



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
 Ladd Acres Elementary School
 2425 SW Cornelius Pass Road
 Hillsboro, Oregon
 PBS Project 23440.024, Phase 0003

Dear Mr. Peterson:

From October 23 to October 26, 2018, PBS Engineering and Environmental Inc. (PBS) performed short term radon testing at Ladd Acres Elementary School located at 2425 SW Cornelius Pass Road in Hillsboro, 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 short-term radon tests at Ladd Acres Elementary School tested below 4.0 pCi/L.

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:**LADD ACRES
MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
9119366	CONFERENCE ROOM	2018-10-23 @ 10:00 am	2018-10-26 @ 10:00 am	< 0.3	2018-10-29
9119375	COUNSELOR COMMOM	2018-10-23 @ 10:00 am	2018-10-26 @ 10:00 am	< 0.3	2018-10-29
9119373	COUNSELOR OFFICE	2018-10-23 @ 10:00 am	2018-10-26 @ 10:00 am	0.7 ± 0.2	2018-10-29
9119383	CUSTODIAL OFFICE	2018-10-23 @ 10:00 am	2018-10-26 @ 10:00 am	1.4 ± 0.3	2018-10-29
9119372	ELL OFFICE	2018-10-23 @ 10:00 am	2018-10-26 @ 10:00 am	0.7 ± 0.3	2018-10-29
9119371	ELL ROOM DUP	2018-10-23 @ 10:00 am	2018-10-26 @ 10:00 am	0.9 ± 0.3	2018-10-29
9119379	GYM 1	2018-10-23 @ 10:00 am	2018-10-26 @ 10:00 am	< 0.3	2018-10-29
9119381	GYM 2	2018-10-23 @ 10:00 am	2018-10-26 @ 10:00 am	0.8 ± 0.3	2018-10-29
9119385	GYM OFFICE	2018-10-23 @ 10:00 am	2018-10-26 @ 10:00 am	< 0.3	2018-10-29
9119360	HEALTH ROOM	2018-10-23 @ 10:00 am	2018-10-26 @ 10:00 am	0.6 ± 0.3	2018-10-29
9119376	LIB. COMP LAB	2018-10-23 @ 10:00 am	2018-10-26 @ 10:00 am	0.5 ± 0.3	2018-10-29
9119377	LIBRARY 1	2018-10-23 @ 10:00 am	2018-10-26 @ 10:00 am	0.6 ± 0.3	2018-10-29
9119378	LIBRARY 2	2018-10-23 @ 10:00 am	2018-10-26 @ 10:00 am	0.6 ± 0.2	2018-10-29
9119384	LIBRARY OFFICE	2018-10-23 @ 10:00 am	2018-10-26 @ 10:00 am	< 0.3	2018-10-29
9119368	MAIN OFFICE	2018-10-23 @ 10:00 am	2018-10-26 @ 10:00 am	< 0.3	2018-10-29
9119359	OFFICE WORK ROOM	2018-10-23 @ 10:00 am	2018-10-26 @ 10:00 am	< 0.3	2018-10-29
9119367	PRINCIPAL OFFICE	2018-10-23 @ 10:00 am	2018-10-26 @ 10:00 am	< 0.3	2018-10-29
9119374	STAFF LOUNGE	2018-10-23 @ 10:00 am	2018-10-26 @ 10:00 am	< 0.3	2018-10-29
9119370	WELLNESS ROOM	2018-10-23 @ 10:00 am	2018-10-26 @ 11:00 am	< 0.3	2018-10-29

October 29, 2018

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

LADD ACRES

POD 1

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
9119717	CLASSROOM 1	2018-10-23 @ 11:00 am	2018-10-26 @ 11:00 am	< 0.3	2018-10-29
9119732	CLASSROOM 1 DUP	2018-10-23 @ 11:00 am	2018-10-26 @ 11:00 am	< 0.3	2018-10-29
9119728	CLASSROOM 2	2018-10-23 @ 11:00 am	2018-10-26 @ 11:00 am	0.6 ± 0.3	2018-10-29
9119726	CLASSROOM 3	2018-10-23 @ 11:00 am	2018-10-26 @ 11:00 am	< 0.3	2018-10-29
9119731	CLASSROOM 4	2018-10-23 @ 11:00 am	2018-10-26 @ 11:00 am	< 0.3	2018-10-29
9119729	POD COMMON	2018-10-23 @ 11:00 am	2018-10-26 @ 11:00 am	< 0.3	2018-10-29
9119730	POD COMMON BLANK	2018-10-23 @ 11:00 am	2018-10-26 @ 11:00 am	< 0.3	2018-10-29
9119733	POD WORKROOM	2018-10-23 @ 11:00 am	2018-10-26 @ 11:00 am	< 0.3	2018-10-29

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

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Radon test result report for:

LADD ACRES

POD 2

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
9119718	CLASSROOM 1	2018-10-23 @ 11:00 am	2018-10-26 @ 11:00 am	0.9 ± 0.3	2018-10-29
9119720	CLASSROOM 2	2018-10-23 @ 11:00 am	2018-10-26 @ 11:00 am	0.6 ± 0.3	2018-10-29
9119725	CLASSROOM 3	2018-10-23 @ 11:00 am	2018-10-26 @ 11:00 am	< 0.3	2018-10-29
9119727	CLASSROOM 4	2018-10-23 @ 11:00 am	2018-10-26 @ 11:00 am	0.5 ± 0.3	2018-10-29
9119722	POD COMMONS	2018-10-23 @ 11:00 am	2018-10-26 @ 11:00 am	0.9 ± 0.3	2018-10-29
9119723	POD COMMONS DUP	2018-10-23 @ 11:00 am	2018-10-26 @ 11:00 am	0.9 ± 0.3	2018-10-29
9119724	POD WORKROOM	2018-10-23 @ 11:00 am	2018-10-26 @ 11:00 am	0.7 ± 0.3	2018-10-29

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Radon test result report for:

LADD ACRES

POD 3

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
9119721	COMMONS	2018-10-23 @ 11:00 am	2018-10-26 @ 11:00 am	1.9 ± 0.3	2018-10-29
9119708	ROOM 1	2018-10-23 @ 11:00 am	2018-10-26 @ 11:00 am	2.3 ± 0.3	2018-10-29
9119711	ROOM 2	2018-10-23 @ 11:00 am	2018-10-26 @ 11:00 am	2.2 ± 0.3	2018-10-29
9119712	ROOM 3	2018-10-23 @ 11:00 am	2018-10-26 @ 11:00 am	2.0 ± 0.3	2018-10-29
9119719	ROOM 4	2018-10-23 @ 11:00 am	2018-10-26 @ 11:00 am	1.6 ± 0.3	2018-10-29
9119713	WORKROOM	2018-10-23 @ 11:00 am	2018-10-26 @ 11:00 am	2.2 ± 0.3	2018-10-29

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Radon test result report for:

LADD ACRES

POD 4

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
9119709	CLASSROOM 1	2018-10-23 @ 11:00 am	2018-10-26 @ 10:00 am	3.0 ± 0.3	2018-10-29
9119706	CLASSROOM 1 DUP	2018-10-23 @ 11:00 am	2018-10-26 @ 10:00 am	2.7 ± 0.3	2018-10-29
9119701	CLASSROOM 2	2018-10-23 @ 11:00 am	2018-10-26 @ 10:00 am	3.0 ± 0.3	2018-10-29
9119705	CLASSROOM 3	2018-10-23 @ 11:00 am	2018-10-26 @ 10:00 am	2.8 ± 0.3	2018-10-29
9119702	CLASSROOM 4	2018-10-23 @ 11:00 am	2018-10-26 @ 10:00 am	2.7 ± 0.3	2018-10-29
9119710	POD COMMONS	2018-10-23 @ 11:00 am	2018-10-26 @ 10:00 am	2.9 ± 0.3	2018-10-29
9119703	POD COMMONS DUP	2018-10-23 @ 11:00 am	2018-10-26 @ 10:00 am	2.6 ± 0.3	2018-10-29
9119704	POD WORKROOM	2018-10-23 @ 11:00 am	2018-10-26 @ 10:00 am	2.9 ± 0.3	2018-10-29
9119707	POD WRKRM BLANK	2018-10-23 @ 11:00 am	2018-10-26 @ 10:00 am	< 0.3	2018-10-29

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Radon test result report for:

LADD ACRES

POD 5

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
9119387	COMMON	2018-10-23 @ 11:00 am	2018-10-26 @ 10:00 am	1.9 ± 0.3	2018-10-29
9119396	ROOM 1	2018-10-23 @ 11:00 am	2018-10-26 @ 10:00 am	1.2 ± 0.3	2018-10-29
9119395	ROOM 2	2018-10-23 @ 11:00 am	2018-10-26 @ 10:00 am	1.7 ± 0.3	2018-10-29
9119400	ROOM 3	2018-10-23 @ 11:00 am	2018-10-26 @ 10:00 am	1.8 ± 0.3	2018-10-29
9119314	ROOM 4	2018-10-23 @ 11:00 am	2018-10-26 @ 10:00 am	1.9 ± 0.3	2018-10-29
9119394	STAFF ROOM	2018-10-23 @ 11:00 am	2018-10-26 @ 10:00 am	1.7 ± 0.3	2018-10-29

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**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

LADD ACRES

POD 6

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
9119382	CLASS 1	2018-10-23 @ 10:00 am	2018-10-26 @ 10:00 am	0.8 ± 0.3	2018-10-29
9119392	CLASS 2	2018-10-23 @ 10:00 am	2018-10-26 @ 10:00 am	1.1 ± 0.3	2018-10-29
9119386	CLASS 3	2018-10-23 @ 10:00 am	2018-10-26 @ 10:00 am	1.1 ± 0.3	2018-10-29
9119391	CLASS 3 DUP	2018-10-23 @ 10:00 am	2018-10-26 @ 10:00 am	1.0 ± 0.3	2018-10-29
9119390	CLASS 4	2018-10-23 @ 10:00 am	2018-10-26 @ 10:00 am	1.0 ± 0.3	2018-10-29
9119399	COMMON	2018-10-23 @ 10:00 am	2018-10-26 @ 10:00 am	< 0.3	2018-10-29
9119380	COMMON BLANK	2018-10-23 @ 10:00 am	2018-10-26 @ 10:00 am	< 0.3	2018-10-29
9119393	POD OFFICE	2018-10-23 @ 10:00 am	2018-10-26 @ 10:00 am	0.7 ± 0.2	2018-10-29
9119389	STAFF WORKROOM	2018-10-23 @ 10:00 am	2018-10-26 @ 10:00 am	0.8 ± 0.3	2018-10-29

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