

School / Facility Radon Testing Report Form

Instructions: Submit one testing report form per-facility per-round of testing. Include the following as attachments:

Attachment 1- Summary Data Tables – containing the following: (see attached samples tables)

- Testing Results – lab/detector Identification, by room number/name (alpha-numeric order) as depicted on facility map/floor plan provided by the facility/school at the time of test device deployment;
- Summary Results – list of rooms by test result ≥ 2.0 -pCi/L; ≥ 2.7 -pCi/L; ≥ 4.0 -pCi/L; and ≥ 8.0 -pCi/L;
- QA/QC Results - (field blanks and duplicates) indicating location collected; trip and office blanks; and spike sample results;
- Invalid Measurement Locations – missed locations, missing and or damaged/compromised testing devices.

Attachment 2 – Laboratory Report(s)

Attachment 3 – Sampling Location Map(s) – indicating approximate location of samples, duplicates and blanks.

School Year: **23-24**

Facility:	College Gardens Elementary Schools
Address:	1700 Yale Place
	Rockville, MD 20850

Reason for Testing:	<input checked="" type="checkbox"/> Scheduled Re-Testing (2 or 5-year schedule) <input type="checkbox"/> Clearance Testing (Post-Mitigation) <input type="checkbox"/> System(s) Performance Testing (Post-Mitigation) <input type="checkbox"/> New Construction/Facility
Facility Current Radon Status:	<input type="checkbox"/> Active Mitigation (2-year regular schedule) <input checked="" type="checkbox"/> No Active Mitigation (5-year regular schedule) <input type="checkbox"/> Not Previously Tested
Round of Testing:	<input checked="" type="checkbox"/> Initial Testing -or- <input type="checkbox"/> Follow-up Testing
Testing Status:	<input checked="" type="checkbox"/> No Further Testing Needed -or- <input type="checkbox"/> Follow-Up Testing Required

Conclusion (When Testing Status is - No Further Testing Needed)

Mitigation -	Facility Radon Status:
<input checked="" type="checkbox"/> Not Required or Considered <input type="checkbox"/> Required (>8.0 -pCi/L) <input type="checkbox"/> Required (≥ 4.0 -pCi/L) <input type="checkbox"/> Consider (≥ 2.0 & <4.0 -pCi/L)	<input checked="" type="checkbox"/> No Change in Status <input type="checkbox"/> Active Mitigation (2-year regular schedule) <input type="checkbox"/> No Active Mitigation (5-year regular schedule)

Detector and Deployment

Detector/Device Type:	<input checked="" type="checkbox"/> Passive	<input checked="" type="checkbox"/> Charcoal Absorption (CAD)	<input type="checkbox"/> Alpha Track (ATD)	<input type="checkbox"/> Other
	<input type="checkbox"/> Continuous	<input type="checkbox"/> Electret ion Chamber (EIC)	<input type="checkbox"/> Electronic Integration (EID)	
<i>Other—Specify here:</i>				
Detector/Device Name:	Air Chek – Radon Test Kits			
Manufacturer:	Radon Lab			
Person(s) Deploying or Retrieving Test Devices and certification number			Organization/Company	
Brittany Maas			KCI Technologies, Inc.	
<i>If noncertified individuals, the qualified measurement professional providing oversight -</i>				
Tyler McCleaf, CSP – Cert. #111004-RMP			KCI Technologies, Inc.	

Testing

<input checked="" type="checkbox"/> Short-Term	Length of Test (days):	3	Date of Deployment and Retrieval (mm/dd/yy):	02/05/2024
<input type="checkbox"/> Long-Term				02/08/2024
Does the test period include weekends, school breaks or holidays?				<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<i>If “Yes” please explain/detail in the space below:</i>				
Was HVAC operating under occupied conditions?				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<i>If “No” please explain/detail in the space below:</i>				

Testing (continued)

	Detectors Deployed		
	Ground-Contact	Upper-Level(s)	Total
Test Locations ¹	53	0	53
Duplicates ²	6	0	6
Field Blanks ³	3	0	3
Grand Total			62

1 – include all detectors deployed (duplicates, field blanks); 1 detector per occupied (or intended to be occupied) ground-contact space ≤ 2,000-square feet; large spaces ≥ 2,000-square feet - 1 detector per 2,000-square feet or part thereof); and upper floors - 10% of all occupied or intended to be occupied rooms per floor (these are in addition to ground contact locations)

2 - 10% of all locations tested, per floor

3 – 5% of all locations tested, per floor

Quality Assurance / Quality Control (QA/QC)

A Quality Assurance plan that is consistent with ANSI/AARST MS-QA (Radon Measurement Systems Quality Assurance) was submitted under separate cover, and is available to review at the MCPS Radon Testing and Mitigation Program website. The following number of QA/QC samples are associated this facility.

Spike Samples ¹	6	Trip Blank(s) ²	1	Office Blank(s) ^{3,4}	1
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1 - 3% of EIC detectors; and 3% from each LOT of CAD and ATD detectors; a maximum of 6-spiked measurements per month for both EIC detectors and each LOT of CAD and ATD detectors.

2 – One per shipping container from start of detector deployment

3 – One per facility tested as devices are removed/allocated from the storage location for deployment;

4 - One additional blank, analyzed prior to deployment, for storage locations that have not been evaluated or monitored, for detectors that have been stored for more than 30-day durations.

Spike Sample Lab Results. Measured values are satisfactory, i.e., within ± 25% of the chamber's reference value.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Quality Control measurements comply with QA/QC requirements in the QA plan previously submitted?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Quality Assurance / Quality Control (QA/QC) (continued)

If “No” to either, please describe any QC measurements that were missing or outside of control tolerances established in the QAP here:

Summary of Test Results¹ and Determination of Valid Measurements²

	Ground-Contact	Upper-Level(s)	Total
Number of test locations:	53	0	53
Number of locations ≥ 8.0 -pCi/L:	0	0	0
Number of locations ≥ 4.0 and ≤ 8 -pCi/L:	0	0	0
Number of locations ≥ 2.7 and ≤ 4 -pCi/L:	0	0	0
Number of locations ≥ 2.0 and ≤ 4 -pCi/L:	0	0	0
Number of missing required test locations ³ :	0	0	0
Percentage of missing test locations for the facility ^{4,5} :	0	0	0

1 – for locations with multiple test results, report consistent with Section 7.2(When Two Test Results Disagree) and 8.1.2 (Averaging) of ANSI/AARST MA-MFLB 2023 – Conducting Measurements of Radon in Multifamily, School, Commercial and Mix-Use Buildings;

2 - the allowance is to be calculated individually for Ground-Contact and Upper-Level(s) Test Locations;

3 – includes missed or inaccessible locations upon deployment or retrieval, damaged (not able to analyze) and missing detectors upon retrieval;

4 – if all valid measurements are < 4.0 -pCi/L and the total number of test locations are ≥ 18 , there is an allowance of $\leq 33\%$. If less than 18 test locations please review section 6.2 of the ANSI/AARST MA-MFLB 2023;

5 – if any valid measurements are ≥ 4.0 -pCi/L and the total number of test locations are ≥ 20 , there is an allowance of $\leq 25\%$ of the total locations tested. If less than 20 test locations please review section 6.2 of the ANSI/AARST MA-MFLB 2023.

Summary of Test Results¹ and Determination of Valid Measurements² (continued)

Were test devices deployed in all occupied and intended to be occupied rooms in contact with the ground, and, if applicable, 10% of upper floor rooms?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Were valid measurements obtained in all occupied and intended to be occupied rooms in contact with the ground, and, if applicable, 10% of upper floor rooms?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<i>If Yes to both above – then Testing Status – ‘No Further Testing Needed’ mark ‘NA’ below and complete Conclusions section</i>	
If No to either above , were all results obtained under 4.0-pCi/L and were there sufficient valid measurements obtained? ^{1,2} <i>If Yes – then Testing Status - ‘No Further Testing Needed’ complete Conclusion section</i> <i>If No, then Testing Status - ‘Follow-up Testing Required’ continue below</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA

1 – if all valid measurements are <4.0-pCi/L and the total number of test locations are ≥18, there is an allowance of ≤33%. If less than 18 test locations please review section 6.2 of the ANSI/AARST MA-MFLB 2023 – Conducting Measurements of Radon in Multifamily, School, Commercial and Mix-Use Buildings to determine the allowance;
 2 – if any valid measurements are ≥4.0-pCi/L and the total number of test locations are ≥20, there is an allowance of ≤25% of the total locations tested. If less than 20 test locations please review section 6.2 of the ANSI/AARST MA-MFLB 2023 – Conducting Measurements of Radon in Multifamily, School, Commercial and Mix-Use Buildings to determine the number the allowance.

- **If ‘No Further Testing Needed’** complete conclusions section on first page.
- **If ‘Follow-up Testing Required’** – complete Follow-up Testing described below and the conclusion section on the first page for only the valid measurements/results obtained

Follow-Up Testing (if required)

Required if –

- 1- Not enough valid results were obtained from a facility (table above);
- 2- Any results ≥ 4.0 – pCi/L; and
- 3- At the discretion of MCPS IAQ Staff

Follow-up Testing:

- 1- If an insufficient number of valid measurements obtained during initial round:
 - return to facility to test locations that require valid measurements
- 2- Follow-up Testing for valid measurements ≥ 4.0-pCi/L

Initial Result(s)	Procedure	Follow-up Result	Conclusion
≥ 4.0-pCi/L	1- Short-term follow-up test 2- Average the results of the two tests	≥4.0	Mitigation Required
		<4.0 but >2.0	Consider Mitigation
		<2.0	Not Required or Considered

- **Complete second School/Facility Radon Testing Report Form for only Follow-up Testing locations.**

Attachment 1:
Summary Data Tables

Table 1- Radon Testing Results		
College Gardens Elementary School		
Test Period: 02/05/2024 - 02/08/2024		
Kit Number	Room / Area	Result
11633560	A100	< 0.3
11633567	A100A	< 0.3
11633589	A100D	0.6
11633590	A100E	0.5
11633564	A100F	0.7
11285575	A100G	0.6
11464798	A101	< 0.3
11633587	A104	< 0.3
11633588	A104A	< 0.3
11633566	A104B	< 0.3
11464799	A105	< 0.3
11464782	A106	< 0.3
11464788	A106	0.6
11469276	A106	< 0.3
11464758	A107	< 0.3
11633575	A109	< 0.3
11464787	A111	< 0.3
11464791	A112	0.8
11464800	A112	0.7
11464794	A112B	< 0.3
11464797	A112B	< 0.3
11469262	A117A	< 0.3
11633559	A159	0.6
11633596	A159	< 0.3
11633598	A159A	< 0.3
11633599	A159A	< 0.3
11464795	B118	< 0.3
11464766	B120	< 0.3
11464786	B121	< 0.3
11633571	B122	< 0.3
11633569	B127	< 0.3
11633572	B127	0.6
11464780	B127A	0.9
11464781	B127A	0.7
11464796	B127A	< 0.3
11633577	B128	0.6
11633578	B129	0.6
11633576	B131	1.9

Table 1- Radon Testing Results		
College Gardens Elementary School		
Test Period: 02/05/2024 - 02/08/2024		
Kit Number	Room / Area	Result
11464773	B207	< 0.3
11633554	C130	< 0.3
11633586	C134	< 0.3
11633593	C134	< 0.3
11633594	C136	< 0.3
11633573	C140	< 0.3
11464792	C142	0.6
11633579	C144	< 0.3
11633574	C146	< 0.3
11633551	C1R1	< 0.3
11634193	C216	< 0.3
11633595	D147	0.5
11633565	D148	0.7
11633563	D151	0.9
11633570	D153	0.8
11464765	D156	0.7
11633582	D156	< 0.3
11633597	D156	< 0.3
11633561	D157	1.0
11285571	D162	0.7
11633562	D164	< 0.3
11633580	D172	1.1
11633986	D239	< 0.3
11464793	STAGE	0.7

Table 3 - QC Radon Testing Results			
College Gardens Elementary School			
Test Period: 02/05/2024 - 02/08/2024			
Kit Number	QC Type	Room / Area	Result
11464782	FB	A106	<0.3
11464788	D	A106	0.6
11464794	D	A112b	<0.3
11633599	D	A159a	<0.3
11464780	D	B127a	0.9
11464796	FB	B127a	<0.3
11633586	D	C134	<0.3
11464765	FB	D156	0.7
11633597	D	D156	<0.3
11470089	OB	OFFICE BLANK	< 0.3
11470096	TB	TRAVEL BLANK	< 0.3

Attachment 2:
Laboratory Reports

Radon test result report for:
COLLEGE GARDENS ES
MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11633560	A100	2024-02-05 @ 8:00 am	2024-02-08 @ 8:00 am	< 0.3	2024-02-12
11633567	A100A	2024-02-05 @ 8:00 am	2024-02-08 @ 8:00 am	< 0.3	2024-02-12
11633589	A100D	2024-02-05 @ 8:00 am	2024-02-08 @ 8:00 am	0.6 ± 0.3	2024-02-12
11633590	A100E	2024-02-05 @ 8:00 am	2024-02-08 @ 8:00 am	0.5 ± 0.3	2024-02-12
11633564	A100F	2024-02-05 @ 8:00 am	2024-02-08 @ 8:00 am	0.7 ± 0.3	2024-02-12
11285575	A100G	2024-02-05 @ 8:00 am	2024-02-08 @ 8:00 am	0.6 ± 0.4	2024-02-12
11464798	A101	2024-02-05 @ 9:00 am	2024-02-08 @ 9:00 am	< 0.3	2024-02-12
11633587	A104	2024-02-05 @ 8:00 am	2024-02-08 @ 8:00 am	< 0.3	2024-02-12
11633588	A104A	2024-02-05 @ 8:00 am	2024-02-08 @ 8:00 am	< 0.3	2024-02-12
11633566	A104B	2024-02-05 @ 8:00 am	2024-02-08 @ 8:00 am	< 0.3	2024-02-12
11464799	A105	2024-02-05 @ 9:00 am	2024-02-08 @ 9:00 am	< 0.3	2024-02-12
11464782	A106	2024-02-05 @ 9:00 am	2024-02-08 @ 8:00 am	< 0.3	2024-02-12
11464788	A106	2024-02-05 @ 9:00 am	2024-02-08 @ 8:00 am	0.6 ± 0.3	2024-02-12
11469276	A106	2024-02-05 @ 9:00 am	2024-02-08 @ 8:00 am	< 0.3	2024-02-12
11464758	A107	2024-02-05 @ 9:00 am	2024-02-08 @ 9:00 am	< 0.3	2024-02-12
11633575	A109	2024-02-05 @ 9:00 am	2024-02-08 @ 9:00 am	< 0.3	2024-02-12
11464787	A111	2024-02-05 @ 9:00 am	2024-02-08 @ 9:00 am	< 0.3	2024-02-12
11464791	A112	2024-02-05 @ 9:00 am	2024-02-08 @ 9:00 am	0.8 ± 0.4	2024-02-12
11464800	A112	2024-02-05 @ 9:00 am	2024-02-08 @ 9:00 am	0.7 ± 0.3	2024-02-12
11464797	A112B	2024-02-05 @ 9:00 am	2024-02-08 @ 9:00 am	< 0.3	2024-02-12
11464794	A112B	2024-02-05 @ 9:00 am	2024-02-08 @ 9:00 am	< 0.3	2024-02-12
11469262	A117A	2024-02-05 @ 9:00 am	2024-02-08 @ 9:00 am	< 0.3	2024-02-12
11633559	A159	2024-02-05 @ 8:00 am	2024-02-08 @ 8:00 am	0.6 ± 0.3	2024-02-12
11633596	A159	2024-02-05 @ 8:00 am	2024-02-08 @ 8:00 am	< 0.3	2024-02-12
11633599	A159A	2024-02-05 @ 8:00 am	2024-02-08 @ 8:00 am	< 0.3	2024-02-12
11633598	A159A	2024-02-05 @ 8:00 am	2024-02-08 @ 8:00 am	< 0.3	2024-02-12
11464795	B118	2024-02-05 @ 9:00 am	2024-02-08 @ 9:00 am	< 0.3	2024-02-12
11464766	B120	2024-02-05 @ 9:00 am	2024-02-08 @ 9:00 am	< 0.3	2024-02-12
11464786	B121	2024-02-05 @ 9:00 am	2024-02-08 @ 9:00 am	< 0.3	2024-02-12
11633571	B122	2024-02-05 @ 9:00 am	2024-02-08 @ 9:00 am	< 0.3	2024-02-12
11633569	B127	2024-02-05 @ 9:00 am	2024-02-08 @ 9:00 am	< 0.3	2024-02-12
11633572	B127	2024-02-05 @ 9:00 am	2024-02-08 @ 9:00 am	0.6 ± 0.4	2024-02-12
11464780	B127A	2024-02-05 @ 9:00 am	2024-02-08 @ 9:00 am	0.9 ± 0.4	2024-02-12
11464796	B127A	2024-02-05 @ 9:00 am	2024-02-08 @ 9:00 am	< 0.3	2024-02-12
11464781	B127A	2024-02-05 @ 9:00 am	2024-02-08 @ 9:00 am	0.7 ± 0.4	2024-02-12
11633577	B128	2024-02-05 @ 9:00 am	2024-02-08 @ 9:00 am	0.6 ± 0.3	2024-02-12
11633578	B129	2024-02-05 @ 9:00 am	2024-02-08 @ 9:00 am	0.6 ± 0.3	2024-02-12

Radon test result report for:
**COLLEGE GARDENS ES
 MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11633576	B131	2024-02-05 @ 9:00 am	2024-02-08 @ 9:00 am	1.9 ± 0.4	2024-02-12
11464773	B207	2024-02-05 @ 9:00 am	2024-02-08 @ 9:00 am	< 0.3	2024-02-12
11633554	C130	2024-02-05 @ 9:00 am	2024-02-08 @ 9:00 am	< 0.3	2024-02-12
11633586	C134	2024-02-05 @ 9:00 am	2024-02-08 @ 9:00 am	< 0.3	2024-02-12
11633593	C134	2024-02-05 @ 9:00 am	2024-02-08 @ 9:00 am	< 0.3	2024-02-12
11633594	C136	2024-02-05 @ 9:00 am	2024-02-08 @ 9:00 am	< 0.3	2024-02-12
11633573	C140	2024-02-05 @ 9:00 am	2024-02-08 @ 9:00 am	< 0.3	2024-02-12
11464792	C142	2024-02-05 @ 8:00 am	2024-02-08 @ 8:00 am	0.6 ± 0.3	2024-02-12
11633579	C144	2024-02-05 @ 8:00 am	2024-02-08 @ 8:00 am	< 0.3	2024-02-12
11633574	C146	2024-02-05 @ 8:00 am	2024-02-08 @ 8:00 am	< 0.3	2024-02-12
11633551	C1R1	2024-02-05 @ 9:00 am	2024-02-08 @ 9:00 am	< 0.3	2024-02-12
11634193	C216	2024-02-05 @ 9:00 am	2024-02-08 @ 9:00 am	< 0.3	2024-02-12
11633595	D147	2024-02-05 @ 8:00 am	2024-02-08 @ 8:00 am	0.5 ± 0.3	2024-02-12
11633565	D148	2024-02-05 @ 8:00 am	2024-02-08 @ 8:00 am	0.7 ± 0.3	2024-02-12
11633563	D151	2024-02-05 @ 8:00 am	2024-02-08 @ 8:00 am	0.9 ± 0.3	2024-02-12
11633570	D153	2024-02-05 @ 8:00 am	2024-02-08 @ 8:00 am	0.8 ± 0.4	2024-02-12
11633582	D156	2024-02-05 @ 8:00 am	2024-02-08 @ 8:00 am	< 0.3	2024-02-12
11464765	D156	2024-02-05 @ 8:00 am	2024-02-08 @ 8:00 am	0.7 ± 0.4	2024-02-12
11633597	D156	2024-02-05 @ 8:00 am	2024-02-08 @ 8:00 am	< 0.3	2024-02-12
11633561	D157	2024-02-05 @ 8:00 am	2024-02-08 @ 8:00 am	1.0 ± 0.4	2024-02-12
11285571	D162	2024-02-05 @ 8:00 am	2024-02-08 @ 8:00 am	0.7 ± 0.4	2024-02-12
11633562	D164	2024-02-05 @ 8:00 am	2024-02-08 @ 8:00 am	< 0.3	2024-02-12
11633580	D172	2024-02-05 @ 8:00 am	2024-02-08 @ 8:00 am	1.1 ± 0.4	2024-02-12
11633986	D239	2024-02-05 @ 9:00 am	2024-02-08 @ 9:00 am	< 0.3	2024-02-12
11464793	STAGE	2024-02-05 @ 9:00 am	2024-02-08 @ 9:00 am	0.7 ± 0.4	2024-02-12

February 13, 2024

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

**KCI
MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11470089	OB	2024-02-05 @ 8:00 am	2024-02-08 @ 12:00 pm	< 0.3	2024-02-12
11478304	OB	2024-02-06 @ 8:00 am	2024-02-09 @ 12:00 pm	< 0.3	2024-02-12
11470096	TB	2024-02-05 @ 8:00 am	2024-02-08 @ 12:00 pm	< 0.3	2024-02-12
11478309	TB	2024-02-06 @ 8:00 am	2024-02-09 @ 12:00 pm	< 0.3	2024-02-12

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

January 29, 2024

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:
STORAGE
KCI

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11635097	Storage	2024-01-07 @ 9:00 am	2024-01-11 @ 9:00 am	< 0.3	2024-01-15

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 213819

NOMINAL Conditions: Radon Conc 50.0 pCi/L Rel. Hum 28.9 % Temp. 69.1 F

Date Start: 2/23/24 Date Stop: 2/26/24 Date Start: _____ Date Stop: _____

Time Start: 0812 Time Stop: 0812 Time Start: _____ Time Stop: _____

Device No.'s: (6) CHAR BAGS Device No.'s: _____

11478400, 11477842, 11477845, _____

11477852, 11477996, 11477999 _____

E3 left

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 1, 2024

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

FEB SK

MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11477842	NA	2024-02-23 @ 8:00 am	2024-02-26 @ 8:00 am	50.3 ± 4.0	2024-03-01
11477845	NA	2024-02-23 @ 8:00 am	2024-02-26 @ 8:00 am	55.3 ± 4.4	2024-03-01
11477852	NA	2024-02-23 @ 8:00 am	2024-02-26 @ 8:00 am	49.4 ± 4.0	2024-03-01
11477996	NA	2024-02-23 @ 8:00 am	2024-02-26 @ 8:00 am	49.8 ± 4.0	2024-03-01
11477999	NA	2024-02-23 @ 8:00 am	2024-02-26 @ 8:00 am	55.4 ± 4.4	2024-03-01
11478400	NA	2024-02-23 @ 8:00 am	2024-02-26 @ 8:00 am	47.0 ± 3.8	2024-03-01

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



Radon Test Kit Chain of Custody

Project Name: MCPS Radon – Testing February 5th to February 8th 2024

Name of Schools:

- 1. Cedar Grove ES
- 2. College Gardens ES
- 3. Lois P. Rockwell ES
- 4. Clarksburg HS
- 5. Bayard Rustin ES
- 6. Sequoyah ES
- 7. Sherwood ES
- 8. Carver Educational Center

	Date	Initials
Radon Test Kits Deployed	02/05/2024	DM
Radon Test Kits Collected	02/08/2024	DM
Radon Test Kits Shipped to Lab*	02/08/2024	DM
Radon Test Kits Received by Lab*	02/12/2024	DM

*All samples sent to Air Check, Inc., 2 Saber Way, Ward Hill, MA 01835

Attachment 3:
Sampling Location Map



MCPS RADON TESTING – EXECUTIVE SUMMARY

Site Name	College Gardens 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	1
# Rooms \geq 4.0 pCi/L	0
Lowest Value	<0.3 pCi/L
Highest Value	<0.3 pCi/L

Project Status

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



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: College Gardens Elementary School
1700 Yale Place
Rockville, MD 20850

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 College Gardens Elementary School, located at 1700 Yale Place, Rockville, MD 20850 (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 three (3) 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 pCi/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.

The results of the radon test analysis indicated the following:

Radon Concentration	Room	Result
≥4.0 pCi/L	None	N/A
<4.0 pCi/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.

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		
College Gardens ES RT		
Test Period: 03/21/2022 - 03/24/2022		
Kit Number	Room / Area	Result
11139270	C217	< 0.3
11139281	C217	< 0.3
11139282	C217	< 0.3

Table 2- Radon Testing Results			
College Gardens ES RT			
Test Period: 03/21/2022 - 03/24/2022			
Kit Number	QC Type	Room / Area	Result
11139281	D	C217	< 0.3
11139282	FB	C217	< 0.3
11139902	OB	OFFICE BLANK	< 0.3
11139928	TB	TRAVEL BLANK	< 0.3

ATTACHMENT C

Laboratory Analytical Results

March 28, 2022

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11139270	C217	2022-03-21 @ 1:00 pm	2022-03-24 @ 12:00 pm	< 0.3	2022-03-28
11139281	C217	2022-03-21 @ 1:00 pm	2022-03-24 @ 12:00 pm	< 0.3	2022-03-28
11139282	C217	2022-03-21 @ 1:00 pm	2022-03-24 @ 12:00 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, 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 light

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 μ R/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

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



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	BMM

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



MCPS RADON TESTING – EXECUTIVE SUMMARY

Site Name	College Gardens 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	61
# Rooms \geq 4.0 pCi/L	0
Lowest Value	<0.3 pCi/L
Highest Value	0.8 pCi/L

Project Status:

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



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: College Gardens Elementary School
1700 Yale Place
Rockville, MD 20850

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 College Gardens Elementary School, located at 1700 Yale Place Rockville, MD 20850 (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 January 19, 2022 and deployed sixty (60) 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.

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 pCi/L	None	N/A
<4.0 pCi/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.

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		
College Gardens ES		
Test Period: 01/25/2022-01/28/2022		
Kit Number	Room / Area	Result
11106299	A100	< 0.3
11106298	A100A	< 0.3
11106297	A100B	< 0.3
11106300	A100D	< 0.3
11106295	A100E	< 0.3
11106296	A100F	< 0.3
11106294	A100G	< 0.3
11106244	A101 STAFF	< 0.3
11106248	A101A TELEPHONE	< 0.3
11106293	A104 HEALTH	< 0.3
11106292	A104A	< 0.3
11106291	A104B	< 0.3
11106290	A104C	< 0.3
11106252	A105	0.6
11106289	A106	< 0.3
11106257	A107 TESTING	< 0.3
11106249	A109	< 0.3
11106251	A109	< 0.3
11106250	A111	< 0.3
11106234	A112 MULTIPURPOSE	< 0.3
11106235	A112 MULTIPURPOSE	< 0.3
11106239	A112B	0.8
11106247	A117A	< 0.3
11106256	A159 GYM	< 0.3
11106262	A159 GYM	< 0.3
11106263	A159A	0.5
11106287	B118	< 0.3
11106282	B120	< 0.3
11106288	B121	< 0.3
11106272	B122	< 0.3
11106273	B125	< 0.3
11106279	B127 MEDIA	< 0.3
11106284	B127 MEDIA	0.7
11106274	B127A	0.6
11106267	B128	< 0.3
11106285	B129	< 0.3
11106286	B131	0.8
11106241	B201	< 0.3
11106271	C130	< 0.3
11106283	C134	< 0.3
11106266	C136	< 0.3
11106275	C140	< 0.3

Table 1- Radon Testing Results		
College Gardens ES		
Test Period: 01/25/2022-01/28/2022		
Kit Number	Room / Area	Result
11106280	C141 COMPUTER	< 0.3
11106281	C141 COMPUTER	< 0.3
11106268	C142	0.6
11106276	C142	< 0.3
11106260	C144	< 0.3
11106269	C146	0.7
11106243	C216	< 0.3
11106264	D147	< 0.3
11106277	D148	< 0.3
11106258	D151	0.8
11106254	D153	0.6
11106259	D153	< 0.3
11106270	D156	< 0.3
11106261	D157	0.5
11106278	D162	< 0.3
11106265	D164	0.7
11106255	D172	0.7
11106246	D240	0.7

Table 2- Radon Testing Results			
College Gardens ES			
Test Period: 12/13/2021-12/16/2021			
Kit Number	QC Type	Room / Area	Result
11106291	D	A104B	< 0.3
11106280	D	C141 Computer	< 0.3
11106281	FB	C141 Computer	< 0.3
11106268	D	C142	0.6
11106276	FB	C142	< 0.3
11106254	D	D153	0.6
11106259	FB	D153	< 0.3
11106251	D	A109	< 0.3
11106249	FB	A109	< 0.3
11106240	D	C217	NA
11106236	FB	C217	NA
11106126	OB	OFFICE BLANK	< 0.3
11105790	TB	TRAVEL Blank	< 0.3

ATTACHMENT C

Laboratory Analytical Results

Radon test result report for:

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11106299	A100	2022-01-25 @ 8:00 am	2022-01-28 @ 7:00 am	< 0.3	2022-01-31
11106298	A100A	2022-01-25 @ 8:00 am	2022-01-28 @ 7:00 am	< 0.3	2022-01-31
11106297	A100B	2022-01-25 @ 8:00 am	2022-01-28 @ 8:00 am	< 0.3	2022-01-31
11106300	A100D	2022-01-25 @ 8:00 am	2022-01-28 @ 8:00 am	< 0.3	2022-01-31
11106295	A100E	2022-01-25 @ 8:00 am	2022-01-28 @ 8:00 am	< 0.3	2022-01-31
11106296	A100F	2022-01-25 @ 8:00 am	2022-01-28 @ 8:00 am	< 0.3	2022-01-31
11106294	A100G	2022-01-25 @ 8:00 am	2022-01-28 @ 8:00 am	< 0.3	2022-01-31
11106244	A101 STAFF	2022-01-25 @ 9:00 am	2022-01-28 @ 8:00 am	< 0.3	2022-01-31
11106248	A101A TELEPHONE	2022-01-25 @ 9:00 am	2022-01-28 @ 8:00 am	< 0.3	2022-01-31
11106293	A104 HEALTH	2022-01-25 @ 8:00 am	2022-01-28 @ 7:00 am	< 0.3	2022-01-31
11106292	A104A	2022-01-25 @ 8:00 am	2022-01-28 @ 7:00 am	< 0.3	2022-01-31
11106291	A104B	2022-01-25 @ 8:00 am	2022-01-28 @ 7:00 am	< 0.3	2022-01-31
11106290	A104C	2022-01-25 @ 8:00 am	2022-01-28 @ 7:00 am	< 0.3	2022-01-31
11106252	A105	2022-01-25 @ 9:00 am	2022-01-28 @ 8:00 am	0.6 ± 0.3	2022-01-31
11106289	A106	2022-01-25 @ 8:00 am	2022-01-28 @ 8:00 am	< 0.3	2022-01-31
11106257	A107 TESTING	2022-01-25 @ 10:00 am	2022-01-28 @ 8:00 am	< 0.3	2022-01-31
11106249	A109	2022-01-25 @ 10:00 am	2022-01-28 @ 8:00 am	< 0.3	2022-01-31
11106251	A109	2022-01-25 @ 9:00 am	2022-01-28 @ 8:00 am	< 0.3	2022-01-31
11106250	A111	2022-01-25 @ 10:00 am	2022-01-28 @ 8:00 am	< 0.3	2022-01-31
11106234	A112 MULTIPURPOSE	2022-01-25 @ 10:00 am	2022-01-28 @ 8:00 am	< 0.3	2022-01-31
11106235	A112 MULTIPURPOSE	2022-01-25 @ 10:00 am	2022-01-28 @ 8:00 am	< 0.3	2022-01-31
11106239	A112B	2022-01-25 @ 10:00 am	2022-01-28 @ 8:00 am	0.8 ± 0.3	2022-01-31
11106247	A117A	2022-01-25 @ 10:00 am	2022-01-28 @ 8:00 am	< 0.3	2022-01-31
11106262	A159 GYM	2022-01-25 @ 9:00 am	2022-01-28 @ 8:00 am	< 0.3	2022-01-31
11106256	A159 GYM	2022-01-25 @ 9:00 am	2022-01-28 @ 8:00 am	< 0.3	2022-01-31
11106263	A159A	2022-01-25 @ 9:00 am	2022-01-28 @ 8:00 am	0.5 ± 0.3	2022-01-31
11106287	B118	2022-01-25 @ 8:00 am	2022-01-28 @ 8:00 am	< 0.3	2022-01-31
11106282	B120	2022-01-25 @ 8:00 am	2022-01-28 @ 8:00 am	< 0.3	2022-01-31
11106288	B121	2022-01-25 @ 8:00 am	2022-01-28 @ 8:00 am	< 0.3	2022-01-31
11106272	B122	2022-01-25 @ 9:00 am	2022-01-28 @ 8:00 am	< 0.3	2022-01-31
11106273	B125	2022-01-25 @ 8:00 am	2022-01-28 @ 8:00 am	< 0.3	2022-01-31
11106279	B127 MEDIA	2022-01-25 @ 8:00 am	2022-01-28 @ 8:00 am	< 0.3	2022-01-31
11106284	B127 MEDIA	2022-01-25 @ 8:00 am	2022-01-28 @ 8:00 am	0.7 ± 0.3	2022-01-31
11106274	B127A	2022-01-25 @ 8:00 am	2022-01-28 @ 8:00 am	0.6 ± 0.3	2022-01-31
11106267	B128	2022-01-25 @ 9:00 am	2022-01-28 @ 8:00 am	< 0.3	2022-01-31
11106285	B129	2022-01-25 @ 9:00 am	2022-01-28 @ 8:00 am	< 0.3	2022-01-31
11106286	B131	2022-01-25 @ 9:00 am	2022-01-28 @ 8:00 am	0.8 ± 0.3	2022-01-31

February 1, 2022

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11106241	B201	2022-01-25 @ 10:00 am	2022-01-28 @ 8:00 am	< 0.3	2022-01-31
11106271	C130	2022-01-25 @ 9:00 am	2022-01-28 @ 8:00 am	< 0.3	2022-01-31
11106283	C134	2022-01-25 @ 9:00 am	2022-01-28 @ 8:00 am	< 0.3	2022-01-31
11106266	C136	2022-01-25 @ 9:00 am	2022-01-28 @ 8:00 am	< 0.3	2022-01-31
11106275	C140	2022-01-25 @ 9:00 am	2022-01-28 @ 8:00 am	< 0.3	2022-01-31
11106280	C141 COMPUTER	2022-01-25 @ 9:00 am	2022-01-28 @ 8:00 am	< 0.3	2022-01-31
11106281	C141 COMPUTER	2022-01-25 @ 9:00 am	2022-01-28 @ 8:00 am	< 0.3	2022-01-31
11106268	C142	2022-01-25 @ 9:00 am	2022-01-28 @ 8:00 am	0.6 ± 0.3	2022-01-31
11106276	C142	2022-01-25 @ 9:00 am	2022-01-28 @ 8:00 am	< 0.3	2022-01-31
11106260	C144	2022-01-25 @ 9:00 am	2022-01-28 @ 8:00 am	< 0.3	2022-01-31
11106269	C146	2022-01-25 @ 9:00 am	2022-01-28 @ 8:00 am	0.7 ± 0.3	2022-01-31
11106243	C216	2022-01-25 @ 10:00 am	2022-01-28 @ 8:00 am	< 0.3	2022-01-31
11106264	D147	2022-01-25 @ 9:00 am	2022-01-28 @ 8:00 am	< 0.3	2022-01-31
11106277	D148	2022-01-25 @ 9:00 am	2022-01-28 @ 8:00 am	< 0.3	2022-01-31
11106258	D151	2022-01-25 @ 9:00 am	2022-01-28 @ 8:00 am	0.8 ± 0.3	2022-01-31
11106254	D153	2022-01-25 @ 9:00 am	2022-01-28 @ 8:00 am	0.6 ± 0.3	2022-01-31
11106259	D153	2022-01-25 @ 9:00 am	2022-01-28 @ 8:00 am	< 0.3	2022-01-31
11106270	D156	2022-01-25 @ 9:00 am	2022-01-28 @ 8:00 am	< 0.3	2022-01-31
11106261	D157	2022-01-25 @ 9:00 am	2022-01-28 @ 8:00 am	0.5 ± 0.3	2022-01-31
11106278	D162	2022-01-25 @ 9:00 am	2022-01-28 @ 8:00 am	< 0.3	2022-01-31
11106265	D164	2022-01-25 @ 9:00 am	2022-01-28 @ 8:00 am	0.7 ± 0.3	2022-01-31
11106255	D172	2022-01-25 @ 9:00 am	2022-01-28 @ 8:00 am	0.7 ± 0.3	2022-01-31
11106246	D240	2022-01-25 @ 10:00 am	2022-01-28 @ 8:00 am	0.7 ± 0.3	2022-01-31

EXPOSURE IN BOWSER-MORNER RADON CHAMBER

CLIENT KCI Technologies, Inc. Job Number 203404

NOMINAL Conditions: Radon Conc 16.2 pCi/L Rel. Hum 28.8 % Temp. 59.9 F

Date Start: 12/24/21 Date Stop: 12/27/21 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

64 left

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 μ 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 $\pm 25\%$ of the chamber's reference value (16.2 pCi/L).

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
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 @ 8:00 am	2021-12-27 @ 8:00 am	15.4 \pm 1.2	2021-12-31

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



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	DM
Radon Test Kits Collected	01/22/2022	DM
Radon Test Kits Shipped to Lab*	01/22/2022	DM
Radon Test Kits Received by Lab*	01/24/2022	DM

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



MCPS RADON TESTING

Executive Summary: College Gardens Elementary School

Date of Test Report:	2/04/2016 (Rev 1)
Round of Testing:	Initial Follow-up Post Remediation
# Rooms Tested:	53
# Rooms \geq 4.0 pCi/L:	0
Low Value:	< 0.3
High Value:	2.7

Project Status:

Initial testing completed; no further action at this time.



February 4, 2016 (Rev 1)

Mr. Richard Cox
Indoor Air Quality Team Leader
Montgomery County Public Schools
850 Hungerford Drive
Rockville, MD 20850

Re: **Radon Testing Services**
KCI Job # 12146341.24

Location: College Gardens Elementary School
1700 Yale Place
Rockville, MD 20850

Dear Mr. Cox:

KCI Technologies, Inc. (KCI) is pleased to submit the following report to the Montgomery County Public Schools (MCPS) pursuant to completing a “short-term” 3 day radon test for the College Gardens Elementary School, located at 1700 Yale Place in Rockville, Maryland 20850 (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 Safety Board (NRSB) Radon Measurement Specialist (certification #14SS056) supervised the testing. Additional information on radon management and the health effects of radon exposure is available from www.montgomerycountymd.gov/dep/air/radon or www.epa.gov/radon.

KCI visited the site on January 11, 2016 and deployed sixty-five (65) activated charcoal (AC) radon test kits. KCI deployed radon test kits in 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 included duplicate samples, field blanks, lab transit blanks, and office blanks in accordance with AARST recommendations. In addition, KCI submitted six (6) 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 14, 2016 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:

The operating condition that represents the greatest amount of significantly occupied time for this building is; heating active, with outdoor temperature averages $\leq 65^{\circ}$ F.

KCI concludes that the test period reasonably represents normal conditions when the building is significantly occupied. Clear characterization of the radon hazard is most likely to be observed under this normal operating condition. Based on the evaluation of test conditions, this test should reasonably characterize radon hazards.

KCI also conducted observations of field conditions which could affect the results of the test and compiled weather data for the testing period. KCI recorded observations of the following conditions in each room at 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.

Results:

The results of the radon test analysis indicated the following:

Radon Concentration	Room	Result
≥ 4.0 pCi/L	none	n/a
< 4.0 pCi/L	See Attachment B	

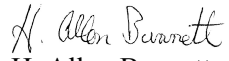
Notes:
D- Duplicate sample

All field blanks, office blank, and lab transit blanks had test results of less than the laboratory detection limit of 0.3 pCi/L. Review of the duplicate sample analysis indicates that adequate laboratory measurement precision was achieved. The Spike sample analysis results indicate the laboratory is operating within statistical control limits.

The sampling locations, field observations, and analytical results are listed on Table 1 (Attachment B). The laboratory analytical results are also attached (Attachment C). Laboratory results and exposure data for the spike samples are also included in Attachment C.

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) 316-7800.

Sincerely,



H. Allen Bennett

Certified Industrial Hygienist
KCI Technologies, Inc.

Attachments: A- Floor Plan with Test Locations
 B- Table 1-Radon Test Summary Spreadsheet
 C- Laboratory Analytical Results

ATTACHMENT B

Radon Test Summary Spreadsheet

Radon Testing Results		
College Gardens Elementary School		
Test Period: 01/11/16-01/14/16		
Kit Number	Room / Area	Result
7722001	A100	< 0.3
7715113	A100A	0.7
7715114	A100D	0.7
7715115	A100E	< 0.3
7715116	A100F	0.8
7715117	A101	< 0.3
7722003	A104	< 0.3
7722004	A104A	0.6
7722002	A104C	< 0.3
7715121	A105	< 0.3
7715120	A106	0.8
7715122	A107	< 0.3
7715123	A109	< 0.3
7715124	A111	< 0.3
7714354	A112	0.8
7714355	A112	0.8
7714356	A112A	< 0.3
7714357	A112B	0.7
7715127	A117A	< 0.3
7714388	A159	< 0.3
7714387	A159	< 0.3
7714390	A159A	< 0.3
7714359	B118	< 0.3
7714358	B120	0.7
7714363	B122	0.8
7714361	B127	0.8
7714360	B127	0.9
7714362	B127A	1.1
7714366	B128	1.2
7714364	B129	0.8
7714365	B131	2.7
7714385	B202	0.7
7714367	C130	0.8
7714369	C134	< 0.3
7714372	C136	< 0.3
7714371	C140	0.6
7714368	C141	0.8
7714375	C142	0.7
7714376	C146	< 0.3
7714392	C226	0.7
7714380	D147	0.6
7714377	D148	0.9
7714370	D151	< 0.3
7714379	D153	0.8
7714378	D156	0.9
7714386	D157	0.7

Table Note:

* Missing or Compromised Sample

Radon Testing Results		
College Gardens Elementary School		
Test Period: 01/11/16-01/14/16		
Kit Number	Room / Area	Result
7714381	D162	0.7
7714382	D164	0.6
7714383	D172	< 0.3
7714389	D233	0.8
7714398	P1	< 0.3
7714394	P2	< 0.3
7714396	P3	< 0.3
7714395	P4	< 0.3
7714391	P5	< 0.3
7714397	P6	< 0.3

Table Note:

* Missing or Compromised Sample

Radon Testing Results		
College Gardens Elementary School		
Test Period: 01/11/16-01/14/16		
Kit Number	QC Type	Result
7715118	D (A100)	0.6
7714400	D (A104)	0.6
7715126	D (A111)	0.6
7714374	D (C136)	< 0.3
7714384	D (D164)	0.8
7714393	D (D233)	0.7
7715119	FB (A100)	< 0.3
7714373	FB (C140)	< 0.3
7714399	OB (0)	< 0.3

Table Note:

* Missing or Compromised Sample

Table Notes:

AC- Activated Charcoal

ACI- Air Chek, Inc.

D- Duplicate

FB- Field Blank

KCI- KCI Technologies, Inc.

OB- Office Blank

PM- Project Manager

QC- Quality Control

ATTACHMENT C

Laboratory Analytical Results

Radon test result report for:
**COLLEGE GARDENS ELEMENTARY SCHOOL
MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7714399	0	2016-01-11 @ 4:00 pm	2016-01-14 @ 1:00 pm	< 0.3	2016-01-18
7715118	A100	2016-01-11 @ 1:00 pm	2016-01-14 @ 11:00 am	0.6 ± 0.3	2016-01-18
7715119	A100	2016-01-11 @ 1:00 pm	2016-01-14 @ 11:00 am	< 0.3	2016-01-18
7722001	A100	2016-01-11 @ 1:00 pm	2016-01-14 @ 11:00 am	< 0.3	2016-01-20
7715113	A100A	2016-01-11 @ 1:00 pm	2016-01-14 @ 11:00 am	0.7 ± 0.4	2016-01-20
7715114	A100D	2016-01-11 @ 1:00 pm	2016-01-14 @ 11:00 am	0.7 ± 0.4	2016-01-20
7715115	A100E	2016-01-11 @ 1:00 pm	2016-01-14 @ 11:00 am	< 0.3	2016-01-20
7715116	A100F	2016-01-11 @ 1:00 pm	2016-01-14 @ 11:00 am	0.8 ± 0.3	2016-01-18
7715117	A101	2016-01-11 @ 1:00 pm	2016-01-14 @ 11:00 am	< 0.3	2016-01-20
7714400	A104	2016-01-11 @ 3:00 pm	2016-01-14 @ 11:00 am	0.6 ± 0.4	2016-01-20
7722003	A104	2016-01-11 @ 1:00 pm	2016-01-14 @ 11:00 am	< 0.3	2016-01-20
7722004	A104A	2016-01-11 @ 1:00 pm	2016-01-14 @ 11:00 am	0.6 ± 0.3	2016-01-18
7722002	A104C	2016-01-11 @ 1:00 pm	2016-01-14 @ 11:00 am	< 0.3	2016-01-20
7715121	A105	2016-01-11 @ 1:00 pm	2016-01-14 @ 11:00 am	< 0.3	2016-01-20
7715120	A106	2016-01-11 @ 1:00 pm	2016-01-14 @ 11:00 am	0.8 ± 0.4	2016-01-20
7715122	A107	2016-01-11 @ 1:00 pm	2016-01-14 @ 11:00 am	< 0.3	2016-01-20
7715123	A109	2016-01-11 @ 1:00 pm	2016-01-14 @ 11:00 am	< 0.3	2016-01-20
7715124	A111	2016-01-11 @ 1:00 pm	2016-01-14 @ 11:00 am	< 0.3	2016-01-20
7715126	A111	2016-01-11 @ 1:00 pm	2016-01-14 @ 11:00 am	0.6 ± 0.4	2016-01-20
7714354	A112	2016-01-11 @ 1:00 pm	2016-01-14 @ 11:00 am	0.8 ± 0.3	2016-01-18
7714355	A112	2016-01-11 @ 1:00 pm	2016-01-14 @ 11:00 am	0.8 ± 0.4	2016-01-20
7714356	A112A	2016-01-11 @ 1:00 pm	2016-01-14 @ 11:00 am	< 0.3	2016-01-20
7714357	A112B	2016-01-11 @ 1:00 pm	2016-01-14 @ 11:00 am	0.7 ± 0.4	2016-01-20
7715127	A117A	2016-01-11 @ 1:00 pm	2016-01-14 @ 11:00 am	< 0.3	2016-01-18
7714387	A159	2016-01-11 @ 2:00 pm	2016-01-14 @ 12:00 pm	< 0.3	2016-01-18
7714388	A159	2016-01-11 @ 2:00 pm	2016-01-14 @ 12:00 pm	< 0.3	2016-01-18
7714390	A159A	2016-01-11 @ 2:00 pm	2016-01-14 @ 12:00 pm	< 0.3	2016-01-20
7714359	B118	2016-01-11 @ 2:00 pm	2016-01-14 @ 11:00 am	< 0.3	2016-01-18
7714358	B120	2016-01-11 @ 2:00 pm	2016-01-14 @ 11:00 am	0.7 ± 0.4	2016-01-20
7714363	B122	2016-01-11 @ 2:00 pm	2016-01-14 @ 11:00 am	0.8 ± 0.3	2016-01-18
7714360	B127	2016-01-11 @ 2:00 pm	2016-01-14 @ 11:00 am	0.9 ± 0.4	2016-01-20
7714361	B127	2016-01-11 @ 2:00 pm	2016-01-14 @ 11:00 am	0.8 ± 0.4	2016-01-20
7714362	B127A	2016-01-11 @ 2:00 pm	2016-01-14 @ 11:00 am	1.1 ± 0.4	2016-01-20
7714366	B128	2016-01-11 @ 2:00 pm	2016-01-14 @ 11:00 am	1.2 ± 0.5	2016-01-20
7714364	B129	2016-01-11 @ 2:00 pm	2016-01-14 @ 11:00 am	0.8 ± 0.4	2016-01-20
7714365	B131	2016-01-11 @ 2:00 pm	2016-01-14 @ 11:00 am	2.7 ± 0.5	2016-01-20
7714385	B202	2016-01-11 @ 3:00 pm	2016-01-14 @ 12:00 pm	0.7 ± 0.4	2016-01-20

February 1, 2016
LABORATORY ANALYSIS REPORT

Radon test result report for:
**COLLEGE GARDENS ELEMENTARY SCHOOL
MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7714367	C130	2016-01-11 @ 2:00 pm	2016-01-14 @ 12:00 pm	0.8 ± 0.4	2016-01-20
7714369	C134	2016-01-11 @ 2:00 pm	2016-01-14 @ 12:00 pm	< 0.3	2016-01-18
7714372	C136	2016-01-11 @ 2:00 pm	2016-01-14 @ 12:00 pm	< 0.3	2016-01-20
7714374	C136	2016-01-11 @ 2:00 pm	2016-01-14 @ 12:00 pm	< 0.3	2016-01-20
7714371	C140	2016-01-11 @ 2:00 pm	2016-01-14 @ 12:00 pm	0.6 ± 0.4	2016-01-20
7714373	C140	2016-01-11 @ 2:00 pm	2016-01-14 @ 12:00 pm	< 0.3	2016-01-20
7714368	C141	2016-01-11 @ 2:00 pm	2016-01-14 @ 12:00 pm	0.8 ± 0.3	2016-01-18
7714375	C142	2016-01-11 @ 2:00 pm	2016-01-14 @ 12:00 pm	0.7 ± 0.3	2016-01-18
7714376	C146	2016-01-11 @ 2:00 pm	2016-01-14 @ 12:00 pm	< 0.3	2016-01-18
7714392	C226	2016-01-11 @ 3:00 pm	2016-01-14 @ 12:00 pm	0.7 ± 0.3	2016-01-18
7714380	D147	2016-01-11 @ 2:00 pm	2016-01-14 @ 12:00 pm	0.6 ± 0.3	2016-01-18
7714377	D148	2016-01-11 @ 2:00 pm	2016-01-14 @ 12:00 pm	0.9 ± 0.3	2016-01-18
7714370	D151	2016-01-11 @ 2:00 pm	2016-01-14 @ 12:00 pm	< 0.3	2016-01-18
7714379	D153	2016-01-11 @ 2:00 pm	2016-01-14 @ 12:00 pm	0.8 ± 0.3	2016-01-18
7714378	D156	2016-01-11 @ 2:00 pm	2016-01-14 @ 12:00 pm	0.9 ± 0.4	2016-01-20
7714386	D157	2016-01-11 @ 2:00 pm	2016-01-14 @ 12:00 pm	0.7 ± 0.3	2016-01-18
7714381	D162	2016-01-11 @ 2:00 pm	2016-01-14 @ 12:00 pm	0.7 ± 0.3	2016-01-18
7714382	D164	2016-01-11 @ 2:00 pm	2016-01-14 @ 12:00 pm	0.6 ± 0.3	2016-01-18
7714384	D164	2016-01-11 @ 2:00 pm	2016-01-14 @ 12:00 pm	0.8 ± 0.3	2016-01-18
7714383	D172	2016-01-11 @ 2:00 pm	2016-01-14 @ 12:00 pm	< 0.3	2016-01-20
7714389	D233	2016-01-11 @ 3:00 pm	2016-01-14 @ 12:00 pm	0.8 ± 0.3	2016-01-18
7714393	D233	2016-01-11 @ 3:00 pm	2016-01-14 @ 12:00 pm	0.7 ± 0.4	2016-01-20
7714398	P1	2016-01-11 @ 3:00 pm	2016-01-14 @ 12:00 pm	< 0.3	2016-01-18
7714394	P2	2016-01-11 @ 3:00 pm	2016-01-14 @ 12:00 pm	< 0.3	2016-01-18
7714396	P3	2016-01-11 @ 3:00 pm	2016-01-14 @ 12:00 pm	< 0.3	2016-01-20
7714395	P4	2016-01-11 @ 3:00 pm	2016-01-14 @ 12:00 pm	< 0.3	2016-01-18
7714391	P5	2016-01-11 @ 3:00 pm	2016-01-14 @ 12:00 pm	< 0.3	2016-01-20
7714397	P6	2016-01-11 @ 3:00 pm	2016-01-14 @ 12:00 pm	< 0.3	2016-01-20

February 2, 2016
LABORATORY ANALYSIS REPORT

Radon test result report for:
MCPS PHASE 5 & 6 TRANSIT BLANKS

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7722194	1	2016-01-19 @ 12:00 pm	2016-01-22 @ 12:00 pm	< 0.3	2016-01-27
7718494	10	2016-01-19 @ 12:00 pm	2016-01-22 @ 12:00 pm	< 0.3	2016-01-27
7718475	11	2016-01-19 @ 12:00 pm	2016-01-22 @ 12:00 pm	< 0.3	2016-01-27
7718495	12	2016-01-19 @ 12:00 pm	2016-01-22 @ 12:00 pm	< 0.3	2016-01-27
7718496	13	2016-01-19 @ 12:00 pm	2016-01-22 @ 12:00 pm	< 0.3	2016-01-27
7718497	14	2016-01-19 @ 12:00 pm	2016-01-22 @ 12:00 pm	< 0.3	2016-01-27
7718498	15	2016-01-19 @ 12:00 pm	2016-01-22 @ 12:00 pm	< 0.3	2016-01-27
7718499	16	2016-01-19 @ 12:00 pm	2016-01-22 @ 12:00 pm	< 0.3	2016-01-27
7718500	17	2016-01-19 @ 12:00 pm	2016-01-22 @ 12:00 pm	< 0.3	2016-01-27
7718296	18	2016-01-19 @ 12:00 pm	2016-01-22 @ 12:00 pm	< 0.3	2016-01-27
7718295	19	2016-01-19 @ 12:00 pm	2016-01-22 @ 12:00 pm	< 0.3	2016-01-27
7722195	2	2016-01-19 @ 12:00 pm	2016-01-22 @ 12:00 pm	< 0.3	2016-01-27
7716789	20	2016-01-19 @ 12:00 pm	2016-01-22 @ 12:00 pm	< 0.3	2016-01-27
7716785	21	2016-01-19 @ 12:00 pm	2016-01-22 @ 12:00 pm	< 0.3	2016-01-26
7716791	22	2016-01-19 @ 12:00 pm	2016-01-22 @ 12:00 pm	< 0.3	2016-01-27
7716786	23	2016-01-19 @ 12:00 pm	2016-01-22 @ 12:00 pm	< 0.3	2016-01-27
7716793	24	2016-01-19 @ 12:00 pm	2016-01-22 @ 12:00 pm	< 0.3	2016-01-27
7718274	25	2016-01-19 @ 12:00 pm	2016-01-22 @ 12:00 pm	< 0.3	2016-01-27
7716792	26	2016-01-19 @ 12:00 pm	2016-01-22 @ 12:00 pm	< 0.3	2016-01-27
7718294	27	2016-01-19 @ 12:00 pm	2016-01-22 @ 12:00 pm	< 0.3	2016-01-27
7718293	28	2016-01-19 @ 12:00 pm	2016-01-22 @ 12:00 pm	< 0.3	2016-01-27
7718292	29	2016-01-19 @ 12:00 pm	2016-01-22 @ 12:00 pm	< 0.3	2016-01-27
7722197	3	2016-01-19 @ 12:00 pm	2016-01-22 @ 12:00 pm	< 0.3	2016-01-27
7718290	30	2016-01-19 @ 12:00 pm	2016-01-22 @ 12:00 pm	< 0.3	2016-01-27
7722198	4	2016-01-19 @ 12:00 pm	2016-01-22 @ 12:00 pm	< 0.3	2016-01-27
7722199	5	2016-01-19 @ 12:00 pm	2016-01-22 @ 12:00 pm	< 0.3	2016-01-27
7722211	6	2016-01-19 @ 12:00 pm	2016-01-22 @ 12:00 pm	< 0.3	2016-01-27
7718491	7	2016-01-19 @ 12:00 pm	2016-01-22 @ 12:00 pm	< 0.3	2016-01-27
7718476	8	2016-01-19 @ 12:00 pm	2016-01-22 @ 12:00 pm	< 0.3	2016-01-26
7718479	9	2016-01-19 @ 12:00 pm	2016-01-22 @ 12:00 pm	< 0.3	2016-01-27

December
23,
2015

**LABORATORY ANALYSIS
REPORT ****

Spike Sample Laboratory Results

Radon test result report for:
MCPS

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7706380	101	2015-12-18 @ 9:00 am	2015-12-21 @ 9:00 am	25.2	2015-12-23
7706381	102	2015-12-18 @ 9:00 am	2015-12-21 @ 9:00 am	26.5	2015-12-23
7706208	103	2015-12-18 @ 9:00 am	2015-12-21 @ 9:00 am	27.7	2015-12-23
7705132	104	2015-12-18 @ 9:00 am	2015-12-21 @ 9:00 am	28.6	2015-12-23
7706366	105	2015-12-18 @ 9:00 am	2015-12-21 @ 9:00 am	26.5	2015-12-23
7706211	106	2015-12-18 @ 9:00 am	2015-12-21 @ 9:00 am	26.1	2015-12-23

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

Note: Spike samples are test canisters that are deliberately exposed to a controlled high level of radon in a laboratory. They provide a quality control measure in the testing process and do NOT reflect radon levels in the building being tested.

EXPOSURE IN BOWSER-MORNER RADON CHAMBER

CLIENT KCI Technologies Inc. Job Number 173224

NOMINAL Conditions: Radon Conc 26.9 pCi/L Rel. Hum 49.6 % Temp. 69.9 F

Date Start: 12/18/15 Date Stop: 12/21/15 Date Start: _____ Date Stop: _____

Time Start: 0929 Time Stop: 0929 Time Start: _____ Time Stop: _____

Device No.'s: 7705132, 7706208, Device No.'s: _____

7706211, 7706366, _____

7706380, 7706381 _____

F3 Left

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 μ R/h Elevation = 820 ft**



Chain of Custody

Project Name: MCPS Radon Phase V

Name of Schools:

- | | | |
|-------------------------|---------------------------|-------------------------|
| 1. Arcola ES | 11. Clopper Mill ES | 21. Parkland Magnet MS |
| 2. Argyle ES | 12. College Gardens ES | 22. Rachel Carson ES |
| 3. Bells Mill ES | 13. Eastern MS | 23. Roberto Clemente MS |
| 4. Bethesda ES | 14. Fallsmead ES | 24. Rock Creek ES |
| 5. Brookhaven ES | 15. Fields Road ES | 25. Rockview ES |
| 6. Burning Tree ES | 16. Flower Hill ES | 26. Rockville HS |
| 7. Capt. James Daly ES | 17. Flower Valley ES | 27. Rocky Hill MS |
| 8. Carderock Springs ES | 18. Fox Chapel ES | 28. Seneca Valley HS |
| 9. Cashell ES | 19. Glen Haven ES | 29. Westover ES |
| 10. Clearspring ES | 20. James Hubert Blake HS | 30. William Farquar MS |

	Date	Initials
Radon Test Kits Deployed	1/11/16	JM
Radon Test Kits Sampled	1/14/16	JM
Radon Test Kits Shipped to Lab*	1/15/16	JM
Radon Test Kits Received by Lab*	1/18/16	JM

*All samples sent to Air Check, Inc., 1936 Butler Bridge Road, Mills River, NC 28758

M. A. CECIL & ASSOCIATES, INC.

4475 Shannon Way, Port Republic, Maryland 20676 (301) 855-7710
INDUSTRIAL HYGIENE AND ENVIRONMENTAL HEALTH

August 20, 2013

Mr. Sean Yarup
Montgomery County Public Schools
16651 Crabbs Branch Way
Rockville, Maryland 20855

Re: Radon Evaluation- College Gardens Elementary School

Dear Mr. Yarup:

Environmental radon testing has been completed at College Gardens Elementary School.

Twenty-seven charcoal canisters were placed in various rooms throughout the school. The canisters were placed on August 6, 2013 and retrieved on August 8, 2013. The detected radon concentration was below the EPA recommended level of 4.0 pico curies per liter (pCi/l) of air. Testing locations and results are summarized in the table below. One sample (MPR) was missing at the time of retrieval.

Should you have any questions concerning this report please do not hesitate to contact us.

Sincerely,



Michael A. Cecil, CIH

**College Gardens Elementary School
Environmental Radon Results
August 6 to 8, 2013**

Location	Detected Radon Concentration (pCi/l)
Main Office	<0.5
Gym	<0.5
Room D157	<0.5
Room D172	0.6
Room D153(A)	0.5
Room D153(B)	<0.5
Room D164	<0.5
Room D162	<0.5
Room D151	<0.5
Room D156	<0.5
Room D147	<0.5
Room D148	<0.5
Room C146(A)	<0.5
Room C146(B)	0.5
Room C142	<0.5
Room C140	<0.5
Room C136	<0.5
Room C134	0.6
Room C141	<0.5
Room C130	<0.5
Room B128	<0.5
Room B122	<0.5
IMC	<0.5
Room B120	<0.5
Room B118	<0.5
MPR	Missing at pick-up
A101	0.5



MCPS RADON TESTING

Executive Summary: College Gardens Elementary School

Date of Test Report:	2/04/2016 (Rev 1)
Round of Testing:	Initial Follow-up Post Remediation
# Rooms Tested:	53
# Rooms \geq 4.0 pCi/L:	0
Low Value:	< 0.3
High Value:	2.7

Project Status:

Initial testing completed; no further action at this time.



February 4, 2016 (Rev 1)

Mr. Richard Cox
Indoor Air Quality Team Leader
Montgomery County Public Schools
850 Hungerford Drive
Rockville, MD 20850

Re: **Radon Testing Services**
KCI Job # 12146341.24

Location: College Gardens Elementary School
1700 Yale Place
Rockville, MD 20850

Dear Mr. Cox:

KCI Technologies, Inc. (KCI) is pleased to submit the following report to the Montgomery County Public Schools (MCPS) pursuant to completing a “short-term” 3 day radon test for the College Gardens Elementary School, located at 1700 Yale Place in Rockville, Maryland 20850 (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 Safety Board (NRSB) Radon Measurement Specialist (certification #14SS056) supervised the testing. Additional information on radon management and the health effects of radon exposure is available from www.montgomerycountymd.gov/dep/air/radon or www.epa.gov/radon.

KCI visited the site on January 11, 2016 and deployed sixty-five (65) activated charcoal (AC) radon test kits. KCI deployed radon test kits in 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 included duplicate samples, field blanks, lab transit blanks, and office blanks in accordance with AARST recommendations. In addition, KCI submitted six (6) 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 14, 2016 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:

The operating condition that represents the greatest amount of significantly occupied time for this building is; heating active, with outdoor temperature averages $\leq 65^{\circ}$ F.

KCI concludes that the test period reasonably represents normal conditions when the building is significantly occupied. Clear characterization of the radon hazard is most likely to be observed under this normal operating condition. Based on the evaluation of test conditions, this test should reasonably characterize radon hazards.

KCI also conducted observations of field conditions which could affect the results of the test and compiled weather data for the testing period. KCI recorded observations of the following conditions in each room at 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.

Results:

The results of the radon test analysis indicated the following:

Radon Concentration	Room	Result
≥ 4.0 pCi/L	none	n/a
< 4.0 pCi/L	See Attachment B	

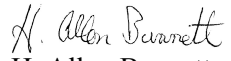
Notes:
D- Duplicate sample

All field blanks, office blank, and lab transit blanks had test results of less than the laboratory detection limit of 0.3 pCi/L. Review of the duplicate sample analysis indicates that adequate laboratory measurement precision was achieved. The Spike sample analysis results indicate the laboratory is operating within statistical control limits.

The sampling locations, field observations, and analytical results are listed on Table 1 (Attachment B). The laboratory analytical results are also attached (Attachment C). Laboratory results and exposure data for the spike samples are also included in Attachment C.

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) 316-7800.

Sincerely,



H. Allen Bennett
Certified Industrial Hygienist
KCI Technologies, Inc.

Attachments: A- Floor Plan with Test Locations
 B- Table 1-Radon Test Summary Spreadsheet
 C- Laboratory Analytical Results

ATTACHMENT B

Radon Test Summary Spreadsheet

Radon Testing Results		
College Gardens Elementary School		
Test Period: 01/11/16-01/14/16		
Kit Number	Room / Area	Result
7722001	A100	< 0.3
7715113	A100A	0.7
7715114	A100D	0.7
7715115	A100E	< 0.3
7715116	A100F	0.8
7715117	A101	< 0.3
7722003	A104	< 0.3
7722004	A104A	0.6
7722002	A104C	< 0.3
7715121	A105	< 0.3
7715120	A106	0.8
7715122	A107	< 0.3
7715123	A109	< 0.3
7715124	A111	< 0.3
7714354	A112	0.8
7714355	A112	0.8
7714356	A112A	< 0.3
7714357	A112B	0.7
7715127	A117A	< 0.3
7714388	A159	< 0.3
7714387	A159	< 0.3
7714390	A159A	< 0.3
7714359	B118	< 0.3
7714358	B120	0.7
7714363	B122	0.8
7714361	B127	0.8
7714360	B127	0.9
7714362	B127A	1.1
7714366	B128	1.2
7714364	B129	0.8
7714365	B131	2.7
7714385	B202	0.7
7714367	C130	0.8
7714369	C134	< 0.3
7714372	C136	< 0.3
7714371	C140	0.6
7714368	C141	0.8
7714375	C142	0.7
7714376	C146	< 0.3
7714392	C226	0.7
7714380	D147	0.6
7714377	D148	0.9
7714370	D151	< 0.3
7714379	D153	0.8
7714378	D156	0.9
7714386	D157	0.7

Table Note:

* Missing or Compromised Sample

Radon Testing Results		
College Gardens Elementary School		
Test Period: 01/11/16-01/14/16		
Kit Number	Room / Area	Result
7714381	D162	0.7
7714382	D164	0.6
7714383	D172	< 0.3
7714389	D233	0.8
7714398	P1	< 0.3
7714394	P2	< 0.3
7714396	P3	< 0.3
7714395	P4	< 0.3
7714391	P5	< 0.3
7714397	P6	< 0.3

Table Note:

* Missing or Compromised Sample

Radon Testing Results		
College Gardens Elementary School		
Test Period: 01/11/16-01/14/16		
Kit Number	QC Type	Result
7715118	D (A100)	0.6
7714400	D (A104)	0.6
7715126	D (A111)	0.6
7714374	D (C136)	< 0.3
7714384	D (D164)	0.8
7714393	D (D233)	0.7
7715119	FB (A100)	< 0.3
7714373	FB (C140)	< 0.3
7714399	OB (0)	< 0.3

Table Note:

* Missing or Compromised Sample

Table Notes:

AC- Activated Charcoal

ACI- Air Chek, Inc.

D- Duplicate

FB- Field Blank

KCI- KCI Technologies, Inc.

OB- Office Blank

PM- Project Manager

QC- Quality Control

ATTACHMENT C

Laboratory Analytical Results

Radon test result report for:
**COLLEGE GARDENS ELEMENTARY SCHOOL
MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7714399	0	2016-01-11 @ 4:00 pm	2016-01-14 @ 1:00 pm	< 0.3	2016-01-18
7715118	A100	2016-01-11 @ 1:00 pm	2016-01-14 @ 11:00 am	0.6 ± 0.3	2016-01-18
7715119	A100	2016-01-11 @ 1:00 pm	2016-01-14 @ 11:00 am	< 0.3	2016-01-18
7722001	A100	2016-01-11 @ 1:00 pm	2016-01-14 @ 11:00 am	< 0.3	2016-01-20
7715113	A100A	2016-01-11 @ 1:00 pm	2016-01-14 @ 11:00 am	0.7 ± 0.4	2016-01-20
7715114	A100D	2016-01-11 @ 1:00 pm	2016-01-14 @ 11:00 am	0.7 ± 0.4	2016-01-20
7715115	A100E	2016-01-11 @ 1:00 pm	2016-01-14 @ 11:00 am	< 0.3	2016-01-20
7715116	A100F	2016-01-11 @ 1:00 pm	2016-01-14 @ 11:00 am	0.8 ± 0.3	2016-01-18
7715117	A101	2016-01-11 @ 1:00 pm	2016-01-14 @ 11:00 am	< 0.3	2016-01-20
7714400	A104	2016-01-11 @ 3:00 pm	2016-01-14 @ 11:00 am	0.6 ± 0.4	2016-01-20
7722003	A104	2016-01-11 @ 1:00 pm	2016-01-14 @ 11:00 am	< 0.3	2016-01-20
7722004	A104A	2016-01-11 @ 1:00 pm	2016-01-14 @ 11:00 am	0.6 ± 0.3	2016-01-18
7722002	A104C	2016-01-11 @ 1:00 pm	2016-01-14 @ 11:00 am	< 0.3	2016-01-20
7715121	A105	2016-01-11 @ 1:00 pm	2016-01-14 @ 11:00 am	< 0.3	2016-01-20
7715120	A106	2016-01-11 @ 1:00 pm	2016-01-14 @ 11:00 am	0.8 ± 0.4	2016-01-20
7715122	A107	2016-01-11 @ 1:00 pm	2016-01-14 @ 11:00 am	< 0.3	2016-01-20
7715123	A109	2016-01-11 @ 1:00 pm	2016-01-14 @ 11:00 am	< 0.3	2016-01-20
7715124	A111	2016-01-11 @ 1:00 pm	2016-01-14 @ 11:00 am	< 0.3	2016-01-20
7715126	A111	2016-01-11 @ 1:00 pm	2016-01-14 @ 11:00 am	0.6 ± 0.4	2016-01-20
7714354	A112	2016-01-11 @ 1:00 pm	2016-01-14 @ 11:00 am	0.8 ± 0.3	2016-01-18
7714355	A112	2016-01-11 @ 1:00 pm	2016-01-14 @ 11:00 am	0.8 ± 0.4	2016-01-20
7714356	A112A	2016-01-11 @ 1:00 pm	2016-01-14 @ 11:00 am	< 0.3	2016-01-20
7714357	A112B	2016-01-11 @ 1:00 pm	2016-01-14 @ 11:00 am	0.7 ± 0.4	2016-01-20
7715127	A117A	2016-01-11 @ 1:00 pm	2016-01-14 @ 11:00 am	< 0.3	2016-01-18
7714387	A159	2016-01-11 @ 2:00 pm	2016-01-14 @ 12:00 pm	< 0.3	2016-01-18
7714388	A159	2016-01-11 @ 2:00 pm	2016-01-14 @ 12:00 pm	< 0.3	2016-01-18
7714390	A159A	2016-01-11 @ 2:00 pm	2016-01-14 @ 12:00 pm	< 0.3	2016-01-20
7714359	B118	2016-01-11 @ 2:00 pm	2016-01-14 @ 11:00 am	< 0.3	2016-01-18
7714358	B120	2016-01-11 @ 2:00 pm	2016-01-14 @ 11:00 am	0.7 ± 0.4	2016-01-20
7714363	B122	2016-01-11 @ 2:00 pm	2016-01-14 @ 11:00 am	0.8 ± 0.3	2016-01-18
7714360	B127	2016-01-11 @ 2:00 pm	2016-01-14 @ 11:00 am	0.9 ± 0.4	2016-01-20
7714361	B127	2016-01-11 @ 2:00 pm	2016-01-14 @ 11:00 am	0.8 ± 0.4	2016-01-20
7714362	B127A	2016-01-11 @ 2:00 pm	2016-01-14 @ 11:00 am	1.1 ± 0.4	2016-01-20
7714366	B128	2016-01-11 @ 2:00 pm	2016-01-14 @ 11:00 am	1.2 ± 0.5	2016-01-20
7714364	B129	2016-01-11 @ 2:00 pm	2016-01-14 @ 11:00 am	0.8 ± 0.4	2016-01-20
7714365	B131	2016-01-11 @ 2:00 pm	2016-01-14 @ 11:00 am	2.7 ± 0.5	2016-01-20
7714385	B202	2016-01-11 @ 3:00 pm	2016-01-14 @ 12:00 pm	0.7 ± 0.4	2016-01-20

February 1, 2016
**LABORATORY ANALYSIS
REPORT ****

Radon test result report for:
**COLLEGE GARDENS ELEMENTARY SCHOOL
MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7714367	C130	2016-01-11 @ 2:00 pm	2016-01-14 @ 12:00 pm	0.8 ± 0.4	2016-01-20
7714369	C134	2016-01-11 @ 2:00 pm	2016-01-14 @ 12:00 pm	< 0.3	2016-01-18
7714372	C136	2016-01-11 @ 2:00 pm	2016-01-14 @ 12:00 pm	< 0.3	2016-01-20
7714374	C136	2016-01-11 @ 2:00 pm	2016-01-14 @ 12:00 pm	< 0.3	2016-01-20
7714371	C140	2016-01-11 @ 2:00 pm	2016-01-14 @ 12:00 pm	0.6 ± 0.4	2016-01-20
7714373	C140	2016-01-11 @ 2:00 pm	2016-01-14 @ 12:00 pm	< 0.3	2016-01-20
7714368	C141	2016-01-11 @ 2:00 pm	2016-01-14 @ 12:00 pm	0.8 ± 0.3	2016-01-18
7714375	C142	2016-01-11 @ 2:00 pm	2016-01-14 @ 12:00 pm	0.7 ± 0.3	2016-01-18
7714376	C146	2016-01-11 @ 2:00 pm	2016-01-14 @ 12:00 pm	< 0.3	2016-01-18
7714392	C226	2016-01-11 @ 3:00 pm	2016-01-14 @ 12:00 pm	0.7 ± 0.3	2016-01-18
7714380	D147	2016-01-11 @ 2:00 pm	2016-01-14 @ 12:00 pm	0.6 ± 0.3	2016-01-18
7714377	D148	2016-01-11 @ 2:00 pm	2016-01-14 @ 12:00 pm	0.9 ± 0.3	2016-01-18
7714370	D151	2016-01-11 @ 2:00 pm	2016-01-14 @ 12:00 pm	< 0.3	2016-01-18
7714379	D153	2016-01-11 @ 2:00 pm	2016-01-14 @ 12:00 pm	0.8 ± 0.3	2016-01-18
7714378	D156	2016-01-11 @ 2:00 pm	2016-01-14 @ 12:00 pm	0.9 ± 0.4	2016-01-20
7714386	D157	2016-01-11 @ 2:00 pm	2016-01-14 @ 12:00 pm	0.7 ± 0.3	2016-01-18
7714381	D162	2016-01-11 @ 2:00 pm	2016-01-14 @ 12:00 pm	0.7 ± 0.3	2016-01-18
7714382	D164	2016-01-11 @ 2:00 pm	2016-01-14 @ 12:00 pm	0.6 ± 0.3	2016-01-18
7714384	D164	2016-01-11 @ 2:00 pm	2016-01-14 @ 12:00 pm	0.8 ± 0.3	2016-01-18
7714383	D172	2016-01-11 @ 2:00 pm	2016-01-14 @ 12:00 pm	< 0.3	2016-01-20
7714389	D233	2016-01-11 @ 3:00 pm	2016-01-14 @ 12:00 pm	0.8 ± 0.3	2016-01-18
7714393	D233	2016-01-11 @ 3:00 pm	2016-01-14 @ 12:00 pm	0.7 ± 0.4	2016-01-20
7714398	P1	2016-01-11 @ 3:00 pm	2016-01-14 @ 12:00 pm	< 0.3	2016-01-18
7714394	P2	2016-01-11 @ 3:00 pm	2016-01-14 @ 12:00 pm	< 0.3	2016-01-18
7714396	P3	2016-01-11 @ 3:00 pm	2016-01-14 @ 12:00 pm	< 0.3	2016-01-20
7714395	P4	2016-01-11 @ 3:00 pm	2016-01-14 @ 12:00 pm	< 0.3	2016-01-18
7714391	P5	2016-01-11 @ 3:00 pm	2016-01-14 @ 12:00 pm	< 0.3	2016-01-20
7714397	P6	2016-01-11 @ 3:00 pm	2016-01-14 @ 12:00 pm	< 0.3	2016-01-20

February 2, 2016
LABORATORY ANALYSIS REPORT

Radon test result report for:
MCPS PHASE 5 & 6 TRANSIT BLANKS

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7722194	1	2016-01-19 @ 12:00 pm	2016-01-22 @ 12:00 pm	< 0.3	2016-01-27
7718494	10	2016-01-19 @ 12:00 pm	2016-01-22 @ 12:00 pm	< 0.3	2016-01-27
7718475	11	2016-01-19 @ 12:00 pm	2016-01-22 @ 12:00 pm	< 0.3	2016-01-27
7718495	12	2016-01-19 @ 12:00 pm	2016-01-22 @ 12:00 pm	< 0.3	2016-01-27
7718496	13	2016-01-19 @ 12:00 pm	2016-01-22 @ 12:00 pm	< 0.3	2016-01-27
7718497	14	2016-01-19 @ 12:00 pm	2016-01-22 @ 12:00 pm	< 0.3	2016-01-27
7718498	15	2016-01-19 @ 12:00 pm	2016-01-22 @ 12:00 pm	< 0.3	2016-01-27
7718499	16	2016-01-19 @ 12:00 pm	2016-01-22 @ 12:00 pm	< 0.3	2016-01-27
7718500	17	2016-01-19 @ 12:00 pm	2016-01-22 @ 12:00 pm	< 0.3	2016-01-27
7718296	18	2016-01-19 @ 12:00 pm	2016-01-22 @ 12:00 pm	< 0.3	2016-01-27
7718295	19	2016-01-19 @ 12:00 pm	2016-01-22 @ 12:00 pm	< 0.3	2016-01-27
7722195	2	2016-01-19 @ 12:00 pm	2016-01-22 @ 12:00 pm	< 0.3	2016-01-27
7716789	20	2016-01-19 @ 12:00 pm	2016-01-22 @ 12:00 pm	< 0.3	2016-01-27
7716785	21	2016-01-19 @ 12:00 pm	2016-01-22 @ 12:00 pm	< 0.3	2016-01-26
7716791	22	2016-01-19 @ 12:00 pm	2016-01-22 @ 12:00 pm	< 0.3	2016-01-27
7716786	23	2016-01-19 @ 12:00 pm	2016-01-22 @ 12:00 pm	< 0.3	2016-01-27
7716793	24	2016-01-19 @ 12:00 pm	2016-01-22 @ 12:00 pm	< 0.3	2016-01-27
7718274	25	2016-01-19 @ 12:00 pm	2016-01-22 @ 12:00 pm	< 0.3	2016-01-27
7716792	26	2016-01-19 @ 12:00 pm	2016-01-22 @ 12:00 pm	< 0.3	2016-01-27
7718294	27	2016-01-19 @ 12:00 pm	2016-01-22 @ 12:00 pm	< 0.3	2016-01-27
7718293	28	2016-01-19 @ 12:00 pm	2016-01-22 @ 12:00 pm	< 0.3	2016-01-27
7718292	29	2016-01-19 @ 12:00 pm	2016-01-22 @ 12:00 pm	< 0.3	2016-01-27
7722197	3	2016-01-19 @ 12:00 pm	2016-01-22 @ 12:00 pm	< 0.3	2016-01-27
7718290	30	2016-01-19 @ 12:00 pm	2016-01-22 @ 12:00 pm	< 0.3	2016-01-27
7722198	4	2016-01-19 @ 12:00 pm	2016-01-22 @ 12:00 pm	< 0.3	2016-01-27
7722199	5	2016-01-19 @ 12:00 pm	2016-01-22 @ 12:00 pm	< 0.3	2016-01-27
7722211	6	2016-01-19 @ 12:00 pm	2016-01-22 @ 12:00 pm	< 0.3	2016-01-27
7718491	7	2016-01-19 @ 12:00 pm	2016-01-22 @ 12:00 pm	< 0.3	2016-01-27
7718476	8	2016-01-19 @ 12:00 pm	2016-01-22 @ 12:00 pm	< 0.3	2016-01-26
7718479	9	2016-01-19 @ 12:00 pm	2016-01-22 @ 12:00 pm	< 0.3	2016-01-27

December
23,
2015

**LABORATORY ANALYSIS
REPORT ****

Spike Sample Laboratory Results

Radon test result report for:

MCPS

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7706380	101	2015-12-18 @ 9:00 am	2015-12-21 @ 9:00 am	25.2	2015-12-23
7706381	102	2015-12-18 @ 9:00 am	2015-12-21 @ 9:00 am	26.5	2015-12-23
7706208	103	2015-12-18 @ 9:00 am	2015-12-21 @ 9:00 am	27.7	2015-12-23
7705132	104	2015-12-18 @ 9:00 am	2015-12-21 @ 9:00 am	28.6	2015-12-23
7706366	105	2015-12-18 @ 9:00 am	2015-12-21 @ 9:00 am	26.5	2015-12-23
7706211	106	2015-12-18 @ 9:00 am	2015-12-21 @ 9:00 am	26.1	2015-12-23

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

Note: Spike samples are test canisters that are deliberately exposed to a controlled high level of radon in a laboratory. They provide a quality control measure in the testing process and do NOT reflect radon levels in the building being tested.

EXPOSURE IN BOWSER-MORNER RADON CHAMBER

CLIENT KCI Technologies Inc. Job Number 173224

NOMINAL Conditions: Radon Conc 26.9 pCi/L Rel. Hum 49.6 % Temp. 69.9 F

Date Start: 12/18/15 Date Stop: 12/21/15 Date Start: _____ Date Stop: _____

Time Start: 0929 Time Stop: 0929 Time Start: _____ Time Stop: _____

Device No.'s: 7705132, 7706208, Device No.'s: _____

7706211, 7706366, _____

7706380, 7706381 _____

F3 Left

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 μ R/h Elevation = 820 ft**



Chain of Custody

Project Name: MCPS Radon Phase V

Name of Schools:

- | | | |
|-------------------------|---------------------------|-------------------------|
| 1. Arcola ES | 11. Clopper Mill ES | 21. Parkland Magnet MS |
| 2. Argyle ES | 12. College Gardens ES | 22. Rachel Carson ES |
| 3. Bells Mill ES | 13. Eastern MS | 23. Roberto Clemente MS |
| 4. Bethesda ES | 14. Fallsmead ES | 24. Rock Creek ES |
| 5. Brookhaven ES | 15. Fields Road ES | 25. Rockview ES |
| 6. Burning Tree ES | 16. Flower Hill ES | 26. Rockville HS |
| 7. Capt. James Daly ES | 17. Flower Valley ES | 27. Rocky Hill MS |
| 8. Carderock Springs ES | 18. Fox Chapel ES | 28. Seneca Valley HS |
| 9. Cashell ES | 19. Glen Haven ES | 29. Westover ES |
| 10. Clearspring ES | 20. James Hubert Blake HS | 30. William Farquar MS |

	Date	Initials
Radon Test Kits Deployed	1/11/16	JM
Radon Test Kits Sampled	1/14/16	JM
Radon Test Kits Shipped to Lab*	1/15/16	JM
Radon Test Kits Received by Lab*	1/18/16	JM

*All samples sent to Air Check, Inc., 1936 Butler Bridge Road, Mills River, NC 28758

M. A. CECIL & ASSOCIATES, INC.

4475 Shannon Way, Port Republic, Maryland 20676 (301) 855-7710
INDUSTRIAL HYGIENE AND ENVIRONMENTAL HEALTH

August 20, 2013

Mr. Sean Yarup
Montgomery County Public Schools
16651 Crabbs Branch Way
Rockville, Maryland 20855

Re: Radon Evaluation- College Gardens Elementary School

Dear Mr. Yarup:

Environmental radon testing has been completed at College Gardens Elementary School.

Twenty-seven charcoal canisters were placed in various rooms throughout the school. The canisters were placed on August 6, 2013 and retrieved on August 8, 2013. The detected radon concentration was below the EPA recommended level of 4.0 pico curies per liter (pCi/l) of air. Testing locations and results are summarized in the table below. One sample (MPR) was missing at the time of retrieval.

Should you have any questions concerning this report please do not hesitate to contact us.

Sincerely,



Michael A. Cecil, CIH

**College Gardens Elementary School
Environmental Radon Results
August 6 to 8, 2013**

Location	Detected Radon Concentration (pCi/l)
Main Office	<0.5
Gym	<0.5
Room D157	<0.5
Room D172	0.6
Room D153(A)	0.5
Room D153(B)	<0.5
Room D164	<0.5
Room D162	<0.5
Room D151	<0.5
Room D156	<0.5
Room D147	<0.5
Room D148	<0.5
Room C146(A)	<0.5
Room C146(B)	0.5
Room C142	<0.5
Room C140	<0.5
Room C136	<0.5
Room C134	0.6
Room C141	<0.5
Room C130	<0.5
Room B128	<0.5
Room B122	<0.5
IMC	<0.5
Room B120	<0.5
Room B118	<0.5
MPR	Missing at pick-up
A101	0.5