This report shall not be reproduced except in full, without written approval of AIH Laboratory. It shall not be used to claim product endorsement by AIHA or any other agency of the government

Lab Notes at Page 4

United States Department of Commerce
National Institute of Standards and Technology

Certificate of Accreditation to ISO/IEC 17025:2005

NVLAP LAB CODE: 500079-0

AIH Laboratory

Anaheim, CA

is accredited by the National Voluntary Laboratory Accreditation Program for specific services, listed on the Scope of Accreditation, for:

Asbestos Fiber Analysis

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communique dated January 2009).

2018-10-01 through 2019-09-30

Effective Dates

For the National Voluntary Laboratory Accreditation Program

MOLD LABORATORY RESULTS

LA Testing

520 Mission Street South Pasadena, CA 91030

Phone/Fax: (323) 254-9960 / (323) 254-9982

http://www.LAT sting.com / pasadenalab@latesting.com

Order ID:	321917321
Customer ID:	32TESV78
Customer PO:	
Project ID:	

Attn:	Ulises Monsalvo	Phone:	(562) 868-3777
	T a Environmental Services	Fax:	
	12631 Imperial Hwy	Collected:	08/03/2019
	Suite A225	Received:	08/05/2019
	a a F p ings. CA 90670	A al yzed:	08/05/2019
oj:	71900 / Cal State LA King Hall, Room 1004		

Spore T ap ASSESSMENTReport™ Air-O-Cell(™) Analysis of Fungal Spores & Particulates (Methods MICRO-SOP-201, ASTM D7391)

	article Identification	Raw Count	(Count/m³)	% of Total	Interpetation Guideline
321917321-0001	Alternaria (Ulocladium)				
	Ascospores				
Client Sample ID 28417372	Aspergillus/Penicilium	1*	10*	20	☑ ✹
	Basidiospores				
	Bipolaris++				
	Chaetomium				
Location Center C 1064 - C	Cladosporium	1	40	80	☑ ✹
	Curvularia				
	Epicoccum				
	Fusarium				
Sample Volume (L) 75	Ganoderma				
	Myxomycetes++				
	Pithomyces++				
	Rust				
Sample Type Inside	Copulariopsis/Microascus				
	Achybotrys/Memnoniella				
Comments	Unidentifiable Spores				
	Zygomycetes				
	Botrytis				
	Oidium				
	Total Fungi	**2**	**50**	**100**	☑
	Hyphal Fragment				
	Insect Fragment				
	Pollen	1*	10*		⚠ 🌲 ✹

Analytical Sensitivity 600x: **44** counts/cubic meter

Analytical Sensitivity 300x *: **13*** counts/cubic meter

kin Fragments: **2** 1 to 4 (low to high)

Fibrous Particulate: **1** 1 to 4 (low to high)

Background: **2** 1 o 4 (low to high); 5 (overloaded)

No discernable field blank was submitted with this group of samples.

++ Includes other spores with similar morphology; see EMSL's fiungal glossary fior each specific ca g ry

☑ Concentration at or below background

⚠ Concentration above background

🚫 Concentration 10X or more above background

🌲 Not commonly found growing indoors, spores likely come from outside.

✹ pores reported to be able to cause allergies in individuals.

☣ Potential for mycotoxin production exists with these fungi.

💧 These fungi are considered water damage indicators.

Initial report from: 08/05/2019 15:55:37

Regina Norman, Laboratory Manager
or Other App oved Sig ator y

For Information on the fungi listed in this report please visit the Resources section at www.emsl.com

LA Testing

520 Mission Street South Pasadena, CA 91030

Phone/Fax: (323) 254-9960 / (323) 254-9982

http://www.LAT sting.com / pasadenalab@latesting.com

Order ID:	321917321
Customer ID:	32TESV78
Customer PO:	
Project ID:	

Attn:	Ulises Monsalvo	Phone:	(562) 868-3777
	T a Environmental Services	Fax:	
	12631 Imperial Hwy	Collected:	08/03/2019
	Suite A225	Received:	08/05/2019
	a a F p ings. CA 90670	A al yzed:	08/05/2019
oj:	71900 / Cal State LA King Hall, Room 1004		

Spore T ap ASSESSMENTReport™ Air-O-Cell(™) Analysis of Fungal Spores & Particulates (Methods MICRO-SOP-201, ASTM D7391)

	article Identification	Raw Count	(Count/m3)	% of Total	Interpetation Guideline
321917321-0002	Alternaria (Ulocladium)				
	Ascospores				
Client Sample ID 28417265	Aspergillus/Penicilium	1*	10*	33.3	☑ ✹
	Basidiospores				
	Bipolaris++				
	Chaetomium				
Location Center C 1064 - B	Cladosporium	1*	10*	33.3	☑ ✹
	Curvularia				
	Epicoccum				
	Fusarium				
Sample Volume (L) 75	Ganoderma				
	Myxomycetes++	1*	10*	33.3	☑ 🌲 ✹
	Pithomyces++				
Sample Type Inside	Rust				
	Copulariopsis/Microascus				
	Achybotrys/Memnoniella				
Comments	Unidentifiable Spores				
	Zygomycetes				
	Botrytis				
	Oidium				
	Total Fungi	**3**	**30**	**100**	☑
	Hyphal Fragment				
	Insect Fragment				
	Pollen				

Analytical Sensitivity 600x: **44** counts/cubic meter

Analytical Sensitivity 300x *: **13*** counts/cubic meter

kin Fragments: **2** 1 to 4 (low to high)

Fibrous Particulate: **1** 1 to 4 (low to high)

Background: **2** 1 o 4 (low to high); 5 (overloaded)

No discernable field blank was submitted with this group of samples.

++ Includes other spores with similar morphology; see EMSL's fiungal glossary fior each specific ca g ry

☑ Concentration at or below background

⚠ Concentration above background

🚫 Concentration 10X or more above background

🌲 Not commonly found growing indoors, spores likely come from outside.

✹ pores reported to be able to cause allergies in individuals.

☣ Potential for mycotoxin production exists with these fungi.

💧 These fungi are considered water damage indicators.

Initial report from: 08/05/2019 15:55:37

Regina Norman, Laboratory Manager
or Other App oved Sig ator y

For Information on the fungi listed in this report please visit the Resources section at www.emsl.com

LA Testing

520 Mission Street South Pasadena, CA 91030

Phone/Fax: (323) 254-9960 / (323) 254-9982

http://www.LAT sting.com / pasadenalab@latesting.com

Order ID:	321917321
Customer ID:	32TESV78
Customer PO:	
Project ID:	

Attn: Ulises Monsalvo
T a Environmental Services
12631 Imperial Hwy
Suite A225
a a F p inas. CA 90670

oj: 71900 / Cal State LA King Hall, Room 1004

Phone: (562) 868-3777
Fax:
Collected: 08/03/2019
Received: 08/05/2019
A al yzed: 08/05/2019

Spore T ap ASSESSMENTReport™ Air-O-Cell(™) Analysis of Fungal Spores & Particulates (Methods MICRO-SOP-201, ASTM D7391)

Client Sample ID
28417227

Location
Center C 1064 - A

Sample Volume (L)
75

Sample Type
Inside

Comments

321917321-0003

article Identification	Raw Count	(Count/m3)	% of Total	Interpetation Guideline
Alternaria (Ulocladium)				
Ascospores				
Aspergillus/Penicilium	1*	10*	50	☑ ✹
Basidiospores				
Bipolaris++				
Chaetomium				
Cladosporium				
Curvularia				
Epicoccum				
Fusarium				
Ganoderma				
Myxomycetes++	1*	10*	50	☑ ▲ ✹
Pithomyces++				
Rust				
Copulariopsis/Microascus				
Achybotrys/Memnoniella				
Unidentifiable Spores				
Zygomycetes				
Botrytis				
Oidium				
Total Fungi	**2**	**20**	**100**	☑
Hyphal Fragment				
Insect Fragment				
Pollen				

Analytical Sensitivity 600x: **44** counts/cubic meter
Analytical Sensitivity 300x *: **13*** counts/cubic meter

kin Fragments: **2** 1 to 4 (low to high)
Fibrous Particulate: **1** 1 to 4 (low to high)
Background: **2** 1 o 4 (low to high); 5 (overloaded)

No discernable field blank was submitted with this group of samples.

++ Includes other spores with similar morphology; see EMSL's fiungal glossary fior each specific ca g ry

☑ Concentration at or below background
⚠ Concentration above background
⊘ Concentration 10X or more above background

▲ Not commonly found growing indoors, spores likely come from outside.
✹ pores reported to be able to cause allergies in individuals.
☣ Potential for mycotoxin production exists with these fungi.
💧 These fungi are considered water damage indicators.

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or Other App oved Sig ator y

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Order ID: 321917321
Customer ID: 32TESV78
Customer PO:
Project ID:

Attn: Ulises Monsalvo
T a Environmental Services
12631 Imperial Hwy
Suite A225
a a F p ings. CA 90670
oj: 71900 / Cal State LA King Hall, Room 1004

Phone: (562) 868-3777
Fax:
Collected: 08/03/2019
Received: 08/05/2019
A al yzed: 08/05/2019

Spore T ap ASSESSMENTReport™ Air-O-Cell(™) Analysis of Fungal Spores & Particulates (Methods MICRO-SOP-201, ASTM D7391)

321917321-0004

Client Sample ID
28417382

Location
Center C 1064 - D

Sample Volume (L)
75

Sample Type
Inside

Comments

article Identification	Raw Count	(Count/m3)	% of Total	Interpetation Guideline
Alternaria (Ulocladium)				
Ascospores				
Aspergillus/Penicilium	2*	30*	25	☑ ✹
Basidiospores				
Bipolaris++				
Chaetomium	1	40	33.3	☑ ✹ ☣ 💧
Cladosporium	1*	10*	8.3	☑ ✹
Curvularia				
Epicoccum				
Fusarium				
Ganoderma				
Myxomycetes++				
Pithomyces++				
Rust				
Copulariopsis/Microascus				
Achybotrys/Memnoniella				
Unidentifiable Spores				
Zygomycetes				
Botrytis				
Oidium	1	40	33.3	⚠
Total Fungi	**5**	**120**	**100**	☑
Hyphal Fragment				
Insect Fragment				
Pollen				

Analytical Sensitivity 600x: **44** counts/cubic meter
Analytical Sensitivity 300x *: **13*** counts/cubic meter

kin Fragments: **2** 1 to 4 (low to high)
Fibrous Particulate: **1** 1 to 4 (low to high)
Background: **2** 1 o 4 (low to high); 5 (overloaded)

No discernable field blank was submitted with this group of samples.
++ Includes other spores with similar morphology; see EMSL's fiungal glossary fior each specific ca g ry

☑ Concentration at or below background
⚠ Concentration above background
🚫 Concentration 10X or more above background

Not commonly found growing indoors, spores likely come from outside.
pores reported to be able to cause allergies in individuals.
Potential for mycotoxin production exists with these fungi.
These fungi are considered water damage indicators.

Initial report from: 08/05/2019 15:55:37

Regina Norman, Laboratory Manager
or Other App oved Sig ator y

Samples received in good condition unless otherwise noted. High levels of background particulate can obscure spores and other particulates, leading to underestimation. Background levels of 5 indicate an overloading of background particulates, prohibiting accurate detection and qua ification. Present = Spores detected on overloaded samples. R sults are not blank corrected unless otherwise noted. The dete ction limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. "*" Denotes particles found at 300X. "-" Denotes not detected. Due to method stopping rules, raw counts in excess of 100 are xtrapolated based on the percentage analyzed. LA T sting maintains liability limited to cost of a nalysis. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by LA T sting. LA T sting bears no sponsibility for sample collection activities or analytical m ethod limitations. Interpretation and use of test results are the responsibility of the client. The report reflects the samples as received. When the information supplied by the customer can affect the validity of the result, it will be noted on the report.

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a a F p ings, CA 90670
oj: 71900 / Cal State LA King Hall, Room 1004

Phone: (562) 868-3777
Fax:
Collected: 08/03/2019
Received: 08/05/2019
A al yzed: 08/05/2019

Spore T ap ASSESSMENTReport™ Air-o-Cell(™) Analysis of Fungal Spores & Particulates (Methods MICRO-SOP-201, ASTM D7391)

article Identification	Raw Count	(Count/m3)	% of Total	Interpetation Guideline
Alternaria (Ulocladium)				
Ascospores				
Aspergillus/Penicilium				
Basidiospores				
Bipolaris++				
Chaetomium				
Cladosporium				
Curvularia				
Epicoccum				
Fusarium				
Ganoderma				
Myxomycetes++				
Pithomyces++				
Rust				
Copulariopsis/Microascus				
Achybotrys/Memnoniella				
Unidentifiable Spores				
Zygomycetes				
Botrytis				
Oidium				
Total Fungi	-	**None Detected**	-	
Hyphal Fragment				
Insect Fragment				
Pollen				

321917321-0005			
Client Sample ID 28417922			
Location Hall outside C 1064A			
Sample Volume (L) 75			
Sample Type Inside			
Comments			

Analytical Sensitivity 600x: **TT** counts/cubic meter
Analytical Sensitivity 300x *: **FJU** counts/cubic meter

kin Fragments: **D** 1 to 4 (low to high)
Fibrous Particulate: **F** 1 to 4 (low to high)
Background: **D** 1 o 4 (low to high); 5 (overloaded)

No discernable field blank was submitted with this group of samples.

++ Includes other spores with similar morphology; see EMSL's fiungal glossary fior each specific ca g ry

Concentration at or below background
Concentration above background
Concentration 10X or more above background

Not commonly found growing indoors, spores likely come from outside.
pores reported to be able to cause allergies in individuals.
Potential for mycotoxin production exists with these fungi.
These fungi are considered water damage indicators.

Initial report from: 08/05/2019 15:55:37

Regina Norman, Laboratory Manager
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oj:	71900 / Cal State LA King Hall, Room 1004		

Spore T ap ASSESSMENTReport™ Air-O-Cell(™) Analysis of Fungal Spores & Particulates (Methods MICRO-SOP-201, ASTM D7391)

	article Identification	Raw Count	(Count/m3)	% of Total	Interpetation Guideline
321917321-0008	Alternaria (Ulocladium)	1	40	1.7	
	Ascospores				
Client Sample ID 28417947	Aspergillus/Penicilium	2	90	3.9	
	Basidiospores	3	100	4.3	
	Bipolaris++	1	10	1.7	
	Chaetomium	2	90	3.9	
Location Exterior Kings hall	Cladosporium	35	1500	64.9	
	Curvularia	1*	10*	0.4	
	Epicoccum	1*	10*	0.4	
Sample Volume (L) 75	Fusarium	2	90	3.9	
	Ganoderma	1*	10*	0.4	
	Myxomycetes++	4	200	8.7	
	Pithomyces++				
Sample Type Background	Rust	1*	10*	0.4	
	Copulariopsis/Microascus				
	Achybotrys/Memnoniella				
Comments	Unidentifiable Spores	3	100	4.3	
	Zygomycetes				
	Botrytis	1*	10*	0.4	
	Oidium	1*	10*	0.4	
	Total Fungi	**59**	**2310**	**100**	
	Hyphal Fragment				
	Insect Fragment				
	Pollen				

Analytical Sensitivity 600x: **44** counts/cubic meter

Analytical Sensitivity 300x *: **13*** counts/cubic meter

kin Fragments: **1** 1 to 4 (low to high)

Fibrous Particulate: **1** 1 to 4 (low to high)

Background: **2** 1 o 4 (low to high); 5 (overloaded)

No discernable field blank was submitted with this group of samples.

++ Includes other spores with similar morphology; see EMSL's fiungal glossary fior each specific ca g ry

Concentration at or below background

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AIHA Laboratory Accreditation Programs, LLC

acknowledges that

LA Testing

520 Mission Street, South Pasadena, CA 91030

Laboratory ID: 102814

along with all premises from which key activities are performed, as listed above, has fulfilled the requirements of the AIHA Laboratory Accreditation Programs (AIHA-LAP), LLC accreditation to the ISO/IEC 17025:2005 international standard, *General Requirements for the Competence of Testing and Calibration Laboratories* in the following:

LABORATORY ACCREDITATION PROGRAMS

✓	**INDUSTRIAL HYGIENE**	Accreditation Expires: April 01, 2020
✓	**ENVIRONMENTAL LEAD**	Accreditation Expires: April 01, 2020
✓	**ENVIRONMENTAL MICROBIOLOGY**	Accreditation Expires: April 01, 2020
☐	**FOOD**	Accreditation Expires:
☐	**UNIQUE SCOPES**	Accreditation Expires:

Specific Field(s) of Testing (FoT)/Method(s) within each Accreditation Program for which the above named laboratory maintains accreditation is outlined on the attached **Scope of Accreditation**. Continued accreditation is contingent upon successful on-going compliance with ISO/IEC 17025:2005 and AIHA-LAP, LLC requirements. This certificate is not valid without the attached **Scope of Accreditation**. Please review the AIHA-LAP, LLC website (www.aihaaccreditedlabs.org) for the most current Scope.

Beth Bair

Elizabeth Bair
Chairperson, Analytical Accreditation Board

Cheryl O. Morton

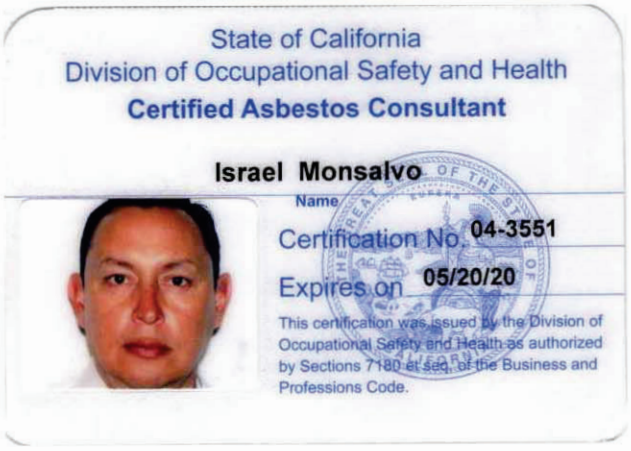
Cheryl O. Morton
Managing Director, AIHA Laboratory Accreditation Programs, LLC

Revision 16: 03/21/2018

Date Issued: 04/30/2018

CERTIFICATIONS

TERRA Environmental

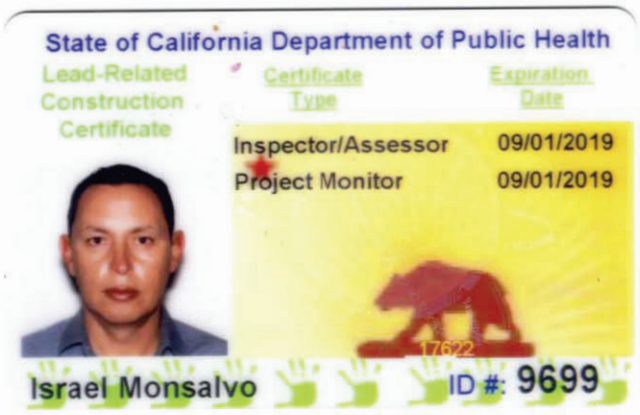

State of California
Division of Occupational Safety and Health
Certified Asbestos Consultant

Israel Monsalvo
Name

Certification No. 04-3551

Expires on 05/20/20

This certification was issued by the Division of Occupational Safety and Health as authorized by Sections 7180 et seq. of the Business and Professions Code.


State of California Department of Public Health

Lead-Related Construction Certificate

Certificate Type | Expiration Date

Inspector/Assessor 09/01/2019

Project Monitor 09/01/2019

17622

Israel Monsalvo ID #: 9699

Israel Monsalvo, CAC, CDPH-I/A & PM
Cal/OSHA-Certified Asbestos Consultant # 04-3551
CDPH-Certified Lead I/A, PM # 9699

12631 Imperial Hwy. A225 Santa Fe Springs CA 90670
Tel 562.868.3777 Fax 562.868.3778 www.terraeng.com

MICRO Mold Inspection Consulting and Remediation Organization

CERTIFIED MOLD INSPECTOR

The Faculty and Training Board of Micro Consulting, a National Certification Organization, hereby certifies that

Israel Monsalvo

has successfully completed the 30 hour course of study and scored 96% on a 100 question exam and is hereby awarded this certificate of completion, with all rights and privileges pertaining thereto. Subjects for this certification: Introduction to Mold; Mold Identification; Health Effects From Mold; Respiratory Protection; Personal Protective Equipment; Inspection Tools; Sampling; Exterior & Interior Mold Assessment; Report Preparation. This certificate is signed by the proper officers and sealed this date, January 20, 2012. Certified Mold Inspector #CMI-80727

Robert W. Ederer, President/CEO