



February 21, 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 Complex  
2900 SE 122nd Avenue  
Portland, Oregon 97236  
PBS Project 23179.043, Phase 0002

Dear Mr. Callaway:

From February 12 to 15, 2018, PBS Engineering and Environmental Inc. (PBS) performed short-term radon testing at the South Powellhurst Complex located at 2900 SE 122nd Avenue in Portland, 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. 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)
7958987	102C	5.6
7958961	204	4.4
7958962	208	4.5
7958964	208-DUP	4.8
7958965	210	10.0
7958960	211	4.0
7958968	212	7.4
7958969	214	7.1
7958970	216	6.5
7958967	217	8.0
7958972	218	9.3
7958974	220	13.7
7958971	216A	7.2
7958973	218A	14.5
7958975	220A	16.6
7958993	BUS GARAGE, BREAK RM	4.1
7958995	MAINTENANCE BLDG, WEST SHOP	4.8

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 503.417.7694 or [chris.boyce@pbsusa.com](mailto:chris.boyce@pbsusa.com) with any questions or comments.

Sincerely,



Chris Boyce  
Project Manager

Attachment: AirChek, Inc Laboratory Analysis Report

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Radon test result report for:  
**SOUTH POWELLHURST  
 MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7958984	102	2018-02-12 @ 11:00 am	2018-02-15 @ 11:00 am	0.9 ± 0.2	2018-02-16
7958985	102A	2018-02-12 @ 11:00 am	2018-02-15 @ 11:00 am	1.3 ± 0.2	2018-02-16
7958986	102B	2018-02-12 @ 11:00 am	2018-02-15 @ 11:00 am	1.3 ± 0.2	2018-02-16
7958987	102C	2018-02-12 @ 11:00 am	2018-02-15 @ 11:00 am	5.6 ± 0.4	2018-02-16
7958983	103	2018-02-12 @ 11:00 am	2018-02-15 @ 11:00 am	2.9 ± 0.3	2018-02-16
7958977	104	2018-02-12 @ 11:00 am	2018-02-15 @ 12:00 pm	3.2 ± 0.3	2018-02-16
7958978	104-DUP	2018-02-12 @ 11:00 am	2018-02-15 @ 12:00 pm	3.2 ± 0.3	2018-02-16
7958979	104A	2018-02-12 @ 11:00 am	2018-02-15 @ 12:00 pm	2.9 ± 0.3	2018-02-16
7958981	105	2018-02-12 @ 11:00 am	2018-02-15 @ 11:00 am	1.8 ± 0.3	2018-02-16
7958980	107	2018-02-12 @ 11:00 am	2018-02-15 @ 11:00 am	1.8 ± 0.3	2018-02-16
7958976	109	2018-02-12 @ 11:00 am	2018-02-15 @ 11:00 am	3.2 ± 0.3	2018-02-16
7958961	204	2018-02-12 @ 10:00 am	2018-02-15 @ 11:00 am	4.4 ± 0.4	2018-02-16
7958962	208	2018-02-12 @ 10:00 am	2018-02-15 @ 11:00 am	4.5 ± 0.4	2018-02-16
7958964	208-DUP	2018-02-12 @ 10:00 am	2018-02-15 @ 11:00 am	4.8 ± 0.4	2018-02-16
7958963	208A	2018-02-12 @ 10:00 am	2018-02-15 @ 11:00 am	3.1 ± 0.3	2018-02-16
7958965	210	2018-02-12 @ 10:00 am	2018-02-15 @ 11:00 am	10.0 ± 0.6	2018-02-16
7958960	211	2018-02-12 @ 10:00 am	2018-02-15 @ 11:00 am	4.0 ± 0.4	2018-02-16
7958968	212	2018-02-12 @ 10:00 am	2018-02-15 @ 12:00 pm	7.4 ± 0.5	2018-02-16
7958969	214	2018-02-12 @ 10:00 am	2018-02-15 @ 12:00 pm	7.1 ± 0.5	2018-02-16
7958966	215	2018-02-12 @ 10:00 am	2018-02-15 @ 11:00 am	3.7 ± 0.3	2018-02-16
7958970	216	2018-02-12 @ 11:00 am	2018-02-15 @ 12:00 pm	6.5 ± 0.4	2018-02-16
7958971	216A	2018-02-12 @ 11:00 am	2018-02-15 @ 12:00 pm	7.2 ± 0.5	2018-02-16
7958967	217	2018-02-12 @ 10:00 am	2018-02-15 @ 12:00 pm	8.0 ± 0.5	2018-02-16
7958972	218	2018-02-12 @ 11:00 am	2018-02-15 @ 12:00 pm	9.3 ± 0.6	2018-02-16
7958973	218A	2018-02-12 @ 11:00 am	2018-02-15 @ 12:00 pm	14.5 ± 0.8	2018-02-16
7958974	220	2018-02-12 @ 11:00 am	2018-02-15 @ 12:00 pm	13.7 ± 0.7	2018-02-16
7958975	220A	2018-02-12 @ 11:00 am	2018-02-15 @ 12:00 pm	16.6 ± 0.8	2018-02-16
7958959	BLANK	2018-02-12 @ 9:00 am	2018-02-15 @ 11:00 am	< 0.3	2018-02-16
7958982	ENTRANCE FOYER	2018-02-12 @ 11:00 am	2018-02-15 @ 11:00 am	2.6 ± 0.3	2018-02-16

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**\*\* LABORATORY ANALYSIS REPORT \*\***

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Radon test result report for:  
**SOUTH POWELLHURST  
WAREHOUSE**

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<b>Kit #</b>	<b>Room Id</b>	<b>Started</b>	<b>Ended</b>	<b>pCi/L</b>	<b>Analyzed</b>
7958988	WAREHOUSE 1	2018-02-12 @ 11:00 am	2018-02-15 @ 12:00 pm	2.6 ± 0.3	2018-02-16
7958989	WAREHOUSE 2	2018-02-12 @ 11:00 am	2018-02-15 @ 12:00 pm	2.7 ± 0.3	2018-02-16
7958990	WAREHOUSE 3	2018-02-12 @ 11:00 am	2018-02-15 @ 12:00 pm	1.9 ± 0.3	2018-02-16
7958992	WAREHOUSE BREAK	2018-02-12 @ 11:00 am	2018-02-15 @ 12:00 pm	1.9 ± 0.3	2018-02-16
7958991	WAREHOUSE OFFICE	2018-02-12 @ 11:00 am	2018-02-15 @ 12:00 pm	1.8 ± 0.2	2018-02-16

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

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**\*\* LABORATORY ANALYSIS REPORT \*\***

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Radon test result report for:  
**SOUTH POWELLHURST  
MAINTENANCE SHOP**

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<b>Kit #</b>	<b>Room Id</b>	<b>Started</b>	<b>Ended</b>	<b>pCi/L</b>	<b>Analyzed</b>
7958993	BREAK RM	2018-02-12 @ 11:00 am	2018-02-15 @ 12:00 pm	4.1 ± 0.4	2018-02-16
7958994	BREAK RM-DUP	2018-02-12 @ 11:00 am	2018-02-15 @ 12:00 pm	3.7 ± 0.3	2018-02-16
7958997	EAST SHOP	2018-02-12 @ 11:00 am	2018-02-15 @ 12:00 pm	3.7 ± 0.3	2018-02-16
7958996	THOMPSON OFFICE	2018-02-12 @ 11:00 am	2018-02-15 @ 12:00 pm	2.0 ± 0.3	2018-02-16
7958995	WEST SHOP	2018-02-12 @ 11:00 am	2018-02-15 @ 12:00 pm	4.8 ± 0.4	2018-02-16

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Radon test result report for:  
**SOUTH POWELLHURST  
BUS SHOP**

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<b>Kit #</b>	<b>Room Id</b>	<b>Started</b>	<b>Ended</b>	<b>pCi/L</b>	<b>Analyzed</b>
7958999	BREAK ROOM	2018-02-12 @ 11:00 am	2018-02-15 @ 12:00 pm	1.5 ± 0.2	2018-02-16
7959000	GARAGE	2018-02-12 @ 11:00 am	2018-02-15 @ 12:00 pm	2.4 ± 0.3	2018-02-16
7958998	OFFICE	2018-02-12 @ 11:00 am	2018-02-15 @ 12:00 pm	1.4 ± 0.2	2018-02-16

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