



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  
Robert Gray Elementary School  
4949 Addison Road  
Capitol Heights, MD 20743

Mr. Baylor:

On May 14, 2019, a Soil and Land Use Technology, Inc. (SaLUT) Industrial Hygienist conducted an indoor air quality (IAQ) evaluation at Robert Gray Elementary School, a property maintained by the Prince George's County Public School (PGCPS) located at 4949 Addison Road, Capitol Heights, MD 20743. 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 Robert Gray Elementary School, visited on May 14, 2019.

**Table 1-Observations**

Location	Summary of Observations 5-14-2019
Classroom 102 (Secretary’s 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; Central HVAC system.
Music Room 150	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; Central HVAC system.
Classroom 214	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; Central HVAC system.
Classroom 244	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; Central HVAC system.
Science Lab 300	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; Active water leak and one stained ceiling tile; Two missing ceiling tiles; Central HVAC and unit ventilator system.
Classroom 334	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; Central 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 482 ppm therefore indoor concentrations should not exceed approximately 1,182 ppm (700 + 482). The maximum average interior CO<sub>2</sub> concentration detected was 1,087 ppm in the Classroom 214 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 0.003 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 0.017 mg/m<sup>3</sup> (17 µg/m<sup>3</sup>) in Classroom 214. 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: Robert Gray 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* 73 to 79°F	ASHRAE <65%	NAAQS 9	ASHRAE 1,182	NAAQS 0.012	NAAQS 0.150	1.0
Classroom 102 (Secretary’s Office)	68.0	49.7	0	568	0.001	0.005	0
Music Room 150	62.6	55.7	0	681	0.001	0.009	0
Classroom 214	69.8	57.6	0	1087	0.003	0.017	0.1
Classroom 244	65.3	53.9	0	506	0.002	0.016	0
Science Lab 300	68.9	53.2	0	721	0.001	0.004	0
Classroom 334	67.1	51.1	0	647	0.001	0.005	0
Exterior of the building- Next to the entrance	60.8	46.1	0	482	0.001	0.016	0

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: Robert Gray Elementary School - Measurements of Mold-in-Air Samples  
May 14, 2019 (9:45 AM-12:30 PM)**

Spore Types	Outdoor next to the Building Entrance Area	Classroom 102 (Secretary's Office)	Music Room 150	Classroom 214
<i>Alternaria (Ulocladium)</i>	-	-	-	-
<i>Ascospores</i>	9,990	300	-	200
<i>Aspergillus/Penicillium</i>	300	-	-	-
<i>Basidiospores</i>	1,500	790	700	1,400
<i>Bipolaris++</i>	-	-	-	-
<i>Chaetomium</i>	-	-	-	-
<i>Cladosporium</i>	1,100	-	-	40
<i>Curvularia</i>	-	-	-	-
<i>Epicoccum</i>	-	-	-	-
<i>Fusarium</i>	-	-	-	-
<i>Ganoderma</i>	-	-	-	-
<i>Myxomycetes++</i>	90	-	-	-
<i>Pithomyces</i>	-	-	-	-
<i>Rust</i>	-	-	-	-
<i>Scopulariopsis/Microascus</i>	-	-	-	-
<i>Stachybotrys/Memmoniella</i>	-	-	-	-
<i>Unidentifiable Spores</i>	-	-	-	-
<i>Zygomycetes</i>	-	-	-	-
<i>Bispora</i>	-	-	-	-
<i>Hyphal Fragment</i>	-	-	-	40
<i>Insect Fragment</i>	-	-	-	-
<i>Pollen</i>	-	-	-	-
<b>Total Fungi</b>	<b>12,980</b>	<b>1,090</b>	<b>700</b>	<b>1,640</b>

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

**Table 3: Robert Gray Elementary School - Measurements of Mold-in-Air Samples continued**

**May 14, 2019 (9:45 AM-12:30 PM)**

Spore Types	Classroom 244	Science Lab 300	Classroom 334	Field Blank
<i>Alternaria (Ulocladium)</i>	-	-	-	-
<i>Ascospores</i>	300	40	200	-
<i>Aspergillus/Penicillium</i>	-	-	-	-
<i>Basidiospores</i>	960	2,500	1,900	-
<i>Bipolaris++</i>	-	-	-	-
<i>Chaetomium</i>	-	-	-	-
<i>Cladosporium</i>	200	-	200	-
<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>	100	-	-	-
<i>Pollen</i>	-	-	-	-
<b>Total Fungi</b>	<b>1,220</b>	<b>2,540</b>	<b>2,300</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 readings which were 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 Robert Gray Elementary School, SaLUT recommends the following measures to address the indoor air quality concerns documented:

1. Replace missing and stained ceiling tiles in the Science Lab 300.



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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 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

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

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

**EMSL Order:** 291905199  
**Customer ID:** SALU50  
**Customer PO:**  
**Project ID:**

**Attn:** Indika Jayatilake  
 SaLUT  
 1818 New York Avenue, NE  
 Suite 218A  
 Washington, DC 20002  
**Project:** PGPCS IAQ/19-035 Robert Gray ES

**Phone:** (301) 595-3783  
**Fax:** (301) 595-3787  
**Collected:** 05/14/2019  
**Received:** 05/14/2019  
**Analyzed:** 05/18/2019

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

Lab Sample Number:	291905199-0001			291905199-0002			291905199-0003		
Client Sample ID:	27953733			27953694			27953806		
Volume (L):	75			75			75		
Sample Location	Inside Classroom 244 Area			Inside the Office 102 (Secretary) Area			Inside the Classroom 214 Area		
Spore Types	Raw Count	Count/m³	% of Total	Raw Count	Count/m³	% of Total	Raw Count	Count/m³	% of Total
Alternaria (Ulocladium)	-	-	-	-	-	-	-	-	-
Ascospores	7	300	20.5	7	300	27.5	5	200	12.2
Aspergillus/Penicillium	-	-	-	-	-	-	-	-	-
Basidiospores	22	960	65.8	18	790	72.5	31	1400	85.4
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	5	200	13.7	-	-	-	1	40	2.4
Curvularia	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-
Fusarium	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	-	-	-	-	-	-
Myxomycetes++	-	-	-	-	-	-	-	-	-
Pithomyces++	-	-	-	-	-	-	-	-	-
Rust	-	-	-	-	-	-	-	-	-
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-
Zygomycetes	-	-	-	-	-	-	-	-	-
<b>Total Fungi</b>	<b>34</b>	<b>1460</b>	<b>100</b>	<b>25</b>	<b>1090</b>	<b>100</b>	<b>37</b>	<b>1640</b>	<b>100</b>
Hyphal Fragment	3	100	-	-	-	-	1	40	-
Insect Fragment	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	44	-	-	44	-	-	44	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-
Skin Fragments (1-4)	-	2	-	-	2	-	-	3	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-
Background (1-5)	-	2	-	-	1	-	-	1	-

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

*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 08:39:55

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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### 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	291905199-0004 27953630 75 Inside the Science Lab 300 Area			291905199-0005 27953690 75 Inside the Classroom 334 Area			291905199-0006 27953679 75 Inside the Music Room 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	1	40	1.6	4	200	8.7	-	-	-
Aspergillus/Penicillium	-	-	-	-	-	-	-	-	-
Basidiospores	58	2500	98.4	43	1900	82.6	16	700	100
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	-	-	-	4	200	8.7	-	-	-
Curvularia	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-
Fusarium	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	-	-	-	-	-	-
Myxomycetes++	-	-	-	-	-	-	-	-	-
Pithomyces++	-	-	-	-	-	-	-	-	-
Rust	-	-	-	-	-	-	-	-	-
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-
Zygomycetes	-	-	-	-	-	-	-	-	-
<b>Total Fungi</b>	<b>59</b>	<b>2540</b>	<b>100</b>	<b>51</b>	<b>2300</b>	<b>100</b>	<b>16</b>	<b>700</b>	<b>100</b>
Hyphal Fragment	-	-	-	1	40	-	-	-	-
Insect Fragment	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	44	-	-	44	-	-	44	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-
Skin Fragments (1-4)	-	2	-	-	2	-	-	3	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-
Background (1-5)	-	2	-	-	1	-	-	2	-

++ 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>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> 05/18/2019
<b>Project:</b> PGPCS IAQ/19-035 Robert Gray 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	291905199-0007 27953680 75 Outside Exterior EV Sample			291905199-0008 27953663 Field Blank					
	Raw Count	Count/m³	% of Total	Raw Count	Count/m³	% of Total			
<b>Spore Types</b>									
Alternaria (Ulocladium)	-	-	-	-	-	-	-	-	-
Ascospores	229	9990	77	-	-	-	-	-	-
Aspergillus/Penicillium	7	300	2.3	-	-	-	-	-	-
Basidiospores	34	1500	11.6	-	-	-	-	-	-
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	26	1100	8.5	-	-	-	-	-	-
Curvularia	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-
Fusarium	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	-	-	-	-	-	-
Myxomycetes++	2	90	0.7	-	-	-	-	-	-
Pithomyces++	-	-	-	-	-	-	-	-	-
Rust	-	-	-	-	-	-	-	-	-
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-
Zygomycetes	-	-	-	-	-	-	-	-	-
<b>Total Fungi</b>	<b>298</b>	<b>12980</b>	<b>100</b>	-	<b>No Trace</b>	-	-	-	-
Hyphal Fragment	-	-	-	-	-	-	-	-	-
Insect Fragment	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	44	-	-	0	-	-	-	-
Analyt. Sensitivity 300x	-	13*	-	-	0*	-	-	-	-
Skin Fragments (1-4)	-	1	-	-	-	-	-	-	-
Fibrous Particulate (1-4)	-	1	-	-	-	-	-	-	-
Background (1-5)	-	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 08:39:55

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.  
LABORATORY PRODUCTS TRADING

### Microbiology Chain of Custody

EMSL Order Number (Lab Use Only):

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

Company Name: Soil and Land Use Technology 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., 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 Robert Gray 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			
<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 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 (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 <i>Penicillium</i> , <i>Aspergillus</i> , <i>Cladosporium</i> , <i>Stachybotrys</i> 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 <i>Penicillium</i> , <i>Aspergillus</i> , <i>Cladosporium</i> , <i>Stachybotrys</i> 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				<small>*MFT= Membrane Filtration Technique</small>			
M011 Bacteria Count & ID - 5 Most Prominent				<small>**MPN= Most Probable Number</small>			
M012 Pseudomonas aeruginosa (P/A***)				<small>***P/A= Presence/Absence</small>			
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)
27953733	Inside the Classroom 244 area	Air	<input checked="" type="checkbox"/> P <input type="checkbox"/> NP	M001	75L	5-14-2019 11:20AM-1PM	
27953694	Inside the Office 102(Secretary) area	Air	<input type="checkbox"/> P <input type="checkbox"/> NP	M001	75L	"	
27953806	Inside the Classroom 214 area	Air	<input type="checkbox"/> P <input type="checkbox"/> NP	M001	75L	"	
27953630	Inside the Science Lab 300 area	Air	<input type="checkbox"/> P <input type="checkbox"/> NP	M001	75L	"	
27953690	Inside the Classroom 334 area	Air	<input type="checkbox"/> P <input type="checkbox"/> NP	M001	75L	"	
27953679	Inside the Music Room area	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: 3:45pm			
Comments/Special Instructions:							

