

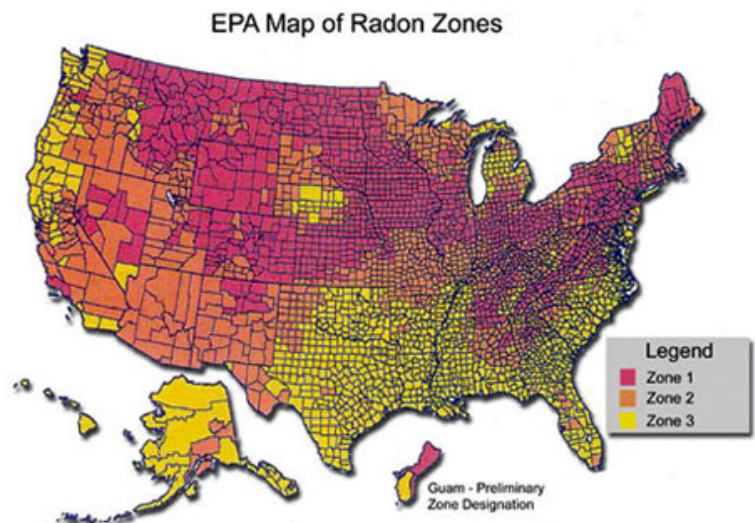


Position paper from the American Association of Radon Scientists and Technologists (AARST) on the installation of Radon Resistant New Construction (RRNC) features in new homes.

Executive Summary: AARST encourages the installation of Radon Resistant New Construction (RRNC) features during construction of every new home or during any structural remodeling of existing homes, especially in EPA Zones 1 & 2. Further, AARST strongly recommends that all homes should be tested for elevated levels of radon after completion of construction. AARST acknowledges that RRNC features in a home that include a confirmatory radon test can be promoted to consumers as a healthy feature of the new home. AARST also recognizes that additional benefits, including the reduction of basement dampness and other soil gases in homes, may be derived from the activation of an RRNC system.

Radon:

Radon is a colorless, odorless, radioactive gas that occurs naturally in all parts of the US. Radon is a “group A” carcinogen and the leading cause of lung cancer in non-smokers. Radon is estimated to be responsible for the death of about 21,000 people in the United States every year. Radon concentrations are reported in picocuries per liter (pCi/l), which is a measure of radioactivity in a volume of air. The only way to determine the concentration of radon in a home is to perform a test. The USEPA currently has an action level of 4 pCi/l and homes that test at or above that level should be mitigated to reduce the radon concentration as low as practical.



Radon Resistant New Construction:

The rough-in of Radon Resistant New Construction (RRNC) features in a home is best accomplished during the time of new home construction. RRNC features include: a gas permeable layer, such as crushed stone, under all concrete slab floors in contact with the soil; a 6 mil polyethylene vapor barrier placed on top of the gas permeable layer; sealing of the floor-wall joint and other openings in the slab; PVC pipe run as a duct from a tee fitting in the gas permeable layer, through the house and out the roof of the home; and an electrical outlet and adequate room for a radon fan in the attic space of the home for activating the system, if needed. Rough-in RRNC features are prescribed in International Residential Code, Appendix-F (Radon Control Methods); NFPA 5000, Chapter 49; CABO, Appendix-F

Radon Testing:

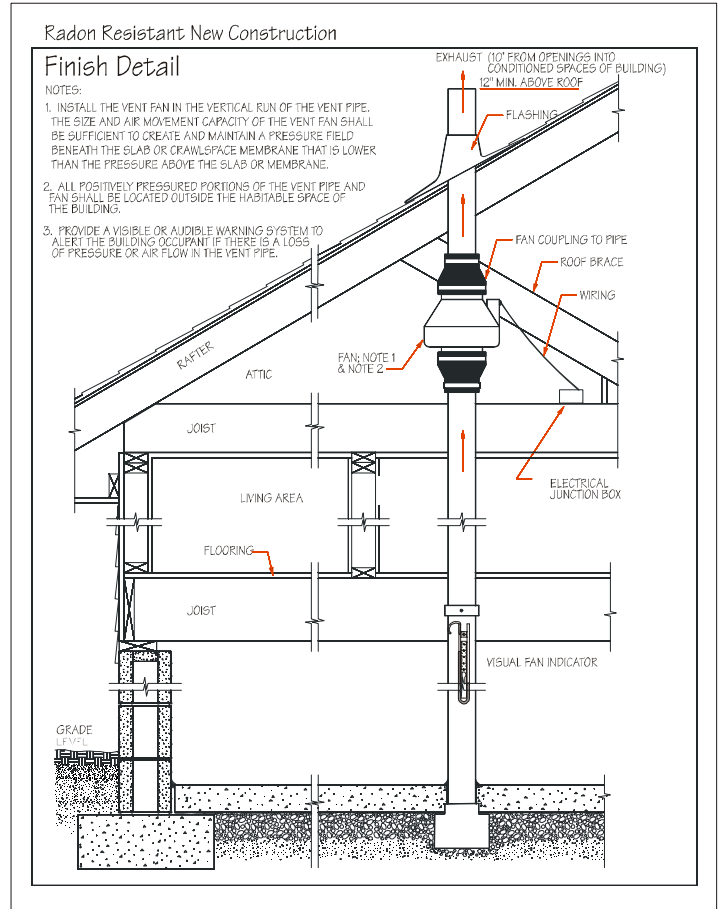
Radon testing should be performed prior to occupancy of the home, after the home is completed and can be closed up and conditioned. Testing is the only way to confirm whether elevated levels of radon are present in the home. No assumption can be made regarding the radon reduction performance of RRNC features without testing. It is highly recommended to have your home tested by a licensed or certified radon measurement professional or at a minimum, provide two (2) test kits from a NEHA-NRPP-listed lab to the home buyer for a confirmatory radon test.

Activation:

When testing indicates a radon concentration at or above the USEPA action level of 4 pCi/l, then a fan should be cut into the pipe in the attic to make the system an Active Soil Depressurization System (ASD). An Active Soil Depressurization System uses a small inline fan to ventilate the gas permeable layer and remove radon before it can enter the home. A pressure gauge provides visual indication to the homeowner of fan operation. System activation should always be performed by a radon mitigation professional. Many states have regulations regarding radon testing and mitigation. You can find a certified radon measurement or mitigation professional in your area at www.radongas.org or you can contact your state radon office.

Moisture and other Soil Gases:

An Active Subslab Depressurization radon control system has also been shown to reduce basement or crawlspace dampness http://www.epa.gov/radon/pdfs/moisturestudy/study_main.pdf, as well as, volatile organic compounds (VOCs) and other soil gases. This reduction of moisture and other soil gases in the home can have a significant health benefit for occupants.



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