

Jeffrey S. Moquin, Director
Risk Management Department

Telephone: (754) 321-3200
Facsimile: (754) 321-3290

March 14, 2008

TO: Scott Fiske, Principal
Western High School

FROM: Edward See, Project Manager
Risk Management Department

SUBJECT: Western High School – Air-O-Cell Sampling Results

Attached is a copy of the report received from Dr. Salazar pertaining to the air (Air-O-Cell) sampling conducted at your site on February 11, 2008, as requested by members of your site based IAQ Committee during a meeting on January 31, 2008. The test results do not reflect any signs of microbial amplification within the building. In fact, indoor concentrations are far below that of outdoors; approximately 1/5th the average level detected outdoors.

Please continue to monitor occupied spaces and report any potential IAQ concerns to your Head Facility Serviceperson and implement the IAQ Response Protocol (copy attached) as necessary.

Rest assured that we will continue to work with you and your staff with respect to the maintenance work that is currently in progress as identified during the IAQ walkthrough conducted on November 9, 2008.

Should you have any questions or concerns, please do not hesitate to contact our office at 754-321-3200.

ES/tc
Enclosures

cc: Dr. Verda Farrow, Area Superintendent
Margaret Underhill, Area Director
Jeffrey S. Moquin, Director, Risk Management
James Carballo, Project Manager, Facilities and Construction Management
Ralph Eckhardt, Broward Teachers Union
Roy Jarrett, National Federation of Public and Private Employees
Mark Dorsett, Manager 1, Physical Plant Operations Division, Zone 1
Roy Norton, Manager Custodial/Grounds, Physical Plant Operations Division
Robert Krickovich, Coordinator, LEA, Facilities and Construction Management

Salazar Consulting Group, Inc.

*A professional team of engineers, industrial hygienists,
safety experts, physicians, and health scientists.*

Indoor Environmental Quality Evaluations
Environmental and Medical Monitoring
EPA/OSHA Compliance
Expert Testimony

Hazardous Waste Control
Hazard Communication
Safety Evaluations
Training

March 7, 2008

Mr. Jeffrey S. Moquin
Director
Risk Management Department
The School Board of Broward County
7770 West Oakland Park Boulevard
Sunrise, Florida 33351-6750

RE: Air-O-Cell Sampling Results
Western High School – Select Areas
1200 Southwest 136th Avenue
Davie, Florida 33325-4304
SCG File No. 1031.61

Dear Mr. Moquin:

Salazar Consulting Group, Inc. (SCG) has received the analytical results for Air-O-Cell samples collected at the aforementioned school facility on February 11, 2008. Samples were collected from select indoor areas identified by school representatives; outdoor samples were collected for comparative purposes (please be reminded that detailed assessment of sampled locations was not performed by SCG at the time of sample collections). Samples were collected by methods in accordance with generally accepted industry guidelines, and sent to an independent American Industrial Hygiene Association (AIHA)-accredited environmental microbiology laboratory for analyses.

Original laboratory documents reporting the analytical results of airborne mold samples collected at the time of evaluation are enclosed for reference. Please note that one (1) sample collected was not analyzed by the laboratory due to damage apparently occurring during transport; results for the respective sample are therefore not included in analyses of the data. Nonetheless, the air sampling data indicate that average indoor levels of airborne mold elements were detected at slightly over one-fifth (1/5) the average level detected outdoors. More specifically, indoor levels of mold elements ranged from 95 spores per cubic meter air (s/m^3) to $1232 s/m^3$, and averaged $322 s/m^3$. By comparison, outdoor levels of airborne mold elements ranged from $521 s/m^3$ to $3316 s/m^3$, and averaged $1526 s/m^3$. The average indoor/outdoor ratio, calculated by dividing the average indoor concentration by the average outdoor concentration and multiplying by one hundred (100) to convert to a percentage value, was 21.1 percent (%). Again, this ratio indicates that average indoor concentrations of mold elements only reached approximately 21.1 % of the average level detected outdoors. The types of mold elements detected indoors were generally similar to those detected from outdoor sources; mold elements detected exclusively indoors were detected at the analytical limit of detection.

Mr. Jeffrey S. Moquin

March 7, 2008

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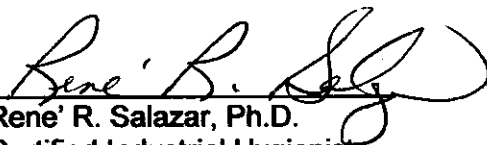
The analytical results reported by the laboratory are considered generally favorable; no obvious and consistent elevations in airborne mold elements were detected by comparison to sampled outdoor locations. However, although such outcomes are generally considered favorable, SCG is not able to offer comment on their meanings nor on any resulting occupant exposure consequences, primarily given the absence of specific standards and/or guidelines for data interpretation. SCG cautions that microbial sampling data often varies significantly due to a multitude of factors, and therefore attempting to offer precise meaning of the outcomes reported may prove difficult and perhaps result in development of misleading conclusions. SCG further cautions that this data should only supplement information acquired by detailed physical assessment of sampled locations; the need for thorough physical assessment of sampled locations and subsequent development of appropriate remedial response measures should not be disregarded due to the outcomes of the air sampling activities reported.

SCG appreciates the opportunity to be of assistance in this regard. Please do not hesitate to contact us should you have any questions, comments, or require additional information.

Sincerely,

SALAZAR CONSULTING GROUP, INC.

By:


Rene' R. Salazar, Ph.D.
Certified Industrial Hygienist

Enclosure

Rec'd 2/20/08

February 14, 2008
Final Report Q0334

Rene Salazar
Salazar Consulting Group, Inc.
6607 Heatherton Court
Tampa, FL 33617

Re: Project No. 1031.61

Dear Dr. Salazar,

The analysis of environmental samples submitted to PathCon Laboratories (see Table 1) has been completed. Samples were received and analysis initiated on February 13, 2008. Samples received in acceptable condition were analyzed and reported herein. Results are presented in attached table(s). Results in this report are based on samples submitted by the on-site investigator.

The purpose of this report is to identify and quantify fungi from collected samples at the time they are submitted. It is not the intent of this report to make any suggestions or associations concerning potential health effects of building occupants, nor to suggest any remediation procedures. There are no governmental regulations concerning permissible numbers of fungi in environmental samples.

Your invoice will follow under separate cover. Thank you for your business.

Sincerely,

PATHOGEN CONTROL ASSOCIATES, INC.

By:



for

Brian G. Shelton, M.P.H.
President/CEO

PathCon Final Report Q0334

Table 1. Identification of Air-O-Cell Sampling Sites

Site No.	Description
01	Sample 080211-RS-01, Room 314D, Unoccupied
02	Sample 080211-RS-02, Room 312C, Unoccupied
03	Sample 080211-RS-03, Room 327H, Unoccupied
04	Sample 080211-RS-04, Outdoors, Front entrance, Clear day
05	Sample 080211-RS-05, Room 401E, Unoccupied
06	Sample 080211-RS-06, Room 407, 1 occupant
07	Sample 080211-RS-07, Room 429, Unoccupied
08	Sample 080211-RS-08, Outdoors, Rear area, Clear day
09	Sample 080211-RS-09, Room 341A, Unoccupied
10	Sample 080211-RS-10, Room 611B, Unoccupied
11	Sample 080211-RS-11, Room 524, Unoccupied
12	Sample 080211-RS-12, Room 720C, Unoccupied
13	Sample 080211-RS-13, Outdoors, Front entrance, Clear day
14	Sample 080211-RS-14, Outdoors, Front area, Clear day
15	Sample 080211-RS-15, Outdoors, Front area, Clear day
16	Sample 080211-RS-16, Control, Unexposed
17	Sample 080211-RS-17, Control, Unexposed

PathCon Final Report Q0334

Table 2. Results of Microbiological Analysis of Air-O-Cell Sample(s)

Sample	Concentration ^{1,2,3}	Spore Types ⁴
01	Void*	
02	189**	Unidentified spores (3) <i>Curvularia</i> -like (1)
03	1232**	Unidentified spores (17) <i>Cladosporium</i> -like (3) Hyphae (3) <i>Penicillium/Aspergillus</i> -like (2) <i>Curvularia</i> -like (1)
04	1232	Unidentified spores (14) <i>Cladosporium</i> -like (10) <i>Bipolaris</i> -like (1) <i>Penicillium/Aspergillus</i> -like (1)
05	332	<i>Cladosporium</i> -like (4) Unidentified spores (2) Hypha (1)
06	95	Unidentified spore (1) Hypha (1)
07	237	Unidentified spores (3) Hyphae (2)

¹ Estimated number of fungal spores per cubic meter of air. Counts may include other fungal fragments if present.

² Counts are based on an airflow rate of 15.2 liters per minute and a sample exposure time of 10 minutes.

³ Limits of the test were approximately 47 fungal spores per cubic meter of air.

⁴ Genera listed in descending order of occurrence.

* Sample slide was damaged upon receipt, unable to analyze sample.

** Counts may have been influenced due to presence of a large amount of debris.

PathCon Final Report Q0334

Table 2. Results of Microbiological Analysis of Air-O-Cell Sample(s)

Sample	Concentration ^{1,2,3}	Spore Types ⁴
08	3316	Unidentified spores (23) <i>Cladosporium</i> -like (21) <i>Fusarium</i> -like (13) Hyphae (5) <i>Bipolaris</i> -like (3) <i>Curvularia</i> -like (3) <i>Penicillium/Aspergillus</i> -like (1) <i>Spegazzinia</i> -like (1)
09	237	<i>Penicillium/Aspergillus</i> -like (3) Unidentified spores (2)
10	332	Unidentified spores (3) <i>Cladosporium</i> -like (1) <i>Epicoccum</i> -like (1) <i>Penicillium/Aspergillus</i> -like (1) Hypha (1)
11	142	<i>Penicillium/Aspergillus</i> -like (2) Hypha (1)
12	95	<i>Penicillium/Aspergillus</i> -like (1) Unidentified spore (1)

¹ Estimated number of fungal spores per cubic meter of air. Counts may include other fungal fragments if present.

² Counts are based on an airflow rate of 15.2 liters per minute and a sample exposure time of 10 minutes.

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PathCon Final Report Q0334

Table 2. Results of Microbiological Analysis of Air-O-Cell Sample(s)

Sample	Concentration ^{1,2,3}	Spore Types ⁴
13	521	Unidentified spores (5) <i>Acremonium</i> -like (4) <i>Cladosporium</i> -like (1) <i>Penicillium/Aspergillus</i> -like (1)
14	1232	Unidentified spores (16) <i>Cladosporium</i> -like (6) <i>Curvularia</i> -like (2) Hyphae (2)
15	1326	Unidentified spores (14) Hyphae (5) <i>Cladosporium</i> -like (4) <i>Penicillium/Aspergillus</i> -like (3) <i>Bipolaris</i> -like (2)
16	Not Detected	
17	Not Detected	

¹ Estimated number of fungal spores per cubic meter of air. Counts may include other fungal fragments if present.

² Counts are based on an airflow rate of 15.2 liters per minute and a sample exposure time of 10 minutes.

³ Limits of the test were approximately 47 fungal spores per cubic meter of air.

⁴ Genera listed in descending order of occurrence.

* Sample slide was damaged upon receipt, unable to analyze sample.

** Counts may have been influenced due to presence of a large amount of debris.

SALAZAR CONSULTING GROUP, INC.

6607 Heatherton Court, Tampa, Florida 33617
(813) 980-1915 • FAX (813) 988-7486

CHAIN OF CUSTODY

Project BCSB/Western HS
Location Dawie, Florida
Sampled by: R. Salazar

Project No. 1031.61
Date: 2/11/08

SAMPLE NO.	LOCATION	TYPE	COMMENTS
080211- RS-01	Room 314D	ACCS	unoccupied
080211- RS-02	Room 312C		
080211- RS-03	Room 327H		
080211- RS-04	OUTDOORS - FRONT ENTRANCE		Clear day
080211- RS-05	Room 401E		unoccupied
080211- RS-06	Room 407		1 occupant
080211- RS-07	Room 429		unoccupied
080211- RS-08	OUTDOORS - ROOF AREA		clear day

Laboratory Instructions:

- Please invoice Salazar Consulting Group, Inc.
 - FAX preliminary results and mail final results.
 - Other: PLEASE FAX RESULTS & MAIL ORIGINALS.
- SAMPLE FLOW RATE = 15.2 LPM
SAMPLE TIME = 10.0 MIN.

CHAIN OF CUSTODY DATA:

Collected by: R. Salazar Date: 2/11/08
 Packaged/Sent by: R. Salazar Date: 2/11/08
 Transporter: FedEx Date: 2/11/08
 Laboratory: Path Core
 Lab Receiver: J Hawk Date: 2/13/08
 Lab Analyst: _____ Date: _____

PLEASE RETURN THIS FORM WITH ANALYTICAL RESULTS

