Radon Reduction and Removal

In a Nutshell

Radon is a naturally occurring gas that is colorless, tasteless, and odorless. The Surgeon General has warned that radon is the second leading cause of lung cancer in the United States. Radon is a bi-product of the breakdown of uranium. Homes and buildings can be tested for radon, and they can be designed to reduce exposure to this harmful element.

The “How To”

Radon is colorless, tasteless, ordorless and extremely harmful. Radon levels are measured in piocouries per liter of air (pCi/L). Normal outside levels of Radon are not harmful. The EPA recommends fixing your home if either one long-term test or two short-term tests show your house is above the .4 pCi/L level. Fixing your home requires the installation of either a passive or active mitigation system.

The U.S. Environmental Protection Agency provides a lot of information on how to test your house for radon and what the options are for radon mitigation, as well as information on Illinois and Missouri's predicted radon levels. According to the EPA, most of western Illinois is likely to have high radon levels. The EPA recommends radon testing regardless of a home's location. This webpage from the American Lung Association explains in a bit more depth the health risks associated with radon.

Planning & Zoning

This stltoday.com article provides a good overview of the state laws dealing with radon in Illinois and Missouri. Illinois has passed several laws concerning radon. One of the latest laws passed requires licensed day care providers to test for radon every three years. The Illinois Radon Awareness Act, passed in 2008, requires the seller of a home to provide information on any radon test performed on the property. Missouri's laws are not as progressive, but the national trend is toward laws which require more dissemination of information related to radon levels.

Measuring Success

Determing success of radon reduction would be measured in lower levels of radon in the community and fewer lung cancer cases.

Discover More

EPA Consumer Guide to Radon Reduction

https://www.epa.gov/radon

American Lung Association provides indepth resources on health impacts, state and national lung cancer statistics and information on testing and reduction.

http://www.lung.org/healthy-air/home/resources/radon.html

Illinois Emergency Management Agency, State Radon Resources

http://www.state.il.us/iema/radon/radon.htm

University of Illinois Extension educational resources and testing information. There is also a teacher resource page, which includes activities.

http://takeactiononradon.illinois.edu/

Case Studies

Advanced Radon Control

Address

9051 Watson Road, Suite 133 - St. Louis, MO 63126

Description

Advanced Radon Control provides both testing and mitigation services for both commercial and residential proprieties.

Cost

The cost of mitigation varies depending on the certification of the company, insurance, materials, project length, and installation. The average cost for Advanced Radon Control is around $795.

Lessons Learned

The biggest stumbling block is the large amount of misinformation that is out on both the consumer and real estate marketplace. You must always educate people on what radon mitigation really is.

With a large variety of providers you cannot compare on an apples to apples basis based on prices. Radon mitigation is no generally in the public eye. It tends to only get red flagged with the real estate industry.

National Radon Program Services

Contact

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Description

The National Radon Reduction Program is run in conjunction with the Environmental Protection Agency (EPA). The intention of the program is to provide education on Radon and also training on the measurement and mitigation of Radon. They provide four websites

- Kansas Radon Program
- www.kansasradonprogram.org

- National Radon Program Services
- www.sosradon.org

- Radon Courses Online
- www.radoncoursesonline.org

- Radon training Information
- http://www.engext.ksu.edu/radoncourses

On these pages people can find Radon FAQ's, fact sheets, links, information on how to get home radon test kits, ways to reduce radon in the home, state radon programs, and other resources. They also offer courses in radon measurement and radon mitigation. In addition to these, they offer online courses in measurement and mitigation certification as well as radon mitigation and radon measurement.

Cost

The radon test kits run $15 for a short term (3-4 days) kit and $25 for a long term (3-12 months). The national fees for training vary depending on what kind you do. Generally, a one week training costs $600 and the online courses run between $50-100.

The program itself is funded by a combination of EPA and Kansas Department of Health and environment

grants.

Lessons Learned

Radon is one of the most challenging subjects to provide education and training on because there is so much information, i.e., studies and reports on it and how it actually effects the body.

One of the most successful expansions of the program was to include online courses in their training program. They are able to reach a larger audience.

They are always in communication with past trainees. They send out yearly surveys and attempt to meet the needs of each caller to the national hotline in order to improve the program.

SIL Radon Awareness Task Force, Inc.

Contact

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Address

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Description

SIL Radon Awareness Task Force is a 501 c 3 corporation whose mission is to educate the population of Southern Illinois about the risk of living with elevated radon levels. The bulk of the population in Southern Illinois is not aware that radon causes lung cancer nor that radon accounts for approximately 37% of a persons annual radioactive dose. We endeavor to educate them about radon and make them aware that elevated radon levels and the associated health risk can be managed.

Cost

The task force is a sub-contractor of the Illinois Emergency Management Agency State Indoor Radon Grant - SIRG program. We receive $12,000 - $15,000 annually for project expenses. Task force members receive no compensation.

Lessons Learned

You can’t quit. You have to keep looking for presentation opportunities to get before the public and make them aware of the risk. This includes home shows, health and information fairs, presentations to professional groups etc.

State Indoor Radiation Grant

Contact

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Description

During the year we presented information at 29 separate events. These included home shows in St. Louis, Kansas City, Farmington, and Jefferson City, the Regional Radon Stakeholder's Meeting, a training program for new local public health agency administrators, and a number of health fairs and conferences. Total attendance at these events was 6,576. We spoke one-on-one with 10 contractors during the year.

We worked with two chapters of Habitat for Humanity. The Truman Heritage Chapter of Habitat builds all of its homes with RRNC features. We are supplying them with radon detectors so that the homes can be tested before occupancy to determine if the systems need to be activated before the families move in. They built 10 homes during the fiscal year.

We made a presentation on RRNC to the Energy and Environment Commission for the City of Columbia. The commission made a recommendation to the city council to adopt RRNC. We are working to get adoption of Appendix F added to Columbia's next round of building codes. We have also been interviewing builders and home owners in Raymore, MO about their experiences with RRNC in new homes.

During the year, we promoted radon testing at 29 separate events. We provided radon information to three groups of realtors and 8 home inspectors. We updated our map of residential testing results. We continued our initiative to increase residential testing in counties where little testing has been conducted. We continued working with Children's Mercy Hospital on their project. We provided 200 radon detector coupons to St. Louis County for their Healthy Homes Initiative. We tested 172 schools during the fiscal year.

During calendar year 2012, reported radon mitigations were above 3,000. Reported mitigations for FY 2012 totaled 2,780. Reported mitigations for FY13 are currently at 3,554, with a few mitigators left to report. During the fiscal year, we received 632 radon inquiries. We received 460 IAQ inquiries, 354 of those involved mold. We conducted 8 on-site IAQ investigations. We gave out 5,014 detectors to the public. Our radon webpage had 11,841 hits. Our indoor air webpage had 11,736 hits.

Cost

The financial resources for this agreement are $137,456 in federal funds and $91,637 in state funding, for a

total budget of $229,093.

Lessons Learned

These numbers are not comparable to historical data because we have changed counting software. We are using Google Analytics to track hits on our web pages. This software gives us more data than before, but the results are not comparable to data that has collected prior to 2011.

Several schools that had previously been tested were mitigated during the year. We are unsure the exact number as several school districts are pursuing mitigation this summer. At least 5 schools have already been mitigated, but we expect more than 10 mitigations will be completed by the end of the summer.

The Environmental Public Health Tracking (EPHT) Program continues to provide support to the radon program. The national workgroup our staff was leading has not agreed on standards necessary to make radon a standard data element available on the national portal. There continues to be discussion on how to increase the amount of radon data available on the national level.

Tracking the number of homes built radon-resistant remains difficult. Except for tracking the number of building permits issued by the City of Raymore, our only methods of tracking RRNC are to speak directly with the builder and to track the amount of Form-A-Drain sold in the state. The City of Raymore issued 84 building permits during FY13. We received reports of 128 additional homes built with RRNC, and 399 homes built radon-ready using CertainTeed® Form-A-Drain.