

# INDUSTRIAL HYGIENE REPORT

## RADON TESTING REPORT

### Liberty School

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

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On-site: March 14–17, 2017

Report: April 10, 2017

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#### 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 school, a radon mitigation system was 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

All classrooms 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. Test kit labeled "Check In" room 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, therefore a subslab depressurization system was installed.

### Sample Data Attached

Radon test result report for:

**SK  
LIBERTY**

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Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7151259	20	2017-03-14 @ 8:00 am	2017-03-17 @ 11:00 am	0.6 ± 0.2	2017-03-20
7151257	21	2017-03-14 @ 8:00 am	2017-03-17 @ 11:00 am	< 0.3	2017-03-20
7151258	21	2017-03-14 @ 8:00 am	2017-03-17 @ 11:00 am	< 0.3	2017-03-20
7151256	22	2017-03-14 @ 8:00 am	2017-03-17 @ 11:00 am	1.0 ± 0.3	2017-03-20
8153283	CHECK IN	2017-03-14 @ 8:00 am	2017-03-17 @ 11:00 am	< 0.3	2017-03-20

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