



November 13, 2018

Dave Peterson
Hillsboro School District
4901 SE Witch Hazel Road
Hillsboro, Oregon 97123

Via email: petersod@hsd.k12.or.us

Regarding: District Wide Radon Testing
 Tobias Elementary School
 1065 SW 206th Avenue
 Aloha, Oregon
 PBS Project 23440.024, Phase 0003

Dear Mr. Peterson:

From October 16 to October 19, 2018, PBS Engineering and Environmental Inc. (PBS) performed short term radon testing at Tobias Elementary School located at 1065 SW 206th Avenue in Aloha, 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 AirChek, 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.

Laboratory results indicate all but one short-term radon test at Tobias Elementary School tested below 4.0 pCi/L. The test located in Room 14 had a result of 4.2 pCi/L and will require follow up testing.

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 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 503.935.5484 or dale.voeller@pbsusa.com with any questions or comments.

Sincerely,

Dale Voeller, CHMM, CSP
Senior Project Manager

Attachment: AirChek, Inc Laboratory Analysis Report

SG::dsv

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

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
9119855	BOOK ROOM	2018-10-16 @ 9:00 am	2018-10-19 @ 11:00 am	1.2 ± 0.3	2018-10-22
9119849	BOSCOM ROOM	2018-10-16 @ 9:00 am	2018-10-19 @ 11:00 am	0.9 ± 0.3	2018-10-22
9119832	CAFETERIA 1	2018-10-16 @ 9:00 am	2018-10-19 @ 10:00 am	0.9 ± 0.3	2018-10-22
9119827	CAFETERIA 2	2018-10-16 @ 9:00 am	2018-10-19 @ 10:00 am	0.9 ± 0.3	2018-10-22
9119873	CLASS 10 BLANK	2018-10-16 @ 9:00 am	2018-10-19 @ 11:00 am	< 0.3	2018-10-22
9119841	CLASSROOM 1	2018-10-16 @ 9:00 am	2018-10-19 @ 10:00 am	2.0 ± 0.3	2018-10-22
9119871	CLASSROOM 10	2018-10-16 @ 9:00 am	2018-10-19 @ 11:00 am	1.3 ± 0.3	2018-10-22
9119874	CLASSROOM 11	2018-10-16 @ 10:00 am	2018-10-19 @ 11:00 am	1.9 ± 0.3	2018-10-22
9119851	CLASSROOM 12	2018-10-16 @ 9:00 am	2018-10-19 @ 11:00 am	1.5 ± 0.3	2018-10-22
9119872	CLASSROOM 13	2018-10-16 @ 10:00 am	2018-10-19 @ 11:00 am	1.7 ± 0.3	2018-10-22
9119852	CLASSROOM 14	2018-10-16 @ 9:00 am	2018-10-19 @ 11:00 am	4.2 ± 0.4	2018-10-22
9119867	CLASSROOM 15	2018-10-16 @ 9:00 am	2018-10-19 @ 11:00 am	1.6 ± 0.3	2018-10-22
9119868	CLASSROOM 15 DUP	2018-10-16 @ 9:00 am	2018-10-19 @ 11:00 am	1.3 ± 0.3	2018-10-22
9119853	CLASSROOM 16	2018-10-16 @ 9:00 am	2018-10-19 @ 11:00 am	1.6 ± 0.3	2018-10-22
9119869	CLASSROOM 17	2018-10-16 @ 9:00 am	2018-10-19 @ 11:00 am	2.0 ± 0.3	2018-10-22
9119854	CLASSROOM 18	2018-10-16 @ 9:00 am	2018-10-19 @ 11:00 am	1.6 ± 0.3	2018-10-22
9119858	CLASSROOM 18 DUP	2018-10-16 @ 9:00 am	2018-10-19 @ 11:00 am	2.0 ± 0.3	2018-10-22
9119856	CLASSROOM 19	2018-10-16 @ 9:00 am	2018-10-19 @ 11:00 am	1.0 ± 0.3	2018-10-22
9119842	CLASSROOM 2	2018-10-16 @ 9:00 am	2018-10-19 @ 10:00 am	1.5 ± 0.3	2018-10-22
9119859	CLASSROOM 20	2018-10-16 @ 9:00 am	2018-10-19 @ 11:00 am	1.9 ± 0.3	2018-10-22
9119857	CLASSROOM 21	2018-10-16 @ 9:00 am	2018-10-19 @ 11:00 am	1.7 ± 0.3	2018-10-22
9119860	CLASSROOM 23	2018-10-16 @ 9:00 am	2018-10-19 @ 11:00 am	2.1 ± 0.3	2018-10-22
9119840	CLASSROOM 3	2018-10-16 @ 9:00 am	2018-10-19 @ 10:00 am	1.5 ± 0.3	2018-10-22
9119839	CLASSROOM 4	2018-10-16 @ 9:00 am	2018-10-19 @ 10:00 am	1.4 ± 0.3	2018-10-22
9119863	CLASSROOM 5	2018-10-16 @ 9:00 am	2018-10-19 @ 11:00 am	1.4 ± 0.3	2018-10-22
9119864	CLASSROOM 6	2018-10-16 @ 9:00 am	2018-10-19 @ 11:00 am	1.6 ± 0.3	2018-10-22
9119866	CLASSROOM 7	2018-10-16 @ 9:00 am	2018-10-19 @ 11:00 am	1.4 ± 0.3	2018-10-22
9119870	CLASSROOM 8	2018-10-16 @ 9:00 am	2018-10-19 @ 11:00 am	1.3 ± 0.3	2018-10-22
9119862	CLASSROOM 9	2018-10-16 @ 9:00 am	2018-10-19 @ 11:00 am	1.5 ± 0.3	2018-10-22
9119883	CONFERENCE ROOM	2018-10-16 @ 10:00 am	2018-10-19 @ 10:00 am	0.8 ± 0.3	2018-10-22
9119875	GYM 1	2018-10-16 @ 10:00 am	2018-10-19 @ 10:00 am	0.8 ± 0.3	2018-10-22
9119877	GYM 2	2018-10-16 @ 10:00 am	2018-10-19 @ 10:00 am	1.0 ± 0.3	2018-10-22
9119876	GYM OFFICE	2018-10-16 @ 10:00 am	2018-10-19 @ 10:00 am	1.3 ± 0.3	2018-10-22
9119825	HEALTH ROOM	2018-10-16 @ 8:00 am	2018-10-19 @ 10:00 am	1.5 ± 0.3	2018-10-22
9119833	KITCHEN OFFICE	2018-10-16 @ 9:00 am	2018-10-19 @ 10:00 am	1.2 ± 0.3	2018-10-22
9119847	LIBRARY 1	2018-10-16 @ 9:00 am	2018-10-19 @ 10:00 am	0.9 ± 0.3	2018-10-22
9119846	LIBRARY 1 DUP	2018-10-16 @ 9:00 am	2018-10-19 @ 10:00 am	0.8 ± 0.3	2018-10-22

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

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
9119845	LIBRARY 2	2018-10-16 @ 9:00 am	2018-10-19 @ 10:00 am	1.0 ± 0.3	2018-10-22
9119848	LIBRARY 2 BLANK	2018-10-16 @ 9:00 am	2018-10-19 @ 10:00 am	< 0.3	2018-10-22
9119861	LIBRARY COMP LAB	2018-10-16 @ 9:00 am	2018-10-19 @ 11:00 am	1.3 ± 0.3	2018-10-22
9119850	LIBRARY OFFICE	2018-10-16 @ 9:00 am	2018-10-19 @ 10:00 am	1.2 ± 0.3	2018-10-22
9119824	MAIN OFFICE	2018-10-16 @ 8:00 am	2018-10-19 @ 10:00 am	1.6 ± 0.3	2018-10-22
9119834	MUSIC ROOM	2018-10-16 @ 9:00 am	2018-10-19 @ 10:00 am	1.2 ± 0.3	2018-10-22
9119830	OFFICE BEKKEN	2018-10-16 @ 8:00 am	2018-10-19 @ 10:00 am	2.2 ± 0.3	2018-10-22
9119826	OFFICE LOUNGE	2018-10-16 @ 8:00 am	2018-10-19 @ 10:00 am	1.4 ± 0.3	2018-10-22
9119831	OFFICE WORKROOM	2018-10-16 @ 8:00 am	2018-10-19 @ 10:00 am	1.9 ± 0.4	2018-10-22
9119879	P25	2018-10-16 @ 10:00 am	2018-10-19 @ 11:00 am	0.8 ± 0.3	2018-10-22
9119880	P26	2018-10-16 @ 10:00 am	2018-10-19 @ 11:00 am	0.6 ± 0.3	2018-10-22
9119878	PORT 24	2018-10-16 @ 10:00 am	2018-10-19 @ 11:00 am	< 0.3	2018-10-22
9119881	PORT 24 DUP	2018-10-16 @ 10:00 am	2018-10-19 @ 11:00 am	0.8 ± 0.3	2018-10-22
9119886	PORT 27	2018-10-16 @ 10:00 am	2018-10-19 @ 11:00 am	0.7 ± 0.3	2018-10-22
9119888	PORT 27 BLANK	2018-10-16 @ 10:00 am	2018-10-19 @ 11:00 am	< 0.3	2018-10-22
9119835	RESOURCE TEACHER	2018-10-16 @ 9:00 am	2018-10-19 @ 10:00 am	0.9 ± 0.3	2018-10-22
9119838	SENSORY DUP	2018-10-16 @ 9:00 am	2018-10-19 @ 10:00 am	1.2 ± 0.3	2018-10-22
9119836	SENSORY ROOM	2018-10-16 @ 9:00 am	2018-10-19 @ 10:00 am	0.9 ± 0.3	2018-10-22
9119843	SPARE ROOM	2018-10-16 @ 9:00 am	2018-10-19 @ 11:00 am	1.2 ± 0.3	2018-10-22
9119837	SPEECH	2018-10-16 @ 9:00 am	2018-10-19 @ 10:00 am	1.4 ± 0.3	2018-10-22
9119844	STEM OFFICE	2018-10-16 @ 9:00 am	2018-10-19 @ 10:00 am	0.8 ± 0.3	2018-10-22
9119865	VIC BRIAN OFFICE	2018-10-16 @ 9:00 am	2018-10-19 @ 11:00 am	2.5 ± 0.3	2018-10-22