

Radon in Minnesota Homes

Pre-reading

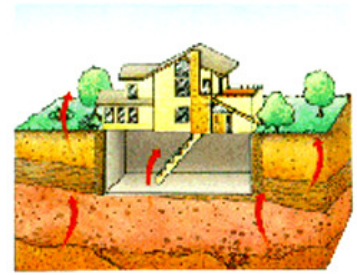
Questions: What do you know about radon? What is it and where is it?

Definitions: Assessment – an analysis or study of something

EPA – Environmental Protection Agency

Geology – the rocks, minerals and soil of a specific place

MDH – Minnesota Department of Health



Reading

A recent risk assessment from the EPA states that radon causes 21,000 premature cancer deaths each year in the United States. The U.S. Surgeon General has warned that radon is the second leading cause of lung cancer in the country – second only to smoking. For non-smokers, radon is the number one cause of cancer.

Radon is a radioactive gas. It continuously decays and releases radiation. It is produced from minerals in soil such as uranium and radium. Radon is present throughout the environment. However, when high levels are present indoors, people are exposed to more of its radiation and their risk of cancer increases.

Radon is a common problem in Minnesota homes. Why? Much of the soil in the Upper Midwest contains widespread uranium and radium. These minerals break down to release radon gas. Therefore, Minnesota's geology provides an ongoing supply of radon.

In addition, a large percentage of Minnesota homes have high levels of radon in the indoor air because of how they are built and how they operate in the climate. Plus, many of the state's homes have basements that are used as living spaces.

Because it is a gas, radon is able to move through spaces in the soil around a home's foundation. Minnesota homes tend to operate under a negative pressure. This is especially true in the lowest portions of the homes and during the heating season.

This negative pressure acts as a vacuum (suction) that pulls soil gases into the lower level of the structure. Some causes of home vacuum are: heated air rising inside the home; wind blowing past a home; air used by fireplaces, wood stoves and furnaces; and, air vented to the outside by clothes dryers and exhaust fans in bathrooms, kitchens or attics.

Radon can enter the home through the floor and walls or anywhere there is an opening between the home and the soil. Such openings could include dirt floor crawl spaces, unsealed sumps, cracks in slab-on-grade floors, and the tiny pore spaces in concrete block walls. A basement, of course, provides a large surface area that contacts soil material.

Radon is colorless, odorless and tasteless. Therefore, a radon test is the only way to find out how much radon is in your home. Radon tests are easy and inexpensive. Contact the MDH Indoor Air Unit to find out where to obtain radon test kits and how to use the kits. The phone number is 800-798-9050.

Source: MN Department of Health (MDH) website - <http://www.health.state.mn.us/divs/eh/indoorair/radon/index.html>

Level 7.0

Understanding

1. Why is radon hard to detect? _____

2. Where is the most likely place to find radon in a home? Why there? _____

3. What is radon? Where does it come from? _____

4. How does radon enter a home? _____

5. Why should people be concerned about radon? _____

6. Which state has a lot of radon? Why? _____

7. How can people test for radon? _____

8. When are home radon levels usually the highest? Why? _____

Writing

Option A: Summarize the reading in your own words.

Option B: Have you checked the radon level in your home? If yes, write about how you did it. What were the results?
