



Radon Test

Pedee Campus
12975 Kings Valley Hwy
Monmouth OR 97361

Property Inspected For

Luckiamute Valley Charter Schools
12975 Kings Valley Hwy
Monmouth OR 97361



Radon Test

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Date: 11/08/2019 File name: LV13559
Person ordering inspection: Daniel Shimek

Client

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Inspection

Pedee Campus
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Dan Lubbers

OCHI 003 CCB 91335 PCA 109474

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SCOPE OF INSPECTION SERVICES²

This report represents a visual inspection of the property and provides to our client an itemized listing of those items inspected or tested. Any area that is not listed, or is not readily accessible or visible to the inspector is not included in this assessment. The inspector will not be required to move furniture, carpeting, insulation, or other materials or belongings in order to perform the inspection. Note: THIS INSPECTION DOES NOT COVER ITEMS OR CONDITIONS THAT MAY BE DISCOVERED ONLY BY INVASIVE METHODS. NO REMOVAL OF MATERIALS OR DISMANTLING OF SYSTEMS SHALL BE PERFORMED UNDER THIS INSPECTION.

THE FOLLOWING ARE NOT WITHIN THE SCOPE OF THIS INSPECTION, whether or not they are concealed.

- 1.) Building code or zoning ordinance violations
- 2.) Internal structural integrity
- 3.) Geological stability or ground condition of the site
- 4.) Pesticides, or other environmental hazards not specifically noted
- 5.) Value of or estimates of property or repairs
- 6.) System warranties, component warranties, or any other warranty
- 7.) Certification of occupancy verification
- 8.) Actual Health effect of Lead, Radon, Asbestos and Lead in water.

OAR 812 REQUIRED LANGUAGE

THIS REPORT IS INTENDED ONLY FOR THE USE OF THE PERSON PURCHASING THE INSPECTION SERVICES. NO OTHER PERSON, INCLUDING A PURCHASER OF THE INSPECTED PROPERTY WHO DID NOT PURCHASE THE INSPECTION SERVICES, MAY RELY UPON ANY REPRESENTATION OF THE REPORT.

INSPECTION STANDARDS

This service is provided in accordance with the instructions provided by the manufacturer of the testing device and/or ascribes to the recommendations and protocols established by the relevant EPA program currently listed; however, does not guarantee or warranty the accuracy of the test or results.

LIMITATIONS ON LIABILITY/POLICY FOR REFUND

Liability for mistakes, differences of opinion, negligence, or other disagreements is limited to a refund of the fee paid for the report. This report is of no validity unless payment in full and a signed contract are on file with this inspection company. Inspections Unlimited does not imply any warranty or guarantee. Seasonal and weather conditions may cause variance in test results Results of this test represent conditions existing only at the time and place of the test. In the event elevated levels are detected it is the sole responsibility of the client to obtain further testing or mitigation measures. In the event you have discovered a condition of concern, contact this inspection company within five business days of discovery of the condition, to determine if an appointment for consultation or re-evaluation is needed. There will be no fee for this verbal consultation but there may be fees for additional testing or other services. This will assist you in making an informed decision prior to taking any action. No refund will be given if alterations or repairs, beyond those necessary to protect the structure from further damage, are made prior to the consultation appointment.

The scope of all testing is limited to providing a screening only of the condition testing for. If positive results are obtained for any condition, additional testing may be necessary of all components, units or buildings. Accepted EPA protocol for test samples obtained are followed; however, numbers of tests are developed for

client request, to keep costs manageable by client and to determine if further testing is needed.

SERVICES AVAILABLE

Additional inspection services, including invasive inspection, are available through this inspection service under separate direction and contract for an additional fee. Contact your inspector for availability of other inspection services and associated fees.

RE-INSPECTION

Re-inspection, when requested in writing by the client, would include a re-evaluation of the structure areas requested. The same standards will be used in re-inspection as were used for the initial inspection. Re-inspections are provided for an additional charge.

CONDITIONS REVEALED DURING PERFORMANCE OR RECOMMENDATIONS

Should any condition be revealed, or a previously inaccessible area be accessed during the accomplishment of work recommendations or any other work, the client of the inspection should be informed. It is the client's responsibility to contact Inspections Unlimited if further inspection is desired. At the client's request, Inspections Unlimited can be contracted to provide further evaluation of these areas. The contractor or party performing repairs should inspect all areas of repair and all areas that may be concealed by performance of repairs. The party performing repairs assumes all liability for repairs, quality of workmanship and materials, and for code and permit compliance. If the client is aware of any previous assessments, test results or pertinent information, the client needs to supply Inspections Unlimited with copies of this information for review and report alterations if needed.

This Environmental Screening report will express the data obtained during the test period. The testing will be based on Inspections Unlimited standards and practices as developed for the property being inspected and based on EPA standards for testing of this type. This test is not a guarantee of the presence or absence of the condition tested for. This is intended to be a baseline sampling to give an indication if further testing is needed. (Additional inspection services can be obtained under separate direction and contract for an additional fee.) The report is not a code compliance inspection, does not address insurability or regulations or 3rd party requirements of any kind. It is not intended to determine past or future defects, or defects found due to changes in occupancy, modifications, or remodeling.

The report is limited to the area tested at the time of service. Any area not tested and directly reported on is not included in the report. This report is not intended to be exhaustive, nor to imply that every component will be tested, nor imply that every possible defect will be discovered. It is not intended to determine or describe repair or mitigation methods, but to determine the need for further evaluation. It is intended only as a general guide to assist the client in making his own evaluation of the condition.

Radon Test Summary

The following represents a summary conclusion of the radon testing completed. Additional information on specific testing and components are located in the following checklist and data. Final conclusion regarding the existence of radon levels above the EPA recommended action level of 4.0pCi/l can not be made unless testing is completed in multiple seasons to obtain an annual average. Testing was limited to the structure and areas indicated in this report. Testing and weather conditions, compliance by structure occupants and visitors and other factors may effect the consistency of these results with any future tests or prior test results. Additional testing may be needed to determine annual average radon level for this structure.

1 Notations / Recommendations

1.3 Technician Recommendation, Main Bldg - First Test Between 2.1-2.7 pCi/L The first test results are above 2.0 pCi/l and under 4.0 pCi/l. At this result level, it may be possible to have test results over 4.0 pCi/L when testing is performed in a different season or building operation condition. A second retest for radon should be considered during another season and after weatherization and remodeling is completed to confirm the annual average is below 4.0 pCi/L. Recommendation for further testing is based on current building configuration and test results obtained. Changes in the building features, systems, or operation may effect radon results.

1.5 Technician Recommendation, Modular & Gymnasium - Under 2.0 pCi/l Consider Retesting A second test for radon could be considered to meet EPA recommendations for confirmation of the annual average radon levels for the structure. Since the results obtained were less than 2 times the the action level of 4.0 pCi/L, retesting should be completed at 5 year intervals or with weatherization, HVAC alterations or with remodeling to assure radon levels remain low.

3 Structure Information

3.12 Potential Radon Entry Points - Sump Pit Repairs Recommended There is unfinished area with dirt floor and small sump pit or hole in the slab of the basement. Radon levels likely can be improved by separating exposed earth areas with special attention to air barriers and weatherstripping. Consult a qualified contractor for further evaluation and repairs to limit radon entry. (See Photo #106 107 109)



Checklist

1 Notations / Recommendations

1.1 EPA Comments - Initial Screening Under 4pCi/l The test results are less than the EPA action level for radon of 4.0 pCi/l. A second test is necessary to confirm annual averages. Sometimes short-term tests are less definitive about whether or not your structure is above 4 pCi/l. This can happen when your results are close to 4 pCi/l. For example, if the average of your two short-term test results is 4.1 pCi/l, there is about a 50% chance that your year-round average is somewhat below 4 pCi/L. The average indoor radon level is estimated to be about 1.3 pCi/l and about 0.4 pCi/l of radon is normally found in the outside air. Most structures today can be reduced to 2 pCi/l or below. However, EPA believes that any radon exposure carries some risk-no level of radon is safe. Even radon levels below 4 pCi/L pose some risk, and you can reduce your risk of lung cancer by lowering your radon level.

1.2 Test Results, Main Bldg - Some between 2.1-2.7 pCi/l Retest The test results of some locations were between 2.1-2.7 pCi/l. The overall average is a standard average of the activated charcoal test results of all tests taken in the building. Retesting to confirm annual radon levels are below 4 pCi/l is recommended. All weatherization and renovation should be completed prior to retesting. For individual test kit results, consult the attached test matrix

1.3 Technician Recommendation, Main Bldg - First Test Between 2.1-2.7 pCi/L The first test results are above 2.0 pCi/l and under 4.0 pCi/l. At this result level, it may be possible to have test results over 4.0 pCi/L when testing is performed in a different season or building operation condition. A second retest for radon should be considered during another season and after weatherization and remodeling is completed to confirm the annual average is below 4.0 pCi/L. Recommendation for further testing is based on current building configuration and test results obtained. Changes in the building features, systems, or operation may effect radon results.

1.4 Test Results, Modular & Gymnasium Bldgs - Below 2.0 pCi/l The average of the tests taken are below 2.0 pCi/l. The overall average is the average of the activated charcoal test results of all tests taken in the building. For individual results, consult the attached test matrix.

1.5 Technician Recommendation, Modular & Gymnasium - Under 2.0 pCi/l Consider Retesting A second test for radon could be considered to meet EPA recommendations for confirmation of the annual average radon levels for the structure. Since the results obtained were less than 2 times the the action level of 4.0 pCi/L, retesting should be completed at 5 year intervals or with weatherization, HVAC alterations or with remodeling to assure radon levels remain low. Recommendation for further testing is based on current building configuration and test results obtained. Changes in the building features, systems, or operation may effect radon results.

2 Charcoal Absorption - Radon

2.1 Test Device Type/Name - Pro Chek Charcoal Absorption The test device utilized for this test was an Air Chek brand ProChek activated charcoal absorption test kit. This is a short term radon test kit designed for professional use.

2.2 Test Location - Multiple Locations See Matrix Multiple test kits were deployed for the purpose of this test. Refer to the attached testing matrix for number of tests and location of placement information. (See Photo #100 104 110 114)



2.3 Date Placed - November 8, 2019 This represents the date the monitoring started. Testing during winter weather conditions is generally recommended when possible. The test period reasonably represents normal conditions when the building is significantly occupied.

2.4 Date Removed - November 11, 2019 This represents the date the monitoring concluded. The test should reasonably characterize radon hazards.

2.5 Time in Place - 70 Hours This represents the total time the collection test devices were in place.

2.6 Explanation of Tampers - None Noted There were no indications that the devices were moved or tampered with. The test devices appear to be in the same location and condition as when placed.

2.7 Charcoal Absorption Test Result - Multiple Results, See Matrix Multiple tests were placed, resulting in a matrix of test results. Refer to the matrix for individual test results for individual locations.

3 Structure Information

3.1 Size of Structure - Wood Frame The structures are wood frame. The total square footage of the structures is over 2000 sq ft.

3.2 Foundation Type, Modular Bldgs - Modular Raised Open The structure is constructed with wood skirting around the perimeter. There is air space between the structure floors and the ground. The foundation vents were open at the start and/or end of the test; therefore, it is assumed that they were not maintained closed for the duration of the test period. (See Photo #125)



3.3 Foundation Type, Main Bldg - Basement The Main Bldg structure is constructed with an on grade concrete slab basement where all areas are built into a hillside or soil and are below ground level. (See Photo #103 123 124)



3.4 Foundation Type, Gym - Slab The gymnasium structure is constructed with a slab on grade concrete foundation that is in contact with the soil under the majority of the structure. There is no access under the structure. (See Photo #117 120)



3.5 Vapor Barrier / Ground Cover, Modular Bldgs - Vapor barrier There is a vapor barrier covering the ground. Properly installed vapor barriers may effect radon levels.

3.6 Tightness of Structure, Main / Modular - Average The structures appear to have been constructed in a manner to limit interior to exterior air flow and would be considered air tight in most areas. Changes in the structure to either increase or decrease the flow of air from the exterior to the interior of the structure may have an impact on the radon level in the structure.

3.7 Tightness of Structure, Gym - Prior to Energy Code The structure appears to have been constructed prior to the implementation of energy codes that reduce air flow in an effort to limit interior to exterior air flow in most areas. Changes in the structure to either increase or decrease the flow of air from the exterior to the interior of the structure may have an impact on the radon level in the structure.

3.8 Thermostat Type - Programmable The thermostats are programmable thermostats and were set to 70 °F during testing times except the gymnasium which was at 50 °F.

3.9 Areas Not Heated with Central System - Zonal Heating There is zone heating that appears to heat to all occupied areas of the structure. With zone heating radon levels may vary more throughout the structure. There is no heat supply evident in the gymnasium.

3.10 Heating System Air Intake / Exchanger - Maintained and Set The air intake/exchange system are complicated and require special tools to assure function. The system was reported to be maintained professionally and was set in occupied mode during the test by on-site operators. Alterations in the air intake/exchange systems may greatly effect radon levels. Retesting following any significant alterations to the system are recommended.

3.11 High Volume Ventilation Fans - None Noted There were no high volume ventilation fans noted in the structure at the time of testing. Bathroom fans and standard kitchen vent fans are not considered high volume ventilation.

3.12 Potential Radon Entry Points - Sump Pit Repairs Recommended There is unfinished area with dirt floor and small sump pit or hole in the slab of the basement. Radon levels likely can be improved by separating exposed earth areas with special attention to air barriers and weatherstripping. Consult a qualified contractor for further evaluation and repairs to limit radon entry. (See Photo #106 107 109)



3.13 Mitigation System - None Noted There were no mitigation system components noted in place at the time of testing.

4 Testing Conditions

4.1 Test Area - 9 Locations Test device kits were placed in 9 locations throughout the campus to represent the locations occupied by the school programs.

4.2 Building Occupied During Test - School Operational Not Occupied The school was in operational mode and actively occupied prior to the test. The structure was in operational mode during the testing period. Testing was completed during a time when occupants were not in the building to help limit the potential for tampering with testing devices.

4.3 Closed Prior to Test - Standard Operation Requested The occupants or person(s) in control of the structure were instructed to maintain the structure in normal operational modes and settings for 12-24 hours prior to the start of the test and to maintain these conditions for the duration of the test. Inspections Unlimited has no ability to determine if all conditions were met for the duration of the test period.

4.4 Average Interior Temperature - 70 degrees Fahrenheit The average temperature is based on the information available at the start and end of the test period and is based on the best estimate of the technician performing the test.

4.5 Average Exterior Temperature Range - 30-63 degrees Fahrenheit The average temperature is based on the weather information available during the test period and averaged based on the best estimate of the technician performing the test.

4.6 Humidity - Average Weather conditions during the test period would be considered average for the climate and season.

4.7 Conditions That May Effect Results - None Noted There were no visibly noted conditions during the testing period that would normally be considered to have a significant effect on the test results. Retesting in another season should be considered for annual exposure and structure management changes.

5 End Checklist

Photos Referenced in Report



Client

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Inspection

Pedee Campus
12975 Kings Valley Hwy
Monmouth, OR 97361

Date: 11/08/2019

The following pages consist of the photos referenced in the Radon Test report.

If you have access to the internet you can view the photos at an enlarged size through this PDF file. Simply click on a photo and your browser will open to a secure website of your photo. These photos can only be accessed via this document.

You can view the comment associated with the photo by hovering your mouse over the comment icon (☰). These photos and comments appear in the order they are found in the report. Comments do not appear in the printed version and are visible only in the PDF file.

These photos are intended to further document the conditions noted during the inspection process and should be utilized in conjunction with the Radon Test report. Not all photos take, nor all conditions noted in the inspection are represented here. These photos may be used in conjunction with this inspection report only. Reproduction for any other purpose is restricted under the copyright of Inspections Unlimited.

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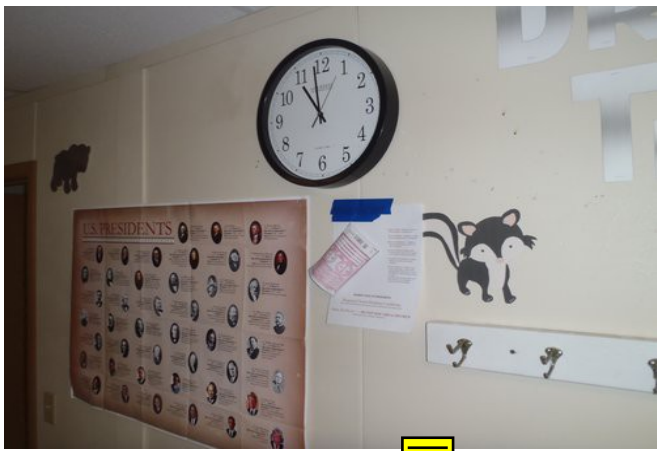


Photo #100

Charcoal Absorption - Radon - Test Location

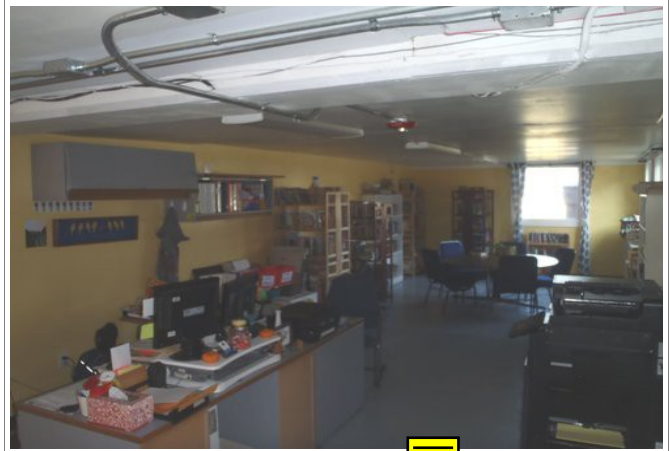


Photo #104

Charcoal Absorption - Radon - Test Location

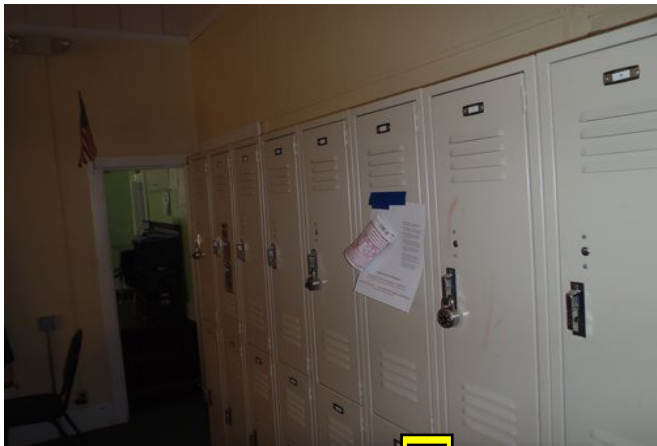


Photo #110

Charcoal Absorption - Radon - Test Location

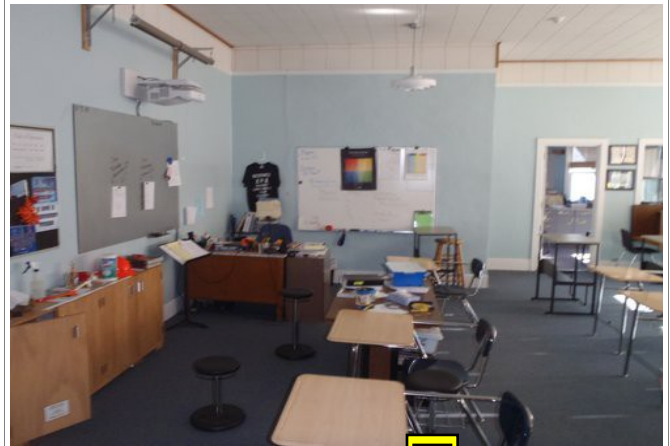


Photo #114

Charcoal Absorption - Radon - Test Location



Photo #125 

Structure Information - Foundation Type, Modular Bldgs



Photo #103 

Structure Information - Foundation Type, Main Bldg



Photo #123 

Structure Information - Foundation Type, Main Bldg



Photo #124 

Structure Information - Foundation Type, Main Bldg



Photo #117 

Structure Information - Foundation Type, Gym



Photo #120 

Structure Information - Foundation Type, Gym

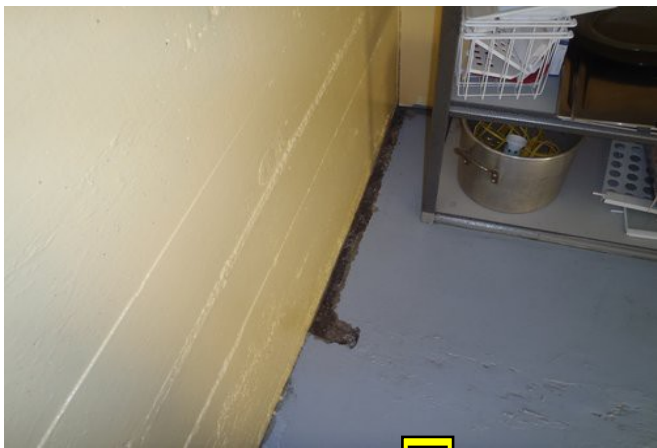


Photo #106 

Structure Information - Potential Radon Entry Points



Photo #107 

Structure Information - Potential Radon Entry Points

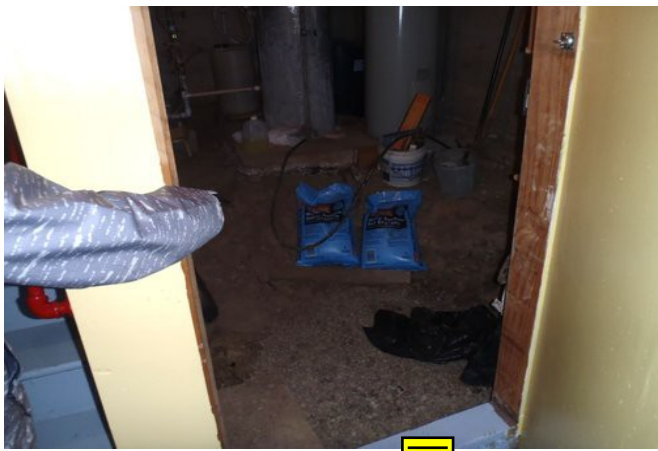


Photo #109 

Structure Information - Potential Radon Entry Points



**Luckimute Charter
Schools – Pedee
Campus
Pedee OR**

12975 Kings Valley Hwy

**Radon
Results**

Location Teted	Kit #	Bldg	Room	Date started	Time started	Results	Notes
Pedee Campus							
	7275256	modular	6th grade	11/08/2019	11:00 AM	0.5 pCi/L	door closed
	7275257	modular	Computer lab	11/08/2019	11:00 AM	0.6 pCi/L	
	7275258	Main	Science & Cafeteria	11/08/2019	11:00 AM	2.1 pCi/L	
	7275259	Main	Science & Cafeteria – Duplicate "9 th Grade"	11/08/2019	11:00 AM	2.2 pCi/L	result in range for duplicate
	7275260		Shipping Blank	11/08/2019	11:00 AM	< 0.3 pCi/L	result reflects Blank test
	7275261	Main	Library	11/08/2019	12:00 PM	2.7 pCi/L	
	7275277	Main	Language Arts	11/08/2019	12:00 PM	2.4 pCi/L	open door to basement stairway
	7275276	Main	Social Studies	11/08/2019	12:00 PM	1.1 pCi/L	
	7275275	Main	8 th Grade Home room	11/08/2019	12:00 PM	2.3 pCi/L	
	7275273	Main	Blank "8 th Grade Home room"	11/08/2019	12:00 PM	< 0.3 pCi/L	result reflects Blank test
	7275272	Main	Math	11/08/2019	12:00 PM	1.8 pCi/L	



**Luckimute Charter
Schools – Pedee
Campus
Pedee OR**

12975 Kings Valley Hwy

**Radon
Results**

Location Teted	Kit #	Bldg	Room	Date started	Time started	Results	Notes
Pedee Campus							
	7575271	Gym	Gymnasium	11/08/2019	12:00 PM	1.1 pCi/L	Wet & unheated

November 12, 2019

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:
PEDEE CAMPUS
GYM

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7275271	GYM	2019-11-08 @ 12:00 pm	2019-11-11 @ 10:00 am	1.1 ± 0.3	2019-11-12

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

November 12, 2019

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:
**PEDEE CAMPUS
MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7275260	10TH GRADE	2019-11-08 @ 11:00 am	2019-11-11 @ 10:00 am	< 0.3	2019-11-12
7275275	8TH GRADE HOME ROOM	2019-11-08 @ 12:00 pm	2019-11-11 @ 10:00 am	2.3 ± 0.3	2019-11-12
7275273	8TH GRADE HOME ROOM	2019-11-08 @ 12:00 pm	2019-11-11 @ 10:00 am	< 0.3	2019-11-12
7275259	9TH GRADE	2019-11-08 @ 11:00 am	2019-11-11 @ 10:00 am	2.2 ± 0.3	2019-11-12
7275277	LANGUAGE ARTS	2019-11-08 @ 12:00 pm	2019-11-11 @ 10:00 am	2.4 ± 0.3	2019-11-12
7275261	LIBRARY	2019-11-08 @ 11:00 am	2019-11-11 @ 10:00 am	2.7 ± 0.3	2019-11-12
7275272	MATH	2019-11-08 @ 12:00 pm	2019-11-11 @ 10:00 am	1.8 ± 0.3	2019-11-12
7275258	SCIENCE / CAFETERIA	2019-11-08 @ 11:00 am	2019-11-11 @ 10:00 am	2.1 ± 0.3	2019-11-12
7275276	SOCIAL STUDIES	2019-11-08 @ 12:00 pm	2019-11-11 @ 10:00 am	1.1 ± 0.3	2019-11-12

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

November 12, 2019

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:
**PEDEE CAMPUS
MODULAR**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7275256	6TH GRADE	2019-11-08 @ 11:00 am	2019-11-11 @ 10:00 am	0.5 ± 0.3	2019-11-12
7275257	COMPUTER LAB	2019-11-08 @ 11:00 am	2019-11-11 @ 10:00 am	0.6 ± 0.3	2019-11-12

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