

When to Schedule a Radon Gas Test for Your Home

If you own a home in St. Louis, Missouri, you probably know the area sits on a radon map that shows moderate to high potential for the gas. That map, produced by the US EPA and state geological surveys, gives a general picture, but it doesn't tell you what's happening inside your own basement. The only way to know your actual exposure is to perform a radon gas test. And the timing of that test matters more than most people realize.

Radon comes from the natural decay of uranium in soil and rock. It moves upward through the ground, finds cracks in your foundation, and accumulates indoors. Unlike carbon monoxide or mold, you can't smell it or see it. You can't feel its effects until years later, when lung cancer statistics start to include your address. That's why residential radon testing is not a one-time task. It's something you need to think about at specific moments in your life as a homeowner.

The Right Time for a Radon Gas Test

Most people schedule a [radon gas test](#) when they are buying or selling a house. That makes sense. A home inspection often includes radon measurement as an add-on service. But if you are not planning to move, you should still test every few years, especially after renovations that affect your foundation or your HVAC system. A concrete slab that was fine for ten years can develop a hairline crack after a dry season or a shifted foundation wall. That crack becomes a highway for radon.

I once worked with a family in the St. Louis suburbs who had lived in their house for fifteen years without ever testing. They installed a new sump pump and noticed a musty smell in the laundry room. A short-term test with a charcoal canister came back at 8 picocuries per liter, double the EPA action level. That smell was not just musty. It was radioactive gas mixing with their indoor air. A simple test done years earlier could have saved them a lot of worry and money.

Short-Term vs. Long-Term Tests

The classic radon test kit you see at hardware stores is usually a charcoal canister or an electret ion chamber. You place it in the lowest livable level of your home, leave it for two to seven days, then mail it to a lab. That is a short-term test. It gives you a snapshot, but radon levels fluctuate day to day and season to season. A short-term test can miss a spike, or it can catch a spike that doesn't represent your annual average radon concentration.

A long-term test runs for three months to a full year. That gives you the real picture. The US EPA recommends long-term testing for the most accurate reading. But if you need results

quickly for a real estate transaction, a short-term test is the practical choice. The key is to follow the instructions exactly. Close windows, keep doors shut, and don't run exhaust fans during the test. Otherwise, you are just measuring outdoor air, not your indoor air quality.

Continuous Monitors Add Precision

For people who want a more detailed look without waiting months, a continuous radon monitor is a better tool than a passive kit. These electronic devices sit in your home and record radon levels every hour. They can show you how levels change when the furnace kicks on, when a storm passes, or when the kids open the basement door. Companies like Air Sense Environmental use continuous monitors for professional residential radon testing because they give clear, time-stamped data that a lab report cannot match.

A continuous monitor also reduces the chance of human error. You don't have to guess whether the test was disturbed. The device logs tampering events and power outages. If you are serious about knowing your exposure, or if you are trying to confirm whether a radon mitigation system is working, a continuous monitor is worth the extra cost.

After the Test: Understanding Action Levels

The US EPA recommends fixing your home if your radon level is at or above 4 picocuries per liter. That is the action level. But the EPA also says there is no safe level of radon. Even 2 pCi/L carries some risk. The difference is that at 4 pCi/L, the risk becomes high enough that mitigation is strongly advised. If your test comes back below 4, you might still consider a radon resistant construction upgrade if you are already planning a renovation. Sealing cracks and installing a sub-slab depressurization system is far cheaper when the slab is already exposed.

If your test shows levels above 4, you need a radon mitigation system. These systems usually involve a vent pipe running from below the slab through the roof, with a fan that pulls soil gas away from the house before it can enter. A good contractor will also seal major entry points. After installation, you should run another radon gas test to confirm the system works. Some mitigation companies offer a guarantee, but you should verify with an independent measurement.

Radon Testing in St. Louis, Missouri

St. Louis sits on a mix of limestone, shale, and glacial deposits that can produce elevated radon readings. The Missouri Department of Health and Senior Services publishes county-level radon maps, but within a single county, levels can vary widely from house to house. Your neighbor's test results are not your test results. Radon testing is local and specific. If you live in

a newer subdivision built with radon resistant construction, you still need to test. The construction techniques reduce entry but do not eliminate it.

I have seen houses in the same St. Louis neighborhood where one reads 1.5 pCi/L and the next reads 12 pCi/L. The difference often comes down to soil permeability under the slab, the quality of the foundation seal, and the ventilation in the crawl space. You cannot guess. You have to measure.

Choosing Between DIY Kits and Professional Service

A basic radon test kit costs between fifteen and thirty dollars. That is cheap. But the accuracy depends on your placement, your home's air flow during the test, and how quickly you mail the sample to the lab. If the kit sits too close to a window or a supply register, your result will be wrong. If you leave the kit open for an extra day, the result will be wrong. If you mail it in summer heat and the charcoal gets too warm, the result will be wrong.

A professional service like Air Sense Environmental removes most of those variables. They place the continuous radon monitor according to EPA protocols, run the test for the correct duration, and interpret the data with your home's construction in mind. They also give you a clear report with next steps. That matters if you need to negotiate a radon credit during a home sale or if you need to convince a contractor that a mitigation system is necessary. A professional report carries more weight than a DIY printout.

Maintaining Awareness Over Time

Radon levels are not static. A radon mitigation system can fail. A new addition can change the pressure dynamics in your basement. A change in your heating system can alter how air moves through your house. I recommend testing every two years, even after mitigation. It is a small investment compared to the health risk. Keep a record of all your results. If you see a trend upward, you can act before levels cross the action level.

Indoor air quality is not something you set and forget. It is a living part of your home, shaped by weather, time, and human activity. A radon detector, whether a passive electret ion chamber or a continuous monitor, is your only window into that invisible part of your environment. Use it.

Summary of Key Points

- Test your home every two years, and always after major foundation work or HVAC changes.
- Use a continuous radon monitor for the most reliable data, especially in a real estate transaction or after mitigation.

- Understand that the US EPA's action level of 4 pCi/L is a guideline, not a safety threshold. Lower is better.
- Professional residential radon testing services like Air Sense Environmental take the guesswork out of placement and interpretation.
- Keep a log of your radon tests and act on any result that seems out of line with your previous readings.

Radon is a serious health risk, but it is also a manageable one. You do not need to live in fear. You just need to test, understand your numbers, and take action when the data says it is time. The first step is to schedule a radon gas test. Do it before the next season changes, before you finish that basement remodel, and certainly before you let another year pass without knowing what is in your air.