



FNNBOA
First Nations National
Building Officers
Association
5717 Old Hwy #2
P.O. Box 219
Shannonville, ON | K0K 3A0
Tel: (902) 895-6385 ext 254
e-mail: info@fnnboa.ca

Eagle's Eye on Housing: New Indoor Radon Guideline

Radon is a colourless, odourless radioactive gas found naturally in the environment. It is produced by the natural breakdown of uranium commonly found in soils and rocks. Because radon is a gas, it can easily move through small spaces in soils and other materials, allowing it to enter the air we breathe, both outdoors and inside buildings. In the outdoors, radon mixes with large volumes of fresh air and is diluted to low concentrations. However, if radon enters an enclosed or poorly ventilated space in a building, it can accumulate to levels that can pose a risk to health.

Exposure to radon increases the risk of developing lung cancer. This has prompted concern that radon levels in some Canadian homes and buildings may be a health risk. Radon gas is measured in units called becquerels per cubic metre (Bq/m³). It is estimated that about 10% of all lung cancers worldwide are related to radon exposure. The level of the risk depends on the amount of radon present, the length of time you are exposed and whether or not you smoke. For example, at a radon level of 200 Bq/m³; a smoker with 70 years of exposure has a 17% risk of developing lung cancer compared to 2% for a non-smoker. In comparison, at a radon level of 800 Bq/m³ the risk for a smoker increases to 30% and 5 % for a non-smoker.

Health Canada's guideline for exposure to radon is based on the best available scientific evidence of health risk. In 1988, a guideline of 800 becquerels per cubic metre was established in Canada. After considering new evidence about radon and the risk of lung cancer, Health Canada, in partnership with the provinces and territories, proposed new guideline of 200 becquerels per cubic metre, which is four times more stringent than the previous one. This new guideline was adopted in June 2007. The guideline recommends that:

- Remedial measures be taken in a dwelling whenever the average annual radon concentration in the normal occupancy area exceeds 200 becquerels per cubic meter.
- The higher the radon concentration, the sooner remedial measures should be taken.
- When remedial action is taken, the radon level should be reduced to a value as low as practicable (i.e., reduced as much as possible using methods that are cost-effective).
- The construction of new dwellings should employ techniques that will minimize radon entry and will facilitate post-construction radon removal, should this subsequently prove necessary.

Currently available information suggests that high radon levels are not widespread in Canadian homes. However, it is difficult to predict the level of radon in any one home as we cannot use generalized information to conclude that any or all houses in a given location will have the same level of indoor radon. First Nations communities that are concerned about exposure to indoor radon might consider testing the levels in their buildings, including houses. Where First Nations communities express an interest in



surveying their housing stock for this purpose, Health Canada Environmental Health Services will assist communities in planning their testing and sampling approach, and provide guidance on the proper deployment of detectors.

For additional information on radon visit Health Canada's Radon website at:

www.hc-sc.gc.ca/iyh/vsv/environ/radon_e.html

www.hc-sc.gc.ca/ewh/semt/radiation/fpt/radprotect/index_e.html

FNNBOA
First Nations National
Building Officers
Association

5717 Old Hwy #2
P.O. Box 219
Shannonville, ON | K0K 3A0
Tel: (902) 895-6385 ext 254
e-mail: info@fnnboa.ca