From: Ambizo
Sent: Tuesday, June 22, 2021 2:31:46 PM
To: Fulmore, James
Subject: Fwd:
Response requested: Yes
Sensitivity: Normal
Attachments:
IAQ Report.pdf;Lab Report.pdf;

---------- Forwarded message ---------
From: **Ambizo** <amberpinto1980@gmail.com>
Date: Mon, Jun 21, 2021 at 1:54 PM
Subject: Fwd:
To: achidek@nemours.org <achidek@nemours.org>

---------- Forwarded message ---------
From: **Ambizo** <amberpinto1980@gmail.com>
Date: Fri, Jun 18, 2021 at 11:51 AM
Subject: Fwd:
To: ddragos@edgewaterpark-nj.com <ddragos@edgewaterpark-nj.com>

There is two attachments. Please contact me [redacted] if there's any issues. Also please contact me to see what can be done

---

IAQ Report.pdf

Environmental & Indoor Air Quality Assessment

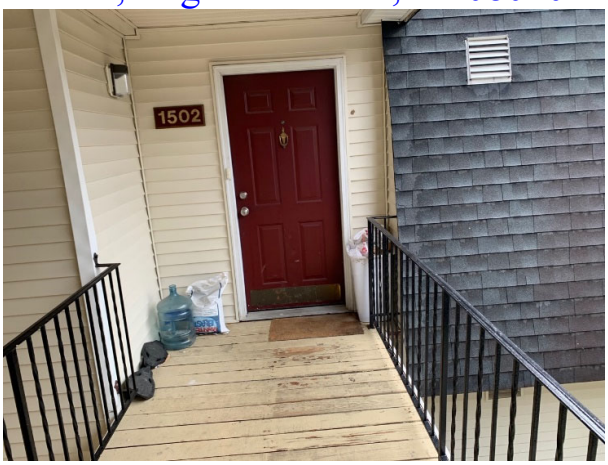
Project: GY-20013 – Ms. Gerstein, Grayson

1502 Manchester Court, Edgewater Park, NJ 08010 – March 17, 2020.

Environmental & Indoor Air Quality Assessment

Project: GY-20013 – Ms. Gerstein, Grayson

1502 Manchester Court, Edgewater Park, NJ 08010 – March 17, 2020.



Report By:

Gary (Gadi) Shaked, CIEC[1], CMC[2], CMRC[3], CRT[4], CAS[5], CRMS[6], CLS[7], WRS[8], OCS[9]

1. *Certified Indoor Environmental Consultant*
2. *Certified Microbial Consultant*
3. *Certified Mold Remediation Contractor*
4. *Certified Restoration Trainer*
5. *Certified Asbestos Supervisor*
6. *Certified Radon Measurement Specialist*
7. *Certified Lead Supervisor*
8. *Certified Water Damage Restoration Specialist*
9. *Certified Odor Control Specialist*

Disaster Recovery - Fire & Water Damage Restoration - Emergency Environmental Cleanup - Document Recovery - Electronics Restoration - Air Quality Assessment - Mold Testing and Remediation - Lead Abatement - Asbestos Removal - Biohazard Cleanup – Archives Digitization - Document Preservation – We are Serving U.S. and Canada

Table of Contents:

April 28, 2020

TERS Total Environmental Restoration Solutions Inc.
410 East Route 59, Nanuet, NY 10954
Email: gs@ters.com Web: www.ters.com
Office: 845-623-3221
Fax: 866-805-3225
Emergency 24/7: 877-777-3117

Ms. Gerstein, Grayson

1502 Manchester Court, Edgewater Park, NJ 08010

RE: Environmental & Indoor Air Quality Assessment

Project: GY-20013 – Ms. Gerstein, Grayson

1502 Manchester Court, Edgewater Park, NJ 08010 – March 17, 2020.

1. Introduction & Executive Summary

On March 17, 2020, we conducted air and surface samplings in the interior areas and outdoors of the above referred property. TERS Inc. engaged to perform an independent survey to determine whether or not the subject premises are has any unacceptable indoor environmental contamination.

The laboratory analytical results indicated that the fungal concentration of Aspergillus/Penicillium was significantly higher than outdoors. We recommend fungal source removal, fungal decontamination and sanitization of the interior surfaces and air quality restoration by extraction/elimination of airborne fungal elements, including reduction of the Total Suspended Particles/(TSP) Respiratory Suspended Particles (RSP) to acceptable levels.

The fungi identified in this report are often associated with moisture and water damage.

All sources of moisture must be definitely identified and corrected ASAP.

2. Methodology

A. Visual inspection and Observation.

- EXTECHBR 200 VIDEO BOROSCOPE, with stereoscopic probes.
- CANON digital camera.

B. Mapping out of all interior hidden moisture, using FLUKE TiR Infrared Thermal Imager.

C. Moisture readings were performed with GE BLD5360 Protimeter moisture meters.

D. Pressure differentials and Air Velocity monitored with FLUKE 975/922 Airflow Meter.

E. Carbon dioxide (CO2), Carbon monoxide (CO), Volatile Organic Compounds (VOC's), Ozone (O3), Air Temperature (°F) and Relative Humidity (%RH) were monitored with DirectSense® IAQ Monitors by GrayWolf.

F. The limited fungal testing involved the collection of three (3) air samples.

The following is a brief description of collection media used in this survey:

Air-O-Cell-Air sampling cassette connected to a micro-pump that draws 15L/min.

G. Formaldehyde measurement uses FP-30 - HCHO Detector.

H. Particle measurement uses LIGHTHOUSE HANDHELD 3016 Particles Meter.

I. Surface samples: Microbial contamination contains adenosine triphosphate (ATP).

J. Direct microscopy analysis and digital photos documentation.

3. Results

The major analytical results are presented as follows:

3.1. Visual inspection and Observation.

During the walkthrough, IAQ problem indicators have been checked for and noted on a floor plan including: water affected areas in the master bedroom, living room and bathroom ceiling. We believe the roofing issue has not been corrected fully and the remediation of the water damage was not performed adequately.

3.2. Moisture readings & Thermo Imaging

The moisture readings in several areas in the were significantly higher than the acceptable level for interior areas.

3.3. Pressure Differentials

The pressure differentials and air velocity measurements did not reveal unusual numerical values.

3.4 Air Freshness

3.4.1 Carbon dioxide

The indoor concentrations of Carbon dioxide were acceptable, by the criteria the American Society for Heating, Refrigerating and Air Conditioning Engineers (ASHRAE) ANSI/ASHRAE.

Table # 1: Carbon dioxide (CO_2) in parts per million (ppm)

No.	Location	CO2 in ppm
1	Bathroom / Master Bedroom	549
2	Kids Bedroom / Living Room	538
3	Outdoors	441

3.4.2 Carbon monoxide

The concentrations of indoor CO detected were below the criteria set by the American Society for Heating, Refrigerating and Air Conditioning Engineers (ASHRAE) ANSI/ASHRAE.

Table 2: Carbon monoxide (CO) in parts per million (ppm)

No.	Location	CO in ppm
1	Bathroom / Master Bedroom	0.1
2	Kids Bedroom / Living Room	0.1
3	Outdoors	0.0

3.5 Volatile Organic Compounds (VOC's)

The concentrations of indoor VOC's detected were below the criteria set by the American Society for Heating, Refrigerating and Air Conditioning Engineers (ASHRAE) ANSI/ASHRAE.

Table 3: Volatile Organic Compounds (VOC's) in parts per billion (ppb)

No.	Location	VOC's in ppb
1	Bathroom / Master Bedroom	98
2	Kids Bedroom / Living Room	104
3	Outdoors	29

3.6 Ozone (O3)

The concentrations of indoor Ozone (O3) detected were below the criteria set by the American Society for Heating, Refrigerating and Air Conditioning Engineers (ASHRAE) ANSI/ASHRAE.

Table 4: Ozone (O3) in parts per million (ppm)

No.	Location	O3 in ppm
1	Bathroom / Master Bedroom	0.11
2	Kids Bedroom / Living Room	0.10
3	Outdoors	0.17

3.7 Airborne Fungal Contamination

The indoor Total Fungal loads were significantly higher than the level detected outdoors.

Table 5: Fungal-Spores per site in Spores/m³

No.	Location	Spores/m³
1	Bathroom / Master Bedroom	130
2	Kids Bedroom / Living Room	520
3	Outdoors	80

3.7.1. Kids Bedroom / Living Room vs. Outdoors

Aspergillus/ Penicillium-like:	200	s/m³, compared to	40	s/m³ detected outdoors.
Total Fungal load:	520	s/m³, compared to	80	s/m³ detected outdoors.
Hyphal Fragments:	200	s/m³, compared to	"none"	s/m³ detected outdoors.

3.8. Air Temperature

The Air Temperature results were in accordance with the current ANSI/ASHRAE Standards and Guidelines for Human Comfort and Occupancy.

3.9. Relative Humidity

The Relative Humidity results were in accordance with the current ANSI/ASHRAE Standards and Guidelines for Human Comfort and Occupancy.

3.10. Particle measurement

The TSP (Total Suspended Particles) and RSP (Respiratory Suspended Particles) were lower than outdoors.

3.11. Formaldehyde in the air

The concentrations of indoor Formaldehyde (**CH_2O**) in the air detected were below the criteria set by the American Society for Heating, Refrigerating and Air Conditioning Engineers (ASHRAE) ANSI/ASHRAE 62-2016.

Table 7: Formaldehyde (CH2O) in parts per million (ppm)

No.	Location	(CH2O) in ppm
1	Bathroom / Master Bedroom	<0.01
2	Kids Bedroom / Living Room	<0.01
3	Outdoors	<0.01

3.12. ATP Analyses

The ATP testing did not reveal unusual numerical values.

4. Description of Major Analytical Results.

4.1. Background: It is known that molds may adversely affect human health through three processes: 1. Allergy (the most common). 2. Infection. 3. Toxicity.

Approximately 10% of Americans are allergic to Cladosporiun, the dominant species in outdoor air (Horner et al. 1995). Recent studies of hospital admission in relation to outdoor fungi ascribe approximately 2% of emergency admissions to hospitals for asthma as being associated with mold spores present in outdoor air and a further 6% to Basidiospores and Ascomycete spores (Dales et al. 2000).

A U.S. EPA-sponsored meeting of 15 scientists, mostly physicians, from 8 countries in mid 1998 on mold and health concludes that indoor **"exposure to mold may constitute a health threat… resulting in respiratory symptoms in both upper and lower airways, an increased incidence of infections, and skin symptoms. Allergy, either to mold or other indoor agents, also presents a health risk. At very high mold exposure levels, nose bleeds, hemoptysis and pulmonary hemorrhage have been documented."** This is a rare consensus of independent and government officials regarding health effects caused by exposure to indoor mold.

The Institute of Medicine released a report on asthma, "Clearing the Air: Asthma and Indoor Air Exposures" (January 21, 2000). It concluded that exposure to fungi was **clearly associated with asthma,** but that **the evidence for the association of indoor mold as causing asthma was "provocative" but not sufficient,** but that indoor mold was **associated with exacerbation of asthma and upper respiratory disease,**

Since 1982, approximately 20 studies have been conducted on the association of dampness, mold and respiratory health in Europe and North America in residential homes. Studies done in the USA and Canada have involved large numbers of individuals. A study of the respiratory health of 4,600 children from six cities in the northeast USA demonstrated that the presence of mold and dampness in the home were correlated to several respiratory symptoms as well as a number non-respiratory symptom. Two studies involving 15,000 children and 18,000 adults from 30 communities in Canada came to similar conclusions. The authors concluded that a non-allergenic mechanism was involved. A dose-effect was also seen in that more visible mold yielded more symptoms (Dales et al. 1991 a, b). Data from a further 13,000 children from 24 cities across the U.S (19) and Canada (5) shows the same pattern (Spengler et al. 1994).

For your convenience, following is a brief description of our major analytical findings. General characterization is made with respect to the most common known health effects of the various species of the identified genera.

4.2.1. Aspergillus: This species is considered common to indoor and outdoor environments. It is widespread in the soil and on plants and is also considered a common contaminant of food. They are frequently isolated from forest products, soils grains, nuts, cotton, organic debris, and water damaged building materials. It has a musty odor. It is commonly implicated in pulmonary disease in immune-compromised hosts. It has also been reported to cause skin infections. It is a common allergen known to cause Type I allergies (hay fever, asthma) and Type III hypersensitivity pneumonitis (H.P.)

Spores can also be found in moist ventilation systems and house dust. There are more than 180 different species of Aspergillus, sixteen of which have been documented as etiological agents of human disease but rarely occur in individuals with normally functioning immune systems. However, due to the substantial increase in populations of individuals with HIV, chemotherapy patients and those on corticosteroid treatment, contamination of building substrates with fungi, particularly Aspergillus, is of concern. Aspergillosis is now the second most common fungal infection requiring hospitalization in the United States. Many Aspergillus species produce mycotoxins that may be associated with diseases in humans and animals. Toxin production is dependent on the species or strain within the species and on the food source for the fungus. Some of these toxins are carcinogenic including aflatoxins and ochratoxin. Aspergillus is a common cause of extrinsic asthma with symptoms including edema and bronchiospasms, and chronic cases may develop pulmonary emphysema. These fungi are frequently secondary opportunistic pathogens in patients with carcinoma, other mycosis, sarcoid, and tuberculosis. Some species can also cause onychomycosis (infection of the nail).

4.2.2. Hyphal Fragments: Structural elements of a fungal colony. The presence of Hyphal Fragments may indicate an active process of vegetative fungal growth.

4.2.3. Penicillium: A wide number of species belong to this genus. Identification to species is difficult. Commonly found in soil, food, cellulose paint grains, and compost piles. It is also commonly found in carpet, wallpaper, and in interior fiberglass duct insulation. It may cause H.P. and allergic aveolitis in susceptible individuals, and is a common cause of extrinsic asthma (immediate-type hypersensitivity: Type I). Acute symptoms include edema and bronchiospasms. Chronic cases may develop pulmonary emphysema. It is also a known allergen: Type I allergies and Type III H.P.

Although this fungus is less allergy provoking than the other molds, Penicillium is reported to be allergenic (skin) and it may cause hypersensitivity pneumonitis and allergic alveolitis in susceptible individuals. It can cause other infections such as keratitis, penicilliosis, and otomycosis. Some species can produce mycotoxins including 1). Ochratoxin, which is damaging to the kidneys and liver and is also a suspected carcinogen; there is also evidence that it impairs the immune system 2). Citrinin, which can cause renal damage, vasodilatation, and bronchial constriction. 3). Gliotoxin, which is an immunosuppressive toxin, and 4) Patulin, which is believed to cause hemorrhage in the brain and lungs. It can also cause extrinsic asthma.

Conclusions;

1. Mold spores are normally present in all indoor environments and cannot be eliminated from them. Where mold growth indoors is at levels higher than outdoors, there is an inappropriate source of water that must be corrected. The major analytical results of this mold investigation are: Aspergillus/ Penicillium-like and Hyphal Fragments.
2. Indoor mold growth in your property may not be obvious. However the significant levels of airborne concentration of a variety of fungal bio-aerosol make us believe that mold may be growing on hidden surfaces, such as the backside of walls, etc, and mainly in the areas of high readings of moisture.
3. In the absence of indoor environmental standards the user must determine the applicability of this report to the given situation.
4. **The fungi identified in this report are often associated with moisture and water damage**.
5. The analytical results reveal the existence of potential allergenic, pathogenic and toxigenic mold inside the randomly sampled interior areas.
6. The detection of Hyphal fragments indicates fungal contamination within the subject areas, and the detection of fungal spores within the subject areas indicates potential fungal amplification.

Recommendations

The several types of microfungal contaminants, such as Aspergillus/ Penicillium-like and Hyphal Fragments detected in your property and the fact that the indoor levels of mold are higher than outdoors, and the moisture levels, brings us to recommend that you consider mold removal and air quality restoration by extracting the fungal spores from air, clean-up of interior surfaces, and preventative treatment of interior surfaces susceptible to fungal growth.

All sources of moisture must be definitely identified and corrected so that fungal contamination and/or microbial amplification will not recur.

All work shall be completed by trained handlers following New Jersey (NJ) DOH, Cleaning and Restoration Certification (IICRC), The Indoor Air Quality Association (IAQA), The American Council for Accredited Certification (ACAC) and EPA Guidelines on Assessment and Remediation of Indoor Environments. All work will provided by a Certified Mold Remediation Contractor (CMRC).

Enclosed please find laboratory Report # 372006658

Lab Report.pdf

EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077

Tel/Fax: (800) 220-3675 / (856) 786-0262

http://www.EMSL.com / xxxxxxxxxxx@xxxx.xxx

EMSL Order: 372006658
Customer ID: TERS62
Customer PO:
Project ID:

Attention: Gary Shaked
Total Environmental Restoration Solution
410 East Route 59
Nanuet, NY 10954

Phone: (914) 707-0183
Fax: (866) 805-3225
Collected Date:
Received Date: 04/24/2020 10:20 AM
Analyzed Date: 04/26/2020

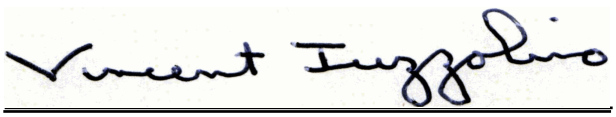
Project: GY-20013 Grayson Gerstein

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

Lab Sample Number:	372006658-0001			372006658-0002			372006658-0003		
Client Sample ID:	1			2			3		
Volume (L):	75			75			75		
Sample Location:	Bathroom / Master Bedroom			Kids Bedroom / Living Room			Outdoors		
Spore Types	**Raw Count**	**Count/M³**	**% of Total**	**Raw Count**	**Count/M³**	**% of Total**	**Raw Count**	**Count/M³**	**% of Total**
Alternaria (Ulocladium)	1*	10*	7.7	-	-	-	-	-	-
Ascospores	-	-	-	-	-	-	-	-	-
Aspergillus/Penicillium	1	40	30.8	4	200	38.5	1	40	50
Basidiospores	-	-	-	-	-	-	-	-	-
Bipolaris++	-	-	-	1*	10*	1.9	-	-	-
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	1	40	30.8	1	40	7.7	1	40	50
Curvularia	-	-	-	1	40	7.7	-	-	-
Epicoccum	-	-	-	2	90	17.3	-	-	-
Fusarium	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	-	-	-	-	-	-
Myxomycetes++	1	40	30.8	3	100	19.2	-	-	-
Pithomyces++	-	-	-	-	-	-	-	-	-
Rust	-	-	-	-	-	-	-	-	-
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-
Zygomycetes	-	-	-	-	-	-	-	-	-
Pestalotia/Pestalotiopsis	-	-	-	1	40	7.7	-	-	-
Total Fungi	**4**	**130**	**100**	**13**	**520**	**100**	**2**	**80**	**100**
Hyphal Fragment	3	100	-	4	200	-	-	-	-
Insect Fragment	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	3	100	-	-	-	-
Analyt. Sensitivity 600x	-	44	-	-	44	-	-	44	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-
Skin Fragments (1-4)	-	3	-	-	3	-	-	1	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-
Background (1-5)	-	3	-	-	4	-	-	1	-

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

No discernable field blank was submitted with this group of samples.



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

High levels of background particulate can obscure spores and other particulates, leading to underestimation. Background levels of 5 indicate an overloading of background particulates, prohibiting accurate detection and quantification. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. "*" Denotes particles found at 300X. "-" Denotes not detected. Due to method stopping rules, raw counts in excess of 100 are extrapolated based on the percentage analyzed. EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. When the information supplied by the customer can affect the validity of the result, it will be noted on the report.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC--EMLAP Lab 100194

Initial report from: 04/27/2020 09:20 AM

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