



Cascade Radon, Inc.
Testing, Mitigation,
Systems Design
CCB 180537 / CASCARI927C1

12839 NE Airport Way Bldg. 9
Portland, OR 97230
Phone (503) 421-4813
Fax (503) 281-6170
Office@CascadeRadon.com

Radon Survey Analysis Job# 17-C023L

for

Evergreen School District
Marrion Elementary
c/o Susan Steinbrenner

property located at

10119 NE 14th St

Vancouver WA 98664

March 16, 2017



Cascade Radon Inc. is a Woman-Owned Small Business (WOSB)

Introduction

The following report documents a study of radon levels for the property located at 10119 NE 14th St Vancouver WA 98664. The goal of this study is to determine indoor radon levels in all areas in contact with the ground and to sample radon in areas on the floors above.

Analysis assumes that the building tested was maintained under “closed-house” conditions (windows closed and exterior doors shut immediately after entering and exiting) 12 hours prior to the start of testing, as well as normal indoor temperatures, for the duration of the testing period.

Conclusions and Recommendations

Test was a “Short-Term” test, with a duration of 49 hours. See the chart below of areas in building that were tested, and the corresponding levels found. Note that one (1) of 54 locations tested had results above the EPA Action Level of 4.0 pCi/L.

It is recommended that a certified radon mitigation company be contacted to mitigate the elevated radon level bringing them below the EPA Action Level. While the EPA recommends buildings be fixed if the radon level is 4.0 pCi/L or more, because there is no known safe level of exposure to radon, EPA also suggests individuals consider fixing their buildings for radon levels between 2.0 pCi/L and 4.0 pCi/L.

The concentration of radon gas in indoor air can vary widely. It may fluctuate from day to day, week to week, and season to season. Indoor radon levels may be affected by barometric pressure, strong winds, rain-soaked ground, snow cover, heating and A/C systems, house construction, open windows, and the like. For further confirmation of average, long-term radon levels, it is suggested a long-term, Alpha-Track type radon test be performed.

Radon Level Measurements

The building tested was assumed occupied during testing.

The measurement technique used (62) Air Check activated charcoal kits.

Measurements of radon levels were made in the following areas:

Test Kit Number	Test Kit Location	Test End Time, Date	Average Radon Level (pCi/L)
7877735, 7877748	Front Office	10:00AM, 3/10/17	1.4 ± 0.3
7877736	Principal	10:00AM, 3/10/17	1.1 ± 0.3
7877740	Conference Room	10:00AM, 3/10/17	1.7 ± 0.3
7877717	AP Office	10:00AM, 3/10/17	1.6 ± 0.3
7877718	Copy Room	10:00AM, 3/10/17	1.4 ± 0.3
7877747	Nurse	10:00AM, 3/10/17	1.1 ± 0.3
7877752	Morning Attendance Room	10:00AM, 3/10/17	0.9 ± 0.3
7877746	Breakroom	10:00AM, 3/10/17	1.3 ± 0.3
7877745	Gym	10:00AM, 3/10/17	1.2 ± 0.3
7877716, 7877715	PE Office	10:00AM, 3/10/17	2.7 ± 0.3
7877738	Custodian	10:00AM, 3/10/17	1.0 ± 0.3
7877759	1B	10:00AM, 3/10/17	< 0.3
7877751	1A	11:00AM, 3/10/17	< 0.3
7877722	5A	11:00AM, 3/10/17	< 0.3
7877742	5B	11:00AM, 3/10/17	< 0.3
7877756	4A	11:00AM, 3/10/17	< 0.3

Test Kit Number	Test Kit Location	Test End Time, Date	Average Radon Level (pCi/L)
7877760	4B	11:00AM, 3/10/17	< 0.3
7877750	2A	11:00AM, 3/10/17	< 0.3
7877721, 7877749	2B	11:00AM, 3/10/17	< 0.3
7877762	Library	11:00AM, 3/10/17	2.8 ± 0.3
7877720	6A	11:00AM, 3/10/17	< 0.3
7877741	6B	11:00AM, 3/10/17	< 0.3
7877713	3B	11:00AM, 3/10/17	< 0.3
7877757	3A	11:00AM, 3/10/17	< 0.3
7877754	7A	11:00AM, 3/10/17	< 0.3
7877755	7B	11:00AM, 3/10/17	< 0.3
7877719	203	11:00AM, 3/10/17	1.5 ± 0.3
7877743, 7877744	201/202	11:00AM, 3/10/17	2.0 ± 0.3
7877733	204	11:00AM, 3/10/17	2.4 ± 0.3
7877708	205	11:00AM, 3/10/17	< 0.3
7877737	206	11:00AM, 3/10/17	1.9 ± 0.3
7877707	200 Pod	11:00AM, 3/10/17	2.0 ± 0.3
7877753	200 Pod Book Room	11:00AM, 3/10/17	2.2 ± 0.3
7877714	Teacher Work Room	11:00AM, 3/10/17	2.7 ± 0.3
7877726	100 Pod Book Room	11:00AM, 3/10/17	3.4 ± 0.4
7877725	106	11:00AM, 3/10/17	4.2 ± 0.4
7877723, 7877724	105	11:00AM, 3/10/17	3.7 ± 0.4
7877730	104	11:00AM, 3/10/17	3.3 ± 0.3
7877758	100 Pod	11:00AM, 3/10/17	3.1 ± 0.3
7877727	103	11:00AM, 3/10/17	2.3 ± 0.3
7877739	102	11:00AM, 3/10/17	2.7 ± 0.3
7877734	101	11:00AM, 3/10/17	3.1 ± 0.4
7877732	Library Office	11:00AM, 3/10/17	2.2 ± 0.3
7877731	Computer Lab	11:00AM, 3/10/17	2.4 ± 0.3
7877728, 7277729	300 Pod	11:00AM, 3/10/17	1.7 ± 0.3
7877767	301	11:00AM, 3/10/17	1.5 ± 0.3
7877773	302	11:00AM, 3/10/17	1.3 ± 0.3
7877769	303	11:00AM, 3/10/17	1.1 ± 0.3
7877768	304	11:00AM, 3/10/17	1.2 ± 0.3
7877763	305	11:00AM, 3/10/17	1.1 ± 0.3
7877774	306	11:00AM, 3/10/17	1.7 ± 0.3
7877771	A2	11:00AM, 3/10/17	1.7 ± 0.3
7877765	A1	11:00AM, 3/10/17	1.9 ± 0.3
7877761	BLANK – 6B	11:00AM, 3/10/17	< 0.3
7877796	BLANK – Office	11:00AM, 3/10/17	< 0.3

Blanks (unexposed kits) and Duplicate tests (two kits laid side by side) were deployed for QA/QC as per EPA protocol

Key:

pCi/L: Picocuries per liter – units of radon concentration.

Average: Cumulative average of the entire period since the test started.

Please contact me if you have any questions.

Thank you,

Tamara Linde
NRPP 108246 RT

#P-5A
Music
Raker
Ext. 2945

#P-1A
Grade-
Farmer
Ext. 2941

#P-4B
OT/PT x2954
Nurse x2949

#P-4A
Grade- 3rd
Dixon
Ext. 2944

#P-2A
L/S
McCallum
Ext. 2942

#P-2B
SAS
S Rivera
Ext. 2952

#P-6B
X
B

#P-3B
Grade-
Szack x2953
Stewart x2953
Hamilton
x2949

#P-3A
Grade-
Dodan/Rasner
Ext. 2943

#P-6A
X

#P-7B
X

#P-7A
X

Key:

- X - Test Placement
- D - Duplicate Test Placement
- B - Blank Test Placement

