Soil and Land Use Technology, Inc.
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March 15, 2021

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

Attention: Alex Baylor
alex.baylor@pgcps.org

Subject: Indoor Air Quality Survey
Baden Elementary School
13601 Baden Westwood Road
Brandywine, MD 20613

Mr. Baylor:

On November 18, 2020, and February 28, 2021 a Soil and Land Use Technology, Inc. (SaLUT) Industrial Hygienist conducted an indoor air quality (IAQ) evaluation at Baden Elementary School, a property maintained by Prince George's County Public School (PGCPS) located at 13601 Baden Westwood Road, Brandywine, MD 20613. The inspection was performed in accordance with PGCPS contract number IFB 022-19.

Corrective Measures Implemented by PGPCS

On February 28, 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, PGPCS implemented the following corrective measures in the Hallway next to Classroom 5 & 7 and Hallway near exit door 16:

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 Baden Elementary School, visited on November 18, 2020, and February 28, 2021, respectively.

Table 1.1-Observations

Location	Summary of Observations 11-18-2020
Cafeteria	White 2'x4' ceiling tiles and beige 9"x 9" floor tiles; No visual signs of microbial growth, and mild odor; Stained ceiling tile; No visible dust on floor/other furniture surfaces; Clean ventilator system; Central AC.
Hallway next Classroom 5 and 7	2'x4' ceiling tiles and 9"x 9" tile floor; No visual signs of microbial growth, and no odor; No visible dust on floor/other furniture surfaces; Clean ventilator system and central AC.
Hallway next to Classroom 12	2'x4' ceiling tiles and 9"x 9" tile floor; No visual signs of microbial growth, and no odor; No visible dust on floor/other furniture surfaces; Clean ventilator system and central AC.
Hallway next to Exit Door 14	2'x4' ceiling tiles and 9"x 9" tile floor; No visual signs of microbial growth, and no odor; No visible dust on floor/other furniture surfaces; Clean ventilator system and central AC.
Hallway next to Exit Door 16	2'x4' ceiling tiles and 9"x 9" tile floor; No visual signs of microbial growth, and no odor; No visible dust on floor/other furniture surfaces; Unit ventilator system and central AC.

Location	Summary of Observations 11-18-2020
Outside Exterior EV Sample	Windy and cold.

Table 1.2-Observations

Location	Summary of Observations 02-28-2021
Hallway next Classroom 5 and 7	2'x4' ceiling tiles and 9"x 9" tile floor; Stained ceiling tiles were replaced;
Hallway next to Exit Door 16	2'x4' ceiling tiles and 9"x 9" tile floor; Stained ceiling tiles were replaced.
Outside Exterior EV Sample	It was Raining.

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 November 18, 2021, the outdoor (building exterior) CO_2 concentration was approximately 749 ppm therefore indoor concentrations should not exceed approximately 1,449 ppm (700 + 749). The maximum average interior CO_2 concentration detected was 756 ppm in Hallway 16 Near Exit Door, 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: Baden Elementary School Instrumental Screening Levels
November 18, 2020 (7:30 AM-9:30 AM)

Sample Location	Temp ^{0}F	RH%	CO ppm	CO_2 ppm
Standards	ASHRAE 68 to 75°F*	ASHRAE <65%	NAAQS 9	ASHRAE 1,449
Cafeteria	71.6	34.5	0	511
Next to the Classroom 12	72.5	32.5	0	510
Next to Classroom 5 and 7 Hallway	73.4	33.6	0	507
Hallway 16 Near Exit Door	73.6	33.8	0	756
Hallway 14 Near the Exit Door	74.8	31.3	0	746
Outside Exterior EV Sample	74.3	54.5	0	749

PM – Particulate Matter size
°F – Degrees Fahrenheit
CO – Carbon Monoxide
ppm – parts per million
µg/m^3 – micrograms per cubic meter
RH% - % Relative Humidity
CO_2 – Carbon Dioxide
* - Winter Comfort Range

Table 2.2: Baden Elementary School Instrumental Screening Levels
February 28, 2021 (7:30 AM-9:30 AM)

Sample Location	Temp ^{0}F	RH%	CO ppm	CO_2 ppm
Standards	ASHRAE 68 to 75°F*	ASHRAE <65%	NAAQS 9	ASHRAE 1,449
Next to Classroom 5 and 7 Hallway	68.9	44.7	0	514
Hallway 16 Near Exit Door	70.7	40.8	0	510
Outside Exterior EV Sample	58.1	60.0	0	453

PM – Particulate Matter size
°F – Degrees Fahrenheit
CO – Carbon Monoxide
ppm – parts per million
µg/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 November 18, 2020, total mold counts in representative samples (spore count/m^3 of air)

in all the areas inspected were less than the outdoor concentrations with the exception of the Hallway next to Classroom 5 & 7 and Hallway near exit door 16. Laboratory analysis follows this report (see attachment).

Tables 3.2: Summarizes airborne mold spore sampling results and locations. On February 28, 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: Baden Elementary School - Measurements of Mold-in-Air Samples November 18, 2020 (7:30 AM-9:30 AM)

Spore Types	Cafeteria	Hallway Next to Class Room 12	Next to Classroom 5 and 7 Hallway	Hallway next to Exit Door 16
Alternaria (Ulocladium)	-	-	-	-
Ascospores	-	-	-	-
Aspergillus/Penicillium	90	570	2900	30100
Basidiospores	10*	40	90	-
Bipolaris++	-	-	-	-
Chaetomium	-	-	-	-
Cladosporium	-	-	300	3100
Curvularia	-	-	-	-
Epicoccum	-	-	10*	-
Fusarium	-	-	-	-
Ganoderma	-	-	-	-
Myxomycetes++	-	-	10*	40
Pithomyces++	-	-	-	-
Rust	-	-	-	-
Scopulariopsis/Microascus	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-
Unidentifiable Spores	-	-	-	-
Zygomycetes	-	-	-	-
Nigrospora	-	-	-	-
Hyphal Fragment	-	-	-	40
Insect Fragment	-	-	40	-
Pollen	-	-	-	-
Total Fungi	**100**	**610**	**3400**	**33240**

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

Table 3.1: Baden Elementary School - Measurements of Mold-in-Air Samples continued
November 18, 2020 (7:30 AM-9:30 AM)

Spore Types	Hallway next Exit Door 14	Outside Exterior EV Sample	Field Blank
Alternaria (Ulocladium)	-	10*	-
Ascospores	-	90	-
Aspergillus/Penicillium	200	400	-
Basidiospores	90	480	-
Bipolaris++	-	-	-
Chaetomium	-	-	-
Cladosporium	40	610	-
Curvularia	-	-	-
Epicoccum	-	-	-
Fusarium	-	-	-
Ganoderma	-	-	-
Myxomycetes++	10*	30*	-
Pithomyces++	-	-	-
Rust	10*	40	-
Scopulariopsis/Microascus		-	-
Stachybotrys/Memnoniella		-	-
Unidentifiable Spores		-	-
Zygomycetes		-	-
Nigrospora		-	-
Hyphal Fragment		-	-
Insect Fragment		-	-
Pollen		-	-
Total Fungi	**350**	**1690**	**No Trace**

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

Table 3.2: Baden Elementary School - Measurements of Mold-in-Air Samples
February 28, 2021 (7:30 AM-9:30 AM)

Spore Types	Next to Classroom 5 and 7 Hallway	Hallway next to Exit Door 16	Outside Exterior EV Sample	Field Blank
Alternaria (Ulocladium)	-	-	-	-
Ascospores	400	-	710	-
Aspergillus/Penicillium	40	570	40	-
Basidiospores	1700	660	2400	-
Bipolaris++	-	-	-	-
Chaetomium	-	-	-	-
Cladosporium	-	40	-	-
Curvularia	-	-	-	-
Epicoccum	-	-	-	-
Fusarium	-	-	-	-
Ganoderma	-	-	-	-
Myxomycetes++	-	-	-	-
Pithomyces++	-	-	-	-
Rust	-	-	-	-
Scopulariopsis/Microascus	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-
Unidentifiable Spores	-	-	-	-
Zygomycetes	-	-	-	-
Nigrospora	-	-	-	-
Hyphal Fragment	-	-	---	-
Insect Fragment	-	-	-	-
Pollen	-	-	-	-
Total Fungi	**2230**	**1270**	**3150**	**No Trace**

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

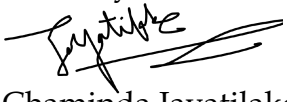
Findings and Conclusions

The comfort parameters (i.e., temperature, RH, CO_2, and CO levels) in the representative areas conform to ASHRAE and/or NAAQS guidelines. On November 18, 2020, total mold counts in representative area samples (spore count/m^3 of air) in all the areas inspected were less than the outdoor concentrations with the exception of the Hallway next to Classroom 5 & 7 and Hallway near exit door 16 indicating amplified mold growth.

On February 28, 2021, total mold counts in air samples (spore count/m3 of air) in the Hallway next to Classroom 5 & 7 and Hallway near exit door 16 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 - 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: 072008652
Customer ID: SALU50
Customer PO:
Project ID:

Attention: Indika Jayatilake
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Project: Baden ES PG County IAQ

Phone: (301) 595-3783
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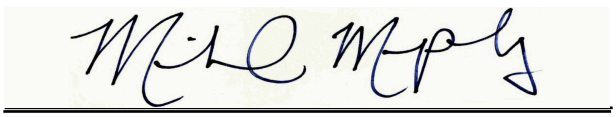
Collected Date: 11/18/2020
Received Date: 11/18/2020 03:43 PM
Analyzed Date: 11/20/2020

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

Lab Sample Number:	072008652-0001			072008652-0002			072008652-0003		
Client Sample ID:	001			002			003		
Volume (L):	75			75			75		
Sample Location:	Cafeteria			Next to the Classroom 12			Next to Classroom 5 and 7 Hallway		
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	2	90	90	13	570	93.4	66	2900	85.3
Basidiospores	1*	10*	10	1	40	6.6	2	90	2.6
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	-	-	-	-	-	-	8	300	8.8
Curvularia	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	1*	10*	0.3
Fusarium	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	-	-	-	-	-	-
Myxomycetes++	-	-	-	-	-	-	1*	10*	0.3
Pithomyces++	-	-	-	-	-	-	-	-	-
Rust	-	-	-	-	-	-	-	-	-
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-
Zygomycetes	-	-	-	-	-	-	-	-	-
Pestalotia/Pestalotiopsis	-	-	-	-	-	-	2	90	2.6
Total Fungi	**3**	**100**	**100**	**14**	**610**	**100**	**80**	**3400**	**100**
Hyphal Fragment	-	-	-	-	-	-	-	-	-
Insect Fragment	-	-	-	-	-	-	1	40	-
Pollen	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	44	-	-	44	-	-	44	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-
Skin Fragments (1-4)	-	2	-	-	1	-	-	1	-
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.



Michael Murphy
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Collected Date: 11/18/2020
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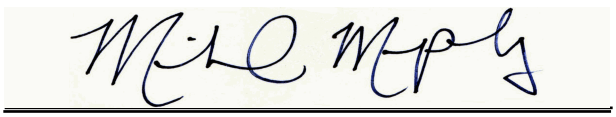
Analyzed Date: 11/20/2020

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

Lab Sample Number:	072008652-0004			072008652-0005			072008652-0006		
Client Sample ID:	004			005			006		
Volume (L):	75			75			75		
Sample Location:	Hallway 16 Near Exit Door			Hallway 14 Near the Exit Door			Ambient		
Spore Types	**Raw Count**	**Count/M³**	**% of Total**	**Raw Count**	**Count/M³**	**% of Total**	**Raw Count**	**Count/M³**	**% of Total**
Alternaria (Ulocladium)	-	-	-	-	-	-	1*	10*	0.6
Ascospores	-	-	-	-	-	-	2	90	5.3
Aspergillus/Penicillium	689	30100	90.6	5	200	57.1	9	400	23.7
Basidiospores	-	-	-	2	90	25.7	11	480	28.4
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	72	3100	9.3	1	40	11.4	14	610	36.1
Curvularia	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-
Fusarium	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	-	-	-	-	-	-
Myxomycetes++	1	40	0.1	1*	10*	2.9	2*	30*	1.8
Pithomyces++	-	-	-	-	-	-	-	-	-
Rust	-	-	-	1*	10*	2.9	1	40	2.4
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-
Zygomycetes	-	-	-	-	-	-	-	-	-
Pestalotia/Pestalotiopsis	-	-	-	-	-	-	2*	30*	1.8
Total Fungi	**762**	**33240**	**100**	**10**	**350**	**100**	**42**	**1690**	**100**
Hyphal Fragment	1	40	-	-	-	-	-	-	-
Insect Fragment	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	44	-	-	44	-	-	44	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-
Skin Fragments (1-4)	-	1	-	-	1	-	-	1	-
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.



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Collected Date: 11/18/2020
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Analyzed Date: 11/20/2020

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

Lab Sample Number:	**072008652-0007**		
Client Sample ID:	**007**		
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	-	-	-
Pestalotia/Pestalotiopsis	-	-	-
Total Fungi	**-**	**No Trace**	**-**
Hyphal Fragment	-	-	-
Insect Fragment	-	-	-
Pollen	-	-	-
Analyt. Sensitivity 600x	-	0	-
Analyt. Sensitivity 300x	-	0*	-
Skin Fragments (1-4)	-	-	-
Fibrous Particulate (1-4)	-	-	-
Background (1-5)	-	-	-

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

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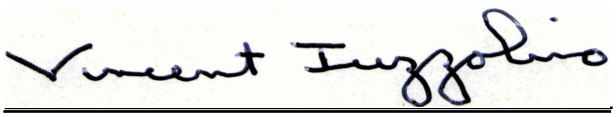
Collected Date: 02/28/2021
Received Date: 03/03/2021 10:55 AM
Analyzed Date: 03/03/2021

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

Lab Sample Number:	372103032-0001			372103032-0002			372103032-0003		
Client Sample ID:	1F			2F			3F		
Volume (L):	75			75			75		
Sample Location:	H/way Next To Classroom 5 And 7			Hallway 16 Near Exit Door			Outside Exterior EV Sample		
Spore Types	**Raw Count**	**Count/M³**	**% of Total**	**Raw Count**	**Count/M³**	**% of Total**	**Raw Count**	**Count/M³**	**% of Total**
Alternaria (Ulocladium)	-	-	-	-	-	-	-	-	-
Ascospores	11	490	22	-	-	-	16	710	22.5
Aspergillus/Penicillium	1	40	1.8	13	570	44.9	1	40	1.3
Basidiospores	38	1700	76.2	15	660	52	54	2400	76.2
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	-	-	-	1	40	3.1	-	-	-
Curvularia	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-
Fusarium	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	-	-	-	-	-	-
Myxomycetes++	-	-	-	-	-	-	-	-	-
Pithomyces++	-	-	-	-	-	-	-	-	-
Rust	-	-	-	-	-	-	-	-	-
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-
Zygomycetes	-	-	-	-	-	-	-	-	-
Total Fungi	**50**	**2230**	**100**	**29**	**1270**	**100**	**71**	**3150**	**100**
Hyphal Fragment	-	-	-	-	-	-	-	-	-
Insect Fragment	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	44	-	-	44	-	-	44	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-
Skin Fragments (1-4)	-	2	-	-	2	-	-	1	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-
Background (1-5)	-	1	-	-	1	-	-	1	-

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



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

Initial report from: 03/04/2021 09:44 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: 372103032
Customer ID: SALU50
Customer PO:
Project ID:

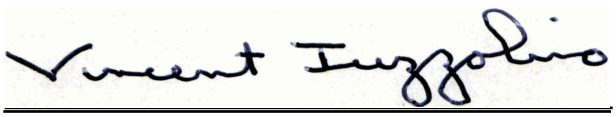
Attention: Indika Jayatilake
SaLUT
1818 New York Avenue, NE
Suite 231
Washington, DC 20002
Project: Baden ES / PGCPS IAQ

Phone: (301) 595-3783
Fax: (301) 595-3787
Collected Date: 02/28/2021
Received Date: 03/03/2021 10:55 AM
Analyzed Date: 03/03/2021

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

Lab Sample Number:	**372103032-0004**		
Client Sample ID:	**4F**		
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: 03/04/2021 09:44 AM

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

OrderID: 072008652

EMSL ANALYTICAL, INC.
LABORATORY · PRODUCTS · TRAINING

Microbiology Chain of Custody

EMSL Order Number (*Lab Use Only*): 072008652

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: Baden ES PG County IAQ	**Please Provide Results:** ☐ Fax ☐ Email
U.S. State Samples Taken: PG County **Project Zip Code:** 20613	**Connecticut Samples:** ☐ Commercial ☐ Residential

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

Public Water Supply Samples: ☐ **Note: All results may automatically be reported to DOH if required by state.**

Turnaround Time (TAT) Options - Please Check

☐ 3 Hour	☐ 6 Hour	☐ 24 Hour	☐ 48 Hour	■ 72 Hour	☐ 96 Hour	☐ 1 Week	☐ 2 Week

Microbiology Test Codes

M001 Air-O-Cell
M174 MoldSnap
M030 Micro 5
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 & Jude Fonseka **Signature of Sampler:**

Sample #	Sample Location/Description	Sample Type	Potable/ NonPotable (Only for Waters)	Test Code	Volume/ Area	Date/Time Collected	Temp/Comments (Lab Use Only)
Example A1	Kitchen Sink/Tap	Water	☒ P ☐ NP	M017	100 mL	9/1/13 4:00 PM	
001	Cafetaria	Air	☐ P ☐ NP	M001	75L	11/18/2020	
002	Next to the Classroom 12	Air	☐ P ☐ NP	M001	75L	11/18/2020	
003	Next to Classroom 5 and 7 hallway	Air	☐ P ☐ NP	M001	75L	11/18/2020	
004	Hallway 16 near exit door	Air	☐ P ☐ NP	M001	75L	11/18/2020	
005	hallway 14 near the exit door	Air	☐ P ☐ NP	M001	75L	11/18/2020	

Client Sample # (s): -

Total # of Samples: 07

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

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

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

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EMSL ANALYTICAL, INC.
BELTSVILLE, MD
2020 NOV 18 P 3:3

Comments/Special Instructions:

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

OrderID: 072008652

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

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

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)
006	Ambient	Air	☐ P ☐ NP	M001	75L	11/18/2020	
007	Field blank	Air	☐ P ☐ NP	M001	75L	11/18/2020	
			☐ P ☐ NP				
			☐ P ☐ NP				
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			☐ P ☐ NP				

Comments/Special Instructions:

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

GEN-FM-10-1: Sample Transfer-One Time
Revision 4.2
Revision Date: 1/05/2016
Effective Date: 1/05/2016

EMSL Analytical, Inc.

Sample Transfer Form

Receiving Lab:	EMSL- BELTSVILLE	**Phone Number:**	3019375700
		Fax Number:	3019375701
Relinquished to:	EMSL- Atlanta	**Phone Number:**	8002203675
		Fax Number:	8567860262
Does new lab hold equivalent or additional accreditation? *		☒ Yes ☐ No	

EMSL Customer ID # (if known):	SALU50
Client Name:	SALUT INC
Client Project:	BADEN ES PG COUNTY IAQ
Tests to be Performed:	M001
Date Received:	11/18/20 3:43 PM
Date Relinquished:	11/19/20
Date Due:	72 HRS - DUE 11/23 @ 3:43 PM
Special Instructions: (e.g. Work Order # , required qualifications, project specific procedures/modifications)	

Relinquished by (Signature):	**Date:** 11/19/20	**Received by (Signature):** SP	**Date:** 11/20/2020 9:15
Relinquished by (Signature):	**Date:**	**Received by (Signature):**	**Date:**

Customer Agreement- Please sign form and send to the receiving laboratory. By signing below, you agree to permit the above named receiving lab to transfer samples to a separate EMSL lab with equivalent qualifications* for analysis. The final report will be issued from the analyzing laboratory. Ensure any requirements are listed in special instructions.

Name (please print):	**Signature:**	**Agent of:**	**Date:**

If this is a recurring project or sample type that may require samples to be relinquished on a regular basis, a Standing Agreement form must be completed.

* Receiving and analyzing labs shall be aware of required qualifications of project prior to transfer of samples.

Note: If customer has been notified and approved this transfer verbally or by e-mail, the receiving lab must sign for the customer above. EMSL employee filling out form on behalf of customer shall print name of person to whom they spoke, date agreement was received, and then sign under Signature.

ORIGIN ID:GBOA (301) 937-5700

EMSL ANALYTICAL, INC.
10768 BALTIMORE AVENUE

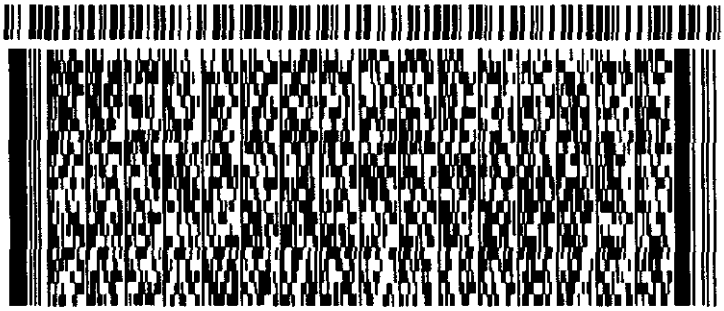
BELTSVILLE, MD 20705
UNITED STATES US

SHIP DATE: 19NOV20
ACTWGT: 1.00 LB
CAD: 110624818/WSXI3200
DIMS: 1x1x1 IN

BILL RECIPIENT

TO **MICHAEL MURPHY**
EMSL ANALYTICAL, INC
2205 CORPORATE PLAZA PARKWAY SE
SUITE 200
SMYRNA GA 30080
(770) 956-9150 REF:
INV:
PO DEPT:

568.5/BABB/B766



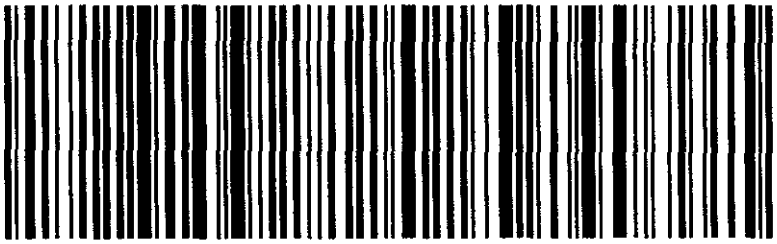
FedEx Express

FRI - 20 NOV 10:30A
PRIORITY OVERNIGHT

TRK# 0201 **3991 3895 8868**

EL TMAA

30080
GA-US **ATL**



OrderID: 372103032

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Microbiology Chain of Custody

EMSL Order Number *(Lab Use Only)*: 372103032

PHONE:
FAX:

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:** 20002 **Country:** USA
Report To (Name): Indika Jayatilake	**Telephone #:** 301-595-3783
Email Address: ijayatilake@salutinc.com	**Fax #:** **Purchase Order:**
Project Number/Location: Baden ES/ PGCPS IAQ	**Please Provide Results:** ☐ Fax ☒ Email
Location Address:	**Connecticut Samples:** ☐ Commercial ☐ 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: ☐ **Biocide Used in Source (specify):** ________ ☐

Public Water Supply Samples: ☐ **Note: All results may automatically be reported to DOH if required by state.**

Turnaround Time (TAT) Options * - Please Check

☐ 3 Hour ☐ 6 Hour ☐ 24 Hour ☐ 48 Hour ☒ 72 Hour ☐ 96 Hour ☐ 1 Week ☐ 2 Week

Microbiology Test Codes

M001 Air-O-Cell
M174 MoldSnap
M030 Micro 5
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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)
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M008 Culturable fungi - Surface Samples (Includes *Penicillium, Aspergillus, Cladosporium, Stachybotrys* Species ID & Count)
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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**)
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M020 Fecal Streptococcus (MFT*)
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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*)
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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: Jude Fonseka **Signature of Sampler:** [signature]

Sample #	Sample Location/Description	Sample Type	Potable/ NonPotable (only for waters)	Test Code	Volume/ Area	Date/Time Collected	Temperature (°C) (Lab Use Only)
1 F	H/way Next to Classroom 5 and 7	Air		M001	75L	2/28/2021	
2 F	Hallway 16 Near Exit Door	Air		M001	75L	2/28/2021	
3 F	Outside Exterior EV Sample	Air		M001	75L	2/28/2021	
4 F	Field Blank			N/A	N/A	2/28/2021	

Client Sample # (s): - **Total # of Samples:** 03 (4) **Samples Received Chilled? Yes / No**

Relinquished (Client): [signature]	**Date:**	**Time:**
Received (Lab): Farnsworth Drop Box	**Date:** 3/3/21	**Time:** 10:55a

Comments/Special Instructions: Era

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Page 1 of ____

Controlled Document – CCC-34 Micro F7.2 8/23/2017