

INDUSTRIAL HYGIENE REPORT

RADON TESTING REPORT

Cummings School

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

By: Kathy Ellis, Senior Industrial Hygiene Consultant

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

On-site: March 14–17, 2017

Report: April 7, 2017

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 Cummings, a radon mitigation system was installed in December 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

All classrooms and the gym and custodian's office had very low levels of radon.

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, 2017, during normal and routine school ventilation system operation, as well as with the radon mitigation system in operation.

Quality assurance testing was also conducted by utilizing blank, duplicate, and spiked samples per the recommendations found in ORS 332.166-.167. The test kits labeled "Check In 1" is the blank. It tested at <0.3 pCi/L, confirming the lab results.

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. In this case, increased ventilation wasn't sufficient, so a subslab depressurization system was installed in the PE Office.

Sample Data Attached

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7854769	13	2017-03-20 @ 10:00 am	2017-03-23 @ 11:00 am	1.2 ± 0.2	2017-03-24
7854767	14	2017-03-20 @ 10:00 am	2017-03-23 @ 11:00 am	0.9 ± 0.2	2017-03-24
7854766	15	2017-03-20 @ 10:00 am	2017-03-23 @ 11:00 am	1.7 ± 0.2	2017-03-24
7854768	16	2017-03-20 @ 10:00 am	2017-03-23 @ 11:00 am	1.3 ± 0.2	2017-03-24
7854770	CHECK IN 1	2017-03-20 @ 10:00 am	2017-03-23 @ 11:00 am	< 0.3	2017-03-24
7854765	CUSTODIAN OFFICE	2017-03-20 @ 10:00 am	2017-03-23 @ 11:00 am	< 0.3	2017-03-24
7854763	PE OFFICE	2017-03-20 @ 10:00 am	2017-03-23 @ 11:00 am	< 0.3	2017-03-24
7854764	PE OFFICE	2017-03-20 @ 10:00 am	2017-03-23 @ 11:00 am	< 0.3	2017-03-24