

March 10, 2021

Prince George's County Public Schools
Environmental Safety Office
13306 Old Marlboro Pike
Upper Marlboro, MD 20772

Attention: Alex Baylor
alex.baylor@pgcps.org

Subject: Indoor Air Quality Survey
Thomas G. Pullen School
700 Brightseat Road
Landover, MD 20785

Mr. Baylor:

On December 1, 2020, and March 1, 2021 a Soil and Land Use Technology, Inc. (SaLUT) Industrial Hygienist conducted an indoor air quality (IAQ) evaluation at Thomas G. Pullen School, a property maintained by Prince George's County Public Schools (PGCPS) located at 700 Brightseat Road, Landover, MD 20785. The inspection was performed in accordance with PGCPS contract number IFB 022-19.

Corrective Measures Implemented by PGPCS

On March 1, 2021, as part of this assessment, SaLUT conducted the IAQ evaluation, including IAQ instrumentation screening, and observations in affected areas. Prior to this assessment, in response to an initial assessment, PGPCS implemented the following corrective measures in the Hallway next to Classrooms 101 and Hallway next to Classroom 205:

1. Identify and clearly assess the affected area;
2. Remove and replace moldy and stained ceiling tiles;
3. Thorough cleanup throughout the affected areas;
4. Operate air scrubbers with HEPA filters in the impacted areas;
5. Monitor and evaluate clean-up operation to determine effectiveness.

Methodology

The IAQ evaluation conducted by SaLUT included a visual assessment, IAQ instrumentation screening, and a collection of interior air samples for mold in representative locations throughout the building. Additionally, one building exterior environmental air sample was taken for comparison.

Air-borne fungal spore samples were collected on *Air-O-Cell* cassettes using a Buck BioAire calibrated pump. The air samples were taken between three and five feet from the ground. In tandem with collecting mold samples, real-time readings for carbon dioxide, carbon monoxide, temperature and relative humidity were collected using a Fluke 975 Air Meter in representative areas within the facility.

The fungal spore air samples were delivered to EMSL Analytical, Inc. of Beltsville, Maryland for analysis. Fungal spores and particulates in air samples were analyzed by Optical Microscopy (methods EMSL 05-TP-003 and ASTM D7391). The sample chain-of-custody and laboratory reports are attached.

Observations

The table below summarizes the main observations from the IAQ survey at Thomas G. Pullen School, visited on December 1, 2020, and March 1, 2021, respectively.

Table 1.1-Observations

Location	Summary of Observations 12-1-2020
Next to Multipurpose Room	2'x4' ceiling tiles and 2'x 2' tile floor; No visual signs of microbial growth; Mild odor; Stained ceiling tiles; No visible dust on floor/other furniture surfaces; No visible dust around ventilator; Central AC.
Hallway next to Classroom 101	2'x4' ceiling tiles and 1'x 1' tile floor; No visual signs of microbial growth, and no odor; No visible dust on floor/other furniture surfaces; No visible dust around ventilator; Central AC.
In between Classrooms 112 and 113	2'x4' ceiling tiles and 1'x 1' tile floor; No visual signs of microbial growth, and no odor; No visible dust on floor/other furniture surfaces; No visible dust around ventilator; Central AC.

Location	Summary of Observations 12-1-2020
Next to Classroom 203	2'x4' ceiling tiles and 1'x 1' tile floor; No visual signs of microbial growth, and no odor; No visible dust on floor/other furniture surfaces; No visible dust around ventilator; Central AC.
Classroom between 205 and 205	2'x4' ceiling tiles and 1'x 1' tile floor; No visual signs of microbial growth, and no odor; No visible dust on floor/other furniture surfaces; No visible dust around ventilator; Central AC.
Outside Exterior EV Sample	Windy

Table 1.2-Observations

Location	Summary of Observations 03-01-2021
Hallway next to Classroom 101	2'x4' ceiling tiles and 1'x 1' tile floor; No visual signs of microbial growth, and no odor; Stained ceiling tiles were replaced;
Hallway next Classroom 205	2'x4' ceiling tiles and 1'x 1' tile floor; No visual signs of microbial growth, and no odor; Stained ceiling tiles were replaced;
Outside Exterior EV Sample	It was windy

Measurements of Indoor Environmental Quality Parameters

Table 2 depicts a summary of average measurements of comfort.

Temperature

The American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) have published recommendations for year round acceptable temperatures in Standard 55-2010 *Thermal Environmental Conditions for Human Occupancy*. The winter comfort range is 20 to 24°C (68 to 75°F) and 23 to 26°C (73 to 79°F) is the summer comfort range. The temperature readings were within the ASHRAE recommended ranges in the representative spaces.

Relative Humidity (RH)

RH is a key factor for mold growth. Mold has the potential of growing on suitable surfaces with humidity levels above 60%. ASHRAE Standard 62.1-2010 *Ventilation for Acceptable Indoor Air Quality* recommends a maximum indoor RH of 65% to preclude the likelihood of condensation on cool surfaces encouraging mold growth. The RH readings were within the ASHRAE recommended ranges in the representative areas.

Carbon Dioxide (CO₂)

Under conditions of maximum occupancy, ASHRAE Standard 62.1-2010, Appendix C, infers that the acceptable CO₂ upper limit is the prevailing outdoor CO₂ concentration plus 700 parts per million (ppm). On December 01, 2020, the outdoor (building exterior) CO₂ concentration was approximately 600 ppm therefore indoor concentrations should not exceed approximately 1,300 ppm (700 + 600). The maximum average interior CO₂ concentration detected was 654 ppm in the Multipurpose Room, a range within the ASHRAE recommendations, per Table 2.1 below.

Carbon Monoxide (CO)

CO is a colorless and odorless gas that is produced by the incomplete combustion of carbon containing fuels. Oil, gasoline, diesel fuels, wood, coke, and coal are major sources of CO. All registered CO concentrations were below the EPA National Ambient Air Quality Standard (NAAQS) of 9 ppm, per Table 2.1 below.

**Table 2.1: Thomas G. Pullen School, Instrumental Screening Levels
December 1, 2020 (7:30 AM-9:30 AM)**

Sample Location	Temp °F	RH%	CO ppm	CO ₂ ppm
Standards	ASHRAE 68 to 75°F*	ASHRAE <65%	NAAQS 9	ASHRAE 1,300
Next to Multipurpose Room	68.0	58.0	0	654
Hallway next to Classroom 101	75.0	31.7	0	484
In-between Classroom 112 and 113	74.1	32.0	0	497
Next to Classroom 203	74.3	44.2	0	502
CR Between 205	75.0	44.1	0	467
Outside Exterior EV Sample	50.0	65.3	0	600

PM - Particulate Matter size
°F - Degrees Fahrenheit
CO - Carbon Monoxide
ppm - parts per million

µg/m³ - micrograms per cubic meter
RH% - % Relative Humidity
CO₂ - Carbon Dioxide
* - Winter Comfort Range

**Table 2.2: Thomas G. Pullen School, Instrumental Screening Levels
March 01, 2021 (7:30 AM-9:30 AM)**

Sample Location	Temp °F	RH%	CO ppm	CO ₂ ppm
Standards	ASHRAE 68 to 75°F*	ASHRAE <65%	NAAQS 9	ASHRAE 1,300
Hallway next to Classroom 101	68.0	62.1	0	630
Hallway next to classroom 205	79.7	61.7	0	588
Outside Exterior EV Sample	50.0	46.5	0	467

PM - Particulate Matter size
°F - Degrees Fahrenheit
CO - Carbon Monoxide
ppm - parts per million

µg/m³ - micrograms per cubic meter
RH% - % Relative Humidity
CO₂ - Carbon Dioxide
* - Winter Comfort Range

Mold-in-Air Samples

There are no definitive regulations or standardized guidelines for addressing airborne mold in an indoor setting. If building systems (ventilation, envelope) are functioning properly, the indoor population profile should mimic what is encountered outdoors and the concentrations should be below the outdoor (building exterior) environmental sample levels.

Tables 3.1 summarizes airborne mold spore sampling results and locations. On December 1, 2020, total mold counts in representative samples (spore count/m³ of air) in all the areas inspected were lower than the outdoor concentrations with the exception of the Hallway next to Classrooms 101 and Hallway next to Classroom 205. Laboratory analysis follows this report (see attachment).

Tables 3.2: Summarizes airborne mold spore sampling results and locations. On March 1, 2021, total mold counts in representative samples (spore count/m³ of air) in all the areas inspected were lower than the outdoor concentrations. Laboratory analysis follows this report (see attachment).

**Table 3.1: Thomas G. Pullen School - Measurements of Mold-in-Air Samples
December 1, 2020 (7:30 AM-9:30 AM)**

Spore Types	Next to Multi-purpose Room	Hallway next to Classroom 101	In between Classrooms 112 and 113	Next to Classroom 203
<i>Alternaria (Ulocladium)</i>	-	-	-	-
<i>Ascospores</i>	40	40	40	-
<i>Aspergillus/Penicillium</i>	-	15,400	80	40
<i>Basidiospores</i>	40	300	40	300
<i>Bipolaris++</i>	-	-	-	-
<i>Chaetomium</i>	-	-	-	-
<i>Cladosporium</i>	-	-	-	-
<i>Curvularia</i>	-	-	-	-
<i>Epicoccum</i>	-	-	-	10*
<i>Fusarium</i>	-	-	-	-
<i>Ganoderma</i>	-	-	-	-
<i>Myxomycetes++</i>	40*	-	40*	-
<i>Pithomyces++</i>	-	-	-	-
<i>Rust</i>	-	-	-	-
<i>Scopulariopsis/Microascus</i>	-	-	-	-
<i>Stachybotrys/Memnoniella</i>	-	-	-	-
<i>Unidentifiable Spores</i>	-	-	-	-
<i>Zygomycetes</i>	-	-	-	-
<i>Nigrospora</i>	-	-	-	-
<i>Hyphal Fragment</i>	-	-	-	40
<i>Insect Fragment</i>	-	-	-	-
<i>Pollen</i>	-	-	-	-
Total Fungi	120	15,740	210	350

* Spore Counts per cubic meter of air (Counts/m³).

++Includes other spores with similar morphology.

Table 3.1: Thomas G. Pullen School - Measurements of Mold-in-Air Samples continued

December 1, 2020 (7:30 AM-9:30 AM)

Spore Types	Classroom between 205 and 205	Outside Exterior EV Sample	Field Blank
<i>Alternaria (Ulocladium)</i>	-	-	-
<i>Ascospores</i>	40	100	-
<i>Aspergillus/Penicillium</i>	6,330	-	-
<i>Basidiospores</i>	460	1,600	-
<i>Bipolaris++</i>	-	-	-
<i>Chaetomium</i>	-	-	-
<i>Cladosporium</i>	-	80	-
<i>Curvularia</i>	-	-	-
<i>Epicoccum</i>	-	-	-
<i>Fusarium</i>	-	-	-
<i>Ganoderma</i>	-	-	-
<i>Myxomycetes++</i>	-	-	-
<i>Pithomyces++</i>	-	-	-
<i>Rust</i>	-	-	-
<i>Scopulariopsis/Microascus</i>	-	-	-
<i>Stachybotrys/Memnoniella</i>	-	-	-
<i>Unidentifiable Spores</i>	-	-	-
<i>Zygomycetes</i>	-	-	-
<i>Nigrospora</i>	-	-	-
<i>Hyphal Fragment</i>	-	-	-
<i>Insect Fragment</i>	-	-	-
<i>Pollen</i>	-	-	-
Total Fungi	6,830	1,780	No Trace

*Spore Counts per cubic meter of air (Counts/m³).

++Includes other spores with similar morphology.

**Table 3.2: Thomas G. Pullen School - Measurements of Mold-in-Air Samples
March 01, 2021 (7:30 AM-9:30 AM)**

Spore Types	Hallway next to Classroom 101	Hallway next to Classroom 205	Outside Exterior EV Sample	Field Blank
<i>Alternaria (Ulocladium)</i>	-	-	-	-
<i>Ascospores</i>	40	-	-	-
<i>Aspergillus/Penicillium</i>	920	100*	36000	-
<i>Basidiospores</i>	300	90	100	-
<i>Bipolaris++</i>	-	-	-	-
<i>Chaetomium</i>	-	-	-	-
<i>Cladosporium</i>	-	-	-	-
<i>Curvularia</i>	-	-	-	-
<i>Epicoccum</i>	-	-	-	-
<i>Fusarium</i>	-	-	-	-
<i>Ganoderma</i>	-	-	-	-
<i>Myxomycetes++</i>	40	-	-	-
<i>Pithomyces++</i>	-	-	-	-
<i>Rust</i>	-	-	-	-
<i>Scopulariopsis/Microascus</i>	-	-	-	-
<i>Stachybotrys/Memnoniella</i>	-	-	-	-
<i>Unidentifiable Spores</i>	-	-	-	-
<i>Zygomycetes</i>	-	-	-	-
<i>Nigrospora</i>	-	-	-	-
<i>Hyphal Fragment</i>	-	-	-	-
<i>Insect Fragment</i>	-	-	-	-
<i>Pollen</i>	-	-	-	-
Total Fungi	1300	190	3700	None Detect

*Spore Counts per cubic meter of air (Counts/m³).

++Includes other spores with similar morphology.

Findings and Conclusions

The comfort parameters (i.e., temperature, RH, CO₂, and CO levels) in the representative areas conform to ASHRAE and/or NAAQS guidelines. On December 1, 2020, total mold counts in representative area samples (spore count/m³ of air) in all the areas inspected were lower than the outdoor concentrations with the exception of the Hallway next to Classrooms 101 and Hallway next to Classroom 205, indicating amplified mold growth.

On March 1, 2021, total mold counts in air samples (spore count/m³ of air) in the cafeteria were significantly lower than the outdoor concentrations, indicating no amplified mold growth. Based on the observations, mold spore results, and the results of the indoor air quality parameters tested, the corrective actions implemented were determined to be effective.

Thank you for the opportunity to provide industrial hygiene services for PGCPs. If you have any questions, please contact me at 301.595.3783.

Sincerely,



Chaminda Jayatilake, PE, CIH, CSP, CHMM
Certified Industrial Hygienist
Soil and Land Use Technology Inc. (SaLUT)

Attachment

Attachment - Mold Spore Sample Analytical Results and Chain-of-Custody Forms

Attachment

Mold Spore Sample Analytical Results and Chain-of-Custody Forms



EMSL Analytical, Inc.

5221 Militia Hill Road Plymouth Meeting, PA 19462
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<http://www.EMSL.com> / plymouthmeetinglab@emsl.com

EMSL Order: 182003841
Customer ID: SALU50
Customer PO:
Project ID:

Attention: Indika Jayatilake
SaLUT
1818 New York Avenue, NE
Suite 231
Washington, DC 20002
Project: 19-035 - Thomas Pule Performing

Phone: (301) 595-3783
Fax: (301) 595-3787
Collected Date: 12/01/2020
Received Date: 12/01/2020 01:41 PM
Analyzed Date: 12/03/2020

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

Lab Sample Number: Client Sample ID: Volume (L): Sample Location:	182003841-0001 S1 75 Next to Multi Purpose			182003841-0002 S2 75 Next to CR 203			182003841-0003 S3 75 Inbetween CR 112 and 113			
	Spore Types	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total
Alternaria (Ulocladium)	-	-	-	-	-	-	-	-	-	-
Ascospores	1	40	33.3	-	-	-	1	40	19	
Aspergillus/Penicillium	-	-	-	1	40	11.4	2	80	38.1	
Basidiospores	1	40	33.3	6	300	85.7	1	40	19	
Bipolaris++	-	-	-	-	-	-	-	-	-	-
Chaetomium	-	-	-	-	-	-	-	-	-	-
Cladosporium	-	-	-	-	-	-	-	-	-	-
Curvularia	-	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	1*	10*	2.9	-	-	-	-
Fusarium	-	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	-	-	-	-	-	-	-
Myxomycetes++	3*	40*	33.3	-	-	-	3*	40*	19	
Pithomyces++	-	-	-	-	-	-	-	-	-	-
Rust	-	-	-	-	-	-	-	-	-	-
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-	-
Zygomycetes	-	-	-	-	-	-	-	-	-	-
Polythrincium	-	-	-	-	-	-	1*	10*	4.8	
Total Fungi	5	120	100	8	350	100	8	210	100	
Hyphal Fragment	-	-	-	1	40	-	-	-	-	-
Insect Fragment	-	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	42	-	-	42	-	-	42	-	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-	-
Skin Fragments (1-4)	-	1	-	-	2	-	-	2	-	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-	-
Background (1-5)	-	2	-	-	1	-	-	1	-	-

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

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: 12/04/2020 10:15 AM

For information on the fungi listed in this report, please visit the Resources section at www.emsl.com



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Fax: (301) 595-3787
Collected Date: 12/01/2020
Received Date: 12/01/2020 01:41 PM
Analyzed Date: 12/03/2020

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

Lab Sample Number: Client Sample ID: Volume (L): Sample Location:	182003841-0004			182003841-0005			182003841-0006		
	Raw Count	Count/M ³	% of Total	Raw Count	Count/M ³	% of Total	Raw Count	Count/M ³	% of Total
S4 75 Hallway Next To CR 101	S5 75 CR Between 205 and 205	S6 75 Outside							
Spore Types	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total
Alternaria (Ulocladium)	-	-	-	-	-	-	-	-	-
Ascospores	1	40	0.3	1	40	0.6	3	100	5.6
Aspergillus/Penicillium	364	15400	97.8	150	6330	92.7	-	-	-
Basidiospores	7	300	1.9	11	460	6.7	37	1600	89.9
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	-	-	-	-	-	-	2	80	4.5
Curvularia	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-
Fusarium	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	-	-	-	-	-	-
Myxomycetes++	-	-	-	-	-	-	-	-	-
Pithomyces++	-	-	-	-	-	-	-	-	-
Rust	-	-	-	-	-	-	-	-	-
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-
Zygomycetes	-	-	-	-	-	-	-	-	-
Polythrincium	-	-	-	-	-	-	-	-	-
Total Fungi	372	15740	100	162	6830	100	42	1780	100
Hyphal Fragment	-	-	-	-	-	-	-	-	-
Insect Fragment	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	42	-	-	42	-	-	42	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-
Skin Fragments (1-4)	-	2	-	-	1	-	-	1	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-
Background (1-5)	-	1	-	-	1	-	-	1	-

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

Kevin Ream, Laboratory Manager
or other Approved Signatory

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

Lab Sample Number:	182003841-0007		
Client Sample ID:	S7		
Volume (L):			
Sample Location:	Field Blank		
Spore Types	Raw Count	Count/M³	% of Total
Alternaria (Ulocladium)	-	-	-
Ascospores	-	-	-
Aspergillus/Penicillium	-	-	-
Basidiospores	-	-	-
Bipolaris++	-	-	-
Chaetomium	-	-	-
Cladosporium	-	-	-
Curvularia	-	-	-
Epicoccum	-	-	-
Fusarium	-	-	-
Ganoderma	-	-	-
Myxomycetes++	-	-	-
Pithomyces++	-	-	-
Rust	-	-	-
Scopulariopsis/Microascus	-	-	-
Stachybotrys/Memnoniella	-	-	-
Unidentifiable Spores	-	-	-
Zygomycetes	-	-	-
Polythrincium	-	-	-
Total Fungi	-	No Trace	-
Hyphal Fragment	-	-	-
Insect Fragment	-	-	-
Pollen	-	-	-
Analyt. Sensitivity 600x	-	0	-
Analyt. Sensitivity 300x	-	0*	-
Skin Fragments (1-4)	-	-	-
Fibrous Particulate (1-4)	-	-	-
Background (1-5)	-	-	-

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

Kevin Ream, Laboratory Manager
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EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077
Tel/Fax: (800) 220-3675 / (856) 786-0262
<http://www.EMSL.com> / cinmicrolab@emsl.com

EMSL Order: 372103093
Customer ID: SALU50
Customer PO:
Project ID:

Attention: Indika Jaynthlake
SaLUT
1818 New York Avenue, NE
Suite 231
Washington, DC 20002
Project: Thomas Pule Peforming / PGPCS IAQ

Phone: (301) 595-3783
Fax: (301) 595-3787
Collected Date:
Received Date: 03/01/2021 09:00 AM
Analyzed Date: 03/04/2021

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

Lab Sample Number: Client Sample ID: Volume (L): Sample Location:	372103093-0001			372103093-0002			372103093-0003		
	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total
1T 75 Hallway Next To CR 101				2T 75 Hallway Next To CR 205			3T 75 Outside Exterior EV Sample		
Spore Types	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total
Alternaria (Ulocladium)	-	-	-	-	-	-	-	-	-
Ascospores	1	40	3.1	-	-	-	-	-	-
Aspergillus/Penicillium	21	920	70.8	8*	100*	52.6	82	3600	97.3
Basidiospores	6	300	23.1	2	90	47.4	3	100	2.7
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	-	-	-	-	-	-	-	-	-
Curvularia	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-
Fusarium	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	-	-	-	-	-	-
Myxomycetes++	1	40	3.1	-	-	-	-	-	-
Pithomyces++	-	-	-	-	-	-	-	-	-
Rust	-	-	-	-	-	-	-	-	-
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-
Zygomycetes	-	-	-	-	-	-	-	-	-
Total Fungi	29	1300	100	10	190	100	85	3700	100
Hyphal Fragment	-	-	-	-	-	-	-	-	-
Insect Fragment	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	44	-	-	44	-	-	44	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-
Skin Fragments (1-4)	-	2	-	-	1	-	-	1	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-
Background (1-5)	-	1	-	-	1	-	-	1	-

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

Vincent Iuzzolino, M.S., Laboratory Manager
or other Approved Signatory

EMSL 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. EMSL 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. 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 in excess of 100 are extrapolated based on the percentage analyzed.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC-EMLAP Accredited #100194

Initial report from: 03/04/2021 10:41 AM

For information on the fungi listed in this report, please visit the Resources section at www.emsl.com



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

Lab Sample Number:	372103093-0004		
Client Sample ID:	4T		
Volume (L):			
Sample Location:	Field Blank		
Spore Types	Raw Count	Count/M³	% of Total
Alternaria (Ullocladium)	-	-	-
Ascospores	-	-	-
Aspergillus/Penicillium	-	-	-
Basidiospores	-	-	-
Bipolaris++	-	-	-
Chaetomium	-	-	-
Cladosporium	-	-	-
Curvularia	-	-	-
Epicoccum	-	-	-
Fusarium	-	-	-
Ganoderma	-	-	-
Myxomycetes++	-	-	-
Pithomyces++	-	-	-
Rust	-	-	-
Scopulariopsis/Microascus	-	-	-
Stachybotrys/Memnoniella	-	-	-
Unidentifiable Spores	-	-	-
Zygomycetes	-	-	-
Total Fungi	-	None Detect	-
Hyphal Fragment	-	-	-
Insect Fragment	-	-	-
Pollen	-	-	-
Analyt. Sensitivity 600x	-	0	-
Analyt. Sensitivity 300x	-	0*	-
Skin Fragments (1-4)	-	-	-
Fibrous Particulate (1-4)	-	-	-
Background (1-5)	-	-	-

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

Vincent Iuzzolino, M.S., Laboratory Manager
or other Approved Signatory

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Initial report from: 03/04/2021 10:41 AM

For information on the fungi listed in this report, please visit the Resources section at www.emsl.com



EMSL ANALYTICAL, INC.
LABORATORY PRODUCTS DIVISION

Microbiology Chain of Custody
EMSL Order Number (Lab Use Only):

EMSL ANALYTICAL, INC.
200 ROUTE 130 NORTH
CINNAMINSON, NJ 08077
PHONE: (800) 220-3675
FAX: (856) 786-0262

Company Name: Salut Inc			EMSL-Bill to: <input type="checkbox"/> Same <input type="checkbox"/> Different If Bill to is Different note instructions in Comments				
Street: 1818 New York Ave NE Suite 231			Third Party Billing requires written authorization from third party.				
City: Washington	State/Province: DC	Zip/Postal Code:	Country:				
Report To (Name): Indika Jayatilake		Telephone #:					
Email Address: ijayatilake@salutinc.com		Fax #:		Purchase Order:			
Project Name/Number: 19-035-Thomas Pallen Performing		Please Provide Results: <input type="checkbox"/> Fax <input type="checkbox"/> Email					
U.S. State Samples Taken: MD		Project Zip Code: 20785		Connecticut Samples: <input type="checkbox"/> Commercial <input type="checkbox"/> Residential			
Sterile, Sodium Thiosulfate Preserved Bottle Used: <input type="checkbox"/> Biocide Used in Source (specify): <input type="checkbox"/>							
Public Water Supply Samples: <input type="checkbox"/> Note: All results may automatically be reported to DOH if required by state.							
Turnaround Time (TAT) Options - Please Check							
<input type="checkbox"/> 3 Hour	<input type="checkbox"/> 6 Hour	<input type="checkbox"/> 24 Hour	<input type="checkbox"/> 48 Hour	<input checked="" type="checkbox"/> 72 Hour	<input type="checkbox"/> 96 Hour	<input type="checkbox"/> 1 Week	<input type="checkbox"/> 2 Week
Microbiology Test Codes							
M001 Air-O-Cell M030 Micro 5 M041 Fungal Direct Examination M169 Pollen ID & Enumeration M280 Dust Characterization Level-1 M281 Dust Characterization Level-2 M005 Viable Fungi- Air Samples (Genus ID & Count) M006 Viable Fungi- Air Samples (Includes <i>Penicillium</i> , <i>Aspergillus</i> , <i>Cladosporium</i> , <i>Stachybotrys</i> Species ID & Count) M007 Culturable fungi - Surface Samples (Genus ID & Count) M008 Culturable fungi - Surface Samples (Includes <i>Penicillium</i> , <i>Aspergillus</i> , <i>Cladosporium</i> , <i>Stachybotrys</i> Species ID & Count) M009 Bacteria Culture Gram Stain & Count M010 Bacteria Count & ID - 3 Most Prominent M011 Bacteria Count & ID - 5 Most Prominent		M174 MoldSnap M032 Allergenco-D M012 <i>Pseudomonas aeruginosa</i> (P/A ^{***}) M024 <i>Pseudomonas aeruginosa</i> (MFT ^{**}) M015 Heterotrophic Plate Count M017 Total Coliform & <i>E. coli</i> (Colilert P/A ^{***}) M018 Total Coliform & <i>E. coli</i> (MFT ^{**}) M114 Total Coliform & <i>E. coli</i> Enumeration (Colilert MPN ^{**}) M019 Fecal Coliform (MFT ^{**}) M020 Fecal <i>Streptococcus</i> (MFT ^{**}) M029 <i>Enterococci</i> (MFT ^{**}) M129 <i>Enterococci</i> (Enterolert P/A ^{***}) M180 Real Time qPCR-ERM1 36 Panel M025 Sewage Screen -Water (MFT ^{**})		M115 Sewage Screen - Water (P/A ^{***}) M116 Sewage Screen - Water (MPN ^{**}) M117 Sewage Screen - Swab (P/A ^{***}) M013 Sewage Screen - Swab (MFT ^{**}) M133 Methicillin-resistant <i>Staph. aureus</i> (MRSA) M031 Rapid-growing non-TB <i>Mycobacteria</i> Detection & Enumeration M014 Endotoxin Analysis M044 Group Allergen (Cat, Dog, Cockroach, Dust Mite) Other See Analytical Price Guide <i>Legionella</i> Analysis Please use EMSL <i>Legionella</i> COC			
*MFT= Membrane Filtration Technique **MPN= Most Probable Number ***P/A= Presence/Absence							
Name of Sampler: Shenal Dias			Signature of Sampler:				
Sample #	Sample Location/Description	Sample Type	Potable/NonPotable (Only for Waters)	Test Code	Volume/Area	Date/Time Collected	
S1	Next to Multi purpose	Air	<input type="checkbox"/> P <input type="checkbox"/> NP	M006	75ml	12/11/20	
S2	Next to CR 203	"	<input type="checkbox"/> P <input type="checkbox"/> NP	"	"	"	
S3	In between CR 212 and 118	"	<input type="checkbox"/> P <input type="checkbox"/> NP	"	"	"	
S4	Hallway next to CR 401	"	<input type="checkbox"/> P <input type="checkbox"/> NP	"	"	"	
S5	CR between 204 and 205	"	<input type="checkbox"/> P <input type="checkbox"/> NP	"	"	"	
Client Sample # (s):		Total # of Samples: 07					
Relinquished (Client):		Date:		Time:			
Received (Lab): S. Anworth Drop Box		Date:		Time: 2020 DEC - 1 10 41			
Comments/Special Instructions:						RECEIVED EMSL ANALYTICAL, INC. BELTSVILLE, MD	

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. constitutes acceptance and acknowledgment of all terms and conditions by Customer.



EMSL Analytical, Inc. Sample Transfer Form

Receiving Lab:	EMSL- BELTSVILLE	Phone Number:	3019375700
		Fax Number:	3019375701
Relinquished to:	EMSL- <i>Plymouth Mtg.</i>	Phone Number:	8002203675
		Fax Number:	8567860262
Does new lab hold equivalent or additional accreditation? *			<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
EMSL Customer ID # (if known):	SALU50		
Client Name:	SALUT INC		
Client Project:	19-035 - THOMAS PULLEN PERFORMING		
Tests to be Performed:	M001		
Date Received:	12/1/20		
Date Relinquished:	12/2/20		
Date Due:	3 DAYS - 12/4/20 @ 2:39 PM		
Special Instructions: (e.g. Work Order # , required qualifications, project specific procedures/modifications)			
Relinquished by (Signature): <i>J. Yarnworth</i>	Date: 12/2/20	Received by (Signature): <i>[Signature]</i>	Date: 12-3-20
Relinquished by (Signature):	Date:	Received by (Signature):	Date:
Customer Agreement- Please sign form and send to the receiving laboratory. By signing below, you agree to permit the above named receiving lab to transfer samples to a separate EMSL lab with equivalent qualifications* for analysis. The final report will be issued from the analyzing laboratory. Ensure any requirements are listed in special instructions.			
Name (please print):	Signature:	Agent of:	Date:
<p><i>If this is a recurring project or sample type that may require samples to be relinquished on a regular basis, a Standing Agreement form must be completed.</i></p> <p>* Receiving and analyzing labs shall be aware of required qualifications of project prior to transfer of samples. Note: If customer has been notified and approved this transfer verbally or by e-mail, the receiving lab must sign for the customer above. EMSL employee filling out form on behalf of customer shall print name of person to whom they spoke, date agreement was received, and then sign under Signature.</p>			



EMSL ANALYTICAL, INC.
LABORATORY PRODUCTS TRAINING

Microbiology Chain of Custody

EMSL Order Number (Lab Use Only):

372103093

RECEIVED
EMSL
CINNAMINSON, NJ

PHONE:

FAX: 21 MAR -3 PM 2:46

Company Name: SaLUT Inc.		EMSL-Bill to: <input checked="" type="checkbox"/> Same <input type="checkbox"/> Different If Bill to is Different note instructions in Comments**					
Street: 1818 New York Ave NE Suite 231		Third Party Billing requires written authorization from third party					
City: Washington	State/Province: DC	Zip/Postal Code: 20002	Country: USA				
Report To (Name): Indika Jayatilake		Telephone #: 301-595-3783					
Email Address: ijayatilake@salutinc.com		Fax #:	Purchase Order:				
Project Number/Location: Thomas Pulle Performing / PGCPs IAQ		Please Provide Results: <input type="checkbox"/> Fax <input checked="" type="checkbox"/> Email					
Location Address:		Connecticut Samples: <input type="checkbox"/> Commercial <input type="checkbox"/> Residential					
*Analysis completed in accordance with EMSL's Terms and Conditions located in the Analytical Price Guide. TATs are subject to methodology requirements							
Sterile, Sodium Thiosulfate Preserved Bottle Used: <input type="checkbox"/> Biocide Used in Source (specify): <input type="checkbox"/>							
Public Water Supply Samples: <input type="checkbox"/> Note: All results may automatically be reported to DOH if required by state.							
Turnaround Time (TAT) Options * - Please Check							
<input type="checkbox"/> 3 Hour	<input type="checkbox"/> 6 Hour	<input type="checkbox"/> 24 Hour	<input type="checkbox"/> 48 Hour <input checked="" type="checkbox"/> 72 Hour <input type="checkbox"/> 96 Hour <input type="checkbox"/> 1 Week <input type="checkbox"/> 2 Week				
Microbiology Test Codes							
M001 Air-O-Cell	M174 MoldSnap	M024 Pseudomonas aeruginosa (MFT*)	M115 Sewage Screen - Water (P/A***)				
M030 Micro 5	M032 Allergenco-D	M015 Heterotrophic Plate Count	M116 Sewage Screen - Water (MPN**)				
M041 Fungal Direct Examination		M017 Total Coliform & E. coli (Colilert P/A***)	M117 Sewage Screen - Swab (P/A***)				
M169 Pollen ID & Enumeration		M018 Total Coliform & E. coli (MFT*)	M013 Sewage Screen - Swab (MFT*)				
M280 Dust Characterization Level-1		M114 Total Coliform & E. coli Enumeration (Colilert MPN**)	M133 Methicillin-resistant Staph. aureus (MRSA)				
M281 Dust Characterization Level-2		M019 Fecal Coliform (MFT*)	M031 Rapid-growing non-TB Mycobacteria Detection & Enumeration				
M005 Viable Fungi- Air Samples (Genus ID & Count)		M020 Fecal Streptococcus (MFT*)	M014 Endotoxin Analysis				
M006 Viable Fungi- Air Samples (Includes Penicillium, Aspergillus, Cladosporium, Stachybotrys Species ID & Count)		M029 Enterococci (MFT*)	M044 Group Allergen (Cat, Dog, Cockroach, Dust Mite)				
M007 Culturable fungi - Surface Samples (Genus ID & Count)		M129 Enterococci (Enterolert P/A***)	Other See Analytical Price Guide				
M008 Culturable fungi - Surface Samples (Includes Penicillium, Aspergillus, Cladosporium, Stachybotrys Species ID & Count)		M180 Real Time qPCR-ERMI 36 Panel	Legionella Analysis Please use EMSL Legionella COC				
M009 Bacteria Culture Gram Stain & Count		M025 Sewage Screen -Water (MFT*)					
M010 Bacteria Count & ID - 3 Most Prominent							
M011 Bacteria Count & ID - 5 Most Prominent							
M012 Pseudomonas aeruginosa (P/A***)							
Name of Sampler: Jude Fonseka		Signature of Sampler:					
Sample #	Sample Location/Description	Sample Type	Potable/NonPotable (only for waters)	Test Code	Volume/Area	Date/Time Collected	Temperature (°C) (Lab Use Only)
1 T	Hallway Next To CR 101	Air		M001	75L	2/28/2021	
2 T	Hallway Next to CR 205	Air		M001	75L	2/28/2021	
3 T	Outside Exterior EV Sample	Air		M001	75L	2/28/2021	+
4 T	Field Blank	Air		N/A	N/A	2/28/2021	
Client Sample # (s): -		Total # of Samples: 04		Samples Received Chilled? Yes / No			
Relinquished (Client):		Date:		Time:			
Received (Lab): L. Kenneth Prop Box		Date:		Time:			
Comments/Special Instructions: OB Ro 3-3-21 10:30 (u)							

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EMSL ANALYTICAL, I
BELLEVILLE, MD
2021 FEB 29 A 6:30