

## **Radon Gas**

February 2018

Radon is a colourless, odourless and tasteless radioactive gas that is formed naturally in the ground by the breakdown of uranium in soil, rocks and water. Radon gas breaks down further to form radioactive particles "progeny" that can be breathed into the lungs. As a gas, radon is slowly released from the ground, water, and some building materials that contain very small amounts of uranium, such as concrete, bricks, tiles, gannet, and gyproc. Radon gas and radon progeny in the air can be breathed into the lungs where they breakdown further and damage lung cells. When lung cells are damaged, they have the potential to result in cancer when they reproduce.

When radon is released from the ground outside it mixes with fresh air and gets diluted resulting in concentrations too low to be of concern. Buildings can act like a vacuum for underground gases. When air is pushed out of the structure, air containing radon is sucked in through cracks in foundation walls, floors, joints, gaps around service pipes, support posts, floor drains, sump pumps, and the water supply. Radon concentrations fluctuate seasonally, but are usually higher in winter than in summer, and are usually higher at night than during the day.



## DANGERS

In March of 2012 a cross-Canada survey of Radon Concentrations in homes was completed. In Saskatchewan an average of 16.3% of all homes were above the recommended limit of 200Bq/m3, with locations in the South of the province above 25% contamination.

On average, 16% of lung cancer deaths are attributable to radon exposure in Canada. If you are a lifelong smoker but are not exposed to radon, your risk of getting lung cancer is one in ten. If you add radon exposure, your risk becomes one in three. For non-smoker, your lifetime lung cancer risk at the same high radon level is only one in twenty.



## **TESTING AND REGULATION**

There are two options for testing for radon: one is to purchase a do-it-yourself radon test kit and the other is to hire a radon measurement professional. The Canadian guideline for radon in indoor air dwellings is 200 Bq/m3. If testing shows levels of radon above this threshold, remedial measures should be taken

Federal employees are governed by the Canada Labour Code (CLC) which requires the Government of Canada to ensure that its workers are not exposed to high levels of radon. Other work-places are governed by the Naturally

Occurring Radioactive Material Guidelines. There is no legal requirement for employers or landlords to test. The Canadian National Radon Proficiency Program for a list of companies that are certified to do radon monitoring and mitigation -

http://c-nrpp.ca/



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When accidents and incidents happen on the jobsite, we are always quick to point the finger at lack of training, not following practices or procedures, or even improper supervision. The idea that the hazards and dangers associated with the job were not properly communicated to all of the workers is often missed.

Tool Box Talks can go by many names, and although formats may vary, these meetings all serve one purpose: to inform employees and contract workers. Tool Box Talks are short, informal, meetings between management and the

workers on a jobsite. The goal of these meetings is to reinforce current safe job procedures, inform workers of new and/or relevant procedures, review recent safety violations/incidents, and ensure workers are up-to-date on the information required to complete their work safely.

Always use a Tool Box Talk form to record the meeting topic, date, who was in attendance, and any follow-up actions to be taken. Not only do these forms help with consistency of record keeping, but they also ensure that nothing is missed. At the end of the meeting have management sign off on the form.



One of the most important aspects of a Tool Box Talk is giving

workers an opportunity to voice their concerns and ask questions. All employees have a right to participate in health and safety as it relates to their work and it is the supervisor or manager's responsibility to create an environment for them to do so. Once the meeting is over, and the form is filled out, it should be filed with other documented Tool Box Talks. Remember that Tool Box Talks are short and informal, they are not meant to be intimidating. Use the opportunity to have fun and stay on top of what is necessary to keep safety culture a strong part of the business.

For a full listing of Tool Box Talk topics, visit: www.scsaonline.ca/resources/tool-box-talks

For a copy of the Tool Box Talk form, visit: www.scsaonline.ca/pdf/Tool\_Box\_Meeting.pdf

## ABOUT THE SASKATCHEWAN CONSTRUCTION SAFETY ASSOCIATION

The Saskatchewan Construction Safety Association (SCSA) is an industry-funded, membership-based, nonprofit organization that provides cost-effective, accessible safety training and advice to employers and employees in the construction industry throughout the province to reduce the human and financial losses associated with injuries. Registered March 20, 1995, the SCSA is, and has been since inception, committed to injury prevention. Serving almost 10,000 member companies with business offices in both Regina and Saskatoon, the major business units of the association are Advisory Services, Business Development, Corporate Services, Program Services and Training. The mission of the SCSA is constructing safety leadership in Saskatchewan and the vision is to create the safest construction environment in Canada.



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