



January 10, 2019

Joe Crelier
Director of Risk Management
Portland Public Schools
501 N Dixon Street
Portland, Oregon 97227

Via email: jcrelier@pps.net

Regarding: District-Wide Radon Testing
Lane Middle School
7200 SE 60th Avenue
Portland, Oregon 97206
PBS Project 6500.618, Phase 0005, Task 001

Dear Mr. Crelier:

From December 4 to 7, 2018, PBS Engineering and Environmental Inc. (PBS) performed short-term radon testing at Lane Middle School located at 7200 SE 60th Avenue in Portland, Oregon.

The Environmental Protection Agency (EPA) and Oregon Health Authority (OHA) recommend that buildings be tested for radon and that any radon concentrations be maintained below 4.0 picocuries per liter (pCi/L) of air. PBS used Air Chek, Inc., brand single-use, short-term radon test kits to measure radon levels in frequently-occupied rooms that are in contact with the ground or above unoccupied basements or crawlspaces.

The following table lists the samples with radon levels above the EPA action level.

Test Kit with Radon 4.0 pCi/L or above

Test Kit Number	Sample Location	Radon Level (pCi/L)
9122815	Room 117A	7.1
9122802	Room 131	6.7
9122843	Room 180	4.1
9122857	Room 184	5.6
9122858	Room 186	5.1
9122865	Room 186 Duplicate	5.2
8122850	Room 196	5.0

Following OHA protocol, samples with initial results equal to or greater than 4.0 pCi/L are currently being retested with long-term radon test kits.

See the attached laboratory analysis report for more details.

In addition to the EPA recommendation that radon concentrations not exceed 4.0 pCi/L, OHA recommends that the following steps be conducted based on the results of a room's initial short-term test:

- **If the result is less than 2.0 pCi/L**, school districts are required to test again every 10 years, per Oregon Revised Statute 332.166-167.
- **If the result is between 2.0 pCi/L and 4.0 pCi/L**, consider fixing (i.e., lowering) the radon in that room.
- **If the result is from 4.0 pCi/L to 8.0 pCi/L**, perform a follow-up measurement of that room using a long-term test. This test should be conducted over as much of a nine-month school year as possible, when the room is likely to be occupied. If that result is equal to or greater than 4.0 pCi/L, the radon in the room should be fixed (i.e., lowered).
- **If the initial short-term test result is equal to or greater than 8.0 pCi/L**, conduct a second short-term test and average its result with the initial short-term test result. If the average of the two is equal to or greater than 4.0 pCi/L, radon in the room should be fixed (i.e., lowered).

Note: A great difference in the results of the short-term tests may indicate a flaw in the testing process. Investigate and consider retesting. For situations in which one of the test results is equal to or greater than 4.0 pCi/L, if the higher result is two or more times the lower result, repeat the test.

LIMITATIONS OF SCOPE

This study was limited to the tests and locations as previously indicated. The site as a whole may have other environmental concerns that will not be characterized by this study. The findings and conclusions of this work are not scientific certainties, but probabilities based on professional judgment concerning the significance of the data gathered during the course of this investigation. PBS is not able to represent conditions on the site or adjoining sites beyond those detected or observed by PBS.

Please feel free to contact me at 503.417.7691 or clark.nelson@pbsusa.com with any questions or comments.

Sincerely,

Clark Nelson
Project Manager

Attachment: Air Chek, Inc., Laboratory Analysis Report

CN:mo

Radon test result report for:

**LANE
MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
9122828	COMMONS	2018-12-04 @ 10:00 am	2018-12-07 @ 10:00 am	1.6 ± 0.6	2018-12-12
9122827	COMMONS	2018-12-04 @ 10:00 am	2018-12-07 @ 10:00 am	1.6 ± 0.5	2018-12-12
9122819	GYM	2018-12-04 @ 9:00 am	2018-12-07 @ 9:00 am	< 0.3	2018-12-12
9122825	HEALTH	2018-12-04 @ 10:00 am	2018-12-07 @ 9:00 am	2.2 ± 0.5	2018-12-12
9122818	MAIN OFFICE	2018-12-04 @ 10:00 am	2018-12-07 @ 9:00 am	2.5 ± 0.6	2018-12-12
9122842	MEDIA CNTR	2018-12-04 @ 11:00 am	2018-12-07 @ 10:00 am	1.0 ± 0.5	2018-12-12
9122833	MEDIA CNTR	2018-12-04 @ 11:00 am	2018-12-07 @ 10:00 am	1.7 ± 0.5	2018-12-12
9122821	PE OFFICE	2018-12-04 @ 10:00 am	2018-12-07 @ 9:00 am	0.9 ± 0.5	2018-12-12
9122816	RM 102 STAFF	2018-12-04 @ 10:00 am	2018-12-07 @ 9:00 am	0.6 ± 0.4	2018-12-12
9122823	RM 103	2018-12-04 @ 10:00 am	2018-12-07 @ 9:00 am	1.9 ± 0.6	2018-12-12
9122831	RM 111 PRINCIPAL	2018-12-04 @ 10:00 am	2018-12-07 @ 9:00 am	2.6 ± 0.6	2018-12-12
9122824	RM 113 PRINCIPAL	2018-12-04 @ 10:00 am	2018-12-07 @ 9:00 am	2.2 ± 0.6	2018-12-12
9122810	RM 117	2018-12-04 @ 10:00 am	2018-12-07 @ 9:00 am	2.9 ± 0.6	2018-12-12
9122817	RM 117 DUP	2018-12-04 @ 10:00 am	2018-12-07 @ 9:00 am	2.3 ± 0.6	2018-12-12
9122815	RM 117A	2018-12-04 @ 10:00 am	2018-12-07 @ 9:00 am	7.1 ± 0.8	2018-12-12
9122808	RM 118	2018-12-04 @ 10:00 am	2018-12-07 @ 9:00 am	1.9 ± 0.5	2018-12-12
9122809	RM 118 BLANK	2018-12-04 @ 10:00 am	2018-12-07 @ 9:00 am	< 0.3	2018-12-12
9122806	RM 119	2018-12-04 @ 9:00 am	2018-12-07 @ 9:00 am	1.6 ± 0.6	2018-12-12
9122813	RM 123	2018-12-04 @ 9:00 am	2018-12-07 @ 9:00 am	1.5 ± 0.5	2018-12-12
9122811	RM 126	2018-12-04 @ 9:00 am	2018-12-07 @ 9:00 am	1.6 ± 0.5	2018-12-12
9122812	RM 126 DUP	2018-12-04 @ 9:00 am	2018-12-07 @ 9:00 am	1.6 ± 0.5	2018-12-12
9122805	RM 127	2018-12-04 @ 9:00 am	2018-12-07 @ 9:00 am	3.1 ± 0.6	2018-12-12
9122803	RM 128	2018-12-04 @ 9:00 am	2018-12-07 @ 9:00 am	0.9 ± 0.5	2018-12-12
9122804	RM 129	2018-12-04 @ 9:00 am	2018-12-07 @ 9:00 am	2.8 ± 0.6	2018-12-12
9122802	RM 131	2018-12-04 @ 9:00 am	2018-12-07 @ 9:00 am	6.7 ± 0.8	2018-12-12
9122807	RM 134	2018-12-04 @ 10:00 am	2018-12-07 @ 9:00 am	< 0.3	2018-12-12
9122829	RM 147	2018-12-04 @ 10:00 am	2018-12-07 @ 10:00 am	1.3 ± 0.5	2018-12-12
9122822	RM 147B	2018-12-04 @ 10:00 am	2018-12-07 @ 10:00 am	1.3 ± 0.5	2018-12-12
9122841	RM 160C MEDIA	2018-12-04 @ 11:00 am	2018-12-07 @ 10:00 am	1.3 ± 0.5	2018-12-12
9122859	RM 163	2018-12-04 @ 12:00 pm	2018-12-07 @ 10:00 am	0.9 ± 0.5	2018-12-12
9122854	RM 163 BLANK	2018-12-04 @ 12:00 pm	2018-12-07 @ 10:00 am	< 0.3	2018-12-12
9122836	RM 164A	2018-12-04 @ 11:00 am	2018-12-07 @ 9:00 am	1.3 ± 0.5	2018-12-12
9122837	RM 164B	2018-12-04 @ 11:00 am	2018-12-07 @ 9:00 am	1.4 ± 0.5	2018-12-12
9122830	RM 164C	2018-12-04 @ 11:00 am	2018-12-07 @ 9:00 am	1.4 ± 0.5	2018-12-12
9122838	RM 164C DUP	2018-12-04 @ 11:00 am	2018-12-07 @ 9:00 am	1.8 ± 0.6	2018-12-12
9122844	RM 168B	2018-12-04 @ 11:00 am	2018-12-07 @ 10:00 am	1.0 ± 0.5	2018-12-12
9122845	RM 169	2018-12-04 @ 11:00 am	2018-12-07 @ 10:00 am	0.8 ± 0.4	2018-12-12

December 12, 2018

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

**LANE
MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
9122832	RM 170	2018-12-04 @ 11:00 am	2018-12-07 @ 10:00 am	< 0.3	2018-12-12
9122839	RM 172	2018-12-04 @ 11:00 am	2018-12-07 @ 10:00 am	< 0.3	2018-12-12
9122840	RM 172 DUP	2018-12-04 @ 11:00 am	2018-12-07 @ 10:00 am	< 0.3	2018-12-12
9122846	RM 174	2018-12-04 @ 11:00 am	2018-12-07 @ 10:00 am	< 0.3	2018-12-12
9122851	RM 175	2018-12-04 @ 11:00 am	2018-12-07 @ 10:00 am	2.2 ± 0.6	2018-12-12
9122852	RM 175 BLANK	2018-12-04 @ 11:00 am	2018-12-07 @ 10:00 am	< 0.3	2018-12-12
9122847	RM 178	2018-12-04 @ 11:00 am	2018-12-07 @ 10:00 am	1.5 ± 0.5	2018-12-12
9122853	RM 179	2018-12-04 @ 11:00 am	2018-12-07 @ 10:00 am	< 0.3	2018-12-12
9122843	RM 180	2018-12-04 @ 11:00 am	2018-12-07 @ 10:00 am	4.1 ± 0.7	2018-12-12
9122857	RM 184	2018-12-04 @ 11:00 am	2018-12-07 @ 10:00 am	5.6 ± 0.7	2018-12-12
9122858	RM 186	2018-12-04 @ 12:00 pm	2018-12-07 @ 10:00 am	5.1 ± 0.7	2018-12-12
9122865	RM 186 DUP	2018-12-04 @ 12:00 pm	2018-12-07 @ 10:00 am	5.2 ± 0.7	2018-12-12
9122848	RM 188	2018-12-04 @ 11:00 am	2018-12-07 @ 10:00 am	3.7 ± 0.6	2018-12-12
9122834	RM 192	2018-12-04 @ 11:00 am	2018-12-07 @ 10:00 am	1.7 ± 0.5	2018-12-12
9122855	RM 193	2018-12-04 @ 11:00 am	2018-12-07 @ 10:00 am	2.9 ± 0.6	2018-12-12
9122856	RM 195	2018-12-04 @ 11:00 am	2018-12-07 @ 10:00 am	1.5 ± 0.5	2018-12-12
9122850	RM 196	2018-12-04 @ 11:00 am	2018-12-07 @ 10:00 am	5.0 ± 0.7	2018-12-12
9122849	RM 196 DUP	2018-12-04 @ 11:00 am	2018-12-07 @ 10:00 am	3.4 ± 0.6	2018-12-12
9122801	RM130	2018-12-04 @ 9:00 am	2018-12-07 @ 9:00 am	< 0.3	2018-12-12
9122826	WAIT OFFICE 100	2018-12-04 @ 10:00 am	2018-12-07 @ 9:00 am	2.2 ± 0.6	2018-12-12
9122835	WAIT OFFICE 164	2018-12-04 @ 10:00 am	2018-12-07 @ 9:00 am	1.5 ± 0.5	2018-12-12