

Understanding the EPA Radon Action Level for Your St. Louis Home

Why the EPA Radon Action Level Matters for St. Louis Homeowners

I remember my first real encounter with radon testing back when I was helping a friend sell her bungalow in the Shaw neighborhood. The buyer's home inspection came back with a note about potential radon risk, and suddenly everyone was scrambling. That's when I first learned about the EPA radon action level and how it shapes decisions for homeowners across St. Louis. It's not just a number on a government website. It's the threshold that tells you when to stop measuring and start acting.

Radon gas is a natural radioactive byproduct of uranium breaking down in soil and rock. It seeps into homes through cracks in foundations, gaps around pipes, and other radon entry points. Because St. Louis sits on a mix of sedimentary and glacial soils, some areas have higher potential for elevated radon levels. The Environmental Protection Agency has studied this for decades, and their guidance centers on a specific figure: 4 pCi/L. That is the EPA radon action level. If your test result is at or above that number, the agency recommends you take steps to reduce the gas inside your home.

What 4 pCi/L Actually Means

To put it in perspective, 4 pCi/L is not an immediate health crisis. It is a practical benchmark. The EPA estimates that roughly one out of every fifteen homes in the United States has a radon level at or above this action level. For Missouri homes, the percentage can be higher depending on the neighborhood and construction type. I have seen results from short-term radon tests in St. Louis that came back at 3.9 pCi/L, and the homeowners wondered if they should do something. Technically, 3.9 is below the [EPA radon action level](#), but it is close enough that many experts, including the team at Air Sense Environmental, recommend a follow-up long-term radon test to get a more accurate annual average.

The number itself comes from a balance of health risk and practical feasibility. At 4 pCi/L, the lifelong lung cancer risk from radon exposure is roughly equivalent to the risk of dying in a house fire. That is significant, but not so high that every home above that level requires immediate evacuation. The EPA and other health agencies have determined that radon mitigation systems can reliably bring levels below 4 pCi/L in most homes. So the action level serves as a clear call to act: test, confirm, and if needed, install a radon reduction system.

How Radon Testing Works in Practice

When I recommend radon testing to homeowners in St. Louis, I always emphasize that one test is better than no test, but the method matters. A radon test kit from a hardware store can give you a basic snapshot. You place it in the lowest livable area of the home, leave it for two to seven days for a short-term radon test, and mail it to a lab. That works for a preliminary check. But the results can be thrown off by weather, open windows, or even the time of year. A short-term test during a windy week in March might read artificially low.

That is why many professionals, including Air Sense Environmental, use a continuous radon monitor. This device sits in the home for at least 48 hours, often longer, and records radon levels hour by hour. It smooths out the spikes and dips and gives a reliable average. I have seen cases where a short-term test kit read 2.5 pCi/L, but a continuous monitor run over three days showed an average of 4.8 pCi/L. The difference changed the homeowners' plan entirely. They went from assuming everything was fine to scheduling radon mitigation before winter set in.

For a more complete picture, a long-term radon test that runs for three to twelve months gives the best estimate of your actual year-round exposure. The EPA itself recommends long-term testing after an initial short-term screen. If your long-term result comes back at or above the EPA radon action level, it is time to call a mitigation contractor.

What Happens If You Are Above the Action Level

Let's say your test result comes back at 5.2 pCi/L. You are above the EPA radon action level, so what now? The first step is not to panic. Radon levels fluctuate, and a single reading might not reflect the whole year. The EPA recommends a follow-up test, ideally a long-term one, to confirm. If the second test also exceeds 4 pCi/L, then radon mitigation is the standard recommendation.

Mitigation usually involves a radon reduction system, often called a sub-slab depressurization system. A contractor drills a small hole through the basement floor, installs a pipe that runs up to the roofline, and attaches a fan that pulls radon from beneath the slab and vents it outside. It is not a disruptive process. Most systems are installed in a day and cost between \$800 and \$2,500 depending on the home's layout. After installation, a follow-up radon test confirms the system is working. In nearly every case, levels drop well below 2 pCi/L.

I have walked through homes in St. Louis where the homeowners were nervous about the cost and disruption. But in every instance, once the system was in, they barely noticed it. The only sign was a small pipe on the outside of the house. Their indoor air quality improved, and they gained peace of mind. One family told me their child's asthma seemed to improve after mitigation, though that was likely coincidence. The real win was eliminating a known lung cancer risk from their daily environment.

Why Every St. Louis Home Should Be Tested

The EPA radon action level is not a legal requirement in Missouri. The state does not mandate testing or mitigation during real estate transactions, though some counties and cities have started to require disclosure. But the absence of a law does not mean the risk is absent. I have tested homes in the same subdivision and seen results ranging from 1.2 pCi/L to 8.9 pCi/L. The geology can vary dramatically from one lot to the next. That is why a single test for your specific home is the only way to know.

Air Sense Environmental, a trusted provider for St. Louis homes, offers continuous radon monitor testing that gives you clear results and practical next steps. Their reports include the average, the peak, and a comparison to the EPA radon action level. They do not sell mitigation systems themselves, so their advice is unbiased. That separation matters because it keeps the focus on your health, not on upselling a service.

If you are buying or selling a home, a radon test should be part of your home inspection. If you have lived in your home for years without testing, now is the time. Radon has no smell, no color, no taste. The only way to know it is there is to measure it. And once you know, the path forward is straightforward.

I have seen too many homeowners in St. Louis assume they are safe because their neighbor tested fine. That is not how radon works. It can enter through a crack in your foundation that your neighbor's house does not have. It can be trapped by your home's negative air pressure while theirs vents naturally. The only reliable approach is to test your own home with a device that gives you a trustworthy reading.

The EPA radon action level of 4 pCi/L is the best tool we have for deciding when to act. It is not perfect. Some experts argue the level should be lower, closer to 2.7 pCi/L, which is the average indoor radon level in U.S. homes. Others point out that any exposure carries some risk. But the 4 pCi/L threshold is a proven, practical guide that has helped millions of homeowners reduce their radon risk. For St. Louis families, understanding that number and acting on it can make the difference between a healthy home and one that silently increases lung cancer risk with every breath.