



Soil and Land Use Technology, Inc.

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May 24, 2019

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

Attention: Alex Baylor  
[alex.baylor@pgcps.org](mailto:alex.baylor@pgcps.org)

Subject: Indoor Air Quality Survey  
Gladys Noon Spellman Elementary School  
3324 - 64th Avenue  
Cheverly, MD 20785

Mr. Baylor:

On May 14, 2019, a Soil and Land Use Technology, Inc. (SaLUT) Industrial Hygienist conducted an indoor air quality (IAQ) evaluation at Gladys Noon Spellman Elementary School, a property maintained by the Prince George's County Public School (PGCPS) located at 3324 - 64th Avenue, Cheverly, MD 20785. The inspection was performed in accordance with PGPCS contract number IFB 022-19.

### **Methodology**

The IAQ evaluation conducted by SaLUT included a visual assessment, IAQ instrumentation screening, and a collection of interior air samples for mold in the 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. A MiniRAE 3000-photoionization detector (PID) was used to measure total volatile organic compounds (TVOC).

Respirable particulate in air (size classes PM<sub>2.5</sub>μ and PM<sub>10</sub>μ) was measured using the Particles Plus 8306 Handheld Particle Counter which was calibrated prior to sampling. 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 Gladys Noon Spellman Elementary School, visited on May 14, 2019.

**Table 1-Observations**

Location	Summary of Observations 5-14-2019
Classroom 102	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; Unit ventilator/Central HVAC system.
Classroom 106	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; Unit ventilator/Central HVAC system.
Classroom 114	2'x4' ceiling tiles and 1'x1' tile floor; Two stained ceiling tiles; No visual signs of microbial growth, and no odor; No visible dust on floor/other furniture surfaces; Unit ventilator/Central HVAC system.
Classroom 206	2'x4' ceiling tiles and 1'x1' tile floor; One stained ceiling tile; No visual signs of microbial growth, and no odor; No visible dust on floor/other furniture surfaces; Unit ventilator/Central HVAC system.
Classroom 212	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; Unit ventilator/Central HVAC system.
Hallway adjacent to Main Office	Active water leak; Visible suspected growth on fiberglass pipe insulation; "Univent" observed to have mismatch filters type.
Hallway adjacent to Supervisor Office	Active water leak; Visible stain on ceiling tile.
Hallway adjacent to Gymnasium	Active water leak; Visible stain on ceiling tile.

Location	Summary of Observations 5-14-2019
Cafeteria Office	Ceiling tiles have no visible stains; Ceiling tile has visible suspected microbial growth in corner of room.
Room 101	Ceiling tiles have no visible stains; Pipe underneath sink has condensation and standing water.
Majority of Classrooms throughout school	Wall convector unit condensate pans were wet, visible rust but no slime, or scale in condensate pan, condensate grille is in good condition; No visible stain on ceiling tiles; Windows were not open during school day; No visible water stain in sink cabinet.
Selected Second Floor Classrooms	Visible growth on stainless steel sink bowl; Debris observed on sinks; No visible stain on ceiling tiles; Wall convector unit condensate pan is dry with no scale, or rust build up.

**Measurements of Indoor Environmental Quality Parameters**

Table 2 depicts a summary of average measurements of comfort parameters and respirable particulates.

**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 with the exception of the some readings which were slightly lower than the ASHRAE comfort level.

**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 (CO<sub>2</sub>)**

Under conditions of maximum occupancy, ASHRAE Standard 62.1-2010, Appendix C, infers that the acceptable CO<sub>2</sub> upper limit is the prevailing outdoor CO<sub>2</sub> concentration plus 700 parts per million (ppm). On the day of the space evaluation, the outdoor (building exterior) CO<sub>2</sub> concentration was approximately 561 ppm therefore indoor concentrations should not exceed approximately 1,261 ppm (700 + 561). The maximum

average interior CO<sub>2</sub> concentration detected was 1,013 ppm in the Classroom 106 area, 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.

**Respirable Particulates**

Direct reading particulate monitoring did not identify a condition of concern. Particulate concentrations for two mass ranges with EPA ambient air quality guidelines (PM<sub>2.5</sub> and PM<sub>10</sub>) were below their respective NAAQS levels. On May 14, 2019, the highest average PM<sub>2.5</sub> concentration during the monitoring period was 0.004 mg/m<sup>3</sup> (4 µg/m<sup>3</sup>) in Classroom 102. This is compared to the NAAQS primary standard for PM<sub>2.5</sub> of 12 µg/m<sup>3</sup> annual mean. The highest average PM<sub>10</sub> concentration during the same period was 0.017 mg/m<sup>3</sup> (17 µg/m<sup>3</sup>) in Classroom 106. This is compared to NAAQS standard for PM<sub>10</sub> of 150 µg/m<sup>3</sup> 24 hour average.

**Total Volatile Organic Chemicals (TVOC)**

LEED’s standard of 500 µg/m<sup>3</sup> for TVOC (ANSI/ASHRAE Standard 62.1-2010) concentrations per the instrument’s level of detection for a healthy commercial building were used as the standard for TVOCs for this survey. Concentrations below this value can be considered as “background levels” and, at such low concentrations, they are extremely unlikely to cause any adverse health conditions to the occupants. Generally, values below 3000 µg/m<sup>3</sup> are unlikely to cause more than mild irritation or headaches, but to date no recognized industry standard has been established for TVOCs. Perfumes, colognes, and air fresheners as well as certain cleaning chemicals can all cause temporary increases in TVOC readings. TVOC readings cannot be used to establish OSHA limits on specific VOCs or be attributed to specific compounds.

**Table 2: Gladys Noon Spellman Elementary School Instrumental Screening Levels  
May 14, 2019 (9:45 AM-12:30 PM)**

Sample Location	Temp °F	RH%	CO ppm	CO <sub>2</sub> ppm	PM 2.5 mg/m <sup>3</sup>	PM 10 mg/m <sup>3</sup>	TVOC ppm
Standards	ASHRAE 68 to 75°F	ASHRAE <65%	NAAQS 9	ASHRAE 1,261	NAAQS 0.012	NAAQS 0.150	1.0
Classroom 102	68.9	55.3	0	861	0.004	0.015	0.2
Classroom 106	68.7	54.1	0	1013	0.003	0.017	0.1
Classroom 114	68.0	54.8	0	990	0.002	0.014	0
Classroom 206	67.1	53.6	0	827	0.001	0.016	0
Classroom 212	67.1	57.0	0	796	0.001	0.011	0

<b>Exterior of the building- Next to the entrance</b>	59.2	54.2	0	561	0.004	0.021	0
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PM - Particulate Matter size

°F - Degrees Fahrenheit

CO - Carbon Monoxide

ppm - parts per million

µg/m<sup>3</sup> - micrograms per cubic meter

RH% - % Relative Humidity

CO<sub>2</sub> - Carbon Dioxide

\* - Summer 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 summarizes airborne mold spore sampling results and locations. On May 14, 2019, total mold counts in representative samples (spore count/m<sup>3</sup> of air) in all the areas inspected were lower than the outdoor concentrations. Laboratory analysis follows this report (see attachment).

**Table 3: Gladys Noon Spellman Elementary School - Measurements of Mold-in-Air Samples  
May 14, 2019 (10:45 AM-1:30 PM)**

Spore Types	Outdoor next to the Building Entrance Area	Classroom 102	Classroom 106	Classroom 114
<i>Alternaria (Ulocladium)</i>	40	-	-	-
<i>Ascospores</i>	6,680	1,000	200	40
<i>Aspergillus/Penicillium</i>	-	200	200	-
<i>Basidiospores</i>	14,300	4,840	2,800	1,400
<i>Bipolaris++</i>	-	-	-	-
<i>Chaetomium</i>	-	-	-	-
<i>Cladosporium</i>	7,680	90	-	40
<i>Curvularia</i>	-	-	-	-
<i>Epicoccum</i>	200	-	-	-
<i>Fusarium</i>	-	-	-	-
<i>Ganoderma</i>	-	-	-	-
<i>Myxomycetes++</i>	90	40	-	10
<i>Pithomyces</i>	-	-	-	-
<i>Rust</i>	-	-	-	-
<i>Scopulariopsis/Microascus</i>	-	-	-	-
<i>Stachybotrys/Memmoniella</i>	-	-	-	-
<i>Unidentifiable Spores</i>	-	-	-	-
<i>Zygomycetes</i>	-	-	-	-
<i>Polythrincium</i>	10	-	-	-
<i>Hyphal Fragment</i>	200	40	90	-
<i>Insect Fragment</i>	-	-	-	-
<i>Pollen</i>	400	-	40	40
<b>Total Fungi</b>	<b>29,000</b>	<b>6,170</b>	<b>3,200</b>	<b>1,490</b>

\* Spore Counts per cubic meter of air (Counts/m<sup>3</sup>)

**Table 3: Gladys Noon Spellman Elementary School - Measurements of Mold-in-Air Samples continued**

**May 14, 2019 (10:45 AM-1:30 PM)**

Spore Types	Classroom 206	Classroom 212	Field Blank
<i>Alternaria (Ulocladium)</i>	-	-	-
<i>Ascospores</i>	40	-	-
<i>Aspergillus/Penicillium</i>	-	-	-
<i>Basidiospores</i>	2,700	960	-
<i>Bipolaris++</i>	-	-	-
<i>Chaetomium</i>	-	-	-
<i>Cladosporium</i>	40	-	-
<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>Botrytis</i>	-	-	-
<i>Hyphal Fragment</i>	40	-	-
<i>Insect Fragment</i>	-	-	-
<i>Pollen</i>	100	-	-
<b>Total Fungi</b>	<b>2,780</b>	<b>960</b>	<b>No Trace</b>

\* Spore Counts per cubic meter of air (Counts/m<sup>3</sup>)

**Findings and Conclusions**

The comfort parameters (i.e., temperature, RH, CO<sub>2</sub>, and CO levels) and respirable particulates in representative areas conform to ASHRAE and/or NAAQS guidelines with the exception of the some temperature readings which were slightly lower than the ASHRAE comfort level. On May 14, 2019, total mold counts in representative area samples (spore count/m<sup>3</sup> of air) in all the areas inspected were lower than the outdoor concentrations, indicating no amplified mold growth.

**Recommendations**

Based on the observations of the IAQ survey performed at Gladys Noon Spellman Elementary School, SaLUT recommends the following measures to address the indoor air quality concerns documented:

1. Repair active water leaks throughout the building to prevent future mold issues;
2. Replace stained ceiling tiles in above-mentioned locations.



Page 8 of 8

Thank you for the opportunity to provide industrial hygiene services for the Prince George's County Public School (PGCPS). If you have any questions, please contact me at 301.595.3783.

Sincerely,

A handwritten signature in black ink, appearing to read 'Jayatilake', written over a faint, illegible stamp or background.

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.

2500 Gateway Centre Blvd., Suite 600 Morrisville, NC 27560

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<b>EMSL Order:</b> 291905205
<b>Customer ID:</b> SALU50
<b>Customer PO:</b>
<b>Project ID:</b>

<b>Attn:</b> Indika Jayatilake SaLUT 1818 New York Avenue, NE Suite 218A Washington, DC 20002	<b>Phone:</b> (301) 595-3783 <b>Fax:</b> (301) 595-3787 <b>Collected:</b> 05/14/2019 <b>Received:</b> 05/14/2019 <b>Analyzed:</b> 05/20/2019
<b>Project:</b> PGPCS IAQ/19-035 Gladys Noon Spellman ES	

### 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	291905205-0001 27953575 75 Inside the Classroom 102 Area			291905205-0002 27953631 75 Inside the Classroom 106 Area			291905205-0003 27953788 75 Inside the Classroom 114 Area		
	Raw Count	Count/m³	% of Total	Raw Count	Count/m³	% of Total	Raw Count	Count/m³	% of Total
<b>Spore Types</b>									
Alternaria (Ulocladium)	-	-	-	-	-	-	-	-	-
Ascospores	23	1000	16.2	5	200	6.3	1	40	2.7
Aspergillus/Penicillium	4	200	3.2	5	200	6.3	-	-	-
Basidiospores	111	4840	78.4	65	2800	87.5	33	1400	94
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	2	90	1.5	-	-	-	1	40	2.7
Curvularia	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-
Fusarium	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	-	-	-	-	-	-
Myxomycetes++	1	40	0.6	-	-	-	1*	10*	0.7
Pithomyces++	-	-	-	-	-	-	-	-	-
Rust	-	-	-	-	-	-	-	-	-
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-
Zygomycetes	-	-	-	-	-	-	-	-	-
Polythrincium	-	-	-	-	-	-	-	-	-
<b>Total Fungi</b>	<b>141</b>	<b>6170</b>	<b>100</b>	<b>75</b>	<b>3200</b>	<b>100</b>	<b>36</b>	<b>1490</b>	<b>100</b>
Hyphal Fragment	1	40	-	2	90	-	-	-	-
Insect Fragment	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	1	40	-	1	40	-
Analyt. Sensitivity 600x	-	44	-	-	44	-	-	44	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-
Skin Fragments (1-4)	-	3	-	-	3	-	-	3	-
Fibrous Particulate (1-4)	-	2	-	-	2	-	-	2	-
Background (1-5)	-	3	-	-	3	-	-	3	-

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

*Alan Goldstein*  
 Alan Goldstein, Ph.D., Laboratory Manager  
 or other approved signatory

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. EMSL maintains liability limited to cost of analysis. 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. Interpretation and use of test results are the responsibility of the client. Samples received in good condition unless otherwise noted.

Samples analyzed by EMSL Analytical, Inc. Morrisville, NC AIHA-LAP, LLC--EMLAP Lab 173741

Initial report from: 05/20/2019 17:32:47

For information on the fungi listed in this report, please visit the Resources section at [www.emsl.com](http://www.emsl.com)



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**Phone:** (301) 595-3783

**Fax:** (301) 595-3787

**Collected:** 05/14/2019

**Received:** 05/14/2019

**Analyzed:** 05/20/2019

**Project:** PGPCS IAQ/19-035 Gladys Noon Spellman ES

### 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	291905205-0004 27953725 75 Inside the Classroom 206 Area			291905205-0005 27953751 75 Inside the Classroom 212 Area			291905205-0006 27953704 75 Outside Exterior EV Sample		
	Spore Types	Raw Count	Count/m³	% of Total	Raw Count	Count/m³	% of Total	Raw Count	Count/m³
Alternaria (Ulocladium)	-	-	-	-	-	-	1	40	0.1
Ascospores	1	40	1.4	-	-	-	153	6680	23
Aspergillus/Penicillium	-	-	-	-	-	-	-	-	-
Basidiospores	61	2700	97.1	22	960	100	327	14300	49.3
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	1	40	1.4	-	-	-	176	7680	26.5
Curvularia	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	5	200	0.7
Fusarium	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	-	-	-	-	-	-
Myxomycetes++	-	-	-	-	-	-	2	90	0.3
Pithomyces++	-	-	-	-	-	-	-	-	-
Rust	-	-	-	-	-	-	-	-	-
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-
Zygomycetes	-	-	-	-	-	-	-	-	-
Polythrincium	-	-	-	-	-	-	1*	10*	0
<b>Total Fungi</b>	<b>63</b>	<b>2780</b>	<b>100</b>	<b>22</b>	<b>960</b>	<b>100</b>	<b>665</b>	<b>29000</b>	<b>100</b>
Hyphal Fragment	1	40	-	-	-	-	4	200	-
Insect Fragment	-	-	-	-	-	-	-	-	-
Pollen	3	100	-	-	-	-	9	400	-
Analyt. Sensitivity 600x	-	44	-	-	44	-	-	44	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-
Skin Fragments (1-4)	-	3	-	-	2	-	-	1	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-
Background (1-5)	-	2	-	-	2	-	-	1	-

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

Alan Goldstein, Ph.D., Laboratory Manager  
or other approved signatory

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. EMSL maintains liability limited to cost of analysis. 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. Interpretation and use of test results are the responsibility of the client. Samples received in good condition unless otherwise noted.

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<b>Project:</b> PGPCS IAQ/19-035 Gladys Noon Spellman ES	

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

<b>Lab Sample Number:</b>	291905205-0007		
<b>Client Sample ID:</b>	27953706		
<b>Volume (L):</b>	Field Blank		
<b>Sample Location:</b>	Field Blank		
<b>Spore Types</b>	<b>Raw Count</b>	<b>Count/m³</b>	<b>% of Total</b>
Alternaria (Ulocladium)	-	-	-
Ascospores	-	-	-
Aspergillus/Penicillium	-	-	-
Basidiospores	-	-	-
Bipolaris++	-	-	-
Chaetomium	-	-	-
Cladosporium	-	-	-
Curvularia	-	-	-
Epicoccum	-	-	-
Fusarium	-	-	-
Ganoderma	-	-	-
Myxomycetes++	-	-	-
Pithomyces++	-	-	-
Rust	-	-	-
Scopulariopsis/Microascus	-	-	-
Stachybotrys/Memnoniella	-	-	-
Unidentifiable Spores	-	-	-
Zygomycetes	-	-	-
Polythrincium	-	-	-
<b>Total Fungi</b>	-	<b>No Trace</b>	-
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.

Alan Goldstein, Ph.D., Laboratory Manager  
or other approved signatory

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. EMSL maintains liability limited to cost of analysis. 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. Interpretation and use of test results are the responsibility of the client. Samples received in good condition unless otherwise noted.

Samples analyzed by EMSL Analytical, Inc. Morrisville, NC AIHA-LAP, LLC--EMLAP Lab 173741

Initial report from: 05/20/2019 17:32:47

For information on the fungi listed in this report, please visit the Resources section at [www.emsl.com](http://www.emsl.com)

Client: SaLUT Test: M001 Air-O-Cell #Samples: 7  
 Order: 291905205 Project: PGPCS IAQ/19-035 Gladys Noon Spellman  
 Disposition: Discard after 6/14/2019 ES

ANALYTICAL, INC.  
 130 NORTH  
 NJ 08077  
 ) 220-3675

FAX: (609) 786-0262

LABORATORY PRODUCTS TRAINING

Company Name: Soil and Land Use Technology 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., 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: PGPCS IAQ/19-035 Gladys Noon Spellman ES		Please Provide Results: <input type="checkbox"/> Fax <input type="checkbox"/> Email					
U.S. State Samples Taken: MD		Project Zip Code:					
		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 type="checkbox"/> 72 Hour <input type="checkbox"/> 96 Hour <input checked="" type="checkbox"/> 1 Week <input type="checkbox"/> 2 Week				
<b>Microbiology Test Codes</b>							
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: Chaminda Jayatilake		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)
			<input checked="" type="checkbox"/> P <input type="checkbox"/> NP				
27953575	Inside the Classroom 102 area	Air	<input type="checkbox"/> P <input type="checkbox"/> NP	M001	75L	5-14-2019 9:45AM-11AM	
27953631	Inside the Classroom 106 area	Air	<input type="checkbox"/> P <input type="checkbox"/> NP	M001	75L	"	
27953788	Inside the Classroom 114 area	Air	<input type="checkbox"/> P <input type="checkbox"/> NP	M001	75L	"	
27953725	Inside the Classroom 206 area	Air	<input type="checkbox"/> P <input type="checkbox"/> NP	M001	75L	"	
27953751	Inside the Classroom 212 area	Air	<input type="checkbox"/> P <input type="checkbox"/> NP	M001	75L	"	
27953704	Outside exterior EV sample	Air	<input type="checkbox"/> P <input type="checkbox"/> NP	M001	75L	"	
Client Sample # (s): -		Total # of Samples:		Samples Received Chilled? Yes/(No) (Lab Use Only)			
Relinquished (Client):		Date:		Time:			
Received (Lab):		Date: 5/14/19		Time: 3:45 PM			
Comments/Special Instructions:							

