



AIR CARE & RESTORATION CO., INC.

AIR PURIFICATION AND RESTORATION SPECIALISTS

May 25, 2006

MACARRO AUCTION COMPANY

3633 Drifting Drive
Hellertown, Pa. 18055

Re: 438 Blue Mountain Drive
Treichlers, Pa. 18086
Indoor Air Quality Report

SITE INFO - HISTORY

On May 16th, 2006, Keith Roe visited this unoccupied home that had not been occupied for several years. All floors in the home were covered with storage material, furniture and debris preventing a thorough inspection / survey of the finish and structural entities of the home. The following conditions are being reported:

PHYSICAL OBSERVATIONS

Reference: Enclosed thirteen (13) pages of Photos.

1. All visible structure, finish surfaces and contents of the home are covered with fungi.
2. The home contains a pungent, "musty" odor indicative of advanced bacterial and fungal amplification (growth).
3. The sub floors of the upper floor are extensively water damaged and covered with fungal growth.
4. The moisture content found in the accessible dry walls was elevated above the threshold needed to support continued fungal growth.
5. Evidence of extensive rodent tunnels, nests and droppings were evident in the lower level of the home.

AIR SAMPLING RESULTS

AIR SAMPLING METHOD

Using an Air-O-Cell cassette sampler, a 75L/5 minute air sample would be taken in each designated location. This "spore-trap" device will capture airborne particulates on a sticky surface inside a sealed cassette. A certified microbiologist then opens this cassette in a lab environment. The particulate matter is then identified into seven separate categories and quantified as to air concentration level.

<u>Category</u>	<u>Quantifiable Method</u>
➤ Mold Spores (live and dead)	Spore Count/M ³
➤ Hyphae fragment (mold parts)	C/M ³ (1)

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- Pollen C/M³
- Fibrous particulate C/M³
- Insect fragment C/M³
- Skin fragments C/M³
- Background dust C/M³

(1) Particle count per cubic meter of air.

These indoor levels are then compared to the outside baseline level as well as current guidelines cited in this report.

Type of Sample	Low Levels of Fungal Contamination	Elevated levels of Fungal Contamination
Spore Trap Samples (Air-o-cell, Micro5)	<1,000 Spores/M ³ of air	>2,000 Spores/M ³ of air

It should be noted that identification of the Air-O-Cell is based on the spore alone. This procedure is presumptive and the viability of the spores is unknown. It should also be noted that these samples were "grab samples" as opposed to continuous samples, and as such, their data should be viewed as a snapshot of conditions that existed at the time of this inspection and sampling. Since isolated release events of fungi can cause the results to be skewed in either direction, caution should be used in interpreting grab sample results. The alternative to this sampling is semi-continuous sampling. Due to the extreme cost of this sampling method, it is generally reserved for conditions where clinical signs or symptoms of disease have been established and a cause is being sought.

It should also be noted that there are no standards for measuring indoor air quality. The ACGIH Bioaerosols Committee recommends sampling in complaint, non-complaint, and outdoor areas several times during the day and making comparisons between the areas. Since the purpose of this investigation was to conduct an indoor air quality screening, and not to provide an in-depth microbiological assessment, our procedures differentiated from the ACGIH recommendations in that only one sample was collected from each of the subject areas during the day.

MICROORGANISMS:

Microorganisms are a normal and essential component of all environments. Bacteria and fungi are needed to break down complex molecules found in organic matter. If provided with water and a food source, they will colonize almost any area on Earth. Microorganisms and/or their reproductive structures are almost always found in outdoor air. Their types and populations will vary depending on local environmental conditions. Doors, windows, and fresh air intakes provide easy access for microorganisms to enter the interiors of buildings.

It is normal to find some quantity of microorganisms in indoor air. In a normal indoor environment, their numbers should be significantly less than outdoor levels. Excessive moisture inside a building from leaks, floods, or other sources can create an "out-of-balance" environment that will tend to amplify their population. Depending on the amount of water, temperature, lighting, and food available, differing species may become dominant. In consequence, the presence of some microorganisms in large quantities may lead to adverse health effects involving building occupants.

Adverse health effects in affected individuals can include both illnesses and allergic responses. Symptoms may range from headache, malaise, and muscle pain to shortness of breath and fever. These effects may be the result of contact with the microbes or spores themselves, or with contracting the airborne toxins that they may excrete. **Test results and health concerns**

should be shared with your physician for the best and most accurate interpretation. They are best used to help visualize the potential for problems.

RESULTS

Reference: EMSL Document # 370603225 – Air-O-Cell Cassette Analysis of Fungal Spores and Other Airborne Particulates by Optical Microscopy (EMSL Method M001)

Sample AOC1 – Living Room (Upper Floor)

Mold Spores

Elevated levels of potentially mycotoxic molds *Aspergillus/Penicillium*, *Chaetomium* and *Stachybotris* were recorded on this level. The total mold level was 13,000 spores/m³, more than four (40 times greater than outdoor levels).

Hyphal Fragments - (non-spore mold parts)

756 parts per cubic meter of air was recorded vs. none "0" outside.

Insect Allergens

Approximately 1,180 parts per cubic meter of air was recorded in this room on this level.

Sample AOC2 – Bedrooms (Upper Floor)

Mold Spores

A total of 13,900 spores/m³ was found in this area of the home, more than four (4) times greater than the outdoor concentration. The primary molds found are classified as potentially mycotoxic and are at elevated levels in comparison to outdoors and known I.A.Q. (Indoor Air Quality) Guidelines for an indoor environment.

Hyphal Fragments - (non-spore mold parts)

336 parts per cubic meter of air was recorded vs. none "0" outside.

HYPHAL FRAGMENTS

These are a portion of the fungal Mycelium (structure and root system) that does not have any spores or other identifiable fungal structures. These are frequently released into the air along with the spores, especially when disturbed or agitated or when the fungal colonies lack sufficient moisture for further amplification (growth). With proper moisture and media, these fragments will grow into a colony. This may indicate that there is an airborne "residual" present from previous amplification (growth) periods.

Insect Allergens

294 parts per cubic meter of air was recorded vs. none "0" outside.

Sample AOC3 – Lower level

Mold Spores

A total in excess of 166,000 spores/m³ per cubic meter of air was recorded primarily comprised of *Aspergillus/Penicillium* and *Stachybotris* molds. These fungi are classified as potentially mycotoxic and were found at excessive levels inside the lower area of the home. The mold spore level found in the lower level was approximately fifty-two (52) times greater than the outdoor environment.

Hyphal Fragments - (non-spore mold parts)

504 parts per cubic meter of air was recorded.

Insect Allergens

2,520 parts per cubic meter of air was recorded.

Sample AOC4 – Outside (Outdoor Control Sample)

Mold Spores

OUTSIDE CONTROL

Principle: An outdoor sample of the same volume is taken on the same medium type to serve for comparison with the results of inside sample readings. If the numbers and types of any organisms recovered inside significantly exceed those found outdoors, a condition of fungal amplification is then confirmed as occurring within the building.

The total mold spore count outside on this day and time was recorded at 3,190 spores/m³.

Hyphal Fragments - (non-spore mold parts)

None.

Insect Allergens

None.

WALL CAVITY SAMPLING RESULTS

Note: An opening was made in an accessible wall cavity on the upper level from which a viable mold sample was obtained.

SWAB SAMPLING METHODS

Swab sampling of surfaces was done using BBL Culturettes with Stuart's transport medium. Swabs were used wet or dry, as required for each sample site.

SAMPLING PROCESSING

Swabs were aseptically transferred to 5 mL of TAT broth/diluent, vortexed for one minute, ultrasonicated for one minute, vortexed again for one minute and 0.1mL spread plates prepared on Malt Extract Agar (MEA) and Cornmeal Agar (CMA) for fungal growth and Tryptic Soy Agar (TSA) for bacterial growth. All mold colony types were identified to at least Genus.

Mold Spores

A total of 20,100 CFU/in² were recorded in the wall cavity comprised of seven (7) separate species of potentially mycotoxic fungi of which *Stachybotris* was the primary fungi amplifying in the wall.

FINDINGS

Reference: EMSL Document #370603225 (SEE attached)

The sampled interior wall cavity contains excessive levels of potentially mycotoxic molds. This condition should be expected throughout the home.

LEVELS OF CONCERN

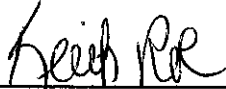
1. This home is not suitable for human occupancy in the present condition.
2. The interior of this home will require extensive mold remediation by an experienced, certified professional mold remediation company. **This cannot be a "Do-it-yourself" project.**
3. This home should not be entered without wearing proper PPE (Personal Protection Equipment) which includes:
 - ✓ A full "Tyvek" body suit.
 - ✓ A mold rated full face respirator.
 - ✓ Latex or nitrile gloves.
 - ✓ Steel toed safety shoes with heavy rubber soles.

Please contact me if you have any questions or for further discussion of any aspect of this report in its recommendations and cautions. I remain at your service...

CERTIFICATION

The information contained in this report is believed to be accurate and true to the best knowledge of the inspector(s). Findings and recommendations for this investigation are based on the observations of the conditions, as they existed at that time. The inspector(s) and Air Care and Restoration Co., Inc. assumes no liability for financial or health consequences due to actions or lack of actions taken by the client as a result of this inspection.

Report respectfully submitted by:



Keith Roe
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Project Manager
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Attn: **Keith Roe**
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1510 Gary Street
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Customer ID: AIRC63
 Customer PO:
 EMSL Order: 370603225
 EMSL Proj:
 Received: 05/17/2006 9:30 AM
 Analysis Date: 05/18/2006
 Report Date: 05/18/2006

Project: **483 BMD**
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Air-O-Cell™ Cassette Analysis of Fungal Spores & Other Airborne Particulates by Optical Microscopy (EMSL Method M001)

Lab Sample Number:	370603225-0001	370603225-0002	370603225-0003	370603225-0004	
Client Sample ID:	AOC 1	AOC 2	AOC 3	AOC 4	
Volume:	75	75	75	75	
Sample Location:	LR/1st Floor	1st Fl/BR	Lower Level	Outside	
Spore Types	Count/m ³	Count/m ³	Count/m ³	Count/m ³	Count/m ³
Agroclybe/Coprinus	84	1090	-	336	
Alternaria	84	-	-	-	
Arthrinium	-	-	-	-	
Arthrospores	-	-	-	-	
Ascospores	882	42	42	1430	
Aspergillus/Penicillium	7810	6220	>164000	-	
Basidiospores	1640	1760	882	126	
Bipolaris	-	-	-	-	
Chaetomium	294	168	462	-	
Cladosporium	840	252	126	1300	
Curvularia	-	-	-	-	
Epicoccum	-	-	-	-	
Fusarium	-	-	-	-	
Ganoderma	-	-	-	-	
Myxomycete	-	-	-	-	
Paecilomyces	-	-	-	-	
Pithomyces/Ulocladium	-	-	-	-	
Rust	-	-	-	-	
Scopulariopsis	-	-	-	-	
Stachybotrys	1340	4410	714	-	
Torula	-	-	-	-	
Unidentifiable Spores	-	-	-	-	
Zygomycetes	-	-	-	-	
Total Fungi	13000	13900	>166000	3190	
Fibrous Particulate	1340	8270	378	-	
Hyphal Fragment	756	336	504	-	
Insect Fragment	1180	294	2520	-	
Pollen	-	42	-	420	
Analytical Sensitivity	42	42	42	42	
Skin Fragments (1-4)	1	2	1	1	
Background (1-5)	4	4	4	1	

No discernable field blank was submitted with this group of samples

High Levels of background particulate can obscure mold spores and other airborne particulates leading to underestimation.
 Background levels of 5 indicate an overloading of background particulates, prohibiting accurate fungal spore detection and quantification.
 The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment.
 Present= Spores found during an additional scan at lower magnification.

ACCREDITATIONS: AIHA EMLAP #100194.

Jason Dobranic, Ph.D.
 or other approved signatory