



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
Liberty High School
7445 NW Wagon Way
Hillsboro, Oregon
PBS Project 23440.024, Phase 0002

Dear Mr. Waletich:

From October 10 to October 13, 2017, PBS Engineering and Environmental Inc. (PBS) performed short term radon testing at Liberty High School located at 7445 NW Wagon Way, 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 Liberty High School tested below 4.0 pCi/L.

One test kit deployed in room 152 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:**LIBERTY
MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7889080	100B	2017-10-10 @ 10:00 am	2017-10-13 @ 10:00 am	1.1 ± 0.3	2017-10-16
7889087	100B BLANK	2017-10-10 @ 10:00 am	2017-10-13 @ 10:00 am	< 0.3	2017-10-16
7889081	102	2017-10-10 @ 10:00 am	2017-10-13 @ 10:00 am	0.7 ± 0.3	2017-10-16
7889088	102 DUP	2017-10-10 @ 10:00 am	2017-10-13 @ 10:00 am	0.9 ± 0.3	2017-10-16
7889073	104	2017-10-10 @ 10:00 am	2017-10-13 @ 10:00 am	< 0.3	2017-10-16
7889079	104 DUP	2017-10-10 @ 10:00 am	2017-10-13 @ 10:00 am	< 0.3	2017-10-16
7889070	105	2017-10-10 @ 10:00 am	2017-10-13 @ 10:00 am	< 0.3	2017-10-16
7889071	106	2017-10-10 @ 10:00 am	2017-10-13 @ 10:00 am	< 0.3	2017-10-16
7889072	107	2017-10-10 @ 10:00 am	2017-10-13 @ 10:00 am	< 0.3	2017-10-16
7889065	108	2017-10-10 @ 10:00 am	2017-10-13 @ 10:00 am	0.7 ± 0.2	2017-10-16
7889064	109	2017-10-10 @ 10:00 am	2017-10-13 @ 9:00 am	< 0.3	2017-10-16
7889063	111	2017-10-10 @ 10:00 am	2017-10-13 @ 9:00 am	0.9 ± 0.3	2017-10-16
7889056	112	2017-10-10 @ 10:00 am	2017-10-13 @ 9:00 am	< 0.3	2017-10-16
7889062	113	2017-10-10 @ 10:00 am	2017-10-13 @ 9:00 am	< 0.3	2017-10-16
7889075	115	2017-10-10 @ 10:00 am	2017-10-13 @ 9:00 am	< 0.3	2017-10-16
7889068	116	2017-10-10 @ 10:00 am	2017-10-13 @ 9:00 am	< 0.3	2017-10-16
7889028	150 OFFICE	2017-10-10 @ 8:00 am	2017-10-13 @ 8:00 am	< 0.3	2017-10-16
7889074	ADMIN	2017-10-10 @ 10:00 am	2017-10-13 @ 10:00 am	0.9 ± 0.3	2017-10-16
7889067	ADMIN DESK	2017-10-10 @ 10:00 am	2017-10-13 @ 9:00 am	0.6 ± 0.3	2017-10-16
7889058	AUDITORIUM	2017-10-10 @ 9:00 am	2017-10-13 @ 9:00 am	< 0.3	2017-10-16
7889060	AUDITORIUM	2017-10-10 @ 9:00 am	2017-10-13 @ 9:00 am	< 0.3	2017-10-16
7889003	BOYS LOCKER OFFI	2017-10-10 @ 7:00 am	2017-10-13 @ 8:00 am	< 0.3	2017-10-16
7889066	CAREER CENTER	2017-10-10 @ 10:00 am	2017-10-13 @ 9:00 am	0.6 ± 0.3	2017-10-16
7889042	CHOIR	2017-10-10 @ 9:00 am	2017-10-13 @ 9:00 am	< 0.3	2017-10-16
7889021	COMM CTR	2017-10-10 @ 8:00 am	2017-10-13 @ 8:00 am	0.7 ± 0.3	2017-10-16
7889052	COMMONS	2017-10-10 @ 9:00 am	2017-10-13 @ 9:00 am	< 0.3	2017-10-16
7889049	COMMONS	2017-10-10 @ 9:00 am	2017-10-13 @ 9:00 am	0.6 ± 0.3	2017-10-16
7889061	CUST OFFICE	2017-10-10 @ 9:00 am	2017-10-13 @ 9:00 am	< 0.3	2017-10-16
7889043	DRAMA	2017-10-10 @ 9:00 am	2017-10-13 @ 9:00 am	< 0.3	2017-10-16
7889044	DRAMA OFFICE	2017-10-10 @ 9:00 am	2017-10-13 @ 9:00 am	< 0.3	2017-10-16
7889002	GIRLS LOCKER OFF	2017-10-10 @ 7:00 am	2017-10-13 @ 8:00 am	< 0.3	2017-10-16
7889053	GYM	2017-10-10 @ 9:00 am	2017-10-13 @ 9:00 am	< 0.3	2017-10-16
7889055	GYM	2017-10-10 @ 9:00 am	2017-10-13 @ 9:00 am	< 0.3	2017-10-16
7889050	GYM	2017-10-10 @ 9:00 am	2017-10-13 @ 9:00 am	< 0.3	2017-10-16
7889094	HEALTH	2017-10-10 @ 10:00 am	2017-10-13 @ 10:00 am	2.5 ± 0.4	2017-10-16
7889059	KITCHEN	2017-10-10 @ 9:00 am	2017-10-13 @ 9:00 am	< 0.3	2017-10-16
7889057	KITCHEN OFFICE	2017-10-10 @ 9:00 am	2017-10-13 @ 9:00 am	0.6 ± 0.2	2017-10-16

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

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7889048	MUSIC OFFICE	2017-10-10 @ 9:00 am	2017-10-13 @ 9:00 am	< 0.3	2017-10-16
7889013	ROOM 122	2017-10-10 @ 8:00 am	2017-10-13 @ 8:00 am	0.9 ± 0.3	2017-10-16
7889017	ROOM 123	2017-10-10 @ 8:00 am	2017-10-13 @ 8:00 am	0.9 ± 0.3	2017-10-16
7889020	ROOM 124	2017-10-10 @ 8:00 am	2017-10-13 @ 9:00 am	< 0.3	2017-10-16
7889019	ROOM 126	2017-10-10 @ 8:00 am	2017-10-13 @ 8:00 am	< 0.3	2017-10-16
7889018	ROOM 126 DUP	2017-10-10 @ 8:00 am	2017-10-13 @ 8:00 am	< 0.3	2017-10-16
7889024	ROOM 128	2017-10-10 @ 8:00 am	2017-10-13 @ 8:00 am	< 0.3	2017-10-16
7889016	ROOM 130	2017-10-10 @ 8:00 am	2017-10-13 @ 8:00 am	0.8 ± 0.3	2017-10-16
7889014	ROOM 131	2017-10-10 @ 8:00 am	2017-10-13 @ 8:00 am	< 0.3	2017-10-16
7889015	ROOM 132	2017-10-10 @ 8:00 am	2017-10-13 @ 8:00 am	< 0.3	2017-10-16
7889012	ROOM 133	2017-10-10 @ 8:00 am	2017-10-13 @ 8:00 am	< 0.3	2017-10-16
7889006	ROOM 135	2017-10-10 @ 8:00 am	2017-10-13 @ 8:00 am	< 0.3	2017-10-16
7889011	ROOM 135 DUP	2017-10-10 @ 8:00 am	2017-10-13 @ 8:00 am	< 0.3	2017-10-16
7889010	ROOM 136	2017-10-10 @ 8:00 am	2017-10-13 @ 8:00 am	1.7 ± 0.3	2017-10-16
7889004	ROOM 137	2017-10-10 @ 7:00 am	2017-10-13 @ 8:00 am	< 0.3	2017-10-16
7889009	ROOM 138	2017-10-10 @ 8:00 am	2017-10-13 @ 8:00 am	1.6 ± 0.3	2017-10-16
7889008	ROOM 139	2017-10-10 @ 7:00 am	2017-10-13 @ 8:00 am	0.6 ± 0.3	2017-10-16
7889005	ROOM 140	2017-10-10 @ 7:00 am	2017-10-13 @ 8:00 am	< 0.3	2017-10-16
7889007	ROOM 142	2017-10-10 @ 7:00 am	2017-10-13 @ 8:00 am	0.6 ± 0.3	2017-10-16
7889025	ROOM 150	2017-10-10 @ 8:00 am	2017-10-13 @ 8:00 am	0.6 ± 0.3	2017-10-16
7889022	ROOM 151	2017-10-10 @ 8:00 am	2017-10-13 @ 9:00 am	< 0.3	2017-10-16
7889029	ROOM 153	2017-10-10 @ 8:00 am	2017-10-13 @ 9:00 am	< 0.3	2017-10-16
7889034	ROOM 154	2017-10-10 @ 8:00 am	2017-10-13 @ 9:00 am	< 0.3	2017-10-16
7889033	ROOM 154 DUP	2017-10-10 @ 8:00 am	2017-10-13 @ 9:00 am	0.7 ± 0.3	2017-10-16
7889026	ROOM 155	2017-10-10 @ 8:00 am	2017-10-13 @ 9:00 am	< 0.3	2017-10-16
7889031	ROOM 157	2017-10-10 @ 8:00 am	2017-10-13 @ 9:00 am	0.7 ± 0.3	2017-10-16
7889035	ROOM 158	2017-10-10 @ 8:00 am	2017-10-13 @ 9:00 am	3.3 ± 0.4	2017-10-16
7889036	ROOM 159	2017-10-10 @ 8:00 am	2017-10-13 @ 9:00 am	< 0.3	2017-10-16
7889030	ROOM 159 BLANK	2017-10-10 @ 8:00 am	2017-10-13 @ 9:00 am	< 0.3	2017-10-16
7889037	ROOM 160	2017-10-10 @ 8:00 am	2017-10-13 @ 9:00 am	1.7 ± 0.3	2017-10-16
7889032	ROOM 161	2017-10-10 @ 8:00 am	2017-10-13 @ 9:00 am	< 0.3	2017-10-16
7889038	ROOM 162	2017-10-10 @ 8:00 am	2017-10-13 @ 9:00 am	0.6 ± 0.3	2017-10-16
7889040	ROOM 163	2017-10-10 @ 9:00 am	2017-10-13 @ 9:00 am	0.6 ± 0.3	2017-10-16
7889039	ROOM 164	2017-10-10 @ 9:00 am	2017-10-13 @ 9:00 am	0.9 ± 0.3	2017-10-16
7889047	ROOM 165	2017-10-10 @ 9:00 am	2017-10-13 @ 9:00 am	0.6 ± 0.3	2017-10-16
7889045	ROOM 166	2017-10-10 @ 9:00 am	2017-10-13 @ 9:00 am	< 0.3	2017-10-16
7889041	ROOM 167	2017-10-10 @ 9:00 am	2017-10-13 @ 9:00 am	< 0.3	2017-10-16

October 17, 2017

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

LIBERTY

MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7889046	ROOM 168	2017-10-10 @ 9:00 am	2017-10-13 @ 9:00 am	< 0.3	2017-10-16
7889054	ROOM 170	2017-10-10 @ 9:00 am	2017-10-13 @ 9:00 am	< 0.3	2017-10-16
7889023	TEACHERS OFFICE	2017-10-10 @ 8:00 am	2017-10-13 @ 8:00 am	1.2 ± 0.3	2017-10-16
7889001	TRAINERS OFFICE	2017-10-10 @ 7:00 am	2017-10-13 @ 8:00 am	< 0.3	2017-10-16
7889077	WAITING AREA	2017-10-10 @ 10:00 am	2017-10-13 @ 10:00 am	0.8 ± 0.3	2017-10-16
7889051	WORKSHOP	2017-10-10 @ 9:00 am	2017-10-13 @ 9:00 am	< 0.3	2017-10-16

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