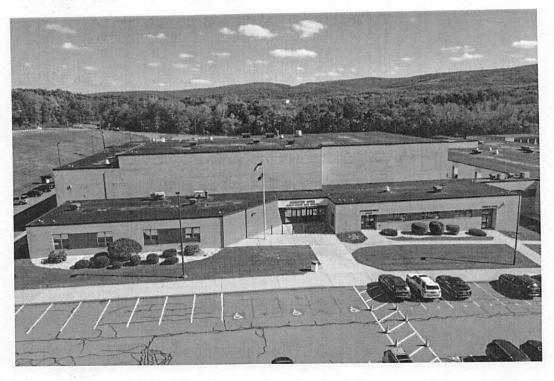
Indoor Air Quality (IAQ) - Mold Report

Hanover Junior-Senior High School 1600 San Souci Pkwy Hanover, PA, 18706



ENVIRONMENTAL ABATEMENT ASSOCIATES, INC.

April 10th, 2024

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Indoor Air Quality Inspection / Testing Report

Hanover High School 1600 San Souci Pkwy Hanover, PA, 18706

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MOLD AIR SAMPLE ANALYSIS RESULTS ACCREDITATIONS

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INDOOR AIR QUALITY INSPECTION / TESTING REPORT

Prepared for:

Brandon Holgren

For the properties known as: 1600 San Souci Pkwy Hanover, PA, 18706

Testing report prepared by Inspection / Quality Indoor Air This Environmental Abatement Associates, Inc. is based on information supplied by the client and on conditions readily observable or measurable on the date of this study. Any inspection and/or testing conducted by Environmental Abatement Associates, Inc. is not meant to determine whether a building is safe or unsafe for occupants in regards to indoor air quality. Interior building conditions vary constantly, therefore the findings and results presented in this report should be considered relative to and representative of the conditions that existed at the time of the inspection and testing. The results and recommendations presented herein should not be relied upon exclusively for the prevention of all possible illnesses, injuries or losses. These services are a supplement to, and not a substitute for, the client's responsibility for protecting the health and safety of employees, students, residents and others Environmental and for complying with applicable laws and regulations. Abatement Associates, Inc. warrants that its work is performed in a competent and professional manner. No other warranties are expressed or implied.

INTRODUCTION AND BACKGROUND 1.0

Personnel of ENVIRONMENTAL ABATEMENT ASSOCIATES, INC. (EAA) were on site Thursday, March 28th 2024 at 1600 San Souci, Hanover, Pennsylvania to conduct an Indoor Air Quality (IAQ) inspection and testing. The inspection and testing was conducted at the request of Brandon Holgren

EVALUATION STRATEGY 2.0

The general strategy employed in this evaluation was to:

- CONDUCT A VISUAL INSPECTION IN DESIGNATED AREAS.
- 2. CONDUCT MOLD AIR SAMPLING IN DESIGNATED AREAS.
- 3. PROVIDE A REPORT OF FINDINGS AND RECOMMENDATIONS.

A visual inspection was conducted in designated areas. The inspection was not intended to be an intensive and detailed inspection, but rather an overview of the conditions that may cause poor indoor air quality. The condition of walls, floor, ceilings, etc. were examined for mold growth and any potential problems that could initiate mold growth were noted.

collected on were air the samples mold four (4) total of Α sampling Allergenco-D using of buildings interior by Environmental Monitoring Systems and cassettes manufactured air sample was pump. One (1) sampling volume air high establish a background to in order to collected outside the back door indoor air the results of when interpreting the used he sample was manufacturer recommendations. each air collected at a flow rate of fifteen (15) liters of air per minute (L/M) for a period of five (5) minutes.

Air samples were logged, labeled and shipped overnight to EMSL Analytical, Inc.,an American Industrial Hygiene Association (AIHA) accredited microbiology laboratory, for analysis by microscopic examination.

AIR CONTAMINANT STANDARDS AND GUIDELINES

In parts per million (ppm)

MEASURED	OSHA PEL Occupational Safety and Health- Permissible Exposure Limits	American C Governmen Hygienists	H TLV onference of tal Industrial - Threshold Values	National I	nstitute for Occi	SH REL upational Safety and Exposure Limits	ASHRAE American Society of Heating, Refrigerating and Air-Conditioning Engineers	
PARAMETER	TWA (8) Total Weighted Average	TWA (8) Total Weighted Average	STEL Short Term Exposure Limits	TWA (8) Total Weighted Average	STEL Short Term Exposure Limits	C Ceiling Recommended Exposure Limits	IDLH Immediately Dangerous to Life and Health	RECOMMENDATIONS
Carbon Monoxide	50	25	-	35	-	200	1,200	Maximum allowable concentration for indoor living spaces is 9 ppm
Carbon Dioxide	5,000	5,000	30,000	5,000	30,000	-	40,000	< 700 ppm above outdoor level indicates adequate ventilation
Temperature								68 °F - 75 °F (winter) 73 °F - 79 °F (summer)
Relative Humidity								30% – 60%

DATA TABLE I
Temperature, Relative Humidity, Carbon Dioxide and Carbon Monoxide Readings

							
Floor	Location	Test Time	Temperature (°F)	Relative Humidity (%)	Carbon Dioxide (PPM)	Carbon Monoxide (PPM)	Comments
0	Bay Door 17 (Baseline)	8:15	40	40	531	7	Air sample # 5603532
1	Cafeteria	8:22	68	38	1038	7	Air sample # 5603813
1	Gym Hallway	8:29	70	39	627	7	Air sample # 5603591
1	Room A20	8:37	68	38	728	7	Air sample # 5288201
1	Hallway A30	8:44	70	38	659	7	Air sample # 5603469
						1	
			 				
	0 1 1	0 Bay Door 17 (Baseline) 1 Cafeteria 1 Gym Hallway 1 Room A20	0 Bay Door 17 (Baseline) 8:15 1 Cafeteria 8:22 1 Gym Hallway 8:29 1 Room A20 8:37	Floor Location Time (°F) 0 Bay Door 17 (Baseline) 8:15 40 1 Cafeteria 8:22 68 1 Gym Hallway 8:29 70 1 Room A20 8:37 68	Floor Location Test Time Temperature (°F) Humidity (%) 0 Bay Door 17 (Baseline) 8:15 40 40 1 Cafeteria 8:22 68 38 1 Gym Hallway 8:29 70 39 1 Room A20 8:37 68 38	Floor Location Test Time Temperature (°F) Humidity (%) Dioxide (PPM) 0 Bay Door 17 (Baseline) 8:15 40 40 531 1 Cafeteria 8:22 68 38 1038 1 Gym Hallway 8:29 70 39 627 1 Room A20 8:37 68 38 728	Floor Location Test Time Temperature (°F) Humidity (%) Dioxide (PPM) Monoxide (PPM) 0 Bay Door 17 (Baseline) 8:15 40 40 531 7 1 Cafeteria 8:22 68 38 1038 7 1 Gym Hallway 8:29 70 39 627 7 1 Room A20 8:37 68 38 728 7

3.0 DISCUSSION AND CONCLUSIONS

Molds are part of the natural environment and are simple, microscopic organisms whose purpose is to break down dead materials. Molds can be found on plants, dry leaves, and about every other organic material. Mold spores are lightweight and are spread by air currents. If spores land on a suitable surface, they will begin to grow. In order to thrive, mold requires four things to grow: water, organic materials, oxygen, and a temperature between 40-90 degrees Fahrenheit.

To stop the growth of mold, find and stop the moisture source. Mold spores will not grow if moisture is not present.

1. Aspergillus Penicillium

a. Aspergillus species are filamentous fungi that are commonly found in soil, decaying, vegetation, seeds and grains where they thrive as saprophytes. Aspergillus species can occasionally be harmful to humans. In humans, Aspergillus fumigatus is the most common and life-threatening airborne opportunistic fungal pathogen, which is particularly important among immunocompromised hosts. Inhaling Aspergillus fumigatus spores(condia) into the lungs may cause multiple diseases, which depend on theirmunological status of the host in humans. These diseases include invasive pulmonaryaspergillosis, aspergilloma, and different forms of hypersensitivity, pneumonitis, andallergic bronchopulmonary aspergillosis (ABPA).

2. Cladosporium

a. Most kinds of Cladosporium are not dangerous to humans, but sometimes they may lead to allergies, or they may worsen asthma. In worse cases, Cladosporium may lead to infections. In most cases if you open some windows or install a heat recovery ventilator (HRV). These measures will help stop new mold from forming, but will not kill active Cladosporium spores already there. For that you will need a non-toxic registered fungicide such as Concrobium.

3. Basidiospores

a. Inhalation of basidiospores can have health effects ranging from pneumonia-like symptoms to cryptococcus meningitis if the infection isn't treated before it spreads to the brain. The list of environments in which this class of molds thrives is extensive. Sources range from old fruit to damp acrylic painted walls. Detection of Basidiospores at levels higher than 5,000 count per cubic meter are considered problematic.

4. Ascospores

a. This group contains potential opportunistic pathogens, toxin producers, and allergens depending on the genus and species. Ascospores do present a human health risk but few have been reported to cause disease.

All sample locations came back with very low numbers

These findings indicate that mold remediation is not needed.

Respectfully Submitted,

Russ Bigus, M.S., Biology Professor of Microbiology

Mold Air Sample Analysis Results

OrderID: 182401343 EMSL

Customer Information

Microbiology Chain of Custody Form EMSL Order Number / Lab Use Only

EMBL Analytical, Inc. 5221 Militia Hill Rd

Plymouth Meeting, PA 19462

182401343 PHONE: (610) 828-3102 EMSL ANALYTICAL, INC. EMAIL: plymouthmeetinglab@emsl.co lank. Third-party billing requires written authorization #811-To is the same as Report-To leave this sect Billing ID: Customer ID: Company Name: Environmental Abatement Associates, Inc. Company Name: Environmental Abatement Associates, Inc. Billing Information Billing Contact: **Christopher Tsioles** Contact Name **Christopher Tsioles** Street Address: 239 Schuyler avenue suite 125B Street Address: 239 Schuyler avenue suite 125B Country: US City, State, Zip: 18704 PA KINGSTON 18704 Country: US City, State, Zip: KINGSTON Phone: 570-283-0500 570-283-0500 Email(s) for invoice:

BB Paris (e) In Report	awdt@verizon.net			11								
			Pro	ject informatio	n		18	hasa				
Project 24-12.1 Han	over Jr/Sr High School	_					Orde			at Ingother:		
MSL LIMS Project ID:		State Samples Collected:	PA	Zip Code Samples Collected::	173	331		eticut (CT) n ercial (Taxab	<u> </u>	ential (Non-taxable)		
Sampled By Name: Chris	stopher Tsioles	Sampled B	y Signature						No of Sai in Shipme			
	odium Thiosulfato Preserved Bottle Us	ed: 1 1 F	liocida Us	ed in Source (s	pecify)							
Sterile, St	Public Water Supply Samp		tetes All s	oculto may aut	matic	ily be reported	to DOH If required	by State.				
	Turn-Around-Time		foose call abox	ed for large projects an	Nor turnan	ound times 6 Hours or L	ess. "32 Hour TAT availe	ble for select test		be submitted by 11.30am.		
3 Hour	6 Hour 24 Hour	32° Hou		48 Hour		72 Hour	96 Hour		1 Week	2 Week		
			,,,,,,,,,,	SICLOGY TEST		3	M115 Sewage	Carron IV	otor (DIA++4)			
M001 Air-O-Cell	M174 MoldSnap			eeruginosa (P/A			M116 Sewage			1		
	M032 Allergenco-D			eeruginosa (MF Note Count	17)		M117 Sewage			į.		
M041 Fungal Direct Exemina		M015 Hete		nate Count & E. Coli (Coliler	t P/A***	١	M013 Sewage			1		
M169 Pollen ID & Enumeration				& E. Coli (MFT*)		•	M730 Methici	in-resistant	Staph, aureus (l	MRSA)		
M280 Dust Characterization I M281 Dust Characterization I				& E. Coli Enume		Colifert MPN**)	M031 Rapid-g	iowing non-	TB Mycobacteric	Delection &		
M005 Viable Fungi-Air Samp		M019 Fec					Enumeration					
M006 Viable Funci-Air Samp	les (Includes <i>Penicilum</i> , Aspergillus,	M020 Feç	al Streptoc	occus (MFT*)			M014 Endoto			. D 4 \$440\		
Cladosportum, Stachybolrys	Species ID & Count)	M029 Enle	•					M044 Group Allergen (Cat, Dog, Cockroach, Dust Mite) M095 Bacteroides				
	ce Samples (Genus ID & Count)			interclent P/A***)			1		e Guide for Tes	t Code		
M008 Culturable Fungi-Surfa Asperaillus, Cladosponum, S	NOBB Culturable Fungi-Surface Samples (includes <i>Penicilium,</i> Is <i>pengillus, Cladosponum, Slachybotrys</i> Species ID & Count)			R-ERMI 38 Pan n - Water (MFT*				ise use EMSL <i>L</i>				
M009 Bacteria Culture Gram		*MFT= Membrane Filtration Technique										
M010 Bacteria Count & ID -		**MPN = Most Probable Number										
M011 Bacteria Count & ID -		•••P/A = Presence/Absence										
Sample #	Sample Location/Description	Sample Type (Matrix) Potable / I Potable / I Potable / I Water				Test Code	Volume/Area	Date / Ti	me Callected	Temperature (Lab Use Only)		
Example: Sample 1	Kitchen	.w	ater	Potable		M017	1,000 ml	1/1/20	21 3:30pm			
5603295	By Door 17	Air				M001_	1,500 m	-	8:20 AM			
5603813	Cafeteria	Air				M001	1,500 m	3/28/2	4 8:27 AM			
5603591	Gym Hallway	Air				M001	1,500 m	3/28/2	4 8:34 AM			
5288201	Room A20	Air				M001	1,500 m	3/28/2	4 8:42 AM			
5603469	Hallway by A30	Air				M001	1,500 m	3/28/2	4 8:49 AM	1 4 Tr		
						Brancia Mal	hada Halla of Dat	octor ata \		• •		
	Special Instructions and/or Re	egulatory Re	draemeng	s (sampie speci	icauons	, Processing Mei	alogs, Limits of Del	euun, eus)		r.le.		
Method of Shapment.					Sample	Condition Upon	Receipt:		EMBL F	YU [X		
Relinquished by: Chris	topher Tsioles	Date/Tim	e:3/28	/24	Receiv	ed by Um	Mm		Date/Time	19/24		
Relinquished by:		Date/Tim			Received by:				Date/Time /	32000		

Controlled Document - COC-34 Micro R13 03/02/2021 AGREE TO ELECTRONIC SIGNATURE (By checking, I consent to signing this Chain of Custody document by electronic signature.) EMSL Analytical, Inc.'s Laboratory Terms and Conditions are incorporated into this Chain of Custody by reference in their entirety. Submission of samples to EMSL Analytical, Inc.



EMSL Analytical, Inc.

5221 Militia Hill Road Plymouth Meeting, PA 19462 Tel/Fax: (610) 828-3102 / (610) 828-3122

http://www.EMSL.com / plymouthmeetinglab@emsl.com

Attention: Christopher Tsioles

Environmental Abatement Associates, Inc.

239 Schuyler avenue suite 125B

KINGSTON, PA 18704

EMSL Order: 182401343 Customer ID: ENVA55

Customer PO: Project ID:

Phone: (570) 283-0500

Fax: (570) 283-0577

 Collected Date:
 03/28/2024

 Received Date:
 03/29/2024

 Analyzed Date:
 04/02/2024

Project: 24-12.1 HANOVER JR/SR HIGH SCHOOL

Test Report: Allergenco-D(™) Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number: Client Sample ID: Volume (L): Sample Location:	182401343-0001 5603295 1500 BY DOOR 17			182401343-0002 5603813 1500 CAFETERIA			182401343-0003 5603591 1500 GYM HALLWAY		
Spore Types	Raw Count†	Count/m³	% of Total	Raw Count†	Count/m³	% of Total	Raw Count†	Count/m³	% of Total
Alternaria (Ulocladium)					• 414		-	•	
Ascospores	16	35	8	-		-	-	-	
Aspergillus/Penicillium++				1	2	50			400
Basidiospores	115(181)	395	90.4	1	2	50	4	9	100
Bipolaris++						•	•		•
Chaetomium++		Anna Paris de la Constantina del Constantina de la Constantina de		-	-	-	-		
Cladosporium	3	7	1.6	-		• 1			
Curvularia		The second			-	-	-	-	-
Epicoccum				estate de la			•		
Market Commission of the State		RESIDEN	S GALLESTON	-	-		-	-	-
Fusarium++									•
Ganoderma		Mark Printers	1	-		-	-	-	
Myxomycetes++	manager to state of the state of			AND THE PERSON NAMED IN					•
Pithomyces++		•	AULIE MEE	_		-	-	-	-
Rust				CONTRACTOR OF THE PARTY OF THE					
Scopulariopsis/Microascus	•					-	_	-	-
Stachybotrys/Memnoniella				ALCOHOL: THE					
Unidentifiable Spores	•		•				-		-
Zygomycetes	E. E. E.		400	2	4	100	4	9	100
Total Fungi	200	437	100	2		100	-		-
Hyphal Fragment	-			address recognis					
Insect Fragment				- 10 m					
Pollen	-		-		2	ed School attack		2	
Analyt. Sensitivity 600x		2			<1*			<1*	
Analyt. Sensitivity 300x	-	<1*			< I		5930 DEG	1	
Skin Fragments (1-4)	•	1				•		1	a language and the
Fibrous Particulate (1-4)		1						2	
Background (1-5)		1	-	•		•		4	

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.

† Due to method stopping rules, extrapolated raw counts are reported in parenthesis.

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

Muni Com

Kevin Ream, Laboratory Manager or other Approved Signatory

EMSL Analytical, Inc. maintains liability limited to cost of analysis. Interpretation and use of lest results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL Analytical, Inc. EMSL Analytical, Inc. bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody, Samples are within quality control criteria and met method specifications unless otherwise noted. Skin Fragment and Fibrous Particulate ratings are based on the percent of non-fungal material they represent: 1 (1-25%), 2 (26-50%), 3 (51-75%), or 4 (76-100%), Background ratings are based on the total area covered by non-fungal particulate: 1 (1-25%), 2 (26-50%), 3 (51-75%), or 5 (100%; overloaded). 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 quantification. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection 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 >= 100 are extrapolated based on the percentage analyzed.

Samples analyzed by EMSL Analytical, Inc. Plymouth Meeting, PA AIHA LAP, LLC-EMLAP Accredited #178659

Initial report from: 04/02/2024 10:12 AM



EMSL Analytical, Inc.

5221 Militia Hill Road Plymouth Meeting, PA 19462

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Lab Sample Number: Client Sample ID: Volume (L): Sample Location:	182401343-0004 5288201 1500 ROOM A20			32401343-0005 5603469 1500 ALLWAY BY A3				
Spore Types	Raw Count†	Count/m³	% of Total	Raw Count†	Count/m³	% of Total		
Alternaria (Ulocladium)					•			
Ascospores		-		-	-	-		
Aspergillus/Penicillium++		Service Alles		3	7	63.6		
Basidiospores	2	4	100	2	4	36.4		
Bipolaris++			•	• 1	- 1	-		
Chaetomium++			-		-	-		
Cladosporium						•		
Curvularia								
Epicoccum				News Control				
Fusarium++					-	-		
Ganoderma								
Myxomycetes++	-			-	-	-		
Pithomyces++								
Rust				-		-		
Scopulariopsis/Microascus								
Stachybotrys/Memnoniella		-			-	-		
Unidentifiable Spores								
Zygomycetes			-	-		-		
Total Fungi	2	4	100	5	11	100		
Hyphal Fragment	Section Sections	General Control	ing historia.		-	-		
Insect Fragment	and the state of							
Pollen				-	-	-		
Analyt. Sensitivity 600x		2		Maga-Duras	2	Andrew - twice		
Analyt. Sensitivity 300x		<1*		-	<1*	-		
Skin Fragments (1-4)	STATE OF STATE OF	1		Market Landson	1	distribution of		
Fibrous Particulate (1-4)		1			1			
Background (1-5)	BANK SHEAT STATE			A PROPERTY OF THE PARTY OF	1			

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.

† Due to method stopping rules, extrapolated raw counts are reported in parenthesis.

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

Muni Cun

Kevin Ream, Laboratory Manager or other Approved Signatory

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Samples analyzed by EMSL Analytical, Inc. Plymouth Meeting, PA AIHA LAP, LLC-EMLAP Accredited #178659

Initial report from: 04/02/2024 10:12 AM

Accreditations



AIHA Laboratory Accreditation Programs, LLC

acknowledges that

EMSL Analytical, Inc. 5221 Militia Rd., Plymouth Meeting, PA 19462 Laboratory ID: LAP-178659

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 17025:2017 international standard, General Requirements for the Competence of Testing and Calibration Laboratories in the following:

LABORATORY ACCREDITATION PROGRAMS

	INDUSTRIAL HYGIENE	Accreditation Expires: September 01, 2023
$\overline{\Box}$	ENVIRONMENTAL LEAD	Accreditation Expires:
	ENVIRONMENTAL MICROBIOLOGY	Accreditation Expires: September 01, 2023
	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 17025:2017 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.

Chervl O Morton

Managing Director, AIHA Laboratory Accreditation Programs, LLC

Cheryl O. Charton

Revision19.1: 07/28/2021

Date Issued: 08/31/2021



AIHA Laboratory Accreditation Programs, LLC SCOPE OF ACCREDITATION

EMSL Analytical, Inc.

5221 Militia Rd., Plymouth Meeting, PA 19462

Laboratory ID: LAP-178659

Issue Date: 08/31/2021

The laboratory is approved for those specific field(s) of testing/methods listed in the table below. Clients are urged to verify the laboratory's current accreditation status for the particular field(s) of testing/Methods, since these can change due to proficiency status, suspension and/or withdrawal of accreditation.

Environmental Microbiology Laboratory Accreditation Program (EMLAP)

Initial Accreditation Date: 09/01/2019

EMLAP Scope Category	Field of Testing (FOT)	Component, parameter or characteristic tested	Method	Method Description (for internal methods only)
Fungal	Air - Direct Examination	Spore Trap	MICRO-SOP-201	Standard Operating Procedure for the Analysis of Airborne Fungal Spores, Hyphal Fragments, Pollen, Insect Fragments, Skin Fragments and Fibrous Particulate by Optical Microscopy of Spore Trap Samples
Fungal .	Bulk - Direct Examination	Bulks (liquid or solid)	MICRO-SOP-200	Standard Operating Procedure for the Microscopic Examination of Fungal Spores, Fungal Structures, Hyphae, Pollen, Insect Fragments, and Fibrous Particulate from Surface Samples
Fungal	Surface - Direct Examination	Swab or Tape Lift	MICRO-SOP-200	Standard Operating Procedure for the Microscopic Examination of Fungal Spores, Fungal Structures, Hyphae, Pollen, Insect Fragments, and Fibrous Particulate from Surface Samples

A complete listing of currently accredited EMLAP laboratories is available on the AIHA LAP, LLC website at: http://www.aihaaccreditedlabs.org

Effective: 07/29/2021

Revision: 7.1 Page 1 of 1

Indoor Air Quality (IAQ) - Mold Report

Hanover Memorial Elementary School 80 W. Saint Mary's Rd. Hanover, PA, 18706



ENVIRONMENTAL ABATEMENT ASSOCIATES, INC.

April 10th, 2024

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Indoor Air Quality Inspection / Testing Report

Hanover Memorial Elementary School 80 W. Saint Mary's Rd. Hanover, PA, 18706

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APPENDIX

MOLD AIR SAMPLE ANALYSIS RESULTS ACCREDITATIONS

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INDOOR AIR QUALITY INSPECTION / TESTING REPORT

Prepared for:

Brandon Holgren

80 W. Saint Mary's Rd. Hanover, PA, 18706

Quality Inspection / Testing report prepared This Indoor Air Environmental Abatement Associates, Inc. is based on information supplied by the client and on conditions readily observable or measurable on the date of this study. Any inspection and/or testing conducted by Environmental Abatement Associates, Inc. is not meant to determine whether a building is safe or unsafe for occupants in regards to indoor air quality. Interior building conditions vary constantly, therefore the findings and results presented in this report should be considered relative to and representative of the conditions that existed at the time of the inspection and testing. The results and recommendations presented herein should not be relied upon exclusively for the prevention of all possible illnesses, injuries or losses. These services are a supplement to, and not a substitute for, the client's responsibility for protecting the health and safety of employees, students, residents and others and for complying with applicable laws and regulations. Environmental Abatement Associates, Inc. warrants that its work is performed in a competent and professional manner. No other warranties are expressed or implied.

1.0 INTRODUCTION AND BACKGROUND

Personnel of ENVIRONMENTAL ABATEMENT ASSOCIATES, INC. (EAA) were on site Thursday, March 28th 2024 at 80 W. Saint Mary's Rd., Hanover, Pennsylvania to conduct an Indoor Air Quality (IAQ) inspection and testing. The inspection and testing was conducted at the request of Brandon Holgren

2.0 EVALUATION STRATEGY

The general strategy employed in this evaluation was to:

- 1. CONDUCT A VISUAL INSPECTION IN DESIGNATED AREAS.
- 2. CONDUCT MOLD AIR SAMPLING IN DESIGNATED AREAS.
- 3. PROVIDE A REPORT OF FINDINGS AND RECOMMENDATIONS.

A visual inspection was conducted in designated areas. The inspection was not intended to be an intensive and detailed inspection, but rather an overview of the conditions that may cause poor indoor air quality. The condition of walls, floor, ceilings, etc. were examined for mold growth and any potential problems that could initiate mold growth were noted.

collected on mold air the samples were (4) of four Α total sampling Allergenco-D using interior of buildings **Environmental Monitoring** and **Systems** cassettes manufactured by pump. One (1) air sample was sampling volume air hiah a background to in order to establish collected outside the back door when interpreting the results of the indoor air be used manufacturer recommendations, sample was each air samples. Per collected at a flow rate of fifteen (15) liters of air per minute (L/M) for a period of five (5) minutes.

Air samples were logged, labeled and shipped overnight to EMSL Analytical, Inc.,an American Industrial Hygiene Association (AIHA) accredited microbiology laboratory, for analysis by microscopic examination.

AIR CONTAMINANT STANDARDS AND GUIDELINES

In parts per million (ppm)

MEASURED	OSHA PEL Occupational Safety and Health- Permissible Exposure Limits	American C Governmen Hygienists	H TLV onference of tal Industrial - Threshold Values	National I	nstitute for Occ	SH REL upational Safety ar d Exposure Limits	ASHRAE American Society of Heating, Refrigerating and Air-Conditioning Engineers	
PARAMETER	TWA (8) Total Weighted Average	TWA (8) Total Weighted Average	STEL Short Term Exposure Limits	TWA (8) Total Weighted Average	STEL Short Term Exposure Limits	C Ceiling Recommended Exposure Limits	IDLH Immediately Dangerous to Life and Health	RECOMMENDATIONS
Carbon Monoxide	50	25	-	35	-	200	1,200	Maximum allowable concentration for indoor living spaces is 9 ppm
Carbon Dioxide	5,000	5,000	30,000	5,000	30,000	-	40,000	< 700 ppm above outdoor level indicates adequate ventilation
Temperature								68 °F - 75 °F (winter) 73 °F - 79 °F (summer)
Relative Humidity								30% – 60%

DATA TABLE I
Temperature, Relative Humidity, Carbon Dioxide and Carbon Monoxide Readings

Test No.	Floor	Location	Test Time	Temperature (°F)	Relative Humidity (%)	Carbon Dioxide (PPM)	Carbon Monoxide (PPM)	Comments
1	0	Front Door (Baseline)	10:58	72	35	727	7	Air sample # 5603859
2	1	Auditorium	11:05	73	34	722	7	Air sample # 5603288
3	1	Cafeteria	11:13	74	32	594	7	Air sample # 5603691
4	3	Hallway Room C10	11:22	72	38	602	7	Air sample # 5603871
5	2	Hallway Room B9	11:29	72	31	633	7	Air sample # 5603624
-								
							,	

3.0 DISCUSSION AND CONCLUSIONS

Molds are part of the natural environment and are simple, microscopic organisms whose purpose is to break down dead materials. Molds can be found on plants, dry leaves, and about every other organic material. Mold spores are lightweight and are spread by air currents. If spores land on a suitable surface, they will begin to grow. In order to thrive, mold requires four things to grow: water, organic materials, oxygen, and a temperature between 40-90 degrees Fahrenheit.

To stop the growth of mold, find and stop the moisture source. Mold spores will not grow if moisture is not present.

1. Aspergillus Penicillium

a. Aspergillus species are filamentous fungi that are commonly found in soil, decaying, vegetation, seeds and grains where they thrive as saprophytes. Aspergillus species can occasionally be harmful to humans. In humans, Aspergillus fumigatus is the most common and life-threatening airborne opportunistic fungal pathogen, which is particularly important among immunocompromised hosts. Inhaling Aspergillus fumigatus spores(condia) into the lungs may cause multiple diseases, which depend on theimmunological status of the host in humans. These diseases include invasive pulmonaryaspergillosis, aspergilloma, and different forms of hypersensitivity, pneumonitis, and allergic bronchopulmonary aspergillosis (ABPA).

2. Cladosporium

a. Most kinds of Cladosporium are not dangerous to humans, but sometimes they may lead to allergies, or they may worsen asthma. In worse cases, Cladosporium may lead to infections. In most cases if you open some windows or install a heat recovery ventilator (HRV). These measures will help stop new mold from forming, but will not kill active Cladosporium spores already there. For that you will need a nontoxic registered fungicide such as Concrobium.

3. Basidiospores

a. Inhalation of basidiospores can have health effects ranging from pneumonia-like symptoms to cryptococcus meningitis if the infection isn't treated before it spreads to the brain. The list of environments in which this class of molds thrives is extensive. Sources range from old fruit to damp acrylic painted walls. Detection of Basidiospores at levels higher than 5,000 count per cubic meter are considered problematic.

4. Ascospores

a. This group contains potential opportunistic pathogens, toxin producers, and allergens depending on the genus and species. Ascospores do present a human health risk but few have been reported to cause disease.

All sample locations came back with very low numbers

These findings indicate that mold remediation is not needed.

Respectfully Submitted,

Russ Bigus, M.S., Biology Professor of Microbiology

Mold Air Sample Analysis Results

OrderID: 182401345 EMSL ANALYTICAL, INC.

Microbiology Chain of Custody Form

EMSL Order Number / Lab Use Only

182401345

EMOL Analytical, Inc. 5221 Militia Hill Rd

If 881-To is the same as Report-To feave this section blank. There-party billing requires written authorization

Plymouth Meeting, PA 19462

PHONE: (610) 828-3102 EMAIL: plymouthmeetinglab@emsl.co

Customer ID: Company Name. Environmental Abatement Associates, Inc. Environmental Abatement Associates, Inc. Company Name. Billing Contact: **Christopher Tsioles** Contact Name. Christopher Tsioles Street Address: 239 Schuyler avenue suite 125B Street Address: 239 Schuyler avenue suite 125B 18704 Country: US Country: US City, State, Zip KINGSTON Customer City, State, Zip: 18704 KINGSTON Phone: 570-283-0500 Phone: 570-283-0500 Email(s) for Invoice: Email(s) for Report: eaawdt@verizon.net Project Information Purchase Project Name/No: 24-12.4 Hanover Lands America McMerial element any State of Connecticut (CT) must select project location. EMSL LIMS Project ID: Samples PA Commercial (Taxable) Residential (Non-taxable) Collected: Collected:: No of Samples Sampled By Signature: Sampled By Name Christopher Tsioles Biocide Used in Source (specify) Sterile, Sodium Thiosulfate Preserved Bottle Used: Note: All results may automatically be reported to DOH if required by State. Public Water Supply Samples: Ploase call should for large projects ancier turnstround times 6 Hours or Less. *32 Hour TAT available for select tests only; samples must be submitted by 11:30am Turn-Around-Time (TAT) 2 Week 1 Week 48 Hour 96 Hour 72 Hour 32° Hour 3 Hour 6 Hour 24 Hour MICROBIOLOGY TEST CODES M115 Sewage Screen - Water (P/A***) M012 Pseudomonas aeruginosa (P/A***) M001 Air-O-Cell M174 MoldSnap M116 Sewage Screen - Water (MPN**) M024 Pseudomonas aeruginosa (MFT*) M030 Micro 5 M032 Allergenco-D M815 Heterotrophic Plate Count M117 Sewage Screen - Swab (P/A***) M041 Fungal Direct Examination M013 Sewage Screen - Swab (MFT*) M017 Total Coliform & E. Coli (Collect P/A***) M169 Pollen ID & Enumeration M730 Methicillin-resistant Staph, aureus (MRSA) M018 Total Coliforn & E. Coli (MFT*) M280 Dust Characterization Level-1 M031 Repid-growing non-TB Mycobacteria Detection & M114 Total Coliforn & E. Coli Enumeration (Colifert MPN**) M281 Dust Characterization Level-2 Enumeration M019 Fecal Coliform (MFT*) MCOS Viable Fungi-Air Samples (Genus ID & Count) M014 Endotoxin Analysis M020 Fecal Streptococcus (MFT*) MODS Viable Fungi-Air Samples (Includes Penicilium, Aspergilius, M044 Group Allergen (Cat, Dog, Cockroach, Dust Mile) Cladosporium, Stachybotrys Species ID & Count) M029 Enterococci (MFT*) M095 Bacteroides M129 Enterococci (Enteroleit P/A***) M007 Culturable Fungi-Surface Samples (Genus ID & Count) Other - See Analytical Price Guide for Test Code M180 Real Time qPCR-ERMI 36 Panel M008 Culturable Fungi-Surface Samples (Includes Penicillum, Aspergillus, Cladosporium, Stachybotrys Species ID & Count) Legionella Analysis Please use EMSL Legionella COC M025 Sewage Screen - Water (MFT*) *MFT= Membrane Filtration Technique M009 Bacteria Culture Gram Stain & Count *MPN = Most Probable Number M010 Bacteria Count & ID - 3 Most Prominent **P/A = Presence/Absence M011 Bacteria Count & ID - 5 Most Prominent Potable / Non-Temperature Sample Type Volume/Area Date / Time Collected **Test Code** Sample Location/Description Potable (Only for (Lab Use Only) Sample # (Matrix) Water) M017 1.000 ml 1/1/2021 3:30pm Water Potable Kitchen Example: Sample 1 1.500 ml 3/28/24 11:03 AM Air M001 Front Door 5603859 M001 1.500 ml 3/28/24 11:10 AM Auditorium Air 5603288 M001 1.500 ml 3/28/24 11:18 AM Air Cafeteria 5603691 M001 1.500 ml 3/28/24 11:27 AM Air 5283871 Hallway Rm C10 M001 1.500 ml 3/28/24 11:34 AM Air Hallway Rm B9 5603624 Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.) EMSL Fed Ex Sample Condition Upon Receipt: Method of Shipment: Date/Time Date/Time:3/28/24 Retinquished by: Christopher Tsioles Date/Time. Date/Time Relinquished by: ontrolled Document - COC-34 Micro R13 03/02/2021

AGREE TO ELECTRONIC SIGNATURE (By checking, I consent to signing this Chem of Custody document by electronic signature.)



EMSL Analytical, Inc.

5221 Militia Hill Road Plymouth Meeting, PA 19462

Tel/Fax: (610) 828-3102 / (610) 828-3122

http://www.EMSL.com / plymouthmeetinglab@emsl.com

Attention: Christopher Tsioles

Environmental Abatement Associates, Inc.

239 Schuyler avenue suite 125B

KINGSTON, PA 18704

EMSL Order: 182401345 Customer ID: ENVA55

Customer PO: Project ID:

Phone: (570) 283-0500

Fax: (570) 283-0577

Collected Date: 03/28/2024 **Received Date:** 03/29/2024

Analyzed Date: 04/02/2024

Project: 21-12.4 HANOVER MEMORIAL ELEMENTARY

Test Report: Allergenco-D(™) Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number: Client Sample ID: Volume (L): Sample Location:		182401345-0001 5603859 1500 FRONT DOOR			82401345-0002 5603288 1500 AUDITORIUM		1	82401345-0003 5603691 1500 CAFETERIA	
Spore Types	Raw Count†	Count/m³	% of Total	Raw Count†	Count/m³	% of Total	Raw Count†	Count/m³	% of Total
Alternaria (Ulocladium)	1	· <1*	0.2		- Table	BALLY CONT			
Ascospores	11	24	8.9		-	-	-	-	-
Aspergillus/Penicillium++							•		
Basidiospores	101(111)	242	89.7	4	9	93.1	2	4	100
Bipolaris++				MND - DATE					
Chaetomium++		-	-		-	-		-	-
Cladosporium	4	3*	1.1	English Service			•	-	
Curvularia		-	-	-	-		-	-	-
Epicoccum								•	•
Fusarium++			-		-	:#:	-	-	-
Ganoderma						-			
Myxomycetes++		-	-	1	<1*	6.9		-	-
Pithomyces++						•			-
Rust	-	-	-	-		-	-	-	-
Scopulariopsis/Microascus	De la Constitución de la Constit								
Stachybotrys/Memnoniella	-	-	-		-	-	-	-	-
Unidentifiable Spores	111111111111111111111111111111111111111			THE PARTY					•
Zygomycetes		-	_	-	-	-	-		-
Total Fungi	127	269	100	5	9	100	2	4	100
Hyphal Fragment		-	-	1	2	-		-	-
Insect Fragment	e tree in the	Taran Land			•	1000			
Pollen	1-	2		-		-	-	-	-
Analyt. Sensitivity 600x	money average	2	CHARLEST - THE SER	MARKET - LEW H	. 2			2	
Analyt, Sensitivity 300x		<1*			<1*		-	<1*	
Skin Fragments (1-4)		1		no visit a participa	2			2	
Fibrous Particulate (1-4)		1		1-	1	-	-	1	-
Background (1-5)	SHIP TO BEFORE	2	Marie - Australia		1 .		•	1	

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.

† Due to method stopping rules, extrapolated raw counts are reported in parenthesis.

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

Muni Cum

Kevin Ream, Laboratory Manager or other Approved Signatory

EMSL Analytical, Inc. maintains liability limited to cost of analysis, Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL Analytical, Inc. EMSL Analytical, Inc. bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received, Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. Skin Fragment and Fibrous Particulate ratings are based on the percent of non-fungal material they represent: 1 (1-25%), 2 (26-50%), 3 (51-75%), or 4 (76-100%). Background ratings are based on the total area covered by non-fungal particles: 1 (1-25%), 2 (26-50%), 3 (51-75%), 4 (76-99%), or 5 (100%) overloaded). High levels of background particulate can obscure spores and other particulates, leading to underestimation. Background levels of 5 indicate an overloading of background particulates, provided and particulates, provided particulat

Samples analyzed by EMSL Analytical, Inc. Plymouth Meeting, PA AIHA LAP, LLC-EMLAP Accredited #178659

Initial report from: 04/02/2024 03:57 PM



EMSL Analytical, Inc.

5221 Militia Hill Road Plymouth Meeting, PA 19462 Tel/Fax: (610) 828-3102 / (610) 828-3122

http://www.EMSL.com / plymouthmeetinglab@emsl.com

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Collected Date: 03/28/2024 **Received Date:** 03/29/2024

Analyzed Date: 04/02/2024

Project: 21-12.4 HANOVER MEMORIAL ELEMENTARY

Test Report: Allergenco-D(™) Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number: Client Sample ID: Volume (L): Sample Location:		82401345-0004 5283871 1500 LLWAY RM C1		182401345-0005 5603624 1500 HALLWAY RM B9				
Spore Types	Raw Count†	Count/m³	% of Total	Raw Count†	Count/m³	% of Total	 	,
Alternaria (Ulocladium)		• I						
Ascospores	-	-	-	-	-	-		
Aspergillus/Penicillium++	2	4	28.6	•	•			
Basidiospores	5	10	71.4	3	7	100		
Bipolaris++				•	•	•		
Chaetomium++		-	-	-	-	-		
Cladosporium			1500/A-08/A			-		
Curvularia			-	-	-	-		
Epicoccum				-		•		
Fusarium++				-	-			
Ganoderma						- 10		
Myxomycetes++		-			-			
Pithomyces++								
Rust		-	-	-	-	-		
Scopulariopsis/Microascus					-			
Stachybotrys/Memnoniella		-	-		-	-		
Unidentifiable Spores				+				
Zygomycetes	-	-	-	-	-	-		
Total Fungi	7	14	100	3	7	100		
Hyphal Fragment		-		-	-	-		
Insect Fragment								
Pollen		-		-	-	-		
Analyt. Sensitivity 600x		2	- 100 m	ALTERNATION	2	•		
Analyt. Sensitivity 300x	-	<1*	-	-	<1*	-		
Skin Fragments (1-4)	1000	2			2			
Fibrous Particulate (1-4)		1		-	1			
Background (1-5)	BEST TO STATE OF	1			1			

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.

† Due to method stopping rules, extrapolated raw counts are reported in parenthesis.

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

Muni Cun

Kevin Ream, Laboratory Manager or other Approved Signatory

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Samples analyzed by EMSL Analytical, Inc. Plymouth Meeting, PA AIHA LAP, LLC-EMLAP Accredited #178659

Initial report from: 04/02/2024 03:57 PM

Accreditations



AIHA Laboratory Accreditation Programs, LLC

acknowledges that

EMSL Analytical, Inc. 5221 Militia Rd., Plymouth Meeting, PA 19462 Laboratory ID: LAP-178659

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 17025:2017 international standard, General Requirements for the Competence of Testing and Calibration Laboratories in the following:

LABORATORY ACCREDITATION PROGRAMS

INDUSTRIAL HYGIENE	Accreditation Expires: September 01, 2023
ENVIRONMENTAL LEAD	Accreditation Expires:
ENVIRONMENTAL MICROBIOLOGY	Accreditation Expires: September 01, 2023
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 17025:2017 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.

Cheryl O. Onartan

Managing Director, AIHA Laboratory Accreditation Programs, LLC

Revision19.1: 07/28/2021 Date Issued: 08/31/2021



AIHA Laboratory Accreditation Programs, LLC SCOPE OF ACCREDITATION

EMSL Analytical, Inc.

5221 Militia Rd., Plymouth Meeting, PA 19462

Laboratory ID: LAP-178659

Issue Date: 08/31/2021

The laboratory is approved for those specific field(s) of testing/methods listed in the table below. Clients are urged to verify the laboratory's current accreditation status for the particular field(s) of testing/Methods, since these can change due to proficiency status, suspension and/or withdrawal of accreditation.

Environmental Microbiology Laboratory Accreditation Program (EMLAP)

Initial Accreditation Date: 09/01/2019

EMLAP Scope Category	Field of Testing (FOT)	Component, parameter or characteristic tested	Method	Method Description (for internal methods only)	
Fungal	Air - Direct Examination	Spore Trap	MICRO-SOP-201	Standard Operating Procedure for the Analysis of Airborne Fungal Spores Hyphal Fragments, Pollen, Insect Fragments, Skin Fragments and Fibrous Particulate by Optical Microscopy of Spore Trap Samples Standard Operating Procedure for the Microscopic Examination of Fungal Spores, Fungal Structures, Hyphae, Pollen, Insect Fragments, and Fibrous Particulate from Surface Samples	
Fungal	Bulk - Direct Examination	Bulks (liquid or solid)	MICRO-SOP-200		
Fungal	Surface - Direct Examination	Swab or Tape Lift	MICRO-SOP-200	Standard Operating Procedure for the Microscopic Examination of Fungal Spores, Fungal Structures, Hyphae, Pollen, Insect Fragments, and Fibrous Particulate from Surface Samples	

A complete listing of currently accredited EMLAP laboratories is available on the AIHA LAP, LLC website at: http://www.aihaaccreditedlabs.org

Effective: 07/29/2021 Revision: 7.1 Page 1 of 1

Indoor Air Quality (IAQ) - Mold Report

Hanover Lee Park Elementary School 99 Lee Park Ave. Hanover, PA, 18706



ENVIRONMENTAL ABATEMENT ASSOCIATES, INC.
April 10th, 2024

CONTENTS

Indoor Air Quality Inspection / Testing Report

Hanover Lee Park Elementary School 99 Lee Park Ave. Hanover, PA, 18706

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1.00	INTRODUCTION AND BACKGROUND	1
2.00	EVALUATION STRATEGY	
3.00	DISCUSSION AND CONCLUSIONS	5-6

APPENDIX

MOLD AIR SAMPLE ANALYSIS RESULTS ACCREDITATIONS

"This document was prepared and created by Environmental Abatement Associates, Inc. and contains confidential, proprietary and/or privileged information that is legally protected. The document is intended for the sole use of the addressee indicated above. You are hereby notified that any use of the contents of this document or any action to inform another of its contents is strictly prohibited without first securing the written consent of Environmental Abatement Associates, Inc."

大量的大大型的大型,不是一种企业,不是一个工程,不是一个工程的大型,不是一个工程的大型,不是一个工程的大型,不是一个工程的工程的大型,不是一个工程的工程的工程的

INDOOR AIR QUALITY INSPECTION / TESTING REPORT

Prepared for:

Brandon Holgren

For the properties known as:

99 Lee Park Ave.

Hanover, PA, 18706

Quality Inspection / Testing report prepared by Indoor Air Environmental Abatement Associates, Inc. is based on information supplied by the client and on conditions readily observable or measurable on the date of this study. Any inspection and/or testing conducted by Environmental Abatement Associates, Inc. is not meant to determine whether a building is safe or unsafe for occupants in regards to indoor air quality. Interior building conditions vary constantly, therefore the findings and results presented in this report should be considered relative to and representative of the conditions that existed at the time of the inspection and testing. The results and recommendations presented herein should not be relied upon exclusively for the prevention of all possible illnesses, injuries or losses. These services are a supplement to, and not a substitute for, the client's responsibility for protecting the health and safety of employees, students, residents and others and for complying with applicable laws and regulations. Environmental Abatement Associates, Inc. warrants that its work is performed in a competent and professional manner. No other warranties are expressed or implied.

1.0 INTRODUCTION AND BACKGROUND

Personnel of ENVIRONMENTAL ABATEMENT ASSOCIATES, INC. (EAA) were on site Thursday, April 4th 2024 at 99 Lee Park Ave., Hanover, Pennsylvania to conduct an Indoor Air Quality (IAQ) inspection and testing. The inspection and testing was conducted at the request of Brandon Holgren

2.0 EVALUATION STRATEGY

The general strategy employed in this evaluation was to:

- 1. CONDUCT A VISUAL INSPECTION IN DESIGNATED AREAS.
- 2. CONDUCT MOLD AIR SAMPLING IN DESIGNATED AREAS.
- 3. PROVIDE A REPORT OF FINDINGS AND RECOMMENDATIONS.

A visual inspection was conducted in designated areas. The inspection was not intended to be an intensive and detailed inspection, but rather an overview of the conditions that may cause poor indoor air quality. The condition of walls, floor, ceilings, etc. were examined for mold growth and any potential problems that could initiate mold growth were noted.

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Air samples were logged, labeled and shipped overnight to EMSL Analytical, Inc.,an American Industrial Hygiene Association (AIHA) accredited microbiology laboratory, for analysis by microscopic examination.

AIR CONTAMINANT STANDARDS AND GUIDELINES

In parts per million (ppm)

MEASURED PARAMETER	OSHA PEL Occupational Safety and Health- Permissible Exposure Limits	Governmen Hygienists	H TLV onference of tal Industrial - Threshold Values	National I	nstitute for Occi	SH REL upational Safety and Exposure Limits	ASHRAE American Society of Heating, Refrigerating and Air-Conditioning Engineers	
	TWA (8) Total Weighted Average	TWA (8) Total Weighted Average	STEL Short Term Exposure Limits	TWA (8) Total Weighted Average	STEL Short Term Exposure Limits	C Ceiling Recommended Exposure Limits	IDLH Immediately Dangerous to Life and Health	RECOMMENDATIONS
Carbon Monoxide	50	25	-	35	-	200	1,200	Maximum allowable concentration for indoor living spaces is 9 ppm
Carbon Dioxide	5,000	5,000	30,000	5,000	30,000	<u>-</u>	40,000	< 700 ppm above outdoor level indicates adequate ventilation
Temperature								68 °F - 75 °F (winter) 73 °F - 79 °F (summer)
Relative Humidity								30% – 60%

DATA TABLE I
Temperature, Relative Humidity, Carbon Dioxide and Carbon Monoxide Readings

	Tomporation, transfer and trans									
Test No.	Floor	Location	Test Time	Temperature (°F)	Relative Humidity (%)	Carbon Dioxide (PPM)	Carbon Monoxide (PPM)	Comments		
1	0	Front Door (Baseline)	7:05	37	44	645	7	Air sample # 5603613		
2	1	Auditorium	7:11	65	38	661	7	Air sample # 56033562		
3	1	Room B2	7:17	68	35	681	7	Air sample # 5603517		
4	2	Library	7:23	68	36	733	7	Air sample # 5603604		
5	3	Hallway C9	7:32	70	33	1249	7	Air sample # 5603546		
	1									
.										
			 							

3.0 DISCUSSION AND CONCLUSIONS

Molds are part of the natural environment and are simple, microscopic organisms whose purpose is to break down dead materials. Molds can be found on plants, dry leaves, and about every other organic material. Mold spores are lightweight and are spread by air currents. If spores land on a suitable surface, they will begin to grow. In order to thrive, mold requires four things to grow: water, organic materials, oxygen, and a temperature between 40-90 degrees Fahrenheit.

To stop the growth of mold, find and stop the moisture source. Mold spores will not grow if moisture is not present.

1. Aspergillus Penicillium

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3. Basidiospores

a. Inhalation of basidiospores can have health effects ranging from pneumonia-like symptoms to cryptococcus meningitis if the infection isn't treated before it spreads to the brain. The list of environments in which this class of molds thrives is extensive. Sources range from old fruit to damp acrylic painted walls. Detection of Basidiospores at levels higher than 5,000 count per cubic meter are considered problematic.

4. Ascospores

a. This group contains potential opportunistic pathogens, toxin producers, and allergens depending on the genus and species. Ascospores do present a human health risk but few have been reported to cause disease.

All sample locations came back with very low numbers

These findings indicate that mold remediation is not needed.

Respectfully Submitted,

Russ Bigus, M.S., Biology Professor of Microbiology **Mold Air Sample Analysis Results**

OrderID: 182401440 EMBL ANALYTICAL, INC.

Microbiology Chain of Custody Form EMSL Order Number / Lab Use Only

182401440

EMBL Analytical, Inc. 5221 Militia Hill Rd

Plymouth Meeting, PA 19462

PHONE: (610) 828-3102

EMAIL: plymouthmeetinglab@emsl.co

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	Biling Co	Office					
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18704 Country: US		e, Zip: KINC	STON	PA 187	04 Country: US		
	Phone:	570-	283-0500				
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	Stete Samples PA Collected Sampled By Signature Wed: Blocide Used Inples: Noto: All res Ime (TAT) Press call sheet is MICROBIC MO12 Pseudomonas as M015 Heterotrophic Plat M017 Total Coliform 8. is M018 Total Coliform 8. is M019 Fecal Streptococi M029 Enterococci (MF M129 Enterococci (Ent M120 Enterococci	Secondary Company	State Samples Collected: Samples Samples Samples Collected: Collected: Samples Collected: Collected:	Campany Name: Environmental Absolution Envir	Secretary Secretary Secretary State Secretary Secretary State Secretary Secretary		



EMSL Analytical, Inc.

5221 Militia Hill Road Plymouth Meeting, PA 19462

Tel/Fax: (610) 828-3102 / (610) 828-3122

http://www.EMSL.com / plymouthmeetinglab@emsl.com

Attention: Christopher Tsioles

Environmental Abatement Associates, Inc.

239 Schuyler avenue suite 125B

KINGSTON, PA 18704

EMSL Order: 182401440 Customer ID: ENVA55

Customer PO: Project ID:

Phone: (570) 283-0500

Fax: (570) 283-0577 Collected Date: 04/04/2024

Received Date: 04/05/2024 Analyzed Date: 04/09/2024

Project: 24-12.3 LEE PARK ELEMENTARY

Test Report: Allergenco-D(™) Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number: Client Sample ID: Volume (L): Sample Location:		5603613 1500 DOOR (BASE	5603613 5603562 56035 1500 1500 150						03517 500 DM B-2	
Spore Types	Raw Count†	Count/m³	% of Total	Raw Count†	Count/m³	% of Total	Raw Count†	Count/m³	% of Total	
Alternaria (Ulocladium)								•		
Ascospores	23	49	13	4	8	14.3	-	-		
Aspergillus/Penicillium++			la visita in the	3	6	10.7				
Basidiospores	107(155)	327	87	20	42	75	-			
Bipolaris++							•			
Chaetomium++		-			-		-	•		
Cladosporium							• • • • •	•	***	
Curvularia					-	- 7	-	-		
Epicoccum			1 4 7 7 1 1 5 1					•		
Fusarium++		Company of the last of the las	A RESIDENCE PROPERTY.		-		-	-	-	
Ganoderma			wind the				-		•	
DEACHAL MARKET CONTROL OF THE CONTRO					-				-	
Myxomycetes++		-						•		
Pithomyces++					-	-	-	-		
Rust		Secure de la constitución de la		ATTENDED TO						
Scopulariopsis/Microascus		•			_	-	-			
Stachybotrys/Memnoniella		NAME OF TAXABLE PARTY.				SHIP TO SHIP				
Unidentifiable Spores							-	-	-	
Zygomycetes	-		400	27	56	100		No Trace		
Total Fungi	178	376	100	21	30	100	-		-	
Hyphal Fragment	•	•		Name and Parks						
Insect Fragment	•					M RESIDENCE	N. P. Sandania	_		
Pollen	-	-	-	The second second	-	TO SECRET LINES SEE		2		
Analyt. Sensitivity 600x		2		•	2			<1*	-	
Analyt. Sensitivity 300x		<1*	-	-	<1*	-				
Skin Fragments (1-4)		1			2	-				
Fibrous Particulate (1-4)		1	-		1					
Background (1-5)		1	•	•	1		•	•	NAME OF TAXABLE PARTY.	

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.

† Due to method stopping rules, extrapolated raw counts are reported in parenthesis.

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

Muni Cam

Kevin Ream, Laboratory Manager or other Approved Signatory

EMSL Analytical, Inc. maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL Analytical, Inc. EMSL Analytical, Inc. bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples are received, Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. Skin Fragment and Fibrous Particulate ratings are based on the percent of non-fungal material they represent: 1 (1-25%), 2 (26-50%), 3 (51-75%), a (76-100%). Background ratings are based on the total area covered by non-fungal particles: 1 (1-25%), 2 (26-50%), 3 (51-75%), a (76-99%), o 75 (100%; overloaded). 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 quantification. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection 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 >= 100 are extrapolated based on the percentage analyzed.

Samples analyzed by EMSL Analytical, Inc. Plymouth Meeting, PA AIHA LAP, LLC-EMLAP Accredited #178659

Initial report from: 04/09/2024 01:10 PM



EMSL Analytical, Inc.

5221 Militia Hill Road Plymouth Meeting, PA 19462 Tel/Fax: (610) 828-3102 / (610) 828-3122 http://www.EMSL.com / plymouthmeetinglab@emsl.com EMSL Order: 182401440 Customer ID: ENVA55

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Lab Sample Number: Client Sample ID: Volume (L): Sample Location:	1	82401440-0004 5603604 1500 LIBRARY			182401440-0005 5603546 1500 HALLWAY C9			
Spore Types	Raw Count†	Count/m³	% of Total	Raw Count†	Count/m³	% of Total		
Alternaria (Ulocladium)					•			
Ascospores		-		1	2	8		
Aspergillus/Penicillium++								
Basidiospores	1	2	100	11	23	92		
Bipolaris++				•				
Chaetomium++		-	-	-	-			
Cladosporium								
Curvularia		-	-	-	-	-		
Epicoccum								
Fusarium++		-	-	-	-	-		
Ganoderma					•	-		
Myxomycetes++			-			-		
Pithomyces++			•	•				
Rust				-	-	-		
Scopulariopsis/Microascus	15 CO. 15 CO. 15 CO.	1			•			
Stachybotrys/Memnoniella			-	-	-	-		
Unidentifiable Spores						•		
Zygomycetes			(±)	-	-	-		
Total Fungi	1	2	100	12	25	100		
Hyphal Fragment		-	-	-	-	-		
Insect Fragment	and the second							
Pollen		-		2 2	-	-		
Analyt. Sensitivity 600x		2			2			
Analyt. Sensitivity 300x		<1*	-	-	<1*	-		
Skin Fragments (1-4)		1		-	2			
Fibrous Particulate (1-4)		1		-	1	-		
Background (1-5)	made a service	1			1			

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

Muni Run

Kevin Ream, Laboratory Manager or other Approved Signatory

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Initial report from: 04/09/2024 01:10 PM

⁺⁺ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.

[†] Due to method stopping rules, extrapolated raw counts are reported in parenthesis.

Accreditations



AIHA Laboratory Accreditation Programs, LLC

acknowledges that

EMSL Analytical, Inc. 5221 Militia Rd., Plymouth Meeting, PA 19462 Laboratory ID: LAP-178659

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 17025:2017 international standard, General Requirements for the Competence of Testing and Calibration Laboratories in the following:

LABORATORY ACCREDITATION PROGRAMS

\square	INDUSTRIAL HYGIENE	Accreditation Expires: September 01, 202.
	ENVIRONMENTAL LEAD	Accreditation Expires:
	ENVIRONMENTAL MICROBIOLOGY	Accreditation Expires: September 01, 202
	FOOD	Accreditation Expires:
$\overline{\Box}$	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 17025:2017 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.

Chervl O Morton

Managing Director, AIHA Laboratory Accreditation Programs, LLC

Cheryl O. Martan

Revision19.1: 07/28/2021 Date Issued: 08/31/2021



AIHA Laboratory Accreditation Programs, LLC SCOPE OF ACCREDITATION

EMSL Analytical, Inc.

5221 Militia Rd., Plymouth Meeting, PA 19462

Laboratory ID: LAP-178659

Issue Date: 08/31/2021

The laboratory is approved for those specific field(s) of testing/methods listed in the table below. Clients are urged to verify the laboratory's current accreditation status for the particular field(s) of testing/Methods, since these can change due to proficiency status, suspension and/or withdrawal of accreditation.

Environmental Microbiology Laboratory Accreditation Program (EMLAP)

Initial Accreditation Date: 09/01/2019

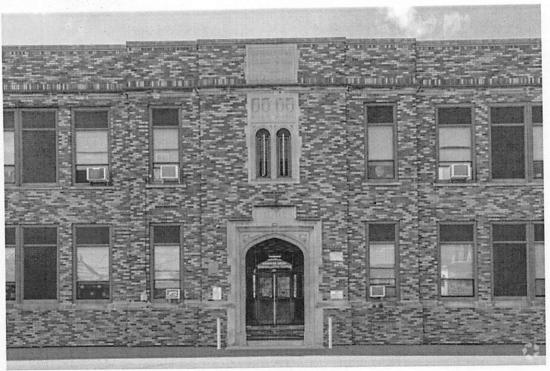
EMLAP Scope Category	Field of Testing (FOT)	Component, parameter or characteristic tested	Method	Method Description (for internal methods only)
Fungal	Air - Direct Examination	Spore Trap	MICRO-SOP-201	Standard Operating Procedure for the Analysis of Airborne Fungal Spores, Hyphal Fragments, Pollen, Insect Fragments, Skin Fragments and Fibrous Particulate by Optical Microscopy of Spore Trap Samples
Fungal	Bulk - Direct Examination	Bulks (liquid or solid)	MICRO-SOP-200	Standard Operating Procedure for the Microscopic Examination of Fungal Spores, Fungal Structures, Hyphae, Pollen, Insect Fragments, and Fibrous Particulate from Surface Samples
Fungal	Surface - Direct Examination	Swab or Tape Lift	MICRO-SOP-200	Standard Operating Procedure for the Microscopic Examination of Fungal Spores, Fungal Structures, Hyphae, Pollen, Insect Fragments, and Fibrous Particulate from Surface Samples

A complete listing of currently accredited EMLAP laboratories is available on the AIHA LAP, LLC website at: http://www.aihaaccreditedlabs.org

Effective: 07/29/2021 Revision: 7.1 Page 1 of 1

Indoor Air Quality (IAQ) - Mold Report

Hanover Green Elementary School 561 Main Rd. Hanover, PA, 18706



ENVIRONMENTAL ABATEMENT ASSOCIATES, INC.
April 10th, 2024

CONTENTS

Indoor Air Quality Inspection / Testing Report

Hanover Green Elementary School 651 Main Rd. Hanover, PA, 18706

Page		
1	INTRODUCTION AND BACKGROUND	1.00
	EVALUATION STRATEGY	
5-6	DISCUSSION AND CONCLUSIONS	3.00

APPENDIX

MOLD AIR SAMPLE ANALYSIS RESULTS ACCREDITATIONS

[&]quot;This document was prepared and created by Environmental Abatement Associates, Inc. and contains confidential, proprietary and/or privileged information that is legally protected. The document is intended for the sole use of the addressee indicated above. You are hereby notified that any use of the contents of this document or any action to inform another of its contents is strictly prohibited without first securing the written consent of Environmental Abatement Associates, Inc."

INDOOR AIR QUALITY INSPECTION / TESTING REPORT

Prepared for:

Brandon Holgren

For the properties known as: 651 Main Rd Hanover, PA, 18706

Inspection / Testing report prepared by Quality This Indoor Air Environmental Abatement Associates, Inc. is based on information supplied by the client and on conditions readily observable or measurable on the date of this study. Any inspection and/or testing conducted by Environmental Abatement Associates, Inc. is not meant to determine whether a building is safe or unsafe for occupants in regards to indoor air quality. Interior building conditions vary constantly, therefore the findings and results presented in this report should be considered relative to and representative of the conditions that existed at the time of the inspection and testing. The results and recommendations presented herein should not be relied upon exclusively for the prevention of all possible illnesses, injuries or losses. These services are a supplement to, and not a substitute for, the client's responsibility for protecting the health and safety of employees, students, residents and others Environmental and for complying with applicable laws and regulations. Abatement Associates, Inc. warrants that its work is performed in a competent and professional manner. No other warranties are expressed or implied.

1.0 INTRODUCTION AND BACKGROUND

Personnel of ENVIRONMENTAL ABATEMENT ASSOCIATES, INC. (EAA) were on site Thursday, March 28th 2024 at 651 Main Rd., Hanover, Pennsylvania to conduct an Indoor Air Quality (IAQ) inspection and testing. The inspection and testing was conducted at the request of Brandon Holgren

2.0 EVALUATION STRATEGY

The general strategy employed in this evaluation was to:

- 1. CONDUCT A VISUAL INSPECTION IN DESIGNATED AREAS.
- 2. CONDUCT MOLD AIR SAMPLING IN DESIGNATED AREAS.
- 3. PROVIDE A REPORT OF FINDINGS AND RECOMMENDATIONS.

A visual inspection was conducted in designated areas. The inspection was not intended to be an intensive and detailed inspection, but rather an overview of the conditions that may cause poor indoor air quality. The condition of walls, floor, ceilings, etc. were examined for mold growth and any potential problems that could initiate mold growth were noted.

collected on were air the samples mold of four (4) total Α sampling Allergenco-D using buildings interior of by Environmental Monitoring Systems and cassettes manufactured air sample was pump. One (1) sampling volume air hiah in order to establish a background to collected outside the back door indoor air results of the the when interpreting be used sample was manufacturer recommendations, each air samples. collected at a flow rate of fifteen (15) liters of air per minute (L/M) for a period of five (5) minutes.

Air samples were logged, labeled and shipped overnight to EMSL Analytical, Inc.,an American Industrial Hygiene Association (AIHA) accredited microbiology laboratory, for analysis by microscopic examination.

AIR CONTAMINANT STANDARDS AND GUIDELINES

In parts per million (ppm)

MEASURED	OSHA PEL Occupational Safety and Health- Permissible Exposure Limits	American C Governmen Hygienists	H TLV onference of tal Industrial - Threshold Values	National I	nstitute for Occ	SH REL upational Safety ar d Exposure Limits	ASHRAE American Society of Heating, Refrigerating and Air-Conditioning Engineers	
PARAMETER	TWA (8) Total Weighted Average	TWA (8) Total Weighted Average	STEL Short Term Exposure Limits	TWA (8) Total Weighted Average	STEL Short Term Exposure Limits	C Ceiling Recommended Exposure Limits	IDLH Immediately Dangerous to Life and Health	RECOMMENDATIONS
Carbon Monoxide	50	25	-	35	-	200	1,200	Maximum allowable concentration for indoor living spaces is 9 ppm
Carbon Dioxide	5,000	5,000	30,000	5,000	30,000	<u>-</u>	40,000	< 700 ppm above outdoor level indicates adequate ventilation
Temperature								68 °F - 75 °F (winter) 73 °F - 79 °F (summer)
Relative Humidity								30% – 60%

DATA TABLE I
Temperature, Relative Humidity, Carbon Dioxide and Carbon Monoxide Readings

Test No.	Floor	Location	Test Time	Temperature (°F)	Relative Humidity (%)	Carbon Dioxide (PPM)	Carbon Monoxide (PPM)	Comments
1	0	Front Door (Baseline)	9:04	43	34	980	7	Air sample # 5603810
2	1	Cafeteria	9:14	69	33	638	7	Air sample # 5603543
3	B1	Basement	9:22	71	35	664	7	Air sample # 5603702
4	2	Room B14	9:31	70	34	626	7	Air sample # 5603463
5	1	Room A1	9:39	70	34	702	7	Air sample # 5603611
,								
<u>.</u>								
			-					

3.0 DISCUSSION AND CONCLUSIONS

Molds are part of the natural environment and are simple, microscopic organisms whose purpose is to break down dead materials. Molds can be found on plants, dry leaves, and about every other organic material. Mold spores are lightweight and are spread by air currents. If spores land on a suitable surface, they will begin to grow. In order to thrive, mold requires four things to grow: water, organic materials, oxygen, and a temperature between 40-90 degrees Fahrenheit.

To stop the growth of mold, find and stop the moisture source. Mold spores will not grow if moisture is not present.

1. Aspergillus Penicillium

a. Aspergillus species are filamentous fungi that are commonly found in soil, decaying, vegetation, seeds and grains where they thrive as saprophytes. Aspergillus species can occasionally be harmful to humans. In humans, Aspergillus fumigatus is the most common and life-threatening airborne opportunistic fungal pathogen, which is particularly important among immunocompromised hosts. Inhaling Aspergillus fumigatus spores(condia) into the lungs may cause multiple diseases, which depend on theimmunological status of the host in humans. These diseases include invasive pulmonaryaspergillosis, aspergilloma, and different forms of hypersensitivity, pneumonitis, and allergic bronchopulmonary aspergillosis (ABPA).

2. Cladosporium

a. Most kinds of Cladosporium are not dangerous to humans, but sometimes they may lead to allergies, or they may worsen asthma. In worse cases, Cladosporium may lead to infections. In most cases if you open some windows or install a heat recovery ventilator (HRV). These measures will help stop new mold from forming, but will not kill active Cladosporium spores already there. For that you will need a nontoxic registered fungicide such as Concrobium.

3. Basidiospores

a. Inhalation of basidiospores can have health effects ranging from pneumonia-like symptoms to cryptococcus meningitis if the infection isn't treated before it spreads to the brain. The list of environments in which this class of molds thrives is extensive. Sources range from old fruit to damp acrylic painted walls. Detection of Basidiospores at levels higher than 5,000 count per cubic meter are considered problematic.

4. Ascospores

a. This group contains potential opportunistic pathogens, toxin producers, and allergens depending on the genus and species. Ascospores do present a human health risk but few have been reported to cause disease.

All sample locations came back with very low numbers

These findings indicate that mold remediation is not needed.

Respectfully Submitted,

Russ Bigus, M.S., Biology Professor of Microbiology



OrderID: 182401340 EMSL ANALYTICAL INC.

Microbiology Chain of Custody Form EMSL Order Number / Lab Use Only

EMOL Analytical, Inc. 5221 Militia Hill Rd

182401340

Plymouth Meeting, PA 19462

PHONE: (610) 828-3102 EMAIL: plymouthmeetinglab@emsl.co

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f appi rovidi	iceble, EMSL will I)		Collected:		Coller		17	331		Commen	cial (Taxable	_	lo. of San	ential (Non-taxable)	
Sam	Christopher Tsioles Sampled By Signature:												n Shipmer		
	Sterile,	Sodium Thiosulfate Preserved Bottle L		Blocide Usa	ed in Sou	ice	(specify)			014/4	Clato				
		Public Water Supply SamTurn-Around-Tig		tote: All n	esults m	ay a	utomatic: ander times	ally be reported ound times 6 Hours or	Less.	Or it required to 12 Hour TAT available	of select lesis	only: sam	ples must b	e submitted by 19-30am.	
	3 Hour	6 Hour 24 Hour	32. Hon		48 Hou			72 Hour		96 Hour		1 Weel		2 Wask	
_		<u> </u>					T CODE	s							
MOC	1 Arr-O-Cell	M174 MoldSnap	M012 Pso							M115 Sewage S M116 Sewage S					
	0 Micro 5	M032 Allergenco-D		<i>udomonas (</i> Protrophic P			ur i - j			M117 Sewage S					
	i1 Fungal Direct Exami i9 Pollen ID & Enumera	•	I	M015 Heterotrophic Plate Cot M017 Total Coliform & E. Cal				nt P/A***) M013 Sewage Screen - Sv					rab (MFT°)		
		Characterization Level-1 M018 Total Coliform & E. Co								M730 Methicillin M031 Rapid-gro					
	1 Dust Characterization					Entw	neration (Collen MPN**)		Enumeration	Ming non-11	D MYSI	Juavioria	Delection o	
	_	ples (Genus ID & Count) ples (Includes <i>Penicillum, Aspergillus,</i>	1	al Coliform al Streptoco	•	FT°)				M014 Endotoxir	n Analysis				
Cl3	dosporium, Stachyboln	s Species ID & Count)	1	erococci (M						MD44 Group All		Dog. C	Cockroac	h, Dust Mile)	
		faco Samples (Genus ID & Count)	1	arococci (E							t Code				
M0 As	08 Culturable Fungi-Sui ie <i>rgillus, Cladosporium</i> ,	face Samples (Includes Penicilium, Stachybotrys Species ID & Count)		il Time qPC vage Screei						Legionella Ana					
l	ng Bacteria Culture Gra			mbrane Fil											
	10 Becteria Count & ID		1 1	Most Proba		er									
MO	11 Bacteria Count & ID	- 5 Most Prominent	***P/A = F	resence/Al	Potable	.,	Non		_						
	Sample#	Sample Location/Description	(Ma	e Type trix)	Potabl V	e (C Vate	only for er)	Test Code	$oldsymbol{ol}}}}}}}}}}}}}$	olume/Area	Date / Tim	ne Col	lected	Temperature (Lab Use Only)	
	Example: -Sample 1	Kitchen	w.w	eter	r gr P	otat		M017			1/1/202		- +		
5	603810	Front Door	Air	\				M001	11,	,500 ml	3/28/24	9:04	AM		
5	603543	Cafeteria	Air					M001	1,	<u>,500 ml</u>	3/28/24	9:14	AM		
5	603702	Basement	_Air_					M001	+-	,500 ml					
5	283463	Room B14	Air					M001	1	,500 ml	3/28/24	9:31	AM	- A# 14	
5	603611	Room A1	Air					M001	1	<u>,500 mi</u>	3/28/24	9:39	AM (-	
r		Special Instructions and/or	Regulatory Ro	oquirements	(Sample	Spe	eclication	s, Processing Me	ethod	s, Limits of Deter			1 C		
Mr	thod of Shipment.						Sampl	e Condition Upor	Rec	eipt:	EMSL	. Fe	ul E	<u> </u>	
L		-tbT-!-1	Date/Tim	18:0 100	10.4	_	_	red by:	•	The -	<u> </u>	Date	Time.	29/2-1	
_		stopher Tsioles	Date/Tim	18:3/28/	124			red by:	1_4			Date/	O/7	7/6-1 7000	
L	elinquished by:	Alera R13 03/02/2021								-1	Austral : d:			30PM	
-	controlled Document - COC-34 Micro R13 03/02/2021 AGREE TO ELECTRONIC SI					NAT	URE (8y d	hecking, I consent	to sig	ning this Chain of	Custody doca	umant b	iy electroi	iic signature.)	



EMSL Analytical, Inc.

5221 Militia Hill Road Plymouth Meeting, PA 19462

Tel/Fax: (610) 828-3102 / (610) 828-3122

http://www.EMSL.com / plymouthmeetinglab@emsl.com

Attention: Christopher Tsioles

Environmental Abatement Associates, Inc.

239 Schuyler avenue suite 125B

KINGSTON, PA 18704

EMSL Order: 182401340 Customer ID: ENVA55

Customer PO: Project ID:

Phone: (570) 283-0500

Fax: (570) 283-0577

Collected Date: 03/28/2024 Received Date: 03/29/2024

Analyzed Date: 04/02/2024

Project: 24-12.2 HANOVER GREENVILLE ELEMENTARY

Test Report: Allergenco-D(™) Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number: Client Sample ID: Volume (L): Sample Location:	182401340-0001 5603810 1500 FRONT DOOR			82401340-0002 5603543 1500 CAFETERIA		182401340-0003 5603702 1500 BASEMENT			
Spore Types	Raw Count†	Count/m³	% of Total	Raw Count†	Count/m³	% of Total	Raw Count†	Count/m³	% of Total
Alternaria (Ulocladium)						A - # (5) 1 -	• 200		
Ascospores	1	2	0.6		-	-	-		a some men and a second
Aspergillus/Penicillium++					•		•		400
Basidiospores	106(146)	319	99.4	6	10	100	11	24	100
Bipolaris++								•	•
Chaetomium++					-	E.	-	-	-
Cladosporium							-		
Curvularia		-		-		-	-	-	-
Epicoccum					HISTORY OF THE				
Fusarium++			-		-		-		-
Ganoderma		Total Control			Hotels - Stand				
				-			-		-
Myxomycetes++		Name of the last o							
Pithomyces++		in the second		-		¥	-		-
Rust		Assert Committee	e unique el nimi	grante galego.					
Scopulariopsis/Microascus					Landa problem beautiful		-	-	-
Stachybotrys/Memnoniella		Annual Services		CONTRACTOR OF THE PARTY OF THE					
Unidentifiable Spores	Phane Cons						-	2	
Zygomycetes	-	-	400	6	10	100	11	24	100
Total Fungi	147	321	100				-		-
Hyphal Fragment	•			and the second					-
Insect Fragment						-	-		
Pollen	5	3*			2			2	
Analyt. Sensitivity 600x		2			<1*		-	<1*	
Analyt. Sensitivity 300x	-	<1*	a a maria de la composición dela composición de la composición de la composición de la composición dela composición dela composición dela composición de la composición dela composición de la composición dela composición dela composición dela composición dela composición dela composición dela composi	and the second	2	a mereka	100000000000000000000000000000000000000	1	
Skin Fragments (1-4)		1			1		_	1	-
Fibrous Particulate (1-4)	a factor	1		A PERSONAL PROPERTY.	1			2	
Background (1-5)		1	•					-	

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.

† Due to method stopping rules, extrapolated raw counts are reported in parenthesis.

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

Muni Cum

Kevin Ream, Laboratory Manager or other Approved Signatory

EMSL Analytical, Inc. maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL Analytical, Inc. EMSL Analytical, Inc. bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received, Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody, Samples are within quality control criteria and met method specifications unless otherwise noted. Skin Fragment and Fibrous Particulate ratings are based on the percent of non-fungal material they represent: 1 (1-25%), 2 (26-50%), 3 (51-75%), or 4 (76-100%). Background ratings are based on the total area covered by non-fungal particles: 1 (1-25%), 2 (26-50%), 3 (51-75%), or 5 (100%; overloaded). 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 quantification. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection 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 >= 100 are extrapolated based on the percentage analyzed.

Samples analyzed by EMSL Analytical, Inc. Plymouth Meeting, PA AIHA LAP, LLC-EMLAP Accredited #178659

Initial report from: 04/02/2024 10:12 AM



EMSL Analytical, Inc.

5221 Militia Hill Road Plymouth Meeting, PA 19462 Tel/Fax: (610) 828-3102 / (610) 828-3122

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Attention: Christopher Tsioles

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EMSL Order: 182401340 Customer ID: ENVA55

Customer PO: Project ID:

Phone: (570) 283-0500

Fax: (570) 283-0577

Collected Date: 03/28/2024 Received Date: 03/29/2024 Analyzed Date: 04/02/2024

Project: 24-12.2 HANOVER GREENVILLE ELEMENTARY

Test Report: Allergenco-D(™) Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number: Client Sample ID: Volume (L): Sample Location:	1	82401340-0004 5283463 1500 ROOM B14		11	82401340-0005 5603611 1500 ROOM A1			
Spore Types	Raw Count†	Count/m³	% of Total	Raw Count†	Count/m³	% of Total	-	
Alternaria (Ulocladium)						•		
Ascospores		-		-	-			
Aspergillus/Penicillium++		Harris Harris		•				
Basidiospores	7	20	100	11	24	100		
Bipolaris++				•	-	•		
Chaetomium++			-	-	7			
Cladosporium					•	•		
Curvularia		-		-	-			
Epicoccum				- 10		-		
Fusarium++		-	-	-	-	-		
Ganoderma								
Myxomycetes++		-	-	-	-	-		
Pithomyces++								
Rust	_	-	-	-	-	-		
Scopulariopsis/Microascus	nagrama je ozgra							
Stachybotrys/Memnoniella			-	-	-	-		
Unidentifiable Spores				Barb. Hall				
Zygomycetes			-	-	-	-		
Zygornycetes Total Fungi	7	20	100	11	24	100		
Hyphal Fragment	BILLIAN CONTRACTOR	-		-	-	-		
Insect Fragment	and a second	(Assert Section						
Pollen			-			-		
Analyt, Sensitivity 600x	*	2			2			
		<1*	· ·		<1*	-		
Analyt. Sensitivity 300x	NUTSHINGS NOW	2			2	A SELECTION OF THE SELE		
Skin Fragments (1-4) Fibrous Particulate (1-4)		1			1	-		
Background (1-5)	termination of the contract	1			1			

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.

† Due to method stopping rules, extrapolated raw counts are reported in parenthesis.

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

Muni Eur

Kevin Ream, Laboratory Manager or other Approved Signatory

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Samples analyzed by EMSL Analytical, Inc. Plymouth Meeting, PA AIHA LAP, LLC-EMLAP Accredited #178659

Initial report from: 04/02/2024 10:12 AM

Accreditations



AIHA Laboratory Accreditation Programs, LLC

acknowledges that

EMSL Analytical, Inc. 5221 Militia Rd., Plymouth Meeting, PA 19462

Laboratory ID: LAP-178659

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 17025:2017 international standard, General Requirements for the Competence of Testing and Calibration Laboratories in the following:

LABORATORY ACCREDITATION PROGRAMS

INDUSTRIAL HYGIENE	Accreditation Expires: September 01, 2023
ENVIRONMENTAL LEAD	Accreditation Expires:
ENVIRONMENTAL MICROBIOLOGY	Accreditation Expires: September 01, 2023
FOOD	Accreditation Expires:
UNIQUE SCOPES	Accreditation Expires:
	ENVIRONMENTAL LEAD ENVIRONMENTAL MICROBIOLOGY FOOD

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 17025:2017 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.

Cheryl O Morton

Managing Director, AIHA Laboratory Accreditation Programs, LLC

Cheryl O. Charton

Revision19.1: 07/28/2021

Date Issued: 08/31/2021



AIHA Laboratory Accreditation Programs, LLC SCOPE OF ACCREDITATION

EMSL Analytical, Inc.

5221 Militia Rd., Plymouth Meeting, PA 19462

Laboratory ID: LAP-178659

Issue Date: 08/31/2021

The laboratory is approved for those specific field(s) of testing/methods listed in the table below. Clients are urged to verify the laboratory's current accreditation status for the particular field(s) of testing/Methods, since these can change due to proficiency status, suspension and/or withdrawal of accreditation.

Environmental Microbiology Laboratory Accreditation Program (EMLAP)

Initial Accreditation Date: 09/01/2019

EMLAP Scope Category	Field of Testing (FOT)	Component, parameter or characteristic tested	Method	Method Description (for internal methods only)
Fungal	Air - Direct Examination	Spore Trap	MICRO-SOP-201	Standard Operating Procedure for the Analysis of Airborne Fungal Spores, Hyphal Fragments, Pollen, Insect Fragments, Skin Fragments and Fibrous Particulate by Optical Microscopy of Spore Trap Samples
Fungal	Bulk - Direct Examination	Bulks (liquid or solid)	MICRO-SOP-200	Standard Operating Procedure for the Microscopic Examination of Fungal Spores, Fungal Structures, Hyphae, Pollen, Insect Fragments, and Fibrous Particulate from Surface Samples
Fungal	Surface - Direct Examination	Swab or Tape Lift	MICRO-SOP-200	Standard Operating Procedure for the Microscopic Examination of Fungal Spores, Fungal Structures, Hyphae, Pollen, Insect Fragments, and Fibrous Particulate from Surface Samples

A complete listing of currently accredited EMLAP laboratories is available on the AIHA LAP, LLC website at: http://www.aihaaccreditedlabs.org

Effective: 07/29/2021 Revision: 7.1

Page 1 of 1

Indoor Air Quality (IAQ) - Mold Report

Hanover Lyndwood Elementary School 2 Colley St. Hanover, PA, 18706



ENVIRONMENTAL ABATEMENT ASSOCIATES, INC.

April 10th, 2024

CONTENTS

Indoor Air Quality Inspection / Testing Report

Hanover Lyndwood Elementary School 2 Colley St. Hanover, PA, 18706

		Page
1.00	INTRODUCTION AND BACKGROUND	1
	EVALUATION STRATEGY	
3.00	DISCUSSION AND CONCLUSIONS	5-6

APPENDIX

MOLD AIR SAMPLE ANALYSIS RESULTS ACCREDITATIONS

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INDOOR AIR QUALITY INSPECTION / TESTING REPORT

Prepared for:

Brandon Holgren

For the properties known as: 2 Colley St. Hanover, PA, 18706

Testing report prepared Inspection / Quality This Indoor Air Environmental Abatement Associates, Inc. is based on information supplied by the client and on conditions readily observable or measurable on the date of this study. Any inspection and/or testing conducted by Environmental Abatement Associates, Inc. is not meant to determine whether a building is safe or unsafe for occupants in regards to indoor air quality. Interior building conditions vary constantly, therefore the findings and results presented in this report should be considered relative to and representative of the conditions that existed at the time of the inspection and testing. The results and recommendations presented herein should not be relied upon exclusively for the prevention of all possible illnesses, injuries or losses. These services are a supplement to, and not a substitute for, the client's responsibility for protecting the health and safety of employees, students, residents and others and for complying with applicable laws and regulations. Environmental Abatement Associates, Inc. warrants that its work is performed in a competent and professional manner. No other warranties are expressed or implied.

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1.0 INTRODUCTION AND BACKGROUND

Personnel of ENVIRONMENTAL ABATEMENT ASSOCIATES, INC. (EAA) were on site Thursday, March 28th 2024 at 2 Colley St., Hanover, Pennsylvania to conduct an Indoor Air Quality (IAQ) inspection and testing. The inspection and testing was conducted at the request of Brandon Holgren

2.0 EVALUATION STRATEGY

The general strategy employed in this evaluation was to:

- 1. CONDUCT A VISUAL INSPECTION IN DESIGNATED AREAS.
- 2. CONDUCT MOLD AIR SAMPLING IN DESIGNATED AREAS.
- 3. PROVIDE A REPORT OF FINDINGS AND RECOMMENDATIONS.

A visual inspection was conducted in designated areas. The inspection was not intended to be an intensive and detailed inspection, but rather an overview of the conditions that may cause poor indoor air quality. The condition of walls, floor, ceilings, etc. were examined for mold growth and any potential problems that could initiate mold growth were noted.

collected on air the samples were four (4) mold total of Α Allergenco-D sampling using buildings interior of by Environmental Monitoring and **Systems** cassettes manufactured air sample was (1) pump. One volume air sampling high establish a background to in order to outside the back door collected air the indoor the results of when interpreting be used air sample manufacturer recommendations, each collected at a flow rate of fifteen (15) liters of air per minute (L/M) for a period of five (5) minutes.

Air samples were logged, labeled and shipped overnight to EMSL Analytical, Inc.,an American Industrial Hygiene Association (AIHA) accredited microbiology laboratory, for analysis by microscopic examination.

AIR CONTAMINANT STANDARDS AND GUIDELINES

In parts per million (ppm)

MEASURED PARAMETER	OSHA PEL Occupational Safety and Health- Permissible Exposure Limits	American C Governmen Hygienists	H TLV onference of tal Industrial - Threshold Values	National I	nstitute for Occi	SH REL upational Safety ar d Exposure Limits	ASHRAE American Society of Heating, Refrigerating and Air-Conditioning Engineers	
	TWA (8) Total Weighted Average	TWA (8) Total Weighted Average	STEL Short Term Exposure Limits	TWA (8) Total Weighted Average	STEL Short Term Exposure Limits	C Ceiling Recommended Exposure Limits	IDLH Immediately Dangerous to Life and Health	RECOMMENDATIONS
Carbon Monoxide	50	25	-	35	-	200	1,200	Maximum allowable concentration for indoor living spaces is 9 ppm
Carbon Dioxide	5,000	5,000	30,000	5,000	30,000	-	40,000	< 700 ppm above outdoor level indicates adequate ventilation
Temperature								68 °F - 75 °F (winter) 73 °F - 79 °F (summer)
Relative Humidity								30% – 60%

DATA TABLE I
Temperature, Relative Humidity, Carbon Dioxide and Carbon Monoxide Readings

Test No.	Floor	Location	Test Time	Temperature (°F)	Relative Humidity (%)	Carbon Dioxide (PPM)	Carbon Monoxide (PPM)	Comments
1	0	Front Door (Baseline)	10:01	65	36	533	7	Air sample # 5603320
2	2	Girls Bathroom	10:18	73	35	1229	7	Air sample # 5603509
3	2	Hallway Room B8	10:27	72	35	601	7	Air sample # 5603329
4	1	Hallway Room A7	10:34	71	37	1032	7	Air sample # 5603706
5	1	Hallway Room A5	10:40	71	35	854	7	Air sample # 5603319
			†					
			-					

3.0 DISCUSSION AND CONCLUSIONS

Molds are part of the natural environment and are simple, microscopic organisms whose purpose is to break down dead materials. Molds can be found on plants, dry leaves, and about every other organic material. Mold spores are lightweight and are spread by air currents. If spores land on a suitable surface, they will begin to grow. In order to thrive, mold requires four things to grow: water, organic materials, oxygen, and a temperature between 40-90 degrees Fahrenheit.

To stop the growth of mold, find and stop the moisture source. Mold spores will not grow if moisture is not present.

1. Aspergillus Penicillium

a. Aspergillus species are filamentous fungi that are commonly found in soil, decaying, vegetation, seeds and grains where they thrive as saprophytes. Aspergillus species can occasionally be harmful to humans. In humans, Aspergillus fumigatus is the most common and life-threatening airborne opportunistic fungal pathogen, which is particularly important among immunocompromised hosts. Inhaling Aspergillus fumigatus spores(condia) into the lungs may cause multiple diseases, which depend on theimmunological status of the host in humans. These diseases include invasive pulmonaryaspergillosis, aspergilloma, and different forms of hypersensitivity, pneumonitis, andallergic bronchopulmonary aspergillosis (ABPA).

2. Cladosporium

a. Most kinds of Cladosporium are not dangerous to humans, but sometimes they may lead to allergies, or they may worsen asthma. In worse cases, Cladosporium may lead to infections. In most cases if you open some windows or install a heat recovery ventilator (HRV). These measures will help stop new mold from forming, but will not kill active Cladosporium spores already there. For that you will need a non-toxic registered fungicide such as Concrobium.

3. Basidiospores

a. Inhalation of basidiospores can have health effects ranging from pneumonia-like symptoms to cryptococcus meningitis if the infection isn't treated before it spreads to the brain. The list of environments in which this class of molds thrives is extensive. Sources range from old fruit to damp acrylic painted walls. Detection of Basidiospores at levels higher than 5,000 count per cubic meter are considered problematic.

4. Ascospores

a. This group contains potential opportunistic pathogens, toxin producers, and allergens depending on the genus and species. Ascospores do present a human health risk but few have been reported to cause disease.

All sample locations came back with very low numbers

These findings indicate that mold remediation is not needed.

Respectfully Submitted,

Russ Bigus, M.S., Biology Professor of Microbiology Mold Air Sample Analysis Results

OrderID: 182401344 EMSL ANALYTICAL, INC.

Microbiology Chain of Custody Form EMSL Order Number / Lab Use Only

182401344

EMSL Analytical, Inc. 5221 Militia Hill Rd

Plymouth Meeting, PA 19462

PHONE: (610) 828-3102

EMAIL: plymouthmeetinglab@emsl.co

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Customer Information	City, State, Zip: KIN	IGSTON PA	18704	Country: U		12	City, State,			STON	PA	18704 C		
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Project 24-12.4 Hanover Lynnwood Elementary Name/No:										must splect proje	ed location:			
MS	L LIMS Project ID: licable, EMSL will		State Samples	PA	Zip Co Samp	des	173	331			rcial (Taxa		ential (Non-taxable	
rovid	0}		Collected: Sampled By	Signature	Collec	ted::				<u> </u>		No. of Sa		
sam		stopher Tsioles		locide Use			(ennelfu)					in Sinhin	5 <u> </u>	
	Sterile, S	odium Thiosulfate Preserved Bottle Us Public Water Supply Samp	U	oto: All r	aguite m	AV #1	utomatica	lly bo rep	orted to	DOH if required	by State.			
_		Turn-Around-Time	(TAT) P	cose call chose	d (or large pr	ojects :	and/or turnero	und times 8 i	tours or Less	"32 Hour TAT eve:le	ole for select to	sts only; samples must	be submitted by 11-30am	
	3 Hour	6 Hour 24 Hour	32° Hour	ـــــــا	48 Hou		7 00056	72 Hou	<u></u>	88 Hour				
		M174 MaidSnap	M012 Pseu				T CODES			M115 Sewage	Screen - V	Vater (P/A***)		
	O1 Air-O-Cell BO Micro 5	M032 Allergenco-D	M024 Pseu									Vater (MPN**)		
	41 Fungal Direct Examina		M015 Heter	•						M117 Sewage Screen - Swab (P/A***)				
	69 Pollen ID & Enumerati		M017 Total)		M013 Sewage Screen - Swab (MFT*) M730 Methicilin-resistant Steph, aureus (MRSA)				
	80 Dust Characterization 81 Dust Characterization		M018 Total Colform & E. Colf (MFT*) M114 Total Colform & E. Colf Enumeration (Colfort MPN**)							M031 Rapid-growing non-TB Mycobacteria Detection &				
	91 Dust Characterization 95 Viable Fungi-Air Samp		M019 Fecal Coliform (MFT*)							Enumeration				
Mo	os Viable Funci-Air Samt	iles (Includes Penicilium, Aspergilius,	M020 Fecal Streptococcus (MFT*)						M014 Endotoxin Analysis M044 Group Allergen (Cat, Dog. Cockroach, Dust Mite)					
ı	dosporium, Stechybotrys	•	M029 Enterococci (MFT*) M129 Enterococci (Enterolent P/A***)						M095 Bacteroides					
M	DR Cultigrable Funci-Surfa	ace Samples (Genus ID & Count) ace Samples (Includes <i>Penicillum</i> ,		M180 Real Time qPCR-ERMI 36 Panel						Other - See Analytical Price Guide for Test Code				
As	pergillus, Cladosponum,	Stachybotrys Species ID & Count)	M025 Sewage Screen - Water (MFT*)						Legionella Analysis Please use EMSL Legionella COC					
	09 Bacteria Culture Gran		*MFT= Membrane Filtration Tecturique **MPN = Most Probable Number											
1	HO Becleria Count & ID - 111 Bacteria Count & ID -		1	***PIA = Presence/Absence										
٦	Sample #	Sample Location/Description		e Type trix)			nly for	Test C	ode	Volume/Area	Date / 1	rime Collected	Temperature (Lab Use Only)	
r	Example: Sample 1	Kilchen ·	Wa	ater	Р	otab	le	M01	7	1,000 ml	1/1/2	:021 3:30pm		
5	603320	Front Door	Air					M00		1,500 m	-			
5	603509	Girls Bathroom	Air	<u> </u>				M00		1,500 m				
⊩	603329	Hallway Rm B8	Air		ļ			M00		1,500 m	+			
-	283706	Hallway Rm A7	+	Air M0					1,500 m	 				
5	603319	Hallway Rm A5	Air M001				1	1,500 m	3/28/2	4 10:45 AM	ļ			
L		<u></u>			ــــــــــــــــــــــــــــــــــــــ	_				4-11-3-10-		,		
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	ethod of Shipment:						Sample	Conditio	Upon R	eceipt:	<u> </u>	MSL Fee	Ex.	
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	elinquished by:	topher Tsioles	Date/Time: 3/28/24				Receive	111	mi	177.0		Date/Time	2014	
L	ettriguished by:	co R13 03/02/2021	AGREE TO SE SCHOOLS SIGNATURE (By checking I content to signing this Charm of Custody document by electronic					TSO PUN						
·			I AGDES T	O EI BOTO	ONIC SIGI	ΝΔΤΙ	IRF (Ry chi	eckino lo	resent to s	enning this Chain (n Cardody d	socument by electr	voic sinnaturo 1	



EMSL Analytical, Inc.

5221 Militia Hill Road Plymouth Meeting, PA 19462

Tel/Fax: (610) 828-3102 / (610) 828-3122

http://www.EMSL.com / plymouthmeetinglab@emsl.com

Attention: Christopher Tsioles

Environmental Abatement Associates, Inc.

239 Schuyler avenue suite 125B

KINGSTON, PA 18704

EMSL Order: 182401344 Customer ID: ENVA55

Customer PO: Project ID:

Phone: (570) 283-0500

Fax: (570) 283-0577

Collected Date: 03/28/2024 **Received Date:** 03/29/2024

Analyzed Date: 04/02/2024

Project: 24-12.4 HANOVER LYNNWOOD ELEMENTARY

Test Report: Allergenco-D(™) Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number: Client Sample ID: Volume (L): Sample Location:		82401344-0001 5603320 1500 FRONT DOOR			82401344-0002 5603509 1500 RLS BATHROOI	м	1 H.		
Spore Types	Raw Count†	Count/m³	% of Total	Raw Count†	Count/m³	% of Total	Raw Count†	Count/m³	% of Total
Alternaria (Ulocladium)					•		-		-
Ascospores	11	24	8.3			-	-		
Aspergillus/Penicillium++					-		• 1615		100
Basidiospores	111(122)	266	91.7	6	10	83.3	16	35	100
Bipolaris++						•		-	-
Chaetomium++		-	-		-	-	-	-	
Cladosporium	Appendix and state of							•	
Curvularia		-	-		-	-	-	-	-
Epicoccum									•
Fusarium++) Establishment	_		-		-	-	-
Ganoderma					300				•
				1	2	16.7	-	-	-
Myxomycetes++	and the same of th						•		
Pithomyces++			N BELLEVILLE			-	-	-	-
Rust							•		-
Scopulariopsis/Microascus				_	-		-	-	-
Stachybotrys/Memnoniella		I SANSON PROPERTY.			ATTENDED TO				
Unidentifiable Spores	•			-	-	-	-	-	-
Zygomycetes		290	100	7	12	100	16	35	100
Total Fungi	133	290	100	THE REAL PROPERTY.	-				-
Hyphal Fragment		a management and desired		-		-			•
Insect Fragment	•	•			-		-		
Pollen		-			2			2	e aroe • u si
Analyt. Sensitivity 600x		2	•		<1*		-	<1*	-
Analyt. Sensitivity 300x		<1*		in the second	2			1	-
Skin Fragments (1-4)		1			1		-	1	-
Fibrous Particulate (1-4)		1		and the second	1000000	at acres in the		1	
Background (1-5)		1							

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.

† Due to method stopping rules, extrapolated raw counts are reported in parenthesis.

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

Muni Cun

Kevin Ream, Laboratory Manager or other Approved Signatory

EMSL Analytical, Inc. maintains liability limited to cost of analysis, Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL Analytical, Inc. EMSL Analytical, Inc. bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are writin quality control criteria and met method specifications unless otherwise noted. Skin Fragment and Fibrous Particulate ratings are based on the percent of non-fungal material they represent: 1 (1-25%), 2 (26-50%), 3 (51-75%), or 4 (76-100%). Background ratings are based on the total area covered by non-fungal particulate: 1 (1-25%), 2 (26-50%), 3 (51-75%), 4 (76-99%), or 5 (100%; overloaded). High levels of background particulates, and the particulates, prohibiting accurate detection and quantification. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection 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 >= 100 are extrapolated based on the percentage analyzed.

Samples analyzed by EMSL Analytical, Inc. Plymouth Meeting, PA AIHA LAP, LLC-EMLAP Accredited #178659

Initial report from: 04/02/2024 11:18 AM



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Project: 24-12.4 HANOVER LYNNWOOD ELEMENTARY

Test Report: Allergenco-D(™) Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number: Client Sample ID: Volume (L): Sample Location:		82401344-0004 5283706 1500 ALLWAY RM A7		182401344-0005 5603319 1500 HALLWAY RM A5				
Spore Types	Raw Count†	Count/m³	% of Total	Raw Count†	Count/m³	% of Total		
Alternaria (Ulocladium)								
Ascospores	1	2	18.2	•	-			
Aspergillus/Penicillium++		•		•				
Basidiospores	4	9	81.8	24	52	100		
Bipolaris++								
Chaetomium++		_	-	-	-	-		
Cladosporium				-		•		
Curvularia		-	-	-	2	-		
Epicoccum								
Fusarium++						-		
Ganoderma	ninders that the					-		
Myxomycetes++	ESSELECTION OF THE PARTY OF THE			-	-			
Pithomyces++		entra entra						
Rust					-	-		
	CONTRACTOR OF THE							
Scopulariopsis/Microascus				E1, 2000 (1900 CA	-			
Stachybotrys/Memnoniella	1 10 7	REMORESTATION		STATE OF THE STATE				
Unidentifiable Spores			14 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	-	-			
Zygomycetes	Maria de Cario de Car	11	100	24	52	100		
Total Fungi	5	REAL PROPERTY.	100	-	-	-		
Hyphal Fragment			in the second second	A SECTION OF				
Insect Fragment								
Pollen		-			2			
Analyt. Sensitivity 600x		2	•		<1*			
Analyt. Sensitivity 300x	-	<1*	and the local division in the local division	and a second	1	washing the		
Skin Fragments (1-4)	•	1		an sufabili	1			
Fibrous Particulate (1-4)	-	1		STATE OF THE PARTY	1	meters.		
Background (1-5)		1		•				

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.

† Due to method stopping rules, extrapolated raw counts are reported in parenthesis.

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

Muni Cum

Kevin Ream, Laboratory Manager or other Approved Signatory

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Samples analyzed by EMSL Analytical, Inc. Plymouth Meeting, PA AIHA LAP, LLC-EMLAP Accredited #178659

Initial report from: 04/02/2024 11:18 AM

Accreditations



AIHA Laboratory Accreditation Programs, LLC

acknowledges that

EMSL Analytical, Inc. 5221 Militia Rd., Plymouth Meeting, PA 19462 Laboratory ID: LAP-178659

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 17025:2017 international standard, General Requirements for the Competence of Testing and Calibration Laboratories in the following:

LABORATORY ACCREDITATION PROGRAMS

\square	INDUSTRIAL HYGIENE	Accreditation Expires: September 01, 2023
	ENVIRONMENTAL LEAD	Accreditation Expires:
M	ENVIRONMENTAL MICROBIOLOGY	Accreditation Expires: September 01, 2023
	FOOD	Accreditation Expires:
П	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 17025:2017 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.

Chervl O Morton

Managing Director, AIHA Laboratory Accreditation Programs, LLC

Cheryl O. Charton

Revision19.1: 07/28/2021 Date Issued: 08/31/2021



AIHA Laboratory Accreditation Programs, LLC SCOPE OF ACCREDITATION

EMSL Analytical, Inc.

5221 Militia Rd., Plymouth Meeting, PA 19462

Laboratory ID: LAP-178659

Issue Date: 08/31/2021

The laboratory is approved for those specific field(s) of testing/methods listed in the table below. Clients are urged to verify the laboratory's current accreditation status for the particular field(s) of testing/Methods, since these can change due to proficiency status, suspension and/or withdrawal of accreditation.

Environmental Microbiology Laboratory Accreditation Program (EMLAP)

Initial Accreditation Date: 09/01/2019

EMLAP Scope Category	Field of Testing (FOT)	Component, parameter or characteristic tested	Method	Method Description (for internal methods only)
Fungal	Air - Direct Examination	Spore Trap	MICRO-SOP-201	Standard Operating Procedure for the Analysis of Airborne Fungal Spores, Hyphal Fragments, Pollen, Insect Fragments, Skin Fragments and Fibrous Particulate by Optical Microscopy of Spore Trap Samples
Fungal	Bulk - Direct Examination	Bulks (liquid or solid)	MICRO-SOP-200	Standard Operating Procedure for the Microscopic Examination of Fungal Spores, Fungal Structures, Hyphae, Pollen, Insect Fragments, and Fibrous Particulate from Surface Samples
Fungal	Surface - Direct Examination	Swab or Tape Lift	MICRO-SOP-200	Standard Operating Procedure for the Microscopic Examination of Fungal Spores, Fungal Structures, Hyphae, Pollen, Insect Fragments, and Fibrous Particulate from Surface Samples

A complete listing of currently accredited EMLAP laboratories is available on the AIHA LAP, LLC website at: http://www.aihaaccreditedlabs.org

Effective: 07/29/2021 Revision: 7.1 Page 1 of 1