

SURGEON GENERAL ADVISORY: “Indoor radon gas is a national health problem. Radon causes thousands of deaths each year and is the second leading cause of lung cancer. Millions of homes have elevated radon levels. Homes should be tested for radon. When elevated levels are confirmed, the problem should be corrected.”

Houses with elevated radon concentrations are EASILY and inexpensively fixed by a qualified contractor. Although, the cost may vary depending on the size and design of the home, it seldom runs more than \$800 to \$1,500.

Radon mitigation really works permanently reducing concentrations by up to 99%. And since most systems completely prevent soil air from entering the house, you may notice other air quality improvement as well.

Radon reduction measures in no way diminish the dollar value of the home and are accepted nationally as home improvement. Very little maintenance is required and system operation costs are generally less than \$10 per month for the fan electricity and very minor loss of conditioned air.

Finally, since reduction systems lower radon concentrations so effectively and eliminate peak fluctuations, living in a mitigated home reduces one's risk of radon related lung cancer to **as low as reasonably achievable** (ALARA), - even lower than living in most houses testing below the EPA Action Level with no radon control system.

For more information, please refer to the EPA's *Home Buyer's & Seller's Guide to Radon Reduction* and *Consumer's Guide to Radon Reduction*. To receive your copies, call the EPA's Policy & Public Information Branch at (202) 233-9400 or on the World Wide Web at: <http://www.epa.gov/iaq/radon/pubs/citguide.html>
<http://www.epa.gov/iaq/radon/pubs/hmbyguid.html>

Your state radon office in North Carolina is at (919) 571-4141. Consumer Federation of America's toll free Radon Fix-It Line is for consumers whose results are 4Ci/l or higher. Call (800) 644-6999 weekdays between noon and 8 pm EST for live operators.

What is Radon?

Radon is an odorless, colorless radioactive gas which is formed by the natural breakdown of uranium. Radon can be found in high concentrations in soils and rocks containing granite, shale, phosphate and uranium, or occasionally industrial waste, in almost any area. As it is produced, it moves through the soil to the earth's surface where it can either safely dissipate in outdoor air or seep into a building through cracks and gaps in its foundation or slab. It can also be introduced into the air within a building through the water supply, particularly from well systems, or from certain building materials.

Research has shown that once trapped inside a closed structure, radon can accumulate to the point where a potential health hazard may exist. Actually it is the breakdown of radon into what is referred to as radon decay products (or radon daughters) that represents the greatest concern. These decay products become attached to airborne particles which can be inhaled and ultimately cause lung tissue damage.

The concentration of radon in any particular structure is dependent on a number of variable factors such as soil composition, building construction, weather conditions, and even occupant lifestyle. Levels may vary from day to day, season to season. Consequently, it is difficult to readily determine average annual radon levels in particular building. The greatest potential for high radon concentrations exists when the air pressure within a house is less than that of the radon gas in the soil. This condition is commonly caused by the use of appliances and fans in a relatively airtight structure. Appliances requiring air for combustion or other purposes lower indoor air pressure. This action draws in the higher pressure radon laden air into the house through ground level cracks and openings such as drains, sumps, floor cracks, foundation walls and water supply.

CONSUMER FEDERATION OF AMERICA:

“Consumers need to know about the health of a house they are considering purchasing, including whether there is a radon problem, and if so, how to fix it. The EPA Buyer's and Seller's Guide to Radon provides practical information that every home buyer needs to know.”

Measurement Levels:

The U. S. Environmental Protection Agency (EPA) has established 4 picocuries per liter (pCi/l) or .02 working levels (WL) as the maximum acceptable continuous exposure level for radon in a residence. This level is not considered a finite cut-off point, rather it is a guidance point to determine when remedial action is advisable.

Measurements of 1-4Ci/l are typically found in many houses in certain areas. This is considered a low level which generally does not require any significant remedial action, depending on the specific situation or occupant concern.

Some of the standard radon mitigation methods are:

Forced Ventilation: This method utilizes fans or other mechanical means to exchange the radon laden indoor air for outdoor air.

Heat Recovery Ventilation: Through means of a heat exchanger, this method utilizes the hot (or cold) air being exhausted to heat (or cool) the radon free incoming air.

Sub-Slab Suction: This method utilizes vertical piping through the slab to draw the radon laden air from below the structure to the outside.

Block-Wall Ventilation: With this method, a solid horizontal duct is installed and sealed in place over the horizontal wall/floor joint (or gap) around the entire basement perimeter. The radon laden air is then mechanically vented to the exterior.

Pressurization: This method involves sealing off the basement from the rest of the house and then delivering air from the upper floors to the basement, thereby increasing the air pressure in the basement and keeping radon gas out.

Why choose us as your Home Inspector?

In the Real Estate Business it is commonly stated that the three most important criteria for selecting a property are location, location and location. It can be said that the three most important criteria for selecting a Home Inspector are experience, experience and experience. The State of North Carolina requires a license to be a Home Inspector. Holding a license does not make a person a good Home Inspector anymore than it makes anyone successful. The qualities shared by the best Home Inspectors are experience and the ability to observe, report and communicate based on that experience. As a Home Inspector what we report affects many. Our work must be neutral, accurate and fair. Home's are like people, none are perfect, but some come closer than others.

Our Perspective:

Every inspection must be reported and accepted from a proper perspective. Our perspective is:

1. Home ownership is an expensive long-term commitment. The buyer should become as informed about their purchase as possible. Failure to do so may lead to long term displeasure or worse.
2. Homes should be compared to their peers in the same price range, not to a mystical perfection or a new house.
3. Construction and maintenance of homes is not a perfect art. The perfect house does not exist. All houses have issues, even new houses.
4. Most Home Inspectors and their reports are one sided. They only see and report the negative. All homes have two sides. We strive to observe and report the positive as well as the negative attributes of a home.
5. Observation and reporting of existing issues do not decrease the value of the home, it only makes for a better-informed buyer, seller. The value of the home is the same after the inspection as it was before. The only change is in the perception of those involved based on their newly acquired knowledge.
6. Value and price are not necessarily the same thing. Any home will be a valuable purchase provided there is a balance between its peers in the same price range with adjustments for consideration of existing issues or systems which may not be functioning as

intended. The best deal must have balance among price, terms, location, neighborhood make up and existing conditions. If you think there is a perfect balance, you are dreaming. What must be sought is an acceptable balance. This acceptable balance will make for a WIN-WIN-WIN deal. Out of balance will cause trouble for everyone involved.

7. Buying a home is often an emotional experience when it should be a logical one. The goal of Realtor and Home Inspector must be to reduce the emotional and stress the logical. Logical decisions are usually good decisions. Emotional decisions are often questionable.

Our Experience:

Retired from active construction following 30 plus years and 4,000,000 square feet of commercial construction. Involved from the trenches to the board room with projects ranging from a set of stairs to the top of the waterfall at Stone Mountain State Park, to buildings totaling hundreds of thousands of square feet.

Testimonial:

"The Raven" of The Old Hickory Council, BSA June 1997 "A more dedicated professional could not be found. His creative ideas, attention to detail and concern for our needs made this more than just a construction project. He truly made this center a treasured gift to Scouting."

We Test for Radon!

"When Experience Counts"

Chris D. Hilton

Construction Consultant

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Radon

THERE'S NO CAUSE FOR ALARM!

**If elevated radon levels are found
in the home you intend to purchase**



Chris D. Hilton
Home Inspector