

Why a Radon Retest Matters After Mitigation in St. Louis Homes

Understanding the Need for a Radon Retest

When you buy or sell a home in St. Louis, the radon test is often one of those items on the checklist that can cause a bit of anxiety. I have been in enough basements around here to know that the soil gas story is different from neighborhood to neighborhood. Some homes in the city test fine year after year, while others a few blocks away show numbers that make you stop and think. The EPA radon guideline of 4.0 picocuries per liter is not a magic line, but it is the standard that real estate contracts lean on. Once a radon mitigation system is installed, the next logical question is: does it actually work? That is where a radon retest becomes essential.

I have seen homeowners assume that because they paid for a mitigation system, the problem is solved forever. That assumption can cost you. The truth is that radon levels shift with seasons, weather, and even changes you make to your home. A radon retest after mitigation is not just a box to check. It is the only way to confirm that the system is performing as designed. Without it, you are essentially betting on an unseen process.

The Mechanics of Radon Entry and Mitigation

Radon enters a home primarily through the ground. It moves through soil gas and finds its way inside through cracks in the foundation, gaps around pipes, and sump openings. The stack effect, which is the natural upward movement of warm air inside a house, pulls that radon-laden air up from the basement into the living spaces. In a St. Louis winter, when the house is sealed tight and the heat is running, the stack effect is strongest. That is often when radon levels peak.

A radon mitigation system, typically a sub-slab depressurization setup, works by creating a vacuum beneath the concrete floor. That vacuum draws soil gas away from the house and vents it safely above the roofline. It is a proven method, but its effectiveness depends on proper installation and the specific conditions of your home. That is why a [radon retest](#) after installation is so important. You need to know that the system is actually pulling radon away and not just humming along doing nothing.

Continuous Monitors vs. Passive Detectors

When it comes to testing, you have options. The old standby is the Alpha Track detector, which is a passive device that you leave in place for months. It gives you an average reading over the long term, and it is the tool of choice for a long-term radon test. Then there is the short-term

radon test, which usually uses a passive charcoal canister left in place for two to seven days. That is the kind commonly used in real estate transactions because it fits the timeline of a home inspection.

But for a radon retest after mitigation, I prefer an active monitor. Specifically, a continuous radon monitor gives you hour-by-hour readings over the test period. That is useful because radon levels fluctuate. A single grab sample or a passive canister might miss a spike that happens at night when the house is closed up. With a continuous monitor, you can see the pattern. Companies like Air Sense Environmental use these monitors for good reason. They provide data that is harder to argue with, and in a real estate context, that clarity matters.

I have also used Radalink in the past for some quick checks. It is a service that ships passive monitors and processes them in a lab. It works fine for a baseline, but for a retest where you need confidence in the result, I lean toward an active monitor that gives you real-time data. The trade-off is cost. An active monitor is more expensive, but when you are verifying a mitigation system, that cost is justified.

When to Retest and What to Expect

The timing of a radon retest matters. I usually tell people to wait at least 24 hours after the mitigation system is turned on. That gives the system time to establish the negative pressure under the slab. Then run the test for at least 48 hours, preferably longer. The EPA recommends a test length of two to seven days for a short-term test. During that time, keep the house in its normal closed-up condition. That means windows closed, doors shut except for normal entry and exit, and the HVAC running as usual.

If the mitigation system is working, the retest should show a radon level well below the EPA radon guideline of 4.0 pCi/L. In many cases, the level drops to under 2.0 pCi/L or even lower. I have seen systems bring a level from 15 pCi/L down to 0.8 pCi/L. That is a success story. But sometimes the retest shows a number that is still elevated. That does not necessarily mean the system is a failure. It could mean there is a secondary entry point that was not sealed, or the system needs a small adjustment. A Certified Radon Professional can diagnose the issue.

One thing I have learned over the years is that a single test is never the final word. Radon is variable. A retest that comes back low in September might be different from one done in January. That is why some homeowners choose to do a long-term radon test after the initial retest. A year-long Alpha Track detector gives you a true annual average, which is the most accurate picture of your exposure. But for the immediate question of whether the mitigation system works, a short-term retest with an active monitor is the right approach.

The Role of Retesting in Real Estate Transactions

In a home sale, the radon test is often a point of negotiation. If the initial test comes back high, the buyer may ask for a mitigation system to be installed. The contract might then specify that a radon retest be performed after installation to confirm the fix. That is a common scenario in St. Louis real estate. I have worked with home inspectors who include radon testing as part of their standard inspection package. When they find elevated levels, they recommend mitigation and a retest.

The real estate contract should be clear about who pays for the retest and what the acceptable level is. Some contracts set the bar at the EPA radon guideline of 4.0 pCi/L, while others aim for a lower number. That is a detail worth discussing with your agent. The important thing is that the retest is done by a qualified professional using reliable equipment. A passive charcoal canister is fine for the initial test, but for a retest that determines whether a deal goes through, I prefer a continuous radon monitor. The data is more defensible.

I have also seen situations where the seller installs a mitigation system but does not retest. That is a mistake. Without a retest, the buyer has no proof that the system works. The home inspector might note that the system is present, but they cannot certify its effectiveness without a test. A retest closes that loop and gives both parties peace of mind.

Maintaining Your Mitigation System Over Time

Once your radon retest confirms that the mitigation system is working, the job is not over. These systems require maintenance. The fan that creates the vacuum under the slab will eventually wear out. I recommend checking the manometer, which is the gauge that shows the pressure difference, at least once a month. If the gauge drops, the fan may have failed. Also, keep the vent pipe clear of debris and snow. A blocked vent can render the whole system useless.

Basement ventilation also plays a role. If you finish your basement after the mitigation system is installed, the new walls and flooring can change the airflow patterns. That might affect radon levels. Any significant renovation to the lowest level of your home should be followed by another radon retest. The same goes for major changes to the foundation, such as adding a sump pump or sealing cracks. Each of those changes alters the soil gas dynamics.

I have talked to homeowners who installed a mitigation system and then forgot about it for years. When they finally retested, they were surprised to find the levels had crept back up. That is usually due to a mechanical failure or a change in the house. Regular retesting, every two to five years, is a good practice. The National Radon Program and the Consumer Product Safety Commission both recommend periodic testing, especially after any major home renovation.

Practical Advice for St. Louis Homeowners

If you live in the St. Louis area and you are dealing with radon, you are not alone. The geology here includes limestone and shale, which can produce significant radon. I have tested homes in the city, the county, and the surrounding suburbs. The levels vary widely, but the solution is the same: test, mitigate, and retest. Air Sense Environmental has been doing this work in St. Louis for years, and they know the local patterns. They use continuous radon monitors for their retests, which gives you fast results and reliable data.

When you schedule a radon retest, ask what type of monitor will be used. If the company shows up with a passive charcoal canister, that is fine for a general check, but for a verification test after mitigation, you want an active monitor. Also, ask about the turnaround time. Some labs take weeks to process passive detectors. An active monitor can give you results in hours. That speed is valuable when a real estate closing date is approaching.

I also recommend keeping a record of all your radon tests. Note the date, the type of test, the result, and any changes to the house. That log becomes useful if you ever sell the home or if you need to show a history of low radon levels to a buyer. It is a simple habit that saves time later.

Final Thoughts on Retesting

A radon retest is not an admission that the first test was wrong. It is a verification step that ensures your home is safe. Whether you are a buyer, a seller, or a long-time homeowner, the process is the same. Test the home, install mitigation if needed, and then retest to confirm the fix. The investment in a retest is small compared to the health risk of living with elevated radon. And in a real estate transaction, that retest can be the document that lets everyone move forward with confidence.

I have seen too many people skip the retest because they assumed the mitigation system worked. Sometimes it did, sometimes it did not. The only way to know for sure is to test again. So if you have a mitigation system in your home, or if you are in the middle of a real estate deal that requires one, make the radon retest a priority. It is the final piece of the puzzle that turns a good intention into a proven result.