



November 28, 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
South Powellhurst
2900 SE 122nd Avenue
Portland, Oregon
PBS Project 23179.065, Phase 0001

Dear Mr. Callaway:

From November 6 to 9, 2018, PBS Engineering and Environmental Inc. (PBS) performed short-term radon testing in Room 102C and the basement bus garage offices at South Powellhurst, located at 2900 SE 122nd Avenue in Portland, Oregon.

This testing was completed after adjustments and modifications had been made to the HVAC system in these areas.

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)
9124123	Room 208	5.4
9124128	Room 210	7.6
9124129	Room 212	6.6
9124130	Room 214	5.6
9122793	Room 216A	4.4
9124122	Room 217	5.5
9124120	Room 217 (Duplicate)	5.7
9124131	Room 218	7.6
9122794	Room 218A	7.2

Test Kit Number	Sample Location	Radon Level (pCi/L)
9124124	Room 220	10.0
9124126	Room 220A	14.8

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:
**SOUTH POWELLHURST
MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
9124121	ROOM 102C	2018-11-06 @ 1:00 pm	2018-11-09 @ 1:00 pm	1.0 ± 0.3	2018-11-12
9124123	ROOM 208	2018-11-06 @ 2:00 pm	2018-11-09 @ 1:00 pm	5.4 ± 0.4	2018-11-12
9124128	ROOM 210	2018-11-06 @ 2:00 pm	2018-11-09 @ 1:00 pm	7.6 ± 0.5	2018-11-12
9122792	ROOM 211	2018-11-06 @ 2:00 pm	2018-11-09 @ 1:00 pm	3.3 ± 0.4	2018-11-12
9124129	ROOM 212	2018-11-06 @ 2:00 pm	2018-11-09 @ 1:00 pm	6.6 ± 0.5	2018-11-12
9124130	ROOM 214	2018-11-06 @ 2:00 pm	2018-11-09 @ 1:00 pm	5.6 ± 0.5	2018-11-12
9124125	ROOM 216	2018-11-06 @ 2:00 pm	2018-11-09 @ 1:00 pm	3.9 ± 0.4	2018-11-12
9122793	ROOM 216A	2018-11-06 @ 2:00 pm	2018-11-09 @ 1:00 pm	4.4 ± 0.4	2018-11-12
9124122	ROOM 217	2018-11-06 @ 2:00 pm	2018-11-09 @ 1:00 pm	5.5 ± 0.4	2018-11-12
9124120	ROOM 217 DUP	2018-11-06 @ 2:00 pm	2018-11-09 @ 1:00 pm	5.7 ± 0.4	2018-11-12
9124131	ROOM 218	2018-11-06 @ 1:00 pm	2018-11-09 @ 1:00 pm	7.6 ± 0.5	2018-11-12
9122794	ROOM 218A	2018-11-06 @ 1:00 pm	2018-11-09 @ 1:00 pm	7.2 ± 0.4	2018-11-12
9124124	ROOM 220	2018-11-06 @ 1:00 pm	2018-11-09 @ 1:00 pm	10.0 ± 0.5	2018-11-12
9124126	ROOM 220 A	2018-11-06 @ 1:00 pm	2018-11-09 @ 1:00 pm	14.8 ± 0.7	2018-11-12