



June, 2017

**Air Quality in School District No. 57 (Prince George) Schools,**  
**Volunteer Radon Gas Screening, 2016-17**

In June 2016, the School District No. 57 (Prince George) Board of Education approved the use of \$32,000 from surplus funds to be used for the purposes of completing voluntary radon gas screening. Central Interior Building Consultants Inc. were engaged to conduct the investigation during the fall and early winter of the 2016-17 academic year. Detection kits were deployed throughout occupied schools as well as the Central Administration Office.

What is Radon?

*Radon is a radioactive gas that is formed naturally by the breakdown of uranium in soil, rock and water. It cannot be detected by the senses; i.e., you cannot see it, smell it, or taste it. However, it can be detected easily with radon measurement devices. When radon escapes from the ground to the outdoors, it mixes with fresh air, resulting in concentrations too low to be of concern. When radon enters an enclosed space, such as a building, it can accumulate to high concentrations and become a health concern. Radon can enter a building any place it finds an opening where the building contacts the soil... The only known health risk associated with long-term exposure to radon is an increased risk of developing lung cancer. The level of risk depends on the concentration of radon and duration of exposure.*

Health Canada (January 2016). *Guide for Radon Measurements in Public Buildings*. Her Majesty the Queen in Right of Canada.

[http://www.hc-sc.gc.ca/ewh-semt/pubs/radiation/radon\\_building-edifices/index-eng.php](http://www.hc-sc.gc.ca/ewh-semt/pubs/radiation/radon_building-edifices/index-eng.php)

**Health Canada Standards:**

The following guidelines were adopted by the Government of Canada on June 9, 2007:

*Remedial measures should be undertaken in a dwelling whenever the average annual radon concentration exceeds 200 Bq/m<sup>3</sup> in the normal occupancy area.*

*The higher the radon concentration, the sooner the remediation measures should be undertaken. When remedial action is taken, the radon level should be reduced to a value as low as practicable.*

*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.*

**Health Canada recommendations for remedial action:**

1. **Remediate within 2 years:** Results between 200 and 600 Bq/m<sup>3</sup>, Health Canada recommends taking steps to reduce the radon within 2 years.
2. **Remediate within 1 year:** Results greater than 600 Bq/m<sup>3</sup>, Health Canada recommends taking steps to reduce the level within 1 year.

[http://www.hc-sc.gc.ca/ewh-semt/pubs/radiation/radon\\_building-edifices/index-eng.php](http://www.hc-sc.gc.ca/ewh-semt/pubs/radiation/radon_building-edifices/index-eng.php)

**School District No. 57 (Prince George) Radon Screening Initial Results:**

Results of the initial long-term measurement were encouraging. The majority of school district schools tested below Health Canada's acceptable levels of 200 Bq/m<sup>3</sup>, with 39 of the 46 sites screened reporting 0 Bq/m<sup>3</sup> readings of radon gas. A few site results were, however, above Health Canada's recommended threshold, thus further investigation was conducted.

**Please see following links:**

[Radon Testing Mitigation Report January 2017](#)

[Recommendations for Radon Screen Results Central Interior Building Consultants Inc.](#)

**School District No. 57 (Prince George) Radon Screening Further Investigation Results:**

Further radon screening investigation was conducted in identified sites. Results confirmed that the building ventilation systems affect the radon levels accordingly with the amount of fresh air supplied to areas. Fully operational ventilations systems reduce the levels of radon gas detected to within Health Canada threshold guidelines.

**Ongoing Commitment to Air Quality:**

Continuing work recommended by Hardy Nickel, Central Interior Building Consultants Inc., will determine the optimum usage of ventilation systems when staff are working after regular school schedules.

**Please see following link:**

[April 3, 2017 Radon Testing Report and Recommendation](#)