

936 RIDGEBROOK ROAD • SPARKS, MD 21152 • 410-316-7800 • (FAX) 410-316-7935

### MCPS RADON TESTING – EXECUTIVE SUMMARY

Site Name	Farmland Elementary School	
Date of Test Report	05/12/2022	
Round of Testing	Initial	
	Follow-up	
	Post Remediation	
	2 Year Testing	
	5 Year Testing	
	HVAC Upgrade	
	Window Replacement	
	New Addition	
	New Facility	
# Rooms Tested	2	
# Rooms $\geq$ 4.0 pCi/L	0	
Lowest Value	<0.3 pCi/L	
Highest Value	2.3 pCi/L	

#### **Project Status**

Current Project Status at this time: Testing completed; no further action needed

KCI Technologies, Inc. WWW.kci.com

#### ENGINEERS • PLANNERS • SCIENTISTS • CONSTRUCTION MANAGERS

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May 12, 2022

Mr. Brian Croyle, PG, CHMM Environmental Specialist Montgomery County Public Schools Gaithersburg, MD 20879

Re: Radon Testing Services

KCI Job # 122108316

Location: Farmland Elementary School

7000 Old Gate Rd. Rockville, MD 20852

Dear Mr. Croyle:

KCI Technologies, Inc. (KCI) is pleased to submit the following report to Montgomery County Public Schools (MCPS) pursuant to completing a "short-term" 3 day radon test for the Farmland Elementary School, located at 7000 Old Gate Rd. Rockville, MD 20852 (subject site).

#### **Scope of Services:**

KCI conducted radon testing at the subject site to evaluate indoor radon levels relative to the USEPA's recommended action level of 4.0 picocuries per Liter (pCi/L) - the level at which EPA recommends that schools take action to reduce the level. KCI conducted the radon testing in accordance with American Association of Radon Scientists and Technologists (AARST) *Protocol for Conducting Measurements of Radon and Radon Decay Products in Schools and Large Buildings*. A National Radon Proficiency Program (NRPP) Radon Measurement Specialist (certification #111004 RT) supervised the testing. Additional information on radon management and the health effects of radon exposure is available from https://www.montgomeryschoolsmd.org or www.epa.gov/radon.

KCI visited the site on March 21, 2022 and deployed four (4) activated charcoal (AC) radon test kits. KCI deployed radon test kits in all frequently-occupied ground contact rooms, and other areas, (if applicable) in accordance with AARST guidance.

KCI sampled the following locations during this follow-up test:

- 1. Rooms with missing test kits from the Radon 2022 testing period (i.e. test kit was deployed but not recovered),
- 2. Rooms with invalidated test kits from the Radon 2022 testing period (e.g. an open window in the room or disturbed test kit),
- 3. Rooms which were locked/inaccessible during the Radon 2022 testing period,
- 4. Rooms with elevated radon results (i.e.  $\geq$ 3.5 piC/L),
- 5. Rooms previously tested for radon but not tested in Radon 2022, and
- 6. Additional rooms that require testing (if applicable.)

A floor plan map of the building with the test locations is included as Attachment A of this report.

As a quality control measure, KCI also included duplicate samples, field blanks, lab transit blanks, and office blanks in accordance with AARST recommendations. In addition, KCI submitted test kits to Bowser-Morner, Inc. as spike samples. The spiked tests were exposed to a known radon concentration by Bowser-Morner prior to being returned to the laboratory for analysis.

KCI returned to the site on March 24, 2022 to retrieve the radon sampling test kits. KCI shipped all radon tests via overnight delivery to Airchek, Inc. for analysis by gamma-ray spectroscopy. Airchek, Inc. is a NRSB certified analytical laboratory for radon analysis (certification # ARL1402) located at 1936 Butler Bridge Road, Mills River, North Carolina.

#### **Evaluation of Testing Conditions:**

These tests represent:

• Follow-up to initial testing.

These tests were conducted to:

• Evaluate radon concentrations at the facility.

According to AARST, *Protocol for Conducting Measurements of Radon and Radon Decay Products in Schools and Large Buildings*, ideal testing conditions would be when the building is fully occupied and the heating system is active. For this test, the facility's HVAC system was operating in heating mode; therefore, KCI concludes that this test was conducted during ideal testing conditions.

KCI recorded observations of the following conditions in each room during the time of deployment and collection of the radon test kits:

- Indoor temperature,
- HVAC Operation,
- Dehumidifier operation,
- Humidifier operation,
- Ceiling fan operation, and
- Open windows or doors.

KCI also compiled weather data for the testing period and conducted observations of relevant field conditions. During the test period, weather records indicate low temperatures were in the low 40°Fs and high temperatures ranged from the low 50°Fs to the low 70°Fs. Maximum sustained winds ranged from 0-29 miles per hour. Average humidity was around 56% with 0.51 inches of precipitation (rain) was recorded during testing period.

#### **Results:**

The sampling locations and analytical results are listed on Table 1 (Attachment B). The quality control sample locations and analytical results are listed on Table 2 (Attachment B). Sampling locations and associated test kit identification numbers and relevant field observations are listed on Table 3 (Attachment B). The laboratory analytical results are included in Attachment C. Laboratory results and exposure data for the spike samples are also included in Attachment C.

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The results of the radon test analysis indicated the following:

Radon Concentration	Room	Result
≥4.0 piC/L	None	N/A
<4.0 piC/L	See Attachment B	

Quality Control Samples		
Results of Blank Canisters:	The office blanks, and lab transit blanks had test results of	
	less than the laboratory detection limit of 0.3 pCi/L.	
Adequate Laboratory Precision? Review of the duplicate sample analysis indicates that		
	adequate laboratory measurement precision was achieved.	
Spike Sample Analysis:	The Spike Sample analysis results indicate the laboratory is	
	operating within statistical control limits.	

Our professional services have been performed in accordance with customary principles and practices in the field of industrial hygiene and engineering. If you have any questions or comments regarding this report, please feel free to contact me at (410) 891-1769.

Sincerely,

Tyler P. McCleaf

Radon Measurement Provider

#111004 RT

KCI Technologies, Inc.

Tyler McCleaf

Attachments: A- Floor Plan with Test Locations

B- Table 1-3, Radon Test Summary Spreadsheets

C- Laboratory Analytical Results

## ATTACHMENT A

## Floor Plan With Test Locations

## ATTACHMENT B

## Radon Test Summary Spreadsheet

### **Table Notes:**

AC- Activated Charcoal

ACI- Air Check, Inc.

D- Duplicate

FB- Field Blank

KCI- KCI Technologies, Inc.

OB- Office Blank

PM- Project Manager

OC- Quality Control

Table 1- Radon Testing Results			
	Farmland ES RT		
Te	Test Period: 03/21/2022 - 03/24/2022		
Kit Number Room / Area Result			
11139262 103 2.3		2.3	
11139271 103 2.3		2.3	
11139273 103 < 0.3		< 0.3	
11139275			

Table 2- Radon Testing Results				
	Farmland ES RT			
Test Period: 03/21/2022 - 03/24/2022				
Kit Number	QC Type	Room / Area	Result	
11139262	D	103	2.3	
11139273	FB	103	< 0.3	
11139902	ОВ	OFFICE BLANK	< 0.3	
11139928	ТВ	TRAVEL BLANK	< 0.3	

Summary of Missed Locations			
	Farmland ES RT		
Т	Test Period: 03/21/22 - 03/24/22		
Kit Number	Kit Number Room/Area Resu		
	NA		

Summary of Missing, Compromised and >/= 4 piC/L Tests			
	Farmland ES RT		
Test Period: 03/21/22 - 03/24/22			
Kit Number	Room/Area	Result	
	NA		

#### Table Note:

<sup>\*</sup> Missing or Compromised Sample

## ATTACHMENT C

## Laboratory Analytical Results

March 28, 2022

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

### Radon test result report for:

Kit#	Room Id	Started	Ended	pCi/L	Analyzed
11139262	103	2022-03-21 @ 12:00 pm	2022-03-24 @ 11:00 am	$2.3 \pm 0.4$	2022-03-28
11139271	103	2022-03-21 @ 12:00 pm	2022-03-24 @ 11:00 am	$2.3 \pm 0.4$	2022-03-28
11139273	103	2022-03-21 @ 12:00 pm	2022-03-24 @ 11:00 am	< 0.3	2022-03-28
11139275	141	2022-03-21 @ 11:00 am	2022-03-24 @ 11:00 am	$1.1 \pm 0.3$	2022-03-28

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

## EXPOSURE IN BOWSER-MORNER RADON CHAMBER

CLIENT KCI Technologies, I	10b Number 204620
NOMINAL Conditions: Radon Conc 27. 0 p	Ci/L Rel. Hum <u>50.1</u> % Temp. <u>70.0</u>
Date Start: 3/18/22 Date Stop: 3/21/22	Date Start: Date Stop:
Time Start: <u>0795</u> Time Stop: <u>0795</u>	(
Device No.'s: (5) Char Bags-	Device No.'s:
11139367 11139368, 11139371,	
11139710, 11139717	C
E3 Right	
Date Start: Date Stop:	Date Start: Date Stop:
Time Start: Time Stop:	Time Start: Time Stop:
Device No.'s:	Device No.'s:
	ř
* a	
Date Start: Date Stop:	Date Start: Date Stop:
Time Start: Time Stop:	Time Start: Time Stop:
Device No.'s:	Device No.'s:

Note: All times are in 24-hour (military) notation, Eastern Standard Time (EST) Background =  $7 \mu R/h$  Elevation = 820 ft

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

#### Radon test result report for:

MCPS - Spike Sample Lab Results. Measured values are satisfactory, i.e., within  $\pm$  25% of the chamber's reference value (25.7 pCi/L).

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11139367	SK1	2022-03-18 @ 7:00 am	2022-03-21 @ 7:00 am	$25.9 \pm 2.1$	2022-03-30
11139368	SK2	2022-03-18 @ 7:00 am	2022-03-21 @ 7:00 am	$23.9 \pm 2.0$	2022-03-30
11139371	SK3	2022-03-18 @ 7:00 am	2022-03-21 @ 7:00 am	$25.7 \pm 2.1$	2022-03-30
11139710	SK4	2022-03-18 @ 7:00 am	2022-03-21 @ 7:00 am	$26.4 \pm 2.1$	2022-03-30
11139717	SK5	2022-03-18 @ 7:00 am	2022-03-21 @ 7:00 am	$24.6 \pm 2.0$	2022-03-30

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#### Engineers • Planners • Scientists • Construction Managers

Corporate Office: 936 Ridgebrook road • Sparks , Maryland 21152 • 410-316-7800 • (Fax) 410-316-7935

### **Radon Test Kit Chain of Custody**

Project Name: MCPS Radon - March 2022 Schools - Retesting

#### Name of Schools:

- 1. Rosa Parks MS
- 2. Poolesville ES
- 3. Wyngate ES
- 4. Seven Locks ES
- 5. Walt Whitman HS
- 6. Somerset ES
- 7. Rock Creek Forest ES
- 8. Walter Johnson HS
- 9. Westbrook ES
- 10.Westland MS
- 11.Farmland ES
- 12. College Gardens ES
- 13. Julius West MS
- 14.Robert Frost MS
- 15. Carl Sandburg Learning Center

	Date	Initials
Radon Test Kits Deployed	03/21/2022	BMM
Radon Test Kits Collected	03/24/2022	BMM
Radon Test Kits Shipped to Lab*	03/25/2022	BMM
Radon Test Kits Received by Lab*	03/28/2022	Bonn

<sup>\*</sup>All samples sent to Air Check, Inc., 1936 Butler Bridge Rd, Mills River, NC 28759



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### MCPS RADON TESTING – EXECUTIVE SUMMARY

Site Name	Farmland Elementary
	School
Date of Test Report	2/21/2022
Round of Testing	Initial
	Follow-up
	Post Remediation
	2 Year Testing
	5 Year Testing
	HVAC Upgrade
	Window Replacement
	New Addition
	New Facility
# Rooms Tested	41
# Rooms $\geq$ 4.0 pCi/L	0
Lowest Value	<0.3 pCi/L
Highest Value	1.5 pCi/L

Project Status:

Initial testing completed; Missing or Compromised tests to be re-sampled

KCI Technologies, Inc. WWW.kci.com

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February 21, 2022

Brian T. Croyle, PG, CHMM Environmental Specialist Montgomery County Public Schools Gaithersburg, MD 20879

Re: Radon Testing Services

KCI Job # 122108316

Location: Farmland Elementary School

7000 Old Gate Rd. Rockville, MD 20852

Dear Mr. Croyle:

KCI Technologies, Inc. (KCI) is pleased to submit the following report to Montgomery County Public Schools (MCPS) pursuant to completing a "short-term" 3 day radon test for the Farmland Elementary School, located at 7000 Old Gate Rd. Rockville, MD 20852 (subject site).

#### **Scope of Services:**

KCI conducted radon testing at the subject site to evaluate indoor radon levels relative to the USEPA's recommended action level of 4.0 picocuries per Liter (pCi/L) - the level at which EPA recommends that schools take action to reduce the level. KCI conducted the radon testing in accordance with American Association of Radon Scientists and Technologists (AARST) *Protocol for Conducting Measurements of Radon and Radon Decay Products in Schools and Large Buildings*. A National Radon Proficiency Program (NRPP) Radon Measurement Specialist (certification #111004 RT) supervised the testing. Additional information on radon management and the health effects of radon exposure is available from <a href="https://www.montgomeryschoolsmd.org">https://www.montgomeryschoolsmd.org</a> or <a href="https://www.montgomeryschoolsmd.org">www.epa.gov/radon</a>.

KCI visited the site on January 19, 2022 and deployed fifty (50) activated charcoal (AC) radon test kits. KCI deployed radon test kits in all frequently-occupied ground contact rooms, and other areas, (if applicable) in accordance with AARST guidance.

A floor plan map of the building with the test locations is included as Attachment A of this report.

As a quality control measure, KCI also included duplicate samples, field blanks, lab transit blanks, and office blanks in accordance with AARST recommendations. In addition, KCI submitted test kits to Bowser-Morner, Inc. as spike samples. The spiked tests were exposed to a known radon concentration by Bowser-Morner prior to being returned to the laboratory for analysis.

KCI returned to the site on January 22, 2022 to retrieve the radon sampling test kits. KCI shipped all radon tests via overnight delivery to Airchek, Inc. for analysis by gamma-ray spectroscopy. Airchek, Inc.

KCI TECHNOLOGIES, INC. WWW.kci.com

is a NRSB certified analytical laboratory for radon analysis (certification # ARL1402) located at 1936 Butler Bridge Road, Mills River, North Carolina.

#### **Evaluation of Testing Conditions:**

These tests represent:

Follow-up to initial testing.

These tests were conducted to:

• Evaluate radon concentrations at the facility.

According to AARST, Protocol for Conducting Measurements of Radon and Radon Decay Products in Schools and Large Buildings, ideal testing conditions would be when the building is fully occupied and the heating system is active. For this test, the facility's HVAC system was operating in heating mode; therefore, KCI concludes that this test was conducted during ideal testing conditions.

KCI recorded observations of the following conditions in each room during the time of deployment and collection of the radon test kits:

- Indoor temperature,
- HVAC Operation,
- Dehumidifier operation,
- Humidifier operation,
- Ceiling fan operation, and
- Open windows or doors.

KCI also compiled weather data for the testing period and conducted observations of relevant field conditions. During the test period, weather records indicate low temperatures were in the 50s and high temperatures ranged from the mid 40s to the low 60s Fahrenheit. Maximum sustained winds ranged from 7-15 miles per hour. Average humidity was around 50% with .15 inches of precipitation (rain) was recorded during testing period.

#### **Results:**

The sampling locations and analytical results are listed on Table 1 (Attachment B). The quality control sample locations and analytical results are listed on Table 2 (Attachment B). Sampling locations and associated test kit identification numbers and relevant field observations are listed on Table 3 (Attachment B). The laboratory analytical results are included in Attachment C. Laboratory results and exposure data for the spike samples are also included in Attachment C.

The results of the radon test analysis indicated the following:

Radon Concentration	Room	Result
≥4.0 piC/L	None	N/A
<4.0 piC/L	See Attachment B	

KCI TECHNOLOGIES, INC. WWW.kci.com

Quality Control Samples			
Results of Blank Canisters:	The office blanks, and lab transit blanks had test results of		
	less than the laboratory detection limit of 0.3 pCi/L.		
Adequate Laboratory Precision?	Review of the duplicate sample analysis indicates that		
	adequate laboratory measurement precision was achieved.		
Spike Sample Analysis:	The Spike Sample analysis results indicate the laboratory is		
	operating within statistical control limits.		

Our professional services have been performed in accordance with customary principles and practices in the field of industrial hygiene and engineering. If you have any questions or comments regarding this report, please feel free to contact me at (410) 891-1769.

Sincerely,

Tyler P. McCleaf

Radon Measurement Provider

#111004 RT

KCI Technologies, Inc.

Tyler McCleaf

Attachments: A- Floor Plan with Test Locations

B- Table 1-3, Radon Test Summary Spreadsheets

C- Laboratory Analytical Results

## ATTACHMENT A

## Floor Plan With Test Locations

## ATTACHMENT B

## Radon Test Summary Spreadsheet

### **Table Notes:**

AC- Activated Charcoal

ACI- Air Check, Inc.

D- Duplicate

FB- Field Blank

KCI- KCI Technologies, Inc.

OB- Office Blank

PM- Project Manager

OC- Quality Control

Table 1- Radon Testing Results				
Farmland ES				
Tes	Test Period: 01/25/2022-01/28/2022			
Kit Number Room / Area R				

Kit Number         Room / Area         Result           11105793         102         < 0.3           11107318         104         < 0.3           11107317         106         < 0.3           11105794         107         0.8           11105797         107         1.5           11107311         108         < 0.3           11107320         111         0.7           11107328         112         0.9           11107312         115         1.0           11107313         116         < 0.3           11107314         116         < 0.3           11107327         116         < 0.3           11107329         123         < 0.3           11107319         123         < 0.3           11107326         129         < 0.3           11107309         130         < 0.3           11107309         130         < 0.3           11107308         134         < 0.3           11107307         135         < 0.3           11107308         134         < 0.3           11107304         138         < 0.3           11107305         138         < 0.3 </th <th></th> <th></th> <th>1</th>			1
11107318         104         < 0.3	Kit Number	Room / Area	Result
11107317         106         < 0.3	11105793	102	< 0.3
11105794         107         0.8           11105797         107         1.5           11107311         108         < 0.3	11107318	104	< 0.3
11105797         107         1.5           11107311         108         < 0.3	11107317	106	< 0.3
11107311         108         < 0.3	11105794	107	0.8
11107320         111         0.7           11107328         112         0.9           11107312         115         1.0           11107313         116         <0.3	11105797	107	1.5
11107328         112         0.9           11107312         115         1.0           11107313         116         <0.3	11107311	108	< 0.3
11107312         115         1.0           11107313         116         < 0.3	11107320	111	0.7
11107313         116         < 0.3	11107328	112	0.9
11107314         116         < 0.3	11107312	115	1.0
11107321       116       < 0.3	11107313	116	< 0.3
11107327         116         < 0.3	11107314	116	< 0.3
11107319         123         < 0.3	11107321	116	< 0.3
11107326       129       < 0.3	11107327	116	< 0.3
11107309       130       < 0.3	11107319	123	< 0.3
11107325       131       < 0.3	11107326	129	< 0.3
11107308       134       < 0.3	11107309	130	< 0.3
11107307       135       < 0.3	11107325	131	< 0.3
11107303       137       < 0.3	11107308	134	< 0.3
11107304       138       0.6         11107306       138       < 0.3	11107307	135	< 0.3
11107306       138       < 0.3	11107303	137	< 0.3
11107302       150       0.7         11107324       150       0.6         11107333       150       < 0.3	11107304	138	0.6
11107324       150       0.6         11107333       150       < 0.3	11107306	138	< 0.3
11107333       150       < 0.3	11107302	150	0.7
11107345       150       < 0.3	11107324	150	0.6
11107315       151       < 0.3	11107333	150	< 0.3
11107343       154       0.5         11107323       155       < 0.3	11107345	150	< 0.3
11107323       155       < 0.3	11107315	151	< 0.3
11107330       157       < 0.3	11107343	154	0.5
11107334       161       < 0.3	11107323	155	< 0.3
11107344       173       < 0.3	11107330	157	< 0.3
11107342       201       < 0.3	11107334	161	< 0.3
11107332       230       < 0.3	11107344	173	< 0.3
11107338       250       < 0.3	11107342	201	< 0.3
11105789       100A       < 0.3	11107332	230	< 0.3
11105800       100B       < 0.3	11107338	250	< 0.3
11105800       100B       < 0.3	11105789	100A	< 0.3
11105795       100D       < 0.3	11105800	100B	
11105796     100F     < 0.3	11105798	100C	< 0.3
11105796     100F     < 0.3	11105795	100D	< 0.3
11106133 102A < 0.3	11105796		
	11106133		

	Table 1- Radon Testing Results				
	Farmland ES				
Tes	Test Period: 01/25/2022-01/28/2022				
Kit Number	Room / Area	Result			
11107310	116A	< 0.3			
11107337	170C	< 0.3			
11107352	1-OUTSIDE	< 0.3			
11107329	2-OUTSIDE	< 0.3			
11107322	3-OUTSIDE	< 0.3			
11107336	4-OUTSIDE	< 0.3			
11105791	MAIN OFFICE	< 0.3			
11107346	OUTSIDE-1	< 0.3			

Table 2- Radon Testing Results					
	Farmlan	id ES			
	Test Period: 12/13/2	021-12/16/2021			
Kit Number	QC Type	Room / Area	Result		
11105797	D	107	1.5		
11107314	11107314 D 116 < 0				
11107321	1107321 FB 116 < 0.				
11107306	D	138	< 0.3		
11107302	D	150	0.7		
11107333 FB 150 < 0.3					
11107352	1107352 D 1-outside < 0.				
11106126	11106126 OB OFFICE BLANK < 0.3				
11105790	ТВ	TRAVEL Blank	< 0.3		

	Summary of Missed Locations					
	Farmland ES					
Te	est Period: 01/25/22 - 01/28/22					
Kit Number	Result					
	NA					

Summary of	Missing, Compromised and >/= 4 p	iC/L Tests				
Farmland ES						
Т	est Period: 01/25/22 - 01/28/22					
	· · · · ·					
Kit Number Room/Area Resul						
11107335	103	Missing				
11107305	141	Missing				

Table Note:

<sup>\*</sup> Missing or Compromised Sample

## ATTACHMENT C

## Laboratory Analytical Results

# Radon test result report for: FARMLAND ES

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11107352	1-OUTSIDE	2022-01-25 @ 3:00 pm	2022-01-28 @ 10:00 am	< 0.3	2022-01-31
11105789	100A	2022-01-25 @ 1:00 pm	2022-01-28 @ 10:00 am	< 0.3	2022-01-31
11105800	100B	2022-01-25 @ 1:00 pm	2022-01-28 @ 10:00 am	< 0.3	2022-01-31
11105798	100C	2022-01-25 @ 1:00 pm	2022-01-28 @ 10:00 am	< 0.3	2022-01-31
11105795	100D	2022-01-25 @ 1:00 pm	2022-01-28 @ 10:00 am	< 0.3	2022-01-31
11105796	100F	2022-01-25 @ 1:00 pm	2022-01-28 @ 10:00 am	< 0.3	2022-01-31
11105793	102	2022-01-25 @ 1:00 pm	2022-01-28 @ 10:00 am	< 0.3	2022-01-31
11106133	102A	2022-01-25 @ 1:00 pm	2022-01-28 @ 10:00 am	< 0.3	2022-01-31
11106111	102C	2022-01-25 @ 1:00 pm	2022-01-28 @ 10:00 am	< 0.3	2022-01-31
11107318	104	2022-01-25 @ 2:00 pm	2022-01-28 @ 10:00 am	< 0.3	2022-01-31
11107317	106	2022-01-25 @ 2:00 pm	2022-01-28 @ 10:00 am	< 0.3	2022-01-31
11105797	107	2022-01-25 @ 1:00 pm	2022-01-28 @ 10:00 am	$1.5 \pm 0.3$	2022-01-31
11105794	107	2022-01-25 @ 1:00 pm	2022-01-28 @ 10:00 am	$0.8 \pm 0.3$	2022-01-31
11107311	108	2022-01-25 @ 2:00 pm	2022-01-28 @ 10:00 am	< 0.3	2022-01-31
11107320	111	2022-01-25 @ 1:00 pm	2022-01-28 @ 10:00 am	$0.7 \pm 0.3$	2022-01-31
11107328	112	2022-01-25 @ 2:00 pm	2022-01-28 @ 10:00 am	$0.9 \pm 0.3$	2022-01-31
11107312	115	2022-01-25 @ 2:00 pm	2022-01-28 @ 10:00 am	$1.0 \pm 0.3$	2022-01-31
11107313	116	2022-01-25 @ 2:00 pm	2022-01-28 @ 10:00 am	< 0.3	2022-01-31
11107321	116	2022-01-25 @ 2:00 pm	2022-01-28 @ 10:00 am	< 0.3	2022-01-31
11107327	116	2022-01-25 @ 2:00 pm	2022-01-28 @ 10:00 am	< 0.3	2022-01-31
11107314	116	2022-01-25 @ 2:00 pm	2022-01-28 @ 10:00 am	< 0.3	2022-01-31
11107310	116A	2022-01-25 @ 2:00 pm	2022-01-28 @ 10:00 am	< 0.3	2022-01-31
11107319	123	2022-01-25 @ 2:00 pm	2022-01-28 @ 11:00 am	< 0.3	2022-01-31
11107326	129	2022-01-25 @ 2:00 pm	2022-01-28 @ 10:00 am	< 0.3	2022-01-31
11107309	130	2022-01-25 @ 2:00 pm	2022-01-28 @ 10:00 am	< 0.3	2022-01-31
11107325	131	2022-01-25 @ 2:00 pm	2022-01-28 @ 10:00 am	< 0.3	2022-01-31
11107308	134	2022-01-25 @ 2:00 pm	2022-01-28 @ 10:00 am	< 0.3	2022-01-31
11107307	135	2022-01-25 @ 2:00 pm	2022-01-28 @ 10:00 am	< 0.3	2022-01-31
11107303	137	2022-01-25 @ 2:00 pm	2022-01-28 @ 10:00 am	< 0.3	2022-01-31
11107306	138	2022-01-25 @ 2:00 pm	2022-01-28 @ 10:00 am	< 0.3	2022-01-31
11107304	138	2022-01-25 @ 2:00 pm	2022-01-28 @ 10:00 am	$0.6 \pm 0.3$	2022-01-31
11107333	150	2022-01-25 @ 3:00 pm	2022-01-28 @ 10:00 am	< 0.3	2022-01-31
11107324	150	2022-01-25 @ 3:00 pm	2022-01-28 @ 10:00 am	$0.6 \pm 0.3$	2022-01-31
11107345	150	2022-01-25 @ 3:00 pm	2022-01-28 @ 10:00 am	< 0.3	2022-01-31
11107302	150	2022-01-25 @ 3:00 pm	2022-01-28 @ 10:00 am	$0.7 \pm 0.3$	2022-01-31
11107315	151	2022-01-25 @ 3:00 pm	2022-01-28 @ 10:00 am	< 0.3	2022-01-31
11107343	154	2022-01-25 @ 3:00 pm	2022-01-28 @ 11:00 am	$0.5 \pm 0.3$	2022-01-31

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## Radon test result report for: FARMLAND ES

1

Kit#	Room Id	Started	Ended	pCi/L	Analyzed
11107323	155	2022-01-25 @ 2:00 pm	2022-01-28 @ 10:00 am	< 0.3	2022-01-31
11107330	157	2022-01-25 @ 2:00 pm	2022-01-28 @ 10:00 am	< 0.3	2022-01-31
11107334	161	2022-01-25 @ 2:00 pm	2022-01-28 @ 10:00 am	< 0.3	2022-01-31
11107337	170C	2022-01-25 @ 3:00 pm	2022-01-28 @ 10:00 am	< 0.3	2022-01-31
11107344	173	2022-01-25 @ 3:00 pm	2022-01-28 @ 11:00 am	< 0.3	2022-01-31
11107329	2-OUTSIDE	2022-01-25 @ 2:00 pm	2022-01-28 @ 10:00 am	< 0.3	2022-01-31
11107342	201	2022-01-25 @ 3:00 pm	2022-01-28 @ 10:00 am	< 0.3	2022-01-31
11107332	230	2022-01-25 @ 3:00 pm	2022-01-28 @ 10:00 am	< 0.3	2022-01-31
11107338	250	2022-01-25 @ 3:00 pm	2022-01-28 @ 10:00 am	< 0.3	2022-01-31
11107322	3-OUTSIDE	2022-01-25 @ 2:00 pm	2022-01-28 @ 10:00 am	< 0.3	2022-01-31
11107336	4-OUTSIDE	2022-01-25 @ 2:00 pm	2022-01-28 @ 10:00 am	< 0.3	2022-01-31
11105791	MAIN OFFICE	2022-01-25 @ 1:00 pm	2022-01-28 @ 10:00 am	< 0.3	2022-01-31
11107346	OUTSIDE-1	2022-01-25 @ 3:00 pm	2022-01-28 @ 10:00 am	< 0.3	2022-01-31

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### **EXPOSURE IN BOWSER-MORNER RADON CHAMBER**

CLIENT KCI Technologie	5 Jac. Job Number 203404
	_pCi/L Rel. Hum <u>28.8</u> % Temp. <u>59.9</u> F
Date Start: 12/24/21 Date Stop: 12/27/2	Date Start: Date Stop:
Time Start: 0809 Time Stop: 0809	Time Start: Time Stop:
Device No.'s: (2) Char Bags-	Device No.'s:
9341721, 9341722	I .
,	=
Gy loft	1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
Date Start: Date Stop:	Date Start: Date Stop:
Time Start: Time Stop:	Time Start: Time Stop:
Device No.'s:	Device No.'s:
	•
E 0	
Date Start: Date Stop:	Date Start: Date Stop:
Time Start: Time Stop:	Time Start: Time Stop:
Device No.'s:	Device No.'s:
=	
	2

Note: All times are in 24-hour (military) notation, Eastern Standard Time (EST) Background =  $7 \mu R/h$  Elevation = 820 ft

December 31, 2021

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

#### Radon test result report for:

SK MA MCPS - Spike Sample Lab Results. Measured values are satisfactory, i.e., within ± 25% of the chamber's reference value (16.2 pCi/L).

70-11/21 1 2021 12 2 0 0 0 0 0 mm	Kit#	Room Id	Started	Ended	pCi/L	Analyzed
0241722 1 2021 12 24 @ 8:00 am 2021 12 27 @ 8:00 am 15 4 + 1 2 2021 15	9341721	1	2021-12-24 @ 8:00 am	2021-12-27 @ 8:00 am	$11.6 \pm 0.9$	2021-12-31
9341722 1 2021-12-24 $\odot$ 8:00 am 2021-12-27 $\odot$ 8:00 am 13.4 $\pm$ 1.2 2021-1	9341722	1	2021-12-24 @ 8:00 am	2021-12-27 @ 8:00 am	$15.4 \pm 1.2$	2021-12-31

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### Engineers • Planners • Scientists • Construction Managers

Corporate Office: 936 Ridgebrook road • Sparks , Maryland 21152 • 410-316-7800 • (Fax) 410-316-7935

### **Radon Test Kit Chain of Custody**

Project Name: MCPS Radon - January 2022 Schools

#### Name of Schools:

- 1. Carver Educational Center
- 2. College Gardens ES
- 3. Farmland ES
- 4. Julius West MS
- 5. Maryvale ES
- 6. Robert Frost MS
- 7. Rock Creek Forest ES
- 8. Sandburg Learning Center
- 9. Westbrook ES

	Date	Initials
Radon Test Kits Deployed	01/19/2022	TM
Radon Test Kits Collected	01/22/2022	My
Radon Test Kits Shipped to Lab*	01/22/2022	an
Radon Test Kits Received by Lab*	01/24/2022	an

<sup>\*</sup>All samples sent to Air Check, Inc., 1936 Butler Bridge Rd, Mills River, NC 28759