Go Above Board
Environmental
Inspection
Dynamics

January 12, 2008

Client: **John Doe**

Subject Property: **123 Main St. Anywhere, USA**

Via E-mail to: **john@aol.com**

Point Specific Assessment

Point Specific-Roof-HVAC
Report # Doe 11208-PSA-1

After a visual inspection of the above residence there are serious *"Red Flags"* of concern, in the area of the front gable roof juncture to the right of the front entry. This area, and a concern for a leakage event at the furnace, were brought to light by the recent home inspector. The inspector suggest a certified mold assessment/inspection. During the inspection we employed the use of our *Tramex* moisture meter, thermal imager and associated digital visual images.

From the exterior inspection and assessment we noted an interrelated event that is affecting the present problems noted on the interior and found on the inside of the garage. The juncture where the front entry brick wythe meets the intersecting front gable roof line over the garage, has no masonry step flashing installed. (SEE PIC. REFERENCE ATTACHED "Exterior "Cause" Issues") We strongly suggest that a qualified and licensed roofing contractor, review and evaluate our findings. From the interior of the garage attic we noted the "effect" issues at hand. (SEE PIC. REFERENCE ATTACHED "Garage "Effect" Issues") There is considerable evidence of moisture damage on the underside of the roof decking, as well as damage to the interior garage drywall below the suspect moisture entry point at the roof.

From the inside area of the adjacent front guest closet, we executed both moisture and thermal imaging scans of the suspect area. We noted very subtle returns from both instruments. We feel the moisture hasn't penetrated significantly into the insulation and drywall at this point.

From our visual assessment and findings in the basement, we found significant problems at/in the area below the front entry and corner point where the moisture intrusion event from the roof is occurring. When we removed the insulation from the rim joist pockets we found considerable moisture damage and microbial growth occurring. (SEE PIC. REFERENCE ATTACHED "Basement "Effect" Issues") The OSB rim joist is severely deteriorated to the point of compromising structure integrity. It is our opinion that this event has been proliferating for some time and that there is concern for ongoing structural deterioration. In examining the adjacent rafter pockets we noted the deterioration had propagated further along/into four of the pockets.

Cont.

The excessive moisture noted sets up ideal conditions conducive for the proliferation of the microbial growth found. We suggest having a qualified carpenter framing contractor review and evaluate. Most importantly, we suggest employing proper remediation protocols as a co-event with the other contractors for their safety and to remedy the growth, especially on any interior work executed.

It is of our opinion and experience that the above cause and effect events are most likely contributing to create conditions conducive for active and amplifying microbial growth that may be associated with toxic strains of mold growth. Toxic mold growth requires a 55% or better continual moisture source to proliferate. Since indication are that this moisture intrusion event has been on going, concern must be brought to light for toxicity levels. If these conditions are left to proliferate, then both wood structural damage and health concerns will exist and exacerbate to elevated levels. As mentioned above, we strongly suggest that you employ professionals trained in proper remediation protocols to remedy.

The other concern pointed out by the home inspector was the leakage event at the furnace. We noted that the existing powered humidifier is malfunctioning. (SEE PIC. REFERENCE ATTACHED "HVAC Issues") We suggest replacement by a qualified and license HVAC technician. Since the drying effects of the running furnace evaporate the leakage, little to no microbial growth will occur.

The concerns and issues described above must all be addressed to insure moisture intrusion and subsequent microbial growth are controlled. A great website to visit is **BuildingSciences.com** for understanding how moisture relates to structures. For more information before any interior/exterior renovations or repairs are executed, try contacting**:** **http://www.buildingscience.com/documents/primers/plonearticlemultipage.2006-12-05.5229931729/section-2-recommendations/view?searchterm=osb** This is excellent information.

It must be understood that at the time of this inspection/assessment/consultation, other areas of moisture intrusion and subsequent microbial growth can exist that are hidden and cannot be visually inspected. This inspection, point specific assessment, consultation, written or verbal, is based on a visual review of the above mentioned accessible areas and at a one-time event. This inspection/assessment/consultation does *not* constitute a WARRANTY, INSURANCE POLICY, OR GUARANTEE OF ANY KIND, and NOR DOES IT SUBSTITUTE FOR SELLERS DISCLOSURE. All structures must be continually monitored for moisture intrusion. Chronic moisture conditions are the primary reason and requirement for microbial (mold) growth to occur.

Inspected by:__ __Kevin M. Cuyler_____ Inspection Date: 01/12/08 **CIAQT**

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Phone: 630-220-3362 e-mail: kmc176@kwom.com
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