

March 15, 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
Rockledge Elementary School
2300 Mariner Drive
Woodbridge, VA 22192

Mr. Baylor:

On December 8, 2020 and February 15, 2021, a Soil and Land Use Technology, Inc. (SaLUT) Industrial Hygienist conducted an indoor air quality (IAQ) evaluation at Rockledge Elementary School, a property maintained by Prince George's County Public Schools (PGCPS) located at 2300 Mariner Drive, Woodbridge, VA 22192. The inspection was performed in accordance with PGCPS contract number IFB 022-19.

Corrective Measures Implemented by PGCPS

On February 15, 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 Multi-Purpose Room:

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 Rockledge Elementary School, visited on December 8, 2020 and February 15, 2021, respectively,

Table 1.1-Observations

Location	Summary of Observations 12-8-2020
In front of Main Office	2'x4' ceiling tiles and 1'x1' 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.
Between Classrooms 2 and 6	2'x4' ceiling tiles 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.
In front of Room 25	2'x4' ceiling tiles 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.
Between Stage Room and Auditorium	2'x4' ceiling tiles 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.
Multi-Purpose Room	2'x4' ceiling tiles 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

Table 1.2-Observations

Location	Summary of Observations 02-15-2021
Multi-Purpose Room	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	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 lower than the ASHRAE recommended ranges in all the representative spaces with the exception of the space in Front of Room 25.

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 8, 2020, the outdoor (building exterior) CO₂ concentration was approximately 561 ppm therefore indoor concentrations should not exceed approximately 1,261 ppm (700 + 561). The maximum average interior CO₂ concentration detected was 780 ppm between Classrooms 2 and 6, 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: Rockledge Elementary School, Instrumental Screening Levels
December 8, 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 1,261
In front of Main Office	61.6	31.4	0	744
Between Classrooms 2 and 6	66.2	31.6	0	780
In front of Room 25	68.0	26.8	0	660
Between Stage Room and Auditorium	65.3	25.8	0	624
Multi-Purpose Room	65.3	27.1	0	582
Outside Exterior EV Sample	50.1	39.2	0	561

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: Rockledge Elementary School, Instrumental Screening Levels
February 15, 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 1,216
Multi-Purpose Room	64.4	31.3	0	520
Outside Exterior EV Sample	55.4	427	0	516

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 8, 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 Multi-Purpose Room. Laboratory analysis follows this report (see attachment).

Table 3.2: Summarizes airborne mold spore sampling results and locations. On February 15, 2021, total mold counts in representative samples (spore count/m³ of air) in the Multi-Purpose Room were higher than the outdoor concentrations. Laboratory analysis follows this report (see attachment).

**Table 3.1: Rockledge Elementary School - Measurements of Mold-in-Air Samples
December 8, 2020 (7:30 AM-9:30 AM)**

Spore Types	In front of Main Office	Between Classrooms 2 and 6	In front of Room 25	Between Stage Room and Auditorium
<i>Alternaria (Ulocladium)</i>	-	-	-	-
<i>Ascospores</i>	80	40	40	-
<i>Aspergillus/Penicillium</i>	40	200	-	-
<i>Basidiospores</i>	930	460	460	590
<i>Bipolaris++</i>	-	-	-	-
<i>Chaetomium</i>	-	-	-	-
<i>Cladosporium</i>	40	30*	-	40
<i>Curularia</i>	-	-	-	-
<i>Epicoccum</i>	-	-	-	-
<i>Fusarium</i>	-	-	-	-
<i>Ganoderma</i>	-	-	-	-
<i>Myxomycetes++</i>	10*	10*	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>	-	-	-	10*
<i>Hyphal Fragment</i>	-	40	-	-
<i>Insect Fragment</i>	-	-	-	-
<i>Pollen</i>	-	-	-	-
Total Fungi	1,100	780	540	640

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

++Includes other spores with similar morphology.

**Table 3.1: Rockledge Elementary School -
Measurements of Mold-in-Air Samples continued
December 8, 2020 (7:30 AM-9:30 AM)**

Spore Types	Multi-Purpose Room	Outside Exterior EV sample	Field Blank
<i>Alternaria (Ulocladium)</i>	-	-	-
<i>Ascospores</i>	-	80	-
<i>Aspergillus/Penicillium</i>	9,500	200	-
<i>Basidiospores</i>	200	1,200	-
<i>Bipolaris++</i>	-	-	-
<i>Chaetomium</i>	-	-	-
<i>Cladosporium</i>	-	420	-
<i>Curvularia</i>	-	-	-
<i>Epicoccum</i>	-	40*	-
<i>Fusarium</i>	-	-	-
<i>Ganoderma</i>	-	-	-
<i>Myxomycetes++</i>	10*	40	-
<i>Pithomyces++</i>	-	10*	-
<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	9,710	2,030	No Trace

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

++Includes other spores with similar morphology.

**Table 3.2: Rockledge Elementary School -
Measurements of Mold-in-Air Samples
February 15, 2021 (7:30 AM-9:30 AM)**

Spore Types	Multi-Purpose Room	Outside EXT EV sample	Field Blank
<i>Alternaria (Ulocladium)</i>	-	10*	-
<i>Ascospores</i>	-	40	-
<i>Aspergillus/Penicillium</i>	510	300	-
<i>Basidiospores</i>	40	40	-
<i>Bipolaris++</i>	-	-	-
<i>Chaetomium</i>	-	-	-
<i>Cladosporium</i>	510	100	-
<i>Curvularia</i>	-	-	-
<i>Epicoccum</i>	-	10*	-
<i>Fusarium</i>	-	-	-
<i>Ganoderma</i>	-	-	-
<i>Myxomycetes++</i>	10*	-	-
<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	1,070	500	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. On December 8, 2020, total mold counts in representative area samples (spore count/m³ of air) in all the areas inspected were lower than the outdoor concentrations, indicating no amplified mold growth, with the exception of the Multi-Purpose Room.

On February 15, 2021, total mold counts in air samples (spore count/m³ of air) in the Multipurpose Room were significantly low, 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
Tel/Fax: (610) 828-3102 / (610) 828-3122
<http://www.EMSL.com> / plymouthmeetinglab@emsl.com

EMSL Order: 182003892
Customer ID: SALU50
Customer PO:
Project ID:

Attention: Indika Jayatilake
SaLUT
1818 New York Avenue, NE
Suite 231
Washington, DC 20002
Project: 09-035- Rockledge ES

Phone: (301) 595-3783
Fax: (301) 595-3787
Collected Date:
Received Date: 12/03/2020 01:45 PM
Analyzed Date: 12/07/2020

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

Lab Sample Number:	182003892-0001			182003892-0002			182003892-0003		
Client Sample ID:	S1			S2			S3		
Volume (L):	75			75			75		
Sample Location:	Infront of Main Office			Between CR 6 and 2			Infront of Room 25		
Spore Types	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total
Alternaria (Ulocladium)	-	-	-	-	-	-	-	-	-
Ascospores	2	80	7.3	1	40	5.4	1	40	7.4
Aspergillus/Penicillium	1	40	3.6	4	200	27	-	-	-
Basidiospores	22	930	84.5	11	460	62.2	11	460	85.2
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	1	40	3.6	2*	30*	4.1	-	-	-
Curvularia	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-
Fusarium	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	-	-	-	-	-	-
Myxomycetes++	1*	10*	0.9	1*	10*	1.4	1	40	7.4
Pithomyces++	-	-	-	-	-	-	-	-	-
Rust	-	-	-	-	-	-	-	-	-
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-
Zygomycetes	-	-	-	-	-	-	-	-	-
Nigrospora	-	-	-	-	-	-	-	-	-
Oidium	-	-	-	-	-	-	-	-	-
Total Fungi	27	1100	100	19	740	100	13	540	100
Hyphal Fragment	-	-	-	1	40	-	-	-	-
Insect Fragment	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	42	-	-	42	-	-	42	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-
Skin Fragments (1-4)	-	2	-	-	2	-	-	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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Samples analyzed by EMSL Analytical, Inc. Plymouth Meeting, PA AIHA-LAP, LLC-EMLAP Accredited #178659

Initial report from: 12/08/2020 09:20 AM

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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: Client Sample ID: Volume (L): Sample Location:	182003892-0004			182003892-0005			182003892-0006				
	S4	S5	S6	Between Stag Room and Audi.			Multipurpose Room			Outside	
Spore Types	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total		
Alternaria (Ulocladium)	-	-	-	-	-	-	-	-	-		
Ascospores	-	-	-	-	-	-	2	80	2.4		
Aspergillus/Penicillium	-	-	-	225	9500	97.8	4	200	6.1		
Basidiospores	14	590	92.2	4	200	2.1	28	1200	36.5		
Bipolaris++	-	-	-	-	-	-	-	-	-		
Chaetomium	-	-	-	-	-	-	-	-	-		
Cladosporium	1	40	6.3	-	-	-	10	420	12.8		
Curvularia	-	-	-	-	-	-	-	-	-		
Epicoccum	-	-	-	-	-	-	3*	40*	1.2		
Fusarium	-	-	-	-	-	-	-	-	-		
Ganoderma	-	-	-	-	-	-	-	-	-		
Myxomycetes++	-	-	-	1*	10*	0.1	1	40	1.2		
Pithomyces++	-	-	-	-	-	-	1*	10*	0.3		
Rust	-	-	-	-	-	-	-	-	-		
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-		
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-		
Unidentifiable Spores	-	-	-	-	-	-	-	-	-		
Zygomycetes	-	-	-	-	-	-	-	-	-		
Nigrospora	1*	10*	1.6	-	-	-	-	-	-		
Oidium	-	-	-	-	-	-	31	1300	39.5		
Total Fungi	16	640	100	230	9710	100	80	3290	100		
Hyphal Fragment	-	-	-	-	-	-	1	40	-		
Insect Fragment	-	-	-	-	-	-	-	-	-		
Pollen	-	-	-	-	-	-	-	-	-		
Analyt. Sensitivity 600x	-	42	-	-	42	-	-	42	-		
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-		
Skin Fragments (1-4)	-	2	-	-	2	-	-	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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Samples analyzed by EMSL Analytical, Inc. Plymouth Meeting, PA AIHA-LAP, LLC-EMLAP Accredited #178659

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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:	182003892-0007		
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	-	-	-
Nigrospora	-	-	-
Oidium	-	-	-
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.

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Customer ID: SALU50

Customer PO:

Project ID:

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Phone: (301) 595-3783

Fax: (301) 595-3787

Collected Date: 03/07/2021

Received Date: 03/08/2021 08:30 AM

Analyzed Date: 03/09/2021

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:	192102107-0001 1R 75 MULTIPURPOSE RM			192102107-0002 2R 75 OUTSIDE			192102107-0003 3R FIELD BLANK			
	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	11	480	39.3	-	-	-	-	-	-	-
Basidiospores	1	40	3.3	-	-	-	-	-	-	-
Bipolaris++	-	-	-	-	-	-	-	-	-	-
Chaetomium	-	-	-	-	-	-	-	-	-	-
Cladosporium	16	700	57.4	-	-	-	-	-	-	-
Curvularia	-	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-	-
Fusarium	-	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	-	-	-	-	-	-	-
Myxomycetes++	-	-	-	-	-	-	-	-	-	-
Pithomyces++	-	-	-	-	-	-	-	-	-	-
Rust	-	-	-	-	-	-	-	-	-	-
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-	-
Zygomycetes	-	-	-	-	-	-	-	-	-	-
Total Fungi	28	1220	100	-	None Detect	-	-	No Trace	-	-
Hyphal Fragment	-	-	-	1	40	-	-	-	-	-
Insect Fragment	-	-	-	-	-	-	-	-	-	-
Pollen	1*	10*	-	2	90	-	-	-	-	-
Analyt. Sensitivity 600x	-	44	-	-	44	-	-	0	-	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	0*	-	-
Skin Fragments (1-4)	-	1	-	-	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.

Abubakar Barry, Microbiology 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. Beltsville, MD AIHA-LAP, LLC-EMLAP Accredited #102891

Initial report from: 03/10/2021 12:46 PM

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



EMSL ANALYTICAL, INC.
LABORATORY PRODUCTS TRAINING

Microbiology Chain of Custody

EMSL Order Number (Lab Use Only):

182003892

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

Company Name: Salut Inc
Street: 1818 New York Ave NE Suite 231
City: Washington **State/Province:** DC **Zip/Postal Code:** **Country:**
Report To (Name): Indira Jayatilake **Telephone #:**
Email Address: *ijayatilake@salutinc.com* **Fax #:** **Purchase Order:**
Project Name/Number: *09-075- Rockledge ES* **Please Provide Results:** Fax Email
U.S. State Samples Taken: MD **Project Zip Code:** 20715 **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 <i>Enterococci</i> (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 <i>Enterococci</i> (Enterolert P/A***)	<i>Legionella</i> Analysis Please use EMSL <i>Legionella</i> 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: *Shenai Dinos* **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	
S1	Infront of Main office	Air	<input type="checkbox"/> P <input type="checkbox"/> NP	M001	75ml	12/08/20	
S2	Between CR leand 2	"	<input type="checkbox"/> P <input type="checkbox"/> NP	"	"	"	
S3	Infront of Room 25	"	<input type="checkbox"/> P <input type="checkbox"/> NP	"	"	"	
S4	Between Stgy room and Audh	"	<input type="checkbox"/> P <input type="checkbox"/> NP	"	"	"	
S5	Multi purpose Room	"	<input type="checkbox"/> P <input type="checkbox"/> NP	"	"	"	

Client Sample # (s): - **Total # of Samples:** 07 **Samples Received Chilled?** Yes / No (Lab Use Only)
Relinquished (Client): *[Signature]* **Date:** **Time:**
Received (Lab): *[Signature]* **Date:** **Time:**
Comments/Special Instructions:

RECEIVED
 EMSL ANALYTICAL, INC.
 BELTSVILLE, MD
 220 DEC -3 PM 1:45

EMSL Analytical, Inc.'s Laboratory Terms and Conditions are incorporated into this chain of custody by reference in their entirety. Submission to EMSL Analytical, Inc. constitutes acceptance and acknowledgment of all terms and conditions by Customer.

Microbiology Chain of Custody

EMSL Order Number (Lab Use Only):

182003892

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



EMSL ANALYTICAL, INC.
 LABORATORY • PRODUCTS • TRAINING

Additional pages of the chain of custody are only necessary if needed for additional sample information.

Sample #	Sample Location/Description	Sample Type	Potable/NonPotable (Only for Waters)	Test Code	Volume/Area	Date/Time Collected	Temperature (°C) (Lab Use Only)
S.6	Outside	Air	<input type="checkbox"/> P <input type="checkbox"/> NP	M01	25ml	12/07/20	
S.7	field blank	" "	<input type="checkbox"/> P <input type="checkbox"/> NP	"	"	"	
			<input type="checkbox"/> P <input type="checkbox"/> NP				
			<input type="checkbox"/> P <input type="checkbox"/> NP				
			<input type="checkbox"/> P <input type="checkbox"/> NP				
			<input type="checkbox"/> P <input type="checkbox"/> NP				
			<input type="checkbox"/> P <input type="checkbox"/> NP				
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			<input type="checkbox"/> P <input type="checkbox"/> NP				
			<input type="checkbox"/> P <input type="checkbox"/> NP				
			<input type="checkbox"/> P <input type="checkbox"/> NP				
			<input type="checkbox"/> P <input type="checkbox"/> NP				
Comments/Special Instructions:							

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.

182003892



EMSL Analytical, Inc.
Sample Transfer Form

Receiving Lab:	EMSL- BELTSVILLE	Phone Number:	3019375700
		Fax Number:	3019375701
Relinquished to:	EMSL- Plymouth Meeting	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:	09-035 - ROCKLEDGE ES		
Tests to be Performed:	M001		
Date Received:	12/3/20		
Date Relinquished:	12/3/20		
Date Due:	3 DAYS - DUE 12/8/20		
Special Instructions: (e.g. Work Order # , required qualifications, project specific procedures/modifications)			
Relinquished by (Signature): <i>L. Schwartz</i>	Date: 12/3/20	Received by (Signature): <i>[Signature]</i>	Date: 12.4.20
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:
<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>			

* 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.



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Microbiology Chain of Custody

EMSL Order Number (Lab Use Only)

192102107

PHONE:

FAX:

Company Name: SaLUT Inc.		EMSL-Bill to: <input checked="" type="checkbox"/> Same <input type="checkbox"/> Different <small>If Bill to is Different note instructions in Comments**</small>					
Street: 1818 New York Ave NE Suite 231		<i>Third Party Billing requires written authorization from third party</i>					
City: Washington	State/Province: DC	Zip/Postal Code: 20002	Country: USA				
Report To (Name): Indika Jayatilake		Telephone #: 301-595-3783					
Email Address: ijayatlake@salutinc.com		Fax #:	Purchase Order:				
Project Number/Location: / PGCPS IAQ Rockledge		Please Provide Results: <input type="checkbox"/> Fax <input checked="" type="checkbox"/> Email					
Location Address: GS		Connecticut Samples: <input type="checkbox"/> Commercial <input type="checkbox"/> Residential					
<small>*Analysis completed in accordance with EMSL's Terms and Conditions located in the Analytical Price Guide TATs are subject to methodology requirements</small>							
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 M012 Pseudomonas aeruginosa (P/A***)	M174 MoldSnap M032 Allergenco-D M024 Pseudomonas aeruginosa (MFT*) M015 Heterotrophic Plate Count M017 Total Coliform & E. coli (Colilert P/A***) M018 Total Coliform & E. coli (MFT*) M114 Total Coliform & E. coli Enumeration (Colilert MPN**) M019 Fecal Coliform (MFT*) M020 Fecal Streptococcus (MFT*) M029 Enterococci (MFT*) M129 Enterococci (Enterolert P/A****) M180 Real Time qPCR-ERMI 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 Staph. aureus (MRSA) M031 Rapid-growing non-TB Mycobacteria Detection & Enumeration M014 Endotoxin Analysis M044 Group Allergen (Cat, Dog, Cockroach, Dust Mite) Other See Analytical Price Guide Legionella Analysis Please use EMSL Legionella COC					
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 R	Multi Purpose Room	Air		M001	75L	03/07/21	
2 R	outside	Air		M001	75L	03/07/21	
3 R	field blank	Air		N/A	N/A	03/07/21	
		Air					
		Air					
Client Sample # (s):		Total # of Samples: 03	Samples Received Chilled? Yes / No				
Relinquished (Client):		Date:	Time:				
Received (Lab): L. Fonseka Drop Box		Date:	Time:				
Comments/Special Instructions:							