

INDUSTRIAL HYGIENE REPORT

Walker Middle School

Report to: Vonnie Good, Risk Management

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On-site: January 14-17, 2013

Report: January 23, 2013

PURPOSE

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

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.

These short-term devices work by trapping room air inside the grains of charcoal with 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 14 to Thursday, January 17, 2013 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 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

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, from uranium 238, and produces radon. 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 the 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:**SALEM K
WALKER**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
4592174	100	2013-01-14 @ 11:00 am	2013-01-17 @ 3:00 pm	< 0.3	2013-01-22
4592176	101	2013-01-14 @ 11:00 am	2013-01-17 @ 3:00 pm	0.6	2013-01-22
4592177	102	2013-01-14 @ 11:00 am	2013-01-17 @ 3:00 pm	0.6	2013-01-22
4592178	103	2013-01-14 @ 11:00 am	2013-01-17 @ 3:00 pm	< 0.3	2013-01-22
4592181	109 CUSTODIAN	2013-01-14 @ 11:00 am	2013-01-17 @ 3:00 pm	1.5	2013-01-22
4592183	111 BEHAVIOR	2013-01-14 @ 11:00 am	2013-01-17 @ 3:00 pm	0.6	2013-01-22
4592184	111 HEALTH	2013-01-14 @ 11:00 am	2013-01-17 @ 3:00 pm	< 0.3	2013-01-22
4592182	111 SRO	2013-01-14 @ 11:00 am	2013-01-17 @ 3:00 pm	< 0.3	2013-01-22
4592185	113	2013-01-14 @ 11:00 am	2013-01-17 @ 3:00 pm	1.0	2013-01-22
4592187	115	2013-01-14 @ 11:00 am	2013-01-17 @ 3:00 pm	< 0.3	2013-01-22
4592211	116	2013-01-14 @ 11:00 am	2013-01-17 @ 3:00 pm	0.7	2013-01-22
4592188	117	2013-01-14 @ 11:00 am	2013-01-17 @ 3:00 pm	< 0.3	2013-01-22
4592210	118	2013-01-14 @ 11:00 am	2013-01-17 @ 3:00 pm	< 0.3	2013-01-22
4592189	119	2013-01-14 @ 11:00 am	2013-01-17 @ 3:00 pm	0.6	2013-01-22
4592202	120	2013-01-14 @ 11:00 am	2013-01-17 @ 3:00 pm	< 0.3	2013-01-22
4592200	120B	2013-01-14 @ 11:00 am	2013-01-17 @ 3:00 pm	0.6	2013-01-22
4592201	121	2013-01-14 @ 11:00 am	2013-01-17 @ 3:00 pm	< 0.3	2013-01-22
4592203	122	2013-01-14 @ 11:00 am	2013-01-17 @ 3:00 pm	0.9	2013-01-22
4592205	123	2013-01-14 @ 11:00 am	2013-01-17 @ 3:00 pm	< 0.3	2013-01-22
4592204	123 OFFICE	2013-01-14 @ 11:00 am	2013-01-17 @ 3:00 pm	0.6	2013-01-22
4592208	124	2013-01-14 @ 11:00 am	2013-01-17 @ 3:00 pm	< 0.3	2013-01-22
4592206	125	2013-01-14 @ 11:00 am	2013-01-17 @ 3:00 pm	< 0.3	2013-01-22
4592207	125 OFFICE	2013-01-14 @ 11:00 am	2013-01-17 @ 3:00 pm	< 0.3	2013-01-22
4592199	130	2013-01-14 @ 11:00 am	2013-01-17 @ 3:00 pm	< 0.3	2013-01-22
4592190	131	2013-01-14 @ 11:00 am	2013-01-17 @ 3:00 pm	< 0.3	2013-01-22
4592198	132	2013-01-14 @ 11:00 am	2013-01-17 @ 3:00 pm	< 0.3	2013-01-22
4592191	133	2013-01-14 @ 11:00 am	2013-01-17 @ 3:00 pm	< 0.3	2013-01-22
4592197	134	2013-01-14 @ 11:00 am	2013-01-17 @ 3:00 pm	< 0.3	2013-01-22
4592192	135	2013-01-14 @ 11:00 am	2013-01-17 @ 3:00 pm	< 0.3	2013-01-22
4592196	136	2013-01-14 @ 11:00 am	2013-01-17 @ 3:00 pm	< 0.3	2013-01-22
4592195	137	2013-01-14 @ 11:00 am	2013-01-17 @ 3:00 pm	< 0.3	2013-01-22
4592170	ASSIST PRINC	2013-01-14 @ 11:00 am	2013-01-17 @ 3:00 pm	< 0.3	2013-01-22
4592167	ATTENDANCE	2013-01-14 @ 11:00 am	2013-01-17 @ 3:00 pm	< 0.3	2013-01-22
4592175	AUX GYM	2013-01-14 @ 11:00 am	2013-01-17 @ 3:00 pm	< 0.3	2013-01-22
4592173	BOY'S PE OFFIC	2013-01-14 @ 11:00 am	2013-01-17 @ 3:00 pm	0.6	2013-01-22
4592171	COUNSELOR	2013-01-14 @ 11:00 am	2013-01-17 @ 3:00 pm	< 0.3	2013-01-22
4592172	GIRL'S PE OFFI	2013-01-14 @ 11:00 am	2013-01-17 @ 3:00 pm	< 0.3	2013-01-22

January 22, 2013

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

**SALEM K
WALKER**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
4592179	KITCHEN OFFICE	2013-01-14 @ 11:00 am	2013-01-17 @ 3:00 pm	1.0	2013-01-22
4592186	LIAISON	2013-01-14 @ 11:00 am	2013-01-17 @ 3:00 pm	1.0	2013-01-22
4592193	MEDIA IT OFFI	2013-01-14 @ 11:00 am	2013-01-17 @ 3:00 pm	< 0.3	2013-01-22
4592194	MEDIA TECH	2013-01-14 @ 11:00 am	2013-01-17 @ 3:00 pm	< 0.3	2013-01-22
4592168	OFFICE MANAG	2013-01-14 @ 11:00 am	2013-01-17 @ 3:00 pm	0.7	2013-01-22
4592169	PRINCIPAL	2013-01-14 @ 11:00 am	2013-01-17 @ 3:00 pm	< 0.3	2013-01-22
4592180	REGISTAR 111	2013-01-14 @ 11:00 am	2013-01-17 @ 3:00 pm	< 0.3	2013-01-22

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