



5/18/18

MOLD INSPECTION REPORT

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Tahoe*

Credentials

Mold Inspection- Certified Mold Inspector (CMI), Certified Environmental Hygienist (CEH)
Restoration- Applied Structural Drying (IICRC-ASD), Water Restoration Technician (IICRC-WRT)
Applied Microbial Remediation (IICRC-AMRT) - Fire and Smoke Restoration Technician (FSRT)
Certified Mold Remediation Contractor (CMRC)
Building Science- Certified Building Analyst, Certified Envelope Professional
Radon- Radon Residential Measurer (106364RT) – Radon Residential Mitigator (10-6415RMT)
Contractor - Lead Safe Renovator (NAT-F166601-1), California B-General, ASB-Asbestos (960994)
Nevada C-3 Contractor (0079127) Nevada C-1 Contractor (0081464)

Dear Interested Parties,

At the request of the prospective purchaser, Tahoe Mold and Water did a limited visual inspection and mold sampling of the above referenced property on May 18, 2018 at 12:00 PM.

Background

The property is going to be put up for sale. Suspected mold was discovered in the third floor master bathroom.

Weather Conditions

On the day of the inspection it was mostly cloudy with a light breeze. There was no recent precipitation leading up to the inspection.

Observations

Exterior

The property is a three level home with a detached garage. The detached garage has living space on the second floor. The property is a down sloping lot. The structures have stucco surface material on the exterior. There is minor deterioration and spalling of this surface on the northeast side of the main structure. This appears to be from condensation around the furnace exhaust line.

The composition roof is without obvious defect. There is a raised ridge that may be part of the roof ventilation system.

Interior

Garage



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Moisture damage to gypsum board ceiling surface in the south corner of the garage. This is under the bathroom, so may be the result of leaky plumbing or water intrusion from the adjacent deck. The area was dry at the time of the inspection.

Garage Suite

Staining is present around the ridge beam ends. This appears to be from a metal beam hanging creating condensation.

Hallway- 1st Floor

Moisture stains are present on the wood floor. This is installed over a slab foundation. The floor had elevated moisture in the areas around the staining. This is likely from ground moisture wetting the slab subfloor.

Bathroom- 1st Floor

Missing/ damaged grout is present on the shower walls around the bath tub. This condition can allow moisture to impact the wall substrate and should be repaired.

NE Bedroom- 1st Floor

Minor moisture damage is present on the door threshold adjacent to the exterior door. The flooring was dry at the time of the inspection.

Utility Room- 1st Floor

Standing water is present in the pit under the wood decking. The water appears to be contaminated in nature, due to its oily appearance.

Office- 2nd Floor

Minor moisture damage is present on the wood floor adjacent to the exterior door. The flooring was dry at the time of the inspection.

Hallway- 3rd Floor

Discoloration is present on the ceiling running in straight lines from the rafter framing on the backside of the wall. This can be the result of dirt sticking to wet surfaces. Often this damage represents a roof system with excessive moisture, likely from inadequate ventilation. Additional investigation is recommended.

South East Bedroom- 3rd Floor

Water staining is present on the ceiling around the recessed light fixture. This appears to be from excessive levels of water vapor in the roof cavity.

North East Bedroom- 3rd Floor



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A previous drywall repair was made to the wall on the backside of the bathroom plumbing wall. This is likely from a past leak. The area was dry at the time of the inspection.

Master Bedroom- 3rd Floor

Atypical mold is present on the gypsum board wall surface behind the cavity cabinets. The area was dry at the time of the inspection.

Crawlspace

The crawlspace is accessed from the lower northeast bedroom. The soil was dry throughout. The soil has no moisture barrier. Moisture barriers are effective at reducing ground moisture evaporation and levels of water vapor in the home. It is recommended that a moisture barrier of no less than 6 mill thickness be installed to cover the entire earth surface. Sealed barriers are preferable if ground water is an issue.

The perimeter crawlspace venting is limited. It is common to provide 1 sq ft of ventilation for every 150-250 sq ft of floor space. This is most effective when vents are placed at the corners and on opposite walls to allow cross ventilation.

Atypical mold is found on the perimeter wall sheathing as well as some of the floor joists. The perimeter wall has slightly elevated moisture levels. Portions of the crawlspace are inaccessible due to the framed wood platform.

Attic

NA

Lab Results

On the day of the inspection four surface samples were taken of suspected mold growth. These include:

1. Crawlspace- Perimeter Wall
2. Crawlspace- Floor Joist
3. Office- Floor by exterior door
4. Master Bathroom- Vanity cabinet wall surface

The Crawlspace perimeter wall surface sample demonstrated extensive Cladosporium growth. This is consistent with atypical mold growth, remediation is recommended.

The Crawlspace floor joist surface sample demonstrated extensive Ophiostoma/Ceratocystis and limited Gonatobotryum growth. These are common lumber mold and does not typically indicate a mold issue.

The Office floor surface sample demonstrated sparse Cladosporium growth. This is consistent with atypical mold growth, remediation is recommended.



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The Master Bathroom wall surface sample demonstrated nearly confluent *Stachybotrys* “black mold” and moderate *Penicillium/Aspergillus* growth. This is consistent with atypical mold growth, remediation is recommended.

On the day of the inspection eight air sample(s) was/were taken of the ambient conditions. The purpose was to screen for the types and quantity of aerosolized mold in the building. An outside sample was taken as a baseline to use for comparison purposes. The inside locations are the following:

1. Garage Suite
2. East Bedroom- 1st Floor
3. West Bedroom- 1st Floor
4. Kitchen
5. Office- 2nd Floor
6. Master Bedroom- 3rd Floor
7. Northeast Bedroom- 3rd Floor

The Garage Suite sample had Basidiospores as the dominant mold. Indoor mold levels were consistent with the outside air and not indicative of atypical mold conditions.

The East Bedroom sample had *Penicillium/Aspergillus* as the dominant mold. This was found elevated with Clusters/Chains of up to 145 spores detected, a potential indicator of a nearby mold source. Remediation is recommended.

The West Bedroom sample had *Penicillium/Aspergillus* as the dominant mold. This was found elevated with Clusters/Chains of up to 22 spores detected, a potential indicator of a nearby mold source. Remediation is recommended.

The Kitchen sample had Basidiospores as the dominant mold. *Penicillium/Aspergillus* was found higher than the outside air and may indicate air that is slightly impacted by atypical mold. No additional cleaning required in this area.

The Office sample had *Penicillium/Aspergillus* as the dominant mold. This was found higher than the outside air and may indicate air that is slightly impacted by atypical mold. There was also the presence of 1 spore of *Stachybotrys*. Given the very low levels of this mold, it does not signify an indoor mold source. No additional cleaning required in this area.

The Master Bedroom sample had Basidiospores as the dominant mold. *Stachybotrys* was found at significant levels indicating air that is impacted by an indoor mold source. Remediation is recommended.

The Northeast Bedroom sample had Basidiospores as the dominant mold. Indoor mold levels were consistent with the outside air and not indicative of atypical mold conditions.

Conclusion

Atypical mold growth was observed in the crawlspace, office, and master bedroom. Airborne mold levels were impacted on the first floor samples as well as the master bedroom samples. Moisture staining and elevated moisture in the first floor wood floor is likely from ground

moisture impact. Staining on the 3rd floor ceiling may indicate elevated levels of water vapor in the roof system and possible atypical mold conditions.

Repair Recommendations

- Resolve all water and ventilation related moisture sources

REMEDIATION WORK SCOPE

- Require all workers in mold contaminated areas to adorn personal protective equipment including a P100 particulate respirator.
- Hang proper signage to prevent unauthorized entry
- Isolate areas of mold growth under a negative pressure containment using air scrubbers and containment walls of 6 mill plastic

First Floor

- Remove all personal property. Wipe all hard objects and hepa vacuum porous items prior to storing outside of the work area.
- Isolate work area under negative pressure with containment walls/doors of 6 mill plastic.
- Detach and remove baseboard trim to allow for floor removal. Inspect lower wall surfaces to determine if mold damage is present.
- Tear out and bag and dispose of wood floor where impacted by moisture. ***This may require removal of all wood flooring on the first floor.***
- ***If applicable***-Cut, bag, and dispose of drywall a minimum of 2' beyond visible water damage.
- ***If applicable***-Remove and bag insulation in open wall/ceiling cavities
- ***If applicable***- Structurally clean wood framing with mold present.
- HEPA vacuum and damp wipe all surfaces.
- Run air scrubbers to remove mold spores from air in work area for 24 hours
- Pass clearance inspection to be provided by a 3rd party Independent Environmental Professional.

Crawlspace

- Isolate work areas under negative pressure using 6 mil containment walls
- Create a clean room constructed of plastic to provide access to the crawlspace area
- Remove wood platform where it obstructs access to the crawlspace areas
- Clean soil surface free of debris, and materials
- Install a permanent 6 mill moisture barrier. This will be simple plastic and not sealed to perimeter foundations. ***Upgraded barriers available.***
- Remove, bag and dispose of all insulation
- Structurally clean wood framing with mold present.
- HEPA vacuum and damp wipe all surfaces.
- Run air scrubbers to remove mold spores from air in work area for 24 hours
- Pass clearance inspection to be provided by a 3rd party Independent Environmental Professional.

Office

- Remove all personal property.
- Isolate work area under negative pressure with containment door set at doorway.
- Cut, bag and dispose of impacted wood flooring.
- Structurally clean wood framing with mold present. HEPA vacuum and damp wipe all surfaces.
- Run air scrubbers to remove mold spores from air in work area for 24 hours
- Pass clearance inspection to be provided by a 3rd party Independent Environmental Professional.

Roof System

- Create 4” holes to gain access to at least three areas of the ceiling for further evaluation.

Master Bathroom

- Remove all personal property. Wipe all hard objects and hepa vacuum porous items prior to storing outside of the work area.
- Isolate entire bathroom under negative pressure with containment door set at doorway.
- Detach and remove vanity cabinets.
- Cut, bag, and dispose of drywall a minimum of 2’ beyond visible water damage. Drywall is typically cut at 2’ or 4’ from the floor with upper drywall remaining.
- Remove and bag insulation in open wall/ceiling cavities
- Structurally clean wood framing with mold present.
- HEPA vacuum and damp wipe all surfaces.
- Run air scrubbers to remove mold spores from air in work area for 24 hours
- Pass clearance inspection to be provided by a 3rd party Independent Environmental Professional.

Master Bedroom

- HEPA vacuum and damp wipe all surfaces.
- Run air scrubbers to remove mold spores from air in work area for 24 hours
- Pass clearance inspection to be provided by a 3rd party Independent Environmental Professional.

Exterior



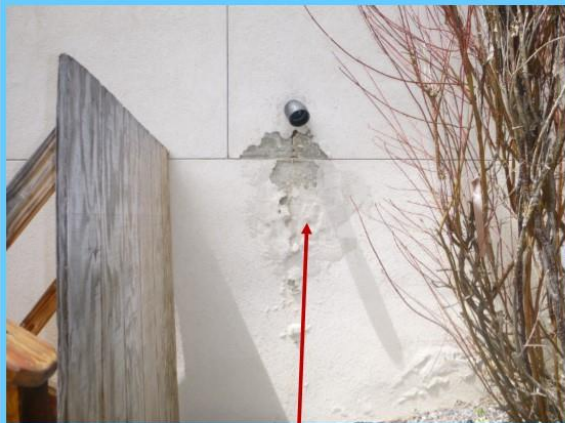
Three level home on a down sloping lot with a detached garage.

Exterior



Soffit venting to the roof system.

Exterior



Moisture damage and spalling on stucco under furnace exhaust on northeast side of the main house.

Garage



Moisture damage to ceiling at south corner under bathroom.

Garage Suite



Moisture damage to wall surface over ridge beam hanger.

Utility Room



Contaminated water in pit.

Lower Hall



Water staining on wood floor.

Lower Hall



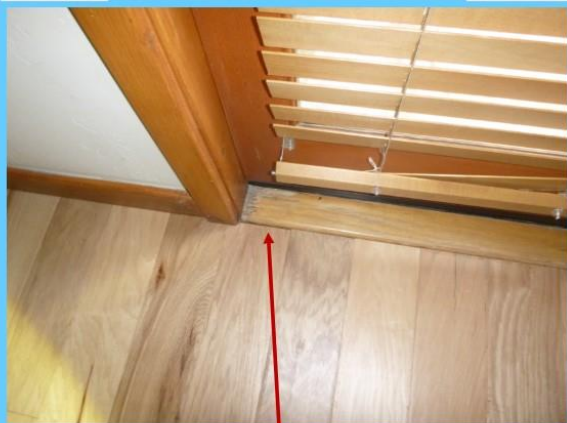
Elevated moisture in flooring.

Lower Bathroom



Missing/cracked grout.

Lower Bedroom



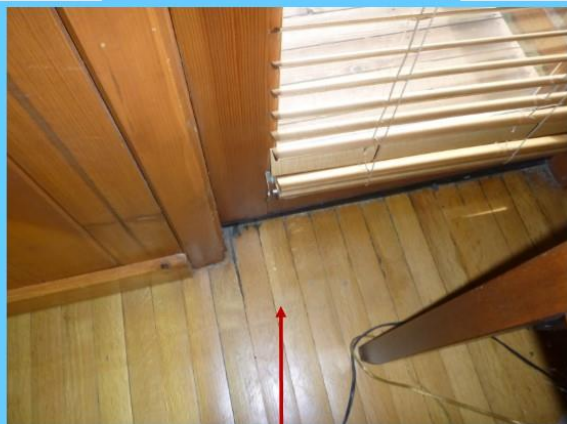
Minor moisture staining/damage around the door threshold.

Lower Bathroom



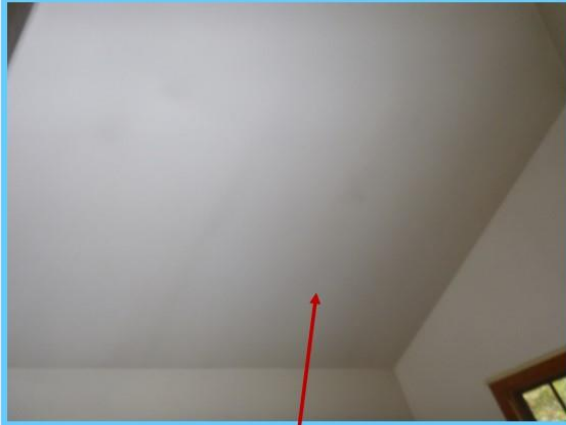
Faucet is dripping.

Office



Moisture damage to wood floor by the exterior door.

Hallway- 3rd Floor



*Discoloration of ceiling where roof framing exists.
(typically an indication of elevated moisture)*

SW Bedroom-3rd Floor



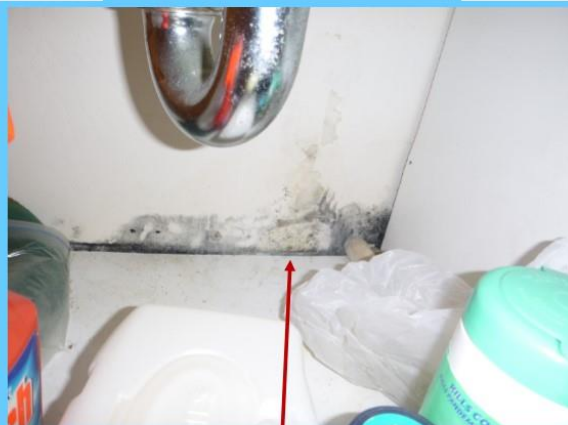
Moisture stains from around light fixture.

SE Bedroom-3rd Floor



*Previous drywall patch on backside of bathroom
plumbing wall.*

Master Bedroom



*Atypical mold on gypsum board behind vanity cabi-
net.*

Crawlspace



Atypical mold on the perimeter wall.

Crawlspace



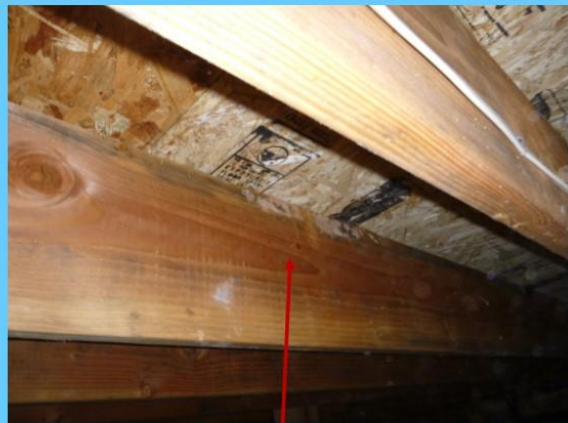
Slightly elevated moisture.

Crawlspace



Framed platform obstructs access to entire crawlspace.

Crawlspace



Atypical mold on floor joist.



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General Inspection Protocol

The inspector will perform their assessment for mold damage using:

- EPA-“Flood Cleanup: Avoiding Indoor Air Quality Problems”
- EAA – “Environmental Assessment Guidelines”
- IICRC 520 “Standard and Reference Guide for Professional Applied Microbial Remediation”
- EPA- “Mold Remediation in Schools and Commercial Buildings”
- ASTM E2418 -“Standard Guide for Readily Observable Mold and Conditions Conductive to Mold in Commercial Building”
- ASTM E2266 -“Design and Construction of Low-Rise Frame Building Wall Systems to Resist Water Intrusion”
- NACHI – “How to Perform Mold Inspections”
- International Building Code 2006 (For NV)
- California Building Standards 2013 (For CA)

The first step in properly evaluating a potential mold problem is the visual inspection. Throughout this phase an inspector is looking for three things, evidence of previous moisture intrusion, evidence of mold growth and areas with a potential for future mold infestation. An assessment typically covers the interior living space, basement, attic and crawl space. Exterior surfaces are examined for evidence of water damage / intrusion and potential for future problem areas. Visual Inspection is limited to reasonably accessible and visible areas of the home. There may be visible mold growth and water intrusions that the inspector has not noted in this limited mold analysis report.

Surface / Bulk sampling is used to identify a mold type at a specific location. This technique is useful also in ruling out possible discolorations or staining that sometimes exhibit mold like characteristics. Typically a cotton swab or piece of clear tape is used to collect a small quantity of material. In turn this is analyzed either with a fungi screen or culture analysis. Natural Link Mold Lab, Reno, NV

Air sampling is the most effective method for determining whether a mold infestation is potentially creating an unsafe living environment. Our testing procedure incorporates the Allergenco-D cassette. Air quality is tested by drawing 15 cubic liters of air per min and impacting the airborne particles over a glass substrate. Typically the process runs for 5 minutes, producing a sample size of 75 cubic liters. Next, the cassette is sent to a laboratory, where the spores are identified and counted.

These numbers alone do not give us enough information to accurately determine the level of contamination. Outside control samples are needed to identify the quantity of mold found in the natural environment.

The following is a brief description of the terms commonly found in your report:

Volume (m) Volume is provided in cubic meters. 5 minutes at 15 liters per minute yields 75 liters, or .075 cubic meters is the most common sampling volume. Sampling volumes may vary depending on locations and particulate in the air.



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Result: This column expresses the spore count per cubic meter, useful when comparing samples with different quantities measured in other locations.

Please refer to your Natural Link Mold Report for lab results. (If Applicable)

We have practiced diligence, care and objectivity in the above mold inspection report.

TM&W makes no representation, certification, warranty, assurance or guarantee of any nature with respect to any of the following

- That all mold that may be on the premises will be detected or identified;
- That the condition of the premises as it relates to water problems, excessive moisture or the presence of mold will be the same any day or time following the assessment;
- That the property is habitable or does not pose potential health risks to current or future occupants;
- That all actual or potential sources of water or excessive moisture that may contribute to the development of mold currently or in the future have been identified and repaired

Notwithstanding the above, we will use our best efforts to find and recommend repair for any and all water intrusion and mold proliferation issues.

Sincerely,

Edward G Riley

Edward (Ned) Riley
President/Contractor/Consultant