

INDUSTRIAL HYGIENE REPORT

RADON TESTING REPORT

TIS

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

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On-site: February 23–26, 2015

Report: March 5, 2015

PURPOSE

Radon testing was done to measure the background levels in all 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 or exterior doors.

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, February 23 to Thursday, February 26, 2015, during normal and routine operations in the building.

EPA RADON GUIDELINES

The EPA has set an Action Level of 4.0 pCi/L (picoCuries per liter) for schools, businesses and homes. If buildings have radon levels at or above 4.0 pCi/L, EPA recommends actions should be taken 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

Most test locations were considerably below the EPA's Action Level of 4.0 picoCuries per liter (pCi/l).

Two test locations were only slightly below the action level, Deputy Director's office @ 3.5 pCi/L and the TIS Director's office @3.5 pCi/L.

It is recommended that the operation of the ventilation systems for these two rooms be checked, to make sure that the amount of outdoor air supplied has not been shut off. If possible, increase the amount of outdoor air to these two rooms, then retest the rooms for radon levels.

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 SCHOOL BUILDINGS

The major control mechanism for lowering radon levels within 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

March 4, 2015

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

**SCH ADM
TIS**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7015756	BREAK ROOM	2015-02-23 @ 9:00 am	2015-02-26 @ 9:00 am	0.8	2015-03-02
7015764	COLD STORAGE RM	2015-02-23 @ 9:00 am	2015-02-26 @ 9:00 am	< 0.3	2015-03-02
7015752	DEPUTY DIRECTOR	2015-02-23 @ 9:00 am	2015-02-26 @ 9:00 am	3.5	2015-03-02
7015760	ED TECH	2015-02-23 @ 9:00 am	2015-02-26 @ 9:00 am	0.7	2015-03-02
7015757	ENTERPRISE SUPER	2015-02-23 @ 9:00 am	2015-02-26 @ 9:00 am	0.8	2015-03-02
7015753	NSG 1	2015-02-23 @ 9:00 am	2015-02-26 @ 9:00 am	0.9	2015-03-02
7015754	NSG 2	2015-02-23 @ 9:00 am	2015-02-26 @ 9:00 am	1.0	2015-03-02
7015755	NSG 3	2015-02-23 @ 9:00 am	2015-02-26 @ 9:00 am	1.2	2015-03-02
7015758	NSG 4	2015-02-23 @ 9:00 am	2015-02-26 @ 9:00 am	1.1	2015-03-02
7015751	OFFICE MANAGER	2015-02-23 @ 9:00 am	2015-02-26 @ 9:00 am	1.9	2015-03-02
7015763	PMO 2	2015-02-23 @ 9:00 am	2015-02-26 @ 9:00 am	0.7	2015-03-02
7015759	SYSTEMS PROGRAM	2015-02-23 @ 9:00 am	2015-02-26 @ 9:00 am	1.1	2015-03-02
7015767	TIS DIRECTOR	2015-02-23 @ 9:00 am	2015-02-26 @ 9:00 am	3.5	2015-03-02
7015761	TIS LIBRARY	2015-02-23 @ 9:00 am	2015-02-26 @ 9:00 am	1.2	2015-03-02
7015765	TIS PROJECTS	2015-02-23 @ 9:00 am	2015-02-26 @ 9:00 am	1.1	2015-03-02
7015766	TIS SUPERVISOR	2015-02-23 @ 9:00 am	2015-02-26 @ 9:00 am	1.1	2015-03-02

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