

RADON TESTING IN CONNECTICUT PUBLIC SCHOOLS

Overview

Inside Out Home Inspections LLC is certified by the Connecticut Department of Health's Radon Program to conduct radon surveys in Connecticut public schools. Per Connecticut General Statute (CGS) 10-220(d), all schools shall be evaluated for radon levels in air and water prior to January 1, 2008 and every five years thereafter.

Radon is a naturally occurring radioactive gas derived from the breakdown of uranium found in the soil and rock. Radon is odorless, colorless and tasteless and therefore cannot be detected without testing. Radon is a known human carcinogen and prolonged exposure to elevated levels of radon gas in air may cause an increased risk of lung cancer. The EPA estimates that radon exposure may cause 7,000 to 30,000 cancer deaths per year in the US, making radon the second leading cause of lung cancer deaths.

Testing

Next to radon exposure at home, schools may be the most likely place where school children and staff are exposed to radon. Many factors can contribute to elevated levels of radon gas into a school building, including:

- the concentration of radon gas beneath the building and the permeability of the soils,
- the construction of the school building, and
- the design and operation of the HVAC systems.

The measurement strategy recommended by the CT Dept. of Health involves taking short term (two to three day) tests where radon collectors are placed in every frequently occupied room in contact with the ground. After analysis and interpretation of the results, follow up testing is conducted in those rooms where elevated levels of radon were detected. The tests should be conducted while school is in session and the buildings and HVAC systems are in normal use. Late fall to early spring are the ideal times to test because all windows and outside doors need to remain closed, except for normal entry and exit.

The testing device used by Inside Out Home Inspections is approved by the EPA and the CT. Dept. of Health. The device is a round canister approximately four inches in diameter and 1 inch high. The canister is filled with activated charcoal, which adsorbs radon when unsealed. The canisters will be placed in every room that is frequently occupied and is in contact with the ground or is a first floor room above a basement. In general, second floor or higher rooms do not need to be tested, unless the building is constructed in such a way that these rooms are in contact with the soil (i.e., the school is built into a hillside).

Planning a radon test

The next step is to plan for your school to be tested for radon. Following a clear and organized plan will provide the best results and will keep all parties informed. Mark Hatheway of Inside Out Home Inspections has conducted thousands of soil gas surveys for radon and other regulated compounds when he was the Senior Manager at Northeast Research Institute and brings years of environmental testing experience to Inside Out Home Inspections LLC. Mr. Hatheway will work with your school's administration, staff, students and parents to inform them about the need for testing, how the tests will be conducted and what the results mean.

The elements of a successful radon survey include:

- Meeting with your school's superintendent or principal as well as the facilities manager to discuss EPA testing protocols, sampling locations, obtain building drawings and provide assistance with educating staff, students and parents about the need for testing.
- Assisting with conducting meetings with representatives of parent and teacher organizations to provide an overview of testing and address any questions or concerns.
- Designing a sampling plan that includes testing in all frequently occupied rooms in contact with the ground and first floor rooms above a basement. The sampling plan will also include a description of the sampling strategy as well as the QA/QC that will be followed.
- Conducting the test after all parties have been notified (usually two weeks in advance).
- Providing a final report to the school and the Department of Health.
- Determining the need for radon mitigation, if needed.

Helpful links for further information

The above is an overview of radon testing in schools. You are encouraged to call Mark Hatheway at 860-267-6932 to discuss your needs. Below are helpful links to provide you with further information.

State of Connecticut Department of Public Health Radon Program

http://www.dph.state.ct.us/BRS/Radon/radon_program.htm

National Environmental Health Association

www.neha-nrpp.org

Environmental protection Agency

<http://www.epa.gov/radon/>

American Lung Association

www.lungusa.org/air/envradon.html