

When to Trust a Short-Term Radon Test for Your Home

If you are buying or selling a home in St. Louis, you have probably heard about radon. It is a natural radioactive gas that seeps up from the ground, and it can accumulate inside houses to levels that pose a health risk. The Environmental Protection Agency estimates that radon exposure is the leading cause of lung cancer among non-smokers. That alone is enough to make anyone pay attention. But when you are in the middle of a real estate transaction, time is tight. You need answers fast. That is where a short-term radon test comes in.

I have spent years testing homes for radon gas across the St. Louis metro area, and I have seen how confusing the testing process can be for homeowners. There are different kinds of tests, different durations, and different devices. Some people grab a radon test kit from the hardware store and hope for the best. Others hire a radon testing service like Air Sense Environmental and get a continuous radon monitor placed in their basement. Both approaches can work, but only if you understand what each type of test can and cannot tell you.

How a Short-Term Radon Test Works

A [short-term radon test](#) typically runs from two to seven days. The most common devices are charcoal canisters, alpha-track detectors, and continuous radon monitors. The charcoal canister is a small container filled with activated charcoal that absorbs radon from the air. After the testing period, you mail it to a lab for analysis. The continuous monitor is an electronic device that takes hourly readings and stores them. It gives you a running average and can show you whether radon levels spiked at certain times of day or stayed steady.

The big advantage of a short-term radon test is speed. If you need results in less than a week, this is the only practical option. A long-term radon test, by contrast, runs for at least 90 days and sometimes up to a year. That kind of test gives a more accurate picture of your year-round average exposure, but it does not help when you have a closing date in three weeks. So the short-term test fills a real need.

But speed comes with trade-offs. Radon levels in a home can vary a lot from day to day. They depend on weather, soil moisture, how often doors and windows are opened, and whether the heating or cooling system is running. A short-term test captures only a snapshot. If you happen to test during a week of heavy rain or a cold snap when the house is sealed tight, the results might show higher radon levels than the home actually averages over a full year.

Closed-House Conditions Matter

To make a short-term radon test as reliable as possible, the Environmental Protection Agency recommends something called closed-house conditions. That means keeping windows and outside doors closed as much as possible during the test period, except for normal entry and exit. You also need to avoid running whole-house fans or other equipment that pulls in outdoor air. The idea is to simulate the worst-case scenario for radon accumulation. If the test is done with windows open or with a lot of air movement, the results will be artificially low and you might miss a real problem.

In my experience, this is where a lot of home radon tests go wrong. People put a radon test kit in the basement and then forget about it. They open a window in the bedroom for fresh air, or they run a window fan to cool the house. Those small actions can cut the measured radon levels in half. Then the test comes back low, everyone breathes a sigh of relief, and a few years later the new owners discover elevated radon levels after a long-term test. That is a costly surprise.

Continuous Monitors Add Confidence

One way to improve the reliability of a short-term radon test is to use a continuous radon monitor instead of a passive device like a charcoal canister. A continuous monitor records radon levels every hour, so you can see whether the readings were stable or erratic. If the monitor shows a big spike on Tuesday night and then a drop when you opened a window on Wednesday morning, you know that the average might not represent the true risk. A good radon testing service will flag those anomalies and may recommend a retest.

Continuous monitors also have the advantage of tamper detection. If someone moves the device or unplugs it, the monitor records that event. For real estate transactions, that provides a layer of accountability. The radon test results become harder to dispute. Air Sense Environmental uses continuous monitors for exactly this reason. It gives both the buyer and seller confidence that the measurement is honest and accurate.

When a Short-Term Test Is Enough

There are situations where a short-term radon test is all you need. If you are in a hurry to close on a house, and the test comes back below the radon action level of 4.0 picocuries per liter (pCi/L), you can proceed with reasonable confidence that the home does not have a major radon problem. The EPA says any radon level above that threshold should be fixed, and most radon mitigation contractors use that same number as a trigger for recommending a radon mitigation system.

If the short-term test comes back above the action level, you have a clear signal that you need radon reduction. At that point, you can hire a radon mitigation company to install a system,

usually a sub-slab depressurization system that vents radon gas from beneath the foundation to the outside. After the system is installed, you should do a follow-up test to confirm that the radon levels have dropped. Most mitigation contractors will guarantee their work down to below 4.0 pCi/L, and often much lower.

So the short-term test serves as a screening tool. It tells you whether you have a problem worth addressing. It does not give you the full picture of your long-term radon exposure, but it gives you enough information to make a decision.

Don't Skip the Long-Term Picture

For homeowners who plan to stay in their house for years, I always recommend following up a short-term radon test with a long-term radon test. The long-term test smooths out the seasonal and weather-driven fluctuations and gives you a truer sense of your actual radon risk. If you buy a house based on a short-term test that came in at 3.5 pCi/L, you might later find that the year-round average is actually 5.0 pCi/L, which is above the action level. That is a situation you want to catch early.

Some radon test kits are designed to be used for both short and long durations. An alpha-track detector, for example, can be left in place for three months or more. You can start with a short-term test to get a quick answer, then leave the same detector in place for the long-term test to get the full picture. That approach gives you the best of both worlds.

Practical Advice for St. Louis Homeowners

St. Louis radon is a real concern. The area sits on a geological formation that produces significant amounts of radon gas, and many homes in the region have measured above 4.0 pCi/L. I have personally tested houses in the same subdivision where one home came in at 1.5 pCi/L and the neighbor's home came in at 12.0 pCi/L. You cannot predict radon levels from one house to the next. You have to test each home individually.

If you are selling a home and a buyer requests a radon test, do not try to game the test by opening windows or running fans. That is dishonest and it can come back to haunt you if the buyer later does their own test and finds elevated radon levels. Instead, let the test run under proper closed-house conditions. If the results are high, you can address the problem proactively and disclose it. Many buyers are willing to split the cost of radon mitigation or accept a credit if they know about the issue upfront.

If you are a buyer, understand that a short-term radon test is a reasonable tool for a transaction, but it is not a guarantee. If you are serious about your family's health, plan to do a long-term test after you move in. And if you find elevated levels, hire a qualified radon

mitigation contractor. Do not try to fix it yourself. Improper mitigation can make the problem worse.

Final Thoughts on Short-Term Testing

A short-term radon test is a practical, time-efficient way to screen a home for radon risk. It is not perfect, but it gives you actionable information when you need it most. The key is to use it correctly: maintain closed-house conditions, use a reliable radon detector, and interpret the results with an understanding of their limitations. If you hire a professional radon testing service, ask whether they use continuous monitors and whether they provide a written report with radon test results and recommendations.

Radon is a serious issue, but it is also a solvable one. Testing is the first step. Whether you choose a short-term radon test or a long-term test, the important thing is to test at all. Do not assume your home is safe because your neighbor's house tested low. Get your own measurement, understand what it means, and take action if needed. Your lungs will thank you.