



March 8, 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
Cherry Park Elementary School
1930 SE 104th Avenue
Portland, Oregon 97216

PBS Project 23179.043, Phase 0002

Dear Mr. Callaway:

From February 26 to March 1, 2018, PBS Engineering and Environmental Inc. (PBS) performed short-term radon testing at Cherry Park Elementary School located at 1930 SE 104th 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., 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)
7958449	1	8.6
7958450	2	9.9
7958455	2-Duplicate	11.7
7958451	3	10.4
7958452	4	8.8
7958453	5	9.2
7958454	6	5.5
7958442	7	8.8
7958443	7-Duplicate	8.0
7958444	8	13.6
7958445	9	10.9
7958446	10	8.4

Test Kit Number	Sample location	Radon Level (pCi/L)
7958447	11	4.9
7958448	12	10.8
7958436	14	7.6
7958438	16	5.3
7958432	19	5.9
7958429	22	5.8
7958428	23	9.0
7958419	27 Faculty Room	4.2
7958418	48 Counselor Office	4.5
7958426	Gym Office	4.9

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.

David Douglas School District
Radon Testing, Cherry Park Elementary
March 8, 2018
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Please feel free to contact me at 503.417.7694 or chris.boyce@pbsusa.com with any questions or comments.

Sincerely,

A handwritten signature in black ink, appearing to read "Chris Boyce". The signature is written in a cursive style with a long, sweeping tail on the "y".

Chris Boyce
Project Manager

Attachment: AirChek, Inc., Laboratory Analysis Report

CB::lkn

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

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7958449	1	2018-02-26 @ 12:00 pm	2018-03-01 @ 2:00 pm	8.6 ± 0.7	2018-03-05
7958446	10	2018-02-26 @ 12:00 pm	2018-03-01 @ 2:00 pm	8.4 ± 0.7	2018-03-05
7958447	11	2018-02-26 @ 12:00 pm	2018-03-01 @ 2:00 pm	4.9 ± 0.6	2018-03-05
7958448	12	2018-02-26 @ 12:00 pm	2018-03-01 @ 2:00 pm	10.8 ± 0.8	2018-03-05
7958435	13	2018-02-26 @ 11:00 am	2018-03-01 @ 2:00 pm	3.6 ± 0.5	2018-03-05
7958436	14	2018-02-26 @ 11:00 am	2018-03-01 @ 2:00 pm	7.6 ± 0.7	2018-03-05
7958437	15	2018-02-26 @ 11:00 am	2018-03-01 @ 2:00 pm	2.6 ± 0.4	2018-03-05
7958438	16	2018-02-26 @ 11:00 am	2018-03-01 @ 2:00 pm	5.3 ± 0.6	2018-03-05
7958440	17	2018-02-26 @ 12:00 pm	2018-03-01 @ 2:00 pm	2.3 ± 0.4	2018-03-05
7958439	18-LIBRARY	2018-02-26 @ 11:00 am	2018-03-01 @ 2:00 pm	2.3 ± 0.4	2018-03-05
7958432	19	2018-02-26 @ 11:00 am	2018-03-01 @ 1:00 pm	5.9 ± 0.6	2018-03-05
7958450	2	2018-02-26 @ 12:00 pm	2018-03-01 @ 2:00 pm	9.9 ± 0.7	2018-03-05
7958455	2 -DUP	2018-02-26 @ 12:00 pm	2018-03-01 @ 2:00 pm	11.7 ± 0.9	2018-03-05
7958431	20	2018-02-26 @ 11:00 am	2018-03-01 @ 1:00 pm	3.9 ± 0.5	2018-03-05
7958433	20-DUP	2018-02-26 @ 11:00 am	2018-03-01 @ 1:00 pm	3.6 ± 0.5	2018-03-05
7958430	21	2018-02-26 @ 11:00 am	2018-03-01 @ 1:00 pm	1.5 ± 0.4	2018-03-05
7958429	22	2018-02-26 @ 11:00 am	2018-03-01 @ 1:00 pm	5.8 ± 0.6	2018-03-05
7958428	23	2018-02-26 @ 11:00 am	2018-03-01 @ 1:00 pm	9.0 ± 0.8	2018-03-05
7958427	24	2018-02-26 @ 11:00 am	2018-03-01 @ 1:00 pm	2.9 ± 0.5	2018-03-05
7958414	25	2018-02-26 @ 11:00 am	2018-03-01 @ 1:00 pm	2.9 ± 0.4	2018-03-05
7958417	26	2018-02-26 @ 11:00 am	2018-03-01 @ 1:00 pm	2.6 ± 0.4	2018-03-05
7958413	27	2018-02-26 @ 11:00 am	2018-03-01 @ 1:00 pm	1.7 ± 0.4	2018-03-05
7958419	27 FACULTY RM	2018-02-26 @ 11:00 am	2018-03-01 @ 1:00 pm	4.2 ± 0.5	2018-03-05
7958420	27-DUP	2018-02-26 @ 11:00 am	2018-03-01 @ 1:00 pm	3.6 ± 0.5	2018-03-05
7958409	28	2018-02-26 @ 11:00 am	2018-03-01 @ 1:00 pm	3.1 ± 0.5	2018-03-05
7958411	29	2018-02-26 @ 11:00 am	2018-03-01 @ 1:00 pm	2.0 ± 0.4	2018-03-05
7958451	3	2018-02-26 @ 12:00 pm	2018-03-01 @ 2:00 pm	10.4 ± 0.8	2018-03-05
7958406	33	2018-02-26 @ 11:00 am	2018-03-01 @ 1:00 pm	2.9 ± 0.5	2018-03-05
7958405	34	2018-02-26 @ 11:00 am	2018-03-01 @ 1:00 pm	2.8 ± 0.4	2018-03-05
7958407	35	2018-02-26 @ 11:00 am	2018-03-01 @ 1:00 pm	2.7 ± 0.4	2018-03-05
7958404	37A	2018-02-26 @ 11:00 am	2018-03-01 @ 1:00 pm	1.9 ± 0.4	2018-03-05
7958452	4	2018-02-26 @ 12:00 pm	2018-03-01 @ 2:00 pm	8.8 ± 0.7	2018-03-05
7958410	41	2018-02-26 @ 11:00 am	2018-03-01 @ 1:00 pm	1.9 ± 0.4	2018-03-05
7958415	44 MEETING	2018-02-26 @ 11:00 am	2018-03-01 @ 1:00 pm	2.1 ± 0.4	2018-03-05
7958416	45 MEETING RM	2018-02-26 @ 11:00 am	2018-03-01 @ 1:00 pm	1.7 ± 0.4	2018-03-05
7958408	46-COMMONS	2018-02-26 @ 11:00 am	2018-03-01 @ 1:00 pm	2.7 ± 0.5	2018-03-05
7958418	48 COUNSELOR	2018-02-26 @ 11:00 am	2018-03-01 @ 1:00 pm	4.5 ± 0.5	2018-03-05

Radon test result report for:
CHERRY PARK
MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7958453	5	2018-02-26 @ 12:00 pm	2018-03-01 @ 2:00 pm	9.2 ± 0.7	2018-03-05
7958454	6	2018-02-26 @ 12:00 pm	2018-03-01 @ 2:00 pm	5.5 ± 0.6	2018-03-05
7958421	60-CUSTODIAL	2018-02-26 @ 11:00 am	2018-03-01 @ 1:00 pm	2.2 ± 0.4	2018-03-05
7958442	7	2018-02-26 @ 12:00 pm	2018-03-01 @ 2:00 pm	8.8 ± 0.8	2018-03-05
7958443	7-DUP	2018-02-26 @ 12:00 pm	2018-03-01 @ 2:00 pm	8.0 ± 0.7	2018-03-05
7958444	8	2018-02-26 @ 12:00 pm	2018-03-01 @ 2:00 pm	13.6 ± 0.9	2018-03-05
7958445	9	2018-02-26 @ 12:00 pm	2018-03-01 @ 2:00 pm	10.9 ± 0.8	2018-03-05
7958434	92 (BOYS LR)	2018-02-26 @ 11:00 am	2018-03-01 @ 1:00 pm	3.5 ± 0.5	2018-03-05
7958401	BLANK 1	2018-02-26 @ 11:00 am	2018-03-01 @ 1:00 pm	< 0.3	2018-03-05
7958441	BLANK 2	2018-02-26 @ 12:00 pm	2018-03-01 @ 2:00 pm	< 0.3	2018-03-05
7958425	GYM 1	2018-02-26 @ 11:00 am	2018-03-01 @ 1:00 pm	2.5 ± 0.4	2018-03-05
7958424	GYM 2	2018-02-26 @ 11:00 am	2018-03-01 @ 1:00 pm	2.9 ± 0.5	2018-03-05
7958426	GYM OFFICE	2018-02-26 @ 11:00 am	2018-03-01 @ 1:00 pm	4.9 ± 0.6	2018-03-05
7958403	HEALTH ROOM	2018-02-26 @ 11:00 am	2018-03-01 @ 1:00 pm	2.9 ± 0.5	2018-03-05
7958402	MAIN OFFICE	2018-02-26 @ 11:00 am	2018-03-01 @ 1:00 pm	2.7 ± 0.4	2018-03-05
7958422	MULTIPURPOSE 1	2018-02-26 @ 11:00 am	2018-03-01 @ 1:00 pm	3.5 ± 0.5	2018-03-05
7958423	MULTIPURPOSE 2	2018-02-26 @ 11:00 am	2018-03-01 @ 1:00 pm	3.9 ± 0.5	2018-03-05
7958412	PRESCHOOL COMMON	2018-02-26 @ 11:00 am	2018-03-01 @ 1:00 pm	1.7 ± 0.4	2018-03-05
7958399	WORK ROOM	2018-02-26 @ 11:00 am	2018-03-01 @ 1:00 pm	2.3 ± 0.4	2018-03-05
7958400	WORK ROOM-DUP	2018-02-26 @ 11:00 am	2018-03-01 @ 1:00 pm	2.3 ± 0.4	2018-03-05

March 5, 2018

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:
CHERRY PARK
PORTABLES

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7958456	30M	2018-02-26 @ 12:00 pm	2018-03-01 @ 2:00 pm	< 0.3	2018-03-05
7958457	30M-DUP	2018-02-26 @ 12:00 pm	2018-03-01 @ 2:00 pm	< 0.3	2018-03-05
7958458	31M	2018-02-26 @ 12:00 pm	2018-03-01 @ 2:00 pm	< 0.3	2018-03-05

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