

Community concern or issue: *Radon Exposure* in homes and buildings

How does this issue impact citizen health or the environment?

Radon gas is a naturally occurring gas created when uranium in the soil “decays.” Radon is also a radioactive gas that continues to breakdown, releasing other harmful “daughter particles” of alpha and beta radiation that can easily get into human body by inhalation. Whenever you breathe in air containing radon, it increases your risk of getting lung cancer. Background readings are found everywhere in the environment and levels increase where structures contact the ground, such as basements. Radon enters the structure through cracks in foundations or walls, basement floors, and in water supplies (such as private wells). Radon is directly linked to increased risk of lung cancer and is the second leading cause of lung cancer in the United States today.

Existing controls or standards

The Environmental Protection Agency (EPA) has set 4 picocuries per liter of air (pCi/L) as the recommended maximum level for radon in indoor air. They further recommend remediation in homes that have a level of 2 pCi/L. Since July 1, 2009, Kansas law requires real estate contracts to contain a “disclaimer” stating the property may present exposure to radon gas and that it places the occupant at risk for lung cancer. The law requires all information known to the seller about radon gas in the home to be disclosed to the buyer. The Kansas Department of Health and Environment recommends all homes sold be tested for radon.

How is this issue impacting our community?

In 1988, the Salina-Saline County Health Department offered radon test kits to the community. Results showed that 64% of the homes tested contained radon levels over 4 pCi/L – the recommended level above which EPA does not want exposure; 85% of the homes

tested had greater than 2 pCi/L, where EPA recommends that remediation start. The survey was voluntary and done by concerned citizens. Citizens had to purchase their own test kits; therefore, results may not represent a cross section of the community. This leaves a gap in knowledge about radon levels in sections of the city with rentals, lower income individuals, and in older homes. Almost 80% of the homes in the city of Salina were built before 1978.

What factors and behaviors contribute to this problem?

The percentage of homes that could be impacted with elevated radon is quite large. Since radon enters a home through openings where there is contact with the soil, those who have older basements with cracks, old drains, and sump pump openings run the risk of having higher levels of radon. Few contractors are trained in radon mitigation or home construction with radon-resistant features. New homes are not built to exclude radon and older homes have few choices for contractors to mitigate existing radon problems. Lower income home owners and renters have even fewer options.

Potential solutions – how can the community help with this issue?

Our community would benefit from training for contractors, education for homeowners and landlords, education for the general public to raise awareness, and more radon testing in high-risk and untested areas to identify homes that need intervention as soon as possible.