



HILLMANN
CONSULTING

May 2, 2019

Ms. Rebecca Lopez
East Stroudsburg Area School District
50 Vine Street
East Stroudsburg, Pennsylvania 18301

RE: Microbial Investigation – Air Quality Sampling
East Stroudsburg Senior High School North
279 Timberwolf Drive
Dingmans Ferry, Pennsylvania 18328
Hillmann Project Number: PH-0755

Dear Ms. Lopez:

Thank you for retaining Hillmann Consulting, LLC (Hillmann) to address your environmental concerns. On April 17, 2019, Ian Hinterleiter conducted a Microbial Investigation and Air Quality Sampling of the Cafeteria, Auditorium, Athletic Training Room and Classrooms 104, 110, 118, 124, 200, 203, 217, 229, 220, 305, and 301 located within East Stroudsburg Senior High School North. This investigation is part of a biannual sampling plan in order to document air quality within East Stroudsburg Senior High School North. The parameters for the investigation included a visual inspection and the collection of one airborne fungal spore sample within the subject spaces listed above.

Hillmann selected the sampling parameters based on consultations with the client (East Stroudsburg Area School District), the laboratory performing the analysis, and our in-house experts. The inspection was a general screening to randomly assess indoor airborne spore concentrations within the subject spaces.

Airborne fungal spores were collected by drawing air through an Air-O-Cell® cassette utilizing a Zefon BioPump. Samples were collected for a time period of five (5) minutes at a calibrated flow rate of 15 L/min yielding a total sample volume of 75 liters. These cassettes were then sent to an AIHA EMLAP accredited laboratory where fungal spores were identified by genera and concentration. Fungal spores are present in normal indoor settings. If found in excess amounts, these spores can produce allergy-like symptoms as well as asthmatic reactions in those who are sensitive to them. If the indoor samples are found to have a greater diversity of genera, and/or higher amounts of fungal spores than outdoor samples, it can be presumed that the subject space may be facilitating microbial growth.

OBSERVATIONS AND FINDINGS

Hillmann was met on site by facility personnel, who escorted Hillmann through the subject spaces to conduct airborne microbial quality assurance sampling.

The East Stroudsburg Senior High School North is primarily composed of a combination of masonry block units and wallboard walls, carpet and vinyl tile flooring, and drop ceiling tiles. Hillmann did not observe water staining or visible microbial growth on accessible surfaces.

Average temperature and relative humidity readings were 70.1°F and 33.9% respectively.

Fourteen (14) airborne fungal spore samples were from the Cafeteria, Auditorium, Athletic Training Room and Classrooms 104, 110, 118, 124, 200, 203, 217, 229, 220, 305, and 301 located within East Stroudsburg Senior High School North. Laboratory analysis showed total indoor fungal spore concentrations and individual fungal genera were lower and/or comparable to the outdoor reference levels.

In the absence of health-based federal standards, Hillmann has adopted industry standard practice and recommended practices by the ACGIH to compare indoor/outdoor fungal concentrations. Samples are deemed “comparable” or “acceptable” when the following criteria are met:

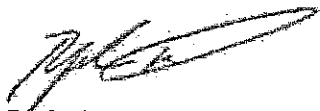
- Overall indoor/outdoor fungal genera identified are similar on the day of sampling. Raw spore counts less than ten (10) do not represent a statistically significant number. Therefore, the presence of one (1) spore of certain indicator genera (i.e. *Stachybotrys*) will not be grounds for failure.
- Common outdoor genera identified indoors are similar to or less than outdoor concentrations.
- Common water intrusion indicator genera including but not limited to: *Penicillium/Aspergillus* group, *Chaetomium*, etc. are similar to outdoor concentrations and/or within one order of magnitude (10 times difference). Exceptions will be made depending on conditions, fungal genera identified, and outlying factors.
- Hillmann also recommends that common water intrusion indicator genera be below a level of 1,000 CFU/m³ of air. Exceptions will be made depending on conditions, fungal genera identified, and outlying factors.

CONCLUSIONS & RECOMMENDATIONS

Based upon the findings and laboratory results, the subject spaces do not appear to be facilitating microbial growth at this time.

If you have any questions, or need additional information, please feel free to contact our office at (856) 581-9055.

Regards,
Hillmann Consulting, LLC



Rafael L. Torres, III
Director of Operations
Philadelphia Area Regional Office



Ian Hinterleiter
Industrial Hygienist

File: PH-0755
Enclosed: Laboratory Results

Date of Sampling: 04/17/2019 Job #: PH-0755
 Date of Sample Receipt: 04/18/2019 Order#: 0419328
 Client: EAST STROUDSBURG AREA SCHOOL #Received: 16
 DISTRICT
 50 VINE STREET
 EAST STROUDSBURG, PA 18301



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 PHONE: (908) 688-7800 FAX: (908) 686-2636
 www.hillmannconsulting.com

Attn:
 Collection Site: HIGH SCHOOL NORTH/ EAST STROUDSBURG/ NJ
 Field Technician: Ian Hinterleiter
 Date of Analysis: 04/18/2019
 Date of Issue: 04/19/2019
 Sampling Method: Air-O-Cell

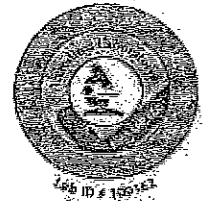
SCOPE TRAP REPORT: Method (Fungal Spore SOD)

Location:	Auditorium			Cafeteria			Room 104		
Lab ID#:	F48082			F48083			F48084		
Volume (Liters):	75			75			75		
Background Debris: *	Light			Light			Light		
	raw ct.	spores/m3	%**	raw ct.	spores/m3	%**	raw ct.	spores/m3	%**
Ascospores				1	61	25%			
Basidiospores	1	61	100%	3	180	75%	2	120	33%
Cladosporium							1	61	17%
Hyphal Fragments							1	61	17%
Penicillium/Aspergillus							2	120	33%
Total Spores/m3	61			240			380		
Analytical Sensitivity ***	61			61			61		

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 *** Analytical sensitivity is based on 1000X magnification and 15% of trace analyzed.
 Samples arrived in acceptable condition unless otherwise noted.
 Uncertainty of measurement available upon request.
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Signature:

Angelo Tango Laboratory Manager #Analyzed: 16



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SCOPE TAB REPORT: Method (Fungal Spore SOP)

Location:	Room 110			Room 118			Athletic Trainer		
Lab ID#:	F48085			F48086			F48087		
Volume (Liters):	75			75			75		
Background Debris: *	Light			Light			Light		
	raw ct.	spores/m3	%**	raw ct.	spores/m3	%**	raw ct.	spores/m3	%**
Basidiospores	1	61	50%	1	61	7%	3	180	60%
Chaetomium				1	61	7%			
Hyphal Fragments							1	61	20%
Penicillium/Aspergillus	1	61	50%	13	790	87%	1	61	20%
Total Spores/m3	120			910			300		
Analytical Sensitivity ***	61			61			61		

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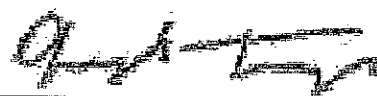
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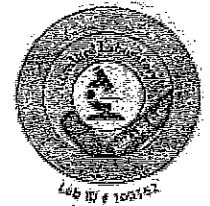
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SCOPE TRAP REPORT: Method (Fungal Spore SOP)

Location:	Room 124			Room 310			Room 305		
Lab ID#:	F48088			F48089			F48090		
Volume (Liters):	75			75			75		
Background Debris: *	Light			Light			Light		
	raw ct.	spores/m3	%**	raw ct.	spores/m3	%**	raw ct.	spores/m3	%**
Basidiospores	1	61	100%	2	120	66%	3	180	50%
Cladosporium							2	120	33%
Penicillium/Aspergillus				1	61	34%	1	61	17%
Total Spores/m3	61			180			360		
Analytical Sensitivity ***	61			61			61		

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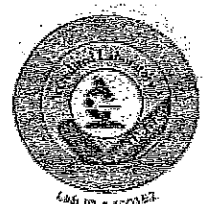
SPORE TRAP REPORT: Method (Fungal Spore SOP)

Location:	Room 229			Room 220			Room 217		
	raw ct.	spores/m3	%**	raw ct.	spores/m3	%**	raw ct.	spores/m3	%**
Lab ID#:	F48091			F48092			F48093		
Volume (Liters):	75			75			75		
Background Debris: *	Light			Light			Light		
Basidiospores	2	120	22%	5	310	84%	1	61	100%
Hyphal Fragments									
Penicillium/Aspergillus	7	430	78%	1	61	16%			
Total Spores/m3	550			370			61		
Analytical Sensitivity ***	61			61			61		

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SPORE TRAP REPORT: Method (Fungal Spore SOP)

Location:	Room 203			Room 200			Outside		
Lab ID#:	F48094			F48095			F48096		
Volume (Liters):	75			75			75		
Background Debris: *	Light			Light			Light		
	raw ct.	spores/m3	%**	raw ct.	spores/m3	%**	raw ct.	spores/m3	%**
Basidiospores				2	120	66%	11	670	92%
Cladosporium	1	61	33%						
Hyphal Fragments	1	61	33%						
Penicillium/Aspergillus	1	61	33%	1	61	34%	1	61	8%
Total Spores/m3	180			180			730		
Analytical Sensitivity ***	61			61			61		

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SPORE TRAP REPORT: Method (Fungal Spore SOP)

Location:	Outside								
Lab ID#:	F48097								
Volume (Liters):	75								
Background Debris: *	Light								
	raw ct.	spores/m3	%**	raw ct.	spores/m3	%**	raw ct.	spores/m3	%**
Ascospores	1	61	20%						
Basidiospores	3	180	60%						
Penicillium/Aspergillus	1	61	20%						
Total Spores/m3	300								
Analytical Sensitivity ***	61								

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