

INDUSTRIAL HYGIENE REPORT

RADON TESTING REPORT

West High School

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

By: Kathy Ellis, Senior Industrial Hygiene Consultant

Reviewed By: DeEtta Burrows, MSPH, CIH

On-site: November 18–21, 2019

Report: December 2, 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 West High School a radon mitigation system was installed in July of 2013. 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 tested locations had levels of radon below the EPA recommended level.

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 18-21, 2019 during normal and routine school ventilation system operation, as well as with the radon mitigation system in operation. Weather conditions during the weeks prior of testing had been generally dry with moderate 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. QSC1 is a spiked kit and does not represent an actual level of radon 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) 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.

At West Salem High School, a mitigation system was installed to control the radon.

Sample Data Attached

Radon test result report for:

**SK
WEST HS**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
9304976	QCB1	2019-11-18 @ 11:00 am	2019-11-21 @ 12:00 pm	< 0.3	2019-11-25
9132395	QCS1	2019-11-17 @ 8:00 am	2019-11-20 @ 8:00 am	23.3 ± 1.4	2019-11-25
9304960	RM 105A	2019-11-18 @ 11:00 am	2019-11-21 @ 12:00 pm	1.0 ± 0.3	2019-11-25
9304964	RM 105A	2019-11-18 @ 11:00 am	2019-11-21 @ 12:00 pm	1.0 ± 0.3	2019-11-25
9304965	RM 105B	2019-11-18 @ 11:00 am	2019-11-21 @ 12:00 pm	< 0.3	2019-11-25
9304966	RM 105C	2019-11-18 @ 11:00 am	2019-11-21 @ 12:00 pm	1.0 ± 0.3	2019-11-25
9304961	RM 117	2019-11-18 @ 11:00 am	2019-11-21 @ 12:00 pm	< 0.3	2019-11-25
9304962	RM 117	2019-11-18 @ 11:00 am	2019-11-21 @ 12:00 pm	< 0.3	2019-11-25
9304963	RM 119	2019-11-18 @ 11:00 am	2019-11-21 @ 12:00 pm	< 0.3	2019-11-25
