



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**  
JM Hill School  
151 East Broad Street  
East Stroudsburg, Pennsylvania 18301  
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, Mr. John Murphy, CMI, conducted a Microbial Investigation and Air Quality Sampling of the Café and Classrooms 225, 215, 121, 101, 207, and 113 located within the JM Hill School. This investigation is part of a biannual sampling plan in order to document air quality within the JM Hill School. 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.

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## 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 JM Hill School is primarily composed of a combination of masonry block units and wallboard walls, hardwood flooring, and drop ceiling tiles. Hillmann did not observe any water staining or visible microbial growth on accessible surfaces.

Average temperature and relative humidity readings were 71.0°F and 33.8% respectively.

Seven (7) airborne fungal spore samples were collected from the Café and Classrooms 225, 215, 121, 101, 207, and 113 within the JM Hill School. 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:

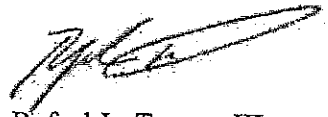
- Overall indoor/outdoor fungal genera identified are similar on the day of sampling. Raw spore counts less than ten (10) do not represent a statistically significant number. Therefore, the presence of one (1) spore of certain indicator genera (i.e. *Stachybotrys*) will not be grounds for failure.
- 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/m<sup>3</sup> 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



John Murphy  
Industrial Hygienist, CMI

File: PH-0755  
Enclosed: Laboratory Results

Date of Sampling: 04/17/2019 Job #: PH-0755  
 Date of Sample Receipt: 04/19/2019 Order#: 0419380  
 Client: EAST STROUDSBURG-AREA SCHOOL #Received: 9  
 DISTRICT  
 50 VINE STREET  
 EAST STROUDSBURG, PA 18301




HILLMANN CONSULTING, L.L.C.  
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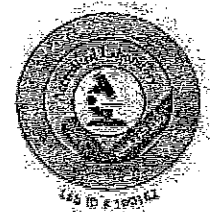
Attn:  
 Collection Site: EAST STROUDSBURG/ PA/ JM HILL SCHOOL  
 Field Technician: John Murphy  
 Date of Analysis: 04/19/2019  
 Date of Issue: 04/22/2019  
 Sampling Method: Air-O-Cell

**SPORE TRAP REPORT: Method (Fungal Spore SOD)**

Location:	Room 225			Room 215			Room 121		
Lab ID#:	F48182			F48183			F48184		
Volume (Liters):	75			75			75		
Background Debris: *	Light			Light			Light		
	raw ct.	spores/m3	%**	raw ct.	spores/m3	%**	raw ct.	spores/m3	%**
Ascospores	2	120	33%				1	61	17%
Basidiospores	1	61	17%	1	61	20%	1	61	17%
Chaetomium	1	61	17%						
Cladosporium				1	61	20%	2	120	33%
Hyphal Fragments	1	61	17%	1	61	20%			
Myxo./Periconia/Rusts/Smuts				1	61	20%	1	61	17%
Penicillium/Aspergillus	1	61	17%	1	61	20%	1	61	17%
<b>Total Spores/m3</b>	<b>360</b>			<b>310</b>			<b>360</b>		
<b>Analytical Sensitivity ***</b>	<b>61</b>			<b>61</b>			<b>61</b>		

\* Background debris may affect analysis of sample causing results to be reported lower than actually present in the air.  
 Background debris are expressed qualitatively; heavy > medium > light.  
 \*\* Percentages may not equal 100% due to rounding.  
 \*\*\* 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.  
 This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by Hillmann Consulting, LLC.

Signature:   
 Angelo Tango Laboratory Manager #Analyzed: 9



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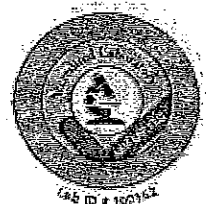
**SPORE TRAP REPORT: Method (Fungal Spore SOD)**

Location:	Room 101			Cafe			Room 113		
Lab ID#:	F48185			F48186			F48187		
Volume (Liters):	75			75			75		
Background Debris: *	Light			Light			Light		
	raw ct.	spores/m3	%**	raw ct.	spores/m3	%**	raw ct.	spores/m3	%**
Ascospores	2	120	40%				2	120	22%
Basidiospores				1	61	50%	1	61	11%
Cladosporium							2	120	22%
Epicoccum							1	61	11%
Hyphal Fragments	1	61	20%	1	61	50%	2	120	22%
Myxo./Periconia/Rusts/Smuts							1	61	11%
Penicillium/Aspergillus	2	120	40%						
<b>Total Spores/m3</b>	<b>300</b>			<b>120</b>			<b>540</b>		
<b>Analytical Sensitivity ***</b>	<b>61</b>			<b>61</b>			<b>61</b>		

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 Date of Analysis: 04/19/2019  
 Date of Issue: 04/22/2019  
 Sampling Method: Air-O-Cell

**SPORE TRAP REPORT: Method (Fungal Spore SOP)**

Location:	Room 207			Outside			Outside		
Lab ID#:	F48188			F48189			F48190		
Volume (Liters):	75			75			75		
Background Debris: *	Light			Medium			Light		
	raw ct.	spores/m3	%**	raw ct.	spores/m3	%**	raw ct.	spores/m3	%**
Ascospores	2	120	28%	7	430	7%	2	120	16%
Basidiospores	1	61	14%	9	550	9%	7	430	59%
Chaetomium							1	61	8%
Cladosporium				73	4,500	70%	1	61	8%
Epicoccum				1	61	1%			
Hyphal Fragments	3	180	43%	13	790	12%			
Penicillium/Aspergillus	1	61	14%	1	61	1%	1	61	8%
Tetraploa				1	61	1%			
<b>Total Spores/m3</b>	<b>420</b>			<b>6,500</b>			<b>730</b>		
<b>Analytical Sensitivity ***</b>	<b>61</b>			<b>61</b>			<b>61</b>		

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