WallRadon Testing, Inc.
Radon & Mold Professionals
195 5th Street Bonita Springs, FL. 34134
(239) 498-4619 office (800) 881-3837 toll free
www.radonmoldhelp.com

Certified

Member

Mold Inspection Report

14333 High Rise Ct. #818
Ft. Myers, FL. 33908

Prepared for:

Doug Wall

Prepared by:

John Cosgrove, CIE
State of Florida - Licensed Mold Assessor # MRS5
Council-Certified Indoor Environmentalist
Board-awarded by the American Council for Accredited Certification

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September 7, 2010

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Scope of Work & Methods

Radon & Mold Professionals conducted a preliminary non-intrusive mold inspection of the accessible interior living spaces and have prepared this report summarizing our inspection findings and laboratory results.

The purpose of this assessment was to identify the presence or absence of mold growth, conditions conducive to mold growth and to determine the indoor air quality as it relates to mold. Information obtained through visual inspection and microscopic analysis of air sampling was used to determine the home's interior conditions. We follow the Indoor Environmental Standards Organization (IESO) sampling protocols.

Non-Intrusive Visual Inspection:

A visual inspection with the use of infrared thermal imaging and moisture meter detection was performed to identify suspect conditions and potential moisture source locations. Digital and infrared photographs are taken to support inspection findings.

Air Sampling and Analysis:

The air sampling methodology utilized for this project was designed to quantify the respective airborne presence of fungal spores in the interior living spaces in relationship to what is naturally occurring outdoors, commonly referred to as normal fungal ecology. Air samples are collected by utilizing a high volume-sampling pump calibrated to a flow rate of 15 liters per minute. The pump then impacts the drawn air into an "Air-O-Cell" cassette. The cassette is a fully contained microscopic slide and media that collects any airborne fungal spores and hyphae particles by impaction on the media.

A control/baseline air sample was collected outdoors for comparison purposes; an indoor air sample was collected near the HVAC main return area. After sample collection the cassettes are re-sealed and placed into individual plastic bags and shipped via overnight courier to EMSL Analytical, Inc. for direct microscopic examination. There, a microbiologist will examine the slides to identify the type, and determine the airborne concentration of, fungal spores present. Spore identification is to genus level unless otherwise specified.

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Summary of Findings

Assessment activities performed by Radon & Mold Professionals indicate that conditions within the residence, as existing at the time of the sample collections and observations, to have the following:

Indoor Temperature and Relative Humidity: The indoor relative humidity was 44.9% and the temperature was 78° F. These measurements are within the normal comfort parameters recommended by ASHRAE (American Society of Heating, Refrigerating and Air Conditioning Engineers).

Indoor Air Quality: The laboratory analysis from the collected indoor air sample was consistent with normal fungal ecology and showed no elevated presence of airborne mold spore concentrations existing.

Visual Inspection: Please see the photograph section of this report for specific locations of impacted surfaces and substrates documented below.

The carpeting had been previously pulled back along the area where the kitchen barstools are located and extended to the air-handler closet. The previously wetted carpet displayed multiple areas of moisture staining. Minor water damage appearing as peeling paint and building material separation were observed along the baseboards adjacent to where the carpet that was pulled back. Moisture staining and suspected mold growth appearing as greenish and whitish discolorations was observed from the carpet tack strips in this same area. Elevated moisture content readings were observed from the baseboards against the back and right side walls in the air-handler closet. Minor water damage and elevated moisture content readings were also observed from the back left hand corner of the guest bedroom closet that shares an interior wall with the air-handler closet. These mold and moisture conditions have resulted from a back-up of the air-handler's condensate drain line.

Inspector's Note #1: It is generally accepted that wood rots when it contains more than 20% moisture content (MC). Therefore, a reading above 20% MC in any organic building material indicates a hazardous condition which should be investigated further. Generally, moisture content below 16% inhibits growth of both destructive fungi and surface fungi.

Inspector's Note #2: The remaining interior areas of the residence were free of any active moisture contact effects and visible indicators of suspected microbial activity.

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Summary of Laboratory Analysis

Location	Sample Type	Total Spore Concentration	Elevated Condition
Outdoors	Air	4,400 Spores/m3	N/A
Main Return Area	Air	84 Spores/m3	**No**

- The laboratory analysis from the collected indoor air sample was consistent with normal fungal ecology and showed no elevated presence of airborne mold spore concentrations existing.

- Air sample results indicating a non-elevated spore concentration should not be construed as a guarantee or warranty against current or future microbial growth. These laboratory results are reflective of the indoor air quality conditions as they specifically relate to airborne fungal spores in the home at the time of sample collection. Air sample collection provides a "snapshot" in time as to what is occurring in the air at the time of sample collection. Any condition which allows for the loss of moisture control, including but not limited to: water intrusion; water vapor condensation or prolonged elevated indoor humidity (>55%) may result in microbial growth.

Recommendations

This report only provides an evaluation of the interior substrate conditions and indoor air quality as they relate to mold and moisture. The following recommendations are meant to provide general remediation procedures based on the information obtained by our investigation and nationally accepted standards. These recommendations should not be construed as the only effective methodology for remediation and no warranty is expressed or implied with these recommendations. Radon & Mold Professionals is independent of any remediation process and we defer to the qualified remediator for specific repair protocols since the actual remediation process may expose additional areas requiring treatment.

- The goal of the remediation process is to correct all existing moisture conditions that promote mold growth and to physically remove all mold contaminated/non-restorable materials in accordance with the IICRC S520 mold remediation standard.

- We recommend state of Florida licensed mold remediators with ACAC and/or IICRC certified personnel who are experienced with water damage and microbial remediation solutions perform all remedial intervention including intrusive investigation. The remediation company should show proof of certifications, carry mold specific Errors & Omissions Insurance, General Liability Insurance and Worker's Compensation.

- The water damage/mold impacted area should be in containment, under a negative pressure with the use of negative air machines (NAMs) equipped with high-efficiency particulate air (HEPA) filtration during remedial efforts to prevent potential cross-contamination between the affected and unaffected areas.

- The HVAC system should be isolated from the work area to minimize the risk of cross contamination. Portable dehumidification may be necessary during the remediation process to maintain conditions that will not support additional mold growth.

- Intrusive investigation should be performed in areas with water damage and/or elevated moisture content to identify the full extent of areas requiring remedial treatment.

- The areas of water damaged and/or stained carpeting should be discarded. Areas of carpet pads that have been wet should always be discarded.

- Porous building materials (sheetrock, baseboards, tack strips, etc.) that have been water damaged to the point that drying and cleaning will not restore them to their pre-water exposure condition or have sustained loss of integrity should be removed and discarded, whether or not there is visible evidence of fungal growth.

- All visible fungi must be physically removed. Areas that have developed fungal growth should be HEPA vacuumed and cleaned thoroughly with an EPA registered product. However, if the mold growth is imbedded within the material and cannot be cleaned; removal of the contaminated materials plus an additional one (1) foot of material beyond the affected area(s) should also be removed. Substrates that cannot be cleaned must be disposed.

- Contaminated building materials should be removed carefully in as large a section as possible for bagging or wrapping with 6-mil disposal bags or securely wrapped in 6-mil poly sheeting. Bagged materials should be sealed inside a second bag before moving them outside the containment area (double bagging), if they are going to pass through Condition 1 areas.

- All surfaces within the containment should be HEPA vacuumed and/or damp-wiped with an appropriate EPA registered product.

- Post Remediation Verification should be performed by a CIE or CIH prior to any build-back of finish materials.

Appendix A – Laboratory Analysis

Asbestos • Lead • Environmental • Materials & Indoor Air Analysis

EMSL Analytical, Inc.
19501 NE 10th Ave. Bay A N. Miami Beach, FL 33179
Phone: (305) 650-0577 Fax: (305) 650-0578 Web: http://www.emsl.com Email:miamilab@emsl.com

Attn: John Cosgrove
Radon & Mold Professionals
195 5th Street
Bonita Springs, FL 34134

EMSL Order: 171005211
Customer ID: WRTI62
Collected: 9/07/2010
Received: 9/08/2010
Analyzed: 9/08/2010

Proj: [redacted] Ft Myers FL

Test Report: Air-O - Cell(™) Analysis of Fungal Spores & Particulates by Optical Microscopy (EMSL Method 05-TP-003)

Lab Sample Number:	171005211-0001			171005211-0002			
Client Sample ID:	16165802			16165753			
Volume (L):	150			150			
Sample Location:	Outdoors			Main Return Area			
Spore Types	**Raw Count**	**Count/m³**	**% of Total**	**Raw Count**	**Count/m³**	**% of Total**	
Alternaria	-	-	-	-	-	-	
Ascospores	57	1200	27.3	1	21	25	
Aspergillus/Penicillium	-	-	-	-	-	-	
Basidiospores	59	1240	28.2	3	63	75	
Bipolaris++	1	21	0.5	-	-	-	
Chaetomium	-	-	-	-	-	-	
Cladosporium	73	1540	35	-	-	-	
Curvularia	7	148	3.4	-	-	-	
Epicoccum	-	-	-	-	-	-	
Fusarium	-	-	-	-	-	-	
Ganoderma	3	63	1.4	-	-	-	
Myxomycetes++	7	148	3.4	-	-	-	
Pithomyces	1	21	0.5	-	-	-	
Rust	-	-	-	-	-	-	
Scopulariopsis	-	-	-	-	-	-	
Stachybotrys	-	-	-	-	-	-	
Torula	-	-	-	-	-	-	
Ulocladium	-	-	-	-	-	-	
Unidentifiable Spores	-	-	-	-	-	-	
Zygomycetes	-	-	-	-	-	-	
Pyricularia	1	21	0.5	-	-	-	
Total Fungi	**209**	**4400**	**100**	**4**	**84**	**100**	
Hyphal Fragment	-	-	-	-	-	-	
Insect Fragment	1	21	-	-	-	-	
Pollen	2	42	-	-	-	-	
Analyt. Sensitivity 600x	-	21	-	-	21	-	
Analyt. Sensitivity 300x	-	7*	-	-	7*	-	
Skin Fragments (1-4)	-	-	-	-	1	-	
Fibrous Particulate (1-4)	-	-	-	-	1	-	
Background (1-5)	-	1	-	-	1	-	

Bipolaris++ = Bipolaris/Dreschlera/Exserohilum Myxomycetes++ = Myxomycetes/Periconia/Smut

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

Samples analyzed by EMSL Analytical, Inc. 19501 NE 10th Ave. Bay A, N. Miami Beach FL AIHA-LAP, LLC--EMLAP Lab 102813

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 othewise noted. The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. "*" Denotes particles found at 300X. EMSL maintains liability limited to cost of anaysis. 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. Interpretation and use of test results are the responsibility of the client. Samples received in good condition unless otherwise noted.

Ariel Escoto, Laboratory Manager
or Other Approved Signatory

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

Test Report SPVER3-7.21.0 Printed: 9/08/2010 07:56:03PM

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Appendix B - Photographs

Moisture stained carpet where the kitchen bar stools are located

Moisture staining/rust on the carpet backing

Water damage and suspected mold growth on the carpet tack strips

Area view of the photo above and to the left

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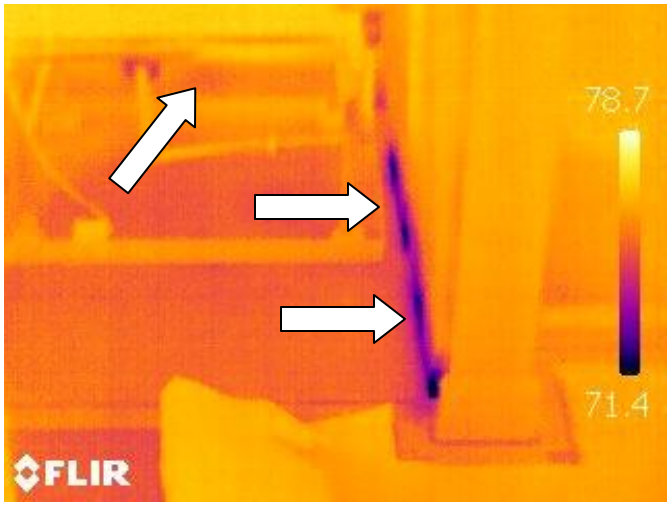

Infrared thermal image showing active moisture evaporation from the lower wall areas in the air-handler closet

Digital view of the image to the left

Water damage and elevated moisture content from the air-handler closet

Area view of the photo to the left

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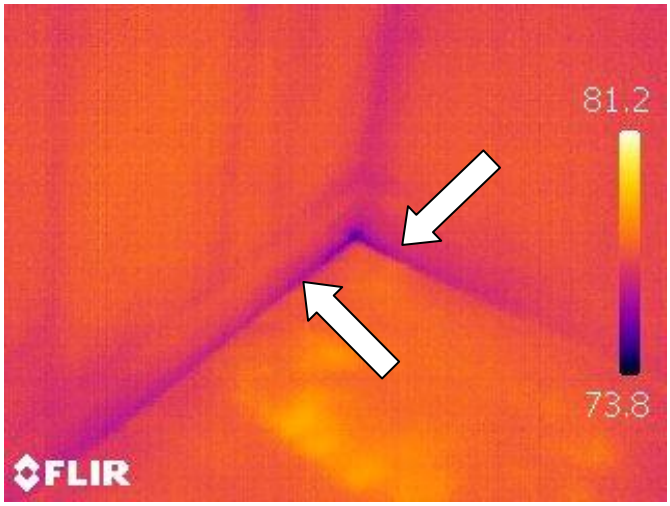
Water damage and elevated moisture content from the air-handler closet

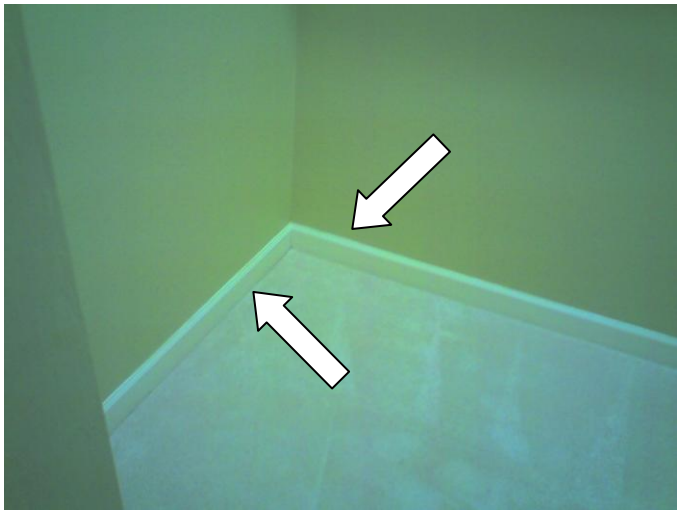
Area view of the photo to the left

Expanded view of the photos above

Area view of the air-handler closet



Infrared thermal image showing active moisture evaporation from the lower wall area in the guest bedroom closet



Digital view of the image to the left

Elevated moisture content from the area shown above

Photos shows minor water damage at the baseboards in the guest bedroom closet

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 Moisture staining on the carpet backing and pad in the guest bedroom closet	 Area view of the photo to the left
 Expanded view of the guest bedroom closet in relationship to the air-handler closet	This space was intentionally left blank

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Appendix C – Glossary of Fungi

Ascospores:
Natural Habitat: Everywhere in nature
Suitable Substrates in the Indoor Environment: Depends on genus and species
Water Activity: Depends on genus and species
Mode of Dissemination: Forcible ejection or passive release and dissemination by wind or insects
Allergenic Potential: Depends on genus and species
Potential Opportunist or Pathogen: Depends on genus and species
Potential Toxins Produced: Depends on genus and species

Basidiospores:
Natural Habitat: Forest floors, Lawns, Plants (saprobes or pathogens depending on genus)
Suitable Substrates in the Indoor Environment: Depends on genus, Wood products
Water Activity: Unknown
Mode of Dissemination: Forcible ejection, Wind currents
Allergenic Potential: Type I allergies (hay fever, asthma), Type III (hypersensitivity pneumonitis)
Potential Opportunist or Pathogen: Depends on genus
Potential Toxins Produced: Amanitins, monomethyl-hydrazine, muscarine, ibotenic acid, psilocybin.

Appendix D - Definitions

- **Airborne:** supported especially by aerodynamic forces or propelled through the air by force
- **Air filtration device (AFD):** depending on the mode of use, an AFD that filters (usually HEPA) and recirculates air is referred to as an air scrubber. One that filters air and creates negative pressure is referred to as a negative air machine (NAM).
- **Allergens:** substances that act as antigens producing an allergy
- **Assessment:** a process performed by an indoor environmental professional (IEP) that includes the evaluation of data obtained from a building history and inspection to formulate an initial hypothesis about the origin, identity, location and extent of amplification of mold contamination. If necessary, a sampling plan is developed, and samples are collected and sent to a qualified laboratory for analysis. The subsequent data is interpreted by the IEP. Then, the IEP, or other qualified individual, may develop a remediation plan.
- **Condition 1 (*normal fungal ecology*):** an indoor environment that may have settled spores, fungal fragments or traces of actual growth whose identity, location and quantity are reflective of a normal fungal ecology for a similar indoor environment.
- **Condition 2** (***settled spores***): an indoor environment which is primarily contaminated with settled spores that were dispersed directly or indirectly from a Condition 3 area, and which may have traces of actual growth.
- **Condition 3 (*actual growth*)**: an indoor environment contaminated with the presence of actual mold growth and associated spores. Actual growth includes growth that is active or dormant, visible or hidden.
- **Containment:** a precaution used to minimize cross-contamination from affected to unaffected areas by traffic or material handling. Containment normally consists of 6-mil polyethylene sheeting, often in combination with negative air pressure, to prevent cross-contamination.
- **Contaminated (contamination):** the presence of indoor mold growth or mold spores, whose identity, location and quantity are not reflective of a *normal fungal ecology* for similar indoor environments, and which may produce adverse health effects, cause damage to materials or adversely affect the operation or function of building systems.
- **Cross-contamination:** the spread of a source or sources of contamination from an affected area to an unaffected area.
- **Dew Point Temperature:** the temperature at which water vapor begins, or would begin, to condense.
- **Fungus (plural "fungi"):** one of the kingdoms into which living things are categorized. Fungi have distinct nuclei and include a variety of types, such as molds, yeasts, and mushrooms.
- **Genus:** a taxonomic category ranking below a family and above a species
- **HEPA:** an acronym for "high efficiency particulate air/arrestance", which describes an air filter that removes 99.97% of particles at 0.3 microns in diameter.
- **HVAC:** an acronym for Heating, Ventilation, and Air Conditioning.

- **Indoor Environmental Professional (IEP):** an individual who is qualified by knowledge, skill, education, training, certification and experience to perform an assessment of the fungal ecology of structures, systems and contents at a job site, create a sampling strategy, sample the indoor environment and submit to an appropriate laboratory, interpret laboratory data and determine Condition 1, 2, or 3 for the purpose of establishing a scope of work and verifying the return of the job site to Condition 1.

- **Inspection:** the gathering of information regarding the mold and moisture status of the building, system, contents or area in question.

- **Materially interested parties:** an individual or entity substantially and directly affected by a mold remediation project.

- **MERV:** MERV is an acronym for Minimum Efficiency Reporting Value. The MERV rating is a measure of the minimum efficiency of an air filter when dealing with particulate sizes between 0.3 to 10 microns.

- **Micron:** one-millionth of a meter - also known as a micrometer

- **Mold:** a group of microscopic organisms that are part of the Fungi Kingdom. They generally reproduce by
- means of spores and are ubiquitous. Often, the terms mold and fungi are used interchangeably.

- **MVOC's: Microbial Volatile Organic Compounds -** Some compounds produced by molds are volatile and are released directly into the air.

- **Mycelium:** the vegetative part of a fungus consisting of a mass of branching threadlike structures

- **Mycotoxin:** Toxic compounds produced by certain fungi. Some mycotoxins cling to the surface of mold spores; others may be found within spores. More than 200 mycotoxins have been identified from common molds, and many more remain to be identified.

- **Normal fungal ecology** (Condition 1): an indoor environment that may have settled spores, fungal fragments or traces of actual growth whose identity, location and quantity are reflective of a normal fungal ecology for a similar indoor environment.

- **Pathogenic:** causing or capable of causing disease

- **Personal protective equipment (PPE):** safety items designed to prevent exposure to potential hazards. Examples include: respirators, gloves, goggles, protective clothing and tools.

- **Plenum:** an air-filled space in a structure that receives air from a blower for distribution (as in a ventilation
- system)

- **Post-remediation verification:** an inspection and assessment performed by an IEP after a remediation project, which can include visual inspection, odor detection, analytical testing or environmental sampling methodologies to verify that structure, system or contents have been returned to Condition 1.

- **Preliminary determination:** a conclusion drawn from the collection, analysis and summary of information obtained during an initial inspection and evaluation to identify areas of moisture and actual or potential mold growth.

- **Quality control:** activities performed by a remediator that are designed to assure the effectiveness of the advised or suggested.

- **Relative Humidity**: The ratio of the amount of water in the air at a given temperature to the maximum amount it could hold at that temperature; expressed as a percentage

- **Remediate:** the process of restoring, repairing; regarding mold damage in buildings. The process includes removing damaged materials, replacing them with new materials and correcting the problem(s) that caused the damage

- **Spores:** the reproductive elements of lower organisms, such as fungi

- **Threshold Exposure Limits:** Threshold exposure limits for fungal air contaminants for individual occupants have not been established, and because of other factors that affect the exposure levels independent of area (proximity, duration), it is impossible to say with certainty how small an area of visible mold growth is small enough to ignore. It is recommended, therefore, that all visible growth be remediated regardless of area.

- **Toxicity:** the degree to which something is poisonous

- **Toxinogenic:** toxin-producing fungi or bacteria

- **Viable:** capable of germination and growth

- **Volatile Organic Compounds (VOC's):** chemicals which vaporize at room temperature

Appendix E - References

- IICRC S520: Standard and Reference Guide for Professional Mold Remediation 2nd Edition. Institution of Inspection, Cleaning and Restoration Certification. Vancouver, WA. 2008

- IICRC S500: Standard and Reference Guide for Professional Water Damage Restoration 3rd Edition. Institution of Inspection, Cleaning and Restoration Certification. Vancouver, WA. 2006

- Recognition, Evaluation and Control of Indoor Mold. American Industrial Hygiene Association. Fairfax, Va. 2008

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- Worldwide Exposure Standards for Mold and Bacteria. 7th Edition. Robert C. Brandys, PhD, MPH, PE, CIH, CSP, CMR and Gail M. Brandys, MS, CSP, CMR, CIEC. OEHCS Publications. Hinsdale, IL. 2003

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