

March 1, 2021

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

Attention: Alex Baylor
alex.baylor@pgcps.org

Subject: Indoor Air Quality Survey
Chapel Forge Early Childhood Center
12711 Milan Way
Bowie, MD 20715

Mr. Baylor:

On December 2, 2020 and February 20, 2021 a Soil and Land Use Technology, Inc. (SaLUT) Industrial Hygienist conducted an indoor air quality (IAQ) evaluation at Chapel Forge Early Childhood Center, a property maintained by Prince George's County Public School (PGCPS) located at 12711 Milan Way, Bowie, MD 20715. The inspection was performed in accordance with PGCPS contract number IFB 022-19.

Corrective Measures Implemented by PGCPS

On February 20, 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, PGCPS implemented the following corrective measures in the cafeteria:

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 Chapel Forge Early Childhood Center, visited on December 2, 2020 and February 20, 2021, respectively.

Table 1.1-Observations

Location	Summary of Observations 12-02-2020
Cafeteria	2’x4’ ceiling tiles and 1’x1’ tile floor; No visual signs of microbial growth, and no odor; One stained ceiling tile; No visible dust on floor/other furniture surfaces; No visible dust around ventilator; Central AC.
Hallway next to Classroom 3	2’x4’ ceiling tiles and 9”x 9” 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.
Hallway next to Classroom 22	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.
Hallway next to Classroom 24	2’x4’ ceiling tiles and 9”x 9” 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.
Hallway next to Pupil Services	2’x4’ ceiling tiles and 9”x 9” and 1’x1’ 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 and cold

Table 1.2-Observations

Location	Summary of Observations 02-20-2021
Cafeteria	2'x4' ceiling tiles and 1'x1' tile floor; No visual signs of microbial growth, and no odor; Stained ceiling tiles were replaced.
Outside Exterior EV Sample	Sunny, windy, chilly and clear sky

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 lower than 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 2, 2020, the outdoor (building exterior) CO₂ concentration was approximately 427 ppm therefore indoor concentrations should not exceed approximately 1,127 ppm (700 + 427). The maximum average interior CO₂ concentration detected was 510 ppm in the Cafeteria, a range within the ASHRAE recommendations, per Table 2 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 below.

**Table 2.1: Chapel Forge Early Childhood Center - Instrumental Screening Levels
December 2, 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 1,127
Cafeteria	68.0	31.5	0	510
Hallway next to Classroom 3	65.3	31.9	0	449
Hallway next to Classroom 22	60.8	34.6	0	446
Hallway next to Classroom 24	61.7	37.2	0	438
Hallway next to Pupil Services	59.0	38.4	0	441
Outside Exterior EV Sample	57.2	35.7	0	427

**Table 2.2: Chapel Forge Early Childhood Center - Instrumental Screening Levels
February 20, 2021 (7:30 AM-9:30 AM)**

Sample Location Standards	Temp °F	RH%	CO ppm	CO ₂ ppm
Standards	ASHRAE 68 to 75°F*	ASHRAE <65%	NAAQS 9	ASHRAE 1,127
Cafeteria	65.3	17.7	0	545
Outside Exterior EV Sample	43.7	29.8	0	490

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.

Table 3.1: summarizes airborne mold spore sampling results and locations. On December 2, 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 Cafeteria and Hallway next to Classroom 24 .

Table 3.2: Summarizes airborne mold spore sampling results and locations. On February 20, 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: Chapel Forge Early Childhood Center - Measurements of Mold-in-Air Samples
December 2, 2020 (7:30 AM-9:30 AM)

Spore Types	Cafeteria	Hallway next to Classroom 3	Hallway next to Classroom 22	Hallway next to Classroom 24
<i>Alternaria (Ulocladium)</i>	-	-	-	-
<i>Ascospores</i>	40	40	-	80
<i>Aspergillus/Penicillium</i>	7,590	200	80	300
<i>Basidiospores</i>	900	410	200	1400
<i>Bipolaris++</i>	-	-	-	-
<i>Chaetomium</i>	40	-	-	-
<i>Cladosporium</i>	2,800	300	40	200
<i>Curvularia</i>	40	-	-	-
<i>Epicoccum</i>	-	-	-	-
<i>Fusarium</i>	-	-	-	-
<i>Ganoderma</i>	-	-	-	-
<i>Myxomycetes++</i>	200	-	40	-
<i>Pithomyces++</i>	-	-	-	-
<i>Rust</i>	-	40	-	-
<i>Scopulariopsis/Microascus</i>	-	-	-	-
<i>Stachybotrys/Memnoniella</i>	300	-	-	-
<i>Unidentifiable Spores</i>	-	-	-	-
<i>Zygomycetes</i>	-	-	-	-
<i>Nigrospora</i>	-	-	-	-
<i>Hyphal Fragment</i>	300	80	40	-
<i>Insect Fragment</i>	200	-	40	-
<i>Pollen</i>	-	-	-	-
Total Fungi	12,410	1,070	440	1,980

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

++Includes other spores with similar morphology.

Table 3.1: Chapel Forge Early Childhood Center - Measurements of Mold-in-Air Samples continued
December 2, 2020 (7:30 AM-9:30 AM)

Spore Types	Hallway next to Pupil Services	Outside Exterior EV Sample	Field Blank	
<i>Alternaria (Ulocladium)</i>	-	-	-	
<i>Ascospores</i>	80	40	-	
<i>Aspergillus/Penicillium</i>	400	-	-	
<i>Basidiospores</i>	400	820	-	
<i>Bipolaris++</i>	-	-	-	
<i>Chaetomium</i>	-	40	-	
<i>Cladosporium</i>	300	660	-	
<i>Curvularia</i>	-	-	-	
<i>Epicoccum</i>	-	-	-	
<i>Fusarium</i>	-	-	-	
<i>Ganoderma</i>	-	-	-	
<i>Myxomycetes++</i>	-	40	-	
<i>Pithomyces++</i>	-	-	-	
<i>Rust</i>	-	40	-	
<i>Scopulariopsis/Microascus</i>	-	-	-	
<i>Stachybotrys/Memnoniella</i>	--	-	-	
<i>Unidentifiable Spores</i>	-	-	-	
<i>Zygomycetes</i>	-	-	-	
<i>Nigrospora</i>	-	-	-	
<i>Hyphal Fragment</i>	40	40	-	
<i>Insect Fragment</i>	-	10*	-	
<i>Pollen</i>	-	-	-	
Total Fungi	1,220	1,690	No Trace	

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

++Includes other spores with similar morphology.

Table 3.2: Chapel Forge Early Childhood Center - Measurements of Mold-in-Air Samples
February 20, 2021 (7:30 AM-9:30 AM)

Spore Types	Cafeteria	Outside Exterior EV Sample	Field Blank
<i>Alternaria (Ulocladium)</i>	-	-	-
<i>Ascospores</i>	-	-	-
<i>Aspergillus/Penicillium</i>	80	100	-
<i>Basidiospores</i>	40	300	-
<i>Bipolaris++</i>	-	-	-
<i>Chaetomium</i>	-	-	-
<i>Cladosporium</i>	40	-	-
<i>Curoularia</i>	-	-	-
<i>Epicoccum</i>	-	-	-
<i>Fusarium</i>	-	-	-
<i>Ganoderma</i>	-	-	-
<i>Myxomycetes++</i>	40	80	-
<i>Pithomyces++</i>	-	-	-
<i>Rust</i>	-	-	-
<i>Scopulariopsis/Microascus</i>	-	-	-
<i>Stachybotrys/Memmoniella</i>	-	-	-
<i>Unidentifiable Spores</i>	-	-	-
<i>Zygomycetes</i>	-	-	-
<i>Nigrospora</i>	-	-	-
<i>Hyphal Fragment</i>	-	-	-
<i>Insect Fragment</i>	-	-	-
<i>Pollen</i>	-	-	-
Total Fungi	200	480	No Trace

*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 with the exception of the temperature. On December 2, 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 Cafeteria and Hallway next to Classroom 24 , indicating amplified mold growth.

On February 20, 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.

10768 Baltimore Avenue Beltsville, MD 20705

Tel/Fax: (301) 937-5700 / (301) 937-5701

<http://www.EMSL.com> / beltsvillelab@emsl.com

EMSL Order: 192011887

Customer ID: SALU50

Customer PO:

Project ID:

Attention: Indika Jayatilake
SaLUT
1818 New York Avenue, NE
Suite 231
Washington, DC 20002

Project: Chapel Forge/ PGCPs IAQ

Phone: (301) 595-3783

Fax: (301) 595-3787

Collected Date: 12/02/2020

Received Date: 12/02/2020 02:32 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:	192011887-0001			192011887-0002			192011887-0003		
Client Sample ID:	01			02			03		
Volume (L):	75			75			75		
Sample Location:	Cafeteria			H/W next to CR 22			H/W next to CR 3		
Spore Types	Raw Count	Count/M ³	% of Total	Raw Count	Count/M ³	% of Total	Raw Count	Count/M ³	% of Total
Alternaria (Ulocladium)	-	-	-	-	-	-	-	-	-
Ascospores	1	40	0.3	-	-	-	1	40	4
Aspergillus/Penicillium	185	7590	63.7	2	80	22.2	4	200	20.2
Basidiospores	22	900	7.6	6	200	55.6	10	410	41.4
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium	1	40	0.3	-	-	-	-	-	-
Cladosporium	68	2800	23.5	1	40	11.1	8	300	30.3
Curvularia	1	40	0.3	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-
Fusarium	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	-	-	-	-	-	-
Myxomycetes++	4	200	1.7	1	40	11.1	-	-	-
Pithomyces++	-	-	-	-	-	-	-	-	-
Rust	-	-	-	-	-	-	1	40	4
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	7	300	2.5	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-
Zygomycetes	-	-	-	-	-	-	-	-	-
Total Fungi	289	11910	100	10	360	100	24	990	100
Hyphal Fragment	7	300	-	1	40	-	2	80	-
Insect Fragment	4	200	-	1	40	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	41	-	-	41	-	-	41	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-
Skin Fragments (1-4)	-	2	-	-	1	-	-	1	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-
Background (1-5)	-	3	-	-	1	-	-	1	-

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

Abubakar Barry, Microbiology Laboratory Manager
or other Approved Signatory

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Samples analyzed by EMSL Analytical, Inc. Beltsville, MD AIHA-LAP, LLC-EMLAP Accredited #102891

Initial report from: 12/03/2020 05:09 PM

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Project: Chapel Forge/ PGCPs IAQ

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Fax: (301) 595-3787

Collected Date: 12/02/2020

Received Date: 12/02/2020 02:32 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:	192011887-0004			192011887-0005			192011887-0006		
	Raw Count	Count/M ³	% of Total	Raw Count	Count/M ³	% of Total	Raw Count	Count/M ³	% of Total
04 75 H/W next to CR 24									
05 75 H/W next to pupil services									
06 75 Outside Exterior EV Sample									
Spore Types									
Alternaria (Ullocladium)	-	-	-	-	-	-	-	-	-
Ascospores	2	80	4	2	80	6.8	1	40	2.4
Aspergillus/Penicillium	7	300	15.2	9	400	33.9	-	-	-
Basidiospores	34	1400	70.7	9	400	33.9	20	820	50
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium	-	-	-	-	-	-	1	40	2.4
Cladosporium	6	200	10.1	7	300	25.4	16	660	40.2
Curvularia	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-
Fusarium	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	-	-	-	-	-	-
Myxomycetes++	-	-	-	-	-	-	1	40	2.4
Pithomyces++	-	-	-	-	-	-	-	-	-
Rust	-	-	-	-	-	-	1	40	2.4
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-
Zygomycetes	-	-	-	-	-	-	-	-	-
Total Fungi	49	1980	100	27	1180	100	40	1640	100
Hyphal Fragment	-	-	-	1	40	-	1	40	-
Insect Fragment	1*	10*	-	-	-	-	1*	10*	-
Pollen	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	41	-	-	41	-	-	41	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-
Skin Fragments (1-4)	-	1	-	-	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.

Abubakar Barry, Microbiology Laboratory Manager
or other Approved Signatory

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Initial report from: 12/03/2020 05:09 PM

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Phone: (301) 595-3783

Fax: (301) 595-3787

Collected Date: 12/02/2020

Received Date: 12/02/2020 02:32 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:	192011887-0007		
Client Sample ID:	07		
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	-	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.

Abubakar Barry, Microbiology Laboratory Manager
or other Approved Signatory

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Customer ID: SALU50
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Project: PGPCS IAQ Reports 19-035 Chapel Forge

Phone: (301) 595-3783
Fax: (301) 595-3787
Collected Date: 02/20/2021
Received Date: 02/22/2021 11:00 AM
Analyzed Date: 02/25/2021

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

Lab Sample Number:	372102619-0001			372102619-0002			372102619-0003		
Client Sample ID:	31626243			30199823			30199831		
Volume (L):	75						75		
Sample Location:	Multipurpose Rm			Field Blank			Outside Sample		
Spore Types	Raw Count	Count/M ³	% of Total	Raw Count	Count/M ³	% of Total	Raw Count	Count/M ³	% of Total
Alternaria (Ulocladium)	-	-	-	-	-	-	-	-	-
Ascospores	-	-	-	-	-	-	-	-	-
Aspergillus/Penicillium	2	80	40	-	-	-	3	100	20.8
Basidiospores	1	40	20	-	-	-	7	300	62.5
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	1	40	20	-	-	-	-	-	-
Curvularia	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-
Fusarium	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	-	-	-	-	-	-
Myxomycetes++	1	40	20	-	-	-	2	80	16.7
Pithomyces++	-	-	-	-	-	-	-	-	-
Rust	-	-	-	-	-	-	-	-	-
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-
Zygomycetes	-	-	-	-	-	-	-	-	-
Total Fungi	5	200	100	-	No Trace	-	12	480	100
Hyphal Fragment	-	-	-	-	-	-	-	-	-
Insect Fragment	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	41	-	-	0	-	-	41	-
Analyt. Sensitivity 300x	-	13*	-	-	0*	-	-	13*	-
Skin Fragments (1-4)	-	2	-	-	-	-	-	1	-
Fibrous Particulate (1-4)	-	1	-	-	-	-	-	1	-
Background (1-5)	-	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: 02/25/2021 11:16 AM

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



EMSL ANALYTICAL, INC.
LABORATORY PRODUCTS TRADING

Microbiology Chain of Custody

EMSL Order Number (Lab Use Only):

192011887

PHONE:

FAX:

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: Chapel Forge / PGCPs IAQ		Please Provide Results: <input type="checkbox"/> Fax <input checked="" type="checkbox"/> Email					
Location Address: 12711 Milan Way, Bowie, MD 20715		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		*MFT= Membrane Filtration Technique					
M011 Bacteria Count & ID - 5 Most Prominent		**MPN= Most Probable Number					
M012 Pseudomonas aeruginosa (P/A***)		***P/A= Presence/Absence					
Name of Sampler: Jude Fonseca		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)
01	Cafeteria	Air		M001	75L	12/2/2020	
02	H/W next to CR 22	Air		M001	75L	12/2/2020	
03	H/W next to CR 3	Air		M001	75L	12/2/2020	
04	H/W next to CR 24	Air		M001	75L	12/2/2020	
05	H/W next to pupil services	Air		M001	75L	12/2/2020	
06	Outside Exterior EV Sample	Air		M001	75L	12/2/2020	
Client Sample # (s):		Total # of Samples: 07		Samples Received Chilled? Yes / No			
Relinquished (Client):		Date:		Time:			
Received (Lab):		Date:		Time:			
Comments/Special Instructions:							

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Microbiology Chain of Custody



EMSL Order Number (Lab Use Only):

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PHONE: (301) 937-5700
FAX: (301) 937-5701

EMSL ANALYTICAL, INC.
LABORATORY PRODUCTS TRAINING

Company Name: SaLUT
Street: 1818 New York Avenue, NE Suite 231
City: Washington **State/Province:** DC **Zip/Postal Code:** 20002 **Country:** US
Report To (Name): Indika Jayatilake **Telephone #:** 301-595-3783
Email Address: ijayatilake@salutinc.com **Fax #:** 301-595-3787 **Purchase Order:**
Project Name/Number: PGPCS IAQ Reports 19-035 *Chapel Forge* **Please Provide Results:** Fax Email
U.S. State Samples Taken: MD **Project Zip Code:** **Connecticut Samples:** Commercial Residential
Sterile, Sodium Thiosulfate Preserved Bottle Used: **Biocide Used in Source (specify):**
Public Water Supply Samples: **Note: All results may automatically be reported to DOH if required by state.**

Turnaround Time (TAT) Options - Please Check

3 Hour 6 Hour 24 Hour 48 Hour 72 Hour 96 Hour 1 Week 2 Week

Microbiology Test Codes			
M001 Air-O-Cell	M174 MoldSnap	M012 <i>Pseudomonas aeruginosa</i> (P/A***)	M115 Sewage Screen - Water (P/A***)
M030 Micro 5	M032 Allergenco-D	M024 <i>Pseudomonas aeruginosa</i> (MFT*)	M116 Sewage Screen - Water (MPN**)
M041 Fungal Direct Examination		M015 Heterotrophic Plate Count	M117 Sewage Screen - Swab (P/A***)
M169 Pollen ID & Enumeration		M017 Total Coliform & <i>E. coli</i> (Colilert P/A***)	M013 Sewage Screen - Swab (MFT*)
M280 Dust Characterization Level-1		M018 Total Coliform & <i>E. coli</i> (MFT*)	M133 Methicillin-resistant <i>Staph. aureus</i> (MRSA)
M281 Dust Characterization Level-2		M114 Total Coliform & <i>E. coli</i> Enumeration (Colilert MPN**)	M031 Rapid-growing non-TB <i>Mycobacteria</i> Detection & Enumeration
M005 Viable Fungi- Air Samples (Genus ID & Count)		M019 Fecal Coliform (MFT*)	M014 Endotoxin Analysis
M006 Viable Fungi- Air Samples (Includes <i>Penicillium</i> , <i>Aspergillus</i> , <i>Cladosporium</i> , <i>Stachybotrys</i> Species ID & Count)		M020 Fecal <i>Streptococcus</i> (MFT*)	M044 Group Allergen (Cat, Dog, Cockroach, Dust Mite)
M007 Culturable fungi - Surface Samples (Genus ID & Count)		M029 Enterococci (MFT*)	Other See Analytical Price Guide
M008 Culturable fungi - Surface Samples (Includes <i>Penicillium</i> , <i>Aspergillus</i> , <i>Cladosporium</i> , <i>Stachybotrys</i> Species ID & Count)		M129 Enterococci (Enterolert P/A***)	Legionella Analysis Please use EMSL Legionella COC
M009 Bacteria Culture Gram Stain & Count		M180 Real Time qPCR-ERMI 36 Panel	
M010 Bacteria Count & ID - 3 Most Prominent		M025 Sewage Screen -Water (MFT*)	
M011 Bacteria Count & ID - 5 Most Prominent			

*MFT= Membrane Filtration Technique
 **MPN= Most Probable Number
 ***P/A= Presence/Absence

Name of Sampler: *Jay Nchang* **Signature of Sampler:** *[Signature]*

Sample #	Sample Location/Description	Sample Type	Potable/NonPotable (Only for Waters)	Test Code	Volume/Area	Date/Time Collected	Temperature (°C) (Lab Use Only)
Example A1	Kitchen Sink/Tap	Water	<input checked="" type="checkbox"/> P <input type="checkbox"/> NP	M017	100 mL	9/1/13 4:00 PM	
3162 6243	Multi-purpose Rm	Air	<input type="checkbox"/> P <input type="checkbox"/> NP	M001	75l	2/21/21	
3019 9823	Field Blank	Air	<input type="checkbox"/> P <input type="checkbox"/> NP	M001		2/21/21	
3019 9931	Outside Sample	Air	<input type="checkbox"/> P <input type="checkbox"/> NP	M001	75l	2/21/21	
			<input type="checkbox"/> P <input type="checkbox"/> NP				
			<input type="checkbox"/> P <input type="checkbox"/> NP				

Client Sample # (s): *3* **Total # of Samples:** *3* **Samples Received Chilled?** Yes / No (Lab Use Only)
Relinquished (Client): *Jay Nchang* **Date:** *2/24/21* **Time:** *14:00*
Received (Lab): *L. Barwood, Drop Box* **Date:** **Time:**

Comments/Special Instructions:
Chapel Forge *Alien & 2-24-21 1100*

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