

What a Radon Reduction Guarantee Means for Your Home

When I bought my first house in St. Louis, the radon test result came back at 8.2 pCi/L. That number is more than double the EPA action level. I had no idea what radon mitigation involved, but I knew I needed a solution that would work and last. What I learned over the next few weeks changed how I think about home health risks and the importance of a real performance promise.

The radon mitigation industry has grown a lot in the past twenty years. More homeowners understand the danger of soil gas entering their living space. But understanding the danger is one thing. Knowing how to pick a contractor you can trust is another. That is where the concept of a radon reduction guarantee becomes essential. It is not just a marketing phrase. It is a commitment that the system installed will actually lower your radon level to a safe range, typically below the EPA action level of 4.0 pCi/L.



How Radon Gets Into Your House

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 even through the pores of concrete slabs. The only way to know your home has a problem is to perform radon testing. A short-term radon test can give you a quick snapshot, but a long-term radon test gives a more accurate average over several months. Both have their place. The key is to start somewhere.

Once you have a result above the EPA action level, the next step is radon mitigation. In St. Louis, the soil composition and home construction styles vary a lot. Older homes with basements often have more entry points for soil gas. Newer homes built with radon-resistant construction techniques tend to have fewer problems, but no house is completely immune.

What a Radon Reduction Guarantee Actually Covers

A [radon reduction guarantee](#) is a promise from the mitigation company that the system they design and install will bring your indoor radon level below a specified threshold. Usually that threshold is the EPA action level of 4.0 pCi/L, but some companies guarantee lower levels. The guarantee should be in writing and should spell out what happens if the system does not meet that goal.

Air Sense Environmental, a company I have worked with on several projects in the St. Louis area, offers a radon reduction guarantee on their installations. When I asked them about it, they explained that the guarantee covers the initial system performance and also includes ongoing support if levels creep back up later. That is more than just a piece of paper. It shows confidence in their work.

What a Typical Guarantee Includes

- A written promise that the system will reduce radon levels below the specified target.
- A post-installation verification test to confirm the system is working.
- Free adjustments or modifications if the initial test shows levels are still too high.
- Coverage for a set period, often one to five years, depending on the company.
- Terms clearly stated so you know what is and is not covered.

The radon reduction guarantee is not the same as a radon mitigation warranty, though they often go together. A warranty covers the equipment itself, like the radon fan or the manometer used to monitor system pressure. The guarantee covers the actual performance. Both are important, but the guarantee is what protects your health directly.

How a Mitigation System Works

The most common type of system for homes with basements or slab-on-grade foundations is sub-slab depressurization. A radon vent pipe runs from beneath the slab up through the roof. A radon fan creates suction that pulls soil gas from under the house and vents it outside, before it can enter your living space. The fan is usually installed in an attic or outside to keep noise down and to avoid pulling conditioned air out of the house.

During installation, the contractor seals cracks and openings with radon sealant to prevent soil gas from entering through other paths. After everything is in place, a manometer is attached to the vent pipe. This simple gauge shows whether the system is maintaining the proper negative pressure. It gives you a quick visual check that the system is working day to day.

Some homes already have a passive radon system installed during construction. That means a vent pipe and sometimes a fan stub-out are in place, but no fan is attached. Turning that into an active radon system by adding a fan is often the most cost-effective solution. A passive system relies on natural air pressure differences and stack effect, which may not be strong enough to reduce high levels reliably. Converting to an active system with a fan gives you controlled suction that can handle higher soil gas pressure.

Why Testing Matters Before and After

Before any mitigation work begins, you need accurate radon testing. A short-term radon test is a good starting point. You place a test device in the lowest lived-in level of your home for two to seven days. The results are fast, but they can be influenced by weather, ventilation, and other factors. A long-term radon test running for three to twelve months gives a truer picture of average exposure. Many homeowners start with a short-term test and then do a follow-up long-term test after mitigation to confirm the system is holding.

Post-installation verification is the step that proves the system works. The contractor should run a radon test after the system has been running for at least 24 hours. Some use a continuous radon monitor that gives hourly readings over several days. Others use a standard short-term test. Either way, the test should be done under normal living conditions. If the result shows levels above the guarantee threshold, the contractor needs to come back and make adjustments at no extra cost. That is what the radon reduction guarantee is for.



I have seen homes where the initial post-installation test showed 3.8 pCi/L, just barely under 4.0. The homeowner was happy, but the contractor wanted to improve it. They added a second

sealant pass around the sump pump opening and increased the fan speed. The next test came back at 1.2 pCi/L. That is the kind of service a real guarantee supports.

Choosing a Mitigation Contractor

Not all contractors offer the same level of protection. When you shop for radon mitigation services in St. Louis, ask specific questions about the guarantee. How long does it last? What does it cost to extend it? Is the post-installation verification included in the price or is it an extra fee? Does the guarantee cover only the initial reduction, or does it also cover system maintenance and re-testing in future years?

A good contractor will be happy to answer those questions. They will also be certified by the EPA or a state program. They will use high-quality materials like a durable radon fan and proper radon vent pipe that meets code. They will show you how to read the manometer and what to do if the gauge indicates a problem. They will also explain the difference between passive radon system performance and active radon system performance, so you understand why active is usually better for homes with moderate to high radon levels.

The radon mitigation warranty on the equipment is important too. Fans can fail after several years of continuous operation. A good warranty covers replacement parts and labor. But the performance guarantee is what gives you peace of mind that the system is actually protecting your family.

Long-Term Peace of Mind

After the system is installed and verified, you still need to monitor it. Check the manometer once a month. If the reading changes, the system may have lost suction. That could mean a fan failure, a blocked vent pipe, or a new crack in the foundation that is letting soil gas bypass the system. Re-test your home every two years or after major renovations. Radon levels can change over time as the ground settles, as the water table shifts, or as you make changes to your home.

The radon reduction guarantee gives you a safety net. If something goes wrong and levels rise, the contractor should come back and fix it under the terms of the guarantee. But you also need to do your part. Keep records of your test results and any maintenance you perform. If you sell your home, those records can be a big selling point. Buyers in St. Louis are becoming more aware of radon risks, and a documented mitigation system with a transferable guarantee adds real value.

I remember one client who had a system installed by a different company a few years earlier. When I tested her home, the level was back up to 5.2 pCi/L. The original guarantee had expired, and the company was out of business. She had to pay for a full redesign. That is a tough

lesson. A radon reduction guarantee is only as good as the company standing behind it. That is why I recommend working with a local, established company like Air Sense Environmental that has a track record in the area and offers a clear, written guarantee.

Radon is a serious health risk. It is the second leading cause of lung cancer in the United States, according to the EPA. But it is also a problem you can fix. With proper radon testing, a well-designed sub-slab depressurization system, and a contractor who offers a real radon reduction guarantee, you can bring your indoor radon level down to a safe range and keep it there. That is worth the investment.