

VPS

Energy Survey Inspection Report (Energy SOP Only)



Florida Street, Your Town FL, 34292
Inspection prepared for: Actual Energy Audit
Inspection Date: 5/25/2011 Time: 1 PM
Age: 27 years Size: Est. 4,500 SF
Weather: 87 F, 60 %RH
Clear and calm

Inspector: A E Haas
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The benefits of a full Home Energy Survey with Diagnostics is that it is based on your homes individual design and components, and creates a list of recommended energy measures that may also help the environment.

What questions should you ask? What is my home's Baseload expense (which means electrical use other than heating or cooling)? What is my Seasonal expense from heating and cooling use? Which appliances in my home use more energy, and when is it economical to replace them with a more efficient one? Why should my home be "air sealed" before replacing my heat or cooling system or before adding attic insulation? What is air sealing? How leaky is my home? Should your attic be air sealed before you add insulation? Why some insulation material is many times better than other types depending on the application/location? Why is the home drafty, or have hot or cold spots? What does different room pressures have to do with air leaks in the home? What should I do first to get the most out of my energy dollars?

The following report should answer many if not all these questions and more. Did you know that for every cubic foot of conditioned air that leaks out of your home another cubic foot of unconditioned air comes into the home requiring your heat or cooling system to condition it, remove moisture in the air, and remove dust and particulates? Air Changes per hour in your home can be measured and then if you decide to have your home air sealed you can likely see immediate savings on your heating or cooling operating costs. The home can be air sealed up to Minimum Ventilation Guidelines (MVG ASHRAE 62.2) or, you can elect to install mechanical ventilation and seal your home as tight as possible for even more efficiency.

This would be cleaner, healthier air than the air that comes in now through leaks in the building enclosure. Remember, energy audits or surveys do not save energy. Energy measures do. Be sure and perform some or all of these measures as your budget allows. Please feel free to call on us for further questions, future remodeling (to keep your energy path on track), and tell your friends you just had a full Home Energy Survey with Diagnostics to optimize your home.

Note: This Home Energy Survey is not a home inspection. The inspector or energy professional did not inspect this home for defects, pests or wood destroying organisms, environmental concerns (such as mold or moisture on building components) or safety issues that normally would be inspected or reported on under a "home inspection" according to home inspections "Standards of Practice." Any references the inspector makes (if any) to defects or water intrusion etc. is just for that instance and does not imply that any other areas similar or not was inspected.

IMPORTANT: If this report recommends Air Sealing, a Combustion Appliance Safety test must be performed if there are gas appliances in the home before undergoing measures to Air Seal the Building Enclosure. These tests may recommend repairs to combustible appliances and their venting.

Summary of Findings

Windows/Doors		
Page 9 Item: 1	Flashing/Sealing	<ul style="list-style-type: none">• The dormer window shafts were found to be very hot during the day when the sun shined at the windows. Consider a low-e coating or replacement with hurricane rated impact resistant low-e windows.
Interior		
Page 10 Item: 1	Issues	<ul style="list-style-type: none">• Open fireplace dampers are a Major source of free flowing outdoor air intrusion as shown by the Blower Door test (documented later in this report).
Other Comments		
Page 17 Item: 1	Deficiencies	<ul style="list-style-type: none">• Clean refrigerator coils as they are probably very dirty. This can reduce efficiency below 50% of normal.

General Information

1. Type of home

Materials: Single Family Home

2. Type of construction

Materials: Concrete Block

3. Type of foundation

Materials: Slab on grade.

4. Number of stories

Materials: Single story.

5. Keep House ? Long

Materials: Plans are to maintain the house for many years to come.

. . . Baseline Energy and Loading . . .

A. Baseload Consumption

The annual baseload electricity use for this home includes all electrical use except heating or cooling.

B. Seasonal Consumption (Based on the seasons of the year and weather)

The annual seasonal cost (heating and cooling) is calculated from the electrical use averaging the 4 hottest months (June through the end of September) and subtracting the monthly estimated baseload, the portion of the annual seasonal cost associated with cooling is calculated.

C. Refrigerator Performance

The Refrigerator can often be one of the most energy consuming appliances you have in the home. Even though it may use only 800 watts compared to the microwave using 1800 watts, it is on a lot more than the microwave. For most appliances, the amount of watts used and the time or duration of operation is not nearly as much as a refrigerator. Try to use one refrigerator for the home and eliminate the need for a freezer or more refrigerators. Learn more here: <http://www.energystar.gov/>

D. Freezer Performance

Freezers for most homes are second in energy usage (after a refrigerator) or 3rd after a water heater and in practical terms if you can change your life style to eliminate a freezer then you can save money. Depending upon the age and size of your freezer the energy cost to maintain one can vary on how much you open the door and what temperature it is stored. If your freezer is in the garage and its unheated the winter is going to be cheaper than in the garage in the summer and is opened more frequently. Freezers less than say 7 years old may be from \$8- \$20 a month and may negate the savings you might have experienced at the grocery store by getting an extra item or using those coupons. Store less by trying to keep all your frozen food in the one refrigerator. It may be cost effective in the long run to purchase one large refrigerator that has ample freezer storage than to maintain a refrigerator and a freezer.

E. Water heater as part of Baseload

The estimated cost for an electric water heater is about \$980 a year (based on 9200 kwh annual use) according to the US department of energy. Extra measures that can save money on electric water heaters are a timer, and an insulation jacket properly installed and taped (electric heaters only). Insulating the HW heater and lowering the temperature also minimizes how much the appliance heats up your house (if it is within the air conditioned space). Local power companies have peak-on-off capabilities via utility connections that can save energy and save you money.

Tip: You can reduce your water heating costs by simply lowering the thermostat setting on your water heater. For each 10F reduction in water temperature, you can save between 3% to 5% in energy costs. Although some manufacturers set

water heater thermostats at 140F, most households usually only require them set at 120F. Water heated at 140F also poses a safety hazard / scalding. However, if you have a dishwasher without a booster heater, it may require a water temperature within a range of 130F to 140F for optimum cleaning. Reducing your water temperature to 120F also slows mineral buildup and corrosion in your water heater and pipes. This helps your water heater last longer and operate at its maximum efficiency.

F. Lighting Efficiency

Lighting costs can surprisingly add up, but can be reduced significantly if CFL bulbs are used where possible. Just one incandescent 60 watt bulb in use for 8 hours a day can cost nearly \$20 a year. That same bulb if CFL, would be equivalent to only a 13 watt bulb. CFL's last longer and do not produce heat like an incandescent bulb. 90 percent of the energy from an incandescent bulb is heat. This heat in the summer can add up throughout the home and require the cooling system to condition it to room temperature. LED bulbs are another alternative to using incandescent. CFL's come in various light shades and now includes 3 way dimmers. Remember, if you are not using it, turn it off.

G. Washing Machine

Washing Machines can be very cheap to use or very expensive. If you use cold water throughout, the cost can be less than 60 cents a load. If you use hot/warm some figures estimate as much as \$2 a load. This cost involves the energy to run the machine as well as the energy used to heat the water. Some tips: Front end washing machines use less energy and they use less "heated water." Always use cold water for the "Rinse" cycle. Using hot or warm water during rinse does not get your clothes cleaner. Clothes that require hot water should instead be put in a warm "Pre-soak" which usually is more effective and cheaper than hot. Some say hot water sets in stains and that it should be avoided altogether.

H. Clothes Dryer

Clothes Dryers can cost approximately 90 cents a load or more with gas dryers typically saving about 20 percent over an electric dryer. Add the cost of the washing machine and you can see that washing and drying the clothes can add up. This is based on a 45 minute drying period. Some tips: When replacing a dryer make sure it has a "Moisture Sensor" that can help detect when the moisture is gone. It will also help prevent over-drying requiring more ironing. Front end washing machines remove more water from the clothes which help the dryer finish faster. Clean the lint filter before each load (allows the moisture to leave the dryer quicker than a dirty filter). Ask your power company about demand or peak times and wash and dry your clothes to avoid the higher charge per kWh. If you over dry your clothes and they are wrinkled you can add a wet towel and dry some more to remove the wrinkles.

I. Dishwasher

Dishwashers use water from the water heater typically and most of the cost associated is already figured in the water heater operating costs. The heated setting on the dishwasher does use some energy but most of the water is pre-heated from the water heater. Newer dish washing machines use less water than those older than 5 years and probably do a better job cleaning the dishes.

J. Range/Oven/Cooktop

Currently, Energy Star does not rate an oven or cooktop. Typically a gas or electric range/oven may be \$20 a month or less. Tip: Always vent a gas oven or cooktop to the outside when possible (some conditions require it). Keep a fire extinguisher nearby (Class B for grease, combustible liquid fires) and never throw water on a grease fire.

K. Microwave Cooking Equipment

A microwave oven usually cost less than \$6 a month to operate (based on 20 minutes a day). There are bigger more important energy users to consider. On replacement though, always vent to the outside when possible.

L. Entertainment Center (Big Screen TV, Game player, Sound System)

Entertainment Centers such as a Big Screen TV along with a Gaming system and sound system can use quite a bit of energy depending on how many hours a day their on. But more surprisingly, is how much they may be using while "off." Typically called "Phantom Loads" some devices continue to consume power while turned off for lights, clocks and fans. A big screen TV may use as much as 90 watts of power when off. Add the gaming system and sound system and it may be as high as 300 or more watts. The solution would be to add a power strip and turn the power strip off when not in use. Even some economical power strips can leak energy and it is recommended to purchase a power strip that is designed to stop energy leaks.

Tip: When leaving for extended periods of time unplug as many electrical appliances and electronic equipment as

possible. This is to decrease energy use and to diminish the chances of damage from transient high voltages and lightning.

Tip: Shut off the main water supply to the house as well. This is to prevent a leak from damaging the house in your absence.

M. Dehumidifier

A dehumidifier, and can cost anywhere from \$20 to \$40 a month depending on its size and how long it operates each day based upon the setting and how much moisture needs removing. A more accurate method is to use a watt meter and measure it over a period of time. If you have more moisture than normal, correcting the problem causing the moisture build up can greatly reduce the energy cost to operate the dehumidifier.

Baseload & Seasonal Efficiency

1. Baseline

Materials: Insufficient data to calculate electrical use.

2. Baseline

Materials: Hot water heaters are off during the summer, this is a good practice. • Water usage is about nil during the off summer season. The winter period is averaging around 6,000 gallons a month. This may be considered high for 2 people but OK if there have been guests at the house.

. . . Exterior Envelope . . .

The exterior surface of your home from an energy performance standpoint makes up what is called a Water Control Layer. It is a structure, sheet, spray or trowel-applied membrane or material layer that controls the passage of liquid water even after long or continuous exposure to moisture. The energy professional observes these areas looking for durability issues that may affect energy performance. Roofs, insulation, walls, flashing, foundations, and grading are all important.

Roof

1. Type of roof covering

Materials: No major issues noted.

2. Roof Comments

Materials: The roof appears to be of high quality. The air layer that aids in drying the wooden shakes helps also insulate the attic from summer heat.

Insulation & Attic Area

1. Defects Noted

Materials: Batts of fiberglass. • Blown in. • R-values: Estimated at R30 or more.



New light can covers - excellent - and new ducts, Area now full covered with insulation.



Previous duct defect, now replaced with new.



Unprotected wires and scant insulation - upgraded.



Missing insulation - repaired now.



Showing new can light covers and new ductwork - before new insulation added.

2. Concerns

Observations:

- Old types of ceiling Can light fixtures, although covered, still allow for some air leakage (as demonstrated on pressure tests).



New insulation resolved multiple issues.



New insulation and new ducts resolved multiple issues.



New insulation and walkway over wires resolved multiple issues.



New insulation resolved multiple issues.



Showing new can light covers and new ductwork - before new insulation added.



Showing new can light covers and new ductwork - before new insulation added.

Foundation/Walls

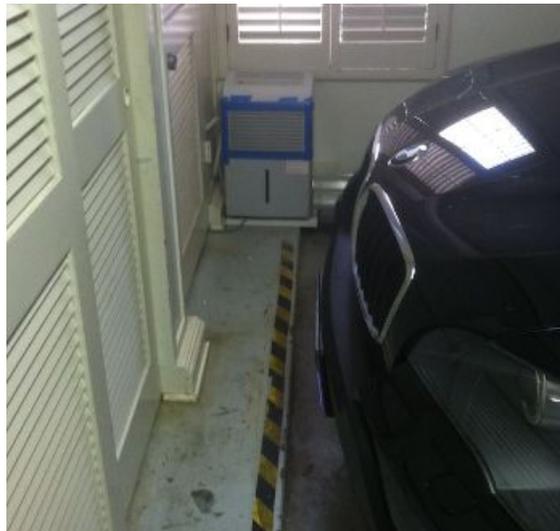
1. Concerns

2. Condition

Materials: Exterior paint is in fairly good shape.

Observations:

- Two new brushed/rolled on layers of exterior paint should help slow moisture intrusion.



Humidity in garage addressed with a dehumidifier - installed.

3. Defects Noted

Observations:

- Plants up against the structure increases moisture uptake. Recommend the plants be trimmed away from the house in all areas.

Grounds & Vegetation

1. Issues

Observations:

- Grading seems appropriate visually.
- Area is low lying. Elevated water tables can cause issues. One needs to minimize moisture at all levels.

2. Concerns

Observations:

- Plants up against house - adds to moisture accumulation and insect entry ways.

Windows/Doors

1. Flashing/Sealing

Materials: Single pane.

Observations:

- Needs updated chaulking and sealing at locations.
- Weather stripping needs replacement in areas.
- **The dormer window shafts were found to be very hot during the day when the sun shined at the windows. Consider a low-e coating or replacement with hurricane rated impact resistant low-e windows.**

2. Condition

Materials: Wooden doors noted.

Observations:

- Needs updated chaulking and sealing at locations.
- Weather stripping needs replacement in areas.

. . . Rough outline of Thermal boundary . . .

The "Thermal Boundary" of your home is what separates the conditioned air inside from the outside air, attic or crawlspace. Typically the thermal boundary is made up of an air control layer (like gypsum board) and a thermal control layer (insulation). A thermal boundary has 6 sides (top, bottom, front back and two sides). Anywhere along the thermal boundary that is not aligned properly (meaning air control layer or thermal control layer, missing or not in tact) energy loss can occur. Energy loss (money) can be heating or cooling and can be significant as breaks in the thermal boundary can allow air leaks through house pressures and heat flow through conduction. It is important to preserve the thermal boundary and air seal and insulate when remodeling. The sketch shows your thermal boundary from a top down view.

Enclosure Performace

1. Defects

Observations:

- The dryer vent was hand cleaned of lint.

2. Concerns

Observations:

- No insulation of access doors to unconditioned space.

3. Concerns

Observations:

- No insulation of access doors to unconditioned space.

. . . Interior Envelope . . .

The interior ceiling, walls and floors from an energy performance standpoint make up what is known as the "Air Control layer". It is made of an assembly of materials that control airflow between a conditioned space and an unconditioned space or between units in multi-family and apartment construction. Vapor Control Layer: The component (or

components) that is (or are) designed and installed in an assembly to control the movement of water by vapor diffusion. The energy professional observes these areas looking for durability issues that may affect energy performance. The main concern is that air moving into the house brings in large amounts of water vapor with it.

The "Thermal Control Layer" is that part of the enclosure that minimizes the transfer of heat between the conditioned area and outside space. Insulation of the walls, ceiling, doors, windows and penetrations are important.

Interior

1. Issues

Materials: A chimney sweep inspected the flues from the inside of the house and said all were OK for continued use. But he could not comment on the upper portions of the flue.

Observations:

- Fireplace dampers should be closed during the summer. I have done this. But then a sign must be available to show this condition. They must be open if you light the pilot gas lights.

Broken dampers repaired.

- **Open fireplace dampers are a Major source of free flowing outdoor air intrusion as shown by the Blower Door test (documented later in this report).**



Dampers in fireplaces all need review.



The dishwasher is Energy Star rated, good.

2. Problems

Materials: A chimney sweep inspected the flues from the inside of the house and said all were OK for continued use. But he could not comment on the upper portions of the flue.

3. Possible Issues

Materials: Use kitchen vents when preparing food to help remove smoke and odors. • Cigarette and cigar smoking should not be done indoors. • Plants are said to help clean indoor air (not proven). But they also may cause mold growth and certainly add to indoor humidity. Essentially ALL the water put in to water plants ends up in the interior air.

Observations:

- Smokers present.



Washing machine held together with tape, falling apart.



Older style, less efficient laundry equipment.



I could not remove this fridge cover, it is full of dust, needs removal and the coils vacuumed out.



Stove vent clogged with grease, clean and check for venting.

Electrical

1. Service amps

Materials: 400 amp service (200 x 2).

2. Size of service sufficient?

Materials: Size of electrical supply appears to be appropriate for this house.

3. Fuses or Circuit breakers?

Materials: Seems appropriate for this house at the time of inspection.

Heating/Air Conditioning

1. Types of cooling/heating systems

Materials: Heat pumps for heating and cooling noted. One older unit and 2 new units on location.

2. Estimated age of cooling systems

Materials: Older A/C unit still relatively efficient, new units at top efficiency at this time.

3. Cooling systems upgraded

Materials: All air handlers with upgraded air filtration systems.

4. Cooling system comments

Materials: A/C system contains a dehumidifier circuit. This is an excellent use in this location.

5. HVAC Issues



Old foyer unit - replaced.



A/C units updated to modern standards.



Old garage unit - replaced.



Old ducts - replaced.



3rd bedroom unit - OK - speed reduced to better remove interior moisture.



New, efficient 4 ton unit in garage.



4 ton unit in garage now with proper filtering..



New 2 ton unit in foyer area, now has filter.



Household dehumidifier installed in garage will address moisture issues even if the A/C is not running as in the cooler months.

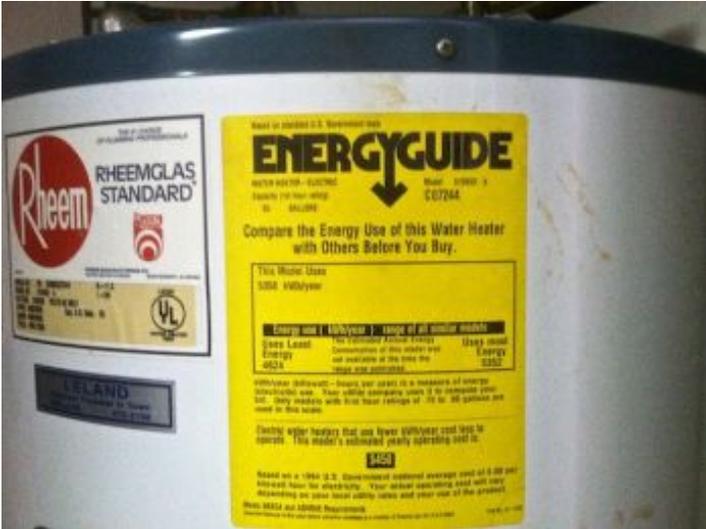


Showing new can light covers and new ductwork - before new insulation added.

Plumbing

1. Problems Noted

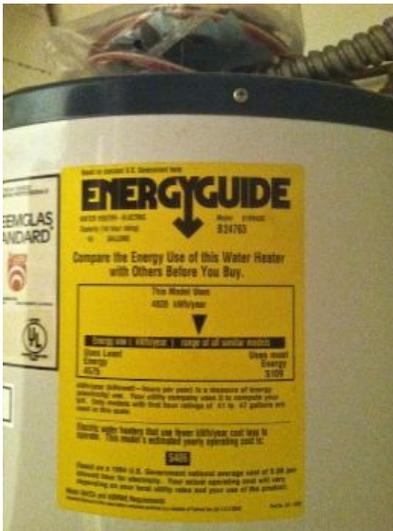
Materials: No leaking fixtures noted on earlier inspection visits. This is good.



81 gallon HW heater in garage is oversized.



81 gallon HW heater in garage -replace with 40 gallon unit at re-piping time.



40 gallon unit can be reduced to a 30 gallon unit.



40 gallon unit can be reduced to a 30 gallon during plumbing re-pipe.

2. Recent plumbing upgrades

Materials: There is a trend to push for the use of tankless water heaters. I have been keeping up with this market. At this time I do not recommend them.

3. Plumbing comments

Materials: Hot Water Heaters:

There is too much and this is a waste. Normally you need 10 gallons for each person in the house. This also assumes the cold water that supplies the hot water heater is at winter temperatures.

You have 80 and 40 gallon tanks. Even accounting for guests, you only need a total of 60 to 80 gallons (total) at most.

... Pressure Testing ...

We depressurized the entire home with a high tech blower door at CFM50 (cubic feet per minute at 50 pascals pressure), if the duct piping has no leaks then we should not get any readings from any registers since the air inside the piping is "inside" the building enclosure. When we get air at these registers under this condition, it means that a leak (or air that is not under the depressurization of CFM50) is coming in from outside the building enclosure.

If the duct piping has leaks a full duct pressurization test is recommended. Some leaks (if any) that may not show during the pressure pan test will reveal themselves under a duct pressurization test.

Depressurization Testing

Minimum Building Airflow Standard EXAMPLE Calculation (ASHRAE 62-89)

Building Data

Living space area = 1500 SF, basement area = 700 SF

of occupants = 4, # of stories above grade = 2, location = Albany, NY

Step 1: Calculate the ventilation required for the building

Airflow = $0.35 \times \text{volume} / 60$

Volume = $8 \times (1500 + 700) = 17600$ cubic feet

Airflow = $0.35 \times 17600 / 60 = 102$ CFM

Step 2: Calculate the ventilation required for the people

Airflow = $15 \times \# \text{ occupants}$

Airflow = $15 \times 4 = 60$ CFM

Step 3: Using the higher airflow requirement, convert to CFM50

Minimum CFM50 = Airflow \times N

Where N is the LBL conversion factor (see chart) (= 21 for Florida)

Minimum CFM50 = $102 \times 15.4(\text{NY}) = 1570$ CFM50

Step 4: Let's say the measured CFM50 was 3570, then

3570 (measured) - 1570 (optimum) = 2000 CFM

This is the amount of air leaks you should diminish to tighten up the house while still allowing for appropriate air exchange (at 50 Pa).

Step 5: Calculate the optimal and actual complete home air changes per hour

Optimal = $102 (60) / 17600 = 0.35$ home air exchanges per hour.

Actual = $(3570 / 15.4) (60) / 17600 = 0.79$ home air exchanges per hour or over twice as much as is needed. That means twice as much moisture, dust, pollutants, pesticides, and other undesirables.

1. Leaks

Materials: Blower Door Testing was performed on 5/24/2011 at 1 PM with the following results:

Calculated, required air movement = 291 cubic feet per minute (CFM) at atmospheric pressure.

Actual, measured air movement = 430 CFM, fireplace dampers closed.

Actual, measured air movement, with all three fireplace dampers open = 543 CFM.

Calculated, required total interior air changes per hour = 0.35. Over a third of the interior air is exchanged with outside air every hour. This is appropriate for this house.

Calculated, measured total interior air changes per hour = 0.52, about 50% more than required. This is not good.

Calculated, measured total interior air changes per hour with all 3 fireplace dampers open = 0.65, about 100% more than needed.

Although the house has been "tightened up", it still has excessive outside air movement into the house. There may be a small percentage leaking through window and door seals but the largest amount is around the ceiling Can lights. Most of them were tested and they all leaked. These have been covered with metal cylindrical covers in the attic. Then they were covered with insulation. This has slowed the passage of air considerably compared to the original condition whereby the air was freely moving by these completely exposed (from attic direction) fixtures.

Note the benefit of closing the fireplace dampers.

Short of exchanging all the Can lights for newer, fully sealed units, or removing them altogether, there is not much that can be done.



Rear door used for depressurization.



Computer for analysis of leaks.



We could not get to -50Pa due to excessive leakage of air.



Computer calculations were made as documented.



Blower door configuration.

Other Comments

1. Deficiencies

Observations:

• Main Issues / Recommendations:

The house is still leaking air above the allowed amount, though I am sure it is probably less than half as much as it was before all the improvements were completed. This leakage adds to the electric bill, increases the humidity load and adds to indoor air pollution. The best thing to do for this issue is to have a small vent in the courtyard, near the A/C unit in the garage. It would look like another dryer outlet from the outside. This outside air port would be somewhat as an air exchanger is up north. But it is just a vent that would attach to the 4 ton air handler. When the A/C unit is on it would draw in a small amount of outside air to the suction, return side of the A/C unit. It would then be filtered and conditioned. Then a small positive inside air pressure would result. This would prevent other openings from sucking in Unconditioned outside air.

The same could be done for the 2 ton unit in the foyer. And the cost would be minimal. The only active part would be a damper to prevent air movement when the air handler is off. I would recommend starting with just the 4 ton unit for now however. An added benefit is a reduction of Radon gases. The movement back and forth with air leaks gives some ventilation but a one way movement will help reduce Radon.

You are planning on having your water pipes epoxied by CuraFlow. At that time they usually replace the hot water heaters. I recommend you use only a 30 gallon tank in the guest bedroom side of the house and then use only a 40 gallon tank at the MBR side of the house. I think this is more than enough when the heater temperature is set to 120 F. This is for a household of 7 people. However, if there is for some reason a lack of hot water then one can compensate by moving the temperature of the hot water to a higher value such as 130 or 140 F. I cannot recommend tankless heaters at this time for many reasons - details if you wish...

• **Clean refrigerator coils as they are probably very dirty. This can reduce efficiency below 50% of normal.**

Corrections Recommended

1. Recommend:

Materials: A new layer of rolled on or brushed on paint helps diminish moisture passage and also looks better. It is best to use only latex based paints most of the time and avoid the use of elastomeric paints that do not "breath".

2. Recommend:

Materials: A new layer of rolled on or brushed on paint helps diminish moisture passage and also looks better. It is best to use only latex based paints most of the time and avoid the use of elastomeric paints that do not "breath".

3. Grounds & Vegetation

Materials: Plants against the house just adds to moisture problems. Keep them at least 12 inches away and preferably more. • Move sprinkler heads a few feet away from the house to diminish moisture and staining issues.

4. Interior

Materials: There is a push to use CFL and LED lights. You probably do not need to replace all your lights but the ones used for the most hours would definately help. • Replace laundry equipment with new, more energy efficient appliances.
Clean refrigerator coils as they are probably very dirty. This can reduce efficiency below 50% of normal.

5. A/C & Heating

Materials: See notes on an air exchanger to pressurize the house.

6. Plumbing

Materials: Reduce hot water heater sizes with next replacement cycle as noted.

7. Issues Noted

Materials: Front loading Washing Machines generally use less water and energy than top loading models. Your laundry appliances are old. We recommend replacement with high efficiency units. • Most currently selling quality Dish Washers are far more efficient than some from even 5 years ago. Check for energy ratings when shopping for replacements. • All fireplaces should be converted to electronic ignition units.

InterNACHI

InterNACHI Home Inspection Standards of Practice
For limited scope inspections, see specific section(s)

1. Definitions and Scope.

2. Standards of Practice

2.1. Roof

2.2. Exterior

2.3. Basement, Foundation, Crawlspace & Structure

2.4. Heating

2.5. Cooling

2.6. Plumbing

2.7. Electrical

2.8. Fireplace

2.9. Attic & Insulation

2.10. Doors, Windows & Interior

3. Limitations, Exceptions & Exclusions

4. Glossary of Terms

5. Standards of Practice Inspection Exclusions

1. Definitions and Scope

1.1. A Home Inspection is a non-invasive, visual examination of a residential dwelling, performed for a fee, which is designed to identify easily observed material defects within specific components of said dwelling. Only areas easy to see and access are inspected (with limitations). Components may include any combination of mechanical, structural, electrical, plumbing, or other essential systems or portions of the home, as identified and agreed to by the Client and Inspector, prior to the inspection process.

I. A home inspection is intended to assist in evaluation of the overall condition of the dwelling. The inspection is based on observation of the visible and apparent condition of the structure and its components on the date of the inspection, and not the prediction of future conditions. The inspector is not a specialist within separate fields but rather a generalist. As such, findings will be less than those that experts within each field will be able to find.

II. A home inspection will not reveal every concern that exists or ever could exist, but only those material defects observed on the day of the inspection. Everything is based on the inspectors opinion at the time of the inspection.

III. A home inspection can include a survey and/or analysis of energy flows and usage in a residential property if the client requests it.

1.2. A Material Defect is a condition of a residential real property, or any portion of it, that would have a significant, adverse impact on the value of the real property, or that involves an unreasonable risk to people on the property. The fact that a structural element, system or subsystem is near, at or beyond the end of the normal useful life of such a structural element, system or subsystem is not by itself a material defect.

1.3. An Inspection Report shall describe and identify, in written format, the inspected systems, structures, and components of the dwelling, and shall identify the material defects that were observed at inspection. Inspection reports may contain recommendations regarding conditions reported or recommendations for correction, monitoring or further evaluation by professionals, but this is not required. The inspectors opinion may vary from the opinion of others.

2. Standards of Practice

2.1. Roof

I. The inspector shall inspect from ground level or eaves:

- A. the roof covering;
- B. the gutters;
- C. the downspouts;
- D. the vents, flashings, skylights, chimney and other roof penetrations; and
- E. the general structure of the roof from the readily accessible panels, doors or stairs.

2.2. Exterior

I. The inspector shall inspect readily accessible:

- A. siding, flashing and trim;
- B. exterior doors, decks, stoops, steps, stairs, porches, railings, eaves, soffits and fascias;
- C. and report as in need of repair any spacings between intermediate balusters, spindles, or rails for steps, stairways, balconies, and railings that permit the passage of an object greater than 4 inches in diameter, from a representative sampling;
- D. a representative number of windows;
- E. the vegetation, surface drainage, and retaining walls when these are likely to adversely affect the structure;
- F. and describe the exterior wall covering.

2.3. Basement, Foundation & Crawlspace

I. The inspector shall inspect readily accessible:

- A. the basement;
- B. the foundation;
- C. the crawlspace;
- D. the visible structural components;
- E. and report on the location of under-floor access openings;
- F. and report any present conditions or clear indications of active water penetration observed by the inspector;
- G. for wood in contact or near soil;
- H. and report any general indications of foundation movement that are observed by the inspector, such as, but not limited to: sheetrock cracks, brick cracks, out-of-square door frames, or floor slopes;

I. and report on any cutting, notching and boring of framing members which may present a structural or safety concern.

2.4. Heating

I. The inspector shall inspect readily accessible:

- A. heating systems using normal operating controls, and describe if possible the energy source and heating method;
- B. and report as in need of repair heating systems which do not operate;
- C. and report if the heating systems are deemed inaccessible.

2.5. Cooling

I. The inspector shall inspect:

- A. the central cooling equipment using normal operating controls.

2.6. Plumbing

I. The inspector shall when accessible:

- A. inspect and try to determine if the water supply is public or private;
- B. verify the presence of and identify the location of the main water shut-off valve;
- C. inspect the water heating equipment, including venting, connections, energy source supply system, and verify the presence or absence of temperature-pressure relief valves and/or Watts 210 valves;
- D. flush toilets;
- E. water-test sinks, tubs and showers for functional drainage;
- F. inspect the interior water supply, including fixtures and faucets;
- G. inspect the drain, waste and vent systems, including fixtures;
- H. describe any visible fuel storage systems;
- I. inspect the drainage sump pumps and test pumps with accessible floats;
- J. inspect and describe the water supply, drain, waste and main fuel shut-off valves, as well as the location of the water main and main fuel shut-off valves;
- K. inspect and report as in need of repair deficiencies in the water supply by viewing the functional flow in two fixtures operated simultaneously;
- L. inspect and report as in need of repair deficiencies in installation and identification of hot and cold faucets;
- M. inspect and report as in need of repair mechanical drain-stops that are missing or do not operate if installed in sinks, lavatories and tubs; and
- N. inspect and report as in need of repair commodes that have cracks in the ceramic material, are improperly mounted on the floor, leak, or have tank components which do not operate.

2.7. Electrical

I. The inspector shall where accessible inspect:

- A. the service drop/lateral;
- B. the meter socket enclosures;
- C. the means for disconnecting the service main;
- D. and describe the service disconnect amperage rating, if labeled;
- E. panelboards and overcurrent devices (breakers and fuses);
- F. and report on any unused circuit breaker panel openings that are not filled;
- G. the service grounding and bonding;
- H. a representative number of switches, lighting fixtures, and receptacles, including receptacles observed and deemed to be AFCI-protected during the inspection using the AFCI test button, where possible (we are not responsible for resetting fixtures that do not readily return to the normal functioning state);
- I. and test all Ground Fault Circuit Interrupter (GFCI) receptacles and GFCI circuit breakers observed and deemed to be GFCIs during the inspection using a GFCI tester, where possible;

- J. and report the presence of solid conductor aluminum branch circuit wiring, if readily visible and detectable;
- K. and report on any tested receptacles in which power was not present, polarity is incorrect, is not secured to the wall, the cover is not in place, the ground fault circuit interrupter devices are not properly installed or do not operate properly, evidence of arcing or excessive heat is present, or where the receptacle is not grounded or is not secured to the wall;
- L. the service entrance conductors and the viewable condition of the conductor insulation;
- M. and report the absence of smoke detectors; and
- N. service entrance cables, and report as in need of repair deficiencies in the integrity of the insulation, drip loop, or separation of conductors at weatherheads and clearances from grade or rooftops.

2.8. Fireplace

I. The inspector shall inspect:

- A. the fireplace, and open and close the damper door, if readily accessible and operable;
- B. hearth extensions and other permanently installed components;
- C. and report as in need of repair deficiencies in the lintel, hearth and material surrounding the fireplace, including fireplace opening clearance from visible combustible materials.

2.9. Attic, Ventilation & Insulation

I. The inspector shall inspect where readily accessible:

- A. the insulation in unfinished spaces;
- B. the ventilation of attic spaces;
- C. mechanical ventilation systems;
- D. and report on the general absence or lack of insulation in unfinished spaces.

2.10. Doors, Windows & Interior

I. The inspector shall:

- A. open and close a representative number of doors and windows;
- B. inspect the walls, ceilings, steps, stairways and railings;
- C. and may report as in need of repair spacing between intermediate balusters, spindles or rails for steps, stairways and railings that permit the passage of an object greater than 4 inches in diameter from a sampling;
- D. inspect garage doors and garage door openers by operating first by remote (if available), and then by the installed automatic door control;
- E. and report as in need of repair any installed electronic sensors that are not operable or not installed at reasonable heights above the garage door;
- F. and report as in need of repair any windows that are obviously fogged or display other evidence of broken seals.

3. Limitations, Exceptions & Exclusions

3.1. Limitations:

- I. An inspection is not technically exhaustive.
- II. An inspection will not identify concealed or latent defects.
- III. An inspection will not deal with aesthetic concerns or what could be deemed matters of taste, cosmetic defects, etc.
- IV. An inspection will not determine the suitability of the property for any use.
- V. An inspection does not determine the market value of the property or its marketability.
- VI. An inspection does not determine the insurability of the property.
- VII. An inspection does not determine the advisability or inadvisability of the purchase of the inspected property.
- VIII. An inspection does not determine the life expectancy of the property or any components or systems therein.

- IX. An inspection does not include items not permanently installed.
- X. These Standards of Practice apply only to homes with four or fewer dwelling units.

3.2. Exclusions:

I. The inspectors are not required to determine:

- A. property boundary lines or encroachments.
- B. the condition of any component or system that is not readily accessible.
- C. the service life expectancy of any component or system.
- D. the size, capacity, BTU, performance, or efficiency of any component or system.
- E. the cause or reason of any condition.
- F. the cause for the need of repair or replacement of any system or component.
- G. future conditions.
- H. compliance with codes or regulations.
- I. the presence of evidence of rodents, animals or insects.
- J. the presence of mold, mildew, fungus or toxic drywall.
- K. the presence of air-borne hazards.
- L. the presence of birds.
- M. the presence of other flora or fauna.
- N. the air quality.
- O. the existence of asbestos.
- P. the existence of environmental hazards.
- Q. the existence of electro-magnetic fields.
- R. the presence of hazardous materials including, but not limited to, the presence of lead in paint.
- S. any hazardous waste conditions.
- T. any manufacturer's recalls or conformance with manufacturer installation, or any information included for consumer protection purposes.
- U. operating costs of systems.
- V. replacement or repair cost estimates.
- W. the acoustical properties of any systems.
- X. estimates of the cost to operating any given system.

II. The inspectors are not required to operate:

- A. any system that is shut down.
- B. any system that does not function properly.
- C. or evaluate low-voltage electrical systems such as, but not limited to:
 - 1. phone lines;
 - 2. cable lines;
 - 3. antennae;
 - 4. lights; or
 - 5. remote controls.
- D. any system that does not turn on with the use of normal operating controls.
- E. any shut-off valves or manual stop valves.
- F. any electrical disconnect or over current protection devices.
- G. any alarm systems.
- H. moisture meters, gas detectors or similar equipment.

III. The inspectors are not required to:

- A. move any personal items or other obstructions, such as, but not limited to:
 - 1. throw rugs;
 - 2. furniture;
 - 3. floor or wall coverings;
 - 4. ceiling tiles;
 - 5. window coverings;

6. equipment;
7. plants;
8. ice;
9. debris;
10. snow;
11. water;
12. dirt;
13. foliage; or
14. pets.

- B. dismantle, open, or uncover any system or component.
- C. enter or access any area which may, in the opinion of the inspector, be unsafe.
- D. enter crawl spaces or other areas that are unsafe or not readily accessible.
- E. inspect underground items such as, but not limited to, underground storage tanks or other indications of their presence, whether abandoned or actively used.
- F. do anything which, in the inspector's opinion, is likely to be unsafe or dangerous to the inspector or others, or damage property, such as, but not limited to: walking on roof surfaces, climbing ladders, entering attic spaces, or negotiating with pets.
- G. inspect decorative items.
- H. inspect common elements or areas in multi-unit housing.
- I. inspect intercoms, speaker systems, radio-controlled security devices, or lawn irrigation systems.
- J. offer guarantees or warranties.
- K. offer or perform any engineering services.
- L. offer or perform any trade or professional service other than home inspection.
- M. research the history of the property, report on its potential for alteration, modification, extendibility, or its suitability for a specific or proposed use for occupancy.
- N. determine the age of construction or installation of any system structure or component of a building, or differentiate between original construction and subsequent additions, improvements, renovations or replacements.
- O. determine the insurability of a property.
- P. perform or offer Phase 1 environmental audits.
- Q. inspect on any system or component which is not included in these standards.
- R. open any locked doors or force difficult openings.

4. Glossary of Terms

- 4.1. Accessible: Can be approached or entered by the inspector safely, without difficulty, fear or danger.
- 4.2. Activate: To turn on, supply power, or enable systems, equipment, or devices to become active by normal operating controls. Examples include turning on the gas or water supply valves to the fixtures and appliances, and activating electrical breakers or fuses.
- 4.3. Adversely Affect: To constitute, or potentially constitute, a negative or destructive impact.
- 4.4. Alarm System: Warning devices, installed or freestanding, including, but not limited to: carbon monoxide detectors, flue gas and other spillage detectors, security equipment, ejector pumps and smoke alarms.
- 4.5. Appliance: A household device operated by use of electricity or gas. Not included in this definition are components covered under central heating, central cooling or plumbing.
- 4.6. Architectural Service: Any practice involving the art and science of building design for construction of any structure or grouping of structures, and the use of space within and surrounding the structures or the design, design development, preparation of construction contract documents, and administration of the construction contract.
- 4.7. Component: A permanently installed or attached fixture, element or part of a system.
- 4.8. Condition: The visible and conspicuous state of being of an object.
- 4.9. Crawlspace: The area within the confines of the foundation and between the ground and the underside of the lowest floor structural component.

- 4.10. Decorative: Ornamental; not required for the operation of essential systems and components of a home.
- 4.11. Describe: To report in writing a system or component by its type, or other observed characteristics to distinguish it from other components used for the same purpose.
- 4.12. Determine: To arrive at an opinion or conclusion pursuant to examination.
- 4.13. Dismantle: To open, take apart or remove any component, device or piece that would not typically be opened, taken apart or removed by an ordinary occupant.
- 4.14. Engineering Service: Any professional service or creative work requiring engineering education, training, and experience and the application of special knowledge of the mathematical, physical and engineering sciences to such professional service or creative work as consultation, investigation, evaluation, planning, design and supervision of construction for the purpose of assuring compliance with the specifications and design, in conjunction with structures, buildings, machines, equipment, works or processes.
- 4.15. Enter: To go into an area to observe visible components.
- 4.16. Evaluate: To assess the systems, structures or components of a dwelling.
- 4.17. Examine: To visually look. See Inspect.
- 4.18. Foundation: The base upon which the structure or wall rests; usually masonry, concrete, or stone, and generally partially underground.
- 4.19. Function: The action for which an item, component, or system is specially fitted or used, or for which an item, component or system exists; to be in action or perform a task.
- 4.20. Functional: Performing, or able to perform, a function.
- 4.21. Home Inspection: The process by which an inspector visually examines the readily accessible systems and components of a home, and operates those systems and components utilizing these Standards of Practice as a guideline.
- 4.22. Household Appliances: Kitchen and laundry appliances, room air conditioners, and similar appliances.
- 4.23. Inspect: To visually look at readily accessible systems and components safely, using normal operating controls, and accessing readily accessible panels and areas in accordance with these Standards of Practice.
- 4.24. Inspected Property: The readily accessible areas of the buildings, site, items, components, and systems included in the inspection.
- 4.25. Inspector: One who performs a real estate inspection.
- 4.26. Installed: Attached or connected such that the installed item requires a tool for removal.
- 4.27. Material Defect: A condition of a residential real property or any portion of it that would have a significant adverse impact on the value of the real property or that involves an unreasonable risk to people on the property. The fact that a structural element, system or subsystem is near, at or beyond the end of the normal useful life of such a structural element, system or subsystem is not by itself a material defect.
- 4.28. Normal Operating Controls: Devices, such as thermostats, that would be operated by ordinary occupants which require no specialized skill or knowledge.
- 4.29. Observe: To see through visually directed attention.
- 4.30. Operate: To cause systems to function or turn on with normal operating controls.
- 4.31. Readily Accessible: An item or component that is, in the judgment of the inspector, capable of being safely observed without the removal of obstacles, detachment or disengagement of connecting or securing devices, or other unsafe or difficult procedures to gain access.
- 4.32. Recreational Facilities: Spas, saunas, steam baths, swimming pools, tennis courts, playground equipment, and other exercise, entertainment or athletic facilities.

- 4.33. Report: A written communication (possibly including images) of any material defects observed during the inspection.
- 4.34. Representative Number: A sufficient number to serve as a typical or characteristic example of the item(s) inspected.
- 4.35. Safety Glazing: Tempered glass, laminated glass, or rigid plastic.
- 4.36. Shut Down: Turned off, unplugged, inactive, not in service, not operational, etc.
- 4.37. Structural Component: A component which supports non-variable forces or weights (dead loads) and variable forces or weights (live loads).
- 4.38. System: An assembly of various components which function as a whole.
- 4.39. Technically Exhaustive: A comprehensive and detailed examination beyond the scope of a real estate home inspection which would involve or include, but would not be limited to: dismantling, specialized knowledge or training, special equipment, measurements, calculations, testing, research, analysis or other means.
- 4.40. Unsafe: A condition in a system or component which is judged to be a significant risk of personal injury during normal, day-to-day use. The risk may be due to damage, deterioration, improper installation, or a change in accepted residential construction standards.
- 4.41. Verify: To confirm or substantiate.

The aforementioned terms are found within the Standards of Practice. Visit InterNACHI's full Glossary.

5. Standards of Practice Inspection Exclusions

2.1. Roof Exclusions

II. The inspector is not required to:

- A. walk on any pitched roof surface.
- B. predict the service life expectancy.
- C. inspect underground downspout diverter drainage pipes.
- D. remove snow, ice, debris or other conditions that prohibit the observation of the roof surfaces.
- E. move insulation.
- F. inspect antennae, lightning arresters, de-icing equipment, or similar attachments.
- G. walk on any roof areas that appear, in the opinion of the inspector, to be unsafe.
- H. walk on any roof areas if it might, in the opinion of the inspector, cause damage.
- I. perform a water test.
- J. warrant or certify the roof.
- K. confirm proper fastening.

2.2. Exterior Exclusions

II. The inspector is not required to:

- A. inspect or operate screens, storm windows, shutters, awnings, fences, outbuildings, or exterior accent lighting.
- B. inspect items, including window and door flashings, which are not visible or readily accessible from the ground.
- C. inspect geological, geotechnical, hydrological and/or soil conditions.
- D. inspect recreational facilities or playground equipment.
- E. inspect seawalls, break-walls and docks.
- F. inspect erosion control and earth stabilization measures.
- G. inspect for safety-type glass.
- H. inspect underground utilities.
- I. inspect underground items.

- J. inspect wells or springs.
- K. inspect solar, wind, or geothermal systems.
- L. inspect swimming pools or spas.
- M. inspect septic systems or cesspools.
- N. inspect sprinkler systems. If the property owner is present and turns on the controls we may inspect the system.
- O. inspect drain fields or dry wells.
- P. determine the integrity of the thermal window seals or damaged glass.
- Q. inspect any damaged glass.

2.3. Basement, Foundation & Crawl Space Exclusions

II. The inspector is not required to:

- A. enter any crawl spaces that are not readily accessible or where entry could cause damage or pose a hazard to the inspector. No inspection will be done if pests, insects or odors are present as these may present a hazard.
- B. move stored items or debris.
- C. operate sump pumps with inaccessible floats.
- D. identify size, spacing, span, location or determine adequacy of foundation bolting, bracing, joists, joist spans or support systems.
- E. provide any engineering or architectural service.
- F. report on the adequacy of any structural system or component.

2.4. Heating Exclusions

II. The inspector is not required to:

- A. inspect or evaluate interiors of flues or chimneys, fire chambers, heat exchangers, combustion air systems, fresh air intakes, humidifiers, dehumidifiers, electronic air filters, geothermal systems or solar heating systems.
- B. inspect fuel tanks or underground or concealed fuel supply systems.
- C. determine the uniformity, temperature, flow, balance, distribution, size, capacity, BTU, or supply adequacy of the heating system.
- D. light or ignite pilot flames.
- E. activate heating, heat pump systems or other heating systems when ambient temperatures or other circumstances are not conducive to safe operation or may damage the equipment.
- F. override electronic thermostats.
- G. evaluate fuel quality.
- H. verify thermostat calibration, heat anticipation, or automatic setbacks, timers, programs or clocks.

2.5. Cooling

II. The inspector is not required to:

- A. determine the uniformity, temperature, flow, balance, distribution, size, capacity, BTU, or supply adequacy of the cooling system.
- B. inspect window units, through-wall units, or electronic air filters.
- C. operate cooling equipment or systems if exterior temperature is below 65 degrees Fahrenheit, or when other circumstances are not conducive to safe operation, or may damage the equipment.
- D. inspect or determine thermostat calibration, cooling anticipation, or automatic setbacks or clocks.
- E. examine electrical current, coolant fluids or gases, or coolant leakage.

2.6. Plumbing and Heating Exclusions

II. The inspector is not required to:

- A. light or ignite pilot flames.
- B. determine the size, temperature, age, life expectancy or adequacy of the water heater.
- C. inspect interiors of flues or chimneys, combustion air systems, water softening or filtering systems, well pumps or tanks, safety or shut-off valves, floor drains, lawn sprinkler systems or fire sprinkler systems.
- D. determine the exact flow rate, volume, pressure, temperature, or adequacy of the water supply.
- E. determine the water quality or potability or the reliability of the water supply or source.

- F. open sealed plumbing access panels.
- G. inspect clothes washing machines or their connections.
- H. operate any main, branch or fixture valve.
- I. test shower pans, tub and shower surrounds or enclosures for leakage.
- J. evaluate the compliance with local or state conservation or energy standards, or the proper design or sizing of any water, waste or venting components, fixtures or piping.
- K. determine the effectiveness of anti-siphon, back-flow prevention or drain-stop devices.
- L. determine whether there are sufficient clean-outs for effective cleaning of drains.
- M. evaluate gas, liquid propane or oil storage tanks.
- N. inspect any underground or concealed fuel supply systems.
- O. inspect any private sewage waste disposal system or component thereof.
- P. inspect water treatment systems or water filters.
- Q. inspect water storage tanks, pressure pumps or bladder tanks.
- R. evaluate wait-time to obtain hot water at fixtures, or perform testing of any kind to water heater elements.
- S. evaluate or determine the adequacy of combustion air.
- T. test, operate, open or close safety controls, manual stop valves and/or temperature or pressure relief valves.
- U. examine ancillary systems or components, such as, but not limited to, those relating to solar water heating, hot water circulation.
- V. determine the existence or condition of polybutylene plumbing.

2.7. Electrical Exclusions

II. The inspector is not required to:

- A. insert any tool, probe or device into the main panelboard, sub-panels, distribution panelboards, or electrical fixtures.
- B. operate electrical systems that are shut down.
- C. remove panelboard cabinet covers or dead front covers, if they are not readily accessible.
- D. operate or reset overcurrent protection devices or overload devices.
- E. operate non-accessible or difficult to access smoke detectors.
- F. measure or determine the amperage or voltage of the main service equipment, if not visibly labeled.
- G. inspect the fire or alarm system and components.
- H. inspect the ancillary wiring or remote control devices.
- I. activate any electrical systems or branch circuits which are not energized.
- J. inspect low-voltage systems, electrical de-icing tapes, swimming pool wiring, or any time-controlled devices.
- K. verify the service ground.
- L. inspect private or emergency electrical supply sources, including, but not limited to: generators, windmills, photovoltaic solar collectors, or battery or electrical storage facility.
- M. inspect spark or lightning arrestors.
- N. inspect or test de-icing equipment.
- O. conduct voltage drop calculations.
- P. determine the accuracy of labeling.
- Q. inspect exterior accent lighting.

2.8. Fireplace Exclusions

II. The inspector is not required to:

- A. inspect the flue or vent system.
- B. inspect the interior of chimneys or flues, fire doors or screens, seals or gaskets, or mantels.
- C. determine the need for a chimney sweep.
- D. operate gas fireplace inserts.
- E. light pilot flames.
- F. determine the appropriateness of any installation.
- G. inspect automatic fuel-feed devices.
- H. inspect combustion and/or make-up air devices.
- I. inspect heat distribution assists, whether gravity controlled or fan-assisted.
- J. ignite or extinguish fires.
- K. determine adequacy of draft or draft characteristics.

- L. move fireplace inserts, stoves, or firebox contents.
- M. perform a smoke test.
- N. dismantle or remove any component.
- O. perform a National Fire Prevention Association (NFPA)-style inspection.
- P. perform a Phase I fireplace and chimney inspection.

2.9. Attic, Ventilation & Insulation Exclusions

II. The inspector is not required to:

- A. enter the attic or any unfinished spaces that are not readily accessible, or where entry could cause damage or pose a safety hazard to the inspector, in his or her opinion.
- B. to move, touch, or disturb insulation.
- C. to move, touch or disturb vapor retarders.
- D. break or otherwise damage the surface finish or weather seal on or around access panels and covers.
- E. identify the composition or exact R-value of insulation material.
- F. activate thermostatically operated fans.
- G. determine the types of materials used in insulation or wrapping of pipes, ducts, jackets, boilers and wiring.
- H. determine the adequacy of ventilation.

2.10. Doors, Windows & Interior Exclusions

II. The inspector is not required to:

- A. inspect paint, wallpaper, window treatments or finish treatments.
- B. inspect central vacuum systems.
- C. inspect safety glazing.
- D. inspect security systems or components.
- E. evaluate the fastening of countertops, cabinets, sink tops or fixtures.
- F. move furniture, stored items, or any coverings, such as carpets or rugs, in order to inspect the concealed floor structure.
- G. move drop-ceiling tiles.
- H. inspect or move any household appliances.
- I. inspect or operate equipment housed in the garage, except as otherwise noted.
- J. verify or certify safe operation of any auto-reverse or related safety function of a garage door.
- K. operate or evaluate any security bar release and opening mechanisms, whether interior or exterior, including their compliance with local, state or federal standards.
- L. operate any system, appliance or component that requires the use of special keys, codes, combinations or devices.
- M. operate or evaluate self-cleaning oven cycles, tilt guards/latches or signal lights.
- N. inspect microwave ovens or test leakage from microwave ovens.
- O. operate or examine any sauna, steam-jenny, kiln, toaster, ice-maker, coffee-maker, can-opener, bread-warmer, blender, instant hot water dispenser, or other small, ancillary devices.
- P. inspect elevators.
- Q. inspect remote controls.
- R. inspect appliances.
- S. inspect items not permanently installed.
- T. discover firewall compromises.
- U. examine or operate any above-ground, movable, freestanding, or otherwise non-permanently installed pool/spa, recreational equipment or self-contained equipment.
- V. come into contact with any pool or spa water in order to determine the system structure or components.
- W. determine the adequacy of spa jet water force or bubble effect.
- X. determine the structural integrity or leakage of a pool or spa.