



Soil and Land Use Technology, Inc.

1818 New York Ave. NE, Ste 231, Washington, DC 20002

Telephone: (301) 595-3783  
www.salutinc.com

June 7, 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  
Clinton Grove Elementary School  
9420 Temple Hills Road  
Clinton, MD 20735

Mr. Baylor:

On May 15, 2019, a Soil and Land Use Technology, Inc. (SaLUT) Industrial Hygienist conducted an indoor air quality (IAQ) evaluation at Clinton Grove Elementary School, a property maintained by Prince George's County Public School (PGCPS), located at 9420 Temple Hills Road, Clinton, MD 20735. 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 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> $\mu$  and PM<sub>10</sub> $\mu$ ) 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 Clinton Grove Elementary School, visited on May 15, 2019.

**Table 1-Observations**

Location	Summary of Observations 5-15-2019
Main Office	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 and HVAC system.
Cafeteria	1’x1’ 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 and HVAC system.
Classroom 201	1’x1’ 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 and HVAC system.
Classroom 206	1’x1’ 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 and HVAC system.
Media Center	2’x2’ 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 and HVAC system.

**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 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 549 ppm therefore indoor concentrations should not exceed approximately 1,249 ppm (700 + 549). The maximum average interior CO<sub>2</sub> concentration detected was 1,199 ppm in the Classroom 201 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 15, 2019, the highest average PM<sub>2.5</sub> concentration during the monitoring period was 0.004 mg/m<sup>3</sup> (3 µg/m<sup>3</sup>) in Classroom 214. 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 0.087 mg/m<sup>3</sup> (87 µg/m<sup>3</sup>) in the Main Office. This is compared to the 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  $\mu\text{g}/\text{m}^3$  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: Clinton Grove Elementary School Instrumental Screening Levels**

**May 15, 2019**

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
<b>Standards</b>	ASHRAE 73 to 79°F*	ASHRAE <65%	NAAQS 9	ASHRAE 1,249	NAAQS 0.012	NAAQS 0.150	1.0
Main Office	76.1	45.5	0	841	0.003	0.087	0
Cafeteria	69.8	53.2	0	773	0.003	0.044	0
Classroom 201	69.8	50.8	0	1199	0.004	0.055	0
Classroom 206	68.6	45.1	0	746	0.002	0.015	0
Media Center	70.7	47.9	0	948	0.003	0.038	0
Exterior of the building- Next to the entrance	67.1	47.9	0	549	0.003	0.051	0

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

$\mu\text{g}/\text{m}^3$  - 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 15, 2019, total mold counts in representative samples (spore count/ $\text{m}^3$  of air) in all the areas inspected were lower than the outdoor concentrations. Laboratory analysis follows this report (see attachment).

**Table 3: Clinton Grove Elementary School - Measurements of Mold-in-Air Samples  
May 15, 2019**

Spore Types	Outdoor next to the Building Entrance Area	Main Office	Cafeteria	Classroom 201
<i>Alternaria (Ulocladium)</i>	-	40	-	-
<i>Ascospores</i>	2,500	1,800	1,200	100
<i>Aspergillus/Penicillium</i>	-	-	90	40
<i>Basidiospores</i>	8,730	1,700	3,400	1,100
<i>Bipolaris++</i>	-	-	-	-
<i>Chaetomium</i>	-	-	-	-
<i>Cladosporium</i>	1,200	90	200	90
<i>Curvularia</i>	-	-	-	-
<i>Epicoccum</i>	40	90	-	-
<i>Fusarium</i>	-	-	-	-
<i>Ganoderma</i>	-	-	-	-
<i>Myxomycetes++</i>	100	40	-	-
<i>Pithomyces++</i>	-	-	-	-
<i>Rust</i>	-	-	-	-
<i>Scopulariopsis/Microascus</i>	-	-	-	-
<i>Stachybotrys/Memmoniella</i>	-	-	-	-
<i>Unidentifiable Spores</i>	-	-	-	-
<i>Zygomycetes</i>	-	-	-	-
<i>Hyphal Fragment</i>	100	90	100	100
<i>Insect Fragment</i>	-	-	-	-
<i>Pollen</i>	-	-	-	-
<b>Total Fungi</b>	<b>12,570</b>	<b>3,760</b>	<b>4,890</b>	<b>1,330</b>

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

**Table 3: Clinton Grove Elementary School - Measurements of Mold-in-Air Samples continued**

**May 15, 2019**

<b>Spore Types</b>	<b>Classroom 206</b>	<b>Media Center</b>	<b>Field Blank</b>
<i>Alternaria (Ulocladium)</i>	-	-	-
<i>Ascospores</i>	200	1,300	-
<i>Aspergillus/Penicillium</i>	-	-	-
<i>Basidiospores</i>	2,000	2,400	-
<i>Bipolaris++</i>	-	-	-
<i>Chaetomium</i>	-	-	-
<i>Cladosporium</i>	90	570	-
<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>Hyphal Fragment</i>	100	90	-
<i>Insect Fragment</i>	-	-	-
<i>Pollen</i>	-	-	-
<b>Total Fungi</b>	<b>2,290</b>	<b>4,270</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 the representative areas conform to ASHRAE and/or NAAQS guidelines with the exception of some readings which were lower than the ASHRAE comfort level. On May 15, 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, not indicating amplified mold growth.

**Recommendations**

Based on the observations, mold spore results, and the results of the indoor air quality parameters tested, we have no recommendations at this time.



Page 7 of 7

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,

A handwritten signature in black ink that reads 'Jayatilake'.

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

Tel/Fax: (919) 465-3900 / (919) 465-3950

<http://www.EMSL.com> / [raleighlab@emsl.com](mailto:raleighlab@emsl.com)

<b>EMSL Order:</b> 291905200
<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> 05/15/2019 <b>Received:</b> 05/15/2019 <b>Analyzed:</b> 05/20/2019
<b>Project:</b> PGPCS IAQ/19-035 Clinton Grove 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	291905200-0001 28394335 75 Inside the Main Office Area			291905200-0002 28394287 75 Inside the Cafeteria Area			291905200-0003 28394314 75 Inside the Classroom 201 Area		
	Raw Count	Count/m³	% of Total	Raw Count	Count/m³	% of Total	Raw Count	Count/m³	% of Total
Spore Types									
Alternaria (Ulocladium)	1	40	1.1	-	-	-	-	-	-
Ascospores	41	1800	47.9	28	1200	24.5	3	100	7.5
Aspergillus/Penicillium	-	-	-	2	90	1.8	1	40	3
Basidiospores	38	1700	45.2	79	3400	69.5	26	1100	82.7
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	2	90	2.4	4	200	4.1	2	90	6.8
Curvularia	-	-	-	-	-	-	-	-	-
Epicoccum	2	90	2.4	-	-	-	-	-	-
Fusarium	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	-	-	-	-	-	-
Myxomycetes++	1	40	1.1	-	-	-	-	-	-
Pithomyces++	-	-	-	-	-	-	-	-	-
Rust	-	-	-	-	-	-	-	-	-
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-
Zygomycetes	-	-	-	-	-	-	-	-	-
<b>Total Fungi</b>	<b>85</b>	<b>3760</b>	<b>100</b>	<b>113</b>	<b>4890</b>	<b>100</b>	<b>32</b>	<b>1330</b>	<b>100</b>
Hyphal Fragment	2	90	-	3	100	-	3	100	-
Insect Fragment	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	44	-	-	44	-	-	44	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-
Skin Fragments (1-4)	-	3	-	-	3	-	-	3	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-
Background (1-5)	-	3	-	-	2	-	-	1	-

++ 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 16:03:43

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



# EMSL Analytical, Inc.

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

Tel/Fax: (919) 465-3900 / (919) 465-3950

<http://www.EMSL.com> / [raleighlab@emsl.com](mailto:raleighlab@emsl.com)

<b>EMSL Order:</b> 291905200
<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> 05/15/2019 <b>Received:</b> 05/15/2019 <b>Analyzed:</b> 05/20/2019
<b>Project:</b> PGPCS IAQ/19-035 Clinton Grove 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	291905200-0004 28394316 75 Inside the Classroom 206 Area			291905200-0005 28394284 75 Inside the Media Center Area			291905200-0006 28394341 75 Outside Exterior EV Sample		
	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	5	200	8.7	30	1300	30.4	58	2500	19.9
Aspergillus/Penicillium	-	-	-	-	-	-	-	-	-
Basidiospores	45	2000	87.3	54	2400	56.2	200	8730	69.5
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	2	90	3.9	13	570	13.3	28	1200	9.5
Curvularia	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	1	40	0.3
Fusarium	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	-	-	-	-	-	-
Myxomycetes++	-	-	-	-	-	-	3	100	0.8
Pithomyces++	-	-	-	-	-	-	-	-	-
Rust	-	-	-	-	-	-	-	-	-
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-
Zygomycetes	-	-	-	-	-	-	-	-	-
<b>Total Fungi</b>	<b>52</b>	<b>2290</b>	<b>100</b>	<b>97</b>	<b>4270</b>	<b>100</b>	<b>290</b>	<b>12570</b>	<b>100</b>
Hyphal Fragment	3	100	-	2	90	-	3	100	-
Insect Fragment	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	44	-	-	44	-	-	44	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-
Skin Fragments (1-4)	-	2	-	-	3	-	-	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*

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 16:03:43

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



# EMSL Analytical, Inc.

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

Tel/Fax: (919) 465-3900 / (919) 465-3950

<http://www.EMSL.com> / [raleighlab@emsl.com](mailto:raleighlab@emsl.com)

EMSL Order: 291905200

Customer ID: SALU50

Customer PO:

Project ID:

**Attn:** Indika Jayatilake  
SaLUT  
1818 New York Avenue, NE  
Suite 218A  
Washington, DC 20002

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

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

**Collected:** 05/15/2019

**Received:** 05/15/2019

**Analyzed:** 05/20/2019

**Project:** PGPCS IAQ/19-035 Clinton Grove 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>	291905200-0007		
<b>Client Sample ID:</b>	28394302		
<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	-	-	-
<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 16:03:43

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: 291905200 Project: PGPCS IAQ/19-035 Clinton Grove ES  
 Disposition: **Discard after 6/14/2019**

CAL, INC.  
 0 NORTH  
 VJ 08077  
 120-3675

EMSL ANALYTICAL SERVICES  
 LABORATORY PRODUCTS TRAINING

FAX: (855) 786-0262

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@safutinc.com		Fax #:	Purchase Order:				
Project Name/Number: PGPCS IAQ/19-035 Clinton Grove 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				
Microbiology Test Codes							
M001 Air-O-Cell	M174 MoldSnap	M024 Pseudomonas aeruginosa (MFT*)	M115 Sewage Screen - Water (PIA***)				
M030 Micro 5	M032 Allergenco-D	M015 Heterotrophic Plate Count	M116 Sewage Screen - Water (MPN**)				
M041 Fungal Direct Examination		M017 Total Coliform & E. coli (Collert P/A***)	M117 Sewage Screen - Swab (PIA***)				
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 (Collert 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 (PIA***)		***PIA= Presence/Absence					
Name of Sampler: Chaminda Jayatilake		Signature of Sampler: <i>[Signature]</i>					
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				
28394335	Inside the Main Office area	Air	<input type="checkbox"/> P <input type="checkbox"/> NP	M001	75L	5-15-2018 10:30AM-1:30PM	
28394336	Inside the Cafeteria area	Air	<input type="checkbox"/> P <input type="checkbox"/> NP	M001	75L	"	
28394314	Inside the Classroom 201 area	Air	<input type="checkbox"/> P <input type="checkbox"/> NP	M001	75L	"	
28394316	Inside the Classroom 206 area	Air	<input type="checkbox"/> P <input type="checkbox"/> NP	M001	75L	"	
28394284	Inside the Media Center area	Air	<input type="checkbox"/> P <input type="checkbox"/> NP	M001	75L	"	
28394341	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): <i>[Signature]</i>		Date: 5/15/19		Time: 3:10 PM			
Comments/Special Instructions:							

(7)

