

FREQUENTLY ASKED QUESTIONS CONCERNING RADON TESTING IN SCHOOLS

By

The Ohio Department of Health Radon Licensing Program

1. Does the Ohio Department of Health (ODH) perform radon testing in schools?

No, ODH no longer conducts radon testing in schools.

2. Some schools and homes near us have reported finding no elevated radon levels. Do we still need to test for radon?

Yes. Since radon levels in buildings vary with local geology, building structure, and Heating, Ventilation and Air Conditioning (HVAC) system, schools in close proximity can exhibit dramatically different radon levels. The only way to know if the rooms in your school have elevated radon levels is to conduct radon testing in your school.

3. Who can test for radon in schools?

ODH licensed radon testers or mitigation specialists may test schools but they need to hold a current ODH radon tester or mitigation specialist license. They must also have a current quality assurance plan on file with the radon licensing program and be approved to use specific types of test devices.

School personnel – The Ohio Administrative Code (O.A.C.) 3701-69-02 (B)(2) states an individual, business entity, or government entity may perform radon testing on a building or real property that the individual, business entity, or government entity owns or leases. If the school owns or leases the building, then school personnel may test the school without holding a radon tester or mitigation specialist license. School personnel can only test in their own school district buildings without being properly licensed. ODH recommends school personnel conducting radon testing attend an ODH approved radon measurement course.

4. Do I need a radon license?

If you are offering radon testing, providing professional advice regarding radon testing, radon exposure, or health risks related to radon, or otherwise holding yourself out as a radon professional in Ohio, then you must have a valid radon tester or mitigation specialist license.

5. What is the difference between a “radon tester” and a “mitigation specialist”?

A radon tester is a person who is licensed to conduct radon testing. A mitigation specialist can also conduct radon testing, but also has the ability to perform radon mitigation system consultation and design work. These radon mitigation specialists may install radon mitigation systems only if they are employed by a company with a current radon contractor license.

6. Where can I find a licensed radon tester or mitigation specialist?

Contact ODH for a current list or find it on the web at the following address:

Phone: (800) 523-4439

<http://www.odh.ohio.gov/odhPrograms/rp/radlic/radon.aspx>

7. What type of radon measurement training is required or recommended?

Licenses are required to take an ODH approved initial radon training course and pass an ODH approved exam. The United States Environmental Protection Agency’s (USEPA) “[Radon Measurement in Schools](#)” document recommends that testing be conducted by school personnel that are qualified and trained. ODH recommends school personnel conducting radon testing attend an ODH approved radon measurement course. There are additional recommendations for schools outlined in Section II the USEPA’s “[Radon Measurement in Schools](#)” document that need be reviewed and considered.

8. What are the ODH radon licensing reporting requirements?

O.A.C. 3701-69-09(H) requires all licensed radon testers and mitigation specialists submit a report listing all tests completed within the quarter and the following information;

- (1) Name of occupant, street address, city, county, state and zip code;
- (2) Start and completion dates;
- (3) Test device used;
- (4) Type of test; and
- (5) Radon concentration reported.

O.A.C. 3701-69-09(I) requires the quarterly reports be submitted in accordance with the following timelines:

- (1) No later than April 15 for the time period of January 1 through March 31.
- (2) No later than July 15 for the time period of April 1 through June 30.
- (3) No later than October 15 for the time period of July 1 through September 30.
- (4) No later than January 15 for the time period of October 1 through December 31 of the previous year.

9. What Quality Assurance is required for radon testing?

Quality Assurance (QA) is a procedure that must be utilized throughout the testing process. This procedure is an integrated system of activities involving planning, quality control, quality assessment, reporting and quality improvement. When utilizing any device, the proper QA for that device is required. The objective of QA is to ensure that radon measurements are scientifically sound and of known precision and accuracy. Without QA, there is no way to ensure the data obtained is valid or accurate. When using passive test devices, duplicates, blanks, and spiked measurements are required at their respective frequencies. Specific requirements for QA measurements can be found in the USEPA's "[Indoor Radon and Radon Decay Product Measurement Device Protocols](#)" under the specific type of device to be used. QA measurements need to be conducted before, during, and after the test kits are deployed or collected in schools. For instance, spikes need to be conducted prior to using a specific set of test devices. If spikes are conducted after the kits are used in a school and the results show the test kits are of poor quality, then all of the results obtained from the school are also of poor quality.

Included in the QA process is the use of device logs and control charts. These tools allow you to plot information so you can track the precision and accuracy of your measurements over time.

All licensed ODH radon testers and mitigation specialists are required to follow their current QA plan on file with the ODH Radon Licensing Program.

10. Am I required to conduct spikes?

Yes. The USEPA's "[Indoor Radon and Radon Decay Product Measurement Device Protocols](#)" discusses and describes the need to perform all QA measurements, including spikes. All ODH licensed radon testers and mitigation specialists using passive radon test kits are required to perform all of the appropriate number of QA measurements during all phases of radon testing. This includes spikes.

11. When should radon testing in schools be conducted?

Schools need to be tested while the building is occupied and when the students are present. Testing should be conducted on weekdays when using a two to five day test. The building must be occupied and the HVAC system must be operating normally.

12. What time of the year should radon testing in schools be conducted?

USEPA's "[Radon Measurement in Schools](#)" states for schools to schedule their testing during the coldest months of the year. Therefore, radon testing in schools needs to be conducted during the heating season, specifically between the months of October and March.

- 13. What are closed building conditions?**
During closed building conditions, all exterior doors and windows are to be kept closed, except for normal entry and exit out of the building. Short-term tests are required to be conducted during closed building conditions.
- 14. Which school rooms should be tested for radon?**
Test all frequently occupied rooms at or below grade and those rooms built above a crawlspace or tunnel. This includes but is not limited to classrooms, offices, gymnasiums, cafeterias, libraries and auditoriums. Areas prone to high temperatures and excess humidity should be avoided. These areas would include but are not limited to janitor closets, bathrooms, locker rooms, and kitchens.
- 15. How are radon tests conducted in large rooms?**
For larger school rooms, one test kit per 2,000 square feet is to be used. This may not be an issue for typical classrooms, but areas such as auditoriums, cafeterias, and gymnasiums need to be measured to determine how many test kits need to be placed in that room. When testing large rooms, do not place the test kits side by side, but rather spread them throughout the room. These types of tests would not be considered a duplicate measurement.
- 16. Should a room be retested if there is evidence of detector tampering?**
Yes. Another test should be conducted under conditions which insure that tampering has not affected the measurement results. Tampering is a part of radon testing in schools and as such you should develop a plan to help avoid it as much as possible and a follow-up plan to deal with it when it occurs.
- 17. How should partitioned classrooms be tested for radon?**
Classrooms with moveable partitions should be individually tested if the partitions extend from the floor to ceiling.
- 18. What should be done if unusual weather conditions (e.g., heavy rain, snow or wind) arise just before a planned 2 to 5-day winter testing period?**
USEPA recommends that schools avoid testing under these conditions. Therefore, testing should be postponed. Plan to be flexible.
- 19. Is the use of continuous radon monitors ever appropriate for radon testing in schools?**
Yes. Continuous radon monitors (CRMs), as well as any other radon devices, may be used for testing as long as they are used to measure a period of no fewer than 48 continuous hours - USEPA's minimum acceptable duration for initial and follow-up measurements. CRMs may be used in accordance with USEPA's measurement protocols for periods of time less than 48 hours only as part of the diagnostic process. The use of CRMs as follow-up measurements is valuable because they can track hourly radon levels and better determine the affect the HVAC has on hourly radon levels.
- 20. When two devices (duplicates) are placed in a room during testing for quality assurance purposes, which measurement result is taken as the radon test result for that room?**
USEPA protocol says to report one measurement. The average of the two devices serves as the radon measurement result for that room.
- 21. If a device appears to have been damaged or opened before deployment, may it be used to measure a room's radon concentration?**
No. Any device which is damaged or opened before deployment cannot be expected to yield a measurement result of acceptable quality or accuracy and should not be deployed.

22. What radon measurement guidance documents are applicable?

Guidance for schools can be found in the USEPA’s “[Radon Measurement in Schools](#)” report. This document is an USEPA report and is not all inclusive. The USEPA’s “[Indoor Radon and Radon Decay Product Measurement Device Protocols](#)” discusses device use and quality assurance requirements while the USEPA’s “[Radon Measurement in Schools](#)” document discusses the nuances of placing radon test kits in schools. Licensees are responsible for following the device protocols for each type of device they use, whether it is specifically stated in the schools document or not.

USEPA “[Indoor Radon and Radon Decay Product Measurement Device Protocols](#)”

EPA 402-R-92-004

<http://www.epa.gov/radon/pubs/devprot1.html>

USEPA “[Radon Measurement in Schools](#)”

EPA 402-R-92-014

http://www.epa.gov/radon/pdfs/radon_measurement_in_schools.pdf

23. Which type of radon test devices can be used?

The most common method to test schools is to use a passive short-term radon test device. Activated charcoal, liquid scintillation and alpha track detectors are the most commonly used passive test device types. Only passive test devices from radon laboratories approved and licensed by ODH can be utilized. A current list of approved and licensed radon laboratories can be found at the ODH Radon Licensing website: <http://www.odh.ohio.gov/odhPrograms/rp/radlic/radon.aspx>.

Another method for testing radon in schools includes the use of active continuous radon monitors (CRMs). These devices are extremely useful in determining when radon may be an issue in schools as they can detect hourly radon concentrations which can be compared to HVAC system operation and school occupancy. If you decide to use a CRM, you must use an approved device and your QA plan must be specific to that device.

24. What is an approved radon measurement device?

In order to use a CRM, the device must be approved. This is only an issue in Ohio for CRMs as any passive test kit must come from an ODH approved laboratory. ODH does not license manufacturers of CRMs, but the devices used in Ohio must be approved. An approved device is one that has either gone through the National Radon Safety Board (NRSB) or the National Environmental Health Association’s National Radon Proficiency Program (NEHA-NRPP) device evaluation programs and is currently listed with either one of these certification bodies. Both certification bodies provide lists of currently approved devices.

National Radon Safety Board

Phone: (866) 329-3474

<http://www.nrsb.org/>

National Environmental Health Association’s National Radon Proficiency Program

Phone: (800) 269-4174

<http://neha-nrpp.org/nrpp/index.shtml>

25. In schools with a basement level (below ground), the first floor is often built at grade level and, therefore, is in contact with the ground only along its outside edge. Should this floor be tested?

Although such a floor may have limited contact with the ground, the outside rooms may have openings permitting radon entry and should be tested if they are frequently occupied. If any of the rooms in the basement are frequently occupied or may be in the future (for example, if extra classroom space is anticipated), these basement rooms should also be tested. In addition, schools with crawlspaces or tunnels between the ground and first floor should test all frequently-occupied first-floor rooms.