



Guide to my Radon Mitigation System



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Air & Water Solutions Radon Certification

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Air & Water Solutions holds a member with certification from the National Radon Proficiency Program (NRPP) for both radon testing & mitigation

“The NRPP is recognized by the EPA and accredited by the ANSI National Accreditation Board (ANAB) under ANSI/ISO/IEC 17024, General Requirements for Bodies Operating Certification Systems of Persons. The NRPP requires all certified individuals to conduct business in accordance with the applicable ANSI/AARST Standard(s). NRPP credentials indicate to building owners and service providers the mastery of the specific skills required to successfully complete radon testing & remedial projects. Achieving and maintaining NRPP certification requires biennial documentation of competence, expertise, and performance to demonstrate skill, knowledge, and quality control. Private certification is required by multiple federal and state agencies”.

<https://nrpp.info/>

Air & Water Solutions is committed to the highest quality deliverance of Clean Air, Clean Water, and Clean Energy to Columbia, MO and surrounding areas. To uphold our NRPP certification our member completes the following tasks:

- Passes a national competency exam
- Is required to complete regular continuing education classes
- Submit proof of satisfactory proficiency demonstration
- Follow a quality assurance plan
- Adhere to a strict code of ethics

My Radon Mitigation System

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(1) My Equipment & Test Findings:

Suction pit location: _____

Additional tie in's/work completed: _____

Where to shut off my system: _____

the radon fan should never be turned off unless absolutely necessary

Pre-mitigation test:

- Test Device: _____
- Measurement: _____ pCi/L

Post-mitigation test:

Manometer/U-Tube reading:

- Test Device: _____
- Measurement: _____ pCi/L

(2) How to care for my radon mitigation system:

Check on your “Manometer” routinely

The Manometer is a pressure gauge on your radon mitigation piping that measures the pressure in your system. It is commonly referred to as the U-Tube. The U-Tube will show you if your radon mitigation fan is working. When the fan is moving air out of your home, as it should, the U-Tube will show higher on one side/shows uneven. Please see your reading above. If the fan ever stops working, the U-Tube will be even on both sides or read 0. If you see this, or have questions, call us at 573-445-1112

Test for radon 1x/year

As homes age, and soil changes, radon levels can fluctuate over time. It is important to test routinely to ensure nothing needs to be changed to your mitigation system. See page 4-5 for more information on testing.

My Radon Mitigation System

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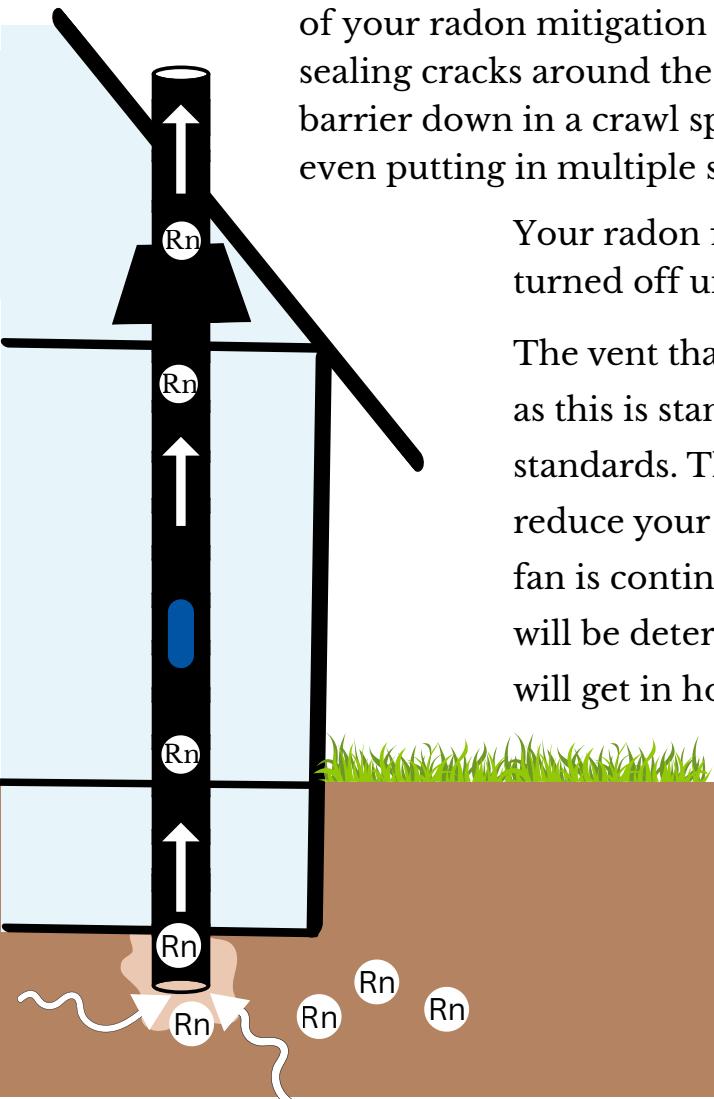
(3) How Radon Mitigation Works:

Air & Water Solutions radon mitigation systems use active soil depressurization per standard for removal of radon. Air & Water Solutions creates a suction pit underneath your home's foundation, seals a pipe into the suction pit, and vents it outside of the home. The mitigation fan needed according to your home's foundation type, size, and testing levels is then placed either outside the home, or in the attic, connecting to the piping to the suction pit. The mitigation fan will suck air from underneath your home to direct the radon accumulation outside of the home, decreasing the level of buildup in the home.

Air & Water Solutions may do additional things to increase the effectiveness of your radon mitigation system according to NRPP standards including sealing cracks around the home, tying into a sump pump, putting a vapor barrier down in a crawl space and/or over exposed ground in the home, or even putting in multiple suction pits in the home.

Your radon fan will run continuously and should never be turned off unless absolutely necessary.

The vent that pipes out of the home is not covered in any way as this is standard installation procedure to ANSI-AARST standards. This is because a covering can restrict airflow and reduce your systems ability to effectively remove radon. The fan is continuously pushing air out so, most critters and debris will be deterred from the fan anyway. With this opening, water will get in however, the system is designed to handle this.



The entire pipe system is sloped down to the suction pit to drain water and only an average of 3 gallons of water will be collected annually. The system itself is capable of removing anywhere to 8 to 20 gallons of moisture per day.

Radon Testing

When should I test?

Radon levels are generally higher during the winter months due to homeowners keeping windows & doors closed to conserve heat. A more tightly sealed home traps radon gas inside causing it to accumulate to higher levels. radon levels will also go up in cold weather due to the stack effect & frozen ground. Testing in the winter will give you more accurate results of what your home's radon levels accumulate to.

How often should I test?

The EPA recommends annual testing if you do not have an active radon system and every other year if your home does however, Air & Water Solutions always recommends testing at least once per year.

Should I continually test even after mitigation? Or if I've already got a low reading?

Homes should be re-tested every year, even if you have gotten a low reading and/or you have a mitigation system. A homes radon levels will change over time. As a home ages, ventilation systems may be altered, cracks form, and the foundation can shift which all presents new paths for radon to come into your home. Additionally, the pressure in your home changes over time and can impact how much radon is seeping into your home.

Where in my home should I test?

Radon testing devices should be placed in the lowest level of the home, where the highest presence of radon gas will be. While testing, windows & outside doors should be closed as much as possible, this should be done for at least 12 hours prior to the test as well to ensure your readings are most accurate. Since pressure affects radon gas presence, testing during unusual storms or temperature increases/decreases may alter test readings from the norm. Follow the radon testing instructions on your device.

Radon Testing - *continued*

What might change the levels of radon in my home?

- Renovations
- Home changes over time
- Soil changes over time
- Pressure changes over time

If you plan to do any changes to your home, it is important to contact a radon specialist to see if testing is required.

What kind of tests are there?

Air & Water Solutions offers 48-hr testing with a testing device that undergoes recalibration every year.

- \$250 for radon test within 30 miles of Columbia
- \$450 for radon test outside 30 miles of Columbia (*further travel costs may be included for highly distant customers*).

Home radon tests can be purchased at your local hardware store or online. There are short-term & long-term test kits.

Radon Facts

What is Radon?

Radon is a naturally occurring radioactive gas that forms from the decay of uranium in the soil, groundwater, and rocks. You cannot smell, taste, or see radon.

Why is radon a problem in my home?

Radon seeps into homes & buildings through cracks, gets trapped, and builds to unsafe levels. Breathing high levels of radon poses health risks by increasing your risk of lung cancer. Radon is the number one cause of lung cancer among people who do not smoke. Since radon is odorless, tasteless, and invisible to the eye, the only way to know if radon is present in your home is to test. While radon problems may be more common in some areas, any home may have a problem.

What levels of radon are unsafe?

Radon is measured in picocuries per liter of air (pCi/L), a measurement of radioactivity. The U.S. Surgeon General and EPA recommend fixing homes with radon levels at or above 4 pCi/L. The EPA even recommends fixing homes with tests reading between 2pCi/L and 4 pCi/L.

How do I remove radon?

A radon mitigation system can be installed in your home or business to reduce your levels of radon.

Links to More Radon Information

<http://www.epa.gov/radon>

<https://nrpp.info/>

Frequently Asked Questions (FAQ)

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Q: How much is a service call from Air & Water Solutions?

A: Air & Water Solutions charges \$110 for the first hour and it is then prorated after that. This means if it only takes 1.5 hours to service your home, you will only be charged for 1.5 hours. If you need emergency service after hours, it is \$160/hr and is also prorated after the first hour.

Q: What other services does Air & Water Solutions offer?

A: Air & Water Solutions offers

- Home Air Solutions:
 - radon testing & mitigation.
 - heating & cooling
 - ductless
 - air filtration
 - humidity control
- Home Energy Solutions
 - solar
 - generac
 - highly efficient hvac systems
 - non-electric water treatment
- Home Water Solutions:
 - drinking water systems
 - whole house softening & filtration
- Vacuums
 - central vacuums (existing & new construction)
 - locally made upright Riccar/Simplicity sales & service