

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

## MCPS RADON TESTING – EXECUTIVE SUMMARY

Site Name	Roscoe Nix Elementary School
Date of Test Report	05/27/2022
Round of Testing	Initial
	Follow-up
	Post Remediation
	2 Year Testing
	5 Year Testing
	HVAC Upgrade
	Window Replacement
	New Addition
	New Facility
# Rooms Tested	1
# Rooms $\geq$ 4.0 pCi/L	0
Lowest Value	<0.3 pCi/L
Highest Value	0.7 pCi/L

### **Project Status**

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



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May 27, 2022

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

Re:	<u>Radon Testing Services</u>
	KCI Job # 122108316

Location: Roscoe Nix Elementary School 1100 Corliss St. Silver Spring, MD 20903

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 Roscoe Nix Elementary School, located at 1100 Corliss St. Silver Spring, MD 20903 (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.epa.gov/radon">www.epa.gov/radon</a>.

KCI visited the site on March 29, 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 April 01, 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 mid 20°Fs and high temperatures ranged from the low 50°Fs to the mid 70°Fs. Maximum sustained winds ranged from 0-33 miles per hour. Average humidity was around 47% with 0.23 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	

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 McCleaf

Tyler P. McCleaf Radon Measurement Provider #111004 RT KCI Technologies, Inc.

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				
	Roscoe Nix ES RT			
Te	est Period: 03/29/2022 - 04/01/2022			
Kit Number	Number Room / Area Result			
11139942	GYM	< 0.3		
11139949 GYM 0.7				
11139957	GYM	0.6		
11139958	GYM	< 0.3		

Table 2- Radon Testing Results				
	Roscoe	Nix ES RT		
	Test Period: 03/29	/2022 - 04/01/2022		
Kit Number QC Type Room / Area Result				
11139957	D	Gym	0.6	
11139942 FB Gym < 0.3				
11139883	OB	OFFICE BLANK	< 0.3	
11139841	ТВ	TRAVEL BLANK	< 0.3	

	Summary of Missed Locations	
	Roscoe Nix ES RT	
T	est Period: 03/29/22 - 04/01/22	
Kit Number	Room/Area	Result
	NA	

Roscoe Nix ES RT     Test Period: 03/29/22 - 04/01/22     Kit Number   Room/Area   Result     NA	Summary	of Missing, Compromised and >/= 4	piC/L Tests		
Test Period: 03/29/22 - 04/01/22 Kit Number Room/Area Result		Roscoe Nix ES RT			
Kit Number Room/Area Result					
		· · · · ·			
NA   Image: Imag	Kit Number	Kit Number Room/Area			
		NA			
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Table Note:

\* Missing or Compromised Sample

## ATTACHMENT C

# Laboratory Analytical Results

### April 4, 2022

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

Radon test result report for:

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11139942	GYM	2022-03-29 @ 10:0	0 am 2022-04-01 @ 12:00 pm	< 0.3	2022-04-04
11139949	GYM	2022-03-29 @ 10:0	0 am 2022-04-01 @ 12:00 pm	$0.7 \pm 0.3$	2022-04-04
11139957	GYM	2022-03-29 @ 10:0	0 am 2022-04-01 @ 12:00 pm	$0.6 \pm 0.3$	2022-04-04
11139958	GYM	2022-03-29 @ 10:0	0 am 2022-04-01 @ 12:00 pm	< 0.3	2022-04-04

# EXPOSURE IN BOWSER-MORNER RADON CHAMBER

CLIENT KCI Technologies, I	Job N	umber 204620
NOMINAL Conditions: Radon Conc 27.0 p		_% Temp. <u>70.0</u> F
Date Start: 3/18/22 Date Stop: 3/21/22	Date Start:	Date Stop:
Time Start: 0705 Time Stop: 0705	Time Start:	Time Stop:
Device No.'s: (5) Char Bags-	Device No.'s:	
11139367, 11139368, 11139371,		
11139710, 11139717		е 
E3 Right	· · · · · · · · · · · · · · · · · · ·	
Date Start: Date Stop:	Date Start:	Date Stop:
Time Start: Time Stop:	Time Start:	Time Stop:
Device No.'s:	Device No.'s:	
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Date Start: Date Stop:	Date Start:	Date Stop:
Time Start: Time Stop:	Time Start:	_ Time Stop:
Device No.'s:	Device No.'s:	
	2	

1

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

March 30, 2022

### **\*\* 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



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. Watkins Mill HS
- 2. Cresthaven ES
- 3. East Silver Spring ES
- 4. Fairland Center
- 5. Francis Scott Key MS
- 6. Greencastle ES
- 7. Roscoe Nix ES
- 8. West Farm Transportation Depot
- 9. Wheaton HS
- 10.White Oak MS
- 11. William Tyler Page ES
- 12.Bel Pre ES
- **13.Fairland ES**
- 14. Highland ES
- **15.Rolling Terrace ES**
- 16.Takoma Park MS
- **17.Viers Mill ES**
- **18.Poolesville ES**

	Date	Initials
Radon Test Kits Deployed	03/29/2022	BMM
Radon Test Kits Collected	04/01/2022	BMM
Radon Test Kits Shipped to Lab*	04/01/2022	BMM
Radon Test Kits Received by Lab*	04/04/2022	BMM

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



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Site Name	Roscoe Nix
	Elementary School
Date of Test Report	4/29/2022
Round of Testing	Initial
	Follow-up
	Post Remediation
	2 Year Testing
	5 Year Testing
	HVAC Upgrade
	Window Replacement
	New Addition
	New Facility
# Rooms Tested	49
# Rooms $\geq$ 4.0 pCi/L	0
Lowest Value	<0.3 pCi/L
Highest Value	1.0 pCi/L

### MCPS RADON TESTING – EXECUTIVE SUMMARY

Project Status: Initial testing completed; Missing or compromised samples need re-sampling



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April 29, 2022

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

Re:	<b>Radon Testing Services</b>	
	KCI Job # 122108316	
Location:	Roscoe Nix Elementary School 1100 Corliss St.	
	Silver Spring, MD 20903	

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 Roscoe Nix Elementary School, located at 1100 Corliss St. Silver Spring, MD 20903 (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 March 7, 2022 and deployed fifty-six (56) 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 March 10, 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

Mr. Brian Croyle April 29, 2022 Page 3

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 post-mitigation biennial testing.

These tests were conducted to:

• Confirm the success of the mitigation system(s).

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 mid 20s and high temperatures ranged from the high 70s to the low 50s Fahrenheit. Maximum sustained winds ranged from 0-32 miles per hour. Average humidity was around 65% with 1.09 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	

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 McCleaf

Tyler P. McCleaf Radon Measurement Provider #111004 RT KCI Technologies, Inc.

Attachments:

A- Floor Plan with Test LocationsB- Table 1-3, Radon Test Summary SpreadsheetsC- Laboratory Analytical Results

KCI TECHNOLOGIES, INC.

## 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	
	Roscoe Nix ES	
Te	est Period: 03/07/2022 - 03/10/2022	
Kit Number	Room / Area	Result
11130515	104	< 0.3
11130503	106	< 0.3
11130508	106	< 0.3
11130502	108	< 0.3
11130531	110	< 0.3
11130530	130	< 0.3
11130507	132	< 0.3
11130528	140	< 0.3
11130549	142	< 0.3
11130556	146	< 0.3
11130542	147	< 0.3
11130548	148	< 0.3
11130550	148	< 0.3
11130541	151	< 0.3
11130540	152	< 0.3
11130539	155	< 0.3
11130536	156	< 0.3
11130534	159	< 0.3
11130532	160	< 0.3
11130533	162	< 0.3
11130506	163	< 0.3
11130513	163	< 0.3
11130544	165	< 0.3
11130543	166	< 0.3
11130535	170	< 0.3
11130560	182	< 0.3
11130567	182	< 0.3
11130566	184 188	< 0.3
11130558 11130563	211	< 0.3
11130563	234	< 0.3
11130555	234	< 0.3
11130568	100B	< 0.3
11130555	1008	< 0.3
11130509	100C 100E	< 0.3
11130510	100E	< 0.3
11130517	102 HEALTH	< 0.3
11130511	102 HEALTH 102E	< 0.3
11130516	102C	< 0.3
11130525	110A	< 0.3
11130524	112 APR	1.0
11130526	112 APR	0.9
11130320		

	Table 1- Radon Testing Results	
	Roscoe Nix ES	
Te	est Period: 03/07/2022 - 03/10/2022	
Kit Number	Room / Area	Result
11130514	114A KITCHEN OFFICE	0.8
11130523	122 BS	< 0.3
11130527	122 BS	< 0.3
11130505	163B	< 0.3
11130551	163B	< 0.3
11130529	190B	< 0.3
11130522	GYM	0.6
11130521	GYM OFFICE	< 0.3
11130512	MAIN OFFICE	< 0.3
11130557	MEDIA CENTER	< 0.3
11130565	MEDIA CENTER	< 0.3
11130559	MEDIA CENTER OFFICE	< 0.3
11130518	STAGE	0.8
11130519	STAGE	0.9

	Table 2- Radon	Testing Results	
	Roscoe	e Nix ES	
	Test Period: 03/07	/2022 - 03/10/2022	
Kit Number	QC Type	Room / Area	Result
11130503	D	106	< 0.3
11130519	D	Stage	0.9
11130527	FB	122 BS	< 0.3
11130548	D	148	< 0.3
11130506	D	163	< 0.3
11130505	FB	163B	< 0.3
11130567	D	182	< 0.3
11131662	OB	OFFICE BLANK	< 0.3
11131691	ТВ	TRAVEL BLANK	< 0.3

	Summary of Missed Locations		
	Roscoe Nix ES		
Т	est Period: 03/07/22 - 03/10/22		
Kit Number	Room/Area	Result	
	NA		

Summary of	of Missing, Compromised and >/= 4	piC/L Tests
,	Roscoe Nix ES	• •
	Test Period: 03/07/22 - 03/10/22	
Kit Number	Room/Area	Result
11130520	Gym	Missing

Table Note:

\* Missing or Compromised Sample

## ATTACHMENT C

# Laboratory Analytical Results

### Radon test result report for:

## **ROSCOE NIX ES**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11130553	100B	2022-03-07 @ 9:00 a	m 2022-03-10 @ 8:00 am	< 0.3	2022-03-14
11130501	100C	2022-03-07 @ 8:00 a	m 2022-03-10 @ 8:00 am	< 0.3	2022-03-14
11130509	100E	2022-03-07 @ 8:00 a	m 2022-03-10 @ 8:00 am	< 0.3	2022-03-14
11130510	100G	2022-03-07 @ 8:00 a	m 2022-03-10 @ 8:00 am	< 0.3	2022-03-14
11130517	102 HEALTH	2022-03-07 @ 8:00 a	m 2022-03-10 @ 8:00 am	< 0.3	2022-03-14
11130511	102E	2022-03-07 @ 8:00 a	m 2022-03-10 @ 8:00 am	< 0.3	2022-03-14
11130516	102G	2022-03-07 @ 8:00 a	m 2022-03-10 @ 8:00 am	< 0.3	2022-03-14
11130515	104	2022-03-07 @ 8:00 a	m 2022-03-10 @ 8:00 am	< 0.3	2022-03-14
11130503	106	2022-03-07 @ 8:00 a	m 2022-03-10 @ 8:00 am	< 0.3	2022-03-14
11130508	106	2022-03-07 @ 8:00 a	m 2022-03-10 @ 8:00 am	< 0.3	2022-03-14
11130502	108	2022-03-07 @ 8:00 a	m 2022-03-10 @ 9:00 am	< 0.3	2022-03-14
11130531	110	2022-03-07 @ 8:00 a	m 2022-03-10 @ 9:00 am	< 0.3	2022-03-14
11130525	110A	2022-03-07 @ 8:00 a	m 2022-03-10 @ 9:00 am	< 0.3	2022-03-14
11130524	112 APR	2022-03-07 @ 8:00 a	m 2022-03-10 @ 9:00 am	$1.0 \pm 0.3$	2022-03-14
11130526	112 APR	2022-03-07 @ 8:00 a	m 2022-03-10 @ 9:00 am	$0.9 \pm 0.3$	2022-03-14
11130514	114A KITCHEN OFFICE	2022-03-07 @ 8:00 a	m 2022-03-10 @ 9:00 am	$0.8 \pm 0.3$	2022-03-14
11130523	122 BS	2022-03-07 @ 8:00 a	m 2022-03-10 @ 9:00 am	< 0.3	2022-03-14
11130527	122 BS	2022-03-07 @ 8:00 a	m 2022-03-10 @ 9:00 am	< 0.3	2022-03-14
11130530	130	2022-03-07 @ 8:00 a	m 2022-03-10 @ 9:00 am	< 0.3	2022-03-14
11130507	132	2022-03-07 @ 8:00 a	m 2022-03-10 @ 9:00 am	< 0.3	2022-03-14
11130528	140	2022-03-07 @ 8:00 a	m 2022-03-10 @ 8:00 am	< 0.3	2022-03-14
11130549	142	2022-03-07 @ 8:00 a	m 2022-03-10 @ 8:00 am	< 0.3	2022-03-14
11130556	146	2022-03-07 @ 8:00 a	m 2022-03-10 @ 8:00 am	< 0.3	2022-03-14
11130542	147	2022-03-07 @ 8:00 a	m 2022-03-10 @ 8:00 am	< 0.3	2022-03-14
11130550	148	2022-03-07 @ 8:00 a	m 2022-03-10 @ 8:00 am	< 0.3	2022-03-14
11130548	148	2022-03-07 @ 8:00 a	m 2022-03-10 @ 8:00 am	< 0.3	2022-03-14
11130541	151	2022-03-07 @ 8:00 a	m 2022-03-10 @ 8:00 am	< 0.3	2022-03-14
11130540	152	2022-03-07 @ 9:00 a	m 2022-03-10 @ 8:00 am	< 0.3	2022-03-14
11130539	155		m 2022-03-10 @ 8:00 am	< 0.3	2022-03-14
11130536	156	2022-03-07 @ 9:00 a	m 2022-03-10 @ 8:00 am	< 0.3	2022-03-14
11130534	159	2022-03-07 @ 9:00 a	m 2022-03-10 @ 8:00 am	< 0.3	2022-03-14
11130532	160	2022-03-07 @ 9:00 a	m 2022-03-10 @ 8:00 am	< 0.3	2022-03-14
11130533	162	2022-03-07 @ 9:00 a	m 2022-03-10 @ 8:00 am	< 0.3	2022-03-14
11130513	163		m 2022-03-10 @ 8:00 am	< 0.3	2022-03-14
11130505	163B	2022-03-07 @ 9:00 a	m 2022-03-10 @ 8:00 am	< 0.3	2022-03-14
11130551	163B	2022-03-07 @ 9:00 a	m 2022-03-10 @ 8:00 am	< 0.3	2022-03-14
11130544	165	2022-03-07 @ 9:00 a	m 2022-03-10 @ 8:00 am	< 0.3	2022-03-14

### Radon test result report for:

### **ROSCOE NIX ES**

170 182 182 184 188	2022-03-07 @ 9:00 am 2022-03-07 @ 9:00 am 2022-03-07 @ 9:00 am	2022-03-10 @ 8:00 am	< 0.3 < 0.3 < 0.3 < 0.3 < 0.3	2022-03-14 2022-03-14 2022-03-14 2022-03-14 2022-03-14
182 182 184 188	2022-03-07 @ 9:00 am 2022-03-07 @ 9:00 am 2022-03-07 @ 9:00 am	2022-03-10 @ 8:00 am 2022-03-10 @ 8:00 am 2022-03-10 @ 8:00 am	< 0.3 < 0.3	2022-03-14 2022-03-14
182 184 188	2022-03-07 @ 9:00 am 2022-03-07 @ 9:00 am	2022-03-10 @ 8:00 am 2022-03-10 @ 8:00 am	< 0.3	2022-03-14
184 188	2022-03-07 @ 9:00 am	2022-03-10 @ 8:00 am		
188			< 0.3	2022-03-14
	2022-03-07 @ 9:00 am	$2022 02 10 \oplus 9.00$		
190B		2022-03-10 @ 8:00 am	< 0.3	2022-03-14
1700	2022-03-07 @ 9:00 am	2022-03-10 @ 8:00 am	< 0.3	2022-03-14
211	2022-03-07 @ 9:00 am	2022-03-10 @ 8:00 am	< 0.3	2022-03-14
234	2022-03-07 @ 9:00 am	2022-03-10 @ 8:00 am	< 0.3	2022-03-14
239	2022-03-07 @ 9:00 am	2022-03-10 @ 8:00 am	< 0.3	2022-03-14
GYM	2022-03-07 @ 8:00 am	2022-03-10 @ 9:00 am	$0.6 \pm 0.3$	2022-03-14
GYM OFFICE	2022-03-07 @ 8:00 am	2022-03-10 @ 9:00 am	< 0.3	2022-03-14
MAIN OFFICE	2022-03-07 @ 8:00 am	2022-03-10 @ 8:00 am	< 0.3	2022-03-14
MEDIA CENTER	2022-03-07 @ 9:00 am	2022-03-10 @ 8:00 am	< 0.3	2022-03-14
MEDIA CENTER	2022-03-07 @ 9:00 am	2022-03-10 @ 8:00 am	< 0.3	2022-03-14
IA CENTER OFFICE	2022-03-07 @ 9:00 am	2022-03-10 @ 8:00 am	< 0.3	2022-03-14
STAGE	2022-03-07 @ 8:00 am	2022-03-10 @ 9:00 am	$0.8 \pm 0.3$	2022-03-14
STAGE	2022-03-07 @ 8:00 am	2022-03-10 @ 9:00 am	$0.9 \pm 0.3$	2022-03-14
	234 239 GYM GYM OFFICE MAIN OFFICE MEDIA CENTER MEDIA CENTER DIA CENTER OFFICE STAGE	234 2022-03-07 @ 9:00 am   239 2022-03-07 @ 9:00 am   GYM 2022-03-07 @ 9:00 am   GYM OFFICE 2022-03-07 @ 8:00 am   MAIN OFFICE 2022-03-07 @ 8:00 am   MEDIA CENTER 2022-03-07 @ 9:00 am   MEDIA CENTER 2022-03-07 @ 9:00 am   MARCENTER OFFICE 2022-03-07 @ 9:00 am   STAGE 2022-03-07 @ 8:00 am	2342022-03-07 @ 9:00 am2022-03-10 @ 8:00 am2392022-03-07 @ 9:00 am2022-03-10 @ 8:00 amGYM2022-03-07 @ 8:00 am2022-03-10 @ 9:00 amGYM OFFICE2022-03-07 @ 8:00 am2022-03-10 @ 9:00 amMAIN OFFICE2022-03-07 @ 8:00 am2022-03-10 @ 9:00 amMEDIA CENTER2022-03-07 @ 9:00 am2022-03-10 @ 8:00 amMEDIA CENTER2022-03-07 @ 9:00 am2022-03-10 @ 8:00 amMARCENTER OFFICE2022-03-07 @ 9:00 am2022-03-10 @ 8:00 amMARCENTER OFFICE2022-03-07 @ 9:00 am2022-03-10 @ 8:00 am	2342022-03-07 @ 9:00 am2022-03-10 @ 8:00 am< 0.32392022-03-07 @ 9:00 am2022-03-10 @ 8:00 am< 0.3

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

### Radon test result report for: ROSCOE NIX ES

n Id Started	Ended	pCi/L	Analyzed
3 2022-03-07	@ 9:00 am 2022-03-10 @ 8:00	am < 0.3	2022-03-14

# EXPOSURE IN BOWSER-MORNER RADON CHAMBER

CLIENT KCI Technologies, I	Job Nu	umber 204620
NOMINAL Conditions: Radon Conc 27.0 p		_% Temp. <u>70.0</u> F
Date Start: 3/18/22 Date Stop: 3/21/22	Date Start:	Date Stop:
Time Start: 0705 Time Stop: 0705	Time Start:	Time Stop:
Device No.'s: (5) Char Bags-	Device No.'s:	
11139367, 11139368, 11139371,		
11139710, 11139717		с. 
E3 Right		10.1
Date Start: Date Stop:	Date Start:	Date Stop:
Time Start: Time Stop:	Time Start:	Time Stop:
Device No.'s:	Device No.'s:	
		Ω.
а — "л Ц		~
Date Start: Date Stop:	Date Start:	Date Stop:
Time Start: Time Stop:	0 7 7 8	Time Stop:
Device No.'s:	Device No.'s:	42

1

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

March 30, 2022

### **\*\* 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



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

Name of Schools:

- 1. Cresthaven ES
- 2. Key, Francis Scott MS
- 3. Nix, Roscoe ES
- 4. Greencastle ES
- 5. Jackson Road
- 6. Page, William Tyler ES
- 7. West Farm Transportation Depot
- 8. Westover ES
- 9. White Oak MS

	Date	Initials
Radon Test Kits Deployed	03/07/2022	BMU
Radon Test Kits Collected	03/10/2022	Ban
Radon Test Kits Shipped to Lab*	03/10/2022	Barri
Radon Test Kits Received by Lab*	03/13/2022	BMM

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