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: High Bridge Elementary School

Dear Mr. Baylor,

On December 2, 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 High Bridge Elementary School located at 7011 Highbridge Rd, Bowie, MD 20720.

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
Room 6	Some decolored ceiling tiles
Library	Dirty vents
Room 12	Some decolored ceiling tiles
Cafeteria	No issues
Room 17	Some decolored ceiling tiles
Room 27	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, Table 3 and Table 4.

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. All the indoor temperature readings were within the ASHRAE Standard.

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 November 30, 2020, the outdoor (ambient) carbon dioxide concentration was approximately 389 ppm so indoor concentrations should not exceed approximately 1089 ppm (700 + 389). 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 from Room 6, the Cafeteria, Room 17, and Room 27 indicate elevated presence of *Aspergillus/Penicillium*. A slight elevation of *Cladosporium* was found in the Cafeteria as well. The horizontal surfaces of the above locations were thoroughly recleaned, and air scrubbers with HEPA filters were operated for 24-36 hours. Subsequently, they were reinspected on February 24, 2021, and the analytical results of air samples collected from Room 17, Room 27, and Cafeteria indicated normal fungal ecology, while Room 6 showed elevated presence of *Aspergillus/Penicillium*. Therefore, Room 6 was recleaned thoroughly and resampled on March 7, 2021, and the analytical results indicated normal fungal ecology. Laboratory analytical results are attached at the end of this report.

Table 2: Air Quality Results (Inspected on 12/02/2020)

Sample Location	Temp ^{0}F	RH%	CO ppm	CO2 ppm	Normal Fungal Ecology?
Standards	**ASHRAE 68 to 75°F**	**ASHRAE <65%**	**NAAQS <9**	**ASHRAE 1189**	
Ambient	57.4	26.2	0	389	-
Room 6	68.0	24.1	0	414	No
Library	71.3	22.7	0	390	Yes
Room 12	70.9	21.4	0	411	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 1112**	
Cafeteria	71.1	18.2	0	412	No
Room 17	71.0	19.2	0	400	No
Room 27	71.2	18.8	0	386	No

Table 3: Air Quality Results (Inspected on 02/24/2021)

Sample Location	Temp ^{0}F	RH%	CO ppm	CO2 ppm	Normal Fungal Ecology?
Standards	**ASHRAE 68 to 75°F**	**ASHRAE <65%**	**NAAQS <9**	**ASHRAE 1183**	
Ambient	65.0	33.0	0	483	-
Room 6	66.0	27.0	0	548	No
Cafeteria	61.0	30.0	0	478	Yes
Room 17	69.0	25.0	0	510	Yes
Room 27	71.0	24.0	0	504	Yes

Table 4: 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	-
Room 6	74.0	18.0	0	427	Yes

Conclusions and Recommendations

Among the comfort parameters measured, the indoor temperature readings were in the range of the ASHRAE recommended range for winter. The indoor mold samples collected from Room 6,

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the Cafeteria, Room 17, and Room 27 indicate elevated presence of *Aspergillus/Penicillium* and a slight elevation of *Cladosporium* was found in the Cafeteria during the screening performed on December 2, 2020, while the other mold sample was found to have a normal fungal ecology for an indoor environment. These locations were thoroughly recleaned and reinspected, and the analytical results indicated normal fungal ecology.

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

#20045190

Analysis Report prepared for

Global, Inc.

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

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

BB203
Indoor Air Quality
High Bridge Elementary School

Collected: **December 2, 2020**
Received: **December 3, 2020**
Reported: **December 3, 2020**

We would like to thank you for trusting Hayes Microbial for your analytical needs!
We received 7 samples by FedEx in good condition for this project on December 3rd, 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

Kenna Leonzo
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BB203
Indoor Air Quality
High Bridge Elementary School

#20045190

Spore Trap
SOP - HMC#101

Sample Number	1	HBES-1201-01		2	HBES-1201-02		3	HBES-1201-03		4	HBES-1201-04	
Sample Name	**Ambient**			**Room 6**			**Library**			**Room 12**		
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	2	27	14.3%	1	13	2.4%						
Aspergillus|Penicillium	6	80	42.9%	37	493	90.2%	2	27	100.0%	4	53	100.0%
Basidiospores												
Bipolaris|Drechslera												
Chaetomium												
Cladosporium	6	80	42.9%	3	40	7.3%						
Curvularia												
Epicoccum												
Fusarium												
Memnoniella												
Myxomycetes												
Pithomyces												
Stachybotrys												
Stemphylium												
Torula												
Ulocladium												
Total	14	187	100%	41	546	100%	2	27	100%	4	53	100%

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

Collected: **Dec 2, 2020** Received: **Dec 3, 2020** Reported: **Dec 3, 2020**

Project Analyst: Shareef Abdelgadir, MS Date: **12 - 03 - 2020**

Reviewed By: Steve Hayes, BSMT Date: **12 - 03 - 2020**

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High Bridge Elementary School

#20045190

Spore Trap
SOP - HMC#101

Sample Number	5	HBES-1201-05		6	HBES-1201-06		7	HBES-1201-07	
Sample Name	**Cafeteria**			**Room 17**			**Room 27**		
Sample Volume	75.00 liter			75.00 liter			75.00 liter		
Reporting Limit	13 spores/m³			13 spores/m³			13 spores/m³		
Background	2			2			2		
Fragments	ND			13/m³			ND		
Organism	**Raw Count**	**Count / m³**	**% of Total**	**Raw Count**	**Count / m³**	**% of Total**	**Raw Count**	**Count / m³**	**% of Total**
Alternaria							1	13	2.9%
Ascospores									
Aspergillus|Penicillium	448	5973	88.9%	48	640	96.0%	34	453	97.1%
Basidiospores									
Bipolaris|Drechslera									
Chaetomium									
Cladosporium	56	747	11.1%						
Curvularia				2	27	4.0%			
Epicoccum									
Fusarium									
Memnoniella									
Myxomycetes									
Pithomyces									
Stachybotrys									
Stemphylium									
Torula									
Ulocladium									
Total	504	6720	100%	50	667	100%	35	466	100%

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

Collected: **Dec 2, 2020** Received: **Dec 3, 2020** Reported: **Dec 3, 2020**

HAYES MICROBIAL CONSULTING

Project Analyst: Shareef Abdelgadir, MS — Date: **12 - 03 - 2020**

Reviewed By: Steve Hayes, BSMT — Date: **12 - 03 - 2020**

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BB203
Indoor Air Quality
High Bridge Elementary School

#20045190

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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Organism Descriptions

Alternaria

Habitat: Commonly found outdoors in soil and decaying plants. Indoors, it is commonly found on window sills and other horizontal surfaces.

Effects: A common allergen and has been associated with hypersensitivity pneumonitis. Alternaria is capable of producing toxic metabolites which may be associated with disease in humans or animals. Occasionally an agent of onychomycosis, ulcerated cutaneous infection and chronic sinusitis, principally in the immunocompromised patient.

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.

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.

Curvularia

Habitat: They exist in soil and plant debris, and are plant pathogens.

Effects: They are allergenic and a common cause of allergic fungal sinusitis. An occasional cause of human infection, including keratitis, sinusitis, onychomycosis, mycetoma, pneumonia, endocarditis and desseminated infection, primarily in the immunocompromised.

HAYES MICROBIAL CONSULTING

Company: Global, Inc
Address: 1818 New York Avenue, Suite 217 Washington, DC 20002

N

SHIP: FEDEX - PAK SO
DATE: 12-03-2020

8160 4411 5690

MOLD
20045190

Job Number: BB203	Job Name: Indoor Air Quality High Bridge Elementary School
Collector: Kenna Leonzo	
Date Collected: 12/02/2020	

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	HBES-1202-01	Ambient	S	75 L	
2	HBES-1202-02	Room 6			
3	HBES-1202-03	Library			
4	HBES-1202-04	Room 12			
5	HBES-1202-05	Cafeteria			
6	HBES-1202-06	Room 17			
7	HBES-1202-07	Room 27			
8					
9					
10					
11					
12					
13					
14					
15					
16					

Released by: Kenna Leonzo | Date: 12/2/20 | Received By: TM | Date: 12-3-20

HAYES MICROBIAL CONSULTING

#21006305

Analysis Report prepared for

Global, Inc.

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

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

20-064
IAQ Reinspection
High Bridge ES

Collected: **February 24, 2021**
Received: **February 25, 2021**
Reported: **February 25, 2021**

We would like to thank you for trusting Hayes Microbial for your analytical needs!
We received 6 samples by FedEx in good condition for this project on February 25th, 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
High Bridge ES

#21006305

Spore Trap, Spore Trap Blank
SOP - HMC#101

Sample Number	1	01		2	02		3	03		4	04	
Sample Name	**Ambient**			**Room 6**			**Cafeteria**			**Room 17**		
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	3	40	21.4%				2	27	66.7%			
Aspergillus|Penicillium	2	27	14.3%	42	560	97.7%				13	173	92.9%
Basidiospores												
Bipolaris|Drechslera												
Chaetomium												
Cladosporium	7	93	50.0%							1	13	7.1%
Curvularia												
Epicoccum							1	13	33.3%			
Fusarium												
Memnoniella												
Myxomycetes	2	27	14.3%	1	13	2.3%						
Pithomyces												
Stachybotrys												
Stemphylium												
Torula												
Ulocladium												
Total	14	187	100%	43	573	100%	3	40	100%	14	186	100%

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

Collected: **Feb 24, 2021** Received: **Feb 25, 2021** Reported: **Feb 25, 2021**

Project Analyst: Shareef Abdelgadir, MS — Date: **02 - 25 - 2021**

Reviewed By: Ramesh Poluri, PhD — Date: **02 - 25 - 2021**

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20-064
IAQ Reinspection
High Bridge ES

#21006305

Spore Trap, Spore Trap Blank
SOP - HMC#101

Sample Number	5	05		6	06	
Sample Name	Room 27			Field Blank		
Sample Volume	75.00 liter			0.00 liter		
Reporting Limit	13 spores/m³			1 spore/m³		
Background	2			NBD		
Fragments	ND			ND		
Organism	**Raw Count**	**Count / m³**	**% of Total**	**Raw Count**	**Count / m³**	**% of Total**
Alternaria						
Ascospores						
Aspergillus|Penicillium	4	53	100.0%			
Basidiospores						
Bipolaris|Drechslera						
Chaetomium						
Cladosporium						
Curvularia						
Epicoccum						
Fusarium						
Memnoniella						
Myxomycetes						
Pithomyces						
Stachybotrys						
Stemphylium						
Torula						
Ulocladium						
Total	4	53	100%	ND	ND	

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

Collected: **Feb 24, 2021** Received: **Feb 25, 2021** Reported: **Feb 25, 2021**

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Project Analyst: Shareef Abdelgadir, MS — Date: **02 - 25 - 2021**

Reviewed By: Ramesh Poluri, PhD — Date: **02 - 25 - 2021**

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20-064
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Spore Trap Information

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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.
1818 New York Ave. Suite 217
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(443) 691-0455

20-064
IAQ Reinspection
High Bridge ES

#21006305

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.

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.

HAYES MICROBIAL CONSULTING

Company: Global Inc
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Washington DC 20002

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SHIP: FEDEX - BOX 50
DATE: 02-25-2021

8160 4410 5667

MOLD

21006305

Job Number: 20-064	Job Name: IAQ Reinspection High Bridge ES
Collector: Shane Prabuddha	Mobile: 443-691-0455 / Email: Channab@globalincusa.net
Date Collected: 02/24/21	Note:

Analysis Type		Analysis Description	Turnaround	Accepted Media Types
Spore Trap	S	Identification & Enumeration of Fungal Spores	24 Hour X	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	Ambient	S	75L	T:65 RH:33 Co2:483 Co:0
2	02	Room 6	S	75L	T:66 RH:27 Co2:548 Co:0
3	03	Cafeteria	S	75L	T:61 RH:30 Co2:478 Co:0
4	04	Room 17	S	75L	T:69 RH:25 Co2:518 Co:0
5	05	Room 27	S	75L	T:71 RH:24 Co2:504 Co:0
6	06	Field blank	S		
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					

Released by: Shane Prabuddha	Date: 02/24/2021	Received By:	Date: 2-25-21

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**

HAYES MICROBIAL CONSULTING
3005 East Boundary Terrace, Suite F. Midlothian, VA. 23112 (804) 562-3435 contact@hayesmicrobial.com

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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.
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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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20-064
IAQ Reinspection
Suitland 45 / High Bridges ES

#21007888

Organism Descriptions

Ascospores

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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.

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

8160 4411 5657

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
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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
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					

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