



March 25, 2020

Joe Crelier
Director of Risk Management
Portland Public Schools
PO Box 3107
Portland, Oregon 97208

Via email: jcrelier@pps.net

Regarding: Radon Testing
Franklin High School
5405 SE Woodward Street
Portland, Oregon 97206
PBS Project 6500.825, Phase 0001

Dear Mr. Crelier:

From March 10 through March 13, 2020, PBS Engineering and Environmental Inc. (PBS) performed short-term radon testing at Franklin High School, located at 5405 SE Woodward Street in Portland, Oregon.

The Environmental Protection Agency (EPA) recommends, and the Oregon Health Authority (OHA) requires, that school 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 all samples in which radon levels were found to be above the EPA action level.

Test Kits with Radon 4.0 pCi/L or above

Test Kit Number	Sample Location	Radon Level (pCi/L)
9378447	S 021	4.4
9367578	S 022	6.3
9367577	S 022	5.0

All the short-term radon test kits that measured elevated levels were on the basement level.

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 503.417.7724 or marli.heininger@pbsusa.com with any questions or comments.

Sincerely,

 **Marli Heininger**
2020.03.25
12:25:46 -07'00'

Marli Heininger
Industrial Hygienist

Attachment: Air Chek Laboratory Analysis Report

MH:mo

Radon test result report for:**MAIN****MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
9408090	M 101	2020-03-10 @ 1:00 pm	2020-03-13 @ 10:00 am	< 0.3	2020-03-16
9367597	M 105	2020-03-10 @ 4:00 pm	2020-03-13 @ 10:00 am	0.9 ± 0.3	2020-03-16
9408092	M 106	2020-03-10 @ 1:00 pm	2020-03-13 @ 10:00 am	1.1 ± 0.3	2020-03-16
9408091	M 107	2020-03-10 @ 1:00 pm	2020-03-13 @ 10:00 am	0.8 ± 0.3	2020-03-16
9367595	M 108	2020-03-10 @ 4:00 pm	2020-03-13 @ 10:00 am	< 0.3	2020-03-16
9367596	M 108 DUP	2020-03-10 @ 4:00 pm	2020-03-13 @ 10:00 am	0.6 ± 0.3	2020-03-16
9367582	M 116	2020-03-10 @ 4:00 pm	2020-03-13 @ 10:00 am	0.7 ± 0.3	2020-03-16
9367594	M 116 BLANK	2020-03-10 @ 4:00 pm	2020-03-13 @ 10:00 am	< 0.3	2020-03-16
9408093	M 117	2020-03-10 @ 1:00 pm	2020-03-13 @ 10:00 am	0.7 ± 0.3	2020-03-16
9408087	M 119	2020-03-10 @ 12:00 pm	2020-03-13 @ 9:00 am	< 0.3	2020-03-16
9408097	M 124A	2020-03-10 @ 12:00 pm	2020-03-13 @ 9:00 am	< 0.3	2020-03-16
9408098	M 124A BLANK	2020-03-10 @ 12:00 pm	2020-03-13 @ 9:00 am	< 0.3	2020-03-16
9408096	M 124B	2020-03-10 @ 12:00 pm	2020-03-13 @ 9:00 am	< 0.3	2020-03-16
9408095	M 124F	2020-03-10 @ 12:00 pm	2020-03-13 @ 9:00 am	< 0.3	2020-03-16
9408088	M 124H	2020-03-10 @ 12:00 pm	2020-03-13 @ 9:00 am	< 0.3	2020-03-16
9378451	M 126	2020-03-10 @ 2:00 pm	2020-03-13 @ 11:00 am	1.0 ± 0.3	2020-03-16
9378452	M 130	2020-03-10 @ 2:00 pm	2020-03-13 @ 12:00 pm	1.0 ± 0.3	2020-03-16
9367589	M 131	2020-03-10 @ 4:00 pm	2020-03-13 @ 11:00 am	0.7 ± 0.3	2020-03-16
9378455	M 132	2020-03-10 @ 2:00 pm	2020-03-13 @ 11:00 am	0.9 ± 0.3	2020-03-16
9378457	M 132 B	2020-03-10 @ 2:00 pm	2020-03-13 @ 11:00 am	0.6 ± 0.3	2020-03-16
9378458	M 132 C	2020-03-10 @ 2:00 pm	2020-03-13 @ 11:00 am	0.8 ± 0.3	2020-03-16
9378459	M 132 D	2020-03-10 @ 2:00 pm	2020-03-13 @ 11:00 am	1.1 ± 0.3	2020-03-16
9378456	M 132 DUP	2020-03-10 @ 2:00 pm	2020-03-13 @ 11:00 am	0.9 ± 0.3	2020-03-16
9378460	M 132 E	2020-03-10 @ 2:00 pm	2020-03-13 @ 11:00 am	0.8 ± 0.3	2020-03-16
9378453	M 133	2020-03-10 @ 2:00 pm	2020-03-13 @ 11:00 am	0.6 ± 0.3	2020-03-16
9378454	M 133 A SICK ROOM	2020-03-10 @ 2:00 pm	2020-03-13 @ 11:00 am	0.5 ± 0.3	2020-03-16
9378472	M 135	2020-03-10 @ 3:00 pm	2020-03-13 @ 12:00 pm	0.7 ± 0.3	2020-03-16
9378461	M 136	2020-03-10 @ 2:00 pm	2020-03-13 @ 12:00 pm	0.6 ± 0.3	2020-03-16
9378462	M 136 BLANK	2020-03-10 @ 2:00 pm	2020-03-13 @ 12:00 pm	< 0.3	2020-03-16
9378463	M 137	2020-03-10 @ 2:00 pm	2020-03-13 @ 12:00 pm	2.7 ± 0.3	2020-03-16
9378464	M 138 HEALTH CLINIC	2020-03-10 @ 2:00 pm	2020-03-13 @ 12:00 pm	1.5 ± 0.3	2020-03-16
9378466	M 138B	2020-03-10 @ 2:00 pm	2020-03-13 @ 12:00 pm	1.5 ± 0.3	2020-03-16
9378468	M 138E EXAM ROOM 2	2020-03-10 @ 2:00 pm	2020-03-13 @ 12:00 pm	1.6 ± 0.3	2020-03-16
9378469	M 138F EXAM ROOM 3	2020-03-10 @ 2:00 pm	2020-03-13 @ 12:00 pm	1.8 ± 0.3	2020-03-16
9378467	M 138H EXAM ROOM 1	2020-03-10 @ 2:00 pm	2020-03-13 @ 12:00 pm	1.0 ± 0.3	2020-03-16
9378465	M 138L	2020-03-10 @ 2:00 pm	2020-03-13 @ 12:00 pm	1.0 ± 0.3	2020-03-16
9378470	M 139	2020-03-10 @ 3:00 pm	2020-03-13 @ 12:00 pm	0.6 ± 0.3	2020-03-16

Radon test result report for:**MAIN****MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
9378471	M 139 DUP	2020-03-10 @ 3:00 pm	2020-03-13 @ 12:00 pm	0.7 ± 0.3	2020-03-16
9408099	MAIN OFFICE	2020-03-10 @ 12:00 pm	2020-03-13 @ 9:00 am	< 0.3	2020-03-16
9408100	MAIN OFFICE DUP	2020-03-10 @ 12:00 pm	2020-03-13 @ 9:00 am	< 0.3	2020-03-16
9378442	S 012	2020-03-10 @ 2:00 pm	2020-03-13 @ 10:00 am	1.4 ± 0.3	2020-03-16
9378443	S 016	2020-03-10 @ 2:00 pm	2020-03-13 @ 11:00 am	2.2 ± 0.3	2020-03-16
9378444	S 016 DUP	2020-03-10 @ 2:00 pm	2020-03-13 @ 11:00 am	2.4 ± 0.3	2020-03-16
9378445	S 020	2020-03-10 @ 2:00 pm	2020-03-13 @ 10:00 am	1.1 ± 0.3	2020-03-16
9378447	S 021	2020-03-10 @ 2:00 pm	2020-03-13 @ 10:00 am	4.4 ± 0.4	2020-03-16
9367578	S 022	2020-03-10 @ 4:00 pm	2020-03-13 @ 10:00 am	6.3 ± 0.4	2020-03-16
9367577	S 022	2020-03-10 @ 4:00 pm	2020-03-13 @ 10:00 am	5.0 ± 0.4	2020-03-16
9378446	S 023	2020-03-10 @ 2:00 pm	2020-03-13 @ 10:00 am	2.1 ± 0.3	2020-03-16
9378448	S 026	2020-03-10 @ 2:00 pm	2020-03-13 @ 10:00 am	1.9 ± 0.3	2020-03-16
9378450	S 027	2020-03-10 @ 2:00 pm	2020-03-13 @ 11:00 am	0.7 ± 0.3	2020-03-16
9378449	S 028	2020-03-10 @ 2:00 pm	2020-03-13 @ 11:00 am	1.0 ± 0.3	2020-03-16
9378439	S 103 BLACK BOX	2020-03-10 @ 1:00 pm	2020-03-13 @ 10:00 am	< 0.3	2020-03-16
9378440	S 103A	2020-03-10 @ 1:00 pm	2020-03-13 @ 10:00 am	< 0.3	2020-03-16
9378441	S 122 MAKEUP	2020-03-10 @ 1:00 pm	2020-03-13 @ 10:00 am	< 0.3	2020-03-16
9378434	S 131 BAND	2020-03-10 @ 1:00 pm	2020-03-13 @ 10:00 am	< 0.3	2020-03-16
9378435	S 131 BLANK	2020-03-10 @ 1:00 pm	2020-03-13 @ 10:00 am	< 0.3	2020-03-16
9378433	S 133	2020-03-10 @ 1:00 pm	2020-03-13 @ 10:00 am	< 0.3	2020-03-16
9378432	S 137 CHOIR	2020-03-10 @ 1:00 pm	2020-03-13 @ 10:00 am	< 0.3	2020-03-16
9378426	S 138	2020-03-10 @ 1:00 pm	2020-03-13 @ 10:00 am	< 0.3	2020-03-16
9378427	S 138D	2020-03-10 @ 1:00 pm	2020-03-13 @ 10:00 am	< 0.3	2020-03-16
9367599	S 140	2020-03-10 @ 1:00 pm	2020-03-13 @ 10:00 am	0.5 ± 0.3	2020-03-16
9378431	S 140D	2020-03-10 @ 1:00 pm	2020-03-13 @ 10:00 am	< 0.3	2020-03-16
9367598	S 142	2020-03-10 @ 1:00 pm	2020-03-13 @ 10:00 am	< 0.3	2020-03-16
9378430	S 145	2020-03-10 @ 1:00 pm	2020-03-13 @ 10:00 am	< 0.3	2020-03-16
9378428	S 145 DUP	2020-03-10 @ 1:00 pm	2020-03-13 @ 10:00 am	< 0.3	2020-03-16
9378480	SS 001A CUSTODIAL	2020-03-10 @ 3:00 pm	2020-03-13 @ 11:00 am	< 0.3	2020-03-16
9378478	SS 001A CUSTODIAN OFFICE	2020-03-10 @ 3:00 pm	2020-03-13 @ 11:00 am	0.9 ± 0.3	2020-03-16
9378479	SS 001A CUSTODIAN OFFICE DUP	2020-03-10 @ 3:00 pm	2020-03-13 @ 11:00 am	< 0.3	2020-03-16
9378481	SS 008	2020-03-10 @ 3:00 pm	2020-03-13 @ 11:00 am	< 0.3	2020-03-16
9378482	SS 009	2020-03-10 @ 3:00 pm	2020-03-13 @ 11:00 am	< 0.3	2020-03-16
9378485	SS 010	2020-03-10 @ 3:00 pm	2020-03-13 @ 11:00 am	1.4 ± 0.3	2020-03-16
9378486	SS 011	2020-03-10 @ 3:00 pm	2020-03-13 @ 11:00 am	0.6 ± 0.3	2020-03-16
9378483	SS 012	2020-03-10 @ 3:00 pm	2020-03-13 @ 11:00 am	0.8 ± 0.3	2020-03-16
9378487	SS 013	2020-03-10 @ 3:00 pm	2020-03-13 @ 11:00 am	0.5 ± 0.3	2020-03-16

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**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

MAIN

MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
9378484	SS 014	2020-03-10 @ 3:00 pm	2020-03-13 @ 11:00 am	< 0.3	2020-03-16
9378488	SS 015	2020-03-10 @ 3:00 pm	2020-03-13 @ 11:00 am	< 0.3	2020-03-16
9378489	SS 016	2020-03-10 @ 3:00 pm	2020-03-13 @ 11:00 am	0.7 ± 0.3	2020-03-16
9378490	SS 016 BLANK	2020-03-10 @ 3:00 pm	2020-03-13 @ 11:00 am	< 0.3	2020-03-16
9378491	SS 017	2020-03-10 @ 3:00 pm	2020-03-13 @ 11:00 am	1.3 ± 0.3	2020-03-16
9378492	SS 024	2020-03-10 @ 3:00 pm	2020-03-13 @ 11:00 am	1.5 ± 0.3	2020-03-16
9378493	SS 025	2020-03-10 @ 3:00 pm	2020-03-13 @ 11:00 am	1.7 ± 0.3	2020-03-16
9378477	SS 101 KITCHEN	2020-03-10 @ 3:00 pm	2020-03-13 @ 11:00 am	< 0.3	2020-03-16
9378476	SS 102 SERVERY	2020-03-10 @ 3:00 pm	2020-03-13 @ 11:00 am	< 0.3	2020-03-16
9378475	SS 104 CAFETERIA 1	2020-03-10 @ 3:00 pm	2020-03-13 @ 11:00 am	< 0.3	2020-03-16
9378473	SS 110	2020-03-10 @ 3:00 pm	2020-03-13 @ 11:00 am	0.8 ± 0.3	2020-03-16
9408094	STORE M 118	2020-03-10 @ 12:00 pm	2020-03-13 @ 9:00 am	< 0.3	2020-03-16
9378437	THEATRE STAGE	2020-03-10 @ 1:00 pm	2020-03-13 @ 10:00 am	< 0.3	2020-03-16
9378438	THEATRE STAGE 2	2020-03-10 @ 1:00 pm	2020-03-13 @ 10:00 am	0.5 ± 0.3	2020-03-16

Air Chek 1936 Butler Bridge Rd, Mills River, NC 28759-3892 Phone: (828) 684-0893 Fax: (828) 684-8498

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**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

MAIN

MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
9408089	M 102	2020-03-10 @ 1:00 pm	2020-03-13 @ 10:00 am	< 0.3	2020-03-16

Air Chek 1936 Butler Bridge Rd, Mills River, NC 28759-3892 Phone: (828) 684-0893 Fax: (828) 684-8498

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**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

**MAIN
ATHLETIC BUILDING**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
9378496	G 010	2020-03-10 @ 4:00 pm	2020-03-13 @ 12:00 pm	< 0.3	2020-03-16
9378497	G 012	2020-03-10 @ 4:00 pm	2020-03-13 @ 12:00 pm	< 0.3	2020-03-16
9378499	G 013	2020-03-10 @ 4:00 pm	2020-03-13 @ 12:00 pm	0.5 ± 0.3	2020-03-16
9378500	G 013 DUP	2020-03-10 @ 4:00 pm	2020-03-13 @ 12:00 pm	< 0.3	2020-03-16
9378498	G 017	2020-03-10 @ 4:00 pm	2020-03-13 @ 12:00 pm	< 0.3	2020-03-16
9367576	G 021	2020-03-10 @ 4:00 pm	2020-03-13 @ 12:00 pm	< 0.3	2020-03-16
9367575	G 023	2020-03-10 @ 4:00 pm	2020-03-13 @ 12:00 pm	< 0.3	2020-03-16
9378495	G002	2020-03-10 @ 4:00 pm	2020-03-13 @ 11:00 am	< 0.3	2020-03-16
9378494	G002A	2020-03-10 @ 4:00 pm	2020-03-13 @ 11:00 am	< 0.3	2020-03-16

Air Chek 1936 Butler Bridge Rd, Mills River, NC 28759-3892 Phone: (828) 684-0893 Fax: (828) 684-8498