ESI Environmental Solutions, Inc.

www.esi4u.com (410)-867-6262

Discovery Environmental Inspection Report

Project Contact Information

Alex Baylor Environmental Specialists Environmental Safety Office 13306 Old Marlboro Pike Upper Marlboro, MD 20772 301-952-6760	John Hanson Montessori School 110,413 sq. feet	Environmental Solutions, Inc. Bryan Harrington 6114 Drum Point Road Deale, MD 20751 410-867-6262 bryan@esi4u.com

Property Location

6360 Oxon Hill Road Oxon Hill, MD 20745

Date of Inspection 2/27/2017

Prepared By: Bryan Harrington

Certified Indoor Environmentalist (CIE)

Dear Mr. Baylor,

The results of the inspection and testing performed at John Hanson Montessori School, which is located at 6360 Oxon Hill Road, Oxon Hill, MD 20745, are concluded and the findings are enclosed. I want to thank you for allowing ESI the opportunity to service your indoor environmental needs. Included in this report are the observations, lab results, and recommendations from ESI's 2/27/2019 inspection and testing.

Background Information

The Prince Georges County Public School Environmental Team has taken a proactive approach in cleaning the above-mentioned school to ensure there are no health or environmental risks related to microbial and biological hazards. Historically elevated levels of humidity, condensation from pipes, periodic steam leaks and outdated HVAC systems, may have contributed to water damage ceiling tiles and colonization of mold spores in various area of the school.

Purpose

ESI was engaged to inspect the school in a random sufficient manner. Classrooms, administration offices, and common area building materials and contents, will be visually inspected for water damage and microbial growth.

In each location inspected, the indoor air quality will be tested for elevated levels of carbon dioxide and carbon monoxide, in addition to measuring the relative humidity and temperature. Microbial / biological hazards within the breathable air space will also be tested.

Based upon the visible assessment, instrument readings and lab results, ESI will determine if additional remediation in required.

Observations and instrument readings

The following table is designed for this project. Some of the fields may not be filled in due to not being applicable during the time of the inspection. You will notice either a 'YES' or 'NO' in the table. 'YES' indicates that mold and /or water damage was detected and 'NO' indicates it was not. If 'YES' is noted, remediation recommendation will be included for the area inspected. Please note that the cubic feet of air in the rooms inspected is an approximate number.

Location	IAQ Sample #	Swab	R/H	Temp	CO2	Co	Cubic feet of air.	
Room 211	2378043	N/A	31.1%	69.6	517	008	7,840	
Inspected								
Ceiling Tiles	Walls	Teachers Desk	Children's Desk	Tables	Cabinets Shelving	Convector	HVAC Diffusors	Windows
2x2	CMU	1	31	0	5	1	0	5
YES	NO	NO	NO	NO	NO	NO	NO	NO

Observation Notes

- There was one water damaged ceiling tile along the wall adjoining the hallway.
- There were no signs of visible mold growth detected within this location.
- The indoor air quality should not pose health or environmental risk. The total spore count was 160 Count/M^3, which would be considered a normal fungal ecology.

Recommendations

- Remove the water damaged ceiling tile and place in a sealed plastic bag for disposal. Replace ceiling tile as needed.

Location	IAQ Sample #	Swab	R/H	Temp	CO2	CO	Cubic feet of air.	
Room 215	2378048	N/A	26.7%	77.0	579	**010**	8,085	
Inspected								
Ceiling Tiles	Walls	Teachers Desk	Children's Desk	Tables	Cabinets Shelving	Convector	HVAC Diffusors	Windows
2x2'	CMU	0	37	0	5	1	0	5
YES	NO	NO	NO	NO	NO	NO	NO	NO

Observation Notes

- There were three water damaged ceiling tiles.
- There were accumulations of dust and organic debris on the fins to the window air handler.
- There were no signs of visible mold growth detected within this location.
- The carbon monoxide reading was slightly amplified.
- The total spore count was 200 Count/M^3, which would be considered a normal fungal ecology.

Recommendations

- Remove the water damaged ceiling tiles and place in a sealed plastic bag for disposal. Replace ceiling tiles as needed.
- Clean and treat the window AHU fins and fan assembly. Replace filter to AHU as needed.
- To reduce Carbon monoxide (CO) levels, increase air exchanges within this location.

Location	IAQ Sample #	Swab	R/H	Temp	CO2	CO	Cubic feet of air.	
Room 203	2378046	N/A	21.6%	74.8	446	15	7,680	
Inspected								
Ceiling Tiles	Walls	Teachers Desk	Children's Desk	Tables	Cabinets Shelving	Convector	HVAC Diffusors	Windows
2x4'	CMU and drywall	0	27	2	13	1	0	8
NO	NO	NO	NO	NO	NO	NO	NO	NO
Observation Notes								
• There were light accumulations of dust under children's desks. • There were no signs of visible mold growth detected within this location. • The carbon monoxide reading was slightly amplified. • The total spore count was 80 Count/M^3, which would be considered a normal fungal ecology.								
Recommendations								
• HEPA vacuum dust from under children's desks. • To reduce Carbon monoxide (CO) levels, increase air exchanges within this location.								

Location	IAQ Sample #	Swab	R/H	Temp	CO2	CO	Cubic feet of air.	
Room 204	2378047	N/A	27.3%	75.5	725	16	9,840	
Inspected								
Ceiling Tiles	Walls	Teachers Desk	Children's Desk	Tables	Cabinets Shelving	Convector	HVAC Diffusors	Windows
2x4'	CMU	1	10	7	22	1	0	7
NO	NO	NO	NO	NO	NO	NO	NO	NO
Observation Notes								
• There were light accumulations of dust on surfaces of cabinets and shelving. • There were no signs of visible mold growth detected within this location. • The carbon monoxide reading was slightly amplified. • The total spore count was 40 Count/M^3, which would be considered a normal fungal ecology.								
Recommendations								
• HEPA vacuum dust from surfaces of cabinets and shelving. • To reduce Carbon monoxide (CO) levels, increase air exchanges within this location.								

Location	IAQ Sample #	Swab	R/H	Temp	CO2	CO	Cubic feet of air.	
Room 120	2378032	N/A	27.4%	77.3	1,080	**018**	10,440	
Inspected								
Ceiling Tiles	Walls	Teachers Desk	Children's Desk	Tables	Cabinets Shelving	Convector	HVAC Diffusors	Windows
2x2'	CMU	2	0	6	20	1	0	7
NO	NO	NO	NO	NO	NO	NO	NO	NO

Observation Notes

- There were light accumulations of dust on surfaces of cabinets and shelving.
- There were no signs of visible mold growth detected within this location.
- The carbon monoxide reading was slightly amplified.
- The total spore count was 200 Count/M^3, which would be considered a normal fungal ecology.

Recommendations

- HEPA vacuum dust from surfaces of cabinets and shelving.
- To reduce Carbon monoxide (CO) levels, increase air exchanges within this location.

Location	IAQ Sample #	Swab	R/H	Temp	CO2	C0	Cubic feet of air.	
Room 121	2378052	N/A	21.5%	77.3	729	**018**	7,440	
Inspected								
Ceiling Tiles	Walls	Teachers Desk	Children's Desk	Tables	Cabinets Shelving	Convector	HVAC Diffusors	Windows
2x4'	CMU	0	2	7	13	1	0	8
YES	NO	NO	NO	NO	NO	NO	NO	NO

Observation Notes

- There was one water damaged ceiling tile in the middle of the room.
- There was heavy accumulation of dust on the window air handler filter.
- There were no signs of visible mold growth detected within this location.
- The carbon monoxide reading was slightly amplified.
- The total spore count was 360 Count/M^3, which would be considered a normal fungal ecology.

Recommendations

- Remove the water damaged ceiling tile and place in a sealed plastic bag for disposal. Replace ceiling tile as needed.
- Remove and replace window AHU filter. HEPA vacuum AHU coils as needed.
- To reduce Carbon monoxide (CO) levels, increase air exchanges within this location.

Location	IAQ Sample #	Swab	R/H	Temp	CO2	CO	Cubic feet of air.	
Room 117	2378042	N/A	23.7%	74.1	718	**017**	7,560	
Inspected								
Ceiling Tiles	Walls	Teachers Desk	Children's Desk	Tables	Cabinets Shelving	Convector	HVAC Diffusors	Windows
2x2'	Pegboard over CMU	1	1	7	17	1	0	8
NO	NO	NO	NO	NO	NO	NO	NO	NO
Observation Notes								
• There were accumulations of dust on the shelving and contents on shelving. • There were no signs of visible mold growth detected within this location. • The carbon monoxide reading was slightly amplified. • The total spore count was 120 Count/M^3, which would be considered a normal fungal ecology.								
Recommendations								
• HEPA vacuum dust from surfaces of shelving and contents on shelving. • To reduce Carbon monoxide (CO) levels, increase air exchanges within this location.								

Location	IAQ Sample #	Swab	R/H	Temp	CO2	CO	Cubic feet of air.	
Room 112	2378031	N/A	18.6	77.1	569	**017**	9,960	
Inspected								
Ceiling Tiles	Walls	Teachers Desk	Children's Desk	Tables	Cabinets Shelving	Convector	HVAC Diffusors	Windows
2x4'	CMU	0	0	8	21	1	0	6
YES	NO	NO	NO	NO	NO	NO	NO	NO
Inspected								
• There were four water damaged ceiling tiles. • There were no signs of visible mold growth detected within this location. • The carbon monoxide reading was slightly amplified. • The total spore count was 520 Count/M^3, which would be considered a normal fungal ecology.								
Recommendations								
• Remove the water damaged ceiling tiles and place in a sealed plastic bag for disposal. Replace ceiling tiles as needed. • To reduce Carbon monoxide (CO) levels, increase air exchanges within this location.								

Location	IAQ Sample #	Swab	R/H	Temp	CO2	CO	Cubic feet of air.	
Library	2378051	N/A	17.1%	76.1	464	**017**	25,920	
Inspected								
Ceiling Tiles	Walls	Teachers Desk	Children's Desk	Tables	Cabinets Shelving	Convector	HVAC Diffusors	Windows
2x2'	CMU	2	0	12	60	3	0	16
NO	NO	NO	NO	NO	NO	NO	NO	NO

Observation Notes

- There were light accumulations of dust on the cabinets and shelving.
- There were no signs of visible mold growth detected within this location.
- The carbon monoxide reading was slightly amplified.
- The total spore count was 280 Count/M^3, which would be considered a normal fungal ecology.

Recommendations

- HEPA vacuum dust from surfaces of cabinets and shelving.
- To reduce Carbon monoxide (CO) levels, increase air exchanges within this location.

Location	IAQ Sample #	Swab	R/H	Temp	CO2	CO	Cubic feet of air.	
Room 124	2378027	N/A	16.6%	79.1	484	**019**	16,087.50	
Inspected								
Ceiling Tiles	Walls	Teachers Desk	Children's Desk	Tables	Cabinets Shelving	Convector	HVAC Diffusors	Windows
2x2'	CMU	0	1	9	6	3	0	10
NO	NO	NO	NO	NO	NO	NO	NO	NO

Observation Notes

- There was water damage and suspected microbial growth under four of the six sinks.
- The carbon monoxide reading was slightly amplified.
- The total spore count was 40 Count/M^3, which would be considered a normal fungal ecology.

Recommendations

- Ensure there are no active plumbing leaks from the sinks. Clean and treat the water damaged sink cabinetry.
- To reduce Carbon monoxide (CO) levels, increase air exchanges within this location.

Location	IAQ Sample #	Swab	R/H	Temp	CO2	CO	Cubic feet of air.	
Room 107	2378016	1	17.9%	73.2	593	**018**	7,320	
Inspected								
Ceiling Tiles	Walls	Teachers Desk	Children's Desk	Tables	Cabinets Shelving	Convector	HVAC Diffusors	Windows
2x2'	CMU	1	0	7	9	7	0	7
NO	NO	NO	NO	**YES**	NO	NO	NO	NO
Observation Notes								
• There was light microbial growth on the underside of the round table near the door. A surface sample was collected and "Light" Aspergillus/Penicillium was detected on the table. • There was no filter on the window air handler unit. Accumulations of dust and organic debris were on the AHU coils. • The carbon monoxide reading was slightly amplified. • The total spore count was 0 Count/M^3, which would be considered a normal fungal ecology.								
Recommendations								
• HEPA vacuum microbial growth from underside of round table. Damp-wipe underside of the table with disinfectant such as Fiberlock ShockWave, or equivalent. • HEPA vacuum window AHU coils as needed. Install new filter on window AHU. • To reduce Carbon monoxide (CO) levels, increase air exchanges within this location.								

Location	IAQ Sample #	Swab	R/H	Temp	CO2	Co	Cubic feet of air.
Outdoors	2378017	N/A	20.7%	53.2	402	**016**	N/A

Interpretation of Lab Results

In the enclosed Air Cassette Analysis report, you will notice Fungal Identification, which is the genera detected in the breathable airspace, both indoors and/or outdoors. The Raw Count is the actual number of spores counted on the slide, and the Count/M^3 are the spores per cubic meter of air. The other particles are non-living particles such as dander, mycelial fragments, pollens, etc.

In order for humans to be exposed indoors, fungal spores, fragments, or metabolites must be released into the air and inhaled, physically contacted (dermal exposure), or ingested. Whether symptoms develop in people exposed to fungi depends on the nature of the fungal material (e.g., allergenic, toxic, or infectious), the amount of exposure, and the susceptibility of exposed persons.

Susceptibility varies with genetic predisposition (e.g., allergic reactions do not always occur in all individuals), age, state of health, and concurrent exposures.

Air Sampling Lab Results

SanAir Technologies Laboratory

Name: Environmental Solutions, Inc
Address: 534-A Deale Road
Deale, MD 20751
Phone: 410-867-6262

Project Number: 6360 Oxon Hill Road
P.O. Number:
Project Name: John Hanson Montessori
Collected Date: 2/28/2019
Received Date: 3/1/2019 10:15:00 AM

SanAir ID Number
19009531
FINAL REPORT
3/5/2019 10:27:51 AM

Analyst: Acharya, Uttam

Air Cassette Analysis

ND = None Detected. Blank spaces indicate no spores detected.

SanAir ID Number	19009531-001			19009531-002			19009531-003			19009531-004		
Analysis Using STL	107C			107C			107C			107C		
Sample Number	2378043			2378048			2378046			2378047		
Sample Identification	Room 211			Room 215			Room 203			Room 204		
Sample Type	Air Cassette - Micro-5			Air Cassette - Micro-5			Air Cassette - Micro-5			Air Cassette - Micro-5		
Volume	25 Liters			25 Liters			25 Liters			25 Liters		
Analytical Sensitivity	40 Count/M³			40 Count/M³			40 Count/M³			40 Count/M³		
Background Density	1+			1+			1+			1+		
Other	**Raw Count**	**Count/M³**	**%**	**Raw Count**	**Count/M³**	**%**	**Raw Count**	**Count/M³**	**%**	**Raw Count**	**Count/M³**	**%**
Dander	32	1280	n/a	29	1160	n/a	29	1160	n/a	44	1760	n/a
Fibers	2	80	n/a				1	40	n/a			
Mycelial Fragments										1	40	n/a
Fungal Identification	**Raw Count**	**Count/M³**	**%**	**Raw Count**	**Count/M³**	**%**	**Raw Count**	**Count/M³**	**%**	**Raw Count**	**Count/M³**	**%**
Ascospores												
Aspergillus/Penicillium	2	80	50	1	40	20	2	80	>99	1	40	>99
Basidiospores	2	80	50	3	120	60						
Bipolaris/Drechslera												
Cladosporium species				1	40	20						
Pestalotia- / Pestalotiopsis-like												
Rusts												
Smuts/Myxomycetes												
TOTAL	**4**	**160**		**5**	**200**		**2**	**80**		**1**	**40**	

Signature: Uttam Acharya Date: 3/5/2019 Reviewed: Johnathan Wilson Date: 3/5/2019

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Air Cassette Analysis

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SanAir ID Number	19009531-005			19009531-006			19009531-007			19009531-008		
Analysis Using STL	107C			107C			107C			107C		
Sample Number	2378032			2378052			2378042			2378031		
Sample Identification	Room 120			Room 121			Room 117			Room 112		
Sample Type	Air Cassette - Micro-5			Air Cassette - Micro-5			Air Cassette - Micro-5			Air Cassette - Micro-5		
Volume	25 Liters			25 Liters			25 Liters			25 Liters		
Analytical Sensitivity	40 Count/M³			40 Count/M³			40 Count/M³			40 Count/M³		
Background Density	2			2			2			1+		
Other	**Raw Count**	**Count/M³**	**%**	**Raw Count**	**Count/M³**	**%**	**Raw Count**	**Count/M³**	**%**	**Raw Count**	**Count/M³**	**%**
Dander	148	5920	n/a	130	5200	n/a	52	2080	n/a	73	2920	n/a
Fibers	3	120	n/a				2	80	n/a	3	120	n/a
Mycelial Fragments				10	400	n/a						
Fungal Identification	**Raw Count**	**Count/M³**	**%**	**Raw Count**	**Count/M³**	**%**	**Raw Count**	**Count/M³**	**%**	**Raw Count**	**Count/M³**	**%**
Ascospores				2	80	22						
Aspergillus/Penicillium	2	80	40							13	520	93
Basidiospores	2	80	40	1	40	11	1	40	33	1	40	7
Bipolaris/Drechslera				1	40	11						
Cladosporium species				2	80	22	2	80	67			
Pestalotia- / Pestalotiopsis-like												
Rusts				1	40	11						
Smuts/Myxomycetes	1	40	20	2	80	22						
TOTAL	**5**	**200**		**9**	**360**		**3**	**120**		**14**	**560**	

Signature: Uttam Acharya Date: 3/5/2019 Reviewed: Johnathan Wilson Date: 3/5/2019

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Air Cassette Analysis

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SanAir ID Number	19009531-009			19009531-010			19009531-011			19009531-012		
Analysis Using STL	107C			107C			107C			107C		
Sample Number	2378051			2378027			2378016			2378017		
Sample Identification	Library			Room 124			Room 107			Outdoors		
Sample Type	Air Cassette - Micro-5			Air Cassette - Micro-5			Air Cassette - Micro-5			Air Cassette - Micro-5		
Volume	25 Liters			25 Liters			25 Liters			25 Liters		
Analytical Sensitivity	40 Count/M³			40 Count/M³			40 Count/M³			40 Count/M³		
Background Density	1+			1+			1+			1+		
Other	**Raw Count**	**Count/M³**	**%**	**Raw Count**	**Count/M³**	**%**	**Raw Count**	**Count/M³**	**%**	**Raw Count**	**Count/M³**	**%**
Dander	51	2040	n/a	49	1960	n/a	96	3840	n/a	23	920	n/a
Fibers	2	80	n/a	3	120	n/a	2	80	n/a	1	40	n/a
Mycelial Fragments	1	40	n/a									
Fungal Identification	**Raw Count**	**Count/M³**	**%**	**Raw Count**	**Count/M³**	**%**	**Raw Count**	**Count/M³**	**%**	**Raw Count**	**Count/M³**	**%**
Ascospores												
Aspergillus/Penicillium	5	200	71									
Basidiospores	2	80	29							1	40	>99
Bipolaris/Drechslera												
Cladosporium species												
Pestalotia- / Pestalotiopsis-like				1	40	>99						
Rusts												
Smuts/Myxomycetes												
TOTAL	**7**	**280**		**1**	**40**					**1**	**40**	

Signature: Uttam Acharya Date: 3/5/2019 Reviewed: Johnathan Wilson Date: 3/5/2019

Direct ID Lab Results

SanAir Technologies Laboratory

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Collected Date: 2/28/2019
Received Date: 3/1/2019 10:15:00 AM

Analyst: Acharya, Uttam

Direct Identification Analysis

SanAir ID: 19009531-013 Sample #:Swab Room 107 Round Table

D1 - Direct Identification Analysis on Surface Swab using STL 104

Direct ID of Mold

Fungi	Estimated Amount
Aspergillus/Penicillium	Light

Estimated Amount	Indication of Growth	Evidence of Mycelial Fragments/Conidiophores
Rare	Not Likely	None
Light	Possible	Some, 10 to 25% of Tape Covered
Moderate	Probable	Abundant, 25 to 50% of Tape Covered
Heavy	Significant	Throughout, 50 to 100% of Tape Covered

*Refer to additional information page for further details

Signature: Uttam Acharya
Date: 3/5/2019

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Organism Descriptions

The descriptions of the organisms presented are derived from various reference materials. The laboratory report is based on the data derived from the samples submitted and no interpretation of the data, as to potential, or actual, health effects resulting from exposure to the numbers of organisms found, can be made by laboratory personnel. Any interpretation of the potential health effects of the presence of this organism must be made by qualified professional personnel with first hand knowledge of the sample site, and the problems associated with that site.

Dander - Comprised of human and/or animal skin cells. Counts may be higher in carpeted rooms and in rooms with more traffic.
Health Effects: May cause allergies.

Fibers - This category can include clothing, carpet, and insulation fibers.

Mycelial Fragments - A mycelium (plural = mycelia) is the "body" of a fungus. It is a collective term for hyphae (singular = hypha), which are the tubular units of the mycelium usually composed of chitin. The terms hyphae and mycelial fragments are used interchangeably. [This information was referenced from the mycology text "The Fifth Kingdom"]In some cases a fungal identification cannot be obtained due to lack of sporulation. Only the mycelial fragments are present, and cannot be identified without the distinguishing characteristics of the spores or the structures they grow from.
Health Effects: Allergic reactions may occur in the presence of spores (conidia) or mycelial/hyphal fragments.

Ascospores - From the fungal Subphylum Ascomycotina. Ascospores are ubiquitous in nature and are commonly found in the outdoor environment. This class contains the "sac fungi" and yeasts. Some ascospores can be identified by spore morphology, however; some care should be excercised with regard to specific identification. They are identified on tape lifts and non-viable analysis by the fact that they have no attachment scars and are sometimes enclosed in sheaths with or without sacs. Ascomycetes may develop both sexual and asexual stages. Rain and high humidity may help asci to release, and dispurse ascospores, which is why during these weather conditions there is a great increase in counts.
Health Effects: This group contains possible allergens.

Aspergillus/Penicillium - These spores are easily aerosolized. Only through the visualization of reproductive structures can the genera be distinguished. Also included in this group are the spores of the genera Acremonium, Phialophora, Verticillium, Paecilomyces, etc. Small, round spores of this group lack the necessary distinguishing characteristics when seen on non-viable examination.
Health Effects: Can cause a variety of symptoms including allergic reactions. Most symptoms occur if the individual is immunocompromised in some way (HIV, cancer, etc). Both Penicillium and Aspergillus spores share similar morphology on non-viable analysis and therefore are lumped together into the same group.

Basidiospores - From the Subphylum Basidiomycotina which contains the mushrooms, shelf fungi, and a variety of other macrofungi. They are saprophytes, ectomycorrhizal fungi or agents of wood rot, which may destroy the structure wood of buildings. It is extremely difficult to identify a specific genera of mushrooms by using standard culture plate techniques. Some basidiomycete spores can be identified by spore morphology; however, some care should be exercised with regard to specific identification. The release of basidiospores is dependant upon moisture, and they are dispersed by wind.
Health Effects: Many have the potential to produce a variety of toxins. Members of this group may trigger Type I and III fungal hypersensitivity reactions. Rarely reported as opportunistic pathogens.

Bipolaris/Drechslera - Found on grasses, grains, various plants, and decaying food. May grow in semi-dry environments. Some species are found in indoor environments. Because of the microscopic similarities between the two genera, they are grouped together on non-viable analyses.
Health Effects: Can occasionally cause corneal infection of the eye. This group of fungi constitutes the most commonly reported causes of allergic fungal sinusitis. They produce type I fungal hypersensitivity in humans.
References: St-Germain, Guy, and Richard Summerbell. Identifying Filamentous Fungi: A Clinical Laboratory Handbook. California: Star Publishing Co., 1996.

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Cladosporium species - The most commonly identified outdoor fungus. The outdoor numbers are reduced in the winter and are often high in the summer. Often found indoors in numbers less than outdoor numbers. It is commonly found on the surface of fiberglass duct liner in the interior of supply ducts. A wide variety of plants are food sources for this fungus. It is found on dead plants, woody plants, food, straw, soil, paint and textiles. Often found in dirty refrigerators and especially in reservoirs where condensation is collected, on moist window frames it can easily be seen covering the whole painted area with a velvety olive green layer.
Health Effects: It is a common allergen. It can cause mycosis. Common cause of extrinsic asthma (immediate-type hypersensitivity: type I). Acute symptoms include edema and bronchiospasms, chronic cases may develop pulmonary emphysema. Illnesses caused by this genus can include phaeohyphomycosis, chromoblastomycosis, hay fever and common allergies.
References: Flannigan, Brian, Robert A. Samson, and J. David Miller, eds. Microorganisms in Home and Indoor Work Environments: Diversity, Health Impacts, Investigation, and Control. London and New York: Taylor & Francis,2001.

Pestalotia- / Pestalotiopsis-like - This group consists of several genera. Mostly plant pathogens.

Rusts - From the group Uredinales, called Rusts due to the color of the spores, which are known for causing disease in plants.

Smuts/Myxomycetes - Smuts and Myxomycetes are parasitic plant pathogens. They are typically grouped together due to their association with plants, the outdoors and because they share similar microscopic morphology.
Health Effects: Can produce type I fungal hypersensitivity reactions.
References: Martin, G.W., C.J. Alexopoulos, and M.L. Farr. The Genera of Myxomycetes. Iowa City, Iowa: University of Iowa Press, 1983.

Conclusions/Recommendations

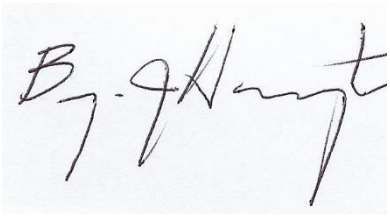
Overall, the inspected rooms were free of surface mold growth. Pre-existing water damage and suspected microbial growth was discovered underneath the sink cabinets in Room 124. In addition, mold growth was detected on the underside of a round table in Room 107. Cleaning recommendations are outlined above.

Water damaged ceiling tiles were noticed in several rooms. The water damaged ceiling tiles should be removed and sealed in a plastic bag for disposal. New ceiling tiles should be installed as needed.

The Carbon monoxide levels throughout the inspected rooms were slightly amplified, ranging between (10-19 ppm). The ASHRAE Standard, as well as the United States Green Building Council's (U.S.G.B.C.) LEED requirement for Carbon monoxide is 9 ppm or less. Please note, the outdoor level of Carbon monoxide was recorded at 16 ppm. This may be due to the property being in a heavy traffic area, right off the main road (Oxon Hill Road).

I hope you found our service beneficial. If you have any questions or concerns, please feel free to contact me at 410-867-6262.

Respectfully,



Bryan Harrington, (CIE)
Environmental Solutions, Inc.

Industry References

Since the 1993 New York City Department of Health (NYCDOH) document (Assessment and remediation of *Stachybotrys Atra* in Indoor Environments) was produced, several other guidance documents have been written. This report was developed in accordance with and including:

- *Fungal Contamination in Buildings: A Guide to Recognition and Management* (Health Canada, 1995).
- *Control of Moisture Problems Affecting Biological Indoor Air Quality* (Flannigan and Morey, 1996).
- *Bioaerosols: Assessment and Control* (American Conference of Government Industrial Hygienists [ACGIH], 1999).
- *Guidelines on Assessment and Remediation of Fungi in Indoor Environments* (NYCDOH, 2000). [external link]
- *Mold Remediation in Schools and Commercial Buildings* (U.S. EPA, 2001).
- *Report of the Microbial Growth Task Force* (The American Industrial Hygiene Association, 2001).
- *Fungal Contamination: A manual for investigation, remediation and control (BECi) 2005*.
- *29 CFR 1910, Occupational Safety and Health Standards for General Industry, U.S. Department of Labor*
- Institute of Inspection, Cleaning and Restoration Certification Standard IICRC S520 *29 CFR 1926, Occupational Safety and Health Standards for the Construction Industry*, U.S. Department of Labor
- *40 CFR 61, National Emission Standards for Hazardous Air Pollutants (NESHAP), U.S. Environmental Protection Agency*
- *ACR 2006, Assessment, Cleaning and Restoration of HVAC Systems, National Air Duct Cleaners Association, 2006**
- *ASHRAE Standards 62.1 or 62.2*
- *ASTM D-1653, Standard Test Methods for Water Vapor Transmission of Organic Coating Films*
- *Bioaerosols: Assessment and Control,* American Conference of Governmental Industrial Hygienists, 1999
- *Field Guide for Determination of Biological Contaminants in Environmental Samples, American Industrial Hygiene Association, 2005*
- *A Guide for Mold Remediation in Schools and Commercial Buildings, US Environmental Protection Agency, 2001 Protecting the Built Environment: Cleaning for Health, Michael A. Berry Ph.D., 1993*
- *IICRC S100 Standard and Reference Guide for Professional Carpet Cleaning, Fourth Edition, Institute of Inspection, Cleaning and Restoration Certification, (S100)**
- *IICRC S300 Standard and Reference Guide for Professional Upholstery Cleaning, First Edition, Institute of Inspection, Cleaning and Restoration Certification, (S300)**
- *ANSI/IICRC S500 Standard and Reference Guide for Professional Water Damage Restoration, Third Edition, Institute of Inspection, Cleaning and Restoration Certification, (S500)**