
INDUSTRIAL HYGIENE RADON REPORT

RADON TESTING REPORT

Englewood Elementary School Classroom 2

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: January 7-10, 2014

Report: January 23, 2014

PURPOSE

Follow up short term radon testing was done in Classroom 2 to track any changes in the level of radon.

A long term radon monitor had been installed in the classroom last spring after finding slightly elevated levels of radon in the November 2012 tests.

During Construction Bond work during the summer of 2013, the unit ventilator was replaced in Classroom 2.

CONCLUSION

The short term test found Classroom 2 had a significant decrease in the level of radon. Replacing the unit ventilator reduced the levels of radon.

SAMPLE RESULTS

The January 2014 tests for radon in Classroom 2 found a low level, 1.7 pCi/L.

In the initial testing in Classroom 2, the radon level was 3.9 pCi/L.

TESTING

A radon Air-Chek short-term test device was used in this classroom. This device was placed 5 feet above the floor where it was not in direct contact with airflow from the ventilation system, windows or exterior doors.

The testing occurred from January 7-10, 2014 during normal and routine school ventilation system operation.

BACKGROUND ON RADON

Radon is a gas that occurs in nature, seeping up from the earth. It is odorless, colorless, and tasteless. Radon comes from the natural breakdown, or radioactive decay, from Uranium 238. The half-life of an individual element is relatively short. Within two weeks, about 90% of a given amount of radon gas will be gone. However, the actual health concern is for the radon decay products, called radon progeny, which carry a small static charge that allows their attachment to water vapor, dust, and smoke particles in the air.

The Radon progeny can become lodged in the lung tissue when they are inhaled, and it is these particles' further radiation decay that is associated with potential lung cancer effects.

Radon can seep into buildings or schools through cracks in slab floors or porous cinderblock. It can enter around loose-fitting drainage pipes or through sump pumps. Pressure differential between the building and the soil surrounding the foundation can draw soil gases into the building.

The US EPA has set an action level of 4.0 pCi/L. At or above this level of radon, the EPA recommends that corrective measures be taken to reduce the exposure to radon gas.

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 in to building increases, the radon levels should decrease. Replacing the unit ventilator greatly improved the air quality in the room and reduced the level of radon.

January 14, 2014

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

SK

ENGLEWOOD

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
4602073	RM 2	2014-01-07 @ 3:00 pm	2014-01-10 @ 8:00 am	1.7	2014-01-14

Air Chek, Inc. 1936 Butler Bridge Rd, Mills River, NC 28759-3892 Phone: (828) 684-0893 Fax: (828) 684-8498