



April 6, 2021

Brad Johnston
Lane Education Service District
1200 State Hwy 99 N
Eugene, Oregon 97402

Via email: bjohnston@lesd.k12.or.us

Regarding: Lane ESD Main Campus – Short-Term Radon Testing
1200 State Hwy 99 N
Eugene, Oregon 97402
PBS Project 52651.000

Dear Mr. Johnston:

From March 29th to March 31st, 2021 PBS Engineering and Environmental Inc. (PBS) performed short-term radon testing for the Lane ESD Building located at 1200 State Hwy 99 N in Eugene, 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. **No samples taken by PBS were found to be above the EPA action level of 4.0 pCi/L.**

In addition to the single-use, short-term radon test kits deployed in frequently occupied rooms, two (2) sample blanks, two (2) spike samples, and four (4) duplicates were analyzed by Air Chek, Inc. in Mills River, North Carolina for quality control (QC) purposes.

The following table presents the results of all tests conducted during this study. Results are listed in pCi/L.

Kit Number	Start Date	End Date	Room	Floor	Result (pCi/L)	Comments
9527729	3/29/2021	3/31/2021	ROOM 75	1	< 0.3	
9527730	3/29/2021	3/31/2021	ROOM 74	1	< 0.3	
9527731	3/29/2021	3/31/2021	ROOM 79	1	0.5	
9527732	3/29/2021	3/31/2021	ROOM 78	1	< 0.3	
9527733	3/29/2021	3/31/2021	ROOM 77	1	< 0.3	
9527734	3/29/2021	3/31/2021	ROOM 77	1	< 0.3	Duplicate: RPD = 0%
9527735	3/29/2021	3/31/2021	ROOM 73	1	< 0.3	
9527736	3/29/2021	3/31/2021	ROOM 68	1	< 0.3	
9527737	3/29/2021	3/31/2021	ROOM 68	1	< 0.3	
9527738	3/29/2021	3/31/2021	ROOM 70	1	< 0.3	
9527739	3/29/2021	3/31/2021	ROOM 69	1	< 0.3	
9527740	3/29/2021	3/31/2021	ROOM 67	1	0.6	
9527741	3/29/2021	3/31/2021	ROOM 66	1	0.8	

Kit Number	Start Date	End Date	Room	Floor	Result (pCi/L)	Comments
9527742	3/29/2021	3/31/2021	ROOM 65	1	1	
9527743	3/29/2021	3/31/2021	ROOM 65	1	1.3	Duplicate: RPD = 17%
9527744	3/29/2021	3/31/2021	ROOM 82	1	0.6	
9527745	3/29/2021	3/31/2021	ROOM 82	1	0.9	
9527746	3/29/2021	3/31/2021	ROOM 81	1	0.9	
9527747	3/29/2021	3/31/2021	ROOM 43	1	< 0.3	
9527748	3/29/2021	3/31/2021	ROOM 42	1	< 0.3	
9527749	3/29/2021	3/31/2021	ROOM 41	1	< 0.3	
9527750	3/29/2021	3/31/2021	ROOM 40	1	< 0.3	
9527751	3/29/2021	3/31/2021	ROOM 35	1	0.5	
9527752	3/29/2021	3/31/2021	ROOM 34	1	< 0.3	
9527753	3/29/2021	3/31/2021	ROOM 33	1	1.1	
9527754	3/29/2021	3/31/2021	ROOM 32	1	0.7	
9527755	3/29/2021	3/31/2021	ROOM 31	1	< 0.3	
9527756	3/29/2021	3/31/2021	ROOM 31A	1	< 0.3	
9527757	3/29/2021	3/31/2021	ROOM 28	1	< 0.3	
9527758	3/29/2021	3/31/2021	ROOM 13	1	< 0.3	
9527759	3/29/2021	3/31/2021	ROOM 30	1	< 0.3	
9527760	3/29/2021	3/31/2021	ROOM 30	1	< 0.3	Duplicate: RPD = 0%
9527761	3/29/2021	3/31/2021	ROOM 62	1	< 0.3	
9527762	3/29/2021	3/31/2021	LUNCHROOM	1	< 0.3	
9527763	3/29/2021	3/31/2021	LUNCHROOM	1	< 0.3	
9527764	3/29/2021	3/31/2021	ROOM 13	1	< 0.3	
9527765	3/29/2021	3/31/2021	ROOM 28	1	< 0.3	
9527766	3/29/2021	3/31/2021	ROOM 3	1	< 0.3	
9527767	3/29/2021	3/31/2021	ROOM 3	1	< 0.3	Duplicate: RPD = 0%
9527768	3/29/2021	3/31/2021	ROOM 4	1	< 0.3	
9527769	3/29/2021	3/31/2021	ROOM 5	1	< 0.3	
9527770	3/29/2021	3/31/2021	ROOM 6	1	< 0.3	
9527771	3/29/2021	3/31/2021	ROOM 48	1	< 0.3	
9527772	3/29/2021	3/31/2021	BUSINESS SERVICES	1	< 0.3	
9527773	3/29/2021	3/31/2021	MIGRANT ED	1	< 0.3	
9527774	3/29/2021	3/31/2021	INSTRUCTION EQUITY	1	< 0.3	
9527775	3/29/2021	3/31/2021	ROOM 9	1	< 0.3	
9527776	3/29/2021	3/31/2021	ROOM 9	1	< 0.3	
9527777	3/29/2021	3/31/2021	ROOM 20	1	< 0.3	
9527778	3/29/2021	3/31/2021	ROOM 20	1	0.7	Duplicate: RPD = 80%
9527779	3/29/2021	3/31/2021	ROOM 18	1	0.7	
9527780	3/29/2021	3/31/2021	ROOM 19	1	< 0.3	
9527781	3/29/2021	3/31/2021	ROOM 21	1	< 0.3	

Kit Number	Start Date	End Date	Room	Floor	Result (pCi/L)	Comments
9527782	3/29/2021	3/31/2021	ROOM 22	1	< 0.3	
9527783	3/29/2021	3/31/2021	ROOM 23A	1	< 0.3	
9527784	3/29/2021	3/31/2021	ROOM 23B	1	< 0.3	
9527785	3/29/2021	3/31/2021	ROOM 29	1	< 0.3	
9527786	3/29/2021	3/31/2021	ROOM 29	1	< 0.3	
9527787	3/29/2021	3/31/2021	LOADING DOCK	1	< 0.3	
9527788	3/29/2021	3/31/2021	ROOM 83 WAREHOUSE	1	< 0.3	
9527789	3/29/2021	3/31/2021	ROOM 83 WAREHOUSE	1	< 0.3	
9527790	3/29/2021	3/31/2021	ROOM 83 WAREHOUSE	1	< 0.3	
9527791	3/29/2021	3/31/2021	ROOM 30A	1	< 0.3	
9527792	3/29/2021	3/31/2021	ROOM 30A	1	< 0.3	
9527882	3/27/2021	3/29/2021	---	---	Reference Value: 13.7 Measured Value: 12.8	Spike Sample: RPE = 7%
9527883	3/27/2021	3/29/2021	---	---	Reference Value: 13.7 Measured Value: 14.2	Spike Sample: RPE = 4%
9527884	3/27/2021	3/29/2021	---	---	Reference Value: 13.7 Measured Value: 13.4	Spike Sample: RPE = 2%
9627733	3/29/2021	3/31/2021	---	---	< 0.3	Blank Sample
9627734	3/29/2021	3/31/2021	---	---	< 0.3	Blank Sample
9627735	3/29/2021	3/31/2021	---	---	< 0.3	Blank Sample
9627736	3/29/2021	3/31/2021	---	---	< 0.3	Blank Sample

Simultaneous measurement results that are both less than (<) 4.0 pCi/L shall agree with a Relative Percent Difference (RPD) of less than (<) 67 percent. RPD is calculated by taking the difference between 2 results, dividing by the average the results, and multiplying by 100.

Relative Percentage Error (RPE) is calculated by taking the difference between a measured value and reference value, dividing by the reference, and multiplying by 100. A trend in RPE values that are more than 30% should be investigated.

The following testing abnormalities were noted during this investigation:

- Test Kit #9527778 (Room 20) had a relative percent difference of 80% when compared to Test Kit #9527777. It should be noted that The Oregon Health Authority does not provide an expected percentage range or follow-up procedures for results below 2.0 pCi/L.

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 541.255.6182 or daniel.lyons@pbsusa.com with any questions or comments.

Sincerely,

Daniel Lyons
Industrial Hygiene Technician

Reviewed by: JH

Attachment: AirChek, Inc., Laboratory Analysis Report

P7901 / LESLIE MURRAY

Kit Number	Start Date	Start Time	End Date	End Time	Temp.	Facility	Building	Room	Project ID	Floor	Result
9527729	2021-03-29	12:00 pm	2021-03-31	1:00 pm	68	1200 STATE HWY	MAIN CAMPUS	ROOM 75	52651.000	1	< 0.3
9527730	2021-03-29	12:00 pm	2021-03-31	1:00 pm	68	1200 STATE HWY	MAIN CAMPUS	ROOM 74	52651.000	1	< 0.3
9527731	2021-03-29	12:00 pm	2021-03-31	1:00 pm	68	1200 STATE HWY	MAIN CAMPUS	ROOM 79	52651.000	1	0.5
9527732	2021-03-29	12:00 pm	2021-03-31	1:00 pm	68	1200 STATE HWY	MAIN CAMPUS	ROOM 78	52651.000	1	< 0.3
9527733	2021-03-29	12:00 pm	2021-03-31	1:00 pm	68	1200 STATE HWY	MAIN CAMPUS	ROOM 77	52651.000	1	< 0.3
9527734	2021-03-29	12:00 pm	2021-03-31	1:00 pm	68	1200 STATE HWY	MAIN CAMPUS	ROOM 77	52651.000	1	< 0.3
9527735	2021-03-29	12:00 pm	2021-03-31	1:00 pm	68	1200 STATE HWY	MAIN CAMPUS	ROOM 73	52651.000	1	< 0.3
9527736	2021-03-29	12:00 pm	2021-03-31	1:00 pm	68	1200 STATE HWY	MAIN CAMPUS	ROOM 68	52651.000	1	< 0.3
9527737	2021-03-29	12:00 pm	2021-03-31	1:00 pm	68	1200 STATE HWY	MAIN CAMPUS	ROOM 68	52651.000	1	< 0.3
9527738	2021-03-29	12:00 pm	2021-03-31	1:00 pm	68	1200 STATE HWY	MAIN CAMPUS	ROOM 70	52651.000	1	< 0.3
9527739	2021-03-29	12:00 pm	2021-03-31	1:00 pm	68	1200 STATE HWY	MAIN CAMPUS	ROOM 69	52651.000	1	< 0.3
9527740	2021-03-29	12:00 pm	2021-03-31	2:00 pm	68	1200 STATE HWY	MAIN CAMPUS	ROOM 67	52651.000	1	0.6
9527741	2021-03-29	12:00 pm	2021-03-31	2:00 pm	68	1200 STATE HWY	MAIN CAMPUS	ROOM 66	52651.000	1	0.8
9527742	2021-03-29	12:00 pm	2021-03-31	2:00 pm	68	1200 STATE HWY	MAIN CAMPUS	ROOM 65	52651.000	1	1.0
9527743	2021-03-29	12:00 pm	2021-03-31	2:00 pm	68	1200 STATE HWY	MAIN CAMPUS	ROOM 65	52651.000	1	1.3
9527744	2021-03-29	12:00 pm	2021-03-31	1:00 pm	68	1200 STATE HWY	MAIN CAMPUS	ROOM 82	52651.000	1	0.6
9527745	2021-03-29	12:00 pm	2021-03-31	1:00 pm	68	1200 STATE HWY	MAIN CAMPUS	ROOM 82	52651.000	1	0.9
9527746	2021-03-29	12:00 pm	2021-03-31	1:00 pm	68	1200 STATE HWY	MAIN CAMPUS	ROOM 81	52651.000	1	0.9
9527747	2021-03-27	12:00 pm	2021-03-29	1:00 pm	68	1200 STATE HWY	MAIN CAMPUS	ROOM 43	52651.000	1	< 0.3
9527748	2021-03-27	12:00 pm	2021-03-29	1:00 pm	68	1200 STATE HWY	MAIN CAMPUS	ROOM 42	52651.000	1	< 0.3
9527749	2021-03-29	12:00 pm	2021-03-31	1:00 pm	68	1200 STATE HWY	MAIN CAMPUS	ROOM 41	52651.000	1	< 0.3
9527750	2021-03-29	12:00 pm	2021-03-31	1:00 pm	68	1200 STATE HWY	MAIN CAMPUS	ROOM 40	52651.000	1	< 0.3
9527751	2021-03-29	1:00 pm	2021-03-31	1:00 pm	68	1200 STATE HWY	MAIN CAMPUS	ROOM 35	52651.000	1	0.5
9527752	2021-03-29	1:00 pm	2021-03-31	1:00 pm	68	1200 STATE HWY	MAIN CAMPUS	ROOM 34	52651.000	1	< 0.3
9527753	2021-03-29	1:00 pm	2021-03-31	1:00 pm	68	1200 STATE HWY	MAIN CAMPUS	ROOM 33	52651.000	1	1.1
9527754	2021-03-29	1:00 pm	2021-03-31	1:00 pm	68	1200 STATE HWY	MAIN CAMPUS	ROOM 32	52651.000	1	0.7
9527755	2021-03-29	1:00 pm	2021-03-31	1:00 pm	68	1200 STATE HWY	MAIN CAMPUS	ROOM 31	52651.000	1	< 0.3
9527756	2021-03-29	1:00 pm	2021-03-31	1:00 pm	68	1200 STATE HWY	MAIN CAMPUS	ROOM 31A	52651.000	1	< 0.3
9527757	2021-03-29	1:00 pm	2021-03-31	1:00 pm	68	1200 STATE HWY	MAIN CAMPUS	ROOM 28	52651.000	1	< 0.3
9527758	2021-03-29	1:00 pm	2021-03-31	1:00 pm	68	1200 STATE HWY	MAIN CAMPUS	ROOM 13	52651.000	1	< 0.3
9527759	2021-03-29	1:00 pm	2021-03-31	2:00 pm	68	1200 STATE HWY	MAIN CAMPUS	ROOM 30	52651.000	1	< 0.3
9527760	2021-03-29	1:00 pm	2021-03-31	2:00 pm	68	1200 STATE HWY	MAIN CAMPUS	ROOM 30	52651.000	1	< 0.3
9527761	2021-03-29	1:00 pm	2021-03-31	2:00 pm	68	1200 STATE HWY	MAIN CAMPUS	ROOM 62	52651.000	1	< 0.3
9527762	2021-03-29	1:00 pm	2021-03-31	2:00 pm	68	1200 STATE HWY	MAIN CAMPUS	LUNCH ROOM	52651.000	1	< 0.3
9527763	2021-03-29	1:00 pm	2021-03-31	2:00 pm	68	1200 STATE HWY	MAIN CAMPUS	LUNCH ROOM	52651.000	1	< 0.3

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Kit Number	Start Date	Start Time	End Date	End Time	Temp.	Facility	Building	Room	Project ID	Floor	Result
9527764	2021-03-29	1:00 pm	2021-03-31	2:00 pm	68	1200 STATE HWY	MAIN CAMPUS	ROOM 13	52651.000	1	< 0.3
9527765	2021-03-29	1:00 pm	2021-03-31	2:00 pm	68	1200 STATE HWY	MAIN CAMPUS	ROOM 28	52651.000	1	< 0.3
9527766	2021-03-29	1:00 pm	2021-03-31	2:00 pm	68	1200 STATE HWY	MAIN CAMPUS	ROOM 3	52651.000	1	< 0.3
9527767	2021-03-29	1:00 pm	2021-03-31	2:00 pm	68	1200 STATE HWY	MAIN CAMPUS	ROOM 3	52651.000	1	< 0.3
9527768	2021-03-29	1:00 pm	2021-03-31	2:00 pm	68	1200 STATE HWY	MAIN CAMPUS	ROOM 4	52651.000	1	< 0.3
9527769	2021-03-29	1:00 pm	2021-03-31	2:00 pm	68	1200 STATE HWY	MAIN CAMPUS	ROOM 5	52651.000	1	< 0.3
9527770	2021-03-29	1:00 pm	2021-03-31	2:00 pm	68	1200 STATE HWY	MAIN CAMPUS	ROOM 6	52651.000	1	< 0.3
9527771	2021-03-29	1:00 pm	2021-03-31	2:00 pm	68	1200 STATE HWY	MAIN CAMPUS	ROOM 48	52651.000	1	< 0.3
9527772	2021-03-29	1:00 pm	2021-03-31	1:00 pm	68	1200 STATE HWY	MAIN CAMPUS	BUSINESS SERVICES	52651.000	1	< 0.3
9527773	2021-03-29	1:00 pm	2021-03-31	2:00 pm	68	1200 STATE HWY	MAIN CAMPUS	MIGRANT ED	52651.000	1	< 0.3
9527774	2021-03-29	1:00 pm	2021-03-31	2:00 pm	68	1200 STATE HWY	MAIN CAMPUS	INSTRUCTION EQUITY	52651.000	1	< 0.3
9527775	2021-03-29	1:00 pm	2021-03-31	2:00 pm	68	1200 STATE HWY	MAIN CAMPUS	ROOM 9	52651.000	1	< 0.3
9527776	2021-03-29	1:00 pm	2021-03-31	2:00 pm	68	1200 STATE HWY	MAIN CAMPUS	ROOM 9	52651.000	1	< 0.3
9527777	2021-03-29	1:00 pm	2021-03-31	2:00 pm	68	1200 STATE HWY	MAIN CAMPUS	ROOM 20	52651.000	1	< 0.3
9527778	2021-03-29	1:00 pm	2021-03-31	2:00 pm	68	1200 STATE HWY	MAIN CAMPUS	ROOM 20	52651.000	1	0.7
9527779	2021-03-29	1:00 pm	2021-03-31	2:00 pm	68	1200 STATE HWY	MAIN CAMPUS	ROOM 18	52651.000	1	0.7
9527780	2021-03-29	1:00 pm	2021-03-31	2:00 pm	68	1200 STATE HWY	MAIN CAMPUS	ROOM 19	52651.000	1	< 0.3
9527781	2021-03-29	1:00 pm	2021-03-31	2:00 pm	68	1200 STATE HWY	MAIN CAMPUS	ROOM 21	52651.000	1	< 0.3
9527782	2021-03-29	1:00 pm	2021-03-31	2:00 pm	68	1200 STATE HWY	MAIN CAMPUS	ROOM 22	52651.000	1	< 0.3
9527783	2021-03-29	1:00 pm	2021-03-31	2:00 pm	68	1200 STATE HWY	MAIN CAMPUS	ROOM 23A	52651.000	1	< 0.3
9527784	2021-03-29	1:00 pm	2021-03-31	2:00 pm	68	1200 STATE HWY	MAIN CAMPUS	ROOM 23B	52651.000	1	< 0.3
9527785	2021-03-29	1:00 pm	2021-03-31	2:00 pm	68	1200 STATE HWY	MAIN CAMPUS	ROOM 29	52651.000	1	< 0.3
9527786	2021-03-29	1:00 pm	2021-03-31	2:00 pm	68	1200 STATE HWY	MAIN CAMPUS	ROOM 29	52651.000	1	< 0.3
9527787	2021-03-29	1:00 pm	2021-03-31	2:00 pm	68	1200 STATE HWY	MAIN CAMPUS	LOADING DOCK	52651.000	1	< 0.3
9527788	2021-03-29	1:00 pm	2021-03-31	2:00 pm	68	1200 STATE HWY	MAIN CAMPUS	ROOM 83 WAREHOUSE	52651.000	1	< 0.3
9527789	2021-03-29	1:00 pm	2021-03-31	2:00 pm	68	1200 STATE HWY	MAIN CAMPUS	ROOM 83 WAREHOUSE	52651.000	1	< 0.3
9527790	2021-03-29	1:00 pm	2021-03-31	2:00 pm	68	1200 STATE HWY	MAIN CAMPUS	ROOM 83 WAREHOUSE	52651.000	1	< 0.3
9527791	2021-03-29	1:00 pm	2021-03-31	2:00 pm	68	1200 STATE HWY	MAIN CAMPUS	ROOM 30A	52651.000	1	< 0.3
9527792	2021-03-29	1:00 pm	2021-03-31	2:00 pm	68	1200 STATE HWY	MAIN CAMPUS	ROOM 30A	52651.000	1	< 0.3
9527882	2021-03-27	7:00 am	2021-03-29	7:00 am	72	1200 STATE HWY	MAIN CAMPUS	HALLWAY - S	52651.000	1	12.8
9527883	2021-03-27	7:00 am	2021-03-29	7:00 am	72	1200 STATE HWY	MAIN CAMPUS	HALLWAY - S	52651.000	1	14.2
9527884	2021-03-27	7:00 am	2021-03-29	7:00 am	72	1200 STATE HWY	MAIN CAMPUS	HALLWAY - S	52651.000	1	13.4
9627733	2021-03-29	1:00 pm	2021-03-31	2:00 pm	68	1200 STATE HWY	MAIN CAMPUS	HALLWAY - B	52651.000	1	< 0.3
9627734	2021-03-29	1:00 pm	2021-03-31	2:00 pm	68	1200 STATE HWY	MAIN CAMPUS	HALLWAY - B	52651.000	1	< 0.3
9627735	2021-03-29	1:00 pm	2021-03-31	2:00 pm	68	1200 STATE HWY	MAIN CAMPUS	HALLWAY - B	52651.000	1	< 0.3

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Kit Number	Start Date	Start Time	End Date	End Time	Temp.	Facility	Building	Room	Project ID	Floor	Result
9627736	2021-03-29	1:00 pm	2021-03-31	2:00 pm	68	1200 STATE HWY	MAIN CAMPUS	HALLWAY - B	52651.000	1	< 0.3

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