



Radon Testing in Schools Project – Frequently Asked Questions

In response to the Government of Canada radon guideline changes and a cross-Canada radon survey indicating radon was more prevalent throughout Canada than initially understood, Elk Island Public Schools (EIPS) initiated a study in 2017 on radon levels within its schools. The study is helping the Division ensure radon levels in EIPS buildings remain as low as possible for students and staff.

What is radon?

Radon is an odourless and colourless gas. The gas is released when uranium—naturally present in rock and soil—decays.

How do you get exposed to radon?

Radon is found in all buildings; it's drawn into buildings through pressure differential between the ground and indoors. The gas can enter through unfinished floors, wall slab joints, sump pumps, windows, and cracks and openings in foundations.

Why is it a concern?

When radon gas is inhaled, it releases radioactive particles which cause damage to DNA in lung cells. Radon is the leading cause of lung cancer among non-smokers, and responsible for approximately 16 per cent of lung cancer deaths in Canada. In smokers, exposure to radon increases the chance of developing lung cancer from five per cent to 33 per cent.

Why are we testing EIPS buildings?

The Division is committed to ensuring safe learning and working spaces. As part of that commitment, we wish to ensure exposure to radon does not exceed Health Canada's guidelines and help ensure we can reduce the overall lifetime burden of radon exposure for students and staff.

At this point we have no reason to believe that radon is an issue in Elk Island Public Schools. While school testing is not mandatory in Alberta, the only way to know if there's a radon issue in a building is to do proactive testing. Health Canada now recommends all buildings, including homes and schools, be tested and remediated if necessary to ensure they have less than 200 Bq/m³ of radon gas.

If radon levels at school exceed guidelines, what are the risks?

Since radon is present in all homes and buildings, exposure in a particular classroom represents a small part of an individual's exposure over the year—approximately 12 per cent of time is spent at school—so there's no immediate health risk associated with exposure if elevated radon levels are found in an office or classroom. It's the Division's goal to help reduce exposure that may contribute to health issues over an individual's lifetime and to educate and encourage our staff and families to do proactive testing in their homes.

Which EIPS schools will be tested?

Testing in schools and central office began in 2017. Testing at all schools will be completed over the next two to three years.



How is radon tested?

An appropriate Health Canada sampling protocol is used to determine the long-term radon levels at each school site. Long-term radon samples are collected from all classrooms and offices located on the lowest level that are occupied for at least four hours per workday within each building.

The sampling involves hanging an Alpha Track Detector within each occupied classroom and office on the ground floor or lowest level. An “occupied” room is one in which an individual spends more than four hours per workday. The detectors are left in place for at least 91 days.

When long-term radon test results are close to or above guidelines (200 Bq/m³), a short-term test using a continuous radon monitor (CRM) is employed to determine the average radon concentration during school hours (8 a.m. to 4 p.m.). The purpose of the follow-up measurement is to determine if the daytime radon levels (those when students and staff are in the school) are the same as those from the long-term radon test results. The long-term test results are indicative of radon levels 24 hours a day. If ventilation systems are shut down when the school is not occupied, this could result in higher radon levels experienced during that time. The CRM allows one to conduct hourly measurements and to determine how radon levels vary, to more accurately estimate the radon exposure for students and staff.

What happens when radon is detected in a school or classroom?

EIPS’ Facility Services department will consult with a certified professional radon mitigation contractor to address the issue. Remediation typically involves the installation of a venting system that will draw radon gas from the ground beneath the building and exhaust it above the roofline where it will be quickly diluted. The classroom will be re-tested after the remediation is completed to ensure we’ve been successful in reducing radon levels as much as possible below the guideline.

For more information contact your school administrator or supervisor or visit:

- <https://www.canada.ca/en/health-canada/services/health-risks-safety/radiation/radon.html>
- <https://www.canada.ca/en/health-canada/services/environmental-workplace-health/reports-publications/radon-what-you-need-to-know.html>
- www.takeactiononradon.ca
- https://www.carexcanada.ca/radon_in_schools/