
INDUSTRIAL HYGIENE RADON REPORT

RADON TESTING REPORT

Chavez Elementary School

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

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On-site: January 13–16, 2014

Report: January 23, 2014

PURPOSE

Radon testing was done to measure the background levels in all classrooms, offices and staff work rooms that are in contact with the ground.

TEST METHOD

Radon Air-Chek short-term test devices were used in each location by placing the device 5-6 feet above the floor where it is not in direct contact with airflow from the ventilation system, windows or exterior doors. Staff were requested to keep windows closed during the testing period.

These short-term devices work by trapping room air inside the grains of charcoal within the devices, meaning that live radon gas is being captured. The analysis is performed by measuring the radiation emitted from the charcoal, which is proportional to the amount of radon that was present in the room air.

The testing occurred from Monday, January 13 to Thursday, January 16, 2014 during normal and routine operation of 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:

RESULTS and RECOMMENDATION

No test locations were above the EPA's Action Level of 4.0 picoCuries per liter (pCi/l).

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, of 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.

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 should 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 use of dilution ventilation. If the amount of outside air delivered into a building increases, the radon levels should decrease.

Sample Data Attached

Radon test result report for:

SK

C CHAVEZ

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
4649259	101	2014-01-13 @ 2:00 pm	2014-01-16 @ 11:00 am	0.8	2014-01-21
4649260	102	2014-01-13 @ 2:00 pm	2014-01-16 @ 11:00 am	0.6	2014-01-21
4649265	103	2014-01-13 @ 2:00 pm	2014-01-16 @ 11:00 am	0.8	2014-01-21
4649266	104	2014-01-13 @ 2:00 pm	2014-01-16 @ 11:00 am	< 0.3	2014-01-21
4649271	105	2014-01-13 @ 2:00 pm	2014-01-16 @ 11:00 am	0.8	2014-01-21
4649275	106	2014-01-13 @ 2:00 pm	2014-01-16 @ 11:00 am	1.5	2014-01-21
4649273	107	2014-01-13 @ 2:00 pm	2014-01-16 @ 11:00 am	< 0.3	2014-01-21
4649274	107 OFFICE	2014-01-13 @ 2:00 pm	2014-01-16 @ 11:00 am	< 0.3	2014-01-21
4649272	108	2014-01-13 @ 2:00 pm	2014-01-16 @ 11:00 am	< 0.3	2014-01-21
4649268	109	2014-01-13 @ 2:00 pm	2014-01-16 @ 11:00 am	0.8	2014-01-21
4649267	110	2014-01-13 @ 2:00 pm	2014-01-16 @ 11:00 am	0.7	2014-01-21
4649264	111	2014-01-13 @ 2:00 pm	2014-01-16 @ 11:00 am	0.6	2014-01-21
4649261	112	2014-01-13 @ 2:00 pm	2014-01-16 @ 11:00 am	0.6	2014-01-21
4649257	113	2014-01-13 @ 2:00 pm	2014-01-16 @ 11:00 am	0.6	2014-01-21
4649269	113 OBS	2014-01-13 @ 2:00 pm	2014-01-16 @ 11:00 am	0.9	2014-01-21
4649270	114 BOOK ST	2014-01-13 @ 2:00 pm	2014-01-16 @ 11:00 am	0.7	2014-01-21
4649262	118 OBS	2014-01-13 @ 2:00 pm	2014-01-16 @ 11:00 am	0.9	2014-01-21
4649263	118 PLC	2014-01-13 @ 2:00 pm	2014-01-16 @ 11:00 am	0.9	2014-01-21
4649256	140	2014-01-13 @ 2:00 pm	2014-01-16 @ 11:00 am	0.8	2014-01-21
4649254	146	2014-01-13 @ 2:00 pm	2014-01-16 @ 11:00 am	1.1	2014-01-21
4649250	167	2014-01-13 @ 2:00 pm	2014-01-16 @ 11:00 am	0.6	2014-01-21
4649251	172	2014-01-13 @ 2:00 pm	2014-01-16 @ 11:00 am	1.4	2014-01-21
4649252	174	2014-01-13 @ 2:00 pm	2014-01-16 @ 11:00 am	1.3	2014-01-21
4649248	179	2014-01-13 @ 2:00 pm	2014-01-16 @ 11:00 am	1.1	2014-01-21
4649247	180	2014-01-13 @ 2:00 pm	2014-01-16 @ 11:00 am	0.8	2014-01-21
4649255	193	2014-01-13 @ 2:00 pm	2014-01-16 @ 11:00 am	< 0.3	2014-01-21
4649244	CONF RM A	2014-01-13 @ 2:00 pm	2014-01-16 @ 11:00 am	1.0	2014-01-21
4649245	CONF RM B	2014-01-13 @ 2:00 pm	2014-01-16 @ 11:00 am	0.9	2014-01-21
4649258	COUNSELOR	2014-01-13 @ 2:00 pm	2014-01-16 @ 11:00 am	0.7	2014-01-21
4649253	KITCHEN	2014-01-13 @ 2:00 pm	2014-01-16 @ 11:00 am	< 0.3	2014-01-21
4649242	OFF MANAGER	2014-01-13 @ 2:00 pm	2014-01-16 @ 11:00 am	< 0.3	2014-01-21
4649241	OFFICE	2014-01-13 @ 2:00 pm	2014-01-16 @ 11:00 am	1.1	2014-01-21
4649243	PRINCIPAL	2014-01-13 @ 2:00 pm	2014-01-16 @ 11:00 am	0.7	2014-01-21
4649246	RM 194	2014-01-13 @ 2:00 pm	2014-01-16 @ 11:00 am	1.0	2014-01-21