KCI TECHNOLOGIES

ENGINEERS • PLANNERS • SCIENTISTS • CONSTRUCTION MANAGERS

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

MCPS RADON TESTING – EXECUTIVE SUMMARY

Site Name	Clearspring 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 ≥ 4.0 pCi/L	0
Lowest Value	<0.3 pCi/L
Highest Value	1.3 pCi/L

Project Status

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

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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: Clearspring Elementary School
9930 Moyer Rd.
Damascus, MD 20872

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 Clearspring Elementary School, located at 9930 Moyer Rd. Damascus, MD 20872 (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 22, 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. ≥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 25, 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 concentration levels 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.

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
QC- Quality Control

Table 1- Radon Testing Results		
Clearspring ES RT		
Test Period: 03/22/2022 - 03/25/2022		
Kit Number	Room / Area	Result
11131718	KITCHEN OFFICE	0.9
11131701	PRINTER	< 0.3
11131702	PRINTER	1.3
11131723	PRINTER	1.0

Table 2- Radon Testing Results			
Clearspring ES RT			
Test Period: 03/22/2022 - 03/25/2022			
Kit Number	QC Type	Room / Area	Result
11131723	D	Printer	1.0
11131701	FB	Printer	< 0.3
11139902	OB	OFFICE BLANK	< 0.3
11139928	TB	TRAVEL BLANK	< 0.3

Summary of Missed Locations		
Clearspring ES RT		
Test Period: 03/22/22 - 03/25/22		
Kit Number	Room/Area	Result
	NA	

Summary of Missing, Compromised and >/= 4 piC/L Tests		
Clearspring ES RT		
Test Period: 03/22/22 - 03/25/22		
Kit Number	Room/Area	Result
	NA	

Table Note:

* Missing or Compromised Sample

ATTACHMENT C

Laboratory Analytical Results

March 28, 2022

** LABORATORY ANALYSIS REPORT **

Radon test result report for:
CLEARSPRING ES

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11131718	KITCHEN OFFICE	2022-03-22 @ 9:00 am	2022-03-25 @ 8:00 am	0.9 ± 0.3	2022-03-28
11131702	PRINTER	2022-03-22 @ 9:00 am	2022-03-25 @ 8:00 am	1.3 ± 0.3	2022-03-28
11131723	PRINTER	2022-03-22 @ 9:00 am	2022-03-25 @ 8:00 am	1.0 ± 0.3	2022-03-28
11131701	PRINTER	2022-03-22 @ 9:00 am	2022-03-25 @ 8:00 am	< 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, Inc. Job Number 204620

NOMINAL Conditions: Radon Conc 27.0 pCi/L Rel. Hum 50.1 % Temp. 70.0 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	_____
E3 Eight	_____
Date Start: _____ Date Stop: _____	Date Start: _____ Date Stop: _____
Time Start: _____ Time Stop: _____	Time Start: _____ Time Stop: _____
Device No.'s: _____	Device No.'s: _____
_____	_____
_____	_____
_____	_____
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 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 ± 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 ± 2.1	2022-03-30
11139368	SK2	2022-03-18 @ 7:00 am	2022-03-21 @ 7:00 am	23.9 ± 2.0	2022-03-30
11139371	SK3	2022-03-18 @ 7:00 am	2022-03-21 @ 7:00 am	25.7 ± 2.1	2022-03-30
11139710	SK4	2022-03-18 @ 7:00 am	2022-03-21 @ 7:00 am	26.4 ± 2.1	2022-03-30
11139717	SK5	2022-03-18 @ 7:00 am	2022-03-21 @ 7:00 am	24.6 ± 2.0	2022-03-30

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

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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. Herbert Hoover MS
2. Parkland MS
3. Redland MS
4. Rock Creek Valley ES
5. Tilden MS
6. Rockville HS
7. Wootton HS
8. Capt. James E. Daly ES
9. Clarksburg HS
10. Clearspring ES
11. Hallie Wells MS
12. Northwest HS
13. Paint Branch HS
14. Rocky Hills MS
15. Seneca Valley HS
16. Sherwood HS
17. Wilson Wims ES

	Date	Initials
Radon Test Kits Deployed	03/22/2022	BMM
Radon Test Kits Collected	03/25/2022	BMM
Radon Test Kits Shipped to Lab*	03/25/2022	BMM
Radon Test Kits Received by Lab*	03/28/2022	BMM

*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	Clearspring Elementary School
Date of Test Report	4/6/2022
Round of Testing	Initial Follow-up Post Remediation 2 Year Testing 5 Year Testing HVAC Upgrade Window Replacement New Addition New Facility
# Rooms Tested	66
# Rooms ≥ 4.0 pCi/L	0
Lowest Value	<0.3 pCi/L
Highest Value	3.1 pCi/L

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

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

April 6, 2022

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

Re: **Radon Testing Services**
KCI Job # 122108316

Location: Clearspring ES
9930 Moyer Rd.
Damascus, MD 20872

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 Clearspring ES, located at 9930 Moyer Rd. Damascus, MD 20871 (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 February 14, 2022 and deployed seventy five (75) 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 February 17, 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 post-mitigation biennial testing.
- Initial testing.

These tests were conducted to:

- Confirm the success of the mitigation system(s).
- Evaluate radon concentration levels due to Addition/HVAC Upgrades/Replacement.

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 20s and high temperatures ranged from the high 30s to the high 40s Fahrenheit. Maximum sustained winds ranged from 5-18 miles per hour. Average humidity was around 15% with 1.5 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
QC- Quality Control

Table 1- Radon Testing Results		
Clearspring ES		
Test Period: 02/14/2022 - 02/17/2022		
Kit Number	Room / Area	Result
11123638	1	1.0
11123634	2	0.6
11123641	2	< 0.3
11123628	3	0.7
11123639	4	< 0.3
11123632	5	1.4
11123619	6	1.2
11123612	7	1.3
11123637	8	< 0.3
11123625	9	0.5
11123608	10	0.6
11123642	11	< 0.3
11123604	12	< 0.3
11123636	12	< 0.3
11123629	13	< 0.3
11123611	14	< 0.3
11123663	15	< 0.3
11123672	16	0.8
11123653	17	< 0.3
11123659	18	0.9
11123650	19	1.1
11123646	20	< 0.3
11123649	21	0.7
11123651	22	1.2
11123652	23	0.8
11123658	24	0.7
11123680	25	1.2
11123675	26	2.9
11123648	27	< 0.3
11123657	27	1.4
11123607	104	< 0.3
11123617	100D	1.8
11123610	100E	2.2
11123623	100I	1.1
11123618	101 HEALTH	0.9
11123609	101C	< 0.3
11123601	101D	1.0
11123615	104A	0.8
11123606	104B	1.1
11123644	107A	1.2
11123643	107B	0.8
11123630	ART	< 0.3

Table 1- Radon Testing Results		
Clearspring ES		
Test Period: 02/14/2022 - 02/17/2022		
Kit Number	Room / Area	Result
11123670	BUILDING SERVICES OFFICE	1.4
11123674	C	1.3
11123622	COPY ROOM	< 0.3
11123621	COUNSELORS OFFICE	1.0
11123661	GYM	1.1
11123668	GYM	1.1
11123660	GYM OFFICE	1.4
11123662	ISM	< 0.3
11123616	K1	0.8
11123614	K2	1.3
11123613	K3	1.8
11123647	K4	1.4
11123602	MAIN OFFICE	1.5
11123633	MEDIA ASST OFFICE	< 0.3
11123620	MEDIA CENTER	< 0.3
11123640	MEDIA CENTER	< 0.3
11123627	MEDIA OFFICE	< 0.3
11123626	MEDIA WORK ROOM	< 0.3
11123645	MULTIPURPOSE ROOM	1.0
11123655	MULTIPURPOSE ROOM	< 0.3
11123624	PRINCIPALS OFFICE	3.1
11123654	R1/R2	1.0
11123682	R1/R2 LL	1.5
11123666	RR	1.5
11123673	S1	0.7
11123603	S3	< 0.3
11123664	SPT	0.6
11123631	ST	< 0.3
11123605	ST OFFICE	< 0.3
11123656	STAFF LOUNGE	1.3
11123635	STAGE	< 0.3
11123665	V	0.8
11123681	Z	2.2

Table 2- Radon Testing Results			
Clearspring ES			
Test Period: 02/14/2022 - 02/17/2022			
Kit Number	QC Type	Room / Area	Result
11123615	D	104A	0.8
11123634	D	2	0.6
11123641	FB	2	< 0.3
11123619	D	6	1.2
11123636	D	12	< 0.3
11123604	FB	12	< 0.3
11123670	D	Building Services Office	1.4
11123657	D	27	< 0.3
11123650	D	19	1.1
11107385	OB	OFFICE BLANK	< 0.3
11123161	TB	TRAVEL BLANK	< 0.3

Summary of Missed Locations		
Clearspring ES		
Test Period: 02/14/22 - 02/17/22		
Kit Number	Room/Area	Result
NA	Kitchen Office	NA
NA	Basement Printer Room	NA

Summary of Missing, Compromised and >/= 4 piC/L Tests		
Clearspring ES		
Test Period: 02/14/22 - 02/17/22		
Kit Number	Room/Area	Result
	NA	

Table Note:

* Missing or Compromised Sample

ATTACHMENT C

Laboratory Analytical Results

February 21, 2022

** LABORATORY ANALYSIS REPORT **

Radon test result report for:

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11123638	1	2022-02-14 @ 1:00 pm	2022-02-17 @ 11:00 am	1.0 ± 0.3	2022-02-21
11123608	10	2022-02-14 @ 2:00 pm	2022-02-17 @ 11:00 am	0.6 ± 0.3	2022-02-21
11122216	100A	2022-02-14 @ 9:00 am	2022-02-17 @ 8:00 am	0.6 ± 0.3	2022-02-21
11122213	100B	2022-02-14 @ 9:00 am	2022-02-17 @ 8:00 am	< 0.3	2022-02-21
11122211	100D	2022-02-14 @ 9:00 am	2022-02-17 @ 8:00 am	< 0.3	2022-02-21
11123617	100D	2022-02-14 @ 1:00 pm	2022-02-17 @ 10:00 am	1.8 ± 0.4	2022-02-21
11123610	100E	2022-02-14 @ 1:00 pm	2022-02-17 @ 10:00 am	2.2 ± 0.4	2022-02-21
11122220	100F	2022-02-14 @ 9:00 am	2022-02-17 @ 8:00 am	0.5 ± 0.3	2022-02-21
11122212	100G	2022-02-14 @ 9:00 am	2022-02-17 @ 8:00 am	0.6 ± 0.3	2022-02-21
11122204	100H	2022-02-14 @ 9:00 am	2022-02-17 @ 8:00 am	0.5 ± 0.3	2022-02-21
11123623	100I	2022-02-14 @ 1:00 pm	2022-02-17 @ 10:00 am	1.1 ± 0.4	2022-02-21
11122203	100J	2022-02-14 @ 9:00 am	2022-02-17 @ 8:00 am	0.8 ± 0.3	2022-02-21
11122207	100M	2022-02-14 @ 9:00 am	2022-02-17 @ 8:00 am	< 0.3	2022-02-21
11122234	100Q	2022-02-14 @ 9:00 am	2022-02-17 @ 8:00 am	< 0.3	2022-02-21
11122287	100R	2022-02-14 @ 12:00 pm	2022-02-17 @ 8:00 am	< 0.3	2022-02-21
11122228	100T	2022-02-14 @ 9:00 am	2022-02-17 @ 8:00 am	< 0.3	2022-02-21
11122227	100V	2022-02-14 @ 9:00 am	2022-02-17 @ 8:00 am	< 0.3	2022-02-21
11122260	101 CAFETERIA	2022-02-14 @ 11:00 am	2022-02-17 @ 9:00 am	< 0.3	2022-02-21
11122268	101 CAFETERIA	2022-02-14 @ 11:00 am	2022-02-17 @ 9:00 am	< 0.3	2022-02-21
11123618	101 HEALTH	2022-02-14 @ 1:00 pm	2022-02-17 @ 10:00 am	0.9 ± 0.3	2022-02-21
11122272	101A	2022-02-14 @ 12:00 pm	2022-02-17 @ 9:00 am	< 0.3	2022-02-21
11123609	101C	2022-02-14 @ 1:00 pm	2022-02-17 @ 11:00 am	< 0.3	2022-02-21
11123601	101D	2022-02-14 @ 1:00 pm	2022-02-17 @ 10:00 am	1.0 ± 0.3	2022-02-21
11122267	101G	2022-02-14 @ 12:00 pm	2022-02-17 @ 9:00 am	< 0.3	2022-02-21
11122215	102 HEALTH	2022-02-14 @ 9:00 am	2022-02-17 @ 8:00 am	< 0.3	2022-02-21
11122206	102A	2022-02-14 @ 9:00 am	2022-02-17 @ 8:00 am	< 0.3	2022-02-21
11122214	102E	2022-02-14 @ 9:00 am	2022-02-17 @ 8:00 am	< 0.3	2022-02-21
11122208	102F	2022-02-14 @ 9:00 am	2022-02-17 @ 8:00 am	< 0.3	2022-02-21
11122205	102G	2022-02-14 @ 9:00 am	2022-02-17 @ 8:00 am	< 0.3	2022-02-21
11122237	103 GYM	2022-02-14 @ 11:00 am	2022-02-17 @ 9:00 am	< 0.3	2022-02-21
11122240	103 GYM	2022-02-14 @ 11:00 am	2022-02-17 @ 9:00 am	0.5 ± 0.3	2022-02-21
11122290	104	2022-02-14 @ 11:00 am	2022-02-17 @ 9:00 am	< 0.3	2022-02-21
11123607	104	2022-02-14 @ 1:00 pm	2022-02-17 @ 11:00 am	< 0.3	2022-02-21
11122283	104A	2022-02-14 @ 11:00 am	2022-02-17 @ 9:00 am	0.8 ± 0.3	2022-02-21
11122258	104A	2022-02-14 @ 11:00 am	2022-02-17 @ 9:00 am	< 0.3	2022-02-21
11123615	104A	2022-02-14 @ 1:00 pm	2022-02-17 @ 11:00 am	0.8 ± 0.3	2022-02-21
11123606	104B	2022-02-14 @ 1:00 pm	2022-02-17 @ 11:00 am	1.1 ± 0.4	2022-02-21

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

February 21, 2022

** LABORATORY ANALYSIS REPORT **

Radon test result report for:

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11122274	104C	2022-02-14 @ 11:00 am	2022-02-17 @ 9:00 am	0.6 ± 0.3	2022-02-21
11122259	104D	2022-02-14 @ 11:00 am	2022-02-17 @ 9:00 am	0.6 ± 0.3	2022-02-21
11122245	104E	2022-02-14 @ 11:00 am	2022-02-17 @ 9:00 am	< 0.3	2022-02-21
11122271	104F	2022-02-14 @ 11:00 am	2022-02-17 @ 9:00 am	0.8 ± 0.4	2022-02-21
11122281	104G	2022-02-14 @ 11:00 am	2022-02-17 @ 9:00 am	1.8 ± 0.3	2022-02-21
11122251	105	2022-02-14 @ 11:00 am	2022-02-17 @ 9:00 am	< 0.3	2022-02-21
11122284	106	2022-02-14 @ 11:00 am	2022-02-17 @ 9:00 am	< 0.3	2022-02-21
11123644	107A	2022-02-14 @ 2:00 pm	2022-02-17 @ 10:00 am	1.2 ± 0.4	2022-02-21
11123643	107B	2022-02-14 @ 2:00 pm	2022-02-17 @ 10:00 am	0.8 ± 0.3	2022-02-21
11122263	108	2022-02-14 @ 10:00 am	2022-02-17 @ 9:00 am	< 0.3	2022-02-21
11122262	108C	2022-02-14 @ 10:00 am	2022-02-17 @ 9:00 am	< 0.3	2022-02-21
11123642	11	2022-02-14 @ 2:00 pm	2022-02-17 @ 11:00 am	< 0.3	2022-02-21
11122254	111	2022-02-14 @ 10:00 am	2022-02-17 @ 9:00 am	< 0.3	2022-02-21
11122255	112	2022-02-14 @ 10:00 am	2022-02-17 @ 9:00 am	< 0.3	2022-02-21
11122256	112A	2022-02-14 @ 10:00 am	2022-02-17 @ 9:00 am	< 0.3	2022-02-21
11122249	112B	2022-02-14 @ 10:00 am	2022-02-17 @ 9:00 am	< 0.3	2022-02-21
11122221	113	2022-02-14 @ 10:00 am	2022-02-17 @ 9:00 am	< 0.3	2022-02-21
11122265	115	2022-02-14 @ 10:00 am	2022-02-17 @ 9:00 am	< 0.3	2022-02-21
11122270	115A	2022-02-14 @ 10:00 am	2022-02-17 @ 9:00 am	< 0.3	2022-02-21
11122223	116	2022-02-14 @ 10:00 am	2022-02-17 @ 9:00 am	0.6 ± 0.3	2022-02-21
11122269	119	2022-02-14 @ 10:00 am	2022-02-17 @ 9:00 am	0.8 ± 0.3	2022-02-21
11122257	119A	2022-02-14 @ 10:00 am	2022-02-17 @ 9:00 am	< 0.3	2022-02-21
11123604	12	2022-02-14 @ 2:00 pm	2022-02-17 @ 11:00 am	< 0.3	2022-02-21
11123636	12	2022-02-14 @ 2:00 pm	2022-02-17 @ 11:00 am	< 0.3	2022-02-21
11122241	120	2022-02-14 @ 9:00 am	2022-02-17 @ 8:00 am	< 0.3	2022-02-21
11122233	123	2022-02-14 @ 10:00 am	2022-02-17 @ 8:00 am	< 0.3	2022-02-21
11122225	123 OFFICE	2022-02-14 @ 10:00 am	2022-02-17 @ 8:00 am	< 0.3	2022-02-21
11122242	124	2022-02-14 @ 10:00 am	2022-02-17 @ 8:00 am	< 0.3	2022-02-21
11122243	126	2022-02-14 @ 10:00 am	2022-02-17 @ 8:00 am	< 0.3	2022-02-21
11123629	13	2022-02-14 @ 2:00 pm	2022-02-17 @ 11:00 am	< 0.3	2022-02-21
11122236	130	2022-02-14 @ 10:00 am	2022-02-17 @ 8:00 am	< 0.3	2022-02-21
11122235	130	2022-02-14 @ 10:00 am	2022-02-17 @ 8:00 am	< 0.3	2022-02-21
11122230	132	2022-02-14 @ 10:00 am	2022-02-17 @ 9:00 am	< 0.3	2022-02-21
11122224	132 OFFICE	2022-02-14 @ 10:00 am	2022-02-17 @ 9:00 am	< 0.3	2022-02-21
11122210	136	2022-02-14 @ 10:00 am	2022-02-17 @ 9:00 am	< 0.3	2022-02-21
11122209	138	2022-02-14 @ 10:00 am	2022-02-17 @ 9:00 am	< 0.3	2022-02-21
11123611	14	2022-02-14 @ 2:00 pm	2022-02-17 @ 11:00 am	< 0.3	2022-02-21

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February 21, 2022 **** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11122218	142	2022-02-14 @ 10:00 am	2022-02-17 @ 9:00 am	< 0.3	2022-02-21
11122219	144	2022-02-14 @ 10:00 am	2022-02-17 @ 9:00 am	< 0.3	2022-02-21
11122217	148	2022-02-14 @ 10:00 am	2022-02-17 @ 9:00 am	< 0.3	2022-02-21
11122222	149	2022-02-14 @ 10:00 am	2022-02-17 @ 9:00 am	< 0.3	2022-02-21
11123663	15	2022-02-14 @ 2:00 pm	2022-02-17 @ 10:00 am	< 0.3	2022-02-21
11122226	150	2022-02-14 @ 10:00 am	2022-02-17 @ 9:00 am	< 0.3	2022-02-21
11122244	151	2022-02-14 @ 10:00 am	2022-02-17 @ 9:00 am	0.6 ± 0.3	2022-02-21
11122248	156 AUX 1	2022-02-14 @ 11:00 am	2022-02-17 @ 9:00 am	< 0.3	2022-02-21
11122273	157	2022-02-14 @ 11:00 am	2022-02-17 @ 9:00 am	< 0.3	2022-02-21
11122282	157B	2022-02-14 @ 11:00 am	2022-02-17 @ 9:00 am	< 0.3	2022-02-21
11122279	157C	2022-02-14 @ 11:00 am	2022-02-17 @ 9:00 am	< 0.3	2022-02-21
11122280	157D	2022-02-14 @ 11:00 am	2022-02-17 @ 9:00 am	< 0.3	2022-02-21
11122246	158	2022-02-14 @ 11:00 am	2022-02-17 @ 9:00 am	< 0.3	2022-02-21
11122276	159	2022-02-14 @ 11:00 am	2022-02-17 @ 9:00 am	< 0.3	2022-02-21
11123672	16	2022-02-14 @ 2:00 pm	2022-02-17 @ 10:00 am	0.8 ± 0.3	2022-02-21
11122247	160	2022-02-14 @ 11:00 am	2022-02-17 @ 9:00 am	< 0.3	2022-02-21
11122250	162	2022-02-14 @ 11:00 am	2022-02-17 @ 9:00 am	< 0.3	2022-02-21
11122202	163	2022-02-14 @ 12:00 pm	2022-02-17 @ 9:00 am	< 0.3	2022-02-21
11122239	166C	2022-02-14 @ 11:00 am	2022-02-17 @ 9:00 am	< 0.3	2022-02-21
11122238	167D	2022-02-14 @ 11:00 am	2022-02-17 @ 9:00 am	< 0.3	2022-02-21
11122275	168	2022-02-14 @ 12:00 pm	2022-02-17 @ 9:00 am	< 0.3	2022-02-21
11123653	17	2022-02-14 @ 2:00 pm	2022-02-17 @ 10:00 am	< 0.3	2022-02-21
11122252	171	2022-02-14 @ 12:00 pm	2022-02-17 @ 9:00 am	< 0.3	2022-02-21
11122232	178 TEAM ROOM	2022-02-14 @ 11:00 am	2022-02-17 @ 9:00 am	< 0.3	2022-02-21
11123659	18	2022-02-14 @ 3:00 pm	2022-02-17 @ 11:00 am	0.9 ± 0.4	2022-02-21
11123650	19	2022-02-14 @ 3:00 pm	2022-02-17 @ 11:00 am	1.1 ± 0.3	2022-02-21
11123641	2	2022-02-14 @ 1:00 pm	2022-02-17 @ 11:00 am	< 0.3	2022-02-21
11123634	2	2022-02-14 @ 1:00 pm	2022-02-17 @ 11:00 am	0.6 ± 0.3	2022-02-21
11123646	20	2022-02-14 @ 3:00 pm	2022-02-17 @ 11:00 am	< 0.3	2022-02-21
11122231	204	2022-02-14 @ 12:00 pm	2022-02-17 @ 10:00 am	< 0.3	2022-02-21
11123649	21	2022-02-14 @ 3:00 pm	2022-02-17 @ 11:00 am	0.7 ± 0.3	2022-02-21
11123651	22	2022-02-14 @ 3:00 pm	2022-02-17 @ 11:00 am	1.2 ± 0.4	2022-02-21
11122266	223 TEAM ROOM	2022-02-14 @ 12:00 pm	2022-02-17 @ 10:00 am	< 0.3	2022-02-21
11123652	23	2022-02-14 @ 3:00 pm	2022-02-17 @ 11:00 am	0.8 ± 0.3	2022-02-21
11123658	24	2022-02-14 @ 3:00 pm	2022-02-17 @ 11:00 am	0.7 ± 0.3	2022-02-21
11123680	25	2022-02-14 @ 2:00 pm	2022-02-17 @ 11:00 am	1.2 ± 0.3	2022-02-21
11122289	250	2022-02-14 @ 12:00 pm	2022-02-17 @ 10:00 am	< 0.3	2022-02-21

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February 21, 2022

** LABORATORY ANALYSIS REPORT **

Radon test result report for:

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11122229	250	2022-02-14 @ 12:00 pm	2022-02-17 @ 10:00 am	< 0.3	2022-02-21
11123675	26	2022-02-14 @ 2:00 pm	2022-02-17 @ 11:00 am	2.9 ± 0.4	2022-02-21
11123648	27	2022-02-14 @ 2:00 pm	2022-02-17 @ 11:00 am	< 0.3	2022-02-21
11123657	27	2022-02-14 @ 2:00 pm	2022-02-17 @ 11:00 am	1.4 ± 0.3	2022-02-21
11123628	3	2022-02-14 @ 1:00 pm	2022-02-17 @ 11:00 am	0.7 ± 0.3	2022-02-21
11122278	350	2022-02-14 @ 12:00 pm	2022-02-17 @ 10:00 am	0.5 ± 0.3	2022-02-21
11123639	4	2022-02-14 @ 1:00 pm	2022-02-17 @ 11:00 am	< 0.3	2022-02-21
11123632	5	2022-02-14 @ 1:00 pm	2022-02-17 @ 11:00 am	1.4 ± 0.4	2022-02-21
11123619	6	2022-02-14 @ 1:00 pm	2022-02-17 @ 11:00 am	1.2 ± 0.4	2022-02-21
11123612	7	2022-02-14 @ 1:00 pm	2022-02-17 @ 11:00 am	1.3 ± 0.4	2022-02-21
11123637	8	2022-02-14 @ 2:00 pm	2022-02-17 @ 11:00 am	< 0.3	2022-02-21
11123625	9	2022-02-14 @ 2:00 pm	2022-02-17 @ 11:00 am	0.5 ± 0.3	2022-02-21
11123630	ART	2022-02-14 @ 1:00 pm	2022-02-17 @ 11:00 am	< 0.3	2022-02-21
11123670	BUILDING SERVICES OFFICE	2022-02-14 @ 2:00 pm	2022-02-17 @ 10:00 am	1.4 ± 0.4	2022-02-21
11123674	C	2022-02-14 @ 3:00 pm	2022-02-17 @ 11:00 am	1.3 ± 0.4	2022-02-21
11123622	COPY ROOM	2022-02-14 @ 1:00 pm	2022-02-17 @ 11:00 am	< 0.3	2022-02-21
11123621	COUNSELORS OFFICE	2022-02-14 @ 1:00 pm	2022-02-17 @ 11:00 am	1.0 ± 0.3	2022-02-21
11123661	GYM	2022-02-14 @ 3:00 pm	2022-02-17 @ 11:00 am	1.1 ± 0.4	2022-02-21
11123668	GYM	2022-02-14 @ 3:00 pm	2022-02-17 @ 11:00 am	1.1 ± 0.3	2022-02-21
11123660	GYM OFFICE	2022-02-14 @ 3:00 pm	2022-02-17 @ 11:00 am	1.4 ± 0.4	2022-02-21
11123662	ISM	2022-02-14 @ 2:00 pm	2022-02-17 @ 10:00 am	< 0.3	2022-02-21
11123616	K1	2022-02-14 @ 1:00 pm	2022-02-17 @ 11:00 am	0.8 ± 0.3	2022-02-21
11123614	K2	2022-02-14 @ 1:00 pm	2022-02-17 @ 11:00 am	1.3 ± 0.3	2022-02-21
11123613	K3	2022-02-14 @ 1:00 pm	2022-02-17 @ 11:00 am	1.8 ± 0.3	2022-02-21
11123647	K4	2022-02-14 @ 1:00 pm	2022-02-17 @ 11:00 am	1.4 ± 0.4	2022-02-21
11123602	MAIN OFFICE	2022-02-14 @ 1:00 pm	2022-02-17 @ 10:00 am	1.5 ± 0.4	2022-02-21
11122201	MAIN OFFICE 100	2022-02-14 @ 9:00 am	2022-02-17 @ 8:00 am	< 0.3	2022-02-21
11123633	MEDIA ASST OFFICE	2022-02-14 @ 1:00 pm	2022-02-17 @ 11:00 am	< 0.3	2022-02-21
11123620	MEDIA CENTER	2022-02-14 @ 1:00 pm	2022-02-17 @ 11:00 am	< 0.3	2022-02-21
11123640	MEDIA CENTER	2022-02-14 @ 1:00 pm	2022-02-17 @ 11:00 am	< 0.3	2022-02-21
11123627	MEDIA OFFICE	2022-02-14 @ 1:00 pm	2022-02-17 @ 11:00 am	< 0.3	2022-02-21
11123626	MEDIA WORK ROOM	2022-02-14 @ 1:00 pm	2022-02-17 @ 11:00 am	< 0.3	2022-02-21
11123645	MULTIPURPOSE ROOM	2022-02-14 @ 2:00 pm	2022-02-17 @ 10:00 am	1.0 ± 0.3	2022-02-21
11123655	MULTIPURPOSE ROOM	2022-02-14 @ 2:00 pm	2022-02-17 @ 10:00 am	< 0.3	2022-02-21
11123624	PRINCIPALS OFFICE	2022-02-14 @ 1:00 pm	2022-02-17 @ 10:00 am	3.1 ± 0.4	2022-02-21
11123654	R1/R2	2022-02-14 @ 2:00 pm	2022-02-17 @ 10:00 am	1.0 ± 0.4	2022-02-21
11123682	R1/R2 LL	2022-02-14 @ 2:00 pm	2022-02-17 @ 11:00 am	1.5 ± 0.3	2022-02-21

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February 21, 2022 **** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11123666	RR	2022-02-14 @ 2:00 pm	2022-02-17 @ 11:00 am	1.5 ± 0.4	2022-02-21
11123673	S1	2022-02-14 @ 2:00 pm	2022-02-17 @ 10:00 am	0.7 ± 0.3	2022-02-21
11123603	S3	2022-02-14 @ 2:00 pm	2022-02-17 @ 10:00 am	< 0.3	2022-02-21
11123664	SPT	2022-02-14 @ 2:00 pm	2022-02-17 @ 10:00 am	0.6 ± 0.4	2022-02-21
11123631	ST	2022-02-14 @ 2:00 pm	2022-02-17 @ 11:00 am	< 0.3	2022-02-21
11123605	ST OFFICE	2022-02-14 @ 2:00 pm	2022-02-17 @ 11:00 am	< 0.3	2022-02-21
11123656	STAFF LOUNGE	2022-02-14 @ 2:00 pm	2022-02-17 @ 10:00 am	1.3 ± 0.3	2022-02-21
11123635	STAGE	2022-02-14 @ 2:00 pm	2022-02-17 @ 11:00 am	< 0.3	2022-02-21
11123665	V	2022-02-14 @ 2:00 pm	2022-02-17 @ 11:00 am	0.8 ± 0.3	2022-02-21
11123681	Z	2022-02-14 @ 3:00 pm	2022-02-17 @ 11:00 am	2.2 ± 0.4	2022-02-21

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EXPOSURE IN BOWSER-MORNER RADON CHAMBER

CLIENT KCI Technologies, Inc. Job Number 204186

NOMINAL Conditions: Radon Conc 25.8 pCi/L Rel. Hum 59.1 % Temp. 70.9 F

Date Start: 2/18/22 Date Stop: 2/21/22	Date Start: _____ Date Stop: _____
Time Start: 0911 Time Stop: 0911	Time Start: _____ Time Stop: _____
Device No.'s: (3) Char Bags -	Device No.'s: _____
11113484, 11192998, 20107126	_____
_____	_____
23 Right	
Date Start: _____ Date Stop: _____	Date Start: _____ Date Stop: _____
Time Start: _____ Time Stop: _____	Time Start: _____ Time Stop: _____
Device No.'s: _____	Device No.'s: _____
_____	_____
_____	_____
_____	
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 µR/h Elevation = 820 ft

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

Kit Number	Start Date	Start Time	End Date	End Time	Temp.	Facility	Building	Room	Project ID	Floor	Result
11113484	2022-02-18	9:00 am	2022-02-21	9:00 am	71	OFFICE	MAIN	SK1		1	27.9
11122998	2022-02-18	9:00 am	2022-02-21	9:00 am	71	OFFICE	MAIN	SK2		1	26.0
20107126	2022-02-18	9:00 am	2022-02-21	9:00 am	71	OFFICE	MAIN	SK3		1	27.6

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KCI TECHNOLOGIES

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 – February 2022 Schools

Name of Schools:

1. Sherwood HS
2. Paint Branch HS
3. Clarksburg HS
4. Hallie Wells MS
5. Rocky Hill MS
6. Wilson Wims ES
7. John T. Baker MS
8. Clearspring ES
9. Damascus ES

	Date	Initials
Radon Test Kits Deployed	02/14/2022	
Radon Test Kits Collected	02/17/2022	
Radon Test Kits Shipped to Lab*	02/17/2022	
Radon Test Kits Received by Lab*	02/19/2022	

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