



November 7, 2017

Casey Waletich
Executive Director of Facilities, Safety, and Operations
Hillsboro School District
4901 SE Witch Hazel Road
Hillsboro, Oregon 97123

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

Regarding: District Wide Radon Testing
Mooberry Elementary School
1230 NE 10th Avenue
Hillsboro, Oregon
PBS Project 23440.024, Phase 0002

Dear Mr. Waletich:

From October 23 to October 26, 2017, PBS Engineering and Environmental Inc. (PBS) performed short term radon testing at Mooberry Elementary School located at 1230 NE 10th Avenue 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 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.

Laboratory results indicate all short-term radon tests at Mooberry Elementary School tested below 4.0 pCi/L.

One test kit deployed in room 29 was lost, damaged or tampered with and therefore not sent to the lab for analysis.

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 503.417.7694 or chris.boyce@pbsusa.com with any questions or comments.

Sincerely,



Chris Boyce
Project Manager

Attachment: AirChek, Inc Laboratory Analysis Report

CB::bmp

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

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7957121	1	2017-10-23 @ 2:00 pm	2017-10-26 @ 1:00 pm	1.1 ± 0.2	2017-10-27
7957127	10	2017-10-23 @ 2:00 pm	2017-10-26 @ 1:00 pm	2.0 ± 0.2	2017-10-27
7957128	11	2017-10-23 @ 2:00 pm	2017-10-26 @ 1:00 pm	2.2 ± 0.2	2017-10-27
7957129	11 OFFICE	2017-10-23 @ 2:00 pm	2017-10-26 @ 1:00 pm	1.9 ± 0.2	2017-10-27
7957130	12	2017-10-23 @ 2:00 pm	2017-10-26 @ 1:00 pm	2.3 ± 0.2	2017-10-27
7957131	13	2017-10-23 @ 2:00 pm	2017-10-26 @ 1:00 pm	1.7 ± 0.2	2017-10-27
7957132	14	2017-10-23 @ 2:00 pm	2017-10-26 @ 1:00 pm	1.5 ± 0.2	2017-10-27
7957133	14 OFFICE	2017-10-23 @ 2:00 pm	2017-10-26 @ 1:00 pm	1.8 ± 0.2	2017-10-27
7957134	15	2017-10-23 @ 2:00 pm	2017-10-26 @ 1:00 pm	1.8 ± 0.2	2017-10-27
7957135	16	2017-10-23 @ 2:00 pm	2017-10-26 @ 1:00 pm	1.0 ± 0.2	2017-10-27
7957136	16-DUP	2017-10-23 @ 2:00 pm	2017-10-26 @ 1:00 pm	0.9 ± 0.2	2017-10-27
7957137	17	2017-10-23 @ 3:00 pm	2017-10-26 @ 1:00 pm	0.9 ± 0.2	2017-10-27
7957138	17 OFFICE	2017-10-23 @ 3:00 pm	2017-10-26 @ 1:00 pm	0.7 ± 0.2	2017-10-27
7957139	18	2017-10-23 @ 3:00 pm	2017-10-26 @ 1:00 pm	1.1 ± 0.2	2017-10-27
7957119	2	2017-10-23 @ 2:00 pm	2017-10-26 @ 1:00 pm	0.8 ± 0.2	2017-10-27
7957120	2 OFFICE	2017-10-23 @ 2:00 pm	2017-10-26 @ 1:00 pm	1.0 ± 0.2	2017-10-27
7957140	20	2017-10-23 @ 3:00 pm	2017-10-26 @ 1:00 pm	0.7 ± 0.2	2017-10-27
7957123	23	2017-10-23 @ 2:00 pm	2017-10-26 @ 1:00 pm	1.0 ± 0.2	2017-10-27
7957124	24	2017-10-23 @ 2:00 pm	2017-10-26 @ 1:00 pm	1.1 ± 0.2	2017-10-27
7957118	3	2017-10-23 @ 2:00 pm	2017-10-26 @ 1:00 pm	0.9 ± 0.2	2017-10-27
7957110	30	2017-10-23 @ 2:00 pm	2017-10-26 @ 1:00 pm	< 0.3	2017-10-27
7957116	4	2017-10-23 @ 2:00 pm	2017-10-26 @ 1:00 pm	1.1 ± 0.2	2017-10-27
7957115	5	2017-10-23 @ 2:00 pm	2017-10-26 @ 1:00 pm	1.0 ± 0.2	2017-10-27
7957117	5 OFFICE	2017-10-23 @ 2:00 pm	2017-10-26 @ 1:00 pm	1.1 ± 0.2	2017-10-27
7957114	6	2017-10-23 @ 2:00 pm	2017-10-26 @ 1:00 pm	1.2 ± 0.2	2017-10-27
7957113	7	2017-10-23 @ 2:00 pm	2017-10-26 @ 1:00 pm	1.0 ± 0.2	2017-10-27
7957111	8	2017-10-23 @ 2:00 pm	2017-10-26 @ 1:00 pm	1.0 ± 0.2	2017-10-27
7957112	8 OFFICE	2017-10-23 @ 2:00 pm	2017-10-26 @ 1:00 pm	0.9 ± 0.2	2017-10-27
7957151	8 OFFICE-DUP	2017-10-23 @ 3:00 pm	2017-10-26 @ 1:00 pm	0.9 ± 0.2	2017-10-27
7957122	9	2017-10-23 @ 2:00 pm	2017-10-26 @ 1:00 pm	0.9 ± 0.2	2017-10-27
7957106	BLANK	2017-10-23 @ 2:00 pm	2017-10-26 @ 1:00 pm	< 0.3	2017-10-27
7957147	BLANK-2	2017-10-23 @ 3:00 pm	2017-10-26 @ 1:00 pm	< 0.3	2017-10-27
7957146	CUSTODIAL	2017-10-23 @ 3:00 pm	2017-10-26 @ 1:00 pm	0.7 ± 0.2	2017-10-27
7957141	FACULTY LUNCH	2017-10-23 @ 3:00 pm	2017-10-26 @ 1:00 pm	0.8 ± 0.2	2017-10-27
7957142	FACULTY-DUP	2017-10-23 @ 3:00 pm	2017-10-26 @ 1:00 pm	0.6 ± 0.2	2017-10-27
7957145	GYM OFFICE	2017-10-23 @ 3:00 pm	2017-10-26 @ 1:00 pm	0.7 ± 0.2	2017-10-27
7957107	HEALTH	2017-10-23 @ 2:00 pm	2017-10-26 @ 1:00 pm	< 0.3	2017-10-27

October 27, 2017

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

**MOOBERRY
MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7957125	LIBRARY	2017-10-23 @ 2:00 pm	2017-10-26 @ 1:00 pm	1.3 ± 0.2	2017-10-27
7957126	LIBRARY OFFICE	2017-10-23 @ 2:00 pm	2017-10-26 @ 1:00 pm	1.1 ± 0.2	2017-10-27
7957103	MAIN OFFICE	2017-10-23 @ 2:00 pm	2017-10-26 @ 1:00 pm	1.2 ± 0.2	2017-10-27
7957143	MULTIPURPOSE-1	2017-10-23 @ 3:00 pm	2017-10-26 @ 1:00 pm	0.7 ± 0.2	2017-10-27
7957144	MULTIPURPOSE-2	2017-10-23 @ 3:00 pm	2017-10-26 @ 1:00 pm	0.5 ± 0.2	2017-10-27
7957108	PRINCIPAL	2017-10-23 @ 2:00 pm	2017-10-26 @ 1:00 pm	0.9 ± 0.2	2017-10-27
7957105	WORK ROOM	2017-10-23 @ 2:00 pm	2017-10-26 @ 1:00 pm	0.7 ± 0.2	2017-10-27
7957152	WORK ROOM-DUP	2017-10-23 @ 3:00 pm	2017-10-26 @ 1:00 pm	0.6 ± 0.2	2017-10-27

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

October 27, 2017

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

**MOOBERRY
KINDERPOD**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7957148	21	2017-10-23 @ 3:00 pm	2017-10-26 @ 1:00 pm	1.5 ± 0.2	2017-10-27
7957149	22	2017-10-23 @ 3:00 pm	2017-10-26 @ 1:00 pm	1.6 ± 0.2	2017-10-27
7957150	ACTIVITY	2017-10-23 @ 3:00 pm	2017-10-26 @ 1:00 pm	1.4 ± 0.2	2017-10-27

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