

**Salem Keizer School District  
Sprague High School  
Basement  
RADON TESTING SAMPLE REPORT**

On-site: March 11 &13, 2013

Report: March 24, 2013

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**PURPOSE**

Follow up radon testing was done in all occupied rooms in the basement after radon remediation systems had been installed in rooms 2 and 14, and the ventilation system for these basement rooms was adjusted.

**CONCLUSION and RECOMMENDATION**

All of the tested rooms had radon levels below the EPA recommended action level at or above 4.0 pCi/L.

**TESTING**

Radon Air-Chek short-term test devices were used in 16 rooms in the basement by suspending the device in each room. The testing occurred from Monday, March 11 to Wednesday, March 13, 2013, during normal and routine school ventilation system operation, as well as the new radon abatement systems operating.

**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.

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 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. Sprague has two radon abatement systems in operation in rooms on the north and south ends of the basement.

## Sprague High School Radon Test Summary

	Dec 2010	June 2010	January 2010	June 2009	May 2009	July 2001
	RADON LEVELS pCi/l	RADON LEVELS pCi/l	RADON LEVELS pCi/l	RADON LEVELS pCi/l	RADON LEVELS pCi/l	RADON LEVELS pCi/l
Rm 1	1.7	<0.3	0.5	0.8	<0.3	12.1
Rm 2	1.2	0.6				
Rm 3	1.1	0.8				
Rm 4	2.4	<0.3	<0.3			
Rm 5		0.6		<0.3		
Rm 6	4.4	0.7	<0.3	0.6		
Rm 7		<0.3				
Rm 8	2.4	0.6	0.8			
Rm 9	1.1	0.8				
Rm 10	2.0	0.8	<0.3			
Rm 11	1.2	1.0	<0.3	0.6		
Rm 12	0.8	0.8	0.7			
Rm 13		1.0				
Rm 14	0.8	<0.3	<0.3	0.6		
Rm 15	1.2	1.1				

	March 2013	Jan 2013	Nov 2012	May 2012	April 18 2012
	RADON LEVELS pCi/l	RADON LEVELS pCi/l	RADON LEVELS pCi/l	RADON LEVELS pCi/l	RADON LEVELS pCi/l
Rm 1	<0.3	0.8	3.0		0.9
Rm 2	<0.3	0.8	2.2		<0.3
Rm 3	0.7	1.0			
Rm 4	<0.3	1.1	3.2		2.4
Rm 5	1.9	1.8			
Rm 6	<0.3	0.7	1.5	15.8	3.3
Rm 7	2.0	1.9			
Rm 8	1.1	1.2	2.8		2.3
Rm 9	1.4	4.4			
Rm 10	<0.3	0.9	1.9		1.3
Rm 11	<0.3	0.8	1.5		
Rm 12	0.8	0.7	1.9		1.8
Rm 13	0.6	<0.3			
Rm 14	0.6		2.6		<0.3
Rm 15 A	<0.3	0.5	<0.3		1.0
Rm 15 Office	0.9	0.6			

# Lab Report

March 20, 2013

**\*\* LABORATORY ANALYSIS REPORT \*\***

Radon test result report for:  
SK  
SPRAGUE

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
4601887	RM 1	2013-03-11 @ 3:00 pm	2013-03-13 @ 5:00 pm	< 0.3	2013-03-19
4601892	RM 10	2013-03-11 @ 3:00 pm	2013-03-13 @ 5:00 pm	< 0.3	2013-03-19
4601893	RM 11	2013-03-11 @ 3:00 pm	2013-03-13 @ 5:00 pm	< 0.3	2013-03-19
4601894	RM 12	2013-03-11 @ 3:00 pm	2013-03-13 @ 5:00 pm	0.8	2013-03-19
4601882	RM 13	2013-03-11 @ 3:00 pm	2013-03-13 @ 5:00 pm	0.6	2013-03-19
4601895	RM 14	2013-03-11 @ 3:00 pm	2013-03-13 @ 5:00 pm	0.6	2013-03-19
4601881	RM 15 OFFICE	2013-03-11 @ 3:00 pm	2013-03-13 @ 5:00 pm	0.9	2013-03-19
4601880	RM 15A	2013-03-11 @ 3:00 pm	2013-03-13 @ 5:00 pm	< 0.3	2013-03-19
4601888	RM 2	2013-03-11 @ 3:00 pm	2013-03-13 @ 5:00 pm	< 0.3	2013-03-19
4601886	RM 3	2013-03-11 @ 3:00 pm	2013-03-13 @ 5:00 pm	0.7	2013-03-19
4601889	RM 4	2013-03-11 @ 3:00 pm	2013-03-13 @ 5:00 pm	< 0.3	2013-03-19
4601885	RM 5	2013-03-11 @ 3:00 pm	2013-03-13 @ 5:00 pm	1.9	2013-03-19
4601890	RM 6	2013-03-11 @ 3:00 pm	2013-03-13 @ 5:00 pm	< 0.3	2013-03-19
4601891	RM 8	2013-03-11 @ 3:00 pm	2013-03-13 @ 5:00 pm	1.1	2013-03-19
4601883	RM 9	2013-03-11 @ 3:00 pm	2013-03-13 @ 5:00 pm	1.4	2013-03-19
4601884	RM7	2013-03-11 @ 3:00 pm	2013-03-13 @ 5:00 pm	2.0	2013-03-19

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