



November 27, 2018

David Callaway
David Douglas School District
11300 NE Halsey Street
Portland, Oregon 97220

Via email: david_callaway@ddsd40.org

Regarding: District-Wide Radon Testing
Gilbert Park Elementary School
13132 SE Ramona Street
Portland, Oregon
PBS Project 23179.065, Phase 0001

Dear Mr. Callaway:

From November 13 to 16, 2018, PBS Engineering and Environmental Inc. (PBS) performed short-term radon testing at Gilbert Park Elementary School, located at 13132 SE Ramona 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)
9123009	Room 6	4.2

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

Sincerely,

Dale Voeller, CHMM, CSP
Senior Project Manager

Attachment: AirChek, Inc., Laboratory Analysis Report

DSV:mo

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

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
9123041	BOYS LOCKER OFF	2018-11-13 @ 2:00 pm	2018-11-16 @ 3:00 pm	0.6 ± 0.3	2018-11-20
9123004	CAF 1	2018-11-13 @ 1:00 pm	2018-11-16 @ 2:00 pm	1.3 ± 0.3	2018-11-20
9123011	CAF 2	2018-11-13 @ 1:00 pm	2018-11-16 @ 2:00 pm	0.7 ± 0.3	2018-11-20
9123016	CAF BLANK	2018-11-13 @ 1:00 pm	2018-11-16 @ 2:00 pm	< 0.3	2018-11-20
9124199	COMPUTER LAB	2018-11-13 @ 12:00 pm	2018-11-16 @ 2:00 pm	2.8 ± 0.4	2018-11-20
9123047	CUSTODIAN OFFICE	2018-11-13 @ 2:00 pm	2018-11-16 @ 2:00 pm	2.6 ± 0.4	2018-11-20
9123045	GIRLS LOCKER OFF	2018-11-13 @ 2:00 pm	2018-11-16 @ 3:00 pm	0.8 ± 0.3	2018-11-20
9123042	GYM 1	2018-11-13 @ 2:00 pm	2018-11-16 @ 3:00 pm	< 0.3	2018-11-20
9123049	GYM 2	2018-11-13 @ 2:00 pm	2018-11-16 @ 3:00 pm	< 0.3	2018-11-20
9123046	GYM OFF DUP	2018-11-13 @ 2:00 pm	2018-11-16 @ 3:00 pm	0.7 ± 0.3	2018-11-20
9123048	GYM OFFICE	2018-11-13 @ 2:00 pm	2018-11-16 @ 3:00 pm	0.6 ± 0.3	2018-11-20
9124196	HEALTH	2018-11-13 @ 12:00 pm	2018-11-16 @ 2:00 pm	0.9 ± 0.3	2018-11-20
9123017	LIBRARY 1	2018-11-13 @ 1:00 pm	2018-11-16 @ 3:00 pm	0.8 ± 0.3	2018-11-20
9123018	LIBRARY 2	2018-11-13 @ 1:00 pm	2018-11-16 @ 3:00 pm	0.8 ± 0.3	2018-11-20
9124191	MAIN OFFICE	2018-11-13 @ 12:00 pm	2018-11-16 @ 2:00 pm	0.5 ± 0.3	2018-11-20
9123019	MS DINA COUNS	2018-11-13 @ 1:00 pm	2018-11-16 @ 2:00 pm	2.7 ± 0.4	2018-11-20
9123003	MS. DINA DUP	2018-11-13 @ 1:00 pm	2018-11-16 @ 2:00 pm	2.3 ± 0.4	2018-11-20
9123012	MS. TATGE OFFICE	2018-11-13 @ 1:00 pm	2018-11-16 @ 2:00 pm	2.4 ± 0.4	2018-11-20
9124193	PRINCIPAL	2018-11-13 @ 12:00 pm	2018-11-16 @ 2:00 pm	0.7 ± 0.3	2018-11-20
9123005	ROOM 1	2018-11-13 @ 12:00 pm	2018-11-16 @ 2:00 pm	2.5 ± 0.4	2018-11-20
9123010	ROOM 1 DUP	2018-11-13 @ 12:00 pm	2018-11-16 @ 2:00 pm	2.8 ± 0.4	2018-11-20
9123001	ROOM 10	2018-11-13 @ 12:00 pm	2018-11-16 @ 2:00 pm	2.5 ± 0.4	2018-11-20
9124194	ROOM 100	2018-11-13 @ 12:00 pm	2018-11-16 @ 2:00 pm	0.5 ± 0.3	2018-11-20
9123039	ROOM 11	2018-11-13 @ 1:00 pm	2018-11-16 @ 2:00 pm	3.0 ± 0.4	2018-11-20
9123034	ROOM 12	2018-11-13 @ 1:00 pm	2018-11-16 @ 2:00 pm	1.9 ± 0.4	2018-11-20
9123029	ROOM 13	2018-11-13 @ 1:00 pm	2018-11-16 @ 2:00 pm	3.1 ± 0.4	2018-11-20
9123030	ROOM 14	2018-11-13 @ 1:00 pm	2018-11-16 @ 2:00 pm	1.2 ± 0.4	2018-11-20
9123033	ROOM 15	2018-11-13 @ 1:00 pm	2018-11-16 @ 2:00 pm	1.1 ± 0.3	2018-11-20
9123025	ROOM 16	2018-11-13 @ 1:00 pm	2018-11-16 @ 2:00 pm	1.7 ± 0.4	2018-11-20
9123023	ROOM 16 DUP	2018-11-13 @ 1:00 pm	2018-11-16 @ 2:00 pm	1.6 ± 0.3	2018-11-20
9123026	ROOM 17	2018-11-13 @ 1:00 pm	2018-11-16 @ 2:00 pm	2.5 ± 0.4	2018-11-20
9123031	ROOM 18	2018-11-13 @ 1:00 pm	2018-11-16 @ 3:00 pm	1.4 ± 0.3	2018-11-20
9123032	ROOM 19	2018-11-13 @ 1:00 pm	2018-11-16 @ 2:00 pm	1.1 ± 0.4	2018-11-20
9123007	ROOM 2	2018-11-13 @ 12:00 pm	2018-11-16 @ 2:00 pm	2.6 ± 0.4	2018-11-20
9123015	ROOM 20	2018-11-13 @ 1:00 pm	2018-11-16 @ 2:00 pm	1.4 ± 0.4	2018-11-20
9123024	ROOM 21	2018-11-13 @ 1:00 pm	2018-11-16 @ 2:00 pm	0.5 ± 0.3	2018-11-20
9123040	ROOM 21 DUP	2018-11-13 @ 1:00 pm	2018-11-16 @ 2:00 pm	< 0.3	2018-11-20

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

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
9123043	ROOM 22	2018-11-13 @ 1:00 pm	2018-11-16 @ 2:00 pm	1.0 ± 0.3	2018-11-20
9123037	ROOM 22 BLANK	2018-11-13 @ 1:00 pm	2018-11-16 @ 2:00 pm	< 0.3	2018-11-20
9123038	ROOM 23	2018-11-13 @ 1:00 pm	2018-11-16 @ 2:00 pm	1.2 ± 0.3	2018-11-20
9123036	ROOM 24	2018-11-13 @ 1:00 pm	2018-11-16 @ 2:00 pm	0.7 ± 0.3	2018-11-20
9123044	ROOM 25	2018-11-13 @ 1:00 pm	2018-11-16 @ 2:00 pm	1.0 ± 0.3	2018-11-20
9123027	ROOM 26	2018-11-13 @ 1:00 pm	2018-11-16 @ 2:00 pm	0.7 ± 0.3	2018-11-20
9123028	ROOM 27	2018-11-13 @ 1:00 pm	2018-11-16 @ 2:00 pm	1.2 ± 0.4	2018-11-20
9123035	ROOM 28	2018-11-13 @ 1:00 pm	2018-11-16 @ 2:00 pm	1.0 ± 0.3	2018-11-20
9123008	ROOM 3	2018-11-13 @ 12:00 pm	2018-11-16 @ 2:00 pm	2.5 ± 0.4	2018-11-20
9124200	ROOM 4	2018-11-13 @ 12:00 pm	2018-11-16 @ 2:00 pm	2.6 ± 0.4	2018-11-20
9123002	ROOM 5	2018-11-13 @ 12:00 pm	2018-11-16 @ 2:00 pm	2.4 ± 0.4	2018-11-20
9123009	ROOM 6	2018-11-13 @ 12:00 pm	2018-11-16 @ 2:00 pm	4.2 ± 0.4	2018-11-20
9123006	ROOM 7	2018-11-13 @ 12:00 pm	2018-11-16 @ 2:00 pm	3.4 ± 0.4	2018-11-20
9123013	ROOM 8	2018-11-13 @ 12:00 pm	2018-11-16 @ 2:00 pm	2.6 ± 0.4	2018-11-20
9123014	ROOM 9	2018-11-13 @ 12:00 pm	2018-11-16 @ 2:00 pm	2.6 ± 0.4	2018-11-20
9123020	STAFF RM BY 11	2018-11-13 @ 1:00 pm	2018-11-16 @ 2:00 pm	3.9 ± 0.4	2018-11-20
9124195	STAFF ROOM	2018-11-13 @ 12:00 pm	2018-11-16 @ 2:00 pm	0.9 ± 0.3	2018-11-20
9123021	STAGE STAFF RM	2018-11-13 @ 1:00 pm	2018-11-16 @ 2:00 pm	1.4 ± 0.4	2018-11-20