



Kansas Radon Program

Engineering Extension
Kansas State University
800-693-5343

<http://radon.oznet.ksu.edu>

***Encourage
both buyers
and sellers to
test for radon!***

***Results of a radon
test from one
house cannot
predict results in
another. Testing of
radon levels in
each home sold is
the only way to
provide the parties
involved in a real
estate transaction
with a level of
confidence about
potential radon
exposure.***

Considering Radon in Real Estate

Radon as a real estate issue

As a real estate professional, you must have a strong familiarity with radon in order to properly advise your clients about it in the buying and selling of homes. Radon, a naturally occurring soil gas that can infiltrate homes, is a known human carcinogen and is the second leading cause of lung cancer behind tobacco smoking. As such, many clients will want to know the radon levels of the homes they are buying in order to make the most fully informed decision possible. It is likely that they will judge your knowledge and attitude concerning radon, and it is possible that clients will walk away from a purchase if home radon testing (and if necessary radon reduction) is handled poorly. Knowledge about radon can help real estate professionals avoid potential problems.

As such, radon may provide a stumbling block in the sale or purchase of a home. It is therefore best to raise this issue with the buyer as soon as interest in a given home is expressed. This provides the buyer(s) the opportunity to ask any questions concerning radon he or she might have and decide if radon testing is something desired. Getting a reliable test that satisfies both buyer and seller is not too difficult in most urban areas, but may be a challenge in rural areas of Kansas.

Is radon a problem in Kansas?

In a 1987-1988 Kansas Department of Health and Environment/U.S. Environmental Protection Agency radon survey of 2,031 homes in Kansas, the average radon level was 3.2 picocuries per liter

(pCi/l) of air. More than **25 percent** of the homes measured had short-term (two-day average) radon levels greater than 4 pCi/l, a level that warrants further action. In some areas of Kansas, the percentage of homes with test results more than 4 pCi/l exceeded **40 percent**.

Radon testing during a real estate transaction

Buyers usually instigate the testing. If radon levels are unacceptably high (i.e., the EPA guideline is 4 pCi/l or more), they want to know. The buyer may pay for the cost of the test, but often expects the seller to pay for the radon-reduction system, if necessary. The buyer may also want to know radon levels in an area of the home the seller might not otherwise test.

The seller or real estate agent can be held legally liable if either knows the radon level in the house and fails to reveal, in a reasonable fashion, information that may be important to a buyer making decisions.

As there are currently no laws in Kansas requiring certification or licensing of individuals conducting radon testing or contracting services, having the test conducted by a radon professional measurement specialist listed in a national Radon Measurement Proficiency program, such as **National Environmental Health Association (NEHA)** [see www.neha.org] or **National Radon Safety Board (NRSB)** [see www.nrsb.org], is the best bet for a valid test. It is possible that a qualified testing service is not available in your area. In this instance the buyer or an

Surgeon General of the United States Health Advisory:

“Indoor radon gas is a national health problem. Radon causes thousands of deaths each year. Millions of homes have elevated radon levels. Most homes should be tested for radon. When elevated levels are confirmed, the problem should be corrected.”

agent of the buyer may perform the radon test using one of the following techniques described in the EPA's *Home Buyer's and Seller's Guide to Radon*.

Sequential radon testing is performed by placing a single-use short-term radon test kit in an appropriate location. Immediately following the collection of that test kit, a second test kit of the same type is deployed. Results from the two test kits are averaged to determine the need for radon mitigation. **Simultaneous radon testing** is performed by placing two single-use short-term radon test kits in an appropriate location at the SAME TIME and using the averaged results of the two kits to determine the necessity of radon mitigation. The key to an accurate test is following test kit directions and the EPA radon measurement protocols.

A common misconception of many sellers is that radon problems are not easily fixable and therefore will lower home value. As such, there have been cases of tampering with measurement devices or test conditions to artificially achieve low-test results. However, surveys have shown that radon does not significantly influence the value of homes once mitigation systems are installed.

Radon mitigation during a real estate transaction

If you are buying a home, there is no reason not to buy one with a radon problem if it meets many or all of your other criteria. Typical radon-reduction costs much the

same as other home repairs (from \$800 to \$2,000). Because increased risk comes from long-term exposure, there is ample time to reduce radon levels before you spend significant time (months and

years) in the same home.

The standard type of radon mitigation (or reduction) is called **active soil depressurization (ASD)**, see Fig. 1, which is a complicated term for the process of creating a vacuum beneath the foundation of a home that is stronger than the vacuum generated by the house itself. The ASD system is composed of a vent shaft, a suction fan, and a system monitor. The vent shaft extends through the foundation of the house into a small pit dug out by hand. This shaft is usually constructed of polyvinyl chloride (PVC) plastic pipe and is typically three to four inches in diameter. The shaft extends either up through the house and is exited through the roof, or it is routed to the outside of the house and vented above the eaves of home. The suction fan generates the vacuum that helps to draw the radon to the vent shaft and draws the gas up the shaft, venting it into the atmosphere above the home. The system monitor is typically a u-shaped manometer, which provides visual proof that the suction fan is indeed creating a vacuum.

It should be noted that ASD radon reduction systems can be adopted to any type of housing foundation, including homes with basements, homes built on slabs, homes built over crawl spaces, or homes with mixed foundation types.

Additional information

The Kansas Radon Program can provide your area with a Radon for Real Estate Professionals half-day seminar, which is certified for three hours of continuing education hours for your real estate license. Contact the Kansas Radon Program for details and scheduling. For a list of radon measurement and mitigation contractors and a description of the guidelines contractors should follow, call the Kansas Radon Program at **1-800-693-5343**. General information related to the Kansas Radon Program can be found at <http://radon.oznet.ksu.edu>.

EPA document site

For a list of all available EPA documents on radon and the **Home Buyer's and Sellers' Guide** in particular, go to EPA's Web site at <http://www.epa.gov/iaq/radon/pubs/index.html>.

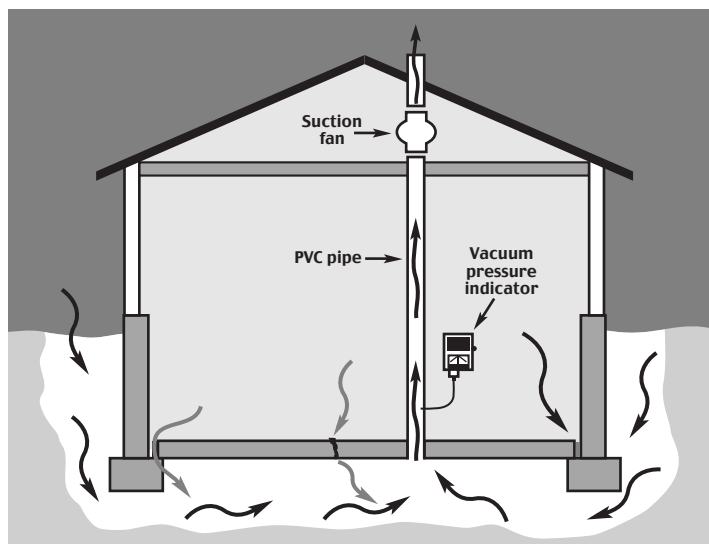


Fig. 1. Active soil depressurization (ASD)