



Radon Test

Bridgeport Campus  
17475 Bridgeport Rd.  
Dallas OR 97338

Property Inspected For

Luckiamute Valley Charter Schools  
12975 Kings Valley Hwy  
Monmouth OR 97361

**Radon Test**

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of  
Inspections Unlimited, Inc  
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Date: 01/20/2020      File name: LV13560  
Person ordering inspection: Daniel Shimek

**Client**

Luckiamute Valley Charter Schools  
12975 Kings Valley Hwy  
Monmouth, OR 97361  
Error: Reference source not found  
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**Inspection**

Bridgeport Campus  
17475 Bridgeport Rd.  
Dallas, OR 97338

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Inspections Unlimited Inc.



Dan Lubbers

OCHI 003 CCB 91335 PCA 109474

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## **SCOPE OF INSPECTION SERVICES<sup>2</sup>**

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**

**1.7 Technician Recommendation Main Building - Under 2.0 pCi/L Retest 5 years** Ongoing maintenance of the building air handling systems are recommended to assure proper air exchange and indoor air quality. Based on the results obtained, periodic testing of the main building could be considered to assist in the confirmation of operation of building systems. Since the results obtained were less than 2 times the the action level of 4.0 pCi/L, retesting in 5 years would be recommended. 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.

**1.8 Technician Recommendation Modulars & Addition - Under 2.0 pCi/L** The Modular buildings and the Main building addition did not show any notable irregularities noted in the test results obtained throughout the buildings. Based on the results obtained, no further testing is required for these buildings.

### **4 Structure Information**

**4.7 Areas Not Heated with Central System - Varied** The buildings have more than one type of heating system. Many of the building areas are provided with ductless split system heat and air conditioning. Ductless systems are not designed to be utilized in large buildings where make-up air and air exchange systems are needed to maintain indoor air quality. A heat source that provides for proper make up air and air exchange in the structure would be recommended to help assure indoor air quality is maintained.

## 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 Building - Under 4.0 pCi/l** The initial test results of some locations were over 3.0 pCi/l. It was suspected at placement of these tests that the main building was not properly in operating mode as required for accurate testing. While there were no test results recorded at more than the action level of 4.0 pCi/l, it was determined that assuring the building was in operating mode and retesting of student high use areas would be prudent in the main building. Further evaluation of the building was conducted and the building was brought into operating mode. Testing of these areas was then completed. For individual location results, consult the attached test matrix. Test results from testing are well under the action level of 4.0 pCi/l in this building. Initial test results in this area are considered invalid due to testing conditions.

**1.3 Test Results Main Bldg Addition - 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 main building addition. For individual test kit results, consult the attached test matrix.

**1.4 Test Results Kindergarten Modular - 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 kindergarten modular building. For individual test kit results, consult the attached test matrix.

**1.5 Test Results 3-4 Modular - 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 3-4 modular building. For individual test kit results, consult the attached test matrix.

**1.6 Test Results Office Modular - 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 office modular building. For individual test kit results, consult the attached test matrix.

**1.7 Technician Recommendation Main Building - Under 2.0 pCi/L Retest 5 years** Ongoing maintenance of the building air handling systems are recommended to assure proper air exchange and indoor air quality. Based on the results obtained, periodic testing of the main building could be considered to assist in the confirmation of operation of building systems. Since the results obtained were less than 2 times the the action level of 4.0 pCi/L, retesting in 5 years would be recommended. 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.

**1.8 Technician Recommendation Modulars & Addition - Under 2.0 pCi/L** The Modular buildings and the Main building addition did not show any notable irregularities noted in the test results obtained throughout the buildings. Based on the results obtained, no further testing is required for these buildings.

## 2 Continuous Monitor

**2.1 Test Device - Femto Tech Professional Radon Monitor / Continuous Monitor** The test devices are electronic monitors, Femto Tech devices, that collect radon and its products. Three CRM devices were deployed. Serial Numbers CRM 5105512 Calibration Date 01-03-2020, CRM 5106066, Calibration Date 01-29-2019 and CRM 5106326 Calibration Date 06-06-2019 The results of the testing are reported in hourly readings that include radon levels, temperature and barometric pressure during the testing time.

**2.2 Date Placed - January 17, 2020** This represents the date the monitoring started. Testing during winter weather conditions is generally recommended. The test period reasonably represents normal conditions when the building is significantly occupied.

**2.3 Date Removed - January 21, 2020** This represents the date the monitoring concluded. The test should reasonably characterize radon hazards.

**2.4 Location of Tests - Multiple Locations** The monitors were placed in three locations of the school building. CRM 5105512 was placed in the hallway, CRM 5106066 was placed in 5<sup>th</sup> Grade Classroom, CRM 5106326 was placed in the computer lab.

**2.5 Time in Place - 89 Hours** This represents the total time the monitoring was conducted.

**2.6 Explanation of Tamperers - None Noted** There were no tamper indications on the device print-outs or the devices. The devices appear to be in the same location and condition as when placed.

## 3 Charcoal Absorption - Radon

**3.1 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.

**3.2 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.

**3.3 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.

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



**3.5 Time in Place - 71 Hours** This represents the total time the collection test devices were in place.

**3.6 Explanation of Tamperers - 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.

**3.7 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.

## 4 Structure Information

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

**4.2 Foundation Type, Modular Bldgs - Post Raised Open** The modular structures are constructed on a raised foundation with 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 #124)



**4.3 Foundation Type, Main Bldg - Basement** The 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.

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

**4.5 Tightness of Structure - 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.

**4.6 Thermostat Type - Programmable** The thermostats are programmable thermostats and were set to 70 °F during testing times.

**4.7 Areas Not Heated with Central System - Varied** The buildings have more than one type of heating system. Many of the building areas are provided with ductless split system heat and air conditioning. Ductless systems are not designed to be utilized in large buildings where make-up air and air exchange systems are needed to maintain indoor air quality. A heat source that provides for proper make up air and air exchange in the structure would be recommended to help assure indoor air quality is maintained.

**4.8 Heating System Air Intake / Exchanger - None Visible** An air intake/exchange system is generally helpful in maintaining indoor air quality.

**4.9 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.

**4.10 Potential Radon Entry Points - None Noted** There were no construction conditions / practices noted that would be considered potential radon entry points in this structure.

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

## 5 Testing Conditions

**5.1 Test Area - 15 Locations, Currently Occupied** Test device kits were placed in 15 locations throughout the campus to represent the locations occupied by the school programs.

**5.2 Building Occupied During Test - Yes** The structure was in operational mode during testing and actively occupied prior to the testing period. Testing was completed during a time when students were not in the building to help limit the potential for tampering with testing devices. Management was instructed to maintain the structure consistent with placement conditions for the testing period. (See Photo #102 104 113)



**5.3 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.

**5.4 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.

**5.5 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.

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

**5.7 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.

## 6 End Checklist

## Photos Referenced in Report



### Client

Luckiamute Valley Charter Schools  
12975 Kings Valley Hwy  
Monmouth, OR 97361  
Error: Reference source not found

### Inspection

Bridgeport Campus  
17475 Bridgeport Rd.  
Dallas, OR 97338

Date: 01/20/2020

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.

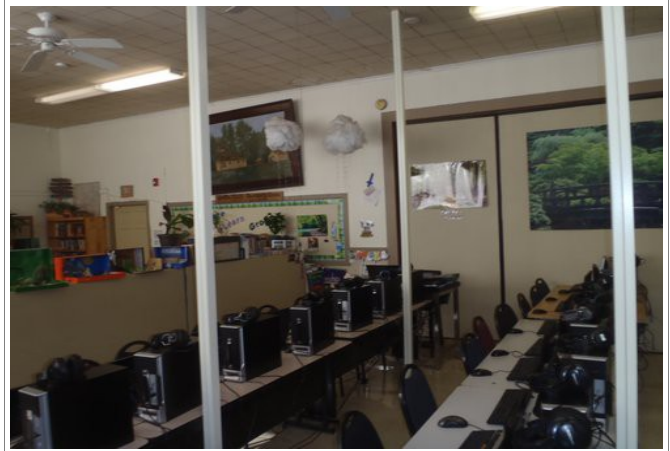
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503-581-5855



**Photo #124**



Structure Information - Foundation Type, Modular Bldgs



**Photo #102**



Testing Conditions - Building Occupied During Test



**Photo #104**



Testing Conditions - Building Occupied During Test



**Photo #113**



Testing Conditions - Building Occupied During Test



Luckimute Charter  
Schools – Bridgeport  
Campus  
Dallas OR

17475 Bridgeport Rd

Radon  
Results

Location Tested	Kit #	Bldg	Room	Date started	Time started	Results	Notes
17475 Bridgeport Rd, Dallas OR							
CRM	5105512	Main	Hallway	01/17/20	01:34 PM	1.5 pCi/L	
CRM	5106326	Main	Computer lab	01/17/20	02:40 PM	0.9 pCi/L	
CRM	5106066	Main	5th grade	01/17/20	01:33 PM	1.0 pCi/L	
	7275278	Main	Computer lab	11/08/2019	09:00 AM	3.4 pCi/L	Invalid test condition
	7275279	Main	Cafeteria	11/08/2019	09:00 AM	2.5 pCi/L	Invalid test condition
	7275280	Main Porch	Parent Resource Room	11/08/2019	09:00 AM	1.3 pCi/L	door closed
	7275281	Main	BLANK "5th grade"	11/08/2019	09:00 AM	< 0.3 pCi/L	result reflects Blank test
	7275282	Main	5th grade	11/08/2019	09:00 AM	2.3 pCi/L	Invalid test condition
	7275283	Main	Hall – Duplicate	11/08/2019	09:00 AM	3.4 pCi/L	result in range for duplicate – invalid test condition



Luckimute Charter  
Schools – Bridgeport  
Campus  
Dallas OR

17475 Bridgeport Rd

Radon  
Results

Location Tested	Kit #	Bldg	Room	Date started	Time started	Results	Notes
17475 Bridgeport Rd, Dallas OR							
	7275284	Main	Hall	11/08/2019	09:00 AM	3.4 pCi/L	Invalid test condition
	7275285	Main Addition	Title 1, Rm 1	11/08/2019	10:00 AM	1.3 pCi/L	Door weatherstrip
	7275286	Main Addition	Special Ed	11/08/2019	10:00 AM	1.0 pCi/L	door closed
	7275287	1-2 Modular	1 <sup>st</sup> grade	11/08/2019	10:00 AM	0.9 pCi/L	door closed
	7275288	1-2 Modular	1st grade – Duplicate	11/08/2019	10:00 AM	1.2 pCi/L	door closed; result in range for duplicate
	7275274	1-2 Modular	2 <sup>nd</sup> grade	11/08/2019	10:00 AM	1.1 pCi/L	door closed
	7275295	Kinder Modular	Kindergarten	11/08/2019	10:00 AM	1.2 pCi/L	door closed
	7275294	3-4 Modular	3 <sup>rd</sup> grade	11/08/2019	10:00 AM	1.3 pCi/L	door closed
	7275293	3-4 Modular	4 <sup>th</sup> grade	11/08/2019	10:00 AM	1.1 pCi/L	door closed



**Luckimute Charter  
Schools – Bridgeport  
Campus  
Dallas OR**

17475 Bridgeport Rd

**Radon  
Results**

Location Tested	Kit #	Bldg	Room	Date started	Time started	Results	Notes
17475 Bridgeport Rd, Dallas OR							
	7275292	Office Modular	Intervention	11/08/2019	10:00 AM	0.6 pCi/L	door closed
	7275291	Office Modular	Reception	11/08/2019	10:00 AM	0.6 pCi/L	door closed
	7275290	Office Modular	Business Management	11/08/2019	10:00 AM	0.7 pCi/L	door closed

< RADON TEST REPORT >

I/D LV13560

START DATE 1/17/20

START TIME 13:34

OPERATOR DAN L

SERIAL NO. - CRM5105512  
 C/F (CPM/pCi/l) .377  
 BKG (pCi/l) .3

Hr Conc. / L RH B/P deg  
 pCi/l B % "Hg F

***	1.0	/	37	29.5	64
***	1.0		37	29.5	65
***	1.4		37	29.5	65
***	1.6		37	29.5	65
***	1.1		37	29.5	66
***	1.2		37	29.3	66
***	1.5		36	29.5	66
***	1.6		36	29.5	66
***	1.5		36	29.3	65
***	1.2		37	29.3	65
***	1.2		36	29.5	66
***	1.1		36	29.3	65
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14	1.5		36	29.6	65
15	1.4		36	29.3	65
16	1.2		36	29.3	65
17	.8		36	29.3	65
18	1.3		37	29.3	65
19	.8		37	29.5	66
20	1.1		36	29.5	67
21	.8		36	29.6	68
22	.9		37	29.6	68
23	1.3		38	29.6	68
24	1.2		39	29.6	68
25	.8		41	29.6	68
26	1.7		41	29.6	67
27	1.7		42	29.6	68
28	.8		42	29.6	68
29	1.0		42	29.8	68
30	1.6		42	29.6	68
31	1.3		42	29.6	68
32	1.4		41	29.6	68
33	1.2		41	29.6	68
34	1.7		41	29.6	68
35	1.4		42	29.6	67
36	1.9		42	29.6	66
37	1.3		42	29.5	66
38	1.8		42	29.6	66
39	1.9		42	29.6	66
40	2.0		42	29.6	66
41	2.5		43	29.6	66
42	1.6		43	29.6	66
43	2.1		43	29.6	66
44	1.5		42	29.6	68
45	1.8		41	29.6	69
46	1.4		42	29.6	69
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48	1.2		44	29.5	68
49	1.6		45	29.5	68
50	.9		45	29.3	68
51	1.9		46	29.3	68
52	1.4		46	29.3	68
53	1.3		46	29.6	68
54	1.6		45	29.3	67
55	1.2		44	29.3	68
56	2.3		43	29.3	68
57	2.2		42	29.3	68
58	1.7		42	29.3	67
59	2.0		41	29.3	67
60	1.5		41	29.3	66

61	1.6	41	29.3	66
62	1.6	41	29.3	66
63	1.9	41	29.3	66
64	1.7	41	29.3	66
65	1.4	42	29.2	66
66	1.2	42	29.3	66
67	2.3	42	29.3	66
68	2.4	42	29.3	66
69	2.1	42	29.3	66
70	2.1	43	29.2	66
71	2.1	43	29.2	66
72	1.8	44	29.2	66
73	1.7	44	29.2	66
74	1.6	44	29.2	66
75	1.8	44	29.2	66
76	1.4	44	29.2	66
77	1.7	44	29.2	66
78	1.7	44	29.0	66
79	1.8	43	28.9	66
80	1.6	43	29.0	66
81	1.9	43	29.0	66
82	1.4	43	29.0	66
83	1.5	42	29.0	66
84	1.2	42	29.0	66
85	1.2	43	28.9	65
86	1.4	43	28.9	65
87	1.3	42	28.9	65
88	1.5	42	28.9	65
89	.8	42	28.9	64

Elapsed Time (min.) 4620  
 Total Count 3282  
 Avg. (pCi/l) 1.5

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< RADON TEST REPORT >

I/D LV13560

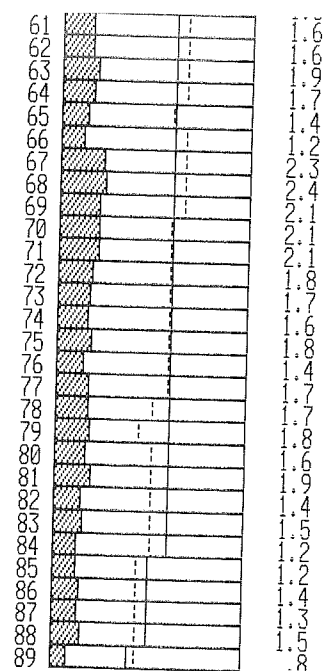
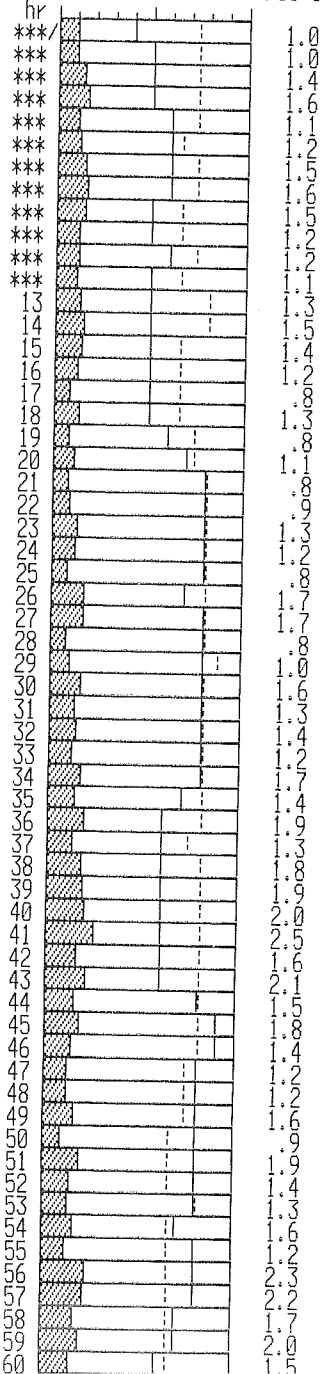
START DATE 1/17/20

START TIME 13:34

OPERATOR DANZ

SERIAL NO. - CRM5105512  
 C/F (CPM/pCi/l) .377  
 BK/G (pCi/l) .3

--- 28 30 "Hg  
 --- 60 70 "F  
 [hatched] 0 10 pCi/l



Elapsed Time (min.) 4620  
 Total Count 3282  
 Avg. (pCi/l) 1.5

< RADON TEST REPORT >

I/D LL13560

START DATE 1/17/20

START TIME 13:33

OPERATOR DANL

SERIAL NO. - CRM5106066  
 C/F (CPM/PCi/l) .380  
 BKG (PCi/l) .6

Hr	Conc. PCi/l	/ L B	RH %	B/P "Hg	deg F
***	.5	/	44	29.6	66
***	.8		41	29.6	67
***	.6		39	29.6	68
***	.8		38	29.6	68
***	1.3		38	29.6	67
***	1.1		38	29.3	66
***	1.1		38	29.3	66
***	1.3		38	29.3	66
***	.4		38	29.2	65
***	.8		38	29.2	65
***	1.1		38	29.2	65
***	1.1		38	29.2	65
13	1.1		38	29.2	64
14	1.2		38	29.2	64
15	1.2		38	29.2	64
16	1.1		38	29.2	64
17	1.0		38	29.2	64
18	.7		38	29.2	64
19	1.2		38	29.2	65
20	1.0		38	29.3	65
21	.8		38	29.3	65
22	.5		38	29.5	65
23	.3		38	29.6	66
24	1.1		39	29.6	66
25	.5		39	29.6	66
26	.6		39	29.6	66
27	1.2		40	29.6	66
28	.8		40	29.6	66
29	1.0		40	29.6	66
30	.6		40	29.6	66
31	.8		40	29.6	66
32	1.0		41	29.6	66
33	1.0		41	29.6	66
34	1.0		41	29.6	66
35	1.1		41	29.6	66
36	1.0		41	29.6	66
37	1.5		41	29.6	66
38	1.0		41	29.6	66
39	.8		41	29.6	66
40	1.6		41	29.6	66
41	1.2		41	29.6	66
42	1.2		41	29.6	66
43	1.8		41	29.6	66
44	1.5		41	29.6	66
45	1.3		41	29.6	66
46	1.5		41	29.6	66
47	.8		41	29.5	67
48	.9		42	29.3	67
49	.4		42	29.3	68
50	.6		42	29.3	68
51	.7		42	29.3	68
52	.8		42	29.3	69
53	.9		42	29.3	69
54	.7		42	29.3	68
55	.5		42	29.3	68
56	.9		42	29.3	68
57	1.0		42	29.3	67
58	1.3		42	29.3	67
59	1.1		42	29.3	66

61	1.5	41	29.3	66
62	1.3	41	29.3	66
63	1.6	41	29.3	66
64	1.5	41	29.3	66
65	1.2	41	29.3	66
66	1.1	41	29.3	66
67	1.2	40	29.3	69
68	1.6	40	29.3	69
69	1.3	40	29.3	69
70	1.1	39	29.3	69
71	.9	40	29.3	69
72	1.4	40	29.3	69
73	1.2	40	29.3	69
74	1.1	40	29.3	69
75	1.0	40	29.2	69
76	.9	40	29.0	69
77	.9	40	29.0	68
78	.4	40	29.0	68
79	1.1	40	29.0	68
80	.9	40	29.0	67
81	.5	41	29.0	67
82	1.2	41	29.0	67
83	1.5	40	29.0	66
84	.5	41	29.0	66
85	1.1	41	29.0	66
86	1.4	41	29.0	66
87	.4	41	29.0	66
88	.3	41	29.0	66
89	.4	40	29.0	66

Elapsed Time (min.) 4620  
 Total Count 2894  
 Avg. (PCi/l) 1.0

< RADON TEST REPORT >

I/D LV13560

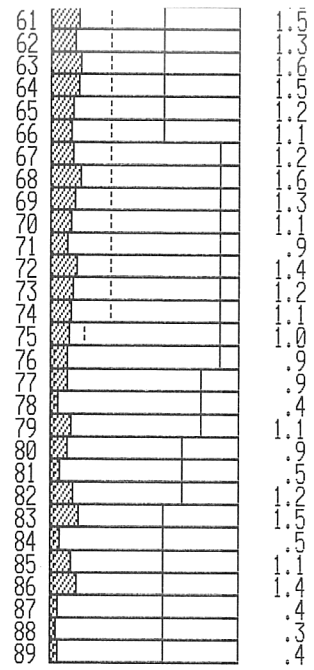
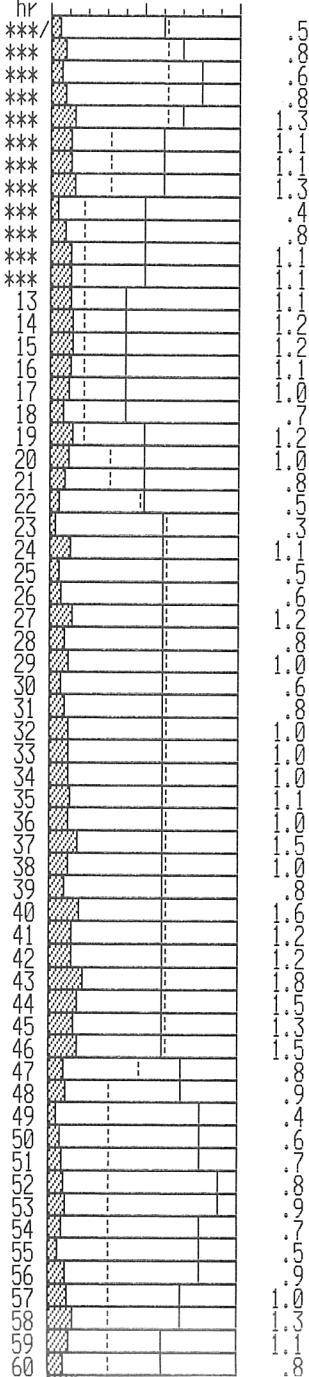
START DATE 1/17/20

START TIME 13:33

OPERATOR DANL

SERIAL NO. - CRM5106066  
 C/F (CPM/pCi/l) .380  
 BKG (pCi/l) .6

--- 29 30 "Hg  
 --- 60 70 "F  
 [hatched] 0 10 pCi/l



Elapsed Time (min.) 4620  
 Total Count 2894  
 Avg. (pCi/l) 1.0

< RADON TEST REPORT >

I/D LV13560

START DATE 1/17/20

START TIME 14:40

OPERATOR DANL

SERIAL NO. - CRM5106326  
 C/F (CPM/pCi/l) .353  
 BKG (pCi/l) .5

Hr	Conc. pCi/l	/ L B	RH %	B/P "Hg	deg F
***	1.2	/	55	26.8	64
***	.6		53	26.8	64
***	1.1		52	26.8	64
***	.7		52	26.8	64
***	.4		51	26.8	64
***	1.1		51	26.8	64
***	1.0		51	26.8	64
***	1.0		51	26.8	64
***	.8		51	26.8	64
***	.7		51	26.8	64
***	1.5		51	26.8	64
***	.7		51	26.7	64
13	.4		50	26.7	64
14	1.1		50	26.7	64
15	.3		51	26.7	64
16	1.0		51	26.7	64
17	.5		51	26.8	64
18	1.0		51	26.8	64
19	.5		51	26.8	64
20	.7		51	26.8	64
21	.9		51	26.8	65
22	.7		52	26.8	65
23	.8		53	26.8	65
24	.6		53	26.8	65
25	.4		54	26.8	65
26	.7		55	26.8	65
27	.2		55	26.8	65
28	.7		56	26.8	65
29	.3		56	26.8	65
30	.3		56	26.8	65
31	.8		56	26.8	65
32	.9		57	26.8	64
33	.3		56	26.8	65
34	.9		56	26.8	65
35	1.3		56	26.8	65
36	1.3		56	26.8	65
37	.9		56	26.8	65
38	1.2		56	26.8	64
39	1.4		56	26.8	64
40	1.4		56	26.8	64
41	1.3		56	26.8	64
42	1.1		56	26.8	64
43	1.2		56	26.8	64
44	1.4		57	26.8	64
45	.8		57	26.8	65
46	1.0		57	26.8	65
47	.7		57	26.8	65
48	.9		57	26.7	66
49	.5		58	26.7	66
50	.2		58	26.5	66
51	.3		59	26.5	66
52	.5		59	26.5	66
53	.3		59	26.5	66
54	.5		58	26.5	66
55	.8		58	26.5	66
56	.9		58	26.5	65
57	.7		58	26.5	65
58	.8		57	26.5	65
59	1.6		57	26.5	65

61	.8	56	26.5	64
62	.4	56	26.7	64
63	.3	56	26.5	64
64	1.1	55	26.5	65
65	1.4	55	26.5	65
66	.8	55	26.5	65
67	1.4	55	26.5	65
68	1.3	55	26.5	64
69	1.1	55	26.5	64
70	1.0	55	26.5	65
71	1.2	55	26.5	65
72	1.1	55	26.5	65
73	.7	56	26.5	65
74	.5	56	26.5	65
75	.8	56	26.5	65
76	.9	56	26.5	65
77	.7	56	26.5	65
78	.9	56	26.5	64
79	.7	56	26.5	64
80	.9	56	26.5	64
81	1.7	56	26.5	64
82	1.0	56	26.5	64
83	1.3	56	26.5	64
84	.7	56	26.5	64
85	1.0	56	26.5	64
86	.7	56	26.5	64
87	1.4	55	26.5	64
88	.8	55	26.5	64
89	.7	54	26.5	64

Elapsed Time (min.) 4620  
 Total Count 2287  
 Avg. (pCi/l) .9

< RADON TEST REPORT >

I/D LV73560

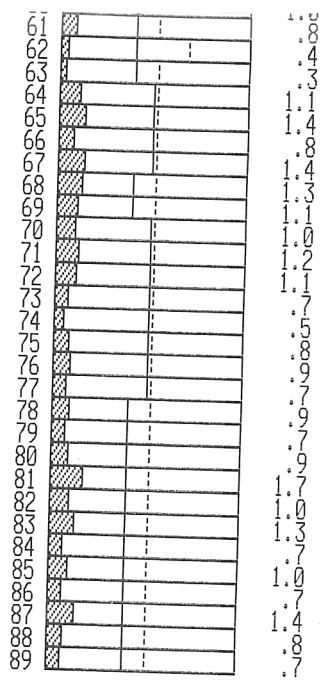
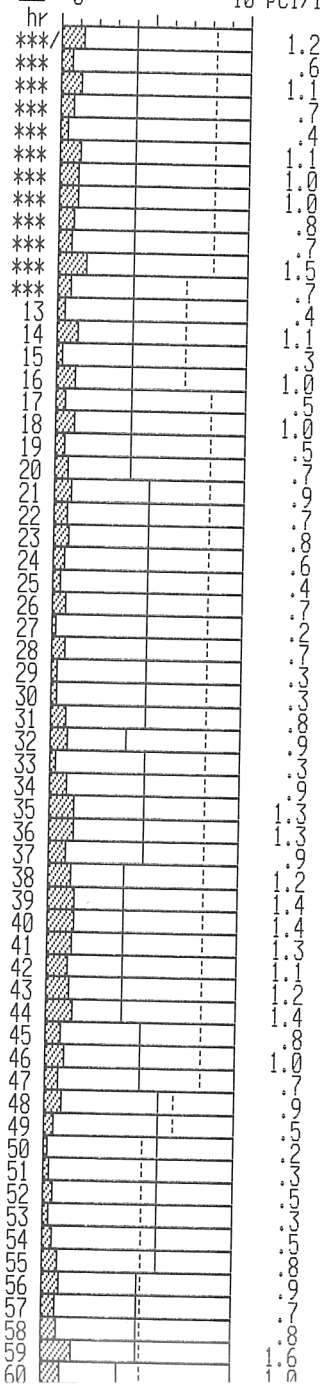
START DATE 1/17/20

START TIME 14:40

OPERATOR DANL

SERIAL NO. - CRM5106326  
 C/F (CPM/PCi/l) .353  
 BKG (PCi/l) .5

--- 26 27 "H9  
 --- 60 70 "F  
 [ ] 0 10 PCi/l



Elapsed Time (min.) 4620  
 Total Count 2287  
 Avg. (PCi/l) .9

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November 12, 2019

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

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Radon test result report for:  
**BRIDGEPORTCAMPUS**  
**1-2 MODULAR**

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<b>Kit #</b>	<b>Room Id</b>	<b>Started</b>	<b>Ended</b>	<b>pCi/L</b>	<b>Analyzed</b>
7275287	1ST GRADE	2019-11-08 @ 10:00 am	2019-11-11 @ 9:00 am	0.9 ± 0.3	2019-11-12
7275288	1ST GRADE	2019-11-08 @ 10:00 am	2019-11-11 @ 9:00 am	1.2 ± 0.3	2019-11-12
7275274	2ND GRADE	2019-11-08 @ 10:00 am	2019-11-11 @ 9:00 am	1.1 ± 0.3	2019-11-12

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

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November 12, 2019

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

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Radon test result report for:  
**BRIDGEPORTCAMPUS**  
**3-4 MODULAR**

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<b>Kit #</b>	<b>Room Id</b>	<b>Started</b>	<b>Ended</b>	<b>pCi/L</b>	<b>Analyzed</b>
7275294	3RD GRADE	2019-11-08 @ 10:00 am	2019-11-11 @ 9:00 am	1.3 ± 0.3	2019-11-12
7275293	4TH GRADE	2019-11-08 @ 10:00 am	2019-11-11 @ 9:00 am	1.1 ± 0.3	2019-11-12

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November 12, 2019

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

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Radon test result report for:  
**BRIDGEPORTCAMPUS**  
**KINDER MODULAR**

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<b>Kit #</b>	<b>Room Id</b>	<b>Started</b>	<b>Ended</b>	<b>pCi/L</b>	<b>Analyzed</b>
7275295	KINDERGARTEN	2019-11-08 @ 10:00 am	2019-11-11 @ 9:00 am	1.2 ± 0.3	2019-11-12

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November 12, 2019

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

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Radon test result report for:  
**BRIDGEPORTCAMPUS  
MAIN**

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<b>Kit #</b>	<b>Room Id</b>	<b>Started</b>	<b>Ended</b>	<b>pCi/L</b>	<b>Analyzed</b>
7275282	5TH GRADE	2019-11-08 @ 9:00 am	2019-11-11 @ 9:00 am	2.3 ± 0.3	2019-11-12
7275281	5TH GRADE	2019-11-08 @ 9:00 am	2019-11-11 @ 9:00 am	< 0.3	2019-11-12
7275279	CAFETERIA	2019-11-08 @ 9:00 am	2019-11-11 @ 9:00 am	2.5 ± 0.3	2019-11-12
7275278	COMPUTER LAB	2019-11-08 @ 9:00 am	2019-11-11 @ 9:00 am	3.4 ± 0.3	2019-11-12
7275283	HALL	2019-11-08 @ 9:00 am	2019-11-11 @ 9:00 am	3.4 ± 0.3	2019-11-12
7275284	HALL	2019-11-08 @ 9:00 am	2019-11-11 @ 9:00 am	3.4 ± 0.3	2019-11-12

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November 12, 2019

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

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Radon test result report for:  
**BRIDGEPORTCAMPUS**  
**MAIN ADDITION**

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<b>Kit #</b>	<b>Room Id</b>	<b>Started</b>	<b>Ended</b>	<b>pCi/L</b>	<b>Analyzed</b>
7275286	SPECIAL ED	2019-11-08 @ 10:00 am	2019-11-11 @ 9:00 am	1.0 ± 0.3	2019-11-12
7275285	TITLE 1, RM 1	2019-11-08 @ 10:00 am	2019-11-11 @ 9:00 am	1.3 ± 0.3	2019-11-12

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November 12, 2019

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

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Radon test result report for:  
**BRIDGEPORTCAMPUS**  
**MAIN PORCH**

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<b>Kit #</b>	<b>Room Id</b>	<b>Started</b>	<b>Ended</b>	<b>pCi/L</b>	<b>Analyzed</b>
7275280	PARENT RESOURCE ROOM	2019-11-08 @ 9:00 am	2019-11-11 @ 9:00 am	1.3 ± 0.3	2019-11-12

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November 12, 2019

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

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Radon test result report for:  
**BRIDGEPORTCAMPUS**  
**OFFICE MODULAR**

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<b>Kit #</b>	<b>Room Id</b>	<b>Started</b>	<b>Ended</b>	<b>pCi/L</b>	<b>Analyzed</b>
7275290	BUSINESS MANAGER	2019-11-08 @ 10:00 am	2019-11-11 @ 9:00 am	0.7 ± 0.3	2019-11-12
7275292	INTERVENTION	2019-11-08 @ 10:00 am	2019-11-11 @ 9:00 am	0.6 ± 0.3	2019-11-12
7275291	RECEPTION	2019-11-08 @ 10:00 am	2019-11-11 @ 9:00 am	0.6 ± 0.3	2019-11-12

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

femto-TECH Laboratories

## CERTIFICATION OF CALIBRATION

Instrument Model

CRM510

Instrument Type

Continuous Radon Monitor

Unit Serial Number

CRM5105512

<u>Test Type</u>	<u>Test Length</u>	<u>Background Level</u>
ackground	1440	0.11 (+/- 10%) CPM

<u>Test Type</u>	<u>Test Length</u>	<u>Conversion Factor</u>
Calibration	1440	0.376 +/- 0.01( $\sigma$ ) CPM per pCi/l

10.16 (+/- 0.3)  $\times 10^{-3}$   
CPM per Bq/m<sup>3</sup>

Test Length is stated in minutes.

CPM = counts per minute.

Default = background test was not performed; the default value for the instrument was used to calculate the conversion factor.

pCi/l = picoCuries per liter of air.


Bq/m<sup>3</sup> = Becquerels per cubic meter of air.

Other = the background level used to calculate the conversion factor was provided by the customer or other source.

### Instrument Calibration Description

Although a nominal instrument calibration factor is established by the electronic and physical design, an individual factor is determined for each production unit referenced to the calibration of a femto-TECH, Inc. "master" unit. femto-TECH "master" units are calibrated in the Bowser-Morner Radon Calibration Laboratory, which maintains intercomparison traceabilities to U.S. Environmental Protection Agency and U.S. Department of Energy (EML) radon laboratories. Background levels for individual units are determined at femto-TECH by an exposure to aged air or nitrogen for a nominal 24 hours.

Date: January 3, 2020



Donald W. Riepenhoff  
Service Manager

**femto-TECH, Inc.**<sup>®</sup>

P.O. Box 8257, 25 Eagle Court.

# CERTIFICATION OF CALIBRATION

Instrument Model

CRM510

Instrument Type

Continuous Radon/Pulsed Ion Chamber

Unit Serial Number

CRM 510 6326

Test Type	Test Length	Background Level
Background	2669	0.17 (+/- 10%) CPM

Test Type	Test Length	Conversion Factor
Calibration	1440	0.353 +/- 0.01(18) CPM per pCi/l  (9.51 +/- 0.3) x 10 <sup>-3</sup> CPM per Bq/m <sup>3</sup>

Test Length is stated in minutes.

CPM = counts per minute.

Default = background test was not performed; the default value for the instrument was used to calculate the conversion factor.

pCi/l = picoCuries per liter of air.


Bq/m<sup>3</sup> = Becquerels per cubic meter of air.

Other = the background level used to calculate the conversion factor was provided by the customer or other source.

### Instrument Calibration Description

Although a nominal instrument calibration factor is established by the electronic and physical design, an individual factor is determined for each production unit referenced to the calibration of a femto-TECH, Inc. "master" unit. femto-TECH "master" units are calibrated in the Bowser-Morner Radon Calibration Laboratory, which maintains intercomparison traceabilities to U.S. Environmental Protection Agency and U.S. Department of Energy (EML) radon laboratories. Background levels for individual units are determined at femto-TECH by an exposure to aged air or nitrogen for a minimum of 24 hours.

Date: La. 06. 2019

Craig Britton   
Calibration Technician

**femto-TECH, Inc.**®

P.O. Box 8257, 25 Eagle Court  
Carlisle, OH 45005