Radon

The University of Rhode Island has implemented a comprehensive radon testing program to measure radon levels in its residence halls, administrative and academic buildings, and other University-owned buildings.

The University has adopted the EPA recommendation that radon levels in occupied buildings should not exceed 4 picoCuries/Liter (pCi/L) and to apply the 4 pCi/L guideline to all spaces regardless whether the use of the spaces was residential or occupational. URI is committed to a program of periodic retesting, mitigation and preventative maintenance of its mitigation systems.

Frequently Asked Questions

What is radon?
Radon is an odorless, colorless, radioactive gas that can cause lung cancer. It comes from the natural decay of uranium found in soil, rocks, and water, and sometimes penetrates buildings through their foundations.

Why does the University test for radon?
Though radon is common in the everyday living environment, the U.S. Environmental Protection Agency has set guidelines that recommend limiting residential levels to 4 pCi/L because of health risks associated with long-term exposure to high radon levels. The current average radon level in the State of Rhode Island is nearly three times the national average. More than one in four homes tested in Rhode Island has a radon level that the Environmental Protection Agency considers a health risk.

How does the University test for radon and what are the next steps if elevated levels of radon are found in a building?
The University of Rhode Island follows the measurement and mitigation protocols developed by the EPA and the RIDOH Rules and Regulations for Radon Control. These testing protocols include a combination of short- and long-term testing. Our University buildings fall under the EPA definition of Public and High Priority Buildings and must therefore test 10% of ground level rooms in each building every three years. All testing must be performed by a Rhode Island Certified Radon Measurement Professional. Short term testing is to be conducted during the months of October through March with closed building conditions. URI utilizes the liquid scintillation type of short term testing detectors which must be exposed for 48 - no longer than 96 hours before analysis.

If short term testing indicates levels of 4 pCi/L or greater in a location, these follow-up steps are taken:

- If the radon measurements during short term testing are found to be greater than or equal to 4 pCi/L but less than 20 pCi/L the University is required to begin follow-up testing within three (3) months using a long term testing device and to expose the measurement device for a minimum of one hundred and twenty (120) days and no more than one (1) year.
- If the short term measurement results are greater than or equal to 20 pCi/L but less than 100 pCi/L the University is required to begin follow-up testing within twenty (20) calendar days after receiving the short term results and expose the measurement device for a minimum of thirty (30) days but no longer than ninety (90) days.

Closed building conditions are not required during long term testing. Long term testing is to be conducted under normal living/working conditions. For long term testing URI utilizes alpha track devices. Alpha track detectors take into account all the changes in weather that occur during the radon gas test period, as well as the changes in the way you occupy/use the building under differing weather conditions. Any area of a public or high priority building having radon in excess of or equal to 4 pCi/L as determined by follow-up, long term measurements must be mitigated to a level below 4 pCi/L. After installation of a mitigation system, measurements shall be repeated in the mitigated room using short term test devices.

Surveillance testing will be repeated every three years in buildings not found to have elevated radon levels and every two years in buildings with radon mitigation systems in operation.

What is a radon mitigation system?

Radon mitigation is any process or system used to reduce radon concentrations in buildings. The goal of the radon mitigation system is to reduce the indoor radon level as low as reasonably achievable. All systems should reduce radon below the EPA action level of 4 pCi/L.

The type of radon mitigation system most commonly installed is a sub-slab depressurization system. Sub-slab depressurization systems work by creating a negative pressure under the building. The radon fan that is mounted outside of the building must run continuously in order for the system to work correctly to mitigate the radon from the building. The fan will pull the radon gas from under the building and routes the gas safely through the exterior piping where the gas exits the building out of the radon system's exterior stack.

I have a radon mitigation system installed in my building. What do I need to do or know about it?

Inspections and maintenance of campus mitigation systems is the responsibility of the URI Department of Environmental Health and Safety. EH&S Staff conduct and document quarterly inspections of each system to ensure its continued performance.

Very little maintenance is required for a properly installed radon system. Typically there are only two reasons for system failure, power loss to the fan and fan failure itself. If you suspect either of these have occured on a system in your building please contact URI EH&S at srm@etal.uri.edu to request an inspection or call the Control Center to generate a work order 401.874.4060.

Please note, radon mitigation systems are considered Life Safety Equipment. It is unlawful and potentially dangerous to tamper with life safety systems. Individuals responsible for tampering with radon mitigation systems are subject to University fines, paying restitution for the cost of restoring systems to proper functioning, and other disciplinary action as determined by the University.

If there are elevated radon levels in the building next to mine, does that mean there will be elevated levels in my building?
Not necessarily. Indoor radon levels vary from building to building, so it is not possible to make a reliable prediction. Do not rely on radon test results taken in other buildings nearby to estimate the radon level in your building. The only way to determine radon levels in a given building is to test.

Does the age of my building affect radon levels in the building?
The age of a building does not necessarily affect radon levels in a building. Although an older building is more likely to have crawl spaces exposed to the soil or cracks in the foundation that could allow the infiltration of radon into the building, some old buildings are less air-tight, which could prevent the build-up of radon. Additionally, if the geological make-up of the rock under the building doesn't contain much uranium, there is no reason to expect elevated radon levels in a building regardless of its age.

Is exposure to radon more hazardous for smokers?
Yes, radon exposure amplifies the risks associated with smoking. Many studies indicate that a significantly higher percentage of smokers than expected will develop lung cancer when compared to nonsmokers exposed at the same radon level.

What resources are available for additional information?
A Citizen's Guide to Radon (EPA)
Radon Fact Sheet (RI Department of Health)

If my question is not answered here, who can I contact at the University?
For questions about the radon testing program or to request results of radon testing please contact:
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