Instructions for Making a Screening-Type Measurement with a Radon Detector

PLEASE READ ALL INSTRUCTIONS

Before you begin

To obtain a valid measurement, the following conditions should exist for 12 hours before and during the testing period.

* All windows and external doors should be closed, except for normal entering and exiting.

* Fans and ventilation systems that use outside air, such as attic fans and bathroom fans, should not be operated during the sampling period. Air conditioners can be used.

* Normal living temperatures should be maintained if possible.

Instructions for Sampling Location and Conditions

* Do not open the canister to begin the measurement if you cannot close it within the specified time period or if you are installing a new heating or air conditioning system.

* Do not start test if weather predictions indicate a severe storm with wind speeds of 30 mph or greater is expected within the testing period.

* If a time error is made or you decide not to use the canister, please indicate this and return using the prepaid mailer. **PLEASE DO NOT DISCARD**.

* Measurements should be made in the lowest lived in area in the house i.e.,basement, bedroom or a playroom. Non-suitable areas are bathrooms, kitchens, laundry rooms, root cellars, garages, crawl spaces or sumps.

* The canister should be exposed to the air people breathe. It should be placed at least 20 inches above the floor or granite surface, and 3 feet from an outside wall, not in a closet, drawer, or cupboard. The canister should not be placed in a location exposed to noticeable drafts or areas where the canister can get hot.

Purpose of a Screening-type Measurement

The purpose of a screening-type measurement is to quickly determine if a house contains high concentrations of radon gas; to provide information for deciding the need for additional measurements. The following sampling instructions reflect the EPA recommended measurement procedures for this method. The procedures are based on the assumption that the greatest source of radon is the soil underlying the house. If other sources are suspected, additional measurements in different locations in the home may be considered.

SAMPLING INSTRUCTIONS

Your radondetek test kit should contain one tape-sealed canister and a box or padded envelope. If the canister has been damaged in shipping, call us at 717-657-7032.

1. REMOVE the canister from the box or envelope. **SAVE THE BOX or PADDED ENVELOPE FOR RETURNING THE CANISTER.**

2. RECORD INFORMATION ON LABEL ON BOTTOM OF CANISTER. Fill in name, address, exact starting date and time, and location placed. If you have any addition information, please feel free to include a note.

3. OPEN THE CANISTER. Remove the tape from around the canister. Remove the lid and place it under the canister. Wrap the tape around the lower half of the canister.

4. PLACE THE CANISTER. Put the canister, open side up, on a table or shelf according to the sampling location instructions. (See above)

5. WAIT. Do not move the canister after the test has started. If the canister has **black** tape, the canister should remain open for 2 days (48 hours). If the canister has **red** or **blue** tape, it should remain open for 3-5 days (72-120 hours) The closing time can vary from 2 hours earlier to 2 hours later than the time opened. ie; if opened 10am, close between 8am and noon after the specified number of days.

6. REMOVE TAPE, REPLACE TOP AND RETAPE AROUND THE CANISTER. It is important to have a good seal for the test to be accurate. One piece of tape is sufficient; do not cover the label.

7. RECORD THE EXACT STOP DATE AND TIME on the bottom label.

8. PLACE CANISTER IN THE BOX OR PADDED ENVELOPE and seal. If supplied, place pre-paid address label (business reply label) on top.

9. MAIL next business day after resealing. Send first class mail.

YOUR SAMPLE WILL BE ANALYZED THE DAY IT ARRIVES AT OUR LAB. THE REPORT WILL BE E-MAILED OR FAXED THAT DAY OR MAILED THE NEXT BUSINESS DAY. IF YOU DO NOT RECEIVE YOUR REPORT WITHIN 10 DAYS, PLEASE CONTACT US.

Activated Charcoal Adsorption Detector Operation

The device consists of a covered metal canister filled with activated charcoal that is held in place by a metal wire mesh, and a metal ring or glue. This is a passive device that, when uncovered, allows the radon to move through the charcoal by diffusion; therefore, no external source of power is needed. The radon gas will attach to the charcoal surfaces. The canister is sealed at the end of the exposure period, trapping the accumulated radon gas. A minimum delay of four hours is required before the canister can be counted. For counting, the sealed canister is placed in a sodium iodide crystal counting system for at least ten minutes. During this time, the gamma rays emitted are counted. After analysis, the counts are converted into radon gas units of picocuries per liter (pCi/L) of air using a calibration factor determined by the exposure conditions.