

# INDUSTRIAL HYGIENE REPORT

## RADON TESTING REPORT

### Myers 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

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#### PURPOSE

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

Myers Elementary School has undergone a major construction project that included additional classrooms, offices and workspaces. These new areas needed to be tested for radon levels.

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

#### CONCLUSION

All tested rooms had levels of radon below the EPA Action level of 4.0 pCi/L.

#### 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.

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

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11314955	100A	2023-03-14 @ 9:00 am	2023-03-17 @ 12:00 pm	0.7 ± 0.3	2023-03-20
11314954	100B	2023-03-14 @ 9:00 am	2023-03-17 @ 12:00 pm	< 0.3	2023-03-20
11314951	100C	2023-03-14 @ 9:00 am	2023-03-17 @ 12:00 pm	0.7 ± 0.3	2023-03-20
11314975	101	2023-03-14 @ 9:00 am	2023-03-17 @ 12:00 pm	< 0.3	2023-03-20
11314974	102	2023-03-14 @ 9:00 am	2023-03-17 @ 12:00 pm	< 0.3	2023-03-20
11314973	103	2023-03-14 @ 9:00 am	2023-03-17 @ 12:00 pm	0.5 ± 0.3	2023-03-20
11314967	104	2023-03-14 @ 9:00 am	2023-03-17 @ 12:00 pm	0.8 ± 0.3	2023-03-20
11314968	105	2023-03-14 @ 9:00 am	2023-03-17 @ 12:00 pm	0.9 ± 0.3	2023-03-20
11314966	106	2023-03-14 @ 9:00 am	2023-03-17 @ 12:00 pm	0.8 ± 0.3	2023-03-20
11314959	108	2023-03-14 @ 9:00 am	2023-03-17 @ 12:00 pm	< 0.3	2023-03-20
11314958	109	2023-03-14 @ 9:00 am	2023-03-17 @ 12:00 pm	< 0.3	2023-03-20
11314960	110	2023-03-14 @ 9:00 am	2023-03-17 @ 12:00 pm	0.6 ± 0.3	2023-03-20
11314956	111	2023-03-14 @ 9:00 am	2023-03-17 @ 12:00 pm	< 0.3	2023-03-20
11314957	112	2023-03-14 @ 9:00 am	2023-03-17 @ 12:00 pm	< 0.3	2023-03-20
11314949	113	2023-03-14 @ 9:00 am	2023-03-17 @ 12:00 pm	< 0.3	2023-03-20
11314950	113 OFFICE	2023-03-14 @ 9:00 am	2023-03-17 @ 12:00 pm	0.8 ± 0.3	2023-03-20
11314941	115N	2023-03-14 @ 9:00 am	2023-03-17 @ 12:00 pm	< 0.3	2023-03-20
11314942	115S	2023-03-14 @ 9:00 am	2023-03-17 @ 12:00 pm	0.5 ± 0.3	2023-03-20
11314940	116	2023-03-14 @ 9:00 am	2023-03-17 @ 12:00 pm	< 0.3	2023-03-20
11314939	117	2023-03-14 @ 9:00 am	2023-03-17 @ 12:00 pm	0.6 ± 0.3	2023-03-20
11314937	118E	2023-03-14 @ 9:00 am	2023-03-17 @ 12:00 pm	0.6 ± 0.3	2023-03-20
11314938	118S	2023-03-14 @ 9:00 am	2023-03-17 @ 12:00 pm	0.6 ± 0.3	2023-03-20
11314936	119	2023-03-14 @ 9:00 am	2023-03-17 @ 12:00 pm	< 0.3	2023-03-20
11314935	120	2023-03-14 @ 9:00 am	2023-03-17 @ 12:00 pm	< 0.3	2023-03-20
11314972	131	2023-03-14 @ 9:00 am	2023-03-17 @ 12:00 pm	0.7 ± 0.3	2023-03-20
11314980	131 A	2023-03-14 @ 9:00 am	2023-03-17 @ 12:00 pm	0.6 ± 0.3	2023-03-20
11314979	131 B	2023-03-14 @ 9:00 am	2023-03-17 @ 12:00 pm	< 0.3	2023-03-20
11314978	131 C	2023-03-14 @ 9:00 am	2023-03-17 @ 12:00 pm	< 0.3	2023-03-20
11314977	131 D	2023-03-14 @ 9:00 am	2023-03-17 @ 12:00 pm	0.7 ± 0.3	2023-03-20
11314976	131 E	2023-03-14 @ 9:00 am	2023-03-17 @ 12:00 pm	0.5 ± 0.3	2023-03-20
11314969	132	2023-03-14 @ 9:00 am	2023-03-17 @ 12:00 pm	0.7 ± 0.3	2023-03-20
11314970	133 E	2023-03-14 @ 9:00 am	2023-03-17 @ 12:00 pm	0.8 ± 0.3	2023-03-20
11314971	133 W	2023-03-14 @ 9:00 am	2023-03-17 @ 12:00 pm	0.8 ± 0.3	2023-03-20
11314947	147	2023-03-14 @ 9:00 am	2023-03-17 @ 12:00 pm	0.6 ± 0.3	2023-03-20
11314962	CAFETERIA NW	2023-03-14 @ 9:00 am	2023-03-17 @ 12:00 pm	0.5 ± 0.3	2023-03-20
11314963	CAFETERIA SW	2023-03-14 @ 9:00 am	2023-03-17 @ 12:00 pm	0.6 ± 0.3	2023-03-20
11314944	GYM N	2023-03-14 @ 9:00 am	2023-03-17 @ 12:00 pm	< 0.3	2023-03-20

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

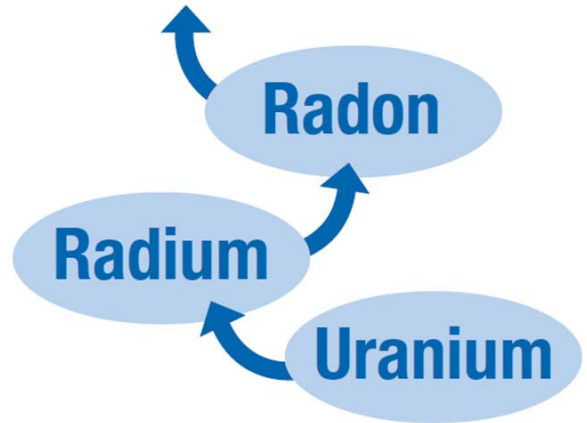
Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11314945	GYM S	2023-03-14 @ 9:00 am	2023-03-17 @ 12:00 pm	< 0.3	2023-03-20
11314964	KITCHEN	2023-03-14 @ 9:00 am	2023-03-17 @ 12:00 pm	< 0.3	2023-03-20
11314965	KITCHEN OFFICE	2023-03-14 @ 9:00 am	2023-03-17 @ 12:00 pm	< 0.3	2023-03-20
11314934	LRC 121	2023-03-14 @ 9:00 am	2023-03-17 @ 12:00 pm	< 0.3	2023-03-20
11314943	MAINTENANCE	2023-03-14 @ 9:00 am	2023-03-17 @ 12:00 pm	< 0.3	2023-03-20
11314952	MEDIA E	2023-03-14 @ 9:00 am	2023-03-17 @ 12:00 pm	0.5 ± 0.3	2023-03-20
11314953	MEDIA S	2023-03-14 @ 9:00 am	2023-03-17 @ 12:00 pm	< 0.3	2023-03-20
11314948	MUSIC	2023-03-14 @ 9:00 am	2023-03-17 @ 12:00 pm	0.5 ± 0.3	2023-03-20
11314946	PE OFFICE 147A	2023-03-14 @ 9:00 am	2023-03-17 @ 12:00 pm	< 0.3	2023-03-20
11314932	PRINCIPAL OFFICE	2023-03-14 @ 9:00 am	2023-03-17 @ 12:00 pm	< 0.3	2023-03-20
11315011	QCB1	2023-03-14 @ 9:00 am	2023-03-17 @ 12:00 pm	< 0.3	2023-03-20
11315012	QCB2	2023-03-14 @ 9:00 am	2023-03-17 @ 12:00 pm	< 0.3	2023-03-20
11315013	QCB3	2023-03-14 @ 9:00 am	2023-03-17 @ 12:00 pm	< 0.3	2023-03-20
11315014	QCB4	2023-03-14 @ 9:00 am	2023-03-17 @ 12:00 pm	< 0.3	2023-03-20
11118565	QCS1	2023-03-12 @ 9:00 am	2023-03-15 @ 9:00 am	27.4 ± 2.2	2023-03-20
11314931	SCHOOL OFFICE	2023-03-14 @ 9:00 am	2023-03-17 @ 12:00 pm	< 0.3	2023-03-20
11314961	STAFF LOUNGE	2023-03-14 @ 9:00 am	2023-03-17 @ 12:00 pm	< 0.3	2023-03-20
11314933	SUPPLY RM	2023-03-14 @ 9:00 am	2023-03-17 @ 12:00 pm	0.5 ± 0.3	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. They are part of the quality control process of testing referenced in the last 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](mailto: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](http://www.healthoregon.org/radon).

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

