



February 15, 2018

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

Via email: david_callaway@ddsd40.org

Regarding: Follow-up Radon Testing
David Douglas High School, North Building
1001 SE 135th Avenue
Portland, Oregon 97233
PBS Project 23179.043, Phase 0002

Dear Mr. Callaway:

From November 20, 2017, to February 2, 2018, PBS Engineering and Environmental Inc. (PBS) performed short-term radon testing at David Douglas High School, North building, located at 1001 SE 135th Avenue in Portland, Oregon.

The Environmental Protection Agency (EPA) and Oregon Health Authority (OHA) recommend that buildings be tested for radon and that any detected 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 locations where initial short-term radon test results were above the action level (4.0 pCi/L). Two rounds of follow-up testing were completed to troubleshoot possible ventilation system deficiencies and check the effectiveness of ventilation system changes and repairs.

Repairs to and adjustments of the ventilation system supplying the lower level of the high school north building gym reduced radon levels in all locations. Radon levels in the girls locker room office and boys locker room office were reduced below the action level. The radon level in the boys team room office remained above the action level. Following OHA protocol, a long-term test kit has been placed in the boys team room office, as results continue to range from 4.0 to 8.0 pCi/L. Long-term test kits have been placed in the girls locker room office and boys locker room office to verify lower radon levels are maintained in these locations.

The following table lists all follow-up samples collected in the lower level of the high school north building gym.

Follow-up Short Term Radon Test Kits

Test Kit Number	Sample Location	Radon Level (pCi/L)
7957616	North, boys locker room office #2	9.8
7957617	North, boys team office #2	12.3
7957618	North, girls locker room office #2	21.1
7958354	North, boys locker room office #3	3.4

Test Kit Number	Sample Location	Radon Level (pCi/L)
7958353	North, boys team office #3	4.0
7958355	North, boys team office (Duplicate)	3.9
7958352	North, girls locker room office #3	<0.3

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 with any questions or comments.

Sincerely,



Chris Boyce
Project Manager

Attachment: Air Chek, Inc. Laboratory Analysis Report

CB::rg

November 20, 2017

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:
**HIGH SCHOOL -NORTH
NORTH**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7957616	BOYS LR OFF.#2	2017-11-14 @ 11:00 am	2017-11-17 @ 1:00 pm	9.8 ± 0.5	2017-11-20
7957617	BOYS TEAM OFF.#2	2017-11-14 @ 11:00 am	2017-11-17 @ 1:00 pm	12.3 ± 0.6	2017-11-20
7957618	GIRLS LR OFF.#2	2017-11-14 @ 11:00 am	2017-11-17 @ 1:00 pm	21.1 ± 0.7	2017-11-20

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

February 2, 2018

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:
**HIGH SCHOOL -NORTH
MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7958354	BOYS LR OFFICE	2018-01-29 @ 1:00 pm	2018-02-01 @ 12:00 pm	3.4 ± 0.3	2018-02-02
7958355	BOYS TEAM - DUP	2018-01-29 @ 1:00 pm	2018-02-01 @ 12:00 pm	3.9 ± 0.3	2018-02-02
7958353	BOYS TEAM OFFICE	2018-01-29 @ 1:00 pm	2018-02-01 @ 12:00 pm	4.0 ± 0.4	2018-02-02
7958352	GIRLS LR OFFICE	2018-01-29 @ 1:00 pm	2018-02-01 @ 12:00 pm	< 0.3	2018-02-02

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