

3. **Results unacceptable, retesting indicated:**

This recommendation will be given only when one measurement is above 4 pCi/L, the other is below 4 pCi/L and the higher value is greater than twice the lower value.

If your air radon level is elevated and the home has well water, it is also advisable to have the water tested for radon. Wells with high levels of dissolved radon can release radon gas into the air when water is drawn from the supply lines and contribute significantly to the total gas concentration in the air.

**What if my radon level is elevated?**

There are simple ways to deal with a radon problem that aren't too costly. Even very high levels can be reduced to acceptable levels. If your radon tests results indicate the need for corrective action, the services of a qualified radon mitigation contractor should be obtained. For information on mitigation techniques and licensed contractors, check with your state radon office.

**Where can I obtain additional information?**

Contact your state radon office at,

Connecticut: (860) 509-7367  
Massachusetts: (413) 586-7525  
Rhode Island: (401) 222-2438

and request the following EPA publications.

*A Citizens Guide to Radon*  
*Home Buyer's and Seller's Guide to Radon*  
*Consumer's Guide to Radon Reduction*

For information on radon in water, call the EPA Safe Drinking Water Hotline at 800-426-4791.



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**Radon in Air**

**A Guide for Home Buyers and Sellers  
Using Dual Short-Term Measurement  
Devices.**



# Radon in Air

(Dual Measurement)

## Introduction

Short-term dual device measurements are ideally suited for time-sensitive situations such as real estate transactions. Side-by-side dual short term tests provide the best combination of speed and accuracy upon which real estate transactions may be based.

## What is radon?

Radon is a radioactive gas which occurs in nature as a result of the radioactive decay of uranium. You cannot see it, smell it, or taste it. Radon can be found in high concentrations in soils and rocks containing uranium, and in water from residential wells.

Outdoor radon is diluted to such low concentrations that it is usually nothing to worry about. However, once inside an enclosed space such as a house, radon can accumulate. Indoor levels depend both on the house's construction and the concentrations of radon in the underlying soil and well water. The EPA recommends that corrective action should be undertaken in any living area having a radon concentration of 4 picocuries per liter (pCi/L) or greater. Studies indicate that as many as one in five homes in the Connecticut, Rhode Island, Massachusetts tri-state area may have elevated radon levels.

## How does radon affect people?

Radon breaks down naturally and forms radioactive decay products. When the air is inhaled, the radon decay products can become trapped in the lungs. As these decay products break down further, they release small bursts of energy which can damage lung tissue and lead to lung cancer.

Scientists estimate that radon exposure causes many thousands of lung cancer deaths in the United States each year. The risk of developing lung cancer from radon depends upon the concentration of radon and the length of exposure. The risk of lung cancer is especially high for smokers with homes having elevated radon levels.

## How does radon enter a home?

Radon is a gas which can move through small spaces in the soil and rock on which a house is built. Radon can seep into a home through dirt floors, cracks in concrete floors and walls, floor drains, sumps, joints, and tiny cracks or pores in hollow-blocks walls.

Radon might also be present in well water and can be released into a home when the water is used. Usually, radon is not a problem with large community water supplies, where it would likely be released into the outside air before the water reaches a home.

## What do the numerical results of a dual device test mean?

In accord with EPA protocol, the accompanying Aquatek report provides the two independent test measurements, the average of the two determinations and the calculated relative percent difference (RPD). The RPD is a measure of how well the two determinations agree and is used to judge the precision of the measurements with regard to EPA specified standards.

The report makes a specific recommendation based on the analytical data. There are three possible recommendations prescribed by EPA protocol.

### **1. Radon level acceptable, no action indicated:**

This recommendation will arise when, (a) both measurements are less than 4 pCi/L, or when (b) only one measurement is above 4 pCi/L, the average is below 4 pCi/L and the higher value is no greater than twice the lower value.

### **2. Radon level elevated, mitigation indicated:**

This recommendation will occur when, (a) both measurements are greater than 4 pCi/L, or when, (b) only one measurement is above 4 pCi/L, the average is above 4 pCi/L and the higher value is no greater than twice the lower value.

(over)