

**New Jersey Department of Environmental Protection**  
**Child Care Center Radon Testing Program**

**Questions and Answers**

**1. What guidance must be followed for child care center testing?**

All testing must be conducted in accordance with the "Testing for Radon in Child Care Centers," DEP Guidance Document, available from the New Jersey Department of Environmental Protection (DEP) Radon Section at (800) 648-0394 or [www.njradon.org](http://www.njradon.org). This guidance is in accordance with the United States Environmental Protection Agency (EPA) document, Radon Measurement in Schools, Revised Edition, EPA 402-R-92-014, July 1993 (including the sheet entitled "Corrections in the Second Printing"). Copies of the EPA document can be obtained from the EPA Indoor Air Quality Info Line, (800) 438-4318.

**2. What if an addition is made to a child care center?**

It is recommended that child care centers use radon resistant construction techniques in new additions (this is required by law in areas designated 'Tier 1' because elevated radon levels are frequently found). This will sharply reduce costs of mitigation if elevated radon levels are later discovered. For further information on these techniques, contact the DEP Radon Section at (800) 648-0394.

**3. Which rooms must be tested?**

As described in the "Testing for Radon in Child Care Centers", all frequently occupied rooms in contact with the ground, or first floor rooms above basement spaces that are not frequently occupied, should be tested. This would not include rest rooms, hallways, stairwells, etc., but would include offices as well as classrooms.

**4. Why must all frequently occupied rooms in contact with the ground be tested?**

Indoor radon levels vary considerably depending on the concentration of uranium in the soil and rocks immediately beneath a room, and on the size and number of openings to the ground (such as cracks in the flooring) through which radon can enter. It is not uncommon for one room to have elevated levels of radon even though surrounding rooms have low concentrations.

**5. Can child care centers test 20% of the rooms each year?**

All rooms within a child care center building should be tested at the same time, since radon levels fluctuate somewhat over time.

**6. My child care center is in an area that has very low levels of radon, according to results of home testing. Why do we need to test?**

Even in areas with low radon potential, there can be geological formations that generate high concentrations of radon in a very small area. Residential testing has found many

New Jersey communities have pockets of relatively high radon levels among areas with low radon levels.

**7. What public notification procedures are recommended? Would DEP release child care center testing data to the public?**

To notify parents of test results, the DEP recommends, at a minimum, that the results of radon testing be posted in a public area that can easily be accessed by parents and the public, along with a fact sheet that will enable parents to interpret the results. The fact sheet and other recommendations for parent notification may be obtained from the DEP Radon Website, [www.njradon.org](http://www.njradon.org). Child care center testing results may be public information. If requested by the public or media, the DEP can only release testing data for public buildings.

**8. Who can test child care centers?**

New Jersey law (N.J.S.A. 26:2D-70 et seq.) states that buildings can be tested only by state-certified radon professionals or the owners of the buildings, except where individuals are exempted from this requirement by the DEP under N.J.A.C. 7:28-27.31. However, if you are not the owner of the building and have obtained written permission from the building owner, you would be considered a “designee” and as a result, would be allowed to place and retrieve the test device. This is often the case when the owner of the building resides in a different state; however, this written permission must be retained on file to avoid any future problems.

**9. Child care centers with steam heat open windows during the winter routinely because rooms overheat. If a center has this or a similar problem, can it test on weekends or holidays?**

EPA recommends that short-term tests lasting between two and five days be conducted on weekdays with the heating, ventilation and air conditioning (HVAC) systems operating normally. Short-term tests should be conducted under "closed building" conditions, with windows and exterior doors closed except for brief, normal entries and exits. When closed building conditions cannot be met on weekdays because of the need to open classroom windows, or for other reasons, centers may consider conducting radon tests over the weekend or holidays. The HVAC system should be operating with normal weekday settings, with the usual weekday setback periods, during the testing period. The child care center must document why testing was not done during normal school operation on weekdays, and maintain the documentation in its files. It must also document what steps were taken to ensure that doors and windows were kept closed except for normal entry and exit, that the HVAC is operating as on weekdays, and that there are no unusual activities occurring in the building that could affect air currents and air pressure. Parents may request this documentation if they become concerned about why testing was not done in the recommended way.

**10. Can child care centers test before or after the October through March time period recommended by EPA?**

Testing during the winter months (October through March) is recommended for the following reasons: 1) windows and exterior doors are more likely to be closed, which minimizes the unpredictable impact on radon levels caused by air currents and air pressure changes from outside weather conditions, and 2) winter testing appears to be a

better reflection of the average radon level in a room during the school year. If it is not possible to test in this time period for some reason, the center must document the reasons for deviating from the guidance, and maintain this documentation on file at the center. Centers must also document what steps were taken to ensure that doors and windows are kept closed except for normal entry and exit, that the HVAC is operating as on weekdays, and that there are no unusual activities occurring in the building that could affect air currents and air pressure. Parents may request this documentation if they become concerned about why testing was not done in the recommended way.

The DEP strongly recommends that testing not be done in the summer in buildings without central air conditioning, due to the very high likelihood that windows will be opened during the testing period.

In addition, if testing is done in warm weather, and open windows are observed and reported to the business analyzing test results, the business may state in their report to the center that the results may be

invalid based on this observation. In this event, the center may have to re-test.

**11. What if a child care center is mitigated during the summer, so that the post-mitigation testing is done in warm weather rather than the cold weather months of October-March recommended by EPA?**

Child care centers are advised to state in contracts with mitigation businesses that the child care center reserves the right to separately test post-mitigation radon concentrations during the cold weather months (since testing in cold weather will provide results more representative of child exposure), and that the contractor must provide additional work as needed, if concentrations are not below 4 pCi/L at that time. As with all testing of child care centers, this testing must be done by either a certified business or an owner or designee as discussed in the guidance document. The cost of this additional testing could be included in the contract with the mitigation business.

**12. Are after-school programs in the same category as child care centers?**

After-school programs that are not located in public schools do fall into the same category as child care centers. **After-school programs located in public schools should check with representatives of that school to find out if the school has a plan to test for radon, since rooms used for after-school programs would be tested in the public school's testing program.**

**13. Why must child care centers test with exterior doors and windows closed except for normal entry and exit?**

The purpose of having exterior doors and windows closed is to get a more accurate, reproducible radon test result. If doors and windows are open, radon levels will fluctuate unpredictably depending on air pressure (if it's a windy day, for example, a classroom with open windows may become depressurized or pressurized, causing radon levels to rise or fall, depending on the direction of the wind and other factors).

**14. EPA recommends postponing tests if major weather or barometric changes are expected. What criteria should be used to define 'major' changes?**

In other testing guidance, for residential testing, EPA suggests that tests lasting two or three days should be postponed if storms with high winds, such as 30 miles per hour, or rapidly changing barometric pressure, are predicted during the measurement period. For

longer tests, unusual weather conditions lasting a short time are less of a concern. In general, the more unusual the weather during the testing period, the more atypical the radon results will be. Although there are no definite criteria for postponing tests, child care centers will obtain more representative results by testing under normal weather conditions.

**15. If radon tests are suspended from the ceiling, what is the maximum height that can be used?**

Test devices should be no higher than 7 feet above the floor as the device should be in the general breathing zone of children and adults.

**16. How should the individual room tested be identified in the testing data?**

The room name or room number should be entered on the Chain of Custody form accompanying each test device. In addition, the room name or number should be entered on the device placement log along with the serial number or other identification number of the device itself, as specified by the radon measurement business.

**17. Can elevated radon levels result from a malfunctioning heating, ventilation and air conditioning (HVAC) system?**

Yes. If a room is insufficiently ventilated because the air handling system is not working properly, or air intake from the outside is blocked, radon levels are likely to be higher than they would be normally. For this reason, it is recommended that the entire HVAC system be inspected, or tested and balanced, prior to testing.

**18. If elevated levels of 4 pCi/L or more are discovered, what is the child care center required to do?**

There are no legal or regulatory requirements, but the DEP and DOE recommend that centers take action to remediate the building in accordance with the EPA document, *Reducing Radon in Schools: A Team Approach* (EPA 402-R-94-008). The document can be obtained from the EPA Indoor Air Quality Info Line, (800) 438-4318. By New Jersey law, radon mitigation systems must be designed and installed by businesses that are certified by the DEP to conduct mitigations. Mitigations typically involve the installation of active soil depressurization (ASD) systems that vent radon gas from below the building to the air outside the building. It is important that possible interactions between the HVAC and ASD systems be considered in design of the mitigation system. The EPA and DEP therefore recommend that the mitigation design be a team effort between the mitigation business and school staff or consultants involved in HVAC maintenance. A list of radon mitigation businesses that are certified to conduct mitigations can be obtained

from the DEP Radon Information Line at (800) 648-0394, or DEP Radon Website at [www.njradon.org](http://www.njradon.org).

**19. When should child care centers be re-tested after a mitigation system is installed?**

For mitigations in private homes, re-testing every two years is recommended, to ensure the system is working properly. Child care centers may wish to retest 2-5 years after the mitigation.

**20. What are the kinds of deviations from EPA recommendations that the DEP will consider**

**"acceptable?"**

The DEP cannot anticipate all situations that child care centers will encounter in undertaking radon testing. In general, if a center makes a good faith effort to follow EPA recommendations, and seeks to create a reasonable alternative where necessary, the center should not have to worry that they will be required to retest. Centers may always contact the Radon Section, (800) 648-0394, for assistance if they encounter difficulties in following guidance.

**21. What should be done if it is found that some windows were left open during the testing period?**

If windows in a room are open during the testing period, this should be noted by the tester on the chain of custody form. The measurement business must then note this on their reports to child care centers, along with the statement that the requirement of closed building conditions was not met which may make the test results invalid. Parents or staff may question the test results in these cases, which may make it necessary to re-test. The lack of closed building conditions must also be reported to the DEP in the business's monthly reports.

**22. If child care centers have reason to believe that children will disturb the test devices, is that an acceptable reason to test on weekends or holidays rather than on weekdays?**

The Radon Section has heard from other states that this was not a significant problem for testers testing on weekdays. If, however, a center strongly believes that children will interfere with the testing process, they can document reasons for conducting the testing on days other than weekdays. Center officials should not hesitate to contact the DEP Radon Section if they have questions about testing procedures, at (800) 648-0394.

**23. Who is responsible for conducting post-mitigation testing to confirm that a mitigation system is effective?**

As stated in the radon regulation, N.J.A.C. 7:28-27.7, post-mitigation testing is the responsibility of the certified radon mitigation business. Mitigation businesses must arrange for post-mitigation testing by measurement businesses that are specified in the mitigation business's application for certification. Post-mitigation tests must be reported by the mitigation business to the DEP, as with residential testing.

**24. If a mitigation business implements HVAC adjustments, as an alternative to the standard mitigation system, does that HVAC adjustment need to be reported in DEP monthly reports as a mitigation?**

No. Only the standard radon mitigation approaches (ASD's, etc.), involving installation of systems specifically designed to reduce radon levels, need to be reported to the DEP as mitigations.

**December 3, 2010**