Elite Home Inspection Report

Sample – Elite Home Inspection Report

Inspection Date:

Prepared For:
Sample Review

Prepared By:
Structure & Site
Inspection Services LLC

www.the411site.com

Report Number:

Inspector:

Phone:
248.645.5522

Table of Contents

Report Overview

THE HOUSE IN PERSPECTIVE

The overall condition of the home is in generally good condition. As with all homes, ongoing maintenance is required and improvements to the systems of the home will be needed over time. The improvements that are recommended in this report are not considered unusual for a home of this age and location.

CONVENTIONS USED IN THIS REPORT

For your convenience, the following conventions have been used in this report.

Major Concern: *a system or component which is considered significantly deficient or is unsafe. Significant deficiencies need to be corrected and, except for some safety items, are likely to involve significant expense.*

Safety Issue: *denotes a condition that is unsafe and in need of prompt attention.*

Repair: *denotes a system or component which is missing or which needs corrective action to assure proper and reliable function.*

Improve: *denotes improvements which are recommended but not required.*

Monitor: *denotes a system or component needing further investigation and/or monitoring in order to determine if repairs are necessary.*

Deferred Cost: *denotes items that have reached or are reaching their normal life expectancy or show indications that they may require repair or replacement anytime during the next five (5) years.*

Please note that those observations listed under "Discretionary Improvements" are not essential repairs, but represent logical long term improvements.

THE SCOPE OF THE INSPECTION

All components designated for inspection in the NACHI (National Association of Certified Home Inspector) Standards of Practice are inspected, except as may be noted in the "Limitations of Inspection" sections within this report. NACHI is the largest home inspection authority in the United States and certifies members for ethical and diligent inspection services.

Visit www.NACHI.org for complete details.

It is the goal of the inspection to put a home buyer in a better position to make a buying decision. Not all improvements will be identified during this inspection. Unexpected repairs should still be anticipated. The inspection should not be considered a guarantee or warranty of any kind.

Please refer to the pre-inspection contract for a full explanation of the scope of the inspection.

WEATHER CONDITIONS

Dry weather conditions prevailed at the time of the inspection.
The estimated outside temperature was 60 degrees F.

RECENT WEATHER CONDITIONS

Dry weather has been experienced in the days leading up to the inspection.

Structure

DESCRIPTION OF STRUCTURE

Foundation: •Basement Configuration
Roof Structure: •Truss

STRUCTURE OBSERVATIONS

General Comments

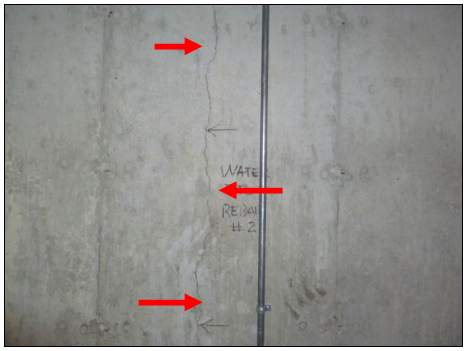
The construction of the home is good quality. The materials and workmanship, where visible, are good. The inspection did not discover evidence of substantial structural movement.

RECOMMENDATIONS / OBSERVATIONS

Foundation

- **Monitor:** Settlement cracks were observed in the foundation walls. This implies that some structural movement of the building has occurred. Cracks of this type should be watched for any sign of additional movement. In the absence of any sign of ongoing movement, repair should not be necessary.

View of structural materials and construction methodology.



Recommend pressure filling foundation crack.

Recommend sealing foundation walls.

LIMITATIONS OF STRUCTURE INSPECTION

As we have discussed and as described in your inspection contract, this is a visual inspection limited in scope by (but not restricted to) the following conditions:

- Structural components concealed behind finished surfaces could not be inspected.
- Only a representative sampling of visible structural components were inspected.
- Furniture and/or storage restricted access to some structural components.
- Engineering or architectural services such as calculation of structural capacities, adequacy, or integrity are not part of a home inspection.

Please also refer to the pre-inspection contract for a detailed explanation of the scope of this inspection.

Roofing

DESCRIPTION OF ROOFING

Roof Covering:	•Asphalt Shingle •Metal •Estimated Age = 6 Years •Layers = 1
Roof Flashings:	•Metal
Chimneys:	•Masonry x3
Roof Drainage System:	•None
Method of Inspection:	•From ladder at lower eaves

ROOFING OBSERVATIONS

General Comments

This quality of asphalt shingle roof material has a typical lifespan of 20 to 25 years. Metal roofing has a typical lifespan of 50 years. Many factors influence the longevity of roofs including; weather, quality of shingle and installation method, proximity of tree limbs, degree of slope and amount of rooftop ventilation. Roofs with multiple layers of cover typically have a shorter life span and require additional costs for removal when re-roofing becomes necessary. Sloped roofs usually last longer than flat roofs. The configuration of the roofing system is susceptible to ice damming and related leaks. The potential for ice dams varies with the severity of the winter and depending on insulation and ventilation under the roof. Severe ice dams can result in leaks, typically near the eaves. Solutions include better attic insulation and ventilation, eave protection below the roof coverings, or as a stop-gap measure, the installation of heating cables on the roof.

RECOMMENDATIONS / OBSERVATIONS

Sloped Roofing

- **Monitor:** The roofing is in good condition. We did not see evidence of active leaks or need for immediate major repair.
- **Improve:** Organic growth on roof surfaces should be treated to prevent decay of roof material. Recommend contacting www.roofmedic.com, a local company that applies an EPA registered chemical to the roof that removes the moss and other organic material for the surface material.

Gutters & Downspouts

- **Repair:** It is recommended that gutters and downspouts be installed to avoid spilling roof runoff around the building – a potential source of water entry or water damage.

Chimneys

- **Repair:** The masonry chimneys need re-pointing (replacing the mortar between the stone) to avoid damage.

View of front metal roof.

View of asphalt shingle above garage.

View of loose masonry tile and missing mortar at various areas of chimneys.

View of moss growth on rear slope.

View of upper chimney.

Loose mortar and stone observed on chimneys.

LIMITATIONS OF ROOFING INSPECTION

As we have discussed and as described in your inspection contract, this is a visual inspection limited in scope by (but not restricted to) the following conditions:

- Not all of the underside of the roof sheathing is inspected for evidence of leaks.
- Evidence of prior leaks may be disguised by interior finishes.
- Estimates of remaining roof life are approximations only and do not preclude the possibility of leakage. Leakage can develop at any time and may depend on rain intensity, wind direction, ice build up, and other factors.
- Antennae, chimney/flue interiors which are not readily accessible are not inspected and could require repair.
- Roof inspection may be limited by access, condition, weather, or other safety concerns.

Please also refer to the pre-inspection contract for a detailed explanation of the scope of this inspection.

Exterior

DESCRIPTION OF EXTERIOR

Wall Covering: •EIFS •Stone
Window/Door Frames and Trim: •Wood •Metal

EXTERIOR OBSERVATIONS

General Comments
The exterior of the home is in good condition.

RECOMMENDATIONS / OBSERVATIONS

Exterior Walls
- **Repair:** The exterior insulation finishing system (EIFS) requires repair. Multiple areas of staining, damage and decaying caulk observed. Additional information below.
- **Repair:** Caulk at dissimilar materials, example stone to siding to reduce moisture and pest infiltration.
- **Repair:** Vegetation growing on or near exterior materials should be kept trimmed away from siding, window trims, and the eaves to reduce risk of insect and water damage.

Exterior Eaves
- **Repair:** The soffit and fascia materials should be painted.

Windows
- **Repair:** The windows require caulking.

Porch
- **Repair:** The porch masonry mortar is deteriorating noticeably. Repairs or rebuilding may eventually be needed here and may involve significant expense.

Lot Drainage
- **Repair:** The grading should be improved to promote the flow of storm water away from the house. This can often be accomplished by the addition of top soil. The ground should slope away from the house at a rate of one inch per foot for at least the first ten feet. At least eight (8) inches of clearance should be maintained between soil level and the bottom of exterior wall siding.

View of damage at EIFS exterior wall material.

View of water staining on EIFS material.

View of decaying caulk at chimney.

EIFS water damage at sill.

Staining of EIFS at chimneys.

Exposed wood at underside of bay framing.


Water damage and exposed wood to fascia board.

Masonry and mortar decay at front porch.

Low grade at front wall.

Garage

- **Repair, Safety Issue:** The large overhead garage door requires adjustment for easy and safe operation. Does not close with a single touch of the control pad.

Information About EIFS

What are Exterior Insulation and Finish Systems?

Exterior Insulation and Finish Systems (EIFS), sometimes referred to as synthetic stucco, typically consist of five components: adhesive, insulation board (attached to substrate with adhesive), a base coat into which a fiberglass mesh is embedded, and a decorative finish coat in the desired color. This type of system is called a *face sealed barrier EIFS* and resists water penetration at its outer surface. It is not intended to drain water that gets behind it. It differs from other types of cladding that have a weather resistive barrier behind the cladding (tar paper or house wrap) and/or may have air spaces between the cladding and substrate.

There are many types of cladding materials that look like stucco. Traditional stucco is made of cement and is different than EIFS cladding, which uses the five components listed above. Other types of "hybrid" stucco include polymer/cement base coat directly applied to a substrate, or traditional stucco with an acrylic finish coat.

How is water entering behind EIFS?

Interfaces between EIFS and dissimilar materials are a common source of water intrusion, not the EIFS lamina (base coat and finish coat). The most frequent source of water intrusion is windows. Water frequently enters the EIFS at window locations in two ways: either through the joint around the perimeter of the window or through seams and joints in the window construction itself. Large quantities of water resulting in some of the most severe damage have frequently been discovered entering behind where a roof meets and terminates at the lower edge of a wall. Other potential sources of water intrusion are chimneys, decks and any other penetration of the EIFS lamina.

Architectural design, severity of weather (rainfall), exposure, and the performance and integration of other building components usually determine whether water infiltration behind the EIFS will occur. Although the likelihood of penetration through the lamina is remote, water can enter the system through cracks in the lamina.

Why does water intrusion occur behind EIFS, and why is it important to discover it?

Water intrusion occurs through and/or around building components such as windows, doors, gable vents, penetrations, and a variety of flashing and construction details. Water intrusion also occurs when maintenance is ignored for these components and other critical areas, such as caulk joints. It is important to discover the occurrence of water intrusion, because water can enter behind the cladding and wet unprotected sheathing, and in some cases, the wood structural members. Depending upon climate and the overall make-up of the wall assembly, the wall may not readily dry out. As water intrusion continues to occur undetected in a particular area, it can accrue to levels substantial enough to cause damage. Early detection of water intrusion is the key to minimizing and preventing such damage.

Is the location of water entry visible, and is the damage visible?

The location of water entry is often difficult to see, and the damage to the substrate and structural members behind the exterior wall cladding frequently cannot be detected by a visual inspection.

Are the water intrusion problems unique to any part of the country?

No. While the problems were discovered in Wilmington, North Carolina, this in no way means that you could not have similar moisture intrusion problems where you live. Field investigations of non-drainable EIFS in other areas of the country have identified entrapped excessive moisture resulting from water intrusion. The degree to which the problem may exist in your area could be influenced by local climatic conditions. The more rain, the greater the likelihood of having water intrusion problems. In arid climates, the opportunity for water intrusion is smaller, and there is more opportunity for drying out of any incidental water intrusion.

Should I have my EIFS home periodically checked for elevated moisture levels?

Yes. Testing should be done at least annually. A combination of two moisture meters should be used: (1) a non-invasive meter that scans through the wall without penetrating the EIFS lamina, and (2) a probe-type meter that penetrates the EIFS lamina and gives moisture readings of materials in contact with the probes. Only a professional experienced in EIFS water intrusion inspections should perform these tests. Testing is recommended to be conducted in accordance with the latest edition of *Moisture Testing Guide for Wood Frame Construction Clad with Exterior Insulation and Finish Systems*, that is published by the New Hanover County Inspections Department in Wilmington, NC. (The telephone number is 910-341-7456.)

How serious are the problems if water intrusion occurs in EIFS-clad houses?

Damage can be significant if moisture intrusion goes undetected. Damage can become more serious if allowed to continue over time.

Can damaged homes be repaired, and does the EIFS cladding have to be removed?

Any repair method undertaken should render the house into a serviceable condition. The performance criterion used to determine if a serviceable condition is being sustained is a moisture assessment. A serviceable condition exists when damage or excessive moisture is not detected behind the EIFS cladding. This may be true even if the EIFS manufacturer's standard specifications and construction details were not originally followed. Localized removal of EIFS may be necessary to facilitate repairs where damage is discovered. Total removal of the cladding may not be necessary.

Home owners who are deciding whether to re-clad should consider the following questions:

- Does the substrate have prolonged excessive moisture that causes decay?
- If water intrusion has occurred, what is the extent of damage?
- Do the areas requiring repair represent the majority of the cladding area, or are they localized?
- Is the cost to repair the house in excess of the cost to re-clad?

What are the repair objectives?

The primary objective of repair is to eliminate water intrusion. Repairs should be made where elevated moisture is detected or structural integrity of the material is impaired. Where structural damage has occurred, those areas require replacement of decayed wood products in addition to eliminating the source of water intrusion. Areas of elevated moisture in the absence of

damage or decay may require no more than eliminating the source of water intrusion. It has been discovered that wet but undamaged substrate can dry out over time once the source of the water intrusion has been eliminated. Repair methods should address leaks associated with but not limited to:

Roofs - Install effective kick-out flashing at roof-to-wall intersections, diverter flashing around trapped valleys, and rake flashing.

Caulk Joints - Install effective caulk joints.

Windows and Doors - Caulk window jamb to sill joint and joints in any molding surrounding the window or door. Specially designed sill flashing is needed below most types of windows and most windows that are mulled together.

Decks - Install effective flashing.

Chimneys - Install effective cap flashing, cricket flashing at trapped valley, and effective kick-out flashing for roof-rake wall intersections.

Other Penetrations - Install effective caulk joint and/or flashing.

Cracks and Damaged EIFS Lamina - Repair according to manufacturer's specifications.

Effective implies that flashing and caulking prevents water intrusion. Special care, craftsperson skill and design consideration are required to make repairs and install flashing.

Repairs for every component, penetration, architectural detail and flashing detail have not been submitted to or reviewed by the EIFS Review Committee. Some repair methods have been developed in laboratory conditions and are currently being tested and monitored in the field for effectiveness. Preliminary test data indicate that effective repairs to some limited components frequently used in EIFS can be achieved. The repairs do not restore windows, flashing or EIFS to match the EIFS manufacturer's original specifications or details, but focus on eliminating leaks by modifying the as-built conditions. The effectiveness of any repair is dependent upon accurate diagnosis of the source of water intrusion and the skill of the contractor making the repair. The repair is performing successfully when elevated moisture diminishes to an acceptable level over time and does not recur in sustained elevated levels in the long term.

Should the repair be monitored?

Yes. You should hire a professional experienced in EIFS water intrusion inspection to perform follow-up inspections within six months after the repair. Then once every year, the effectiveness of the repair should be monitored as part of the whole house moisture survey. If the repair is not successful, elevated moisture levels will be detected, and the repair method should be evaluated for the reason for failure. After making additional repairs, follow up with another inspection until such time that the moisture level becomes acceptable.

How should the home be maintained?

Frequent visual inspections should include thorough checking of windows, flashing and sealant/caulk. Damaged flashing should be repaired or replaced immediately. Cracks or deteriorated sealants should be repaired or removed and replaced. Periodic moisture testing would be prudent, especially for houses that were diagnosed with elevated moisture levels. Homeowners should refer to the manufacturer's maintenance and repair instructions. Information is also available from the National Association of Home Builders (NAHB) Research Center's HomeBase Hotline at 800-898-2842, and the Research Center's Website at www.nahbrc.org. **If you have additional technical questions about EIFS, please contact the Home Base Hotline at the NAHB Research Center. The toll-free number is 1-800-898-2842.**

LIMITATIONS OF EXTERIOR INSPECTION

As we have discussed and as described in your inspection contract, this is a visual inspection limited in scope by (but not restricted to) the following conditions:

- A representative sample of exterior components was inspected rather than every occurrence of components.
- The inspection does not include an assessment of geological, geotechnical, or hydrological conditions, or environmental hazards.
- Screening, shutters, awnings, or similar seasonal accessories, fences, recreational facilities, outbuildings, seawalls, break-walls, docks, erosion control and earth stabilization measures are not inspected unless specifically agreed-upon and documented in this report.

Electrical

DESCRIPTION OF ELECTRICAL

Size of Electrical Service:	•120/240 Volt Main Service - Service Size: 200 Amps
Service Drop:	•Underground
Service Entrance Conductors:	•Aluminum
Service Equipment & Main Disconnects:	•Main Service Rating 100 Amps •Breakers
Service Grounding:	•Ground Rod Connection •Water Pipe Connection
Ground Fault Circuit Interrupters:	•Present
Smoke Detectors:	•Present
Sub-Panel(s):	•Panel Rating: 100 Amp •Breakers •Located: Adjacent to Main

ELECTRICAL OBSERVATIONS

General Comments

The electrical panel is well arranged and all fuses/breakers are properly sized. Generally speaking, the electrical system is in good order. The distribution of electricity within the home is good. Dedicated 220 volt circuits have been provided for all 220 volt appliances within the home.

RECOMMENDATIONS / OBSERVATIONS

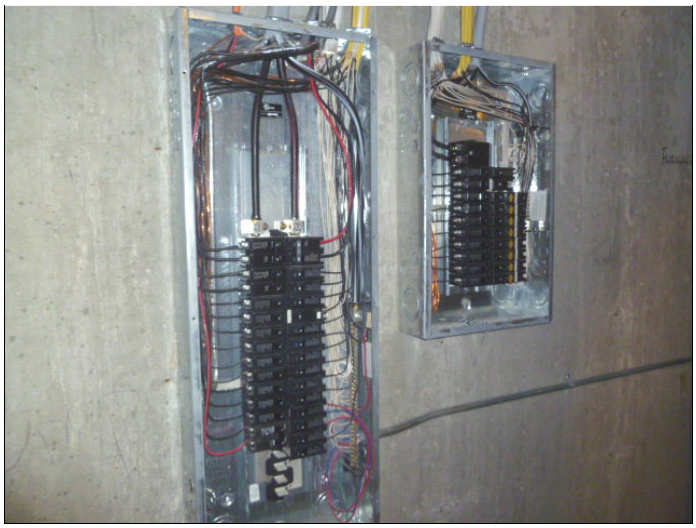
- **Important Safety Notice:** ***All electrical repairs listed in this report should be considered as important safety items as they present risk of fire or shock. These items should receive high priority for action.***

Service / Entrance

- **Improve:** Recommend placing a lock or tab on exterior disconnect to prevent accidental entry.

Switches

- **Repair:** The damaged light switch in master closet should be repaired.



Main and sub distribution panels in good order.

LIMITATIONS OF ELECTRICAL INSPECTION

As we have discussed and as described in your inspection contract, this is a visual inspection limited in scope by (but not restricted to) the following conditions:

- Electrical components concealed behind finished surfaces are not inspected.
- Only a representative sampling of outlets and light fixtures were tested.
- Furniture and/or storage restricted access to some electrical components which may not be inspected.
- The inspection does not include remote control devices, alarm systems and components, low voltage wiring, systems, and components, ancillary wiring, systems, and other components which are not part of the primary electrical power distribution system.

Heating

DESCRIPTION OF HEATING

Energy Source:	•Gas
Heating System Type:	•Forced Air Furnace x2 •Estimated Age 6 Years
Vents, Flues, Chimneys:	•Metal-Single Wall
Heat Distribution Methods:	•Ductwork
Other Components:	•Humidifier

HEATING OBSERVATIONS

General Comments

It appears that the heating system has not been well maintained.

RECOMMENDATIONS / OBSERVATIONS

- **Repair:** The heating system requires service. Soot buildup at heat exchanger indicates an improper mix of gas and air through the fuel regulator. Recommend having the unit serviced by a professional. Furnace systems have a typical life span of 20 years if properly maintained. Units over 5 years old risk cracked heat exchangers and should be routinely checked by a professional heating technician. A heat exchanger is mostly concealed, requires partial disassembly of furnace components for full viewing and is beyond the scope of a home inspection. Annual maintenance is recommended to assure safe, reliable heat. It is highly recommended that a carbon monoxide detector is installed within the home.
- **Monitor:** High efficiency furnaces have a secondary heat exchanger that can cause water leaks into the system. It is recommended that the furnace cover plate be removed several times a heating season to ensure that water buildup is not occurring inside the unit. If water is accumulating, call a technician immediately. A small water leak can cause significant damage to the unit.
- **Repair:** The humidifier filter should be replaced. Watch out for humidifier leaks into the furnace where costly (and hidden) damage can occur.
- **Improve:** The dirty air filter should be replaced.

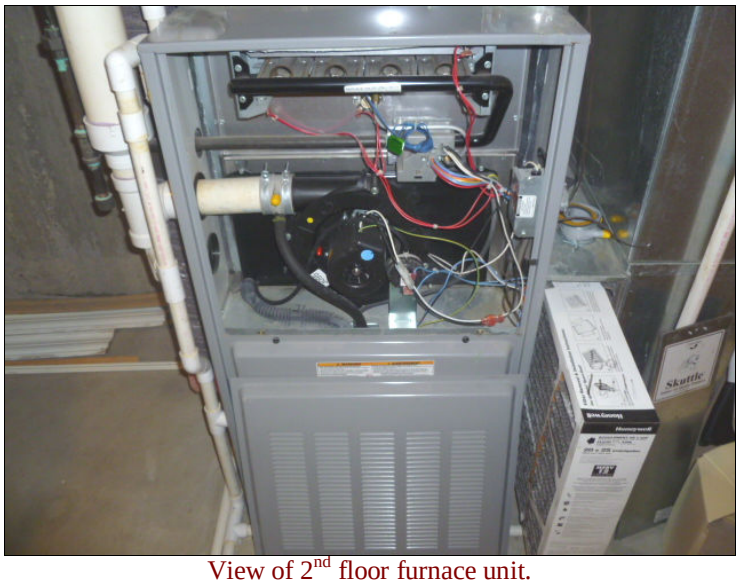
Supply Air Ductwork

- **Improve:** Duct cleaning is recommended.

Combustion / Exhaust

- **Repair:** Screens needed on exterior exhaust pipes to reduce pest entry.

View of basement and 1st floor furnace unit.



View of 2nd floor furnace unit.

LIMITATIONS OF HEATING INSPECTION

As we have discussed and as described in your inspection contract, this is a visual inspection limited in scope by (but not restricted to) the following conditions:

- The adequacy of heat supply or distribution balance is not inspected.
- The interior of flues or chimneys which are not readily accessible are not inspected.
- The furnace heat exchanger, humidifier, or dehumidifier, and electronic air filters are not inspected.
- Solar space heating equipment/systems are not inspected.

Please also refer to the pre-inspection contract for a detailed explanation of the scope of this inspection.

Cooling / Heat Pumps

DESCRIPTION OF COOLING / HEAT PUMPS

Energy Source: •Electricity •Estimated Age = 6 Years
Central System Type: •Air Cooled Central Air Conditioning x2

COOLING / HEAT PUMPS OBSERVATIONS

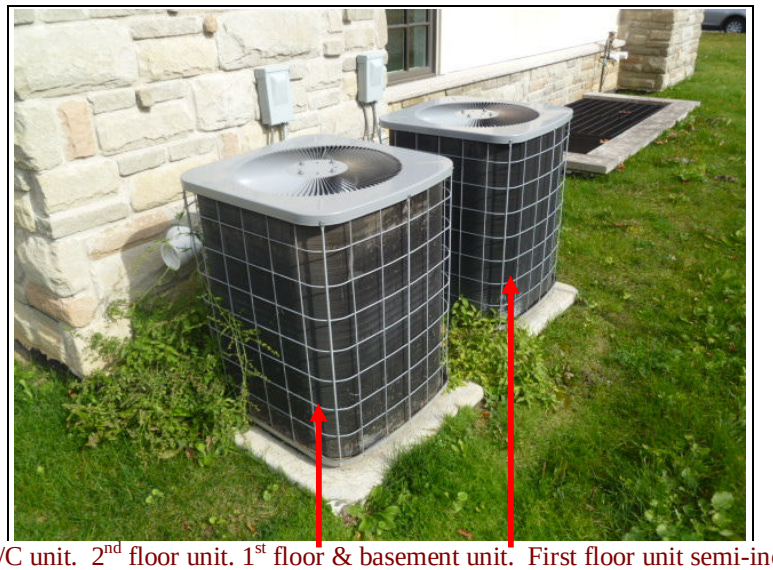
General Comments

It appears that the system has not been well maintained. Air conditioning systems have a typical life span of 15 - 20 years if properly maintained.

RECOMMENDATIONS / OBSERVATIONS

Central Air Conditioning

- **Repair:** The air conditioning condensate line appears to be obstructed on the 2nd floor unit.
- **Improve:** The outdoor unit of the air conditioning system requires cleaning.
- **Improve:** Recommend covering the exterior A/C unit during the winter months. Also, turn breaker off at electrical panel to ensure that the unit is not accidentally turned on during the winter months, which can cause significant damage.
- **Repair:** The first floor air conditioning system was semi-inoperative at the time of the inspection. The condenser unit did not respond properly to controls and the temperature of the air was not as cool as expected. A qualified heating and cooling technician should be consulted to further evaluate of this condition and the remedies available.



Exterior A/C unit. 2nd floor unit. 1st floor & basement unit. First floor unit semi-inoperative.

Condensate line leak on 2nd floor unit.

LIMITATIONS OF COOLING / HEAT PUMPSINSPECTION

As we have discussed and as described in your inspection contract, this is a visual inspection limited in scope by (but not restricted to) the following conditions:

- Window mounted air conditioning units are not inspected.
- The cooling supply adequacy or distribution balance are not inspected.

Please also refer to the pre-inspection contract for a detailed explanation of the scope of this inspection.

Insulation / Ventilation

DESCRIPTION OF INSULATION / VENTILATION

Attic Insulation: •Fiberglass •Estimated Coverage = 10”
Roof Ventilation: •Ridge Vents •Soffit Vents

INSULATION / VENTILATION OBSERVATIONS

General Comments

Insulation levels are typical for a home of this age and construction. Caulking and weather-stripping around doors, windows and other exterior wall openings will help to maintain weather tightness and reduce energy costs.

RECOMMENDATIONS / ENERGY SAVING SUGGESTIONS

Attic / Roof

View of attic cavity, insulation levels and roof structure.

LIMITATIONS OF INSULATION / VENTILATION INSPECTION

As we have discussed and as described in your inspection contract, this is a visual inspection limited in scope by (but not restricted to) the following conditions:

- Insulation/ventilation type and levels in concealed areas are not inspected. Insulation and vapor barriers are not disturbed and no destructive tests (such as cutting openings in walls to look for insulation) are performed.
- Potentially hazardous materials such as Asbestos and Urea Formaldehyde Foam Insulation (UFFI) cannot be positively identified without a detailed inspection and laboratory analysis. This is beyond the scope of the inspection.
- An analysis of indoor air quality is not part of our inspection unless explicitly contracted-for and discussed in this or a separate report.
- Any estimates of insulation R values or depths are rough average values.

Please also refer to the pre-inspection contract for a detailed explanation of the scope of this inspection.

Plumbing

DESCRIPTION OF PLUMBING

Water Supply Source:	•Public Water Supply
Service Pipe to House:	•Copper
Main Water Valve Location:	•Basement
Interior Supply Piping:	•Copper
Waste System:	•Public Sewer System
Water Heater:	•Gas x2 •Estimated Age 6 Years
Other Components:	•Sump & Ejector Pumps

PLUMBING OBSERVATIONS

General Comments

The piping system within the home, for both supply and waste, is a good quality system. The water pressure supplied to the fixtures is typical. Only a slight drop in flow was experienced when two fixtures were operated simultaneously.

RECOMMENDATIONS / OBSERVATIONS

Water Heater

- **Monitor:** Water heaters have a typical life expectancy of 7 to 12 years. The existing unit is approaching this age range.
- **Repair:** The re-circulating pump for the hot water tanks appears to be inoperative.

Fixtures

- **Repair:** Cracked, deteriorated and/or missing shower stall grout and caulk should be replaced.
- **Repair:** Cracked, deteriorated and/or missing bathtub enclosure caulk should be replaced.

Sump Pump

- **Improve:** Recommend installing a backup pump system to protect against power outages and primary pump failure.

Re-circulating pump inoperative.

Master shower grout damage.

LIMITATIONS OF PLUMBING INSPECTION

As we have discussed and as described in your inspection contract, this is a visual inspection limited in scope by (but not restricted to) the following conditions:

- Portions of the plumbing system concealed by finishes and/or storage (below sinks, etc.), below the structure, or beneath the ground surface are not inspected.
- Water quantity and water quality are not tested unless explicitly contracted-for and discussed in this or a separate report.
- Clothes washing machine connections are not inspected.
- Interiors of flues or chimneys which are not readily accessible are not inspected.
- Water conditioning systems, solar water heaters, fire and lawn sprinkler systems, and private waste disposal systems are not inspected unless explicitly contracted-for and discussed in this or a separate report.

INTERIOR OBSERVATIONS

General Condition of Interior Finishes
On the whole, the interior finishes of the home are in average condition. Typical flaws were observed in some areas.

General Condition of Windows and Doors
The majority of the doors and windows are good quality.

General Condition of Floors
The floors of the home are relatively level and walls are relatively plumb.

RECOMMENDATIONS / OBSERVATIONS

Doors
- **Repair:** Living room exterior doors should be trimmed or adjusted as necessary to work properly.

Windows
- **Improve:** The tracking for the slider windows need to be cleaned and lubricated to improve functionality.
- **Monitor:** It may be desirable to replace window screens where missing. The owner should be consulted regarding any screens that may be in storage.

Basement Leakage
- **Monitor:** No evidence of moisture penetration was visible in the basement at the time of the inspection. ***It should be understood that it is impossible to predict whether moisture penetration will pose a problem in the future.*** The vast majority of basement leakage problems are the result of insufficient control of storm water at the surface. The ground around the house should be sloped to encourage water to flow away from the foundation. Gutters and downspouts should act to collect roof water and drain the water at least five (5) feet from the foundation or into a functional storm sewer. Downspouts that are clogged or broken below grade level, or that discharge too close to the foundation are the most common source of basement leakage. Please refer to the Roofing and Exterior sections of the report for more information.
  In the event that basement leakage problems are experienced, lot and roof drainage improvements should be undertaken as a first step. Please beware of contractors who recommend expensive solutions. Excavation, damp-proofing and/or the installation of drainage tiles should be a last resort. In some cases, however, it is necessary. Your plans for using the basement may also influence the approach taken to curing any dampness that is experienced.
- **Monitor:** It is very common for shrinkage and/or settling cracks to develop in foundation walls. It is also common for these cracks to leak. If leakage is experienced, improve lot drainage adjacent to the crack. If leakage persists, various methods of crack repair are available. These include interior patching with an epoxy resin or hydraulic cement and exterior repairs after excavation. The exterior repair, although more expensive, is more often successful in eliminating leakage.

Environmental Issues
- **Monitor:** Carbon monoxide is a colorless, odorless gas that can result from a faulty fuel burning furnace, range, water heater, space heater or wood stove. Proper maintenance of these appliances is the best way to reduce the risk of carbon monoxide poisoning. For more information, consult the Consumer Product Safety Commission at 1-800-638-2772 (C.P.S.C.) for further guidance. It would be wise to install of carbon monoxide detectors within the home.

All three sets of French doors are difficult to open and close due to improper alignment within the frames.

LIMITATIONS OF INTERIOR INSPECTION

As we have discussed and as described in your inspection contract, this is a visual inspection limited in scope by (but not restricted to) the following conditions

- Furniture, storage, appliances and/or wall hangings are not moved to permit inspection and may block defects.
- Carpeting, window treatments, central vacuum systems, household appliances, recreational facilities, paint, wallpaper, and other finish treatments are not inspected.

Appliances

DESCRIPTION OF APPLIANCES

Appliances Tested:	•Gas Range •Dishwasher •Waste Disposer •Refrigerator
Laundry Facility:	•Gas Piping for Dryer •Dryer Vented to Building Exterior
Other Components Tested:	•Door Bell

APPLIANCES OBSERVATIONS

General Comments

The appliances are middle aged. As such, they will become slightly more prone to breakdowns; however, several years of serviceable life should remain. All appliances that were tested responded satisfactorily.

RECOMMENDATIONS / OBSERVATIONS

- **Monitor:** Ice machine was not operational at time of inspection.

LIMITATIONS OF APPLIANCES INSPECTION

As we have discussed and as described in your inspection contract, this is a visual inspection limited in scope by (but not restricted to) the following conditions

- Thermostats, timers and other specialized features and controls are not tested.
- The temperature calibration, functionality of timers, effectiveness, efficiency and overall performance of appliances is outside the scope of this inspection.

Please also refer to the pre-inspection contract for a detailed explanation of the scope of this inspection.

Fireplaces / Wood Stoves

DESCRIPTION OF FIREPLACES / WOOD STOVES

Fireplaces: •Masonry Firebox x3 •Gas
Vents, Flues, Chimneys: •Metal Chimney

FIREPLACES / WOOD STOVESOBSERVATIONS

General Comments
On the whole, the fireplace and it's components are in above average condition.

RECOMMENDATIONS / OBSERVATIONS
•None

LIMITATIONS OF FIREPLACES / WOOD STOVESINSPECTION

As we have discussed and as described in your inspection contract, this is a visual inspection limited in scope by (but not restricted to) the following conditions

- The interiors of flues or chimneys are not inspected.
- Firescreens, fireplace doors, appliance gaskets and seals, automatic fuel feed devices, mantles and fireplace surrounds, combustion make-up air devices, and heat distribution assists (gravity or fan-assisted) are not inspected.
- The inspection does not involve igniting or extinguishing fires nor the determination of draft.
- Fireplace inserts, stoves, or firebox contents are not moved.

Please also refer to the pre-inspection contract for a detailed explanation of the scope of this inspection.

Mold Inspection

DESCRIPTION OF MOLD INSPECTION

A visual mold inspection was conducted throughout the home and garage.

MOLD INSPECTION OBSERVATIONS

RECOMMENDATIONS / OBSERVATIONS

- **Repair:** Signs of mold growth were observed in the floor framing materials. Mold growth is a reaction to sustained moisture infiltration and the condition should be further evaluated. Mold growth within an enclosed environment can be detrimental to the inhabitant's health. Typically, removal of all contaminated materials and eliminating the moisture infiltration are the steps necessary to correct the situation. Visit www.epa.gov/mold for more information.

Mold growth on floor framing deck material.

LIMITATIONS OF MOLD INSPECTION

As prescribed in the pre-inspection contract, this is a visual inspection only. The inspection was limited by (but not restricted to) the following conditions:

- Components concealed behind finished surfaces could not be inspected.

Please also refer to the pre-inspection contract for a detailed explanation of the scope of this inspection.

Pest Inspection

DESCRIPTION OF PEST INSPECTION

A visual pest inspection was conducted throughout the home and garage.

PEST INSPECTION OBSERVATIONS

RECOMMENDATIONS / OBSERVATIONS

- No visible signs of infiltration observed.

LIMITATIONS OF PEST INSPECTION

As prescribed in the pre-inspection contract, this is a visual inspection only. The inspection was limited by (but not restricted to) the following conditions:

- Components concealed behind finished surfaces could not be inspected.

Please also refer to the pre-inspection contract for a detailed explanation of the scope of this inspection.

Cost Summary

INTRODUCTION

The following cost figures are order of magnitude estimates only. They pertain to some of the observations made in this report. This is not an all-inclusive list of future repair costs, nor does it address general annual maintenance. It is recommended that a budget of roughly one percent of the value of the home be set aside annually to cover unexpected repairs and annual maintenance.

It is further recommended that qualified, reputable contractors be consulted for specific quotations. You may find that contractor estimates vary dramatically from these figures, and from each other. Contractors may also uncover defects not apparent at the time of the inspection, resulting in additional costs. Please proceed cautiously.

Should you have any questions regarding contractor opinions or quotations, please contact our office. Any work performed by the homeowner will dramatically reduce costs.

These approximate costs are not intended to represent or influence, in any way, the value of a property.

APPROXIMATE IMPROVEMENT COSTS

Description of Repair – Roof	Overall Condition	Short Term /Immediate Repair Cost	Time Frame
Gutter & downspout installation	n/a	$2,500	Immediate Need
Chimney repairs	Good	$2,500+	Immediate Need

Description of Repair – Exterior	Overall Condition	Short Term /Immediate Repair Cost	Time Frame
EIFS repairs & painting	Good	TBD – Assume $10,000+	Immediate Need
Fascia painting	Good	$1,000	Immediate Need
Grading improvements	Fair	$500	Immediate Need
Masonry repairs – front porch	Good	$500	Immediate Need

Description of Repair – Mold Abatement	Overall Condition	Short Term /Immediate Repair Cost	Time Frame
Mold abatement in basement	n/a	$1,500	Immediate Need

Description of Repair –Interior	Overall Condition	Short Term /Immediate Repair Cost	Time Frame
Living room door adjustments / repairs	Good	$300	Immediate Need

Description of Repair – Heating / Cooling	Overall Condition	Short Term /Immediate Repair Cost	Time Frame
System tune-up and repairs	Good	$200 per unit	Immediate Need

Description of Repair – Plumbing	Overall Condition	Short Term /Immediate Repair Cost	Time Frame
Re-grout master shower, install hand held	Good	$500+	Immediate Need

HMC Job#: **105642**

Hayes Microbial Consulting

Indoor Air Quality Microbiology Laboratory

Email: IAQ@hayesmicrobial.com www.hayesmicrobial.com

13540 E. Boundary Rd. - Bldg. 1 / Suite 101 Midlothian, VA 23112

Mold Analysis Report prepared for

Sample Company

123 Main St.

Midlothian, VA 23112

Ph. 804-562-3435 Fax. 804-562-3435

Job Number:	
Job Name:	**Jones House**
Date Sampled:	**9/29/2010**
Date Analyzed:	**10/1/2010**

AIHA EMPAT Laboratory ID# 188863

AIHA LAP, LLC
ACCREDITED LABORATORY
ENVIRONMENTAL MICROBIOLOGY
ISO/IEC 17025:2005
www.aihaaccreditedlabs.org
LAB #188863

AIHA Accredited
Environmental Microbiology

ASCP American Society for Clinical Pathology

Certified Clinical Microbiologist

Hayes Microbial Consulting

Indoor Air Quality Microbiology Consulting

Email: IAQ@hayesmicrobial.com www.hayesmicrobial.com

13540 E. Boundary Rd.
Building 1 / Suite 101
Midlothian, VA 23112

Spore Trap Analysis

SOP #HMC101

HMC # 105642

Customer	Job Number:	Collected by: Steve Hayes
Sample Company		steve@hayesmicrobial.com
123 Main St.	Job Name: **Jones House**	Date Collected: **9/29/2010**
Midlothian, VA 23112		Date Recieved: **10/1/2010**
Ph. 804-562-3435 Fax. 804-562-3435		Date Reported: **10/1/2010**

HMC ID Number	105642 - 1		105642 - 2		105642 - 3		-	
Sample ID #	ST-1		ST-2		ST-3			
Sample Name	Exterior		First Floor		Second Floor			
Sample Volume	75 Liters		75 Liters		75 Liters		Liters	
Limit of Detection	13 spores/M3		13 spores/M3		13 spores/M3		spores/M3	
Background	1+		1+		2			
Fragments	27 /M3		13 /M3		27 /M3		/M3	
Organism	Count / M^3	% of Total	Count / M^3	% of Total	Count / M^3	% of Total	Count / M^3	% of Total
Alternaria	53	0.6						
Ascospores	5600	58.5	1653	19.3	2293	52.3		
Aspergillus/Penicillium	840	8.8	5600	65.3	960	21.9		
Basidiospores	1707	17.8	693	8.1	653	14.9		
Bipolaris/Drechslera								
Chaetomium			40	0.5				
Cladosporium	1280	13.4	307	3.6	453	10.3		
Curvularia								
Epicoccum								
Fusarium								
Memnoniella								
Myxomycetes	93	1.0			27	0.6		
Pithomyces								
Stachybotrys			280	3.3				
Stemphylium								
Torula								
Trichothecium								
Ulocladium								
Unidentifiable spore								
Total	9573		8573		4387			

Water Damage Indicators | Common Allergens | Slightly Higher than Outside Air | Significantly Higher than Outside Air | Ratio Abnormality

Signature: Stephen N. Hayes **Date:** 10/1/2010 **Reviewed by:** Julie Dillie

Hayes Microbial Consulting
Indoor Air Quality Microbiology Consulting
Email: IAQ@hayesmicrobial.com www.hayesmicrobial.com

13540 E. Boundary Rd.
Building 1 / Suite 101
Midlothian, VA 23112

Direct ID Analysis
SOP #HMC-102
HMC #: 105642

Customer	Job Number:	Collected by: Steve Hayes
Sample Company		steve@hayesmicrobial.com
123 Main St.	Job Name: **Jones House**	Date Collected: **9/29/2010**
Midlothian, VA 23112		Date Recieved: **10/1/2010**
Ph. 804-562-3435 Fax. 804-562-3435		Date Reported: **10/1/2010**

HMC ID Number:	105642 - 4	Sample Type:	Bio-Tape
Sample ID #:	TL-1	Sample Name:	Dining Room Wall

Organism	Spore Estimate	Mycelial Estimate	Notes
Aspergillus	Moderate	Few	

HMC ID Number:	105642 - 5	Sample Type:	Bio-Tape
Sample ID #:	TL-2	Sample Name:	Behind Baseboard

Organism	Spore Estimate	Mycelial Estimate	Notes
Chaetomium	Heavy	Many	
Stachybotrys	Heavy	Many	

HMC ID Number:	105642 - 6	Sample Type:	Bio-Tape
Sample ID #:	TL-3	Sample Name:	By Water Heater

Organism	Spore Estimate	Mycelial Estimate	Notes
Chaetomium	Moderate	Many	
Penicillium	Heavy	Many	
Stachybotrys	Heavy	Many	

Signature: Stephen N. Hayes Date: 10/1/2010 Reviewed by: Julie Dillie

Hayes Microbial Consulting
Indoor Air Quality Microbiology Consulting
Email: IAQ@hayesmicrobial.com www.hayesmicrobial.com

13540 E. Boundary Rd.
Building 1 / Suite 101
Midlothian, VA 23112

Spore Trap Information

Limit of Detection	The Limit of Detection is the lowest number of spores that can be detected based on the total volume of the sample collected and the percentage of the slide that is counted. At Hayes Microbial, 100% of the slide is read so the LOD is based solely on the total volume. Raw spore counts that exceed 500 spores will be estimated.
Blanks	Results have not been corrected for field or laboratory blanks.
Background	The Backgound is the amount of debris that is present in the sample. This debris consists of skin cells, dirt, dust, pollen, drywall dust and other organic and nonorganic matter. As the background density increases, the likelyhood of spores, especially small spores such as those of Aspergillus / Penicillium may be obscured. The background is rated on a scale of 1 to 4 and each level is determined as follows. **ND** : No background detected. (Pump or cassette malfunction) Recollect sample. **1** : Extremely light background. No spores will be uncountable. **1+** : Very light background. Less than 1% of small spores may be uncountable. **2** : Light background. Less than 3% of small spores may be uncountable. **2+** : Moderate background. Less than 5% of small spores may be uncountable. **3** : Moderate/Heavy background. 5% to 25% of small spores and less than 5% of large spores may be uncountable. **3+** : Heavy background. More than 25% of small spores and more than 5% of large spores may be uncountable. **4** : Sample unreadable. Recollect sample.
Fragments	Fragments are small pieces of fungal mycelium or spores. They are not identifiable as to type and when present in very large numbers, may indicate the presence of mold amplification.
Indoor / Outdoor Comparisons	There are no national standards for the numbers of fungal spores that may be present in the indoor environment. As a general rule and guideline that is widely accepted in the indoor air quality field, the numbers and types of spores that are present in the indoor environment should not exceed those that are present outdoors at any given time. There will always be some mold spores present in "normal" indoor environments. The purpose of sampling and counting spores is to help determine whether an abnormal condition exists within the indoor environment and if it does, to help pinpoint the area of contamination. Spore counts should not be used as the sole determining factor of mold contamination. There are many factors that can cause anomalies in the comparison of indoor and outdoor samples due to the dynamic nature of both of those environments.

Water Damage Indicators	These molds are commonly seen in conditions of prolonged water intrusion and usually indicate a problem.
Common Allergens	Although all molds are potential allegens, these are the most common allergens that may be found indoors.
Slightly Higher than Outside Air	The spore count is slightly higher than the outside count and may or may not indicate a source of contamination.
Significantly Higher than Outside Air	The spore count is significantly higher than the outdoor count and probably indicates a source of contamination.
Ratio Abnormality	The types of spores found indoors should be similar to the ones that were identified in the outdoor sample. Significant increases (more than 25 or 30%) in the ratio of a particular spore type may indicate the presence of abnormal levels of mold, even if the total number of spores of that type is lower in the indoor environment than it was outdoors.

Note	Fungi that are present in indoor samples at levels lower than 200 per cubic meter are considered insignificant. Insignificant spore counts are not color coded on the report.

Hayes Microbial Consulting
Indoor Air Quality Microbiology Consulting
Email: IAQ@hayesmicrobial.com www.hayesmicrobial.com

13540 E. Boundary Rd.
Building 1 / Suite 101
Midlothian, VA 23112

Additional Information for Direct Identification Analysis

Spore Estimate	
ND	None Detected
Rare	<10 Spores
Light	10-100 Spores
Moderate	100-1000 Spores
Heavy	>1000 Spores

Mycelial Estimate		
ND	None Detected	No active growth at site.
Trace	Very small amount of mycelium	Probably no active growth at site.
Few	Some mycelium	Possible active growth at site.
Many	Large amounts of mycelium	Probable active growth at site.

Blanks : Results have not been corrected for field or laboratory blanks.

Hayes Microbial Consulting
Indoor Air Quality Microbiology Consulting
Email: IAQ@hayesmicrobial.com www.hayesmicrobial.com

13540 E. Boundary Rd.
Building 1 / Suite 101
Midlothian, VA 23112

Alternaria	**Habitat:**	Commonly found outdoors in soil and decaying plants. Indoors it is commonly found on window sills and other horizontal surfaces.
	Health Effects:	A common allergen and has been associated with hypersensitivity pneumonitis. *Alternaria* is capable of producing toxic metabolites which may be associated with disease in humans or animals. Occasionally an agent of onychomycosis, ulcerated cutaneous infection and chronic sinusitis, principally in the immunocompromised patient.
Ascospores	**Habitat:**	A large group consisting of more than 3000 species of fungi. Common plant pathogens and outdoor numbers become very high following rain. Most of the genera are indistinguishable by spore trap analysis and are combined on the report.
	Health Effects:	Health affects are poorly studied, but many are likely to be allergenic.
Aspergillus / Penicillium	**Habitat:**	The most common fungi isolated from the environment. Very common in soil and on decaying plant material. Are able to grow well indoors on a wide variety of substrates.
	Health Effects:	This group contains common allergens and many can cause hypersensitivity pneumonitis. They may cause extrinsic asthma, and many are opportunistic pathogens. Many species produce mycotoxins which may be associated with disease in humans and other animals. Toxin production is dependent on the species and on the food source for the fungus. Some of these toxins have been found to be carcinogenic.
Basidiospores	**Habitat:**	A common group of Fungi that includes the mushrooms and bracket fungi. They are saprophytes and plant pathogens. In wet conditions they can cause structural damage to buildings.
	Health Effects:	Common allergens and are also associated with hypersensitivity pneumonitis.
Chaetomium	**Habitat:**	Ascomycete fungus, commonly isolated from soil and decaying plant materials. It is cellulolytic and grows well indoors on damp sheetrock and other paper substrates. It is often found growing with Stachybotrys.
	Health Effects:	It is reported to be allergenic and may produce toxins.
Cladosporium	**Habitat:**	One of the most common genera worldwide. Found in soil and plant debris and on the leaf surfaces of living plants. The outdoor numbers are lower in the winter and often relatively high in the summer, especially in high humidity. The outdoor numbers often spike in the late afternoon and evening. Indoors, it can be found growing on textiles, wood, sheetrock, moist window sills and in HVAC supply ducts.
	Health Effects:	A common allergen, producing more than 10 allergenic antigens and a common cause of hypersensitivity pneumonitis.
Myxomycetes	**Habitat:**	Found on decaying plant material and as a plant pathogen.
	Health Effects:	Some allergenic properties reported, but generally pose no health concerns to humans.
Penicillium	**Habitat:**	Often the most common type of fungi isolated from the environment. They are common indoors as well, and are found in house dust, water-damaged papers, fabrics, behind or on paint, and in fiberglass duct insulation. They are also found in a variety of food products.
	Health Effects:	It is a common allergen and an agent of hypersensitivity pneumonitis. Toxins are produced by various species. The production of volatile organic compounds has also been demonstrated. Most species are non-pathogenic, but Penicillium marneffei is a human pathogen in immunocompromized people.
Stachybotrys	**Habitat:**	Commonly found in soil and on decaying plant material. It is cellulolytic, and can be found indoors on wet materials containing cellulose, such as wallboard, ceiling tile, and other paper-based materials. It is found outdoors on decaying plant material although it is rarely detected on outdoor air samples.
	Health Effects:	Allergenic properties are poorly studied and no cases of infection have been reported in humans. They do however produce potent tricothecene mycotoxins. The toxins produced by this fungus can suppress the immune system affecting the lymphoid tissue and the bone marrow. The mycotoxin is also reported to be a liver and kidney carcinogen.

Radon Gas Report

Structure & Site Inspection Services LLC
www.the411site.com
Phone 248.645.5522 info@structureandsite.com

TEST RESULTS ARE ABOVE THE EPA ACTION LEVEL *(more info below)*

To: sample report
Re: sample address

Short-term radon tests are intended to give you an indication of the radon levels during the measurement period in the areas tested. The results of the radon measurements that were performed are as follows:

Radon strength in picocuries per liter (pCi/L): Radon Level = **6.3** Days 3.00

Address of Test Site: Same As Above

Deployment Information:

Start Test	End Test	Location	Device Type	Elect. No.	pCi/L
8/12/10 3:00 PM	8/15/10 3:00 PM	Basement	SST E-Perm	SEN493	6.3
8/12/10 3:00 PM	8/15/10 3:00 PM	Basement	SST E-Perm	SEN511	6.3

Test Results Interpretation

The concentration of radon in the building is measured in picocuries per liter of air (pCi/L). If your average radon level is less than 4.0 pCi/L, no action is necessary. However, radon levels less than 4.0 pCi/L can still pose some health risk, and in many cases can be reduced. The national average indoor radon level is about 1.3 pCi/L while the average outdoor radon concentration is about 0.4 pCi/L. The higher a buildings radon concentration, the greater the health risks to the occupants.

If Test Results Are GREATER than 4.0 pCi/L

If the test results are 4.0 pCi/L or greater, the EPA recommends that you mitigate the building. There are simple ways to fix a radon problem that aren't too costly, and even very high concentrations can be reduced to acceptable levels. Contact our office for a list of remediation companies to contact. info@structureandsite.com

Health Risks Associated with Radon Gas

Radon is a radioactive gas byproduct from the natural breakdown of uranium in soil. Radon is estimated to cause thousands of deaths each year, is the second leading cause of lung cancer and the #1 source of radiation exposure to humans. Children and smokers are at greatest risk from radon gas.

Additional Information Sources on Radon

EPA Web Site	www.epa.gov/radon	
Michigan Dept. of Health	517.335.8190	
EPA Phone #	800.SOS.RADON	
Structure & Site	248.645.5522	www.the411site.com

If you have any additional questions, please don't hesitate to contact our office. Thank you!