

INDUSTRIAL HYGIENE REPORT

RADON TESTING REPORT

Kalapuya School

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

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On-site: October 31–November 2, 2022

Report: November 7, 2022

PURPOSE

Radon retesting was done at Kalapuya School to determine if there have been any changes in the background radon levels in the classrooms, offices and other frequently occupied rooms that are in contact with the ground since the 2013 testing.

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

CONCLUSION and RECOMMENDATIONS

All spaces had levels of radon below the EPA Action Level and below the World Health Organization Action Level.

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 October 31 to November 2, 2022, during normal and routine school ventilation system operation. Weather conditions during the weeks prior of testing had been wet with moderate temperatures.

Quality assurance testing was also conducted by utilizing 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.

The World Health Organization has set their action level at 2.7 pCi/L. Salem-Keizer Public Schools has determined that 2.7 pCi/L is a target level where retesting should be done. No locations had radon levels at 2.7 pCi/L or above.

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.

Radon test result report for:**KALAPUYA
MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11118365	CAFETERIA NE	2022-10-31 @ 10:00 am	2022-11-03 @ 10:00 am	< 0.3	2022-11-04
11118363	CAFETERIA SE	2022-10-31 @ 10:00 am	2022-11-03 @ 10:00 am	< 0.3	2022-11-04
11118356	CONFERENCE RM	2022-10-31 @ 10:00 am	2022-11-03 @ 10:00 am	< 0.3	2022-11-04
11118375	COUNSELOR	2022-10-31 @ 10:00 am	2022-11-03 @ 10:00 am	0.6 ± 0.3	2022-11-04
11118374	CUSTODIAN OFFICE	2022-10-31 @ 10:00 am	2022-11-03 @ 10:00 am	2.2 ± 0.3	2022-11-04
11118364	FOOS SERVICE OFFICE	2022-10-31 @ 10:00 am	2022-11-03 @ 10:00 am	< 0.3	2022-11-04
11118367	GYM N	2022-10-31 @ 10:00 am	2022-11-03 @ 10:00 am	< 0.3	2022-11-04
11118368	GYM SE	2022-10-31 @ 10:00 am	2022-11-03 @ 10:00 am	< 0.3	2022-11-04
11118352	HEALTH ROOM	2022-10-31 @ 10:00 am	2022-11-03 @ 10:00 am	< 0.3	2022-11-04
11118354	ISOLATION ROOM	2022-10-31 @ 10:00 am	2022-11-03 @ 10:00 am	< 0.3	2022-11-04
11118372	MEDIA CENTER BOOK RM	2022-10-31 @ 10:00 am	2022-11-03 @ 10:00 am	< 0.3	2022-11-04
11118369	MEDIA CENTER NE	2022-10-31 @ 10:00 am	2022-11-03 @ 10:00 am	< 0.3	2022-11-04
11118371	MEDIA CENTER OFFICE	2022-10-31 @ 10:00 am	2022-11-03 @ 10:00 am	< 0.3	2022-11-04
11118373	MEDIA CENTER SW	2022-10-31 @ 10:00 am	2022-11-03 @ 10:00 am	< 0.3	2022-11-04
11118370	MEDIA COMPUTER LAB	2022-10-31 @ 10:00 am	2022-11-03 @ 10:00 am	< 0.3	2022-11-04
11118361	MUSIC	2022-10-31 @ 10:00 am	2022-11-03 @ 10:00 am	< 0.3	2022-11-04
11118362	MUSIC OFFICE	2022-10-31 @ 10:00 am	2022-11-03 @ 10:00 am	< 0.3	2022-11-04
11118353	OFFICE MANAGER	2022-10-31 @ 10:00 am	2022-11-03 @ 10:00 am	< 0.3	2022-11-04
11118366	PE OFFICE	2022-10-31 @ 10:00 am	2022-11-03 @ 10:00 am	< 0.3	2022-11-04
11118380	PLC	2022-10-31 @ 10:00 am	2022-11-03 @ 10:00 am	< 0.3	2022-11-04
11118355	PRINCIPAL	2022-10-31 @ 10:00 am	2022-11-03 @ 10:00 am	< 0.3	2022-11-04
11118393	QBC 1	2022-10-31 @ 10:00 am	2022-11-03 @ 10:00 am	< 0.3	2022-11-04
11118394	QCB 2	2022-10-31 @ 10:00 am	2022-11-03 @ 10:00 am	< 0.3	2022-11-04
11118376	RM 103N	2022-10-31 @ 10:00 am	2022-11-03 @ 10:00 am	< 0.3	2022-11-04
11118377	RM 103S	2022-10-31 @ 10:00 am	2022-11-03 @ 10:00 am	< 0.3	2022-11-04
11118378	RM 104	2022-10-31 @ 10:00 am	2022-11-03 @ 10:00 am	< 0.3	2022-11-04
11118379	RM 105	2022-10-31 @ 10:00 am	2022-11-03 @ 10:00 am	< 0.3	2022-11-04
11118382	RM 111	2022-10-31 @ 10:00 am	2022-11-03 @ 10:00 am	< 0.3	2022-11-04
11118383	RM 112	2022-10-31 @ 10:00 am	2022-11-03 @ 10:00 am	< 0.3	2022-11-04
11118384	RM 121 N	2022-10-31 @ 10:00 am	2022-11-03 @ 10:00 am	0.6 ± 0.3	2022-11-04
11118386	RM 121 OFFICE	2022-10-31 @ 10:00 am	2022-11-03 @ 10:00 am	< 0.3	2022-11-04
11118385	RM 121 W	2022-10-31 @ 10:00 am	2022-11-03 @ 10:00 am	0.6 ± 0.3	2022-11-04
11118387	RM 124	2022-10-31 @ 10:00 am	2022-11-03 @ 10:00 am	< 0.3	2022-11-04
11118388	RM 126	2022-10-31 @ 10:00 am	2022-11-03 @ 10:00 am	< 0.3	2022-11-04
11118390	RM 127 E	2022-10-31 @ 10:00 am	2022-11-03 @ 10:00 am	< 0.3	2022-11-04
11118389	RM 127 S	2022-10-31 @ 10:00 am	2022-11-03 @ 10:00 am	0.6 ± 0.3	2022-11-04
11118391	RM 129	2022-10-31 @ 10:00 am	2022-11-03 @ 10:00 am	2.5 ± 0.3	2022-11-04

November 4, 2022

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

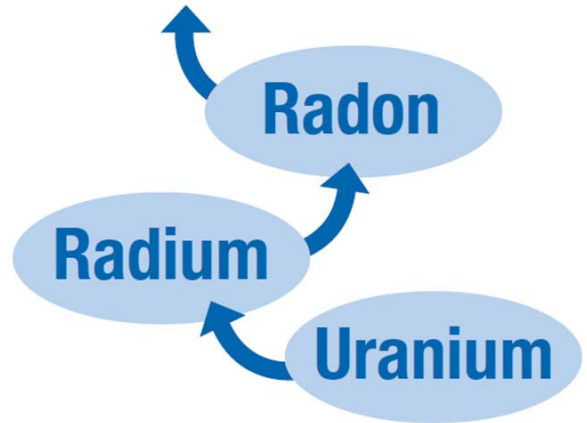
**KALAPUYA
MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11118392	RM 130	2022-10-31 @ 10:00 am	2022-11-03 @ 10:00 am	0.9 ± 0.3	2022-11-04
11118357	RM 176	2022-10-31 @ 10:00 am	2022-11-03 @ 10:00 am	< 0.3	2022-11-04
11118358	RM 177	2022-10-31 @ 10:00 am	2022-11-03 @ 10:00 am	< 0.3	2022-11-04
11118359	RM 178	2022-10-31 @ 10:00 am	2022-11-03 @ 10:00 am	< 0.3	2022-11-04
11118351	SCHOOL OFFICE	2022-10-31 @ 10:00 am	2022-11-03 @ 10:00 am	< 0.3	2022-11-04
11118381	SPEECH	2022-10-31 @ 10:00 am	2022-11-03 @ 10:00 am	< 0.3	2022-11-04
11118360	STAFF ROOM	2022-10-31 @ 10:00 am	2022-11-03 @ 10:00 am	< 0.3	2022-11-04

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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 _____.

