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In the Business of Keeping People and Property Safe Since 1980

Should radon be tested in Western PA?

Western PA has a 58% failure rate. By comparison, nationally there is approximately a 15% failure rate. Our varied geology and high uranium content rocks make us a high risk area. As an interesting side note, the types of rocks that allow for Marcellus oil and gas are often very high in Uranium, which becomes the radon entering our homes.

Is radon really a health risk?

Simply put, it is the second leading cause of lung cancer after the voluntary cause of smoking.

So why test when purchasing a home?

It is a deadline and people tend to only do things when there is a deadline. It is also an opportunity to negotiate with current owners to participate in the cost of a remediation system. Conversely, if you wait until you are the seller and the next buyer has the test done, you could be the person contributing to the cost of radon mitigation...having already exposed yourself and family to the risks of high radon.



What are the economics of radon testing?

Cost of testing is usually about \$ 150.00. Cost to put the system to reduce radon usually runs \$ 800 to 1,200.00 Costs can be higher if crawl spaces and multi-levels of basement are involved.

Does radon ever change after testing?

Radon comes into a home because of the negative pressure that can occur in a home. Yes, changing the environment and level of radon can be the result of adding an addition, installing an interior French drain, changing the heating system, installing exhaust systems, changing windows and doors and other changes can affect radon levels in a home.

Are all radon test methods the same?



The DEP allows a deviation of 25%. What that means is that if you have a test result of 4.0 pCi/l, which is the lowest failing result, the actual reading could be +25% to -25% or between 3.0 pCl/l and 5.0 pCi/l. Continuous Monitors can usually provide the most information. These can reflect peaks or valleys related to weather and can indicate when closed house conditions are breached. Electrets do not indicate breaches in closed house conditions and Activated Carbon tests not only do not indicate breach conditions, but high moisture can affect their function. Alpha Track tests are 6 month tests utilizing "open house" conditions for sixth months. These are the best tests to determine the actual exposure of residents to radon.

How can I tell if my radon tester or mitigator has a valid license?

The PA DEP website has a page to validate licenses. It is not silly to check that site. This inspector has discovered both testers and mitigators operating without a license. One such individual had been on a major Realtor franchise preferred list. That particular incident was discovered when the radon test revealed that the level of the radon was over 30 pCi/l in a home with a mitigation system installed by that mitigator. That website can be found on links from our websites. That link is: http://www.dep.state.pa.us/brp/Radon Division/Rn Services Directory/Directory Mainpage.htm

If a system is installed, can we be sure that the radon is safe?

This has a surprising answer. Simply put, no! We have found improperly installed or modified so as to not operate. When a mitigator installs a system in PA, they are required to test the home for radon within 30 days of completion of the system. Due diligence starts with reviewing that test and make decisions based upon those results and the testing method.

Are there any additional benefits to installing a radon system?

As a matter of fact, yes. The radon system works by removing gases under the slab. That will include water vapor, thereby reducing moisture in the home. In areas over mines, there is often CO venting up through the home. That would be removed. If there is an interior French drain, mold can live in the sump area and the mold will be vented to the exterior.

The house has been shut up for a year, does that mean the radon will be much higher that if it was lived in?

No, radon is a relatively unstable element. It has a ½ life of about 3.8 days. Statistical equilibrium occurs at close to 12 hours. At 3.8 days radioactive decay is perking along and the rate of radon venting into the home are about what it is going to be a 3.8 months or 3.8 years. Because of the decay process, we do not collect a bunch of extra radon in a home because it is closed up.



The new house has a passive system. Does that mean testing is not required?

Not really. What that means is that the work of running the pipe to under the floor and up through the house has been completed, but it may not provide sufficient negative pressure to draw radon out of the home. There will often be some reduction in the radon level due to the "chimney effect" of the passive system, but there is not any assurance that it will create a passing test result

IMPORTANT RADON LINKS AND INFORMATION

- Pennsylvania Radon Mitigation Standards PDF
 - DEP Document #294-2309-002
 - o Consumer Radon Mitigation Checklist Word
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- Pennsylvania Citizen's Guide to Radon PDF
 - DEP Document #2900-BK-DEP0375
- Pennsylvania Consumer's Guide to Radon Reduction PDF
 - DEP Document #2900-BK-DEP1554
- Post-mitigation confirmatory testing
- EPA Radon Publications

Information for Home Buyers & Sellers

- Pennsylvania Home Buyer's & Seller's Guide to Radon PDF
 - o DEP Document #2900-BK-DEP1544
- EPA's Home Buyer's & Seller's Guide to Radon PDF
 - EPA Document #EPA 402/K-09/002
- A Real Estate Guide to Radon in Pennsylvania

Information for Radon-Resistant New Construction

- Building Radon Out: A Step-by-Step Guide on How to Build Radon-Resistant Homes PDF
 - EPA Document #EPA/402-K-01-002