

Why a Radon Retest Matters for Your Home in Jefferson County

If you live in Jefferson County, Missouri, you already know the area has a higher potential for elevated radon levels. The geology across Arnold, Festus, High Ridge, and Hillsboro includes limestone and shale formations that can release radon gas into homes. What many homeowners do not realize is that a single radon test is not enough. Conditions change, and a radon retest is the only way to know if your home remains safe.

I have worked with Air Sense Environmental for several years now, and I have seen how the seasons, home renovations, and even the weather can shift radon readings. The first test might have come back low, but that does not mean the risk is gone. The EPA recommends testing every two years, and in Missouri, where the radon potential is moderate to high, that advice is worth following.

Understanding Radon and Its Behavior

Radon is a radioactive gas that comes from the natural decay of uranium in soil and rock. It moves up through the ground and into your home through cracks in the foundation, gaps around pipes, and other openings. Once inside, it can accumulate to levels that pose a health risk. The EPA estimates that radon causes about 21,000 lung cancer deaths each year in the United States. That is a serious number, and it is why testing matters.

But radon levels are not constant. They can vary with barometric pressure, soil moisture, and how your heating and cooling system runs. A test done in the summer when windows are open might show a low level, while a winter test with the house closed up could reveal a higher concentration. That is where a [radon retest](#) becomes important.

When to Consider a Radon Retest

There are several situations where a radon retest is a good idea. If you have made changes to your home, such as finishing a basement, adding a sump pump, or sealing cracks in the foundation, the airflow and pressure dynamics have changed. These changes can either increase or decrease radon entry. A retest after any major renovation gives you a clear picture.

Another common scenario is after installing a radon mitigation system. Whether you had sub-slab depressurization put in or a basement ventilation system, you need to verify that it is working. The only way to confirm that the system is reducing radon to acceptable levels is to run a test after installation and then repeat it periodically. Most mitigation companies,

including Air Sense Environmental, will recommend a radon retest within a few months of the system being installed to ensure it is performing as designed.

If you are buying or selling a home in Jefferson County, a radon test is almost standard now. But a test that is a year old may not reflect current conditions. Buyers often ask for a fresh test. Sellers who have a recent radon retest on file can move the process along faster. It shows that the home has been actively monitored.

Types of Radon Test Kits

There are several devices used to measure radon, and each has its strengths. The charcoal canister is a short-term detector that sits in the home for two to seven days and is then sent to a lab. It is simple and inexpensive, but it only gives a snapshot. Because radon levels fluctuate, a short-term test might miss a high period.

The alpha-track detector is a long-term option. It stays in place for three months to a year and provides an average reading. This is closer to what the EPA considers an accurate assessment of annual exposure. For a radon retest, a long-term test often makes more sense because it smooths out daily and seasonal swings.

Then there is the continuous radon monitor, which is an electronic device that records radon levels over time. Brands like Airthings and Sun Nuclear make these. They give hourly readings and can show spikes that you might otherwise miss. A continuous monitor is useful if you want to check the effectiveness of a mitigation system or if you have variable conditions in your home.

For a radon retest, I usually recommend using the same type of device as the original test, or at least one that is similarly sensitive. That way you are comparing apples to apples. If you used a charcoal canister the first time and get a continuous monitor the second time, the results might differ simply because of the different methodologies.

How to Perform a Radon Retest

The process is straightforward. You place the test device in the lowest livable area of your home, typically the basement or first floor if there is no basement. It should be away from drafts, direct sunlight, and high humidity. You close all windows and doors for at least 12 hours before starting the test, and keep them closed during the sampling period. This is called closed-house conditions, and it is critical for accurate results.

For a short-term test, you leave the device in place for the time specified by the manufacturer, usually two to seven days. Then you package it up and send it to a lab for analysis. For a long-term test, you leave the alpha-track detector in place for three months or more. Continuous

monitors give you results in real time, but you still need to follow the placement and closed-house rules.

One thing I have learned is that timing matters. Avoid testing during severe weather, like heavy rain or rapid pressure changes, because those can temporarily skew the reading. Also, if you are using a charcoal canister, make sure the lab you send it to is certified by the EPA or an equivalent program. Companies like NRD LLC and Radalink provide reliable analysis, but always check the credentials.

Interpreting Results

The EPA action level is 4 picocuries per liter (pCi/L). If your home tests above that, you should take action to reduce the level. But even below 4, there is no completely safe level. The EPA recommends considering mitigation if your long-term average is between 2 and 4. A radon retest that shows a level above 4 means you need a mitigation system, such as sub-slab depressurization or basement ventilation.

If your retest shows a level below 2, that is good, but it does not mean you are done. I have seen homes in High Ridge that tested low in the spring and then came back above 4 in the fall after the ground dried out. That is why periodic retesting is a smart habit.

I also encourage homeowners to keep a log of their results. Note the date, the device used, the weather conditions, and any changes to the home. Over time, this record can reveal patterns. For example, you might notice that levels always rise after a heavy rain or when the furnace runs a lot. That information can help you decide when to run your next radon retest.

Where to Get Help in Jefferson County

If you live in Arnold, Festus, High Ridge, or Hillsboro, you have local resources. The Jefferson County Health Department can provide information and sometimes low-cost test kits. But for thorough testing and professional mitigation, working with a company like Air Sense Environmental is a solid move. They know the local geology and have experience with the common home types in the area.

I have seen their crews install sub-slab depressurization systems in crawl spaces that were barely accessible, and they did it without disrupting the rest of the home. They also use continuous monitors to verify the system is working before they leave. That kind of follow-through is what you want.

Ultimately, radon testing is not a one-and-done task. It is an ongoing part of home maintenance, much like checking your smoke detector batteries or inspecting your roof. A radon retest every two years, or after any major change to your home, is a small investment

that protects your family's health. And in Jefferson County, where the ground can release radon without warning, it is a step worth taking.