

INDUSTRIAL HYGIENE REPORT

RADON TESTING REPORT

Liberty Elementary School

Report to: Vonnie B. Good, EHS Salem–Keizer Public Schools

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On-site: March 14–17, 2023

Report: March 21, 2023

PURPOSE

Annual radon retesting was done at Liberty Elementary School's upper addition, to ensure that the radon mitigation system (installed in 2014) is functioning properly keeping the radon levels below EPA's Action Level of 4.0 picoCuries/L (pCi/L) in Rooms 20, 21 and 22.

This testing is a requirement in ORS 332 Healthy and Safe Schools Plan rules.

CONCLUSION

All classrooms had low levels of radon indicating that the radon mitigation system is functioning properly.

TESTING

Radon testing was conducted using protocols recommended by the Oregon Health Authority per ORS 332.166-167. Radon Air-Chek short-term test devices were used in the rooms by suspending the device in each room. The testing occurred from March 14-17, 2023 during normal and routine school ventilation system operation. Weather conditions during the weeks prior of testing had been wet with cold temperatures.

Quality assurance testing was also conducted by utilizing laboratory spiked test devices, (QCS), blank (QCB) test devices, and duplicate samples per the recommendations found in ORS 332.166-167.

EPA RADON GUIDELINES

The EPA has set an Action Level of 4.0 pCi/L (picoCuries per liter) for schools. If classrooms, offices or buildings have radon levels at or above 4.0 pCi/L, EPA recommends that schools take action to reduce the level. These actions include:

Step 1. If your result is 4.0 pCi/L or higher take a follow-up test (Step 2) to be sure.

Step 2. Follow up with either a long-term test or a second short-term test.

CONTROL OF RADON LEVELS IN SCHOOLS

The major control mechanism for lowering radon levels within school buildings is the use of dilution ventilation. If the amount of outside air delivered into a building increases, the radon levels should decrease. When increasing ventilation doesn't bring the radon levels below EPA's Action Level, radon mitigation systems are installed.

March 20, 2023

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

**LIBERTY
MAIN**

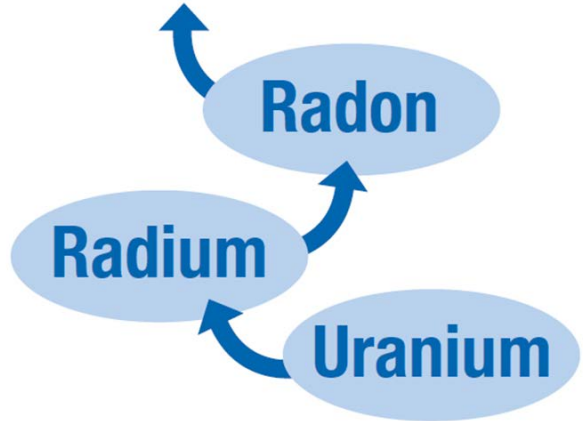
Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11315007	20N	2023-03-14 @ 11:00 am	2023-03-17 @ 1:00 pm	1.6 ± 0.3	2023-03-20
11315006	20S	2023-03-14 @ 11:00 am	2023-03-17 @ 1:00 pm	1.2 ± 0.3	2023-03-20
11315008	21	2023-03-14 @ 11:00 am	2023-03-17 @ 1:00 pm	< 0.3	2023-03-20
11315009	22	2023-03-14 @ 11:00 am	2023-03-17 @ 1:00 pm	0.5 ± 0.3	2023-03-20
11315010	QCB1	2023-03-14 @ 11:00 am	2023-03-17 @ 1:00 pm	0.7 ± 0.3	2023-03-20
11118567	QCS1	2023-03-12 @ 9:00 am	2023-03-15 @ 9:00 am	23.9 ± 1.9	2023-03-20

Air Chek 1936 Butler Bridge Rd, Mills River, NC 28759-3892 Phone: (828) 684-0893 Fax: (828) 684-8498

QCS1, highlighted above, is a "laboratory spiked" test kit. It is part of the quality control process of testing referenced in the second paragraph on Page 1 of this report. IT DOES NOT REPRESENT RADON LEVELS IN THE BUILDING!

Radon in schools

Fact Sheet on Radon Exposure for Students and Staff



What is radon?

Radon is a radioactive gas you can't see, smell or taste. It is a decay product of uranium and is found all over the world. Uranium and its decay products are naturally found in the soil and rocks beneath buildings. Our school image (right) shows how uranium naturally decays into radium that further breaks down into radon gas. Radon moves up through the soil and enters buildings in contact.

Why is radon a problem in Oregon schools?

Radon is the 2nd leading cause of lung cancer, after smoking. The Environmental Protection Agency (EPA) estimates around 21,000 radon-related lung cancer deaths occur each year. Breathing high levels of radon in combination with smoking is even more dangerous and increases your risk by ten times.

Home is likely the most significant source for breathing radon. According to the EPA, 1 out of 15 homes has high radon levels. School is likely the second largest source of radon exposure for students and staff. The only way to know your radon levels is to test. The EPA recommends that **all** homes and schools be tested for radon.

EPA ACTION LEVEL

4.0 Picocuries
Liter of air

Testing at Home

Radon testing at home can be simple and inexpensive. You can find do-it-yourself test kits at most local hardware stores and online from the [American Lung Association](http://www.AmericanLungAssociation.org). Oregon Health Authority (OHA) Radon Program also offers FREE test kits to those living in areas where little data is available. To find out if you are eligible, contact radon.program@state.or.us.

Testing in Oregon Schools

By law (ORS 332.341-345), all Oregon schools are required to test for radon before January 1, 2021.

School radon testing involves the placement of small testing devices in all frequently occupied rooms on the lowest level of the building. Initial testing is short-term and lasts between 2 and 7 days. Test devices are not dangerous in any way.

Rooms that test at or above 4.0 picocuries per liter of air (pCi/L) (EPA recommended action level) are subject to longer confirmation testing and radon reduction systems.

*Test results for your school can be found at:

For more information about radon, visit www.healthoregon.org/radon.

If you have other questions or concerns about radon testing at your school, contact _____ at _____.

