Environmental Consultants and Engineers
1818 New York Avenue Suite 217
Washington, DC 20002
www.globalincusa.net

March 13, 2021

Prince Georges County
Environmental Safety Office
13306 Old Marlboro Pike
Upper Marlboro, MD 20772

Attention: Mr. Alex Baylor

RE: Indoor Air Quality Screening Report

Global Project Number: 20-064
School: Suitland High School

Dear Mr. Baylor,

On December 4, 2020, Global Inc.'s (GLOBAL) team of Industrial Hygienists under the supervision of Certified Industrial Hygienist, Dr. Channa Bambaradeniya, conducted an Indoor Air Quality Screening at Suitland High School located at 5200 Silver Hill Road, District Heights, MD.

Methodology

The IAQ evaluation included a visual assessment, sampling for non-viable mold spores in air, and measurement of comfort parameters (temperature, humidity, carbon dioxide, and carbon monoxide) in randomly selected representative locations within the building. GLOBAL's inspector conducted a walkthrough with Prince Georges County Public School (PGCPS) personnel present. Rooms were selected in a random manner throughout the building so as to prevent sampling bias.

During the visual assessment of representative locations, and when noted, GLOBAL documented those areas with suspected mold growth, water intrusions, and wet conditions that have the potential to lead to mold growth. GLOBAL also noted any unusual odors. At least one microbial air sample was collected for every 10,000 Square Feet (SF) of space in the building and the analytical results for the interior spaces were compared to an outdoor (ambient) sample collected on the same day.

Microbial samples (including a field blank for quality control) were delivered under strict chain-of-custody procedures were to Hayes Microbial Consulting - an AIHA EMPAT-certified laboratory in Midlothian, Virginia for analysis by microscopy. The sample chain-of-custody and laboratory report is attached.

Observations

The general observations in the six indoor locations inspected are summarized in Table 1 below:

Table 1: Observations

Location	Observations
Main Office	No issues
Room 112	No issues
Room 125	No issues
Room 136	No issues
Gym	No issues
Library	No issues
Room 160	No issues
Room 284	No issues
Room 210	No issues
Room 225	No issues
Cafeteria	No issues
Art Room	No issues
Room 263	No issues
Auto Mechanics	No issues
Room 320	No issues
Room 316	No issues
Room 309	No issues
Carpentry	No issues
Dance Studio	No issues
Dance 25	No issues
Main Office (Annex)	No issues
Room 23	No issues
AX 16	No issues
Room 28	No issues
Room 33	No issues
Room 301A	No issues
Room 306	No issues
Room 311	No issues
Room 14	No issues
Main Gym	No issues
Room 152	No issues
Room 115	No issues

Location	Observations
Room 114A	No issues
Room 107	No issues
Room 237	No issues
Room 252	No issues
Room 278	No issues
Room 206	No issues
Room 217	No issues

Comfort Parameter Measurements and Mold-in-Air Sample Results

The comfort parameter measurements and status of fungal ecology is summarized in Table 2 and Table 3.

Temperature

The American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) have published recommendations for year-round acceptable temperatures in Standard 55-2016 (*Thermal Environmental Conditions for Human Occupancy*). The winter comfort range is 68 to 75°F and the summer comfort range is 73 to 79°F. It is important to note that ASHRAE standards are intended as a suggested guideline as opposed to a regulation. The indoor temperature readings were lower in some locations than the ASHRAE recommended range for winter.

Relative Humidity (RH)

Relative humidity is a key factor for mold growth. Mold has the potential of growing on suitable surfaces with humidity levels above 60%. ASHRAE standard 62.1-2013 (*Ventilation for Acceptable Indoor Air Quality*) recommends a maximum indoor relative humidity of 65% to preclude the likelihood of condensation on cool surfaces encouraging mold growth. All the indoor relative humidity readings were below the ASHRAE recommended level of 65%.

Carbon Monoxide

Carbon monoxide (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 the major sources of CO. All registered CO concentrations were below the EPA National Ambient Air Quality Standard (NAAQS) of 9 ppm.

Carbon Dioxide

Under conditions of maximum occupancy, ASHRAE Standard 62.1-2013, Appendix C, infers that the acceptable carbon dioxide upper limit is the prevailing outdoor carbon dioxide concentration plus 700 parts per million (ppm). On December 4, 2020, the outdoor (ambient) carbon dioxide

concentration was approximately 394 ppm so indoor concentrations should not exceed approximately 1094 ppm (700 + 394). All indoor carbon dioxide measurements were within the ASHRAE standards.

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 fungal ecology profile should be consistent with what is encountered outdoors and the spore concentrations should be below the ambient levels. Laboratory analytical results are attached at the end of this report.

The analytical results of indoor air samples collected the Cafeteria indicate elevated presence of *Aspergillus/Penicillium*. The horizontal surfaces of in the cafeteria were thoroughly recleaned, and air scrubbers with HEPA filters were operated for 24-36 hours. Subsequently, the cafeteria was reinspected on March 7, 2021, and the analytical results of air sample collected indicated normal fungal ecology.

Table 2: Air Quality Results (Inspected on 12/4/2020)

Sample Location	Temp ^{0}F	RH%	CO ppm	CO2 ppm	Normal Fungal Ecology?
Standards	**ASHRAE 68 to 75°F**	**ASHRAE <65%**	**NAAQS <9**	**ASHRAE 1094**	
Ambient	52.4	35.9	0	394	-
Main Office	72.4	25.5	0	452	Yes
Room 112	68.0	27.5	0	404	Yes
Room 125	76.5	47.6	0	492	Yes
Room 136	68.9	55.6	0	402	Yes
Gym	66.4	48.5	0	404	Yes
Library	75.5	25.9	0	414	Yes
Room 160	66.0	28..7	0	401	Yes
Room 284	74.4	24.6	0	412	Yes
Room 210	75.0	23.0	0	411	Yes

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Sample Location	Temp ^{0}F	RH%	CO ppm	CO2 ppm	Normal Fungal Ecology?
Standards	**ASHRAE 68 to 75°F**	**ASHRAE <65%**	**NAAQS <9**	**ASHRAE 1094**	
Room 225	68.4	32.4	0	433	Yes
Cafeteria	70.3	41.2	0	420	No
Art Room	67.7	55.0	0	412	Yes
Room 263	70.7	34.4	0	412	Yes
Auto Mechanics	61.4	28.8	0	399	Yes
Room 320	60.5	31.5	0	408	Yes
Room 316	64.3	29.3	0	403	Yes
Room 309	65.8	26.7	0	407	Yes
Carpentry	62.4	28.7	0	397	Yes
Dance Studio	71.5	29.3	0	414	Yes
Dance 25	67.6	25.6	0	419	Yes
Main Office (Annex)	69.9	24.6	0	421	Yes
Room 23	66.6	21.1	0	414	Yes
AX 16	65.0	36.6	0	410	Yes
Room 28	68.7	39.2	0	482	Yes
Room 33	70.0	29.0	0	406	Yes
Room 301A	65.9	30.7	0	401	Yes
Room 306	67.7	39.1	0	431	Yes
Room 311	65.4	26.3	0	402	Yes
Room 14	65.7	29.0	0	420	Yes
Main Gym	70.1	37.6	0	439	Yes
Room 152	76.0	54.7	0	519	Yes

Sample Location	Temp ^{0}F	RH%	CO ppm	CO2 ppm	Normal Fungal Ecology?
Standards	**ASHRAE 68 to 75°F**	**ASHRAE <65%**	**NAAQS <9**	**ASHRAE 1094**	
Room 115	75.1	39.8	0	431	Yes
Room 114A	78.7	25.1	0	414	Yes
Room 107	76.2	28.5	0	428	Yes
Room 237	76.1	38.8	0	461	Yes
Room 252	74.7	46.7	0	410	Yes
Room 278	75.6	28.4	0	471	Yes
Room 206	76.0	24.8	0	429	Yes
Room 217	75.0	21.5	0	464	Yes

Table 3: Air Quality Results (Inspected on 03/07/2021)

Sample Location	Temp ^{0}F	RH%	CO ppm	CO2 ppm	Normal Fungal Ecology?
Standards	**ASHRAE 68 to 75°F**	**ASHRAE <65%**	**NAAQS <9**	**ASHRAE 1123**	
Ambient	48.0	26.0	0	423	-
Cafeteria	54.0	31.0	0	439	Yes

Conclusions and Recommendations

Among the comfort parameters measured, the indoor temperature readings were lower in some locations than the ASHRAE recommended range for winter. The indoor temperature should be maintained at the ASHRAE recommended range for winter (68 to 75^{o}F) for general comfort.

The indoor mold samples collected from the Cafeteria indicate elevated presence of *Aspergillus/Penicillium* during the screening performed on December 4, 2020, while the other mold samples were found to have a normal fungal ecology for an indoor environment. The cafeteria was thoroughly cleaned and reinspected on March 7, 2021, and the analytical results of air sample indicated normal fungal ecology.

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It has been our pleasure to conduct these IAQ Screening services for the Prince Georges County Public School system. If you have any questions, please feel free to contact us.

Regards,

Channa Bambaradeniya, Ph.D., CIH, CSP, CHMM
Certified Industrial Hygienist
Global, Inc.
Mobile: 443-691-0455

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ATTACHMENT I

Air Sample Analytical Results and Chain-Of-Custody Form

HAYES MICROBIAL CONSULTING

#20045811

Analysis Report prepared for

Global, Inc.

1818 New York Ave.
Suite 217
Washington, DC, 20002

Phone: **(443) 691-0455**

BB203
Indoor Air Quality
Suitland High School

Collected: **December 4, 2020**
Received: **December 8, 2020**
Reported: **December 8, 2020**

We would like to thank you for trusting Hayes Microbial for your analytical needs!
We received 41 samples by FedEx in good condition for this project on December 8th, 2020.

The results in this analysis pertain only to this job, collected on the stated date, and should not be used in the interpretation of any other job. This report may not be duplicated, except in full, without the written consent of Hayes Microbial Consulting, LLC..

This laboratory bears no responsibility for sample collection activities, analytical method limitations, or your use of the test results. Interpretation and use of test results are your responsibility. Any reference to health effects or interpretation of mold levels is strictly the opinion of Hayes Microbial. In no event, shall Hayes Microbial or any of its employees be liable for lost profits or any special, incidental or consequential damages arising out of the use of these test results.

Steve Hayes, BSMT(ASCP)
Laboratory Director
Hayes Microbial Consulting, LLC.

EPA Laboratory ID: VA01419

Lab ID: #188863

DPH License: #PH-0198

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Suitland High School

#20045811

Spore Trap, Spore Trap Blank
SOP - HMC#101

Sample Number	1	SHS-1204-01		2	SHS-1204-02		3	SHS-1204-03		4	SHS-1204-04	
Sample Name	**Ambient**			**Main Office**			**Room 112**			**Room 125**		
Sample Volume	75.00 liter			75.00 liter			75.00 liter			75.00 liter		
Reporting Limit	13 spores/m^3			13 spores/m^3			13 spores/m^3			13 spores/m^3		
Background	2			2			2			2		
Fragments	ND			ND			ND			ND		
Organism	**Raw Count**	**Count / m^3**	**% of Total**	**Raw Count**	**Count / m^3**	**% of Total**	**Raw Count**	**Count / m^3**	**% of Total**	**Raw Count**	**Count / m^3**	**% of Total**
Alternaria												
Ascospores	48	640	71.6%	1	13	50.0%	3	40	75.0%	1	13	50.0%
Aspergillus|Penicillium	2	27	3.0%	1	13	50.0%						
Basidiospores	10	133	14.9%				1	13	25.0%	1	13	50.0%
Bipolaris|Drechslera												
Chaetomium												
Cladosporium	6	80	9.0%									
Curvularia												
Epicoccum												
Fusarium												
Memnoniella												
Myxomycetes	1	13	1.5%									
Pithomyces												
Stachybotrys												
Stemphylium												
Torula												
Ulocladium												
Total	67	893	100%	2	26	100%	4	53	100%	2	26	100%

Water Damage Indicator | Common Allergen | Slightly Higher than Baseline | Significantly Higher than Baseline | Ratio Abnormality

Collected: **Dec 4, 2020** Received: **Dec 8, 2020** Reported: **Dec 8, 2020**

Project Analyst: Ramesh Poluri, PhD P. Ramesh Date: **12 - 08 - 2020**

Reviewed By: Steve Hayes, BSMT Stephen N. Hayes Date: **12 - 08 - 2020**

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Sample Number	5	SHS-1204-05		6	SHS-1204-06		7	SHS-1204-07		8	SHS-1204-08	
Sample Name	**Room 136**			**Gym**			**Library**			**Room 160**		
Sample Volume	75.00 liter			75.00 liter			75.00 liter			75.00 liter		
Reporting Limit	13 spores/m³			13 spores/m³			13 spores/m³			13 spores/m³		
Background	2			2			2			2		
Fragments	ND			ND			ND			ND		
Organism	**Raw Count**	**Count / m³**	**% of Total**	**Raw Count**	**Count / m³**	**% of Total**	**Raw Count**	**Count / m³**	**% of Total**	**Raw Count**	**Count / m³**	**% of Total**
Alternaria												
Ascospores	3	40	75.0%	1	13	25.0%	4	53	66.7%	2	27	66.7%
Aspergillus|Penicillium												
Basidiospores	1	13	25.0%	1	13	25.0%	2	27	33.3%	1	13	33.3%
Bipolaris|Drechslera												
Chaetomium												
Cladosporium				2	27	50.0%						
Curvularia												
Epicoccum												
Fusarium												
Memnoniella												
Myxomycetes												
Pithomyces												
Stachybotrys												
Stemphylium												
Torula												
Ulocladium												
Total	4	53	100%	4	53	100%	6	80	100%	3	40	100%

Water Damage Indicator | Common Allergen | Slightly Higher than Baseline | Significantly Higher than Baseline | Ratio Abnormality

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Sample Number	9	SHS-1204-09		10	SHS-1204-10		11	SHS-1204-11		12	SHS-1204-12	
Sample Name	**Room 284**			**Room 210**			**Room 225**			**Cafeteria**		
Sample Volume	75.00 liter			75.00 liter			75.00 liter			75.00 liter		
Reporting Limit	13 spores/m³			13 spores/m³			13 spores/m³			13 spores/m³		
Background	2			2			2			2		
Fragments	ND			ND			ND			ND		
Organism	**Raw Count**	**Count / m³**	**% of Total**	**Raw Count**	**Count / m³**	**% of Total**	**Raw Count**	**Count / m³**	**% of Total**	**Raw Count**	**Count / m³**	**% of Total**
Alternaria												
Ascospores	1	13	50.0%	1	13	50.0%	2	27	66.7%	1	13	6.3%
Aspergillus|Penicillium	1	13	50.0%							15	200	93.8%
Basidiospores							1	13	33.3%			
Bipolaris|Drechslera												
Chaetomium												
Cladosporium				1	13	50.0%						
Curvularia												
Epicoccum												
Fusarium												
Memnoniella												
Myxomycetes												
Pithomyces												
Stachybotrys												
Stemphylium												
Torula												
Ulocladium												
Total	2	26	100%	2	26	100%	3	40	100%	16	213	100%

Water Damage Indicator | Common Allergen | Slightly Higher than Baseline | Significantly Higher than Baseline | Ratio Abnormality

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Sample Number	13	SHS-1204-13		14	SHS-1204-14		15	SHS-1204-15		16	SHS-1204-16	
Sample Name	**Art Room**			**Room 263**			**Auto Mechanics**			**Room 320**		
Sample Volume	75.00 liter			75.00 liter			75.00 liter			75.00 liter		
Reporting Limit	13 spores/m^3			13 spores/m^3			13 spores/m^3			13 spores/m^3		
Background	2			2			2			2		
Fragments	13/m^3			ND			ND			ND		
Organism	**Raw Count**	**Count / m^3**	**% of Total**	**Raw Count**	**Count / m^3**	**% of Total**	**Raw Count**	**Count / m^3**	**% of Total**	**Raw Count**	**Count / m^3**	**% of Total**
Alternaria												
Ascospores	2	27	18.2%	1	13	33.3%	4	53	66.7%	1	13	50.0%
Aspergillus|Penicillium	9	120	81.8%				2	27	33.3%	1	13	50.0%
Basidiospores				2	27	66.7%						
Bipolaris|Drechslera												
Chaetomium												
Cladosporium												
Curvularia												
Epicoccum												
Fusarium												
Memnoniella												
Myxomycetes												
Pithomyces												
Stachybotrys												
Stemphylium												
Torula												
Ulocladium												
Total	11	147	100%	3	40	100%	6	80	100%	2	26	100%

Water Damage Indicator | Common Allergen | Slightly Higher than Baseline | Significantly Higher than Baseline | Ratio Abnormality

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Sample Number	17	SHS-1204-17		18	SHS-1204-18		19	SHS-1204-19		20	SHS-1204-20	
Sample Name	**Room 316**			**Room 309**			**Carpentry**			**Dance Studio**		
Sample Volume	75.00 liter			75.00 liter			75.00 liter			75.00 liter		
Reporting Limit	13 spores/m^3			13 spores/m^3			13 spores/m^3			13 spores/m^3		
Background	2			2			2			2		
Fragments	ND			ND			13/m^3			ND		
Organism	**Raw Count**	**Count / m^3**	**% of Total**	**Raw Count**	**Count / m^3**	**% of Total**	**Raw Count**	**Count / m^3**	**% of Total**	**Raw Count**	**Count / m^3**	**% of Total**
Alternaria												
Ascospores	2	27	66.7%	1	13	50.0%	1	13	25.0%	1	13	5.9%
Aspergillus|Penicillium										7	93	41.2%
Basidiospores	1	13	33.3%				2	27	50.0%			
Bipolaris|Drechslera												
Chaetomium												
Cladosporium				1	13	50.0%	1	13	25.0%	9	120	52.9%
Curvularia												
Epicoccum												
Fusarium												
Memnoniella												
Myxomycetes												
Pithomyces												
Stachybotrys												
Stemphylium												
Torula												
Ulocladium												
Total	3	40	100%	2	26	100%	4	53	100%	17	226	100%

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Sample Number	21	SHS-1204-21		22	SHS-1204-22		23	SHS-1204-23		24	SHS-1204-24	
Sample Name	**Dance 25**			**Main Office (Annex)**			**Room 23**			**AX 16**		
Sample Volume	75.00 liter			75.00 liter			75.00 liter			75.00 liter		
Reporting Limit	13 spores/m^3			13 spores/m^3			13 spores/m^3			13 spores/m^3		
Background	2			2			2			2		
Fragments	ND			ND			ND			ND		
Organism	**Raw Count**	**Count / m^3**	**% of Total**	**Raw Count**	**Count / m^3**	**% of Total**	**Raw Count**	**Count / m^3**	**% of Total**	**Raw Count**	**Count / m^3**	**% of Total**
Alternaria												
Ascospores	2	27	66.7%	3	40	60.0%	1	13	50.0%	3	40	75.0%
Aspergillus|Penicillium												
Basidiospores	1	13	33.3%	1	13	20.0%	1	13	50.0%	1	13	25.0%
Bipolaris|Drechslera												
Chaetomium												
Cladosporium												
Curvularia												
Epicoccum												
Fusarium												
Memnoniella												
Myxomycetes				1	13	20.0%						
Pithomyces												
Stachybotrys												
Stemphylium												
Torula												
Ulocladium												
Total	3	40	100%	5	66	100%	2	26	100%	4	53	100%

Water Damage Indicator | Common Allergen | Slightly Higher than Baseline | Significantly Higher than Baseline | Ratio Abnormality

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Sample Number	25	SHS-1204-25		26	SHS-1204-26		27	SHS-1204-27		28	SHS-1204-28	
Sample Name	**Room 28**			**Room 33**			**Room 301A**			**Room 306**		
Sample Volume	75.00 liter			75.00 liter			75.00 liter			75.00 liter		
Reporting Limit	13 spores/m^3			13 spores/m^3			13 spores/m^3			13 spores/m^3		
Background	2			2			2			2		
Fragments	ND			ND			ND			ND		
Organism	**Raw Count**	**Count / m^3**	**% of Total**	**Raw Count**	**Count / m^3**	**% of Total**	**Raw Count**	**Count / m^3**	**% of Total**	**Raw Count**	**Count / m^3**	**% of Total**
Alternaria												
Ascospores	2	27	100.0%	2	27	66.7%	3	40	60.0%	4	53	80.0%
Aspergillus|Penicillium												
Basidiospores				1	13	33.3%	1	13	20.0%	1	13	20.0%
Bipolaris|Drechslera												
Chaetomium												
Cladosporium												
Curvularia												
Epicoccum												
Fusarium												
Memnoniella												
Myxomycetes							1	13	20.0%			
Pithomyces												
Stachybotrys												
Stemphylium												
Torula												
Ulocladium												
Total	2	27	100%	3	40	100%	5	66	100%	5	66	100%

Water Damage Indicator | Common Allergen | Slightly Higher than Baseline | Significantly Higher than Baseline | Ratio Abnormality

Collected: **Dec 4, 2020** Received: **Dec 8, 2020** Reported: **Dec 8, 2020**

Project Analyst: Ramesh Poluri, PhD P. Ramesh Date: **12 - 08 - 2020**

Reviewed By: Steve Hayes, BSMT Stephen N. Hayes Date: **12 - 08 - 2020**

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BB203
Indoor Air Quality
Suitland High School

#20045811

Spore Trap, Spore Trap Blank
SOP - HMC#101

Sample Number	29	SHS-1204-29		30	SHS-1204-30		31	SHS-1204-31		32	SHS-1204-32	
Sample Name	**Room 311**			**Room 114**			**Main Gym**			**Room 152**		
Sample Volume	75.00 liter			75.00 liter			75.00 liter			75.00 liter		
Reporting Limit	13 spores/m^3			13 spores/m^3			13 spores/m^3			13 spores/m^3		
Background	2			2			2			2		
Fragments	ND			ND			ND			ND		
Organism	**Raw Count**	**Count / m^3**	**% of Total**	**Raw Count**	**Count / m^3**	**% of Total**	**Raw Count**	**Count / m^3**	**% of Total**	**Raw Count**	**Count / m^3**	**% of Total**
Alternaria												
Ascospores	2	27	66.7%	2	27	100.0%	1	13	10.0%	1	13	50.0%
Aspergillus|Penicillium							7	93	70.0%			
Basidiospores										1	13	50.0%
Bipolaris|Drechslera												
Chaetomium												
Cladosporium	1	13	33.3%									
Curvularia												
Epicoccum							1	13	10.0%			
Fusarium												
Memnoniella												
Myxomycetes							1	13	10.0%			
Pithomyces												
Stachybotrys												
Stemphylium												
Torula												
Ulocladium												
Total	3	40	100%	2	27	100%	10	132	100%	2	26	100%

Water Damage Indicator | Common Allergen | Slightly Higher than Baseline | Significantly Higher than Baseline | Ratio Abnormality

Collected: **Dec 4, 2020** Received: **Dec 8, 2020** Reported: **Dec 8, 2020**

Project Analyst: Ramesh Poluri, PhD P. Ramesh Date: **12 - 08 - 2020**

Reviewed By: Steve Hayes, BSMT Stephen N. Hayes Date: **12 - 08 - 2020**

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Indoor Air Quality
Suitland High School

#20045811

Spore Trap, Spore Trap Blank
SOP - HMC#101

Sample Number	33	SHS-1204-33		34	SHS-1204-34		35	SHS-1204-35		36	SHS-1204-36	
Sample Name	**Room 115**			**Room 114A**			**Room 107**			**Room 237**		
Sample Volume	75.00 liter			75.00 liter			75.00 liter			75.00 liter		
Reporting Limit	13 spores/m^3			13 spores/m^3			13 spores/m^3			13 spores/m^3		
Background	2			2			2			2		
Fragments	ND			ND			ND			ND		
Organism	**Raw Count**	**Count / m^3**	**% of Total**	**Raw Count**	**Count / m^3**	**% of Total**	**Raw Count**	**Count / m^3**	**% of Total**	**Raw Count**	**Count / m^3**	**% of Total**
Alternaria												
Ascospores	2	27	66.7%	3	40	50.0%	1	13	50.0%	2	27	66.7%
Aspergillus|Penicillium												
Basidiospores	1	13	33.3%	2	27	33.3%						
Bipolaris|Drechslera												
Chaetomium												
Cladosporium							1	13	50.0%			
Curvularia												
Epicoccum												
Fusarium												
Memnoniella												
Myxomycetes				1	13	16.7%				1	13	33.3%
Pithomyces												
Stachybotrys												
Stemphylium												
Torula												
Ulocladium												
Total	3	40	100%	6	80	100%	2	26	100%	3	40	100%

Water Damage Indicator | Common Allergen | Slightly Higher than Baseline | Significantly Higher than Baseline | Ratio Abnormality

Collected: **Dec 4, 2020** Received: **Dec 8, 2020** Reported: **Dec 8, 2020**

Project Analyst: Ramesh Poluri, PhD P. Ramesh Date: **12 - 08 - 2020**

Reviewed By: Steve Hayes, BSMT Stephen N. Hayes Date: **12 - 08 - 2020**

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Indoor Air Quality
Suitland High School

#20045811

Spore Trap, Spore Trap Blank
SOP - HMC#101

Sample Number	37	SHS-1204-37		38	SHS-1204-38		39	SHS-1204-39		40	SHS-1204-40	
Sample Name	**Room 252**			**Room 278**			**Room 206**			**Room 217**		
Sample Volume	75.00 liter			75.00 liter			75.00 liter			75.00 liter		
Reporting Limit	13 spores/m^3			13 spores/m^3			13 spores/m^3			13 spores/m^3		
Background	2			2			2			2		
Fragments	ND			ND			ND			ND		
Organism	**Raw Count**	**Count / m^3**	**% of Total**	**Raw Count**	**Count / m^3**	**% of Total**	**Raw Count**	**Count / m^3**	**% of Total**	**Raw Count**	**Count / m^3**	**% of Total**
Alternaria												
Ascospores	1	13	50.0%	2	27	50.0%	2	27	66.7%	3	40	75.0%
Aspergillus|Penicillium							1	13	33.3%			
Basidiospores	1	13	50.0%	1	13	25.0%						
Bipolaris|Drechslera												
Chaetomium												
Cladosporium										1	13	25.0%
Curvularia												
Epicoccum				1	13	25.0%						
Fusarium												
Memnoniella												
Myxomycetes												
Pithomyces												
Stachybotrys												
Stemphylium												
Torula												
Ulocladium												
Total	2	26	100%	4	53	100%	3	40	100%	4	53	100%

Water Damage Indicator | Common Allergen | Slightly Higher than Baseline | Significantly Higher than Baseline | Ratio Abnormality

Collected: **Dec 4, 2020** Received: **Dec 8, 2020** Reported: **Dec 8, 2020**

Project Analyst: Ramesh Poluri, PhD P. Ramesh Date: **12 - 08 - 2020**

Reviewed By: Steve Hayes, BSMT Stephen N. Hayes Date: **12 - 08 - 2020**

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Indoor Air Quality
Suitland High School

#20045811

Spore Trap, Spore Trap Blank
SOP - HMC#101

Sample Number	41	Field Blank
Sample Name	**Field Blank**	
Sample Volume	0.00 liter	
Reporting Limit	1 spore/m^3	
Background	NBD	
Fragments	ND	

Organism	Raw Count	Count / m^3	% of Total
Alternaria			
Ascospores			
Aspergillus|Penicillium			
Basidiospores			
Bipolaris|Drechslera			
Chaetomium			
Cladosporium			
Curvularia			
Epicoccum			
Fusarium			
Memnoniella			
Myxomycetes			
Pithomyces			
Stachybotrys			
Stemphylium			
Torula			
Ulocladium			
Total	ND	ND	

Water Damage Indicator | Common Allergen | Slightly Higher than Baseline | Significantly Higher than Baseline | Ratio Abnormality

Collected: **Dec 4, 2020** Received: **Dec 8, 2020** Reported: **Dec 8, 2020**

Project Analyst: Ramesh Poluri, PhD P. Ramesh Date: **12 - 08 - 2020**

Reviewed By: Steve Hayes, BSMT Stephen N. Hayes Date: **12 - 08 - 2020**

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Indoor Air Quality
Suitland High School

#20045811

Spore Trap Information

Reporting Limit	The Reporting Limit is the lowest number of spores that can be detected based on the total volume of the sample collected and the percentage of the slide that is counted. At Hayes Microbial, 100% of the slide is read so the LOD is based solely on the total volume. Raw spore counts that exceed 500 spores will be estimated.
Blanks	Results have not been corrected for field or laboratory blanks.
Background	The Background is the amount of debris that is present in the sample. This debris consists of skin cells, dirt, dust, pollen, drywall dust and other organic and non-organic matter. As the background density increases, the likelihood of spores, especially small spores such as those of Aspergillus and Penicillium may be obscured. The background is rated on a scale of 1 to 5 and each level is determined as follows: **NBD:** No background detected due to possible pump or cassette malfunction. Recollect sample. (Field Blanks will display NBD) **1 :** <5% of field occluded. No spores will be uncountable. **2 :** 5-25% of field occluded. **3 :** 25-75% of field occluded. **4 :** 75-90% of field occluded. **5 :** >90% of field occluded. Suggested recollection of sample.
Fragments	Fragments are small pieces of fungal mycelium or spores. They are not identifiable as to type and when present in very large numbers, may indicate the presence of mold amplification.
Control Comparisons	There are no national standards for the numbers of fungal spores that may be present in the indoor environment. As a general rule and guideline that is widely accepted in the indoor air quality field, the numbers and types of spores that are present in the indoor environment should not exceed those that are present outdoors at any given time. There will always be some mold spores present in "normal" indoor environments. The purpose of sampling and counting spores is to help determine whether an abnormal condition exists within the indoor environment and if it does, to help pinpoint the area of contamination. Spore counts should not be used as the sole determining factor of mold contamination. There are many factors that can cause anomalies in the comparison of indoor and outdoor samples due to the dynamic nature of both of those environments.
Water Damage Indicator Common Allergen Slightly Higher than Baseline Significantly Higher than Baseline Ratio Abnormality	**Blue:** These molds are commonly seen in conditions of prolonged water intrusion and usually indicate a problem. **Green:** Although all molds are potential allergens, these are the most common allergens that may be found indoors. **Orange:** The spore count is slightly higher than the outside count and may or may not indicate a source of contamination. **Red:** The spore count is significantly higher than the baseline count and probably indicates a source of contamination. **Violet:** The types of spores found indoors should be similar to the ones that were identified in the baseline sample. Significant increases (more than 25%) in the ratio of a particular spore type may indicate the presence of abnormal levels of mold, even if the total number of spores of that type is lower in the indoor environment than it was outdoors.
Color Coding	Fungi that are present in indoor samples at levels lower than 200 per cubic meter are not color coded on the report, unless they are one of the water damage indicators.

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Ascospores

Habitat: A large group consisting of more than 3000 species of fungi. Common plant pathogens and outdoor numbers become very high following rain. Most of the genera are indistinguishable by spore trap analysis and are combined on the report.

Effects: Health affects are poorly studied, but many are likely to be allergenic.

Aspergillus|Penicillium

Habitat: The most common fungi isolated from the environment. Very common in soil and on decaying plant material. Are able to grow well indoors on a wide variety of substrates.

Effects: This group contains common allergens and many can cause hypersensitivity pneumonitis. They may cause extrinsic asthma, and many are opportunistic pathogens. Many species produce mycotoxins which may be associated with disease in humans and other animals. Toxin production is dependent on the species, the food source, competition with other organisms, and other environmental conditions.

Basidiospores

Habitat: A common group of Fungi that includes the mushrooms and bracket fungi. They are saprophytes and plant pathogens. In wet conditions they can cause structural damage to buildings.

Effects: Common allergens and are also associated with hypersensitivity pneumonitis.

Cladosporium

Habitat: One of the most common genera worldwide. Found in soil and plant debris and on the leaf surfaces of living plants. The outdoor numbers are lower in the winter and often relatively high in the summer, especially in high humidity. The outdoor numbers often spike in the late afternoon and evening. Indoors, it can be found growing on textiles, wood, sheetrock, moist window sills and in HVAC supply ducts.

Effects: A common allergen, producing more than 10 allergenic antigens and a common cause of hypersensitivity pneumonitis.

Epicoccum

Habitat: It is found in soil and plant litter and is a plant pathogen. It can grow indoors on a variety of substrates, including paper and textiles and is commonly found on wet drywall.

Effects: It is a common allergen. No cases of infection have been reported in humans.

Myxomycetes

Habitat: Found on decaying plant material and as a plant pathogen.

Effects: Some allergenic properties reported, but generally pose no health concerns to humans.

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Page 1 of 3

N

SHIP: FEDEX - BOX SO
DATE: 12-08-2020

8160 4410 5370

MOLD

20045811

Job Number: BB203	Job Name: Indoor Air Quality Suitland High School
Collector: Prabuddha Shane	
Date Collected: 12/04/2020	

Mobile: 443-691-0455 | Email: channab@globalincusa.net

Note:

Analysis Type		Analysis Description	Turnaround	Accepted Media Types
Spore Trap	S	Identification & Enumeration of Fungal Spores	24 Hour	Air Cassettes, Impact Slides
	S+	Spore Trap Analysis with Dander, Fiber, and Pollen counts	24 Hour	Air Cassettes, Impact Slides
Direct ID	D	ID & Semi-Quantative Enumeration of spores and mycelium	24 Hour	Bio-Tape, Tape, Swab, Bulk, Agar Plate
	D+	Direct Analysis with Fully Quantitative spore count	24 Hour	Bio-Tape, Tape, Swab, Bulk, Agar Plate
Culture	C1	Identification & Enumeration of Mold only	7 Day	Air Plate, Agar Plate, Swab, Bulk
	C2	Identification & Enumeration of Bacteria only	4 Day	Air Plate, Agar Plate, Swab, Bulk
	C3	Identification & Enumeration of Mold and Bacteria	7 Day	Air Plate, Agar Plate, Swab, Bulk
	C5	Coliform Screen for Sewage Bacteria	2 Day	Agar Plate, Swab, Bulk
Particle	TPA	Total Particulate Analysis, ID & Count (Does Not Include Mold)	24 Hour	Air Cassettes, Impact Slides, Bio-Tape

#	Number	Sample	Analysis	Volume	Notes
1	SHS-1204-01	Ambient	S	75 L	
2	SHS-1204-02	Main Office			
3	SHS-1204-03	Room112			
4	SHS-1204-04	Room 125			
5	SHS-1204-05	Room 136			
6	SHS-1204-06	Gym			
7	SHS-1204-07	Library			
8	SHS-1204-08	Room 160			
9	SHS-1204-09	Room 284			
10	SHS-1204-10	Room 210			
11	SHS-1204-11	Room 225			
12	SHS-1204-12	Cafeteria			
13	SHS-1204-13	Art Room			
14	SHS-1204-14	Room 263			
15	SHS-1204-15	Auto Mechanics			
16	SHS-1204-16	Room 320			

Released by: Prabuddha Shane | Date: 12/04/2020 | Received By: | Date: 12/8/20

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Pg 1 of 3

N

SHIP: FEDEX - BOX SO
DATE: 12-08-2020

8160 4410 5370

MOLD
20045811

Job Number: BB203	Job Name: Indoor Air Quality Suitland High School
Collector: Prabuddha Shane	
Date Collected: 12/04/2020	

Mobile: 443-691-0455 | Email: channab@globalincusa.net
Note:

Analysis Type		Analysis Description	Turnaround	Accepted Media Types
Spore Trap	S	Identification & Enumeration of Fungal Spores	24 Hour	Air Cassettes, Impact Slides
	S+	Spore Trap Analysis with Dander, Fiber, and Pollen counts	24 Hour	Air Cassettes, Impact Slides
Direct ID	D	ID & Semi-Quantative Enumeration of spores and mycelium	24 Hour	Bio-Tape, Tape, Swab, Bulk, Agar Plate
	D+	Direct Analysis with Fully Quantitative spore count	24 Hour	Bio-Tape, Tape, Swab, Bulk, Agar Plate
Culture	C1	Identification & Enumeration of Mold only	7 Day	Air Plate, Agar Plate, Swab, Bulk
	C2	Identification & Enumeration of Bacteria only	4 Day	Air Plate, Agar Plate, Swab, Bulk
	C3	Identification & Enumeration of Mold and Bacteria	7 Day	Air Plate, Agar Plate, Swab, Bulk
	C5	Coliform Screen for Sewage Bacteria	2 Day	Agar Plate, Swab, Bulk
Particle	TPA	Total Particulate Analysis, ID & Count (Does Not Include Mold)	24 Hour	Air Cassettes, Impact Slides, Bio-Tape

#	Number	Sample	Analysis	Volume	Notes
1	SHS-1204-17	Room 316	S	75 L	
2	SHS-1204-18	Room 309			
3	SHS-1204-19	Carpentry			
4	SHS-1204-20	Dance Studio			
5	SHS-1204-21	Dance 25			
6	SHS-1204-22	Main Office(Annex)			
7	SHS-1204-23	Room 23			
8	SHS-1204-24	AX 16			
9	SHS-1204-25	Room 28			
10	SHS-1204-26	Room 33			
11	SHS-1204-27	Room 301A			
12	SHS-1204-28	Room 306			
13	SHS-1204-29	Room 311			
14	SHS-1204-30	Room 14			
15	SHS-1204-31	Main gym			
16	SHS-1204-32	Room 152			

Released by: Prabuddha Shane | Date: 12/04/2020 | Received By: | Date: 12/8/20

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Company: Global, Inc
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SHIP: FEDEX - BOX SO
DATE: 12-08-2020

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MOLD
20045811

Job Number: BB203	Job Name: Indoor Air Quality Suitland High School
Collector: Prabuddha Shane	
Date Collected: 12/04/2020	

Mobile: 443-691-0455 | Email: channab@globalincusa.net

Note:

Analysis Type		Analysis Description	Turnaround	Accepted Media Types
Spore Trap	S	Identification & Enumeration of Fungal Spores	24 Hour	Air Cassettes, Impact Slides
	S+	Spore Trap Analysis with Dander, Fiber, and Pollen counts	24 Hour	Air Cassettes, Impact Slides
Direct ID	D	ID & Semi-Quantative Enumeration of spores and mycelium	24 Hour	Bio-Tape, Tape, Swab, Bulk, Agar Plate
	D+	Direct Analysis with Fully Quantitative spore count	24 Hour	Bio-Tape, Tape, Swab, Bulk, Agar Plate
Culture	C1	Identification & Enumeration of Mold only	7 Day	Air Plate, Agar Plate, Swab, Bulk
	C2	Identification & Enumeration of Bacteria only	4 Day	Air Plate, Agar Plate, Swab, Bulk
	C3	Identification & Enumeration of Mold and Bacteria	7 Day	Air Plate, Agar Plate, Swab, Bulk
	C5	Coliform Screen for Sewage Bacteria	2 Day	Agar Plate, Swab, Bulk
Particle	TPA	Total Particulate Analysis, ID & Count (Does Not Include Mold)	24 Hour	Air Cassettes, Impact Slides, Bio-Tape

#	Number	Sample	Analysis	Volume	Notes
1	SHS-1204-33	Room 115	S	75 L	
2	SHS-1204-34	Room 114A			
3	SHS-1204-35	Room 107			
4	SHS-1204-36	Room 237			
5	SHS-1204-37	Room 252			
6	SHS-1204-38	Room 278			
7	SHS-1204-39	Room 206			
8	SHS-1204-40	Room 217			
9	Field blank		S		
10					
11					
12					
13					
14					
15					
16					

Released by: Prabuddha Shane | Date: 12/04/2020 | Received By: | Date: 12/8/20

HAYES MICROBIAL CONSULTING

#21007888

Analysis Report prepared for

Global, Inc.

1818 New York Ave.
Suite 217
Washington, DC, 20002

Phone: **(443) 691-0455**

20-064
IAQ Reinspection
Suitland 45 / High Bridges ES

Collected: **March 7, 2021**
Received: **March 9, 2021**
Reported: **March 9, 2021**

We would like to thank you for trusting Hayes Microbial for your analytical needs!
We received 3 samples by FedEx in good condition for this project on March 9th, 2021.

The results in this analysis pertain only to this job, collected on the stated date, and should not be used in the interpretation of any other job. This report may not be duplicated, except in full, without the written consent of Hayes Microbial Consulting, LLC..

This laboratory bears no responsibility for sample collection activities, analytical method limitations, or your use of the test results. Interpretation and use of test results are your responsibility. Any reference to health effects or interpretation of mold levels is strictly the opinion of Hayes Microbial. In no event, shall Hayes Microbial or any of its employees be liable for lost profits or any special, incidental or consequential damages arising out of the use of these test results.

Steve Hayes, BSMT(ASCP)
Laboratory Director
Hayes Microbial Consulting, LLC.

EPA Laboratory ID: VA01419

Lab ID: #188863

DPH License: #PH-0198

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20-064
IAQ Reinspection
Suitland 45 / High Bridges ES

#21007888

Spore Trap
SOP - HMC#101

Sample Number	1	01	2	02	3	01
Sample Name	Suitland HS - Ambient		Suitland HS - Cafeteria		High Bridge ES - Room 6	
Sample Volume	75.00 liter		75.00 liter		75.00 liter	
Reporting Limit	13 spores/m^3		13 spores/m^3		13 spores/m^3	
Background	2		2		2	
Fragments	ND		ND		ND	

Organism	Raw Count	Count / m^3	% of Total	Raw Count	Count / m^3	% of Total	Raw Count	Count / m^3	% of Total
Alternaria									
Ascospores	2	27	33.3%	1	13	100.0%	1	13	25.0%
Aspergillus|Penicillium							2	27	50.0%
Basidiospores	3	40	50.0%						
Bipolaris|Drechslera									
Chaetomium									
Cladosporium	1	13	16.7%				1	13	25.0%
Curvularia									
Epicoccum									
Fusarium									
Memnoniella									
Myxomycetes									
Pithomyces									
Stachybotrys									
Stemphylium									
Torula									
Ulocladium									
Total	6	80	100%	1	13	100%	4	53	100%

Water Damage Indicator | Common Allergen | Slightly Higher than Baseline | Significantly Higher than Baseline | Ratio Abnormality

Collected: **Mar 7, 2021** Received: **Mar 9, 2021** Reported: **Mar 9, 2021**

Project Analyst: Ramesh Poluri, PhD P. Ramesh Date: **03 - 09 - 2021**

Reviewed By: Steve Hayes, BSMT Stephen N. Hayes Date: **03 - 09 - 2021**

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20-064
IAQ Reinspection
Suitland 45 / High Bridges ES

#21007888

Spore Trap Information

Reporting Limit	The Reporting Limit is the lowest number of spores that can be detected based on the total volume of the sample collected and the percentage of the slide that is counted. At Hayes Microbial, 100% of the slide is read so the LOD is based solely on the total volume. Raw spore counts that exceed 500 spores will be estimated.
Blanks	Results have not been corrected for field or laboratory blanks.
Background	The Background is the amount of debris that is present in the sample. This debris consists of skin cells, dirt, dust, pollen, drywall dust and other organic and non-organic matter. As the background density increases, the likelihood of spores, especially small spores such as those of Aspergillus and Penicillium may be obscured. The background is rated on a scale of 1 to 5 and each level is determined as follows: **NBD:** No background detected due to possible pump or cassette malfunction. Recollect sample. (Field Blanks will display NBD) **1 :** <5% of field occluded. No spores will be uncountable. **2 :** 5-25% of field occluded. **3 :** 25-75% of field occluded. **4 :** 75-90% of field occluded. **5 :** >90% of field occluded. Suggested recollection of sample.
Fragments	Fragments are small pieces of fungal mycelium or spores. They are not identifiable as to type and when present in very large numbers, may indicate the presence of mold amplification.
Control Comparisons	There are no national standards for the numbers of fungal spores that may be present in the indoor environment. As a general rule and guideline that is widely accepted in the indoor air quality field, the numbers and types of spores that are present in the indoor environment should not exceed those that are present outdoors at any given time. There will always be some mold spores present in "normal" indoor environments. The purpose of sampling and counting spores is to help determine whether an abnormal condition exists within the indoor environment and if it does, to help pinpoint the area of contamination. Spore counts should not be used as the sole determining factor of mold contamination. There are many factors that can cause anomalies in the comparison of indoor and outdoor samples due to the dynamic nature of both of those environments.
Water Damage Indicator Common Allergen Slightly Higher than Baseline Significantly Higher than Baseline Ratio Abnormality	**Blue:** These molds are commonly seen in conditions of prolonged water intrusion and usually indicate a problem. **Green:** Although all molds are potential allergens, these are the most common allergens that may be found indoors. **Orange:** The spore count is slightly higher than the outside count and may or may not indicate a source of contamination. **Red:** The spore count is significantly higher than the baseline count and probably indicates a source of contamination. **Violet:** The types of spores found indoors should be similar to the ones that were identified in the baseline sample. Significant increases (more than 25%) in the ratio of a particular spore type may indicate the presence of abnormal levels of mold, even if the total number of spores of that type is lower in the indoor environment than it was outdoors.
Color Coding	Fungi that are present in indoor samples at levels lower than 200 per cubic meter are not color coded on the report, unless they are one of the water damage indicators.

Shane Prabuddha
Global, Inc.
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20-064
IAQ Reinspection
Suitland 45 / High Bridges ES

#21007888

Organism Descriptions

Ascospores

Habitat: A large group consisting of more than 3000 species of fungi. Common plant pathogens and outdoor numbers become very high following rain. Most of the genera are indistinguishable by spore trap analysis and are combined on the report.

Effects: Health affects are poorly studied, but many are likely to be allergenic.

Aspergillus|Penicillium

Habitat: The most common fungi isolated from the environment. Very common in soil and on decaying plant material. Are able to grow well indoors on a wide variety of substrates.

Effects: This group contains common allergens and many can cause hypersensitivity pneumonitis. They may cause extrinsic asthma, and many are opportunistic pathogens. Many species produce mycotoxins which may be associated with disease in humans and other animals. Toxin production is dependent on the species, the food source, competition with other organisms, and other environmental conditions.

Basidiospores

Habitat: A common group of Fungi that includes the mushrooms and bracket fungi. They are saprophytes and plant pathogens. In wet conditions they can cause structural damage to buildings.

Effects: Common allergens and are also associated with hypersensitivity pneumonitis.

Cladosporium

Habitat: One of the most common genera worldwide. Found in soil and plant debris and on the leaf surfaces of living plants. The outdoor numbers are lower in the winter and often relatively high in the summer, especially in high humidity. The outdoor numbers often spike in the late afternoon and evening. Indoors, it can be found growing on textiles, wood, sheetrock, moist window sills and in HVAC supply ducts.

Effects: A common allergen, producing more than 10 allergenic antigens and a common cause of hypersensitivity pneumonitis.

HAYES MICROBIAL CONSULTING

Company: Global, Inc
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Washington, DC 20002

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SHIP: FEDEX - BOX 50
DATE: 03-09-2021

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MOLD

21007888

Job Number: 20-064	Job Name: IAQ Reinspection Suitland HS / High Bridge ES
Collector: Shane Prabuddha	
Date Collected: 03/07/21	

Mobile: 443-691-0455 Email: Channab@globalincusa.net

Note:

Analysis Type		Analysis Description	Turnaround	Accepted Media Types
Spore Trap	S	Identification & Enumeration of Fungal Spores	24 Hour	Air Cassettes, Impact Slides
	S+	Spore Trap Analysis with Dander, Fiber, and Pollen counts	24 Hour	Air Cassettes, Impact Slides
Direct ID	D	ID & Semi-Quantative Enumeration of spores and mycelium	24 Hour	Bio-Tape, Tape, Swab, Bulk, Agar Plate
	D+	Direct Analysis with Fully Quantitative spore count	24 Hour	Bio-Tape, Tape, Swab, Bulk, Agar Plate
Culture	C1	Identification & Enumeration of Mold only	7 Day	Air Plate, Agar Plate, Swab, Bulk
	C2	Identification & Enumeration of Bacteria only	4 Day	Air Plate, Agar Plate, Swab, Bulk
	C3	Identification & Enumeration of Mold and Bacteria	7 Day	Air Plate, Agar Plate, Swab, Bulk
	C5	Coliform Screen for Sewage Bacteria	2 Day	Agar Plate, Swab, Bulk
Particle	TPA	Total Particulate Analysis, ID & Count (Does Not Include Mold)	24 Hour	Air Cassettes, Impact Slides, Bio-Tape

#	Number	Sample	Analysis	Volume	Notes
1	01	Suitland HS - Ambient	S	75L	T:48 RH:26 Co2:423 Co:0
2	02	Suitland HS - Cafeteria	S	75L	T:54 RH:31 Co2:439 Co:0
3					
4	01	High Bridge ES - Room 6	S	75L	T:74 RH:18 Co2:427 Co:0
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16					

Released by: Shane Prabuddha	Date: 03/07/21	Received By:	Date: 3-9-21