RADON: Testing Your Child Care Facility

Understanding Radon
Radon is an invisible, radioactive gas created from natural deposits of uranium and radium in the soil. Radon is easily drawn into buildings through cracks and gaps in the foundation and can reach concentrations that increase people’s risk for developing lung cancer.

Radon Levels are High in Colorado
- Colorado is ranked 6th in the nation for elevated radon levels above 4 picocuries per liter (pCi/L). In Colorado, the average indoor radon level is about 6.4 pCi/L.
- The U.S. Environmental Protection Agency (EPA) and the U.S. Surgeon General recommend taking action to reduce indoor radon levels if they are 4 pCi/L or greater.

Radon Exposure Causes Lung Cancer
- Radon is the leading cause of lung cancer in non-smokers.
- Because children have smaller lungs and faster breathing rates, the risk of lung cancer in children resulting from exposure to radon may be almost twice as high as the risk to adults exposed to the same amount of radon.
- Exposure to Colorado’s average indoor radon level (6.4 pCi/L) for 1 year is like having more than 200 chest x-rays per person, per year.

Preparing to Test Your Facility for Radon

STEP 1: Determine when the childcare facility test results are due.
- Was your childcare facility licensed before January 14, 2016?
  - Yes: Test your childcare facility for radon before May 1, 2017.
  - No: Test you childcare facility for radon within six months of occupancy between October and April.

STEP 2: Determine who will be responsible for testing at your childcare facility. Will it be you?
- I want to test the childcare facility myself:
  - Go to www.CO.Train.org to register and view the short training How to Test for Radon in Colorado Child Care Facilities. See page 4 of this document for online training instructions.
  - Purchase discounted radon test kits at https://securechek.com/CCC. For testing procedures, see “Do-It-Yourself Testing for Radon” on page 2, and follow the test kit instructions.
- I want someone else to test the child care facility:
  - Find a certified radon testing contractor at www.coloradoradon.info.

STEP 3: Determine when the testing will be done.
- Schedule a time to test during normal operating hours when the facility is in use by both staff and children (not over weekends or holidays) between October and April.

STEP 4: If you’re doing the test yourself, plan where to place the tests.
- See “Do-It-Yourself Testing for Radon” on page 2 of this document for more information.

STEP 5: Review results and follow guidance for next steps.
- Review test results and follow guidance and any suggested next steps. See page 3 of this document, “TESTING: Results.”
- Keep test results on file at your facility and record them on your log sheet.
- Email your radon test results to sscully@bouldercounty.org to be in compliance with state health department requirements.

Find Out More about Radon
- Boulder County Public Health radon website: www.BoulderCountyRadon.org
- Contact Boulder County Public Health Radon Program healthradon@bouldercounty.org /303.441.1580
- Colorado Department of Public Health and Environment radon website: www.ColoradoRadon.info
Do-It-Yourself Testing for Radon

The following instructions apply to all childcare facility types.

**STEP 1: Determine how many kits you need and when you’ll test.**
- After reviewing the online training at [www.CO.Train.org](http://www.CO.Train.org), determine how many short-term test kits you need:
  - Test every frequently occupied room in contact with the ground or above crawl spaces.
  - For large rooms, you will need a test kit for every 2,000 square feet.
  - Do not test bathrooms, kitchens, closets, hallways, or laundry/utility rooms.
  - Testing should be done between October and April.
  - Run the short term test(s) for 3-4 days during the week while school is in session; Monday morning to Thursday afternoon is optimal. The test(s) can then be mailed to the lab on Friday.
  - Short-term radon testing should not be done if a severe storm is predicted. Avoid short-term testing during blizzards and excessive high winds. Severe weather is defined as a storm with winds exceeding 25 miles per hour and expected to last 24 hours or longer.
  - Do not open the test kit(s) until you are ready to begin testing. Read the test kit instructions before opening the test kit. For more details and animated instructions on using the test kit(s), visit [www.radon.com](http://www.radon.com)

**STEP 2: Get ready to test.**
- Use the attached log sheet to record each kit’s seven-digit serial number and room name where each test will be done. Be sure to record the test results for each room tested in the log when you receive them from the lab.
- **All outside windows and all outside doors must be kept closed (except when entering/exiting the building) for 12 hours before the start of the test and kept closed throughout testing. These closed conditions must be followed for the test results to be valid.**
  - Remind staff to keep outside doors tightly closed after entering and exiting and to keep all outside windows closed during testing. Do not prop open doors or windows.
  - Hang a reminder sign for staff (see attached template) in each room being tested to keep the outside doors and outside windows closed.

**STEP 3: Select the best testing location(s).**
- Select the test location in each room before starting to test. The test will need to remain in that location; it cannot be moved or disturbed during the entire test period. Make sure it is also out of reach of children.
- Do not place the test kit within three feet of outside walls, outside doors, and/or outside windows.
- Do not place a test kit near a heat source or in sunlight.

**STEP 4: Test.**
- Open the test kit only when you are ready to begin testing.
- Fill out all information on the back of the test kit including the room name. Be sure to circle the start date and time to the nearest hour.
- Place the test kit in your previously selected best locations.
- Hang it from an interior (i.e. non-masonry) wall with painter’s tape (DO NOT use pushpins or tacks!) at a height between 4-6 feet. Tape it to the wall using the plastic hook attached to the test kit.
- When the test is completed after 3-4 days, circle the test stop date and time on the back of the test.

**STEP 5: Send test(s) to lab.**
- It is important to mail in the test kit as soon as testing has been completed. If it takes more than 8 days for the kit to arrive at the lab after conclusion of the testing, the lab can’t analyze it for radon.
- After the test is done, prepare the kit for mailing by cutting off the plastic hook and pulling the plastic strip off the sticky strip inside the test kit opening so you can use it to seal the envelope.
- If you have a number of tests to submit, it’s best to mail them together to the lab in one package using overnight mail service (see the mailing instructions on the test kit instruction sheet). This will reduce the risk of tests not reaching the lab in time for analysis or test kits being lost in the mail.
Common mistakes
Mistakes happen. These common mistakes will affect the lab’s ability to analyze the test thus voiding your test and you will have to retest:

- The test period is too short (less than 48 hours) or too long (greater than 7 days) for a short-term test.
- The test takes too long to reach the lab.
- There is missing information on the test packet (e.g. start or stop time, date). Keep track of this information on your log sheet.

Understanding Test Results & Fixing the Problem

- **Less than 4 pCi/L:** If all results are less than 4 pCi/L, no further testing is needed. Retesting is recommended every five years or sooner if the building has been remodeled or the HVAC system has been modified.
- **4-8 pCi/L:** If any room has a short-term test result of 4-8 pCi/L, you will need to conduct a long-term test in the room(s). Room(s) that have long-term test results above 4 pCi/L should have the radon mitigated (reduced). Long-term test kits can be ordered at [www.SOSradon.org](http://www.SOSradon.org).
- **8 pCi/L or higher:** If any room(s) has a short-term test result greater than 8 pCi/L, a second short-term test should be done. If the second short-term test is still greater than 4 pCi/L, the radon level should be mitigated (reduced).

Mitigation: Fixing a radon problem
Reducing radon levels is a simple and relatively inexpensive process.

- Certified radon mitigation contractors can be found at [www.ColoradoRadon.info](http://www.ColoradoRadon.info).
- Contact Boulder County Public Health Radon Program [healthradon@bouldercounty.org](mailto:healthradon@bouldercounty.org) /303.441.1580 for additional guidance.
1. Go to www.CO.Train.org to register for the course and click on the CREATE ACCOUNT button on the home page. If you already have a COTRAIN account, log in and skip to step 4.

2. The next page will be the TRAIN Policies. After you look at them, click on the box next to I agree to these TRAIN policies and then click the Next button.
3. The next page is the registration page. Complete each field, click the Next button, and complete the requested information on the next few pages.

4. After providing the requested information, you will reach the Announcements page. Type RADON in the search box in the top right next to Advanced Search and press enter.
5. On the Course Search screen, double-click on the underlined blue title *How to Test for Radon in Colorado Child Care Facilities*.

6. Click on the Registration tab.
7. Click on the *Launch* button.

8. Follow the instructions to begin the course.
## Radon Testing Log

Name of Facility:

<table>
<thead>
<tr>
<th>Radon Kit Serial #</th>
<th>Room</th>
<th>Start Date and Time</th>
<th>Stop Date and Time</th>
<th>Results (pCi/L)</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example: #8372970</td>
<td>Toddler</td>
<td>11-7-2016 / 8:00 AM</td>
<td>11-10-2016 / 5:00 PM</td>
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<td>Mailed to lab: 11-11-2016</td>
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[Image]
RADON TESTING IN PROGRESS

Keep all outside doors and windows closed!

FROM

_________________________ to ____________________

Date / Time               Date / Time