Soil and Land Use Technology, Inc.
1818 New York Ave. NE, Ste 231, Washington, DC 20002
Telephone: (301) 595-3783
www.salutinc.com

March 1, 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
Heather Hills Elementary School
12605 Heming Lane #1199
Bowie, MD 20716

Mr. Baylor:

On December 2, 2020 and February 20,2021 a Soil and Land Use Technology, Inc. (SaLUT) Industrial Hygienist conducted an indoor air quality (IAQ) evaluation at Heather Hills Elementary School, a property maintained by Prince George's County Public Schools (PGCPS) located at 12605 Heming Lane #1199, Bowie, MD 20784. The inspection was performed in accordance with PGCPS contract number IFB 022-19.

Corrective Measures Implemented by PGPCS

On February 20, 2021, as part of this assessment, SaLUT conducted the IAQ evaluation, including IAQ instrumentation screening, and observations in affected areas. Prior to this assessment, in response to an initial assessment, DGS implemented the following corrective measures in the Hallway by Room11&12 and Multipurpose 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 Heather Hills Elementary School, visited on December 2, 2020 and February 20, 2021, respectively.

Table 1.1-Observations

Location	Summary of Observations 12-2-2020
Multipurpose Room	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.
1st Floor between Classroom 03 and 05	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.
1st Floor Classroom between C and D	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 Classroom 08	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.

Location	Summary of Observations 12-2-2020
2nd Floor Classroom between 11 and 12	2'x4' ceiling tiles and 1'x1' tile floor; Stained ceiling tiles ; 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 02-20-2021
Hallway by Room 11&12	2'x4' ceiling tiles and 1'x1' tile floor; No visual signs of microbial growth, and no odor; Stained ceiling tiles were replaced;
Multipurpose 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	It was sunny, windy, chilly and clear sky

Measurements of Indoor Environmental Quality Parameters

Table 2 depicts a summary of average measurements of comfort.

Temperature

The American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) have published recommendations for year round acceptable temperatures in Standard 55-2010 *Thermal Environmental Conditions for Human Occupancy*. The winter comfort range is 20 to 24°C (68 to 75°F) and 23 to 26°C (73 to 79°F) is the summer comfort range. The temperature readings were within the ASHRAE recommended ranges in the representative spaces.

Relative Humidity (RH)

RH is a key factor for mold growth. Mold has the potential of growing on suitable surfaces with humidity levels above 60%. ASHRAE Standard 62.1-2010 *Ventilation for Acceptable Indoor Air Quality* recommends a maximum indoor RH of 65% to preclude the likelihood of condensation on cool surfaces encouraging mold growth. The RH readings were within the ASHRAE recommended ranges in the representative areas.

Carbon Dioxide (CO_2)

Under conditions of maximum occupancy, ASHRAE Standard 62.1-2010, Appendix C, infers that the acceptable CO_2 upper limit is the prevailing outdoor CO_2 concentration plus 700 parts per million (ppm). On December 02 2020, the outdoor (building exterior) CO_2 concentration was approximately 405 ppm therefore indoor concentrations should

not exceed approximately 1,105 ppm (700 + 405). The maximum average interior CO_2 concentration detected was 665 ppm in the Multipurpose Room, 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: Heather Hills Elementary School, Instrumental Screening Levels December 2, 2020 (7:30 AM-9:30 AM)

Sample Location	Temp ^0F	RH%	CO ppm	CO_2 ppm
Standards	**ASHRAE 68 to 75°F***	**ASHRAE <65%**	**NAAQS 9**	**ASHRAE 1,105**
Multipurpose Room	68.5	34.5	0	665
1st Floor between Classroom 03 and 05	69.8	27.0	0	532
1st Floor Classroom between C and D	70.7	25.5	0	505
In front of Classroom 08	74.2	37.3	0	405
2nd Floor Classroom between 11 and 12	73.1	37.4	0	538
Outside Exterior EV Sample	48.2	40.7	0	405

Table 2.2: Heather Hills Elementary School, Instrumental Screening Levels February 20, 2021 (7:30 AM-9:30 AM)

Sample Location	Temp ^0F	RH%	CO ppm	CO_2 ppm
Standards	**ASHRAE 68 to 75°F***	**ASHRAE <65%**	**NAAQS 9**	**ASHRAE 1,105**
2nd Floor Classroom between 11 and 12	72.5	23.9	0	476
Multipurpose Room	59.8	30.2	0	514
Outside Exterior EV Sample	43.8	27.0	0	452

PM – Particulate Matter size
°F – Degrees Fahrenheit
CO – Carbon Monoxide
ppm – parts per million
$\mu g/m^3$ – micrograms per cubic meter
RH% - % Relative Humidity
CO_2 – 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.

Tables 3.1: summarizes airborne mold spore sampling results and locations. On December 2, 2020, total mold counts in representative samples (spore count/m^3 of air) in

all the areas inspected were lower than the outdoor concentrations. Laboratory analysis follows this report (see attachment).

Tables 3.2: Summarizes airborne mold spore sampling results and locations. On February 20, 2021, total mold counts in representative samples (spore count/m3 of air) in all the areas inspected were lower than the outdoor concentrations. Laboratory analysis follows this report (see attachment)

Table 3.1: Heather Hills Elementary School - Measurements of Mold-in-Air Samples December 2, 2020 (7:30 AM-9:30 AM)

Spore Types	Multipurpose Room	1st Floor between Classroom 03 and 05	1st Floor Classroom between C and D	In front of Classroom 08
Alternaria (Ulocladium)	-	-	-	-
Ascospores	40	40	-	-
Aspergillus/Penicillium	300	200	400	200
Basidiospores	1,400	570	300	200
Bipolaris++	-	-	-	-
Chaetomium	-	-	-	-
Cladosporium	40	200	80	80
Curvularia	-	-	-	-
Epicoccum	-	-	-	-
Fusarium	-	-	-	-
Ganoderma	-	-	-	40
Myxomycetes++	80	-	40	10
Pithomyces++	-	40	-	-
Rust	-	-	-	-
Scopulariopsis/Microascus	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-
Unidentifiable Spores	-	-	-	-
Zygomycetes	-	-	-	-
Nigrospora	-	-	-	-
Hyphal Fragment	40	200	-	10
Insect Fragment	-	40	-	10
Pollen	-	-	-	-
Total Fungi	**1,860**	**1,050**	**910**	**530**

* Spore Counts per cubic meter of air (Counts/m^3).
++Includes other spores with similar morphology.

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Table 3.1: Heather Hills Elementary School – Measurements of Mold-in-Air Samples continued December 2, 2020 (7:30 AM-9:30 AM)

Spore Types	2nd Floor Classroom between 11 and 12	Outside EXT EV sample	Field Blank
Alternaria (Ulocladium)	-	30	-
Ascospores	-	40	-
Aspergillus/Penicillium	1,400	-	-
Basidiospores	300	490	-
Bipolaris++	-	-	-
Chaetomium	-	-	-
Cladosporium	80	400	-
Curvularia	-	-	-
Epicoccum	-	-	-
Fusarium	-	-	-
Ganoderma	-	-	-
Myxomycetes++	-	80	-
Pithomyces++	-	-	-
Rust	-	30	-
Scopulariopsis/Microascus	-	-	-
Stachybotrys/Memnoniella	-	-	-
Unidentifiable Spores	-	-	-
Zygomycetes	-	-	-
Nigrospora	-	-	-
Hyphal Fragment	-	40	-
Insect Fragment	-	40	-
Pollen	-	-	-
Total Fungi	**1,780**	**1,070**	**No Trace**

*Spore Counts per cubic meter of air (Counts/m^3).
++Includes other spores with similar morphology.

Table 3.2: Heather Hills Elementary School – Measurements of Mold-in-Air Samples continued February 20, 2021 (7:30 AM-9:30 AM)

Spore Types	2nd Floor Classroom between 11 and 12	Multipurpose Room	Outside Exterior EV Sample	Field Blank
Alternaria (Ulocladium)	-	-	-	-
Ascospores	-	-	-	-
Aspergillus/Penicillium	-	-	100	-
Basidiospores	-	10*	80	-
Bipolaris++	-	-	-	-
Chaetomium	-	-	-	-
Cladosporium	10*	-	-	-
Curvularia	-	-	-	-
Epicoccum	-	-	-	-
Fusarium	-	-	-	-
Ganoderma	-	-	-	-
Myxomycetes++	-	-	-	-
Pithomyces++	-	-	-	-
Rust	-	-	-	-
Scopulariopsis/Microascus	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-
Unidentifiable Spores	-	-	-	-
Zygomycetes	-	-	-	-
Nigrospora	-	-	-	-
Hyphal Fragment	-	-	-	-
Insect Fragment	-	-	-	-
Pollen	-	-	-	-
Total Fungi	10	10	180	No Trace

Findings and Conclusions

The comfort parameters (i.e., temperature, RH, CO_2, and CO levels) in the representative areas conform to ASHRAE and/or NAAQS guidelines. On December 2, 2020, total mold counts in representative area samples (spore count/m^3 of air) in all the areas inspected were lower than the outdoor concentrations, with the exception of the 2nd Floor Classroom between 11 and 12 and Multipurpose Room indicating amplified mold growth.

On February 20, 2021, total mold counts in air samples (spore count/m3 of air) in the 2nd Floor Classroom between 11 and 12 and Multipurpose Room were significantly lower than the outdoor concentrations, indicating no amplified mold growth. Based on the observations, mold spore results, and the results of the indoor air quality parameters tested, the corrective actions implemented were determined to be effective.

Thank you for the opportunity to provide industrial hygiene services for PGCPS. If you have any questions, please contact me at 301.595.3783.

Sincerely,

Chaminda Jayatilake, PE, CIH, CSP, CHMM
Certified Industrial Hygienist
Soil and Land Use Technology Inc. (SaLUT)

Attachment

Attachment - Mold Spore Sample Analytical Results and Chain-of-Custody Forms

Attachment

Mold Spore Sample Analytical Results and Chain-of-Custody Forms

EMSL Analytical, Inc.

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EMSL Order: 192011881
Customer ID: SALU50
Customer PO:
Project ID:

Attention: Indika Jayatilake
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Project: 19-035- Heather

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Collected Date: 12/02/2020
Received Date: 12/02/2020 02:58 PM
Analyzed Date: 12/03/2020 - 12/04/2020

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

Lab Sample Number:	192011881-0001			192011881-0002			192011881-0003		
Client Sample ID:	S1			S2			S3		
Volume (L):	75			75			75		
Sample Location:	Multipurpose room			1st Floor between CR03 and 05			1st Floor CR between C and D		
Spore Types	**Raw Count**	**Count/M³**	**% of Total**	**Raw Count**	**Count/M³**	**% of Total**	**Raw Count**	**Count/M³**	**% of Total**
Alternaria (Ulocladium)	-	-	-	-	-	-	-	-	-
Ascospores	1	40	2.2	1	40	3.8	-	-	-
Aspergillus/Penicillium	8	300	16.1	4	200	19	12	490	53.8
Basidiospores	34	1400	75.3	14	570	54.3	7	300	33
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	1	40	2.2	6	200	19	2	80	8.8
Curvularia	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-
Fusarium	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	-	-	-	-	-	-
Myxomycetes++	2	80	4.3	-	-	-	1	40	4.4
Pithomyces++	-	-	-	1	40	3.8	-	-	-
Rust	-	-	-	-	-	-	-	-	-
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-
Zygomycetes	-	-	-	-	-	-	-	-	-
Total Fungi	**46**	**1860**	**100**	**26**	**1050**	**100**	**22**	**910**	**100**
Hyphal Fragment	1	40	-	4	200	-	-	-	-
Insect Fragment	-	-	-	1	40	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	41	-	-	41	-	-	41	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-
Skin Fragments (1-4)	-	1	-	-	2	-	-	1	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-
Background (1-5)	-	1	-	-	2	-	-	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

Initial report from: 12/04/2020 11:50 AM

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

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Collected Date: 12/02/2020
Received Date: 12/02/2020 02:58 PM
Analyzed Date: 12/03/2020 - 12/04/2020

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

Lab Sample Number:	192011881-0004			192011881-0005			192011881-0006		
Client Sample ID:	S4			S5			S6		
Volume (L):	75			75					
Sample Location:	2nd Floor CR between 11 and 12			In front of CR08			Field Blank		
Spore Types	**Raw Count**	**Count/M³**	**% of Total**	**Raw Count**	**Count/M³**	**% of Total**	**Raw Count**	**Count/M³**	**% of Total**
Alternaria (Ulocladium)	-	-	-	-	-	-	-	-	-
Ascospores	-	-	-	-	-	-	-	-	-
Aspergillus/Penicillium	33	1400	78.7	4	200	37.7	-	-	-
Basidiospores	7	300	16.9	6	200	37.7	-	-	-
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	2	80	4.5	2	80	15.1	-	-	-
Curvularia	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-
Fusarium	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	1	40	7.5	-	-	-
Myxomycetes++	-	-	-	1*	10*	1.9	-	-	-
Pithomyces++	-	-	-	-	-	-	-	-	-
Rust	-	-	-	-	-	-	-	-	-
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-
Zygomycetes	-	-	-	-	-	-	-	-	-
Total Fungi	**42**	**1780**	**100**	**14**	**530**	**100**	**-**	**No Trace**	**-**
Hyphal Fragment	-	-	-	1*	10*	-	-	-	-
Insect Fragment	-	-	-	1*	10*	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	41	-	-	41	-	-	0	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	0*	-
Skin Fragments (1-4)	-	2	-	-	2	-	-	-	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	-	-
Background (1-5)	-	2	-	-	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

Initial report from: 12/04/2020 11:50 AM

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Collected Date: 12/02/2020
Received Date: 12/02/2020 02:58 PM
Analyzed Date: 12/03/2020 - 12/04/2020

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

Lab Sample Number:	**192011881-0007**		
Client Sample ID:	**S7**		
Volume (L):	**75**		
Sample Location:	**Outside**		
Spore Types	**Raw Count**	**Count/M³**	**% of Total**
Alternaria (Ulocladium)	2*	30*	2.8
Ascospores	1	40	3.7
Aspergillus/Penicillium	-	-	-
Basidiospores	12	490	45.8
Bipolaris++	-	-	-
Chaetomium	-	-	-
Cladosporium	9	400	37.4
Curvularia	-	-	-
Epicoccum	-	-	-
Fusarium	-	-	-
Ganoderma	-	-	-
Myxomycetes++	2	80	7.5
Pithomyces++	-	-	-
Rust	2*	30*	2.8
Scopulariopsis/Microascus	-	-	-
Stachybotrys/Memnoniella	-	-	-
Unidentifiable Spores	-	-	-
Zygomycetes	-	-	-
Total Fungi	**28**	**1070**	**100**
Hyphal Fragment	1	40	-
Insect Fragment	1	40	-
Pollen	-	-	-
Analyt. Sensitivity 600x	-	41	-
Analyt. Sensitivity 300x	-	13*	-
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.

Abubakar Barry, Microbiology Laboratory Manager or other Approved Signatory

Initial report from: 12/04/2020 11:50 AM

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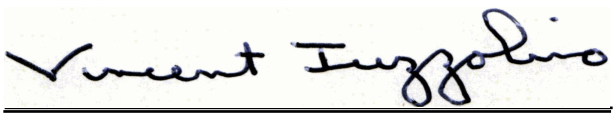
Fax: (301) 595-3787
Collected Date: 02/20/2021
Received Date: 02/22/2021 11:00 AM
Analyzed Date: 02/25/2021

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

Lab Sample Number:	372102617-0001			372102617-0002			372102617-0003		
Client Sample ID:	30199821			31626252			31626284		
Volume (L):	75			75			75		
Sample Location:	Outside Sample			Rm 11+12 Hallway			Multipourpose Rm		
Spore Types	**Raw Count**	**Count/M³**	**% of Total**	**Raw Count**	**Count/M³**	**% of Total**	**Raw Count**	**Count/M³**	**% of Total**
Alternaria (Ulocladium)	-	-	-	-	-	-	-	-	-
Ascospores	-	-	-	-	-	-	-	-	-
Aspergillus/Penicillium	3	100	55.6	-	-	-	-	-	-
Basidiospores	2	80	44.4	-	-	-	1*	10*	100
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	-	-	-	1*	10*	100	-	-	-
Curvularia	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-
Fusarium	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	-	-	-	-	-	-
Myxomycetes++	-	-	-	-	-	-	-	-	-
Pithomyces++	-	-	-	-	-	-	-	-	-
Rust	-	-	-	-	-	-	-	-	-
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-
Zygomycetes	-	-	-	-	-	-	-	-	-
Total Fungi	**5**	**180**	**100**	**1**	**10**	**100**	**1**	**10**	**100**
Hyphal Fragment	-	-	-	-	-	-	-	-	-
Insect Fragment	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	41	-	-	41	-	-	41	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-
Skin Fragments (1-4)	-	1	-	-	2	-	-	2	-
Fibrous Particulate (1-4)	-	1	-	-	2	-	-	2	-
Background (1-5)	-	1	-	-	1	-	-	1	-

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



Vincent Iuzzolino, M.S., Laboratory Manager
or other Approved Signatory

Initial report from: 02/25/2021 11:15 AM

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

EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077
Tel/Fax: (800) 220-3675 / (856) 786-0262
http://www.EMSL.com / cinnmicrolab@emsl.com

EMSL Order: 372102617
Customer ID: SALU50
Customer PO:
Project ID:

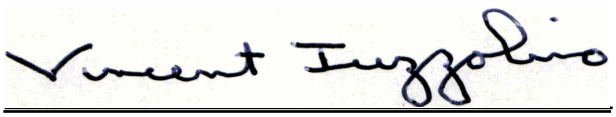
Attention: Indika Jayatilake
SaLUT
1818 New York Avenue, NE
Suite 231
Washington, DC 20002
Project: PGPCS IAQ Reports 19-035 Heather Hill ES

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

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

Lab Sample Number:	**372102617-0004**		
Client Sample ID:	**31626297**		
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	-	-	-
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.



Vincent Iuzzolino, M.S., Laboratory Manager
or other Approved Signatory

Initial report from: 02/25/2021 11:15 AM

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

OrderID: 192011881

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Microbiology Chain of Custody

EMSL Order Number (*Lab Use Only*): 192011881

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

Company Name: Salut Inc	**EMSL-Bill to:** ☐ Same ☐ Different If Bill to is Different note instructions in Comments
Street: 1818 New York Ave NE Suite 231	*Third Party Billing requires written authorization from third party.*
City: Washington **State/Province:** DC	**Zip/Postal Code:** **Country:**
Report To (Name): Indika Jayatilake	**Telephone #:**
Email Address: ijayatilake@salutinc.com	**Fax #:** **Purchase Order:**
Project Name/Number: 19-035-Heather	**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
M030 Micro 5
M174 MoldSnap
M032 Allergenco-D
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 *Penicillium, Aspergillus, Cladosporium, Stachybotrys* Species ID & Count)
M007 Culturable fungi - Surface Samples (Genus ID & Count)
M008 Culturable fungi - Surface Samples (Includes *Penicillium, Aspergillus, Cladosporium, Stachybotrys* 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***)
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

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

Name of Sampler: Shenal Dias **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)
Example A1	Kitchen Sink/Tap	Water	☒ P ☐ NP	M017	100 mL	9/1/13. 4:00 PM	
S1	Multi purpose room	Air	☐ P ☐ NP	M001	75ml	12/02/20	
S2	1st floor between CR03 and 05	"	☐ P ☐ NP	"	"	"	
S3	1st floor CR between C and D	"	☐ P ☐ NP	"	"	"	
S4	2nd floor CR between 11 and 12	"	☐ P ☐ NP	"	"	"	
S5	In Front of CR08	"	☐ P ☐ NP	"	"	"	

Client Sample # (s): -

Total # of Samples: 07

Samples Received Chilled? (Lab Use Only) **Yes / No**

Relinquished (Client): **Date:** **Time:**

Received (Lab): **Date:** **Time:**

RECEIVED
EMSL ANALYTICAL INC.
BELTSVILLE, MD
2020 DEC -2 P 2:53

Comments/Special Instructions:

Controlled Document – COC-34 Micro R8 11/14/2017

OrderID: 192011881

EMSL ANALYTICAL, INC.
LABORATORY•PRODUCTS•TRAINING

Microbiology Chain of Custody

EMSL Order Number *(Lab Use Only)*: 192011881

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

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)
S6	Outside	Air	☐P ☐NP	M001	75ml	12/02/20	
S7	Field blank	"	☐P ☐NP	"	"	"	
			☐P ☐NP				
			☐P ☐NP				
			☐P ☐NP				
			☐P ☐NP				
			☐P ☐NP				
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			☐P ☐NP				

Comments/Special Instructions:

Page ______ of ______

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.

Controlled Document – COC-34 Micro R8 11/14/2017

OrderID: 372102617

Microbiology Chain of Custody

EMSL Order Number (*Lab Use Only*): 372102617

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

EMSL Analytical, Inc.
10768 Baltimore Avenue
Beltsville, MD 20705
PHONE: (301) 937-5700
FAX: (301) 937-5701

Company Name: SaLUT		**EMSL-Bill to:** ☑ Same ☐ Different If 'Bill To' is different, note instructions in Comments *Third Party Billing requires written authorization from third party.*	
Street: 1818 New York Avenue, NE Suite 231			
City: Washington	**State/Province:** DC	**Zip/Postal Code:** 20002	**Country:** US
Report To (Name): Indika Jayatilake		**Telephone #:** 301-595-3783	
Email Address: ijayatilake@salutinc.com		**Fax #:** 301-595-3787	**Purchase Order:**
Project Name/Number: PGPCS IAQ Reports 19-035 Heather Hill ES		**Please Provide Results:** ☐ Fax ☑ Email	
U.S. State Samples Taken: MD	**Project Zip Code:**	**Connecticut Samples:** ☐ Commercial ☐ Residential	

Sterile, Sodium Thiosulfate Preserved Bottle Used: ☐ **Biocide Used in Source (specify):** ☐

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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

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

Name of Sampler: Jay Nchang **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)
Example A1	Kitchen Sink/Tap	Water	☒ P ☐ NP	M017	100 mL	9/1/13 4:00 PM	
3019 9821	Outside Sample	Air	☐ P ☐ NP	M001	751	2/21/21	
3162 6252	RM 11+12 Hallway	Air	☐ P ☐ NP	M001	751	2/21/21	
3162 6284	Multipurpose Rm	Air	☐ P ☐ NP	M001	751	2/21/21	
3162 6297	Field Blank	Air	☐ P ☐ NP	M001		2/21/21	
			☐ P ☐ NP				

Client Sample # (s): **Total # of Samples:** 4 **Samples Received Chilled?** (Lab Use Only) Yes / No

Relinquished (Client): Jay Nchang **Date:** 2/21/21 **Time:** 14:00

Received (Lab): L. Howarth Drop Box **Date:** **Time:**

Comments/Special Instructions:

Heather Hills Elementary School

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Page 1 of 1