

Mystic Air Quality Consultants, Inc. 1204 North Road. Groton. Connecticut 06340

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800 247-7746

May 17, 2024

Mary Anne Butler Stonington Public Schools 40 Field Street Pawcatuck, CT 06379

Re: Environmental Fungi (Mold) Sampling -Post Test (5/9/24) 204 Mistuxet Avenue; Stonington, CT

Dear Mary,

Mystic Air Quality Consultants, Inc. conducted air sampling for environmental fungi (mold) on May 9th, 2024. The mold air samples were collected at 15 Liters per minute for 5 minutes using Allergenco cassettes. The mold samples were analyzed by SanAir Labs, an AIHA EMPAT Accredited lab and state licensed lab. The survey was conducted by Christopher Muller, a Certified Industrial Hygienist.

Environmental Fungi (Mold):

The results of air sampling for mold are presented in Enclosure (1). Please note that even though all mold spores are potential allergens and sources of infection, there are currently no State or Federal legal standards or guidelines for mold levels in the air and on surfaces. The primary purpose of sampling and inspections is to determine if the levels are higher than normal or higher than outside air and /or control samples. To evaluate mold levels, we normally compare the total counts (spores and pieces of mold) per cubic meter of air (which is listed under the "counts/M3" results column for each area) with the outside air levels. Levels 10 times higher than outside air indicate a potential source of mold within the building. Areas with high levels of specific mold species found inside of the building which are not found in outside sample could also indicate a potential mold source in that area.

Location	Mold Counts/M3	Comments
Outside	51,253	*Used for Comparison
Room 220	4,627	
Hallway #220	920	
Room 221	1,013	

A summary of the air sampling results is as follows:

At the time of the survey, the mold levels were consistent with the <u>types of molds found in the outside air</u> <u>-natural environment</u>. There were levels of Basidiospores in all samples. The release of basidiospores is dependent upon moisture, and they are dispersed by wind (outside/exterior mold spores in the air). There was no Stachybotrys mold found (Stachybotrys is also known as "Black Mold" or "Toxic Mold") in the air.

<u>The tested areas would be considered safe for normal use and occupancy.</u> It is recommended to keep the windows closed to reduce the outside air/allergens from coming into the spaces. Wipe down and clean surfaces regularly with disinfectants and HEPA Vacuum. Take steps to always keep the relative humidity below 60% to prevent any other mold growth or allergens from accumulating or occurring.

Sincerely, Christopher J. Eident, CIH, CSP, MPH CEO

Mystic Air Quality is a CT & RI licensed Lab Since 1987





The Identification Specialists

Analysis Report prepared for Mystic Air Quality Consultants

Report Date: 5/14/2024 Project Name: Stonington, CT Project #: 204 Mistuxet Ave SanAir ID#: 24026236



10501 Trade Court | North Chesterfield, Virginia 23236 888.895.1177 | 804.897.1177 | fax: 804.897.0070 | IAQ@SanAir.com | SanAir.com





Name: Mystic Air Quality Consultants Address: 1204 North Road Groton, CT 06340 Phone: 860-449-8903

Analyst: Leake, Sami

Project Number: 204 Mistuxet Ave P.O. Number: Stonington Schools Project Name: Stonington, CT Collected Date: 5/9/2024 Received Date: 5/10/2024 10:20:00 AM SanAir ID Number 24026236 FINAL REPORT 5/14/2024 2:48:56 PM

Air Cassette Analysis

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

SanAir ID Number	240	26236-001		240	26236-002		240	26236-003	Contraction of	240	26236-004	
Analysis Using STL	Closed Lancester Arrest	105C	No. in the		105C		And Statistics	105C		Sales Contracts	105C	
Sample Number		5852689			5852505		5	5852492			5852708	
Sample Identification	entropy of the second second	Outside		Room 220		Hallway # 220		Room 221				
Sample Type	Air Casset	te - Allergenco-	D	Air Casset	te - Allergenco-	D	Air Casset	te - Allergenco-	D	Air Casset	te - Allergenco-	D
Volume	STATISTICS IN THE REAL PROPERTY OF	75 Liters	19963	NUMBER OF STREET	75 Liters			75 Liters			75 Liters	
Analytical Sensitivity	13	Count/M ³		13	Count/M ³		13	Count/M ³		13	Count/M ³	
Background Density		1+			2+		The states in	2+			2	
Other	Raw Count	Count/M ³	%	Raw Count	Count/M ^a	%	Raw Count	Count/M ³	%	Raw Count	Count/M ³	%
Mycelial Fragments				Contacter all personalities of						2	27	n/a
Fungal Identification	Raw Count	Count/M ³	%	Raw Count	Count/M ³	%	Raw Count	Count/M ³	%	Raw Count	Count/M ³	%
Ascospores	1080	14400	28	85	1133	24	18	240	26	15	200	20
Asperaillus/Penicillium	14	187	< 1	17	227	5	1	13	1	5	67	7
Basidiospores	2745	36600	71	233	3107	67	46	613	67	49	653	64
Chaetomium species							1	13	1			
Cladosporium species	5	67	<1	11	147	3	3	40	4	7	93	9
Stachybotrys species				1	13	< 1						
TOTAL	3844	51253		347	4627		69	920	AND NO	76	1013	

Signature: Summinthe Sauke

Date: 5/14/2024

Reviewed: L. Claire Macdauald

Date: 5/14/2024



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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.

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 may be spores of the genera Acremonium, Phialophora, Verticillium, Paecilomyces, Talaromyces etc. Small, round to ovoid 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).

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.

Chaetomium species - It is an ascomycete. It is found on a variety of substrates containing cellulose including paper and plant compost. It can be found on the damp or water damaged paper in sheetrock after a long term water damage. Several species have been reported to play a major role in decomposition of cellulose made materials. These fungi are able to dissolve the cellulose fibers in cotton and paper, and thus cause these materials to disintegrate. The process is especially rapid under moist conditions.

Health Effects: Chaetomium can produce type I fungal hypersensitivity and has caused onychomycosis (nail infections). References: Flannigan, Brian, Robert A. Samson, and J. David Miller, eds. Microorganisms in Home and Indoor Work Environments. London and NY: Taylor & Francis, 2001.de Hoog, G.S. et al. Atlas of Clinical Fungi. 4th ed. Foundation Atlas of Clinical Fungi. 2020



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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 laver.

Health Effects: It is a common allergen. It can cause mycosis. Common cause of extrinsic asthma. 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. London and NY: Taylor & Francis, 2001.de Hoog, G.S. et al. Atlas of Clinical Fungi. 4th ed. Foundation Atlas of Clinical Fungi. 2020

Stachybotrys species - This organism is rarely found in outdoor samples. It is usually difficult to find in indoor air samples unless it is physically disturbed because the spores are in a gelatinous mass. Grows well on wet media, preferably containing cellulose. It proliferates in the indoor environment with long term water damage, growing on wallpaper, gypsum board, and textiles. As a general rule, air cultures for Stachybotrys yields unpredictable results, mainly due to the fact that this fungus is usually accompanied by other fungi such as Aspergillus and Penicillium that normally are better aerosolized than Stachybotrys. This is a slow growing fungus on media. It does not compete well with other rapidly growing fungi. The black fungi grow on building material with high cellulose content and low nitrogen content. Appropriate media for the growth of this organism will have high cellulose content and low nitrogen content.

Health Effects: It has worldwide distribution and has been reported to cause dermatitis, cough, rhinitis, and headache, although no definitive reports of human infections have been verified. It has the ability to cause type I hypersensitivity. It is a documented mycotoxin producer.

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.

SanAir Technologies Laboratory, Inc.

1551 Oakbridge Drive, Suite B - Powhatan, VA 23139 804-897-1177 / 888-895-1177 / Fax 804-897-0070 www.sanair.com

Microbiology Chain of Custody

SanAir ID Number 24026236

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Company: Mystic Air Quality Consultants	Project Number 2041 Marganese A	
Address: 1204 North Road	Project Number 2017 115 102ET AVE	Phone #: 860-449-8903
city. state, Zip: Groton, CT 06340	Projectivame: STON WELTON, CT	Phone #:
Samples Collected By: C. My uch	BO Number STORING 1 STORING	Fax #:
Sample Turner	THU NUMBER STONING TON DCHOOLS	Email:

Jai	inple Types	Analysis Types	
AC	Air Cassette	A1 - Identification and Enumeration of Fungal spores, plus total dander, fiber, and pollen count A2 - Identification and Enumeration of Fungal spores, plus total dander, fiber, and pollen count	Turn Around Time
T B	Tape	D1 - Direct Identification of Fungi	Hours 3/6/24/48-Std
S*	Swab*	D2 - Direct Identification of Mites, Insects, Pollen, etc.	Hours 3/6/24/48-Std
AP	Air Plate	C1 - Culture Identification and Enumeration of Fundi only	Hours 3/6/24/48-Std
в	Bulk	C2 - Culture Identification and Enumeration of Bacteria only	5-10 Days
S	Swab	C3 - Culture Identification and Enumeration of Fungi and Bacteria	2-4 Days 5-10 Days
W	Water	L1 - Culture Identification and Enumeration of Lacinov"	2-4 or 5-10 Days
D	Dust	M1 - Dust Mite Allergen Test	7-10 Days
_	8	SanAir Technologies Laboratory offers speciation by PCR. Please call for details and pricin	Hours 3/6/24/48-Std

Sample #	Sample Identification	Sample Type	Analysis Type(s)	Turn Around	Total Volume (L)	Time
5852689 5852505 5852492 5857708	OUTSING ROOM 220 HALLING @ 220 ROOM 221		Type(s)		Volume (L) or Area (in ²) 25(L)	

Relinguished by	Date	Time			State of the Owner
C. Muler	5/9/74	Luios	Received by	Date	Time
		-1400	Col	570d4	10:20Kr

Unless scheduled, the turn around time for all samples received after 3 pm Friday will begin at 8 am Monday morning. Weekend or Holiday work must be scheduled ahead of time and is charged 150% of analytical rate.

*Although we allow Direct Identification from a swab sample, best results are received from tape samples.



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MOLD INSPI	ECTION	FORM	DA	TE_05 (0	9/2024
LOCATION	200	4 MISTOXE	ET AUE.	STON	INCITON, CT
CLIENT	STO	NINGTON	SCHOOL	S	
Area	Humi- Dity %	Visible mold/ where	Water stains/ standingwater	Moisture readings	Odors
		No ves	No <u>v</u> yes	_	No_ves
arside	L		1		
Room	48	No ves	No <u>v</u> yes	-	No yes
HAWWAY @ RM ZZO	48	No_ves	No_ves	-	No yes
Room 221	48	No yes	No_ <u>v</u> yes	_	No_ <u>v</u> es
		Noyes	No		No

yes

ROOM 221 HAD BLACK PUST FROM

VENT NEAR MS. HELGER DESK,

TEST.

INSPECTOR C. MULLER

COMMENTS

- -

CLEANING

yes

POST