



HILLMANN
CONSULTING

May 8, 2019

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

RE: Microbial Investigation – Air Quality Sampling
Lehman Intermediate School
257 Timberwolf Court
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 Main Gym and Classrooms 101, 110, 119, 122, 203, 209, 217, 212, 307, and 311 located within Lehman Intermediate School. This investigation is part of a biannual sampling plan in order to document air quality within Lehman Intermediate 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.

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 Lehman Intermediate School is primarily composed of a combination of masonry block units and wallboard walls, carpet and vinyl tile flooring, and drop ceiling tiles. Hillmann did observe minor water staining on drop ceiling tiles in rooms 101, 119, and 122. Hillmann did not observe visible microbial growth on accessible surfaces.

Average temperature and relative humidity readings were 71.1°F and 34.2% respectively.

Eleven (11) airborne fungal spore samples were collected from the Main Gym and Classrooms 101, 110, 119, 122, 203, 209, 217, 212, 307, and 311 located within Lehman Intermediate 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:

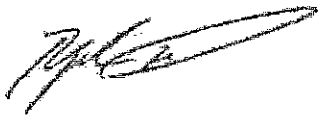
- Overall indoor/outdoor fungal genera identified are similar on the day of sampling. Raw spore counts less than ten (10) do not represent a statistically significant number. Therefore, the presence of one (1) spore of certain indicator genera (i.e. *Stachybotrys*) will not be grounds for failure.
- 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/m³ of air. Exceptions will be made depending on conditions, fungal genera identified, and outlying factors.

CONCLUSIONS & RECOMMENDATIONS

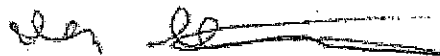
Based upon the findings and laboratory results, the subject spaces do not appear to be facilitating microbial growth at this time.

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#: 0419322



Client: EAST STROUDSBURG AREA SCHOOL DISTRICT
 50 VINE STREET
 EAST STROUDSBURG, PA 18301
 #Received: 13

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 ENVIRONMENTAL CONSULTING, LAB SERVICES
 1600 ROUTE 22 EAST
 P.O. BOX 1597
 UNION, NEW JERSEY 07083-1597
 PHONE: (908) 688-7800 FAX: (908) 686-2636
 www.hillmannconsulting.com

Attn:
 Collection Site: LENMAH INTERMEDIATE

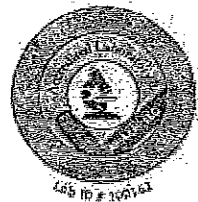
Field Technician: Ian Hinterleiter
 Date of Analysis: 04/18/2019
 Date of Issue: 05/03/2019
 Sampling Method: Air-O-Cell

SCOPE TRAP REPORT: Method (Fungal Spore SOP)

Location:	Main Gym			101			110		
Lab ID#:	F48071			F48072			F48073		
Volume (Liters):	75			75			75		
Background Debris: *	Light			Light			Light		
	raw ct.	spores/m3	%**	raw ct.	spores/m3	%**	raw ct.	spores/m3	%**
Basidiospores				2	130	67%			
Chaetomium							1	64	25%
Myxo./Periconia/Rusts/Smuts							1	64	25%
Penicillium/Aspergillus				1	64	33%	2	130	50%
Total Spores/m3	No Spores Detected			190			260		
Analytical Sensitivity ***	64			64			64		

* 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: Mina Beshay
 Mina Beshay Senior TEM Analyst #Analyzed: 13



Date of Sampling: 04/17/2019 Job #: PH-0755
 Date of Sample Receipt: 04/18/2019 Order#: 0419322



Client: EAST-STROUDSBURG AREA SCHOOL DISTRICT
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 EAST STROUDSBURG, PA 18301
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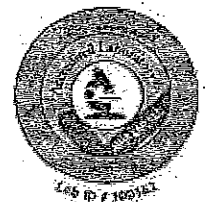
Attn:
 Collection Site: LENMAH INTERMEDIATE
 Field Technician: Ian Hinterleiter
 Date of Analysis: 04/18/2019
 Date of Issue: 05/03/2019
 Sampling Method: Air-O-Cell

SCOPE TRAP REPORT: Method (Fungal Spore SOP)

Location:	307			311			212		
Lab ID#:	F48074			F48075			F48076		
Volume (Liters):	75			75			75		
Background Debris: *	Light			Light			Light		
	raw ct.	spores/m3	%**	raw ct.	spores/m3	%**	raw ct.	spores/m3	%**
Ascospores	1	64	50%						
Coprinus							1	64	33%
Penicillium/Aspergillus	1	64	50%	1	64	100%	2	130	67%
Total Spores/m3	130			64			190		
Analytical Sensitivity ***	64			64			64		

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Client: EAST STROUDSBURG AREA SCHOOL #Received: 13
 DISTRICT
 50 VINE STREET
 EAST STROUDSBURG, PA 18301

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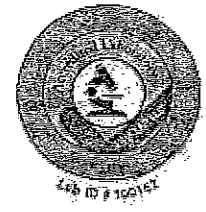
Attn:
 Collection Site: LENMAH INTERMEDIATE
 Field Technician: Ian Hinterleiter
 Date of Analysis: 04/18/2019
 Date of Issue: 05/03/2019
 Sampling Method: Air-O-Cell

SPORE TRAP REPORT: Method (Fungal Spore SOP)

Location:	209			203			217		
Lab ID#:	F48077			F48078			F48079		
Volume (Liters):	75			75			75		
Background Debris: *	Light			Light			Light		
	raw ct.	spores/m3	%**	raw ct.	spores/m3	%**	raw ct.	spores/m3	%**
Cladosporium							2	130	100%
Penicillium/Aspergillus				1	64	100%			
Total Spores/m3	No Spores Detected			64			130		
Analytical Sensitivity ***	64			64			64		

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Attn:
 Collection Site: LENMAH INTERMEDIATE
 Field Technician: Ian Hinterleiter
 Date of Analysis:
 Date of Issue: 05/03/2019
 Sampling Method: Air-O-Cell

SPORE TRAP REPORT: Method (Fungal Spore SOP)

Location:	119			122			Outside		
Lab ID#:	F48080			F48081			F48096		
Volume (Liters):	75			75			75		
Background Debris: *	Light			Light			n/a		
	raw ct.	spores/m3	%**	raw ct.	spores/m3	%**	raw ct.	spores/m3	%**
Basidiospores				2	130	34%	11	670	92%
Myxo./Periconia/Rusts/Smuts				1	64	17%			
Penicillium/Aspergillus				3	190	49%	1	61	8%
Total Spores/m3	No Spores Detected			380			730		
Analytical Sensitivity ***	64			64			61		

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 #Received: 13

Attn:
 Collection Site: LEHMAH INTERMEDIATE
 Field Technician: Ian Hinterleiter
 Date of Analysis:
 Date of Issue: 05/03/2019
 Sampling Method: Air-O-Cell

SCOPE TRAP REPORT: Method (Fungal Spore SOP)

Location:	Outside								
Lab ID#:	F48097								
Volume (Liters):	75								
Background Debris: *	n/a								
	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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Signature: _____

Dylan Jaycox
 Dylan Jaycox, Laboratory Director

#Analyzed: 13

