

# 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 26-29, 2018

Report: December 9, 2018

---

#### 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 26-29, 2018 during normal and routine school ventilation system operation, as well as with the radon mitigation system in operation. Weather conditions during the week of testing had been rainy with low 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.

### 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. However, this was not sufficient at West Salem High School and a subslab depressurization system was installed.

### Sample Data Attached

**SK  
WEST**

---

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
9132338	105A	2018-11-26 @ 10:00 am	2018-11-29 @ 10:00 am	1.2 ± 0.4	2018-12-03
9132335	105A	2018-11-26 @ 10:00 am	2018-11-29 @ 10:00 am	1.0 ± 0.3	2018-12-03
9132334	105A	2018-11-26 @ 10:00 am	2018-11-29 @ 10:00 am	0.8 ± 0.3	2018-12-03
9132336	105B	2018-11-26 @ 10:00 am	2018-11-29 @ 10:00 am	< 0.3	2018-12-03
9132337	105C	2018-11-26 @ 10:00 am	2018-11-29 @ 10:00 am	0.8 ± 0.3	2018-12-03
9132332	117	2018-11-26 @ 10:00 am	2018-11-29 @ 10:00 am	< 0.3	2018-12-03
9132331	117	2018-11-26 @ 10:00 am	2018-11-29 @ 10:00 am	< 0.3	2018-12-03
9132333	119	2018-11-26 @ 10:00 am	2018-11-29 @ 10:00 am	< 0.3	2018-12-03
9132339	CHECK IN	2018-11-26 @ 10:00 am	2018-11-29 @ 10:00 am	< 0.3	2018-12-03

---