Denver Radon Testing

Dave Wilson
Phone: 303-947-5220
Email: denverradontesting@gmail.com
Website: www.denverradontesting.com

Radon Test Results

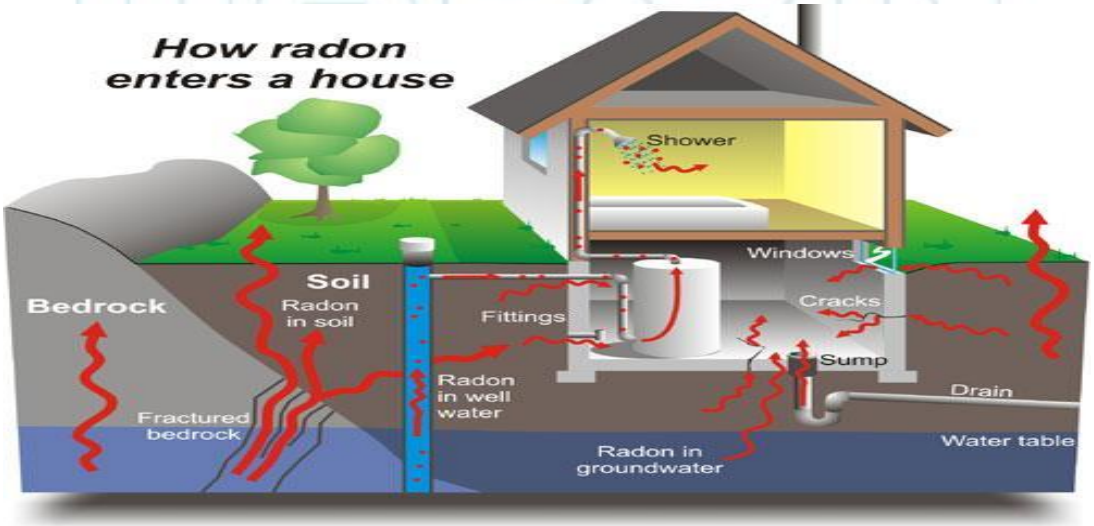
RADON INSPECTION:

Radon gas is a colorless and odorless gas released into the ground as a result of uranium decay. This invisible gas can be hazardous to your health in an enclosed structure. The radon inspection report is attached. The radon testing requires air sampling by an electronic radon monitor over a period of 48 hours.

The US Environmental Protection Agency (EPA) and the Surgeon General strongly recommend taking further action when the home's radon results are **4.0 pCi/L** or greater. The higher a home's radon level, the greater the health risk to you and your family. Smokers and former smokers are at higher risk. There are very straightforward methods for lowering the radon levels that can be performed for reasonable cost. Even homes with very high levels can be equipped to reduce those levels to below the EPA actionable level of **4.0 pCi/L.** Radon Test

Detailed information about radon and the health effects of radon and the proper steps to take to make your home safe can be found at the web site of the EPA - The address is: http://www.epa.gov/radon/pubs/hmbyguid.html#6.c.

The radon levels have been determined to be above a level for which the EPA recommends action be taken. (Your Average 4.5 pCi/L)



The gas can seep into the house in a variety of places:

- Foundation wall cracks; Between floor tiles; Packed earth floors; Construction seams; Gap around pipes and support posts; Crawl spaces, drains and sump holes.

Address: **Your Address Here**

Location of Instrument – Basement Family Room

RadStar RS300 Radon Detector/Monitor

Version 1.7 Serial#: 03557 Calib.#: 29000 TestID#: 30006

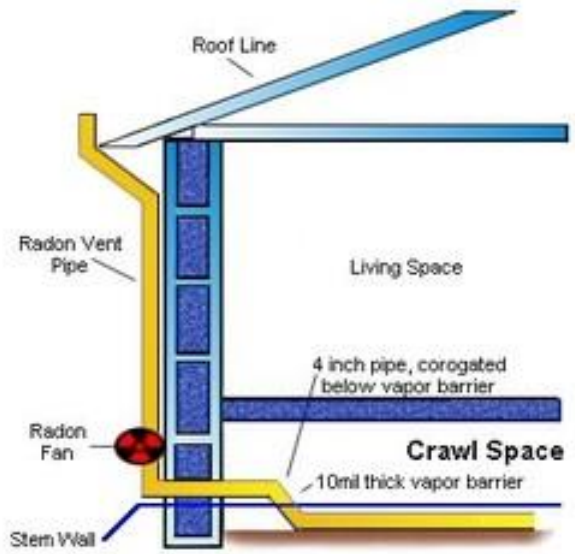
Interval Report

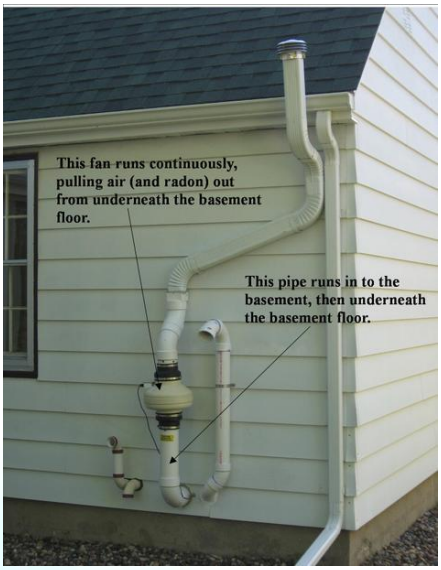
Hour	T	B	AC	Alpha pCi/L	Hour	T	B	AC	Alpha pCi/L	Hour	T	B	AC	Alpha pCi/L
001		*	0017	000.8	017		*	0074	003.6	033		*	0110	005.4
002		*	0043	002.1	018		*	0055	002.7	034		*	0138	006.8
003		*	0064	003.1	019		*	0063	003.1	035		*	0125	006.2
004		*	0079	003.9	020		*	0053	002.6	036		*	0105	005.2
005		*	0098	004.8	021		*	0052	002.5	037		*	0090	004.4
006		*	0119	005.9	022		*	0061	003.0	038		*	0078	003.8
007		*	0106	005.2	023		*	0079	003.9	039		*	0068	003.3
008		*	0110	005.4	024		*	0084	004.1	040		*	0077	003.8
009		*	0134	006.6	025		*	0091	004.5	041		*	0065	003.2
010		*	0154	007.6	026		*	0092	004.5	042		*	0074	003.6
011		*	0144	007.1	027		*	0095	004.7	043		*	0072	003.5
012		*	0139	006.9	028		*	0094	004.6	044		*	0065	003.2
013		*	0113	005.6	029		*	0094	004.6	045		*	0047	002.3
014		*	0118	005.8	030		*	0112	005.5	046		*	0078	003.8
015		*	0081	004.0	031		*	0109	005.4	047		*	0090	004.4
016		*	0079	003.9	032		*	0107	005.3	048		*	0105	005.2

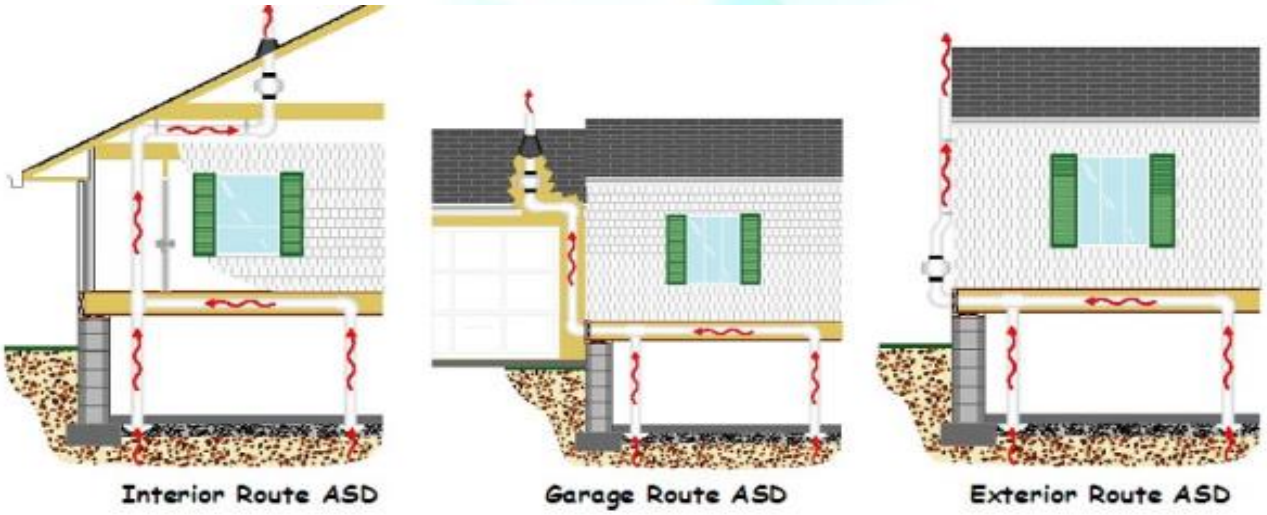
Avg: 004.5 pCi/L
Max: 007.6 pCi/L
Min: 002.3 pCi/L

Start Date/Time – 04-05-14 2:00 pm - End Date/Time – 04-07-14 2:00 pm

Different ways to Mitigate a Home if needed.







Crawlspace Foundations/Or Basement Dirt Floor Areas:

Crawlspace Sub-Membrane Suction is an effective method to reduce radon levels in crawlspace houses. It involves covering the earth floor with a high-density plastic sheet or radon barrier. A vent pipe and fan are used to draw the radon from under the sheet and vent it to the outdoors. When properly applied is the most effective way to reduce radon levels in crawlspace houses. If regular cheap plastic sheeting is used it can become brittle in just a few years and need replacement; for this reason high quality radon barriers are recommended. See picture below, before and after the radon barrier sheeting has been installed.

Active Crawlspace Depressurization involves drawing air directly from the crawlspace using a fan. This technique generally does not work as well as sub-membrane suction and requires special attention to combustion appliance back drafting and sealing the crawlspace from other portions of the house, and may also result in increased energy costs due to loss of conditioned air from the house.

Passive Crawlspace Ventilation is when the crawlspace is passively ventilated (without the use of a fan). Crawlspace ventilation may lower indoor radon levels both by reducing the home's suction on the soil and by diluting the radon beneath the house. Passive ventilation in a crawlspace is achieved by opening vents, or installing additional vents.

Active Crawlspace Ventilation is when the crawlspace is ventilated actively (with the use of a fan). Crawlspace ventilation may lower indoor radon levels both by reducing the home's suction on the soil and by diluting the radon beneath the house. Active ventilation uses a fan to blow air through the crawlspace instead of relying on natural air circulation.

Basement and Slab on Grade Foundations:

Active Sub-Slab Suction (also called subslab depressurization) is the most common and usually the most reliable radon reduction method. One or more suction pipes are inserted through the floor slab into the crushed rock or soil underneath, (can also be used on crawl space areas with poured concrete floors). They also may be inserted below the concrete slab from outside the house. The number and location of suction pipes that are needed depends on how easily air can move in the crushed rock or soil under the slab, and on the strength of the radon source. Often, only a single suction point is needed. A radon vent fan connected to the suction pipe(s) creates suction, drawing radon gas from below the house and releases it into the outdoor air while simultaneously creating a negative pressure (vacuum) beneath the slab. Basically it removes the radon from under the building before it ever has a chance to enter. Common fan locations include unconditioned house and garage spaces, including attics, and the exterior of the house.

Passive Sub-slab Suction is the same as active sub-slab suction except it relies on natural pressure differentials and air currents instead of a fan to draw radon up from below the house. Passive subslab suction is usually associated with radon-resistant features installed in newly constructed homes. Passive subslab is generally not as effective in reducing high radon levels as active subslab suction.

Drainage System Depressurization also known as drain tile suction is used on houses or buildings that have drain tiles or perforated pipe to direct water away from the foundation of the house. Suction on these tiles or pipes is often effective in reducing radon levels. This system is most effective if the drain tiles or pipe are on the inside of the footer and form a complete loop around the foundation of the building.

Sump Hole Suction is a variation of sub slab and drain tile suction. Often, when a house with a basement has a sump pump to remove unwanted water, the sump can be capped so that it can continue to drain water and serve as the location for a radon suction pipe. It is important that the sump cover lid is readily removable for service of the sump pump. The sump cover needs to maintain an air-tight seal to prevent conditioned air from being pulled into the radon vent pipe. A sump cover is prepared for installation; the small diameter pipe is to discharge water from the sump pump, the larger pipe is for radon suction. There is a clear section for viewing beneath and a one way drain installed in the cover for draining a dehumidifier or furnace condensate drain line. This cover is fairly easy to remove and everything is air tight.

Block Wall Suction can be used in basements with hollow block foundation walls. This method removes radon from the hollow spaces within the basement's concrete block wall and is often used in conjunction with sub slab suction.