

INDUSTRIAL HYGIENE REPORT

Myers Elementary 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.

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 during normal and routine operation of the school.

EPA RADON GUIDELINES

The EPA has set an action level of 4 pCi/L (picoCuries per liter) for schools. If classrooms or buildings have radon levels at 4 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 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:
SALEMK
MEYER

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
4592237	101	2013-01-14 @ 4:00 pm	2013-01-17 @ 4:00 pm	1.0	2013-01-22
4592236	102	2013-01-14 @ 4:00 pm	2013-01-17 @ 4:00 pm	1.3	2013-01-22
4592235	103	2013-01-14 @ 4:00 pm	2013-01-17 @ 4:00 pm	1.5	2013-01-22
4592233	104	2013-01-14 @ 4:00 pm	2013-01-17 @ 4:00 pm	1.6	2013-01-22
4592234	105	2013-01-14 @ 4:00 pm	2013-01-17 @ 4:00 pm	1.8	2013-01-22
4592232	106	2013-01-14 @ 4:00 pm	2013-01-17 @ 4:00 pm	1.8	2013-01-22
4592231	107	2013-01-14 @ 4:00 pm	2013-01-17 @ 4:00 pm	2.3	2013-01-22
4592230	108	2013-01-14 @ 4:00 pm	2013-01-17 @ 4:00 pm	1.7	2013-01-22
4592228	109	2013-01-14 @ 4:00 pm	2013-01-17 @ 4:00 pm	1.1	2013-01-22
4592229	110	2013-01-14 @ 4:00 pm	2013-01-17 @ 4:00 pm	1.9	2013-01-22
4592227	111	2013-01-14 @ 4:00 pm	2013-01-17 @ 4:00 pm	1.6	2013-01-22
4592226	112	2013-01-14 @ 4:00 pm	2013-01-17 @ 4:00 pm	1.4	2013-01-22
4592225	113	2013-01-14 @ 4:00 pm	2013-01-17 @ 4:00 pm	1.3	2013-01-22
4592220	115	2013-01-14 @ 4:00 pm	2013-01-17 @ 4:00 pm	0.9	2013-01-22
4592219	116	2013-01-14 @ 4:00 pm	2013-01-17 @ 4:00 pm	0.9	2013-01-22
4592218	117	2013-01-14 @ 4:00 pm	2013-01-17 @ 4:00 pm	1.0	2013-01-22
4592217	118	2013-01-14 @ 4:00 pm	2013-01-17 @ 4:00 pm	1.1	2013-01-22
4592216	119	2013-01-14 @ 4:00 pm	2013-01-17 @ 4:00 pm	1.0	2013-01-22
4592215	120	2013-01-14 @ 4:00 pm	2013-01-17 @ 4:00 pm	1.3	2013-01-22
4592239	ASSIST PRIN	2013-01-14 @ 4:00 pm	2013-01-17 @ 4:00 pm	1.5	2013-01-22
4592224	CHOIR 114	2013-01-14 @ 4:00 pm	2013-01-17 @ 4:00 pm	1.2	2013-01-22
4592221	CUSTODIAN	2013-01-14 @ 4:00 pm	2013-01-17 @ 4:00 pm	1.1	2013-01-22
4592212	HEALTH	2013-01-14 @ 4:00 pm	2013-01-17 @ 4:00 pm	0.6	2013-01-22
4592214	LRC 121	2013-01-14 @ 4:00 pm	2013-01-17 @ 4:00 pm	1.1	2013-01-22
4592222	ORCHESTRA	2013-01-14 @ 4:00 pm	2013-01-17 @ 4:00 pm	1.1	2013-01-22
4592223	PE OFFICE	2013-01-14 @ 4:00 pm	2013-01-17 @ 4:00 pm	1.0	2013-01-22
4592213	PRINCIPAL	2013-01-14 @ 4:00 pm	2013-01-17 @ 4:00 pm	1.0	2013-01-22
4592238	TECHNOLOGY	2013-01-14 @ 4:00 pm	2013-01-17 @ 4:00 pm	1.1	2013-01-22

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