

# INDUSTRIAL HYGIENE REPORT

## RADON TESTING REPORT

### Sprague High School

Report to: Vonnie B. Good, EHS Salem Keizer School District

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On-site: November 13–16, 2018

Report: November 25, 2018

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#### PURPOSE

After initial testing showed radon levels above EPA's Action Level of 4.0 picoCuries/L (pCi/L) in a number of rooms at Sprague High School, three radon mitigation systems were installed in August of 2012. To ensure that the systems are functioning properly and levels are well below EPA's Action Level, annual radon testing is performed.

#### CONCLUSION

All classrooms that were tested locations had levels of radon below the EPA's action level of 4 picoCuries per liter (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 November 13-16, 2018, during normal and routine school ventilation system operation, as well as with the radon mitigation system in operation. Weather conditions a week prior to and during the testing had been dry with moderate temperatures.

Quality assurance testing was also conducted by utilizing blank 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 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 School District has determined that 2.7 pCi/L is a target level where retesting should be done. No locations were above 2.7 pCi/L.

## 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.

In the case of Sprague, radon mitigations systems were determined to be needed to reduce the levels of radon.

### Sample Data Attached

November 19, 2018

### \*\* LABORATORY ANALYSIS REPORT \*\*

Radon test result report for:

**SCHOOL  
SPRAGUE**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7979881	1	2018-11-13 @ 9:00 am	2018-11-16 @ 8:00 am	1.3 ± 0.3	2018-11-19
7979887	10	2018-11-13 @ 9:00 am	2018-11-16 @ 8:00 am	1.1 ± 0.3	2018-11-19
7979886	10	2018-11-13 @ 9:00 am	2018-11-16 @ 8:00 am	0.9 ± 0.3	2018-11-19
7979888	11	2018-11-13 @ 9:00 am	2018-11-16 @ 8:00 am	0.6 ± 0.3	2018-11-19
7979871	114	2018-11-13 @ 9:00 am	2018-11-16 @ 8:00 am	0.9 ± 0.3	2018-11-19
7979872	116	2018-11-13 @ 9:00 am	2018-11-16 @ 8:00 am	1.0 ± 0.3	2018-11-19
7979875	117	2018-11-13 @ 9:00 am	2018-11-16 @ 8:00 am	0.7 ± 0.3	2018-11-19
7979873	118	2018-11-13 @ 9:00 am	2018-11-16 @ 8:00 am	1.1 ± 0.3	2018-11-19
7979874	119	2018-11-13 @ 9:00 am	2018-11-16 @ 8:00 am	0.7 ± 0.3	2018-11-19
7979889	12	2018-11-13 @ 9:00 am	2018-11-16 @ 8:00 am	0.8 ± 0.3	2018-11-19
7979876	121	2018-11-13 @ 9:00 am	2018-11-16 @ 8:00 am	0.6 ± 0.3	2018-11-19
7979877	121	2018-11-13 @ 9:00 am	2018-11-16 @ 8:00 am	0.9 ± 0.3	2018-11-19
7979880	122	2018-11-13 @ 9:00 am	2018-11-16 @ 8:00 am	0.8 ± 0.3	2018-11-19
7979878	123	2018-11-13 @ 9:00 am	2018-11-16 @ 8:00 am	0.7 ± 0.3	2018-11-19
7979879	124	2018-11-13 @ 9:00 am	2018-11-16 @ 8:00 am	0.9 ± 0.3	2018-11-19
7979890	14	2018-11-13 @ 9:00 am	2018-11-16 @ 8:00 am	0.8 ± 0.3	2018-11-19
7979891	15	2018-11-13 @ 9:00 am	2018-11-16 @ 8:00 am	1.3 ± 0.3	2018-11-19
7979882	2	2018-11-13 @ 9:00 am	2018-11-16 @ 8:00 am	0.7 ± 0.3	2018-11-19
7979883	4	2018-11-13 @ 9:00 am	2018-11-16 @ 8:00 am	0.8 ± 0.3	2018-11-19
7979884	6	2018-11-13 @ 9:00 am	2018-11-16 @ 8:00 am	< 0.3	2018-11-19
7979885	8	2018-11-13 @ 9:00 am	2018-11-16 @ 8:00 am	1.1 ± 0.3	2018-11-19
7979892	CHECK IN	2018-11-13 @ 9:00 am	2018-11-16 @ 8:00 am	< 0.3	2018-11-19
7979893	CHECK IN	2018-11-13 @ 9:00 am	2018-11-16 @ 8:00 am	< 0.3	2018-11-19