



Volunteer Inspections and Indoor Air Quality Services  
Bob Byrne  
12916 Butterfield Lane  
Suite A  
Knoxville, TN 37934  
865 385-0170

September 3, 2017

Shawne and Rebecca Huff

Via Email: [thatorganicmom@gmail.com](mailto:thatorganicmom@gmail.com) and [shawnehuff@gmail.com](mailto:shawnehuff@gmail.com)

Indoor Air Quality Inspection / Testing and Laboratory Analysis  
for:

[REDACTED] Knoxville, TN [REDACTED]

Dear Shawne and Rebecca,

Thank you for the opportunity to inspect your homes interior and crawlspace areas and review your concerns regarding home ecology conditions.

**Findings and Observations:**

I performed a walk thru inspection of the homes interior and exterior areas in addition to a complete crawl space inspection. In the process of the inspection I performed an Infrared Thermal scan of all readily accessible areas of the homes interior building envelope.

1. Infrared thermal scan revealed no areas of concern relative to moisture penetrations into the home.

2. Some visible moisture damage was noted within the interior of the home of previous water leaks however, no current issues are apparent inside of the home.
3. Many of the HVAC supply boots, lines and return plenum had high volumes of debris within them.
4. HVAC return plenum on main floor had build up of dust and general debris within the cavity under the stairwell.
5. Air supply flex line to the dinette / classroom bump out was sagging and laying on the grade.
6. Notable gaps in HVAC floor boots increase likelihood of drawing crawlspace air and moisture into the conditioned areas of the home.
7. Crawlspace grade is soil and substantially covered by a plastic vapor barrier.
8. Water was standing on crawlspace vapor barrier near the mid and rear section of the home.
9. Foundation system is an open type with adequate foundation vents. Varmint screens and barriers are installed.
10. The foundation wall at the rear of the home is wet / saturated.
11. Moderate to heavy, scattered apparent microbial growths are present on wood floor joists and main center girders below the shadow line of the sub floor insulation.
12. Adequate gutters, down spots and grade drains were in place to carry water away from the perimeter of the home and the foundation. We are unsure of the function of the grade drains and conditions at the retaining wall at thereat of the home. The retaining wall and grade function need further evaluation by a specialist.
13. It appears that the rear patio slab is draining towards the homes foundation wall as evidenced by staining patterns on the slab and the foundation vent at grade level.
14. We performed air sampling within the home.
15. Lab findings of air samples indicated normal / balanced ecology with exterior mold spore presence.
16. We pulled down several sections of the sub floor insulation and noted there was no evidence of microbial growths on or above the insulation.
17. No evidence of damaged wood in any area of the crawl space due to mold or fungus growths.

**Recommended course(s) of action:**

- A. Have the complete HVAC system on the main floor (including supplies, returns and unit professionally cleaned and treated with a sterant immediately following cleaning when under suction.
- B. Rehang and support sagging supply lines for HVAC system in the crawl space.
- C. Seal gaps around supply boots to close up gaps at subfloor perimeter.
- D. Floor joists and girders need to be professionally cleaned to remove apparent microbial growths below the shadow lines of the sub floor insulation.
- E. Fallen sections of sub floor insulation need to be reinstalled.

- F. Powered foundation vents with humidistat and thermal controls need to be installed in three locations along the back (2) and side of the home (1). Requires hard wiring.
- G. Function of downspout grade drains need to be evaluated and tested for proper function. Repair or replace as required.
- H. Rear patio slab needs to be evaluated for slope towards the home and repaired as is needed.
- I. Rear foundation vent at patio slab should be sealed if it is determined to be a water runoff entry point or slab slope corrected as noted above.

**Work we can perform:**

We can perform the work items as listed items A, B, C, D, E and F for the total fee of \$ 4,867.00. We may be able to coordinate other work items with contractors acceptable to the client if desired

Call me if you have any additional questions or to request a remediation proposal.

Sincerely Yours,



Bob Byrne, CHI and IAQI  
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