

INDUSTRIAL HYGIENE REPORT

RADON TESTING REPORT

Schirle School

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

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Reviewed By: DeEtta Burrows, MSPH, CIH – Wise Steps, Inc.

On-site: December 2-5, 2019

Report: December 17, 2019

PURPOSE

After initial testing showed radon levels above EPA's Action Level of 4.0 picoCuries/L (pCi/L) in a few of the rooms at Schirle, a radon mitigation system was installed in March of 2016. To ensure that the systems are functioning properly and levels are well below EPA's Action Level, annual radon testing is performed.

CONCLUSION AND RECOMMENDATION

All classrooms had levels of radon below the EPA Action Level. However, classroom B2 and the principal's office had slightly elevated radon levels which are above the School District's trigger to retest.

During testing, we recognized that the mitigation system fan wasn't running. The fan was replaced. Recommend retest in classroom B2 and the principal's office after mitigation system is operational. to make sure the mitigation system is operating 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 December 2-5, 2019, during normal and routine school ventilation system operation, as well as with the radon mitigation system in operation. Weather conditions the week of the testing had been dry with low 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. QCS1 is a spiked radon test kit and does not represent an actual radon measurement in the school.

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)

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.

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. A subslab depressurization system was installed in this school. If ventilation doesn't lower the radon below EPA guidelines, a mitigation system may be installed.

Sample Data Attached

December 12, 2019

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

**SK
SCHIRLE**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7274579	B1	2019-12-02 @ 10:00 am	2019-12-05 @ 9:00 am	1.7 ± 0.3	2019-12-09
7274580	B2	2019-12-02 @ 10:00 am	2019-12-05 @ 9:00 am	3.4 ± 0.4	2019-12-09
7274581	B3 NE	2019-12-02 @ 10:00 am	2019-12-05 @ 9:00 am	2.5 ± 0.4	2019-12-09
7274582	B3 NW	2019-12-02 @ 10:00 am	2019-12-05 @ 9:00 am	2.5 ± 0.4	2019-12-09
7274583	B4	2019-12-02 @ 10:00 am	2019-12-05 @ 9:00 am	1.8 ± 0.4	2019-12-09
7274584	B5	2019-12-02 @ 10:00 am	2019-12-05 @ 9:00 am	1.4 ± 0.3	2019-12-09
7274585	B6	2019-12-02 @ 10:00 am	2019-12-05 @ 9:00 am	1.8 ± 0.4	2019-12-09
7274577	PRINCIPAL	2019-12-02 @ 10:00 am	2019-12-05 @ 9:00 am	2.6 ± 0.4	2019-12-09
7274578	PRINCIPAL	2019-12-02 @ 10:00 am	2019-12-05 @ 9:00 am	2.9 ± 0.4	2019-12-09
9305095	QCB1	2019-12-02 @ 10:00 am	2019-12-05 @ 9:00 am	< 0.3	2019-12-09
7274554	QCS1	2019-11-30 @ 8:00 am	2019-12-03 @ 8:00 am	25.0 ± 1.7	2019-12-09 *

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QCS1 is a test kit that was spiked in a laboratory as part of the quality control program of our testing. It does NOT represent a test level in the school.