

INDUSTRIAL HYGIENE REPORT

RADON TESTING REPORT

Liberty Elementary School

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

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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 number of rooms at Liberty, three radon mitigation systems were installed in August of 2014. 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

One classroom, Room 20, had levels of radon at the EPA Action Level. Classroom 21 had a radon level of 2.9 pCi/L, which is just above the Salem Keizer School District recommended level for retesting.

It is recommended to increase the amount of outdoor air these classrooms then retest for radon levels.

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 building ventilation system operation. Weather conditions during the weeks prior of testing had been generally dry with low temperatures.

Quality assurance testing was also conducted by utilizing a blank (QCB) test device 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.

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. If increased ventilation doesn't decrease the radon levels below EPA's guidelines, mitigation systems may be installed.

Sample Data Attached

December 12, 2019

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

**SK
LIBERTY**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
9305096	QCB1	2019-12-02 @ 11:00 am	2019-12-05 @ 9:00 am	0.6 ± 0.4	2019-12-09
7274589	RM 20 SE	2019-12-02 @ 11:00 am	2019-12-05 @ 9:00 am	4.0 ± 0.4	2019-12-09
7274586	RM 20NW	2019-12-02 @ 11:00 am	2019-12-05 @ 9:00 am	3.5 ± 0.4	2019-12-09
7274590	RM 21	2019-12-02 @ 11:00 am	2019-12-05 @ 9:00 am	2.9 ± 0.4	2019-12-09
