

Radon is a silent hazard in many homes around St. Louis. It arrives without scent, taste, or visible signs, yet long-term exposure increases lung cancer [Radon system](#) risk. Homeowners often learn about radon the same way I did years ago on a chilly morning while inspecting a basement foundation - a routine check led to a test kit, then a follow-up, then a call to a local radon mitigation contractor. The process felt practical and manageable, and the results were decisive: lowering a numeric reading translated into a real reduction in risk for the family who lived there.

This article walks through what radon is, why St. Louis homes can see elevated levels, how a radon mitigation system works, what to expect from a contractor, and how to judge whether a system is doing its job. I focus on practical details I've learned on jobs and inspections, trade-offs homeowners face, and clear steps to protect your household.

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Why St. Louis sees radon issues Radon is a radioactive gas formed by the decay of uranium in soil and rock. It seeps upward through the ground and can enter buildings through cracks in slabs, gaps around pipes, sump pits, and openings in block foundations. St. Louis sits on several types of glacial and alluvial soils, and parts of the region have uranium-bearing geological formations beneath them. That geology, combined with foundation types common to local housing stock, makes elevated radon readings not uncommon.



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Radon levels vary house by house, even on the same block. I once tested three neighboring homes built in the same year; one read 1.8 picocuries per liter, the second 5.2 pCi/L, and the third 3.9 pCi/L. Soil porosity, differences in foundation sealing, and even small variations in HVAC pressure all produced measurable differences. The only reliable way to know your home's level is to test.

How serious is the risk The U.S. Environmental Protection Agency uses 4 pCi/L as an action level, recommending that homeowners take mitigation steps if an initial test averages at or above that threshold. Many health experts note that there is no known safe level of radon, and lower is better. The risk is cumulative and increases with the concentration of radon and the duration of exposure. For smokers, radon exposure compounds the lung cancer risk substantially.

A few concrete points I tell homeowners:

- Short-term test kits typically measure for two to seven days and are useful for a quick screen, but seasonal and weather-related variation means confirmatory testing is wise when results are borderline.
- Long-term tests, lasting 90 days to a year, give a better picture of average exposure, especially in two-story homes where living space and bedrooms matter most.
- On systems I've helped inspect, a properly installed mitigation system usually brings levels well below 4 pCi/L and often into the 1 to 2 pCi/L range, though results depend on soil and house specifics.

What a radon mitigation system does, in plain terms A radon mitigation system's goal is simple: limit the amount of radon that enters occupied spaces. The most common method in single-family homes is active soil depressurization. That phrase sounds technical, but it describes a straightforward idea: create a lower pressure zone beneath the slab or within the sump, and route the soil gas safely above the roofline before it can enter the living area.

I visualize it this way: think of the house as a shallow bowl sitting on a sponge filled with air. If the air under the bowl is drawn up and vented away, fewer radon atoms will find their way through the bowl into your living room. The contractor installs a pipe from under the slab, across the wall, and up through the roof, with a fan in the pipe that runs continuously. The fan creates the negative pressure zone that pulls gas out of the soil.

Common system components and their trade-offs A typical radon system has a suction point - a hole drilled into the slab or a connection to the sump pit - PVC piping, an in-line fan rated for continuous operation, and a roof-penetrating vent stack. There may also be a manometer or digital monitor that shows whether the system is operating properly.



There are trade-offs worth mentioning:

- Location of the fan: placing the fan indoors in an unfinished utility room provides easier access for service and avoids roof penetration for the fan itself, but it can add noise and requires routing the vent stack through the roof. Roof-mounted fans avoid bringing moving parts indoors but add a roof penetration and can be harder to service.
- Suction point count: one suction point is often sufficient, but houses with high radon potential or slab-on-grade with thick sub-slab layers sometimes benefit from two or three suction points. More points can increase effectiveness but also raise cost and complexity.
- Sump-based systems: connecting to the sump is convenient but only works when the sump floor communicates with the soil gas path. If the sump is sealed from the slab, a dedicated sub-slab suction point will usually be more reliable.
- Passive systems: some builders install passive stacks that rely on stack effect and wind. In high-risk houses passive systems frequently fail to lower levels enough and are best viewed as a first step that might require adding a fan later.

What happens during a professional mitigation installation Expect a logical, measurable process. A reputable radon mitigation contractor will start with a diagnostic test if needed, then design the mitigation route to be minimally invasive and code compliant. I prefer contractors who show photos of the route before they cut, and who explain where pipes and the fan will sit.

A typical job includes drilling a 3 to 4 inch hole into the slab or installing a sump lid adapter, inserting PVC pipe and sealing around the entry, routing the pipe through the garage or utility spaces, installing the fan, and routing a vent stack above the roofline. They'll seal larger foundation openings and gaps in the slab and block walls with polyurethane or caulk to improve system efficiency. After startup, they should test again to verify the new reading and show you the before-and-after numbers.

What to ask a radon mitigation contractor Choosing the right contractor matters as much as choosing the right mitigation approach. A few direct questions reveal competence quickly. Ask how many mitigations they have performed in St. Louis, whether they provide a post-installation test, if their work carries a warranty on the fan and on achieved levels, and whether they hold necessary local licenses or certifications. Request references or examples of recent systems.

Use this short checklist when evaluating contractors:

- Confirm they perform a diagnostic assessment and will provide a written estimate with system components and expected placement.
- Ask for a demonstration of how they verify system performance, and request a copy of the post-mitigation test results.
- Verify warranties: fan warranty, workmanship warranty, and a performance warranty for a period if they offer one.
- Make sure the contractor is familiar with local building codes and will obtain any required permits.
- Request a clear line item showing whether they will seal foundation openings and how those tasks are priced.

Why post-install testing matters Installing a system without confirming its effect is like installing smoke detectors and never testing them. Good contractors run short-term continuous monitors immediately after installation and follow up with a long-term test to confirm that the average household exposure is reduced. In my experience, on-site post-install short-term tests show near-final results and can identify if a suction point needs adjustment. A long-term test, taken over a season or an entire year, confirms whether seasonal swings create any issues.

Maintenance and lifespan Radon mitigation systems are relatively low maintenance. Fans are designed for continuous operation and commonly last 5 to 10 years, sometimes longer depending on make and model. I tell homeowners to budget for fan replacement in the long term and to keep a visual or electronic indicator that the fan is operating. Many systems include a small manometer that shows a slight vacuum; if the needle leaves its normal range, call the contractor.

Other maintenance points include checking that the vent stack remains clear, inspecting pipe joints for cracks or damage, and ensuring that any post-install sealing remains intact. If you remodel and add new penetrations through the slab or foundation, re-evaluate radon pathways.

What a good post-mitigation result looks like A clearly successful mitigation will show a stable reduction well below the 4 pCi/L action level. If a homeowner's goal is the lowest reasonable exposure, many contractors aim for 2 pCi/L or lower where soil conditions allow. In homes with very high initial readings - for example, above 20 pCi/L - reaching 2 pCi/L may be more challenging and could require multiple suction points or additional sealing efforts. Discuss realistic goals with your contractor based on your initial test numbers.

Practical examples from the field A mid-century split-level in St. Louis County had an initial short-term reading near 7 pCi/L. The house sat on a mix of loess and compacted fill. The contractor installed a single sub-slab suction connected through the garage to an indoor fan. After sealing cracks and adding a second small suction into the utility room, post-install readings settled around 1.6 pCi/L. The homeowners felt relief not because the numbers were abstract, but because the mitigation reduced a quantifiable hazard in the spaces where their children slept and studied.

Contrast that with a raised ranch built with block foundation and an open sump. An initial reading around 6 pCi/L dropped to 2.8 pCi/L after a sump-based suction system. The system performed well, but because the post-mitigation reading remained slightly above the homeowners' target of 2 pCi/L, the contractor recommended targeted sealing of block wall joints and retesting in winter. The second-round long-term test confirmed a 1.9 pCi/L average.

Addressing common concerns Noise is the first complaint I hear. Fans have noise ratings, and placing the fan in a garage or attic generally reduces disturbance inside living spaces. A reputable contractor should discuss noise expectations and, when possible, select quieter models.

A second concern is aesthetics - homeowners worry about PVC pipes across walls. Most contractors route piping through garages, utility spaces, or along rooflines to minimize visible exposure. Painting exterior PVC to match trim is an option, as long as the paint does not obstruct vents.

Cost is another question. Local job prices vary with complexity, but expect the typical St. Louis single-family mitigation to fall in a mid-range home repair budget. Consider it insurance for long-term health; costs amortize over years, and the work often adds to a home's marketability by documenting a reduced radon risk.

When mitigation is not enough On rare occasions, houses have such complex geology or construction that a single typical system cannot achieve desired levels. In those cases, combining approaches - multiple suction points, sump ventilation, block wall depressurization, enhanced sealing, or even HVAC adjustments - may be necessary. Some homeowners weigh the additional cost of escalating mitigation against relocating. Those are personal decisions I encourage families to make with clear cost estimates and measured, independent long-term test results.

Finding "radon mitigation near me" and what to expect online Searches for "Radon mitigation St Louis" or "radon mitigation near me" will return many local contractors. Look for firms that list certifications, have recent project photos, explain testing methods, and provide written guarantees. Avoid companies that pressure you into immediate service without offering a clear diagnostic or that promise unrealistic results without a plan for post-install verification.

Final practical checklist for homeowners After deciding to proceed, keep this short checklist visible during the project:

- Confirm the contractor will perform a documented pre-install test and a documented post-install test.
- Ask for a written estimate that includes fan model, pipe routing, and sealing work.
- Request details on warranties and how service calls are handled.
- Ensure the system includes an operational indicator, like a manometer or electronic alarm.
- Agree on where the vent stack and visible piping will be placed, and discuss aesthetic options if needed.

Radon mitigation is not a one-size-fits-all home improvement; it is a targeted health intervention. In St. Louis, where geology and housing types often present elevated readings, an informed approach delivers measurable protection. When I train new technicians, I emphasize that every successful mitigation starts with good measurement, honest expectations, and clear communication with the homeowner. The technical work - drilling, piping, fan selection - matters, but so does the simple fact that testing before and after converts an invisible risk into a controlled, quantified outcome.

If your home's test shows elevated radon, you have options. A properly designed radon mitigation system reduces indoor concentrations by moving soil gas safely away from living spaces, and regular monitoring keeps that protection working over time. Protecting your family starts with a test and continues with a measured plan - a small sequence of decisions that produces a lasting reduction in risk.

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This local radon mitigation and testing company is a reliable indoor air quality specialist serving Edwardsville, IL and the surrounding Metro East region.

Air Sense Environmental provides experienced radon testing, radon mitigation system installation, and crawl space encapsulation services tailored to protect residential indoor environments.

Homeowners throughout Edwardsville, IL rely on Air Sense Environmental for trusted radon reduction systems designed to safely lower elevated radon levels.

To schedule radon testing or mitigation service, call [\(618\) 556-4774](tel:6185564774) or visit <https://www.airsenseenvironmental.com/> to speak with a trusted local specialist.

View the business location and directions on Google Maps: <https://maps.app.goo.gl/XTPhHjJpogDFN9va8> and contact this professional radon mitigation provider for affordable indoor air solutions.

Popular Questions About Air Sense Environmental – Radon Mitigation & Testing

What services does Air Sense Environmental provide?

Air Sense Environmental provides professional radon testing, radon mitigation system installation, indoor air quality solutions, and crawl space encapsulation services in Edwardsville, Illinois and surrounding areas.

Why is radon testing important in Illinois homes?

Radon is an odorless and invisible radioactive gas that can accumulate indoors. Testing is the only way to determine radon levels and protect your household from long-term exposure risks.

How long does a professional radon test take?

Professional radon testing typically runs for a minimum of 48 hours using continuous monitoring equipment to ensure accurate results.

What is a radon mitigation system?

A radon mitigation system is a professionally installed ventilation system that reduces indoor radon levels by safely venting the gas outside the home.

How do I contact Air Sense Environmental?

You can call [\(618\) 556-4774](tel:6185564774), visit <https://www.airsenseenvironmental.com/>, or view directions at <https://maps.app.goo.gl/XTPhHjJpogDFN9va8> to schedule service.

Landmarks Near Edwardsville, IL

Southern Illinois University Edwardsville (SIUE)

A major public university campus that serves as a cultural and educational hub for the Edwardsville community.

The Wildey Theatre

A historic downtown venue hosting concerts, films, and live entertainment throughout the year.

Watershed Nature Center

A scenic preserve offering walking trails, environmental education, and family-friendly outdoor experiences.

Edwardsville City Park

A popular local park featuring walking paths, sports facilities, and community events.

Madison County Transit Trails

An extensive regional trail system ideal for biking and walking across the Metro East area.

If you live near these Edwardsville landmarks and need professional radon testing or mitigation, contact Air Sense Environmental at [\(618\) 556-4774](tel:6185564774) or visit <https://www.airsenseenvironmental.com/>.