LABTECH RADONOK
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Report & Sample Dates
DATE RECEIVED: 2/5/2024
REPORT DATE: 2/9/2024

RADON TEST REPORT

Laboratory Certification Info
NRPP: 101132 AL
STATE: N/A
ELAP: 11430 NY

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408 Pole Creasman Rd
Asheville, NC 28806

KIT SERIAL	RADON LEVEL	PROPERTY TESTED	TEST DURATION	STRUCTURE
RA160380	3.4 pCi/L	147 Abundance Run	Start: 10:05 AM 01/29/2024	Type: Basement
ID: 2855061	**Margin of Error**	Asheville, NC 28805	End: 05:47 PM 01/31/2024	Floor: Basement
	+/- 0.2 pCi/L	Basement Den	Duration: 55.7 Hours	Closed: Yes

Short Term Radon Tests have an estimated margin of error of ±5% when used according to directions.

Quality Assurance (QA): Sample Type: Short Term. Technology: Activated Charcoal. Device Manufacturer: Alpha Energy Laboratories. Model: RD-1. NRPP Approved Device: AC-8202. Device Performance Standard: ANSI-AARST MS-PC 2022. Quality Assurance Standard: ANSI-AARST MS-QA 2019. Lab Methodology: EPA-402-R-92-004. Test instructions designed in accordance with ANSI-AARST MAH -2019. Radon level uncertainty is calculated using a 95% confidence level. One sampler can test up to 2,000 ft^2. Sampler Deployed by: Matt Soufl. Sampler Retrieved by: Matt Soufl.

Disclaimer: Results are only indicative of the sample as received in the lab. Incorrect information or improper sampling procedures will affect results. Alpha Energy Laboratories (AEL) did not provide sampling services unless otherwise indicated. Device deployment/retrieval is assumed to be performed by the person submitting the sample, unless otherwise specified by the client. The person(s) performing sampling are responsible for sampling QA, which may include duplicate, blank, and/or spiked detectors. Analysis, laboratory QA, and production QA performed by AEL. Measurements are not necessarily predictive or supportive of measurements conducted at different times or locations. AEL is not responsible for the consequences of any action you do or do not take based on the results. This report may only be reproduced in full, unless authorized in writing by AEL.

Radon Information: Radon is a naturally occuring radioactive gas. It is odorless, colorless, and tasteless. Radon in air is ubiquitous (existing or being everywhere at the same time) and is found in outdoor and indoor air. Radon concentration is measured in picocuries per liter of air (pCi/L). The average indoor concentration is 1.3 pCi/L. The average outdoor concentration is 0.4 pCi/L. Radon is the second leading cause of lung cancer, after smoking. Smokers and former smokers are at especially high risk. Radon exposure is a health risk over long periods of time. The more time you spend in a high radon environment, the greater the risk.

The US Environmental Protection Agency (EPA) and the Surgeon General recommend fixing the building when the radon level is 4 pCi/L or more. Because there is no known safe level of exposure to radon, EPA also recommends considering fixing radon levels between 2 pCi/L and 4 pCi/L. The World Health Organization (WHO) recommends fixing the building when the radon level is 2.7 pCi/L or more.

The process of fixing a radon problem is called mitigation. Even buildings with very high levels can be successfully mitigated. EPA recommends that you use a contractor certified by NRPP, NRSB, or your State (where applicable) to correct radon problems.

Measurement Specialist / Laboratory Director  Paul Fletcher **Date** 2/9/2024

IF YOU HAVE QUESTIONS ABOUT WHAT YOUR RESULTS MEAN:
EPA National Hotline: (800) 557-2366, *epa.gov/radon*, or, call your State Radon Official: (828) 712-0972

IF YOU HAVE QUESTIONS ABOUT HOW TO FIX A RADON PROBLEM:
Radon Fix-it Hotline: (800) 644-6999, *epa.gov/radon*, or, call your State Radon Official: (828) 712-0972

WHAT DO MY TEST RESULTS MEAN?

Radon concentration is measured in picocuries per liter of air (pCi/L). The average indoor concentration is 1.3 pCi/L. The average outdoor concentration is 0.4 pCi/L. The US Environmental Protection Agency (EPA) action level is 4 pCi/L, meaning that EPA recommends you take further action if your radon level is 4 pCi/L or more. Because there is no known safe level of exposure to radon, EPA also recommends considering further action for radon levels between 2 pCi/L and 4 pCi/L. The World Health Organization action level is 2.7 pCi/L. If this is your first test, retesting is usually advisable. If you have tested multiple times, average the results and use the average to determine the appropriate next steps.

For results **below 2 pCi/L** you do not need to take further action at this time.

For results **between 2 pCi/L and 4 pCi/L**, consider taking further action. If this is your first test, consider testing again to confirm the initial result. If you have tested multiple times, EPA recommends that you consider fixing the building.

For results **4 pCi/L or greater,** you should take further action. If this is your first test, EPA recommends you conduct another test to confirm the initial reading. If you have tested multiple times, you should fix the building.

If the building has an active radon mitigation system, test annually to confirm the system is working properly. Because radon levels can change, all buildings should be tested at least once every 2 years and whenever the building is renovated.

HOW DANGEROUS IS MY RADON LEVEL?

RADON RISK IF YOU SMOKE

Radon Level	If 1,000 people were exposed to this level over a lifetime	The risk of radon induced lung cancer compares to	What To Do Next?
100 pCi/L	About 770 people could get lung cancer	110 times the risk of dying in a car crash	Fix your home
40 pCi/L	About 380 people could get lung cancer	95 times the risk of dying from poison	Fix your home
20 pCi/L	About 260 people could get lung cancer	250 times the risk of drowning	Fix your home
10 pCi/L	About 150 people could get lung cancer	200 times the risk of dying in a fire	Fix your home
4 pCi/L	About 62 people could get lung cancer	5 times the risk of dying in a car crash	Fix your home
2 pCi/L	About 32 people could get lung cancer	6 times the risk of dying from poison	Consider fixing between 2 & 4 pCi/L
1.3 pCi/L	About 20 people could get lung cancer	(Average indoor radon level)	(Reducing below 1 pCi/L is difficult)
0.4 pCi/L	About 3 people could get lung cancer	(Average outdoor radon level)	(Reducing below 1 pCi/L is difficult)

Note: If you are a former smoker your risk may be lower
Estimates are lifetime risk of lung cancer deaths from EPA Assessment of Risks from Radon in Homes (EPA 402-R-03-003)

RADON RISK IF YOU HAVE NEVER SMOKED

Radon Level	If 1,000 people were exposed to this level over a lifetime	The risk of radon induced lung cancer compares to	What To Do Next?
100 pCi/L	About 440 people could get lung cancer	63 times the risk of dying in a car crash	Fix your home
40 pCi/L	About 120 people could get lung cancer	30 times the risk of dying from poison	Fix your home
20 pCi/L	About 36 people could get lung cancer	35 times the risk of drowning	Fix your home
10 pCi/L	About 18 people could get lung cancer	20 times the risk of dying in a fire	Fix your home
4 pCi/L	About 7 people could get lung cancer	The risk of dying in a car crash	Fix your home
2 pCi/L	About 4 people could get lung cancer	The risk of dying from poison	Consider fixing between 2 & 4 pCi/L
1.3 pCi/L	About 2 people could get lung cancer	(Average indoor radon level)	(Reducing below 1 pCi/L is difficult)
0.4 pCi/L		(Average outdoor radon level)	(Reducing below 1 pCi/L is difficult)

Note: If you are a former smoker your risk may be higher
Estimates are lifetime risk of lung cancer deaths from EPA Assessment of Risks from Radon in Homes (EPA 402-R-03-003)

HOW CAN I FIX A RADON PROBLEM?

The process of fixing a radon problem is called mitigation. Mitigation is highly effective at lowering radon levels. If your radon level is 4 pCi/L or more, you should fix the building. If your radon level is between 2 pCi/L and 4 pCi/L, you should consider fixing the building. There is no known safe level of radon, and levels below 4 pCi/L still pose a signficant health risk. In most cases, radon levels can be lowered below 2 pCi/L.

We recommend only hiring contractors who are certified and trained in radon mitigation. To find a certified contractor:

Call your State Radon Official at **(828) 712-0972** or go to ***aelabs.com/states***

Go to ***aelabs.com/mitigation*** for a list of NRPP certified contractors.

WHAT SHOULD I DO NEXT?

The guide below is for buildings without a radon mitigation system. Buildings with an active mitigation system should have radon levels below 4 pCi/L. Contact the contractor who installed your system if your radon test results indicate a radon level at or above 4 pCi/L. Most mitigation systems include a warranty; refer to your contract for details.

Number of Times Tested	Type of Test	Test Result (pCi/L)	What do I do next?	What test do I use? (If retesting)
One	Short Term	Less than 2	Retest every 2 years	Short Term
One	(2-7 days)	Between 2 and 4	Consider retesting now	Long Term or Short Term
One		Between 4 and 8	Retest now	Long Term or Short Term
One		8 or more	Retest now	Short Term
Two or more	Short Term	Less than 2	Retest every 2 years	Short Term
	(2-7 days)	Between 2 and 4	Consider fixing the building	
		4 or More	Fix the building	
One or more	Long Term	Less than 2	Retest every 2 years	Short Term
	(91-365 days)	Between 2 and 4	Consider fixing the building	
		4 or more	Fix the building	