



## **EHS Radon Testing Procedures**

### **Radiation Protection Service**

#### **Overview**

Where appropriate, Environmental Health & Safety (EHS) will conduct additional radon measurements and testing for applicable U of T sites or buildings arranged through the Radiation Protection Service (RPS) and in consultation with Occupational Health and Safety. Due to the sedimentary nature of soil in Toronto and prior radon testing results, U of T buildings are not at a high risk of exposure from radon. The institutional radon testing program follows the guidelines and recommendations outlined in the Guide for Radon Measurements in Public Buildings published by Health Canada.

#### **Purpose**

The document outlines the risk-based criteria for determining if testing should be conducted.

#### **Request for Testing**

A request for radon testing can be submitted to EHS at [ehs.office@utoronto.ca](mailto:ehs.office@utoronto.ca). The request will be evaluated by the U of T Radiation Safety Officer (RSO) to determine whether the site or building is deemed appropriate for testing. If testing proceeds, the RSO will arrange testing through a Canadian – National Radon Proficiency Program (C-NRPP) testing service.

When determining whether a site or building with higher than normal occupancy should be tested, the RSO will consider relevant building/ventilation information and prior testing data within the vicinity of the site or building under consideration.

#### **Testing Procedure**

A U of T site or building that is deemed appropriate for radon testing will be evaluated by a C-NRPP certified radon testing service provider recognized by Health Canada. Measurements will be targeted to occupied rooms that are in direct contact with the ground (e.g., lower levels) while considering other factors. The RSO will work with the approved testing service to determine the most adequate areas for testing in accordance with established guidelines.

#### **Radon Levels Requiring Action**

If long-term measurements show that radon levels in the site or building are below 200 Bq/m<sup>3</sup>, further measurements are not necessary. The Health Canada guide recommends remediation of a building or site within two years if long-term radon levels are measured to be between 200 Bq/m<sup>3</sup> and 600 Bq/m<sup>3</sup>; and within a year if above 600 Bq/m<sup>3</sup>.



## Definitions

**Becquerel** – SI unit of measuring radioactive decay and is represented with the symbol Bq. A becquerel is defined as the number of radioactive disintegrations per second

**Normal occupancy** – refers to any part of the site or building where a person is likely to spend more than 4 hours per day

**Long-term testing** – radon level measurements that take place over a length of 3 to 12 months

**Radon** – is an elemental gas that results from the breakdown of uranium in soil and rock and is radioactive as it decays by emitting alpha-radiation

**Remediation** – a corrective action aimed at reducing radon levels through various techniques

**Sedimentary soil** – are a type of soil formed from the accumulation and compaction of sediment through natural processes. These soils are typically characterized by distinct layers of rocks and sediment.