



STATE OF CONNECTICUT

DEPARTMENT OF PUBLIC HEALTH
REGULATORY SERVICES BRANCH
Environmental Health Section
Radon Program

Memorandum

DATE: 7/31/08

TO: Radon Measurement and Mitigation Professionals

FROM: Francesca Provenzano, Health Program Supervisor
CT Department of Public Health
Radon Program

RE: Radiation from Granite Countertops

We have been receiving numerous telephone calls from concerned citizens regarding granite countertops emitting radiation and/or radon in their homes. When communicating with such individuals, please remember that the potential for exposure to radon gas being emitted from granite countertops is most likely quite low. Although there may be some risk of exposure, it is quite minimal when compared to other sources of radon in the home. I do realize that you will be receiving calls from people who want their countertops tested. Please use this as an opportunity to educate clients about radon and its health risks. We can all work together in reducing people's exposure to radon in their homes from typical sources - radon from soil gases and water.

In order to uniformly respond to inquiries, the Connecticut Department of Public Health (CT DPH) Radon Program is providing the following guidance on how to approach radon evaluation in homes where granite countertops are present.

According to EPA protocols, the evaluation of radon gas should not occur in bathrooms or kitchens because of atypical air movement (e.g., ventilation hoods) and humidity. Kitchen and bathroom areas are also where granite countertops are frequently located in a home. Radon being emitted from granite is not a new phenomenon. Therefore, when one is testing a home for radon, one should *not* place a test device on or near a granite surface. No useful information will be obtained from testing a countertop utilizing a radon measurement device. Rather than conducting a test of countertops, for which there is no guidance or actionable level of concern, consider conducting a full home evaluation for radon sources. Take a tiered approach in evaluating and reducing the sources of radon in a home. Through a process of elimination, you will determine whether or not the countertops are the primary source of radon in a home, and a health risk for the homeowner. Countertops are most likely not a primary source of radon.



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To perform a full home radon evaluation to determine all potential sources of radon in the home consider the following:

- Test the finished basement of the home, and first floor of the home utilizing approved radon test devices. Do not test in crawl spaces or other areas of a home that would not be evaluated under normal circumstances. The results of your testing should indicate whether the primary concern for radon gas in a home is from soil gases or other sources such as water (or potentially countertops); and
- If the home is served by a groundwater source (i.e., private well), collect two samples of water according to established CT DPH protocols, and submit them to a laboratory approved by the CT DPH for analysis; and
- If the client is adamant, you may locate a test device on the countertop, but please indicate to the client that the results will provide no useful information, and that the added cost for obtaining such results will not be helpful to them in determining risk.

Once you obtain the radon test results, meet with your client to explain the sources of radon in the home, and advise your client on what actions will lead to reduced risk. With regard to testing the countertops, please realize that the results will not readily translate into exposure or risk for occupants of the home. The result will not provide conclusive evidence or information for a client to make an informed decision about reducing risk. When elevated levels of radon are found due to soil gas and water, please inform you clients of the appropriate treatment methods so that they can substantially reduce their risk for developing lung cancer.

Convey the following information regarding elevated radon levels in air and water as follows:

- ❑ If test results for radon in the air (using established protocols) are at or above the action level of 4.0 pCi/L in the basement, then the traditional methods of treatment should follow. The most effective treatment for radon from soil gases is typically the installation of a sub-slab depressurization system. Post-mitigation test results should be below 2.0 pCi/L.
- ❑ If the average of two results of radon in water is at or above 5,000 pCi/L then appropriate treatment of the water should follow. Treatment methods for reducing radon in water include installation of a granular activated charcoal filtration system (for levels between 5,000-10,000 pCi/L) or installation of an aeration system (for levels exceeding 10,000 pCi/L).

After a sub-slab depressurization system has been installed, re-testing in the basement, and living area should occur. Post-treatment samples of water should also be collected and analyzed to ensure that the water treatment system is operating properly. By testing in all of these locations, the client will better understand his or her exposure and risk. Ideally, post-mitigation test results will be low in all of the locations in the home (i.e., basement, first floor, and water). You and your client should be able to conclude that the countertops are not contributing to the home's burden of radon gas.

If post-mitigation results indicate that radon has been effectively reduced in the basement and water, but the first floor living area still yields elevated levels of radon, then the countertops may be the source of radon. If this occurs, have your client contact the CT DPH Radon Program at (860) 509-7367 for further guidance.