Radon Testing and Mitigation in York PA: What Homeowners Need to Know

Radon is a naturally occurring radioactive gas that comes from the breakdown of uranium in soil, rock, and water. It is odorless, colorless, and tasteless, which makes it easy to overlook. When radon seeps into a home through cracks in the foundation, gaps around pipes, or other openings, it can accumulate to levels that pose a health risk. The Environmental Protection Agency has identified radon as the second leading cause of lung cancer after smoking, and it is estimated to be responsible for thousands of deaths each year in the United States. For homeowners in York, Pennsylvania, understanding radon and knowing how to address it is an important part of maintaining a safe indoor environment.

Why Radon Is a Concern in York, PA

York County sits in an area that the EPA has classified as Zone 1, meaning it has the highest potential for indoor radon levels above the action level of 4 picocuries per liter (pCi/L). The geology of south-central Pennsylvania includes a mix of limestone, shale, and granite formations, all of which can contain uranium that decays into radon. Many homes in the region, especially those with basements or crawl spaces that sit directly on soil, are at risk. The only way to know whether a particular home has elevated radon is to test for it.

Radon levels can vary widely even between neighboring houses, so relying on a neighbor's test result is not a safe bet. Factors such as the type of foundation, the construction quality, the ventilation, and even seasonal changes can affect how much radon enters a home. Testing is straightforward and inexpensive, and it provides the data needed to decide whether mitigation is necessary.

Common Mistakes When Testing for Radon

Testing for radon seems simple, but there are several mistakes that can lead to inaccurate results. One common error is testing during a severe storm or when windows and doors are left open for long periods. Short-term tests are meant to be conducted under closed-house conditions, which means keeping windows and exterior doors closed as much as possible, and not running fans that pull air from outside. If the house is not sealed, the test may show artificially low levels.

View the location on Google Maps

Another mistake is placing the test device in the wrong location. The detector should be placed in the lowest lived-in area of the home, such as a basement family room or a first-floor

bedroom. It should not be placed in a bathroom, kitchen, or laundry room where high humidity or drafts can skew the reading. It also should not be placed near a heat source like a stove or furnace, or in direct sunlight. Following the instructions that come with the test kit is essential.

A third error is using an expired test kit or one that has been stored improperly. Radon test kits have a shelf life, and if the kit is past its expiration date or has been exposed to extreme temperatures, the results may not be reliable. Purchasing a kit from a reputable source and checking the date before use is a simple way to avoid this problem.

Finally, some homeowners test only once and assume the result is final. Radon levels can fluctuate with the seasons, weather, and changes to the home. A single test gives a snapshot, but a follow-up test or a long-term test that measures levels over several months provides a more accurate picture of average exposure.

Interpreting Test Results

If a radon test shows a level below 2 pCi/L, the risk is relatively low, and no action is typically needed. Levels between 2 and 4 pCi/L suggest a moderate risk, and the EPA recommends considering mitigation measures. Above 4 pCi/L, the EPA advises taking steps to reduce radon levels. It is worth noting that there is no completely safe level of radon, so even lower readings can be addressed if a homeowner wants extra peace of mind.

When a test result comes back high, the next step is a follow-up test to confirm. Sometimes the first test was done incorrectly, or the high reading was temporary. A second test helps ensure the result is accurate before investing in mitigation. If the follow-up test also shows elevated levels, it is time to plan for radon reduction.

Mitigation: What Works and What Doesn’t

Radon mitigation is the process of lowering indoor radon levels. The most common and effective method for homes with a basement or crawl space is sub-slab depressurization. This involves drilling a small hole through the basement floor, creating a small pit underneath, and installing a pipe with a fan that draws radon from beneath the slab and vents it safely above the roofline. The fan runs continuously, and the system can reduce radon levels by up to 99 percent.

For homes with a crawl space, a similar system can be installed using a vapor barrier on the soil and a vent pipe. For homes that sit on a slab foundation, sub-slab depressurization is still the primary approach. Other methods include sealing cracks and openings in the foundation, improving ventilation, and using a heat recovery ventilator to exchange indoor air with fresh outdoor air. Sealing alone is rarely enough, because radon can enter through many small openings that are hard to seal completely.

It is important to note that mitigation is a job for a qualified professional. The work involves drilling through concrete, installing electrical wiring for the fan, and routing the vent pipe in a way that meets local building codes. A do-it-yourself approach can lead to an ineffective system or even create new pathways for radon. A professional can also test the system after installation to confirm that radon levels have dropped.

One local option is York PA Radon Pros. Homeowners in the area can contact them to discuss testing and mitigation options that fit their specific situation.

How to Choose a Radon Professional

When looking for a radon contractor, there are a few things to keep in mind. First, check that the person or company is certified by a recognized organization such as the National Radon Proficiency Program or the American Association of Radon Scientists and Technologists. Certification indicates that the professional has passed an exam and follows industry standards.

Second, ask about their experience with homes similar to yours. A contractor who has worked on many homes in York County will be familiar with the local geology and common construction types. They can also share references from past customers.

Third, get a written estimate that describes the work to be done, the materials to be used, and the expected outcome. A reputable contractor will provide this without pressure. They should also offer to do a post-mitigation test to confirm the system is working.

Finally, ask about warranties and maintenance. Most radon mitigation systems require little maintenance beyond a periodic check of the fan and the vent pipe, but it helps to know what is covered and for how long.

Preventing Radon Problems in New Construction

For those building a new home in York County, it is much easier and cheaper to install radon-resistant features during construction than to retrofit later. Common techniques include placing a layer of gravel under the foundation, covering the soil with a vapor barrier, installing a vent pipe that runs from the gravel layer up through the roof, and sealing all openings in the foundation. These passive systems do not have a fan and rely on natural convection, but they can be upgraded to an active system later if testing shows it is needed. Many builders in high-radon areas already include these features as standard.

Testing After Mitigation

After a mitigation system is installed, it is important to test the home again to make sure radon levels have fallen. The EPA recommends testing within a few weeks of installation and then every two years or after any major renovation. Changes to the home, such as adding an addition or finishing a basement, can affect radon entry points. Regular testing helps catch any new problems early.

For homeowners who prefer a long-term approach, alpha-track detectors that measure radon over three to twelve months can provide a more reliable average than a short-term test. These detectors are affordable and easy to use, and they reduce the influence of temporary fluctuations.

Radon is a serious issue, but it is also a manageable one. Testing is the first step, and it gives homeowners the information they need to make informed decisions. If mitigation is required, a properly designed and installed system can make a significant difference in indoor air quality. For those in York, PA, local professionals such as York PA Radon Pros can provide guidance and service tailored to the area.

For more information or to schedule a consultation, contact York PA Radon Pros at 867 Clare Ln, York, PA 17402, or call +17178075245.