

School / Facility Radon Testing Report Form

School Year: **24-25**

Facility:	Beverly Farms Elementary School		
Address:	8501 Postoak Road		
	Potomac, MD 20854		
Reason for Testing:	Scheduled Re-Testing - <input type="checkbox"/> 2-year or <input checked="" type="checkbox"/> 5-year schedule <input type="checkbox"/> Clearance Testing (Post-Mitigation) <input type="checkbox"/> Building Envelope or HVAC Upgrades <input type="checkbox"/> New Construction – Addition or 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 (New Facility)		
Round of Testing:	<input type="checkbox"/> Initial Testing -or- <input checked="" 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 type="checkbox"/> Not Required <input checked="" type="checkbox"/> Consider (≥ 2.0 & < 4.0 -pCi/L) <input type="checkbox"/> Required (≥ 4.0 -pCi/L) Rooms:	<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)		
Number of Rooms Tested	48	Lowest Value (pCi/L)	< 0.3
Number of Rooms (≥ 4.0 -pCi/L)	1	Highest Value (pCi/L)	4.5

Instructions: Submit one testing report form per-facility. 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.

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)
Other—Specify here:		
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):	01/13/25	03/24/25
<input type="checkbox"/> Long-Term				01/17/25	03/27/25
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)

Round of Testing	Detectors Deployed				
	Ground-Contact		Upper-Level(s)		Total
	Initial	Follow-Up	Initial	Follow-Up	
Test Locations ¹	43	4	3	0	50
Duplicates ²	5	1	0	0	6
Field Blanks ³	2	1	0	0	3
Grand Total					59

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.

Round of Testing	QA/QC Samples		Total
	Initial	Follow-Up	
Spikes ¹	Not applicable		10
Trip Blanks ²	1	1	2
Office Blanks ^{3, 4}	1	1	2
			14

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.

Quality Assurance / Quality Control (continued)

Spike Sample Lab Results. Measured values are satisfactory, i.e., within $\pm 25\%$ 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 submitted testing organization's/company's QA plan?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Round of Testing	Initial Follow-Up
All Field, Trip and Office Blanks are \leq (less than or equal to) to the Method Detection Limit?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
For all Duplicate Samples ¹ , the higher value is $\leq 2x$ the lower value?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
For all Duplicate Samples ¹ , Relative Percent Difference(s) (RPD) ² are less than the Warning Level ³ ?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
For all Duplicate Samples ¹ , Relative Percent Difference(s) (RPD) ² are less than the Control Level ³ ?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

1 – Duplicate Control – a “NO” response constitute a control failure and the space/location represented by the duplicate sample becomes an invalid measurement location and should be listed in the “Invalid Measurement Locations” Table attached to this report.

2 - The objective of duplicate tests is to assess the precision error of the measurement method or, how well two side-by-side measurements agree or disagree. Precision involving duplicates is calculated by using Relative Percent Difference (RPD). RPD is equal to the difference between the higher test result minus the lower value test result divided by the average of the two duplicate test results, multiplied by 100. The RPD result is then compared to the warning and control limits.

3 - The Warning Level is set at the deviation from ideal performance that would be expected to occur by chance only 5% of the time, and Control Limits are set at that deviation from ideal performance that would be expected to occur by chance only 1% of the time. The Warning Level indicates a potential problem, which should be investigated. The Control Level indicates that the measurement system should be subject to corrective action.

The control and warning levels for duplicates, based on the averaged duplicate test result, are -

Average concentration of the two duplicate test results	Warning Level	Control Level
< 2.0-pCi/L	1-pCi/L	Not applicable
Between 2.0 and 3.9-pCi/L	50% RPD	67% RPD
≥ 4.0 -pCi/L	28% RPD	36% RPD

Summary of Test Results¹ and Determination of Valid Measurements²

Round of Testing	Ground-Contact		Upper-Level(s)		Total
	Initial	Follow-Up	Initial	Follow-Up	
Number of test locations:	43	2	3	0	48
Number of locations ≥ 8.0 -pCi/L:	0	0	0	0	0
Number of locations ≥ 4.0 and ≤ 8 -pCi/L:	2	0	0	0	2
Number of locations ≥ 2.7 and < 4 -pCi/L:	0	0	0	0	0
Number of locations ≥ 2.0 and < 2.7 -pCi/L:	0	0	0	0	0
Number of missing required test locations ³ :	0	0	0	0	0
Number of failed duplicate control locations:	1	0	0	0	1
Percentage of missing test locations for the facility ^{4,5} :	0	0	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)

Round of Testing	Initial	Follow-Up
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	<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 type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<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 sufficient valid measurements obtained?^{1,2} <i>If Yes, then - ‘No Further Testing Needed’ complete Conclusion section on first page.</i> <i>If No, then - ‘Follow-up Testing Required’ continue below.</i>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA	<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.

Follow-Up Testing

Required –

- If an insufficient number (greater than the allowance provided above) of valid measurements were obtained during the initial round of testing (the “missing required test locations” in the table above);
- Any location test results ≥ 4.0-pCi/L;
- Any location where duplicates fail QC checks; and or
- At the discretion of MCPS IAQ Staff

Reason for Follow-Up Testing	Testing Procedure	Follow-up Result	Conclusion
Insufficient Number of Measurements	Follow same procedures as Initial Testing	Not Applicable	Follow Initial Testing procedures
Results ≥ 4.0-pCi/L	Deploy two Short-term follow-up tests and required blanks and duplicates; Average the results of the two tests	≥4.0	Mitigation Required
Failed QC checks		≥2.0 and <4.0	Consider Mitigation
		<2.0	Mitigation Not Required

- ***If follow-up testing identifies additional spaces requiring additional testing it will be performed as part of the ongoing follow-testing round.***

Attachment 1:

Summary Data Tables

Table 1- Radon Testing Results		
Beverly Farms Elementary School		
Test Period: 1/13/2025 - 1/17/2025		
Kit Number	Room / Area	Result
11926531	101	0.8
11903963	104	0.5
11893094	105	0.9
11903965	110	0.8
11903949	112	0.5
11903964	114	0.5
11903994	114	< 0.3
11926590	114	< 0.3
11903997	116	< 0.3
11903943	117	< 0.3
11903933	120	0.5
11903960	120	0.7
11903950	121	0.6
11903995	122	0.7
11903902	123	< 0.3
11903969	124	0.6
11903968	124	0.7
11892870	127	0.5
11903974	128	0.5
11903967	129	< 0.3
11903978	130	< 0.3
11903980	132	< 0.3
11903977	133	0.5
11903979	135	< 0.3
11892877	139	< 0.3
11892878	141	< 0.3
11893100	145	< 0.3
11926598	200	< 0.3
11903947	213	0.7
11903903	246	0.7
11903986	100A	0.6
11926591	100A.3	1.1
11926596	100B	0.9
11926595	100C	< 0.3
11926599	100D	1.1
11926600	100E	1.8
11926594	100F	1.0

Table 1- Radon Testing Results		
Beverly Farms Elementary School		
Test Period: 1/13/2025 - 1/17/2025		
Kit Number	Room / Area	Result
11926572	100G	0.9
11903992	100H	0.7
11892873	100H	< 0.3
11903972	100M	0.6
11893099	109B.3	< 0.3
11903996	120B	< 0.3
11903981	GYM	1.1
11903942	GYM	1.4
11903966	GYM OFFICE	4.5
11903971	GYM OFFICE	4.5
11903957	GYM OFFICE	< 0.3
11903985	MAIN OFFICE	0.5
11903959	MPR	0.7
11903951	MPR	1.2
11906875	MPR	1.7
11903976	STAGE	< 0.3

[illegible]

Table 3 - QC Radon Testing Results			
Beverly Farms Elementary School			
Test Period: 1/13/2025 - 1/17/2025			
Kit Number	QC Type	Room / Area	Result
11926590	D	114	< 0.3
11903994	FB	114	< 0.3
11903968	D	124	0.7
11892873	D	100H	< 0.3
11903971	D	Gym Office	4.5
11903957	FB	Gym Office	< 0.3
11906875	D	MPR	1.7
11906876	OB	OFFICE BLANK	< 0.3
11906878	TB	TRAVEL BLANK	< 0.3

Table 3a - Duplicate Worksheet / Data Validation										
Beverly Farms Elementary School										
Test Period: 1/13/2025 - 1/17/2025										
Sample ID			Duplicate Concentrations (pCi/L) and OC Checks							
Kit Numbers		Room / Area	Higher	Lower	Check #1 (Pass/Fail)	2x the Lower	Check #2 (Pass/Fail)	Average	Relative Percent Difference (RPD)	Check #3
11903992	11892873	100H	0.7	0.3	✓	0.6	FAIL	0.5	<1-pCi/L	✗
11903964	11926590	114	0.3	0.3	✓	0.6	PASS	0.3	<1-pCi/L	✓
11903969	11903968	124	0.7	0.6	✓	1.2	PASS	0.7	<1-pCi/L	✓
11903966	11903971	Gym office	4.5	4.5	✓	9.0	PASS	4.5	0.0%	✓
11903951	11906875	MPR	1.7	1.2	✓	2.4	PASS	1.5	<1-pCi/L	✓
NOTES:							Average (pCi/L)		Warning Level	Control Level
QC Check #1 - Data Entry							< 2.0		1-pCi/L	NA
QC Check #2 - Higher duplicate concentration is < or = to 2x the Lower							Between 2.0 and 3.9		50% RPD	67% RPD
QC Check #3 - Meets RPD Limits, by average duplicate concentration							≥ 4.0		28% RPD	36% RPD

- enter 2 if RPD is BELOW warning and control levels, AND passes QC Check 1 and 2
- enter 1 if RPD is ABOVE warning and BELOW control levels, AND passes QC Check 1 and 2
- enter 0 if RPD is ABOVE control level, or 'FAILS' QC Check 1 or 2

[illegible]

Table 1- Radon Testing Results		
Beverly Farms Elementary School RT		
Test Period: 3/24/2025 - 3/27/2025		
Kit Number	Room / Area	Result
11886564	100H	< 0.3
11886585	100H	< 0.3
11886586	100H	< 0.3
11886592	100H	< 0.3
11886587	GYM OFFICE	1.2
11886588	GYM OFFICE	1.0

[illegible]

Table 3 - QC Radon Testing Results			
Beverly Farms Elementary School RT			
Test Period: 3/24/2025 - 3/27/2025			
Kit Number	QC Type	Room / Area	Result
11886586	D	100H	< 0.3
11886592	FB	100H	< 0.3
11886664	OB	OFFICE BLANK	< 0.3
11886691	TB	TRAVEL BLANK	< 0.3

Table 3a - Duplicate Worksheet / Data Validation										
Beverly Farms Elementary School RT										
Test Period: 3/24/2025 - 3/27/2025										
Sample ID			Duplicate Concentrations (pCi/L) and QC Checks							
Kit Numbers		Room / Area	Higher	Lower	Check #1 (Pass/Fail)	2x the Lower	Check #2 (Pass/Fail)	Average	Relative Percent Difference (RPD)	Check #3
11886586	11886564 11886585	100H	0.3	0.3	✓	0.6	PASS	0.3	<1-pCi/L	✓
NOTES: QC Check #1 - Data Entry QC Check #2 - Higher duplicate concentration is < or = to 2x the Lower QC Check #3 - Meets RPD Limits, by average duplicate concentration - enter 2 if RPD is BELOW warning and control levels, AND passes QC Check 1 and 2 - enter 1 if RPD is ABOVE warning and BELOW control levels, AND passes QC Check 1 and 2 - enter 0 if RPD is ABOVE control level, or 'FAILS' QC Check 1 or 2							Average (pCi/L)		Warning Level	Control Level
							< 2.0		1-pCi/L	NA
							Between 2.0 and 3.9		50% RPD	67% RPD
							≥ 4.0		28% RPD	36% RPD

[illegible]

Attachment 2:

Laboratory Reports

Radon test result report for:
BEVERLY FARMS ES
MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11903986	100A	2025-01-14 @ 1:00 pm	2025-01-17 @ 9:00 am	0.6 ± 0.3	2025-01-20
11926591	100A.3	2025-01-14 @ 1:00 pm	2025-01-17 @ 9:00 am	1.1 ± 0.3	2025-01-20
11926596	100B	2025-01-14 @ 1:00 pm	2025-01-17 @ 9:00 am	0.9 ± 0.3	2025-01-20
11926595	100C	2025-01-14 @ 1:00 pm	2025-01-17 @ 9:00 am	< 0.3	2025-01-20
11926599	100D	2025-01-14 @ 1:00 pm	2025-01-17 @ 9:00 am	1.1 ± 0.3	2025-01-20
11926600	100E	2025-01-14 @ 1:00 pm	2025-01-17 @ 9:00 am	1.8 ± 0.3	2025-01-20
11926594	100F	2025-01-14 @ 1:00 pm	2025-01-17 @ 9:00 am	1.0 ± 0.3	2025-01-20
11926572	100G	2025-01-14 @ 1:00 pm	2025-01-17 @ 9:00 am	0.9 ± 0.3	2025-01-20
11903992	100H	2025-01-14 @ 1:00 pm	2025-01-17 @ 9:00 am	0.7 ± 0.3	2025-01-20
11892873	100H	2025-01-14 @ 1:00 pm	2025-01-17 @ 9:00 am	< 0.3	2025-01-20
11903972	100M	2025-01-14 @ 1:00 pm	2025-01-17 @ 10:00 am	0.6 ± 0.3	2025-01-20
11926531	101	2025-01-14 @ 2:00 pm	2025-01-17 @ 10:00 am	0.8 ± 0.3	2025-01-20
11903963	104	2025-01-14 @ 1:00 pm	2025-01-17 @ 10:00 am	0.5 ± 0.3	2025-01-20
11893094	105	2025-01-14 @ 2:00 pm	2025-01-17 @ 10:00 am	0.9 ± 0.3	2025-01-20
11893099	109B.3	2025-01-14 @ 2:00 pm	2025-01-17 @ 10:00 am	< 0.3	2025-01-20
11903965	110	2025-01-14 @ 1:00 pm	2025-01-17 @ 10:00 am	0.8 ± 0.3	2025-01-20
11903949	112	2025-01-14 @ 1:00 pm	2025-01-17 @ 10:00 am	0.5 ± 0.3	2025-01-20
11926590	114	2025-01-14 @ 1:00 pm	2025-01-17 @ 10:00 am	< 0.3	2025-01-20
11903994	114	2025-01-14 @ 1:00 pm	2025-01-17 @ 10:00 am	< 0.3	2025-01-20
11903964	114	2025-01-14 @ 1:00 pm	2025-01-17 @ 10:00 am	0.5 ± 0.3	2025-01-20
11903997	116	2025-01-14 @ 1:00 pm	2025-01-17 @ 10:00 am	< 0.3	2025-01-20
11903943	117	2025-01-14 @ 1:00 pm	2025-01-17 @ 10:00 am	< 0.3	2025-01-20
11903933	120	2025-01-14 @ 1:00 pm	2025-01-17 @ 10:00 am	0.5 ± 0.3	2025-01-20
11903960	120	2025-01-14 @ 1:00 pm	2025-01-17 @ 10:00 am	0.7 ± 0.3	2025-01-20
11903996	120B	2025-01-14 @ 1:00 pm	2025-01-17 @ 10:00 am	< 0.3	2025-01-20
11903950	121	2025-01-14 @ 1:00 pm	2025-01-17 @ 10:00 am	0.6 ± 0.3	2025-01-20
11903995	122	2025-01-14 @ 1:00 pm	2025-01-17 @ 10:00 am	0.7 ± 0.3	2025-01-20
11903902	123	2025-01-14 @ 1:00 pm	2025-01-17 @ 10:00 am	< 0.3	2025-01-20
11903969	124	2025-01-14 @ 1:00 pm	2025-01-17 @ 10:00 am	0.6 ± 0.3	2025-01-20
11903968	124	2025-01-14 @ 1:00 pm	2025-01-17 @ 10:00 am	0.7 ± 0.3	2025-01-20
11892870	127	2025-01-14 @ 1:00 pm	2025-01-17 @ 10:00 am	0.5 ± 0.3	2025-01-20
11903974	128	2025-01-14 @ 1:00 pm	2025-01-17 @ 10:00 am	0.5 ± 0.3	2025-01-20
11903967	129	2025-01-14 @ 1:00 pm	2025-01-17 @ 10:00 am	< 0.3	2025-01-20
11903978	130	2025-01-14 @ 1:00 pm	2025-01-17 @ 10:00 am	< 0.3	2025-01-20
11903980	132	2025-01-14 @ 1:00 pm	2025-01-17 @ 10:00 am	< 0.3	2025-01-20
11903977	133	2025-01-14 @ 1:00 pm	2025-01-17 @ 10:00 am	0.5 ± 0.3	2025-01-20
11903979	135	2025-01-14 @ 1:00 pm	2025-01-17 @ 10:00 am	< 0.3	2025-01-20

January 20, 2025

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:
BEVERLY FARMS ES
MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11892877	139	2025-01-14 @ 1:00 pm	2025-01-17 @ 10:00 am	< 0.3	2025-01-20
11892878	141	2025-01-14 @ 1:00 pm	2025-01-17 @ 10:00 am	< 0.3	2025-01-20
11893100	145	2025-01-14 @ 1:00 pm	2025-01-17 @ 10:00 am	< 0.3	2025-01-20
11926598	200	2025-01-14 @ 1:00 pm	2025-01-17 @ 10:00 am	< 0.3	2025-01-20
11903947	213	2025-01-14 @ 1:00 pm	2025-01-17 @ 10:00 am	0.7 ± 0.3	2025-01-20
11903903	246	2025-01-14 @ 2:00 pm	2025-01-17 @ 10:00 am	0.7 ± 0.3	2025-01-20
11903942	GYM	2025-01-14 @ 1:00 pm	2025-01-17 @ 10:00 am	1.4 ± 0.3	2025-01-20
11903981	GYM	2025-01-14 @ 1:00 pm	2025-01-17 @ 10:00 am	1.1 ± 0.3	2025-01-20
11903957	GYM OFFICE	2025-01-14 @ 1:00 pm	2025-01-17 @ 10:00 am	< 0.3	2025-01-20
11903966	GYM OFFICE	2025-01-14 @ 1:00 pm	2025-01-17 @ 10:00 am	4.5 ± 0.4	2025-01-20
11903971	GYM OFFICE	2025-01-14 @ 1:00 pm	2025-01-17 @ 10:00 am	4.5 ± 0.4	2025-01-20
11903985	MAIN OFFICE	2025-01-14 @ 1:00 pm	2025-01-17 @ 9:00 am	0.5 ± 0.3	2025-01-20
11906875	MPR	2025-01-14 @ 2:00 pm	2025-01-17 @ 10:00 am	1.7 ± 0.3	2025-01-20
11903959	MPR	2025-01-14 @ 2:00 pm	2025-01-17 @ 10:00 am	0.7 ± 0.3	2025-01-20
11903951	MPR	2025-01-14 @ 2:00 pm	2025-01-17 @ 10:00 am	1.2 ± 0.3	2025-01-20
11903976	STAGE	2025-01-14 @ 2:00 pm	2025-01-17 @ 10:00 am	< 0.3	2025-01-20

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January 20, 2025

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

**OFFICE
MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11906876	O	2025-01-14 @ 11:00 am	2025-01-17 @ 11:00 am	< 0.3	2025-01-20
11906877	O	2025-01-13 @ 11:00 am	2025-01-16 @ 11:00 am	< 0.3	2025-01-20

January 20, 2025

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

**TRAVEL
MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11903993	T	2025-01-13 @ 11:00 am	2025-01-16 @ 11:00 am	< 0.3	2025-01-20
11906878	T	2025-01-14 @ 11:00 am	2025-01-17 @ 11:00 am	< 0.3	2025-01-20

EXPOSURE IN BOWSER-MORNER RADON CHAMBER

CLIENT KCI TECHNOLOGIES, INC Job Number 20001560

NOMINAL Conditions: Radon Conc 50.6 pCi/L Rel. Hum 50.6 % Temp. 70.8 F

Date Start: 12/14/24 Date Stop: 12/17/24 Date Start: _____ Date Stop: _____

Time Start: 0815 Time Stop: 0815 Time Start: _____ Time Stop: _____

Device No.'s: (3) CHAR BAGS Device No.'s: _____

11477880, 11477883, 11477896 _____

B4 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 μ R/h Elevation = 820 ft

December 23, 2024

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

**SK
MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11477880	SK1	2024-12-14 @ 8:00 am	2024-12-17 @ 8:00 am	52.0 ± 4.2	2024-12-23
11477883	SK2	2024-12-14 @ 8:00 am	2024-12-17 @ 8:00 am	54.6 ± 4.4	2024-12-23
11477896	SK3	2024-12-14 @ 8:00 am	2024-12-17 @ 8:00 am	45.5 ± 3.6	2024-12-23







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Radon Test Kit Chain of Custody

Project Name: MCPS Radon – Testing January 14th – January 17th, 2024

Name of Schools:

1. Bethesda Chevy Chase HS
2. Bethesda Maintenance Facility
3. Beverly Farms ES
4. Bradley Hills ES
5. Brookhaven ES
6. Burning Tree ES
7. Cabin John MS

	Date	Initials
Radon Test Kits Deployed	01/14/2025	
Radon Test Kits Collected	01/17/2025	
Radon Test Kits Shipped to Lab*	01/17/2025	
Radon Test Kits Received by Lab*	01/21/2025	

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

April 2, 2025

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:
BEVERLY FARMS ES
MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11886564	100H	2025-03-24 @ 12:00 pm	2025-03-27 @ 10:00 am	< 0.3	2025-04-02
11886585	100H	2025-03-24 @ 12:00 pm	2025-03-27 @ 10:00 am	< 0.3	2025-04-02
11886586	100H	2025-03-24 @ 12:00 pm	2025-03-27 @ 10:00 am	< 0.3	2025-04-02
11886592	100H	2025-03-24 @ 12:00 pm	2025-03-27 @ 10:00 am	< 0.3	2025-04-02
11886587	GYM OFFICE	2025-03-24 @ 12:00 pm	2025-03-27 @ 10:00 am	1.2 ± 0.5	2025-04-02
11886588	GYM OFFICE	2025-03-24 @ 12:00 pm	2025-03-27 @ 10:00 am	1.0 ± 0.5	2025-04-02

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April 3, 2025

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

**OFFICE
MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11886664	OB	2025-03-24 @ 11:00 am	2025-03-27 @ 11:00 am	< 0.3	2025-04-02
11886692	OB	2025-03-25 @ 11:00 am	2025-03-28 @ 11:00 am	< 0.3	2025-04-02
11951800	OB	2025-03-24 @ 11:00 am	2025-03-28 @ 11:00 am	< 0.3	2025-04-02

April 3, 2025

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

**TRAVEL
MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11886691	TB	2025-03-24 @ 11:00 am	2025-03-27 @ 11:00 am	< 0.3	2025-04-02
11886693	TB	2025-03-25 @ 11:00 am	2025-03-28 @ 11:00 am	< 0.3	2025-04-02
11892493	TB	2025-03-24 @ 11:00 am	2025-03-28 @ 11:00 am	< 0.3	2025-04-02

EXPOSURE IN BOWSER-MORNER RADON CHAMBER

CLIENT KCI TECHNOLOGIES, INC Job Number 20002919

NOMINAL Conditions: Radon Conc 7.0 pCi/L Rel. Hum 51.4 % Temp. 70.7 F

Date Start: 3/7/25 Date Stop: 3/10/25 Date Start: _____ Date Stop: _____

Time Start: 0832 Time Stop: 0832 Time Start: _____ Time Stop: _____

Device No.'s: (7) CHAR BAGS Device No.'s: _____

11886401 thru 11886406,

11886410

G3 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 μ R/h Elevation = 820 ft

March 19, 2025

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

QC
MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11886401	SK1	2025-03-07 @ 9:00 am	2025-03-10 @ 9:00 am	7.8 ± 1.1	2025-03-19
11886405	SK2	2025-03-07 @ 9:00 am	2025-03-10 @ 9:00 am	7.1 ± 1.1	2025-03-19
11886406	SK3	2025-03-07 @ 9:00 am	2025-03-10 @ 9:00 am	7.7 ± 1.1	2025-03-19
11886403	SK4	2025-03-07 @ 9:00 am	2025-03-10 @ 9:00 am	7.9 ± 1.2	2025-03-19
11886404	SK5	2025-03-07 @ 9:00 am	2025-03-10 @ 9:00 am	7.6 ± 1.2	2025-03-19
11886410	SK6	2025-03-07 @ 9:00 am	2025-03-10 @ 9:00 am	7.0 ± 1.1	2025-03-19
11886402	SK7	2025-03-07 @ 9:00 am	2025-03-10 @ 9:00 am	8.6 ± 1.2	2025-03-19

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Radon Test Kit Chain of Custody

Project Name: MCPS Radon Re-Testing March 24th – January 27th, 2025

Name of Schools:

- | | |
|----------------------|----------------------------|
| 1. Beverly Farms ES | 7. Julius West MS |
| 2. Bradley Hills ES | 8. Parkland MS |
| 3. Cabin John MS | 9. Rockville HS |
| 4. Springbrook HS | 10. Westland MS |
| 5. Thomas Edison HS | 11. Charles W. Woodward HS |
| 6. Walter Johnson HS | 12. Walt Whitman HS |

	Date	Initials
Radon Test Kits Deployed	03/24/2025	BMH
Radon Test Kits Collected	03/27/2025	BMH
Radon Test Kits Shipped to Lab*	03/28/2025	BMH
Radon Test Kits Received by Lab*	04/01/2025	BMH

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

MCPS RADON TESTING - EXECUTIVE SUMMARY

Site Name	Beverly Farms Elementary School
Date of Report	2/3/2020
Round of Testing	Initial Follow-up Post Remediation 2 year testing 5 year testing HVAC Upgrade Window Replacement New Addition New Facility
# of Rooms Tested	47
# Rooms ≥ 4.0 pCi/L	0
Lowest Value	<0.3 pCi/L
Highest Value	2.0 pCi/L

Project Status

Current Project Status at this time: Testing Complete; no further action.



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2/3/2020

Mr. Richard Cox, MS
Environmental Team Leader
Montgomery County Public Schools
Division of Maintenance
Gaithersburg, Maryland 20879

Re: Radon Testing Services

KCI Job #12146341126

Location: Beverly Farms Elementary School

8501 Postoak Road
Potomac, Maryland 20854

Dear Mr. Cox:

KCI Technologies, Inc. (KCI) is pleased to submit the following report to Montgomery County Public Schools pursuant to completing a “short-term” 3-day radon test for the Beverly Farms Elementary School, located at 8501 Postoak Road in Potomac, Maryland 20854 (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 Provider (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/departments/facilities/maintenance/default.aspx?id=458858> or www.epa.gov/radon.

KCI visited the site on 12/16/2019 and deployed fifty-seven (57) 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 Appendix 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 sixty (60) test kits to Bowser-Morner, Inc. as spike samples. The spiked tests were exposed to a known radon concentration by Bowser-Morner, Inc. prior to being returned to the laboratory for analysis.

KCI returned to the site on 12/19/2019 to retrieve the radon sampling test kits. KCI shipped all radon tests via overnight delivery to Aircheck, Inc. for analysis by gamma-ray spectroscopy. Aircheck, Inc. is a National Radon Safety Board (NRSB) radon measurement provider and is a 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 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.

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 lower-20s and high temperatures were in the lower-40s. Maximum sustained winds ranged from 12-26 miles per hour. Average humidity was around 67%. 0.54 inches of precipitation (rain and snow) was recorded during the 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	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 410-316-7800.

Sincerely,

Mr. Tyler P. McCleaf
Radon Measurement Provider
111004 RT

KCI Technologies, Inc.

Attachments:

A- Floor Plan with Test Locations

B - Tables 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 Chek, Inc.

D- Duplicate

FB- Field Blank

KCI- KCI Technologies, Inc.

OB- Office Blank

PM- Project Manager

QC- Quality Control

Table 1- Radon Testing Results		
Beverly Farms Elementary School		
Test Period: 12/16/2019-12/19/2019		
Kit Number	Room / Area	Result
9341301	100	< 0.3
9341302	100A	0.6
9341303	100A.2 ISO	0.7
9341304	100A.3	0.7
9341305	100D	0.9
9341306	100E	1
9341307	100B	0.9
9341308	100C	< 0.3
9341309	100G	< 0.3
9341310	100G	0.8
9341311	100F	0.6
9341312	100H	< 0.3
9341313	100M	1
9341314	102	< 0.3
9341315	101	0.8
9341316	105	0.9
9341317	109	< 0.3
9341318	109	0.6
9341319	109B.3	< 0.3
9341320	117	< 0.3
9341321	117	< 0.3
9341322	117	< 0.3
9341323	121	< 0.3
9341324	123	< 0.3
9341325	127	< 0.3
9341326	129	< 0.3
9341327	133	< 0.3
9341332	145	< 0.3
9341333	146	1.2
9341334	146	1.6
9341335	146B	2
9341336	130	0.7
9341337	132	0.6
9341338	128	< 0.3
9341339	124	< 0.3
9341340	122	< 0.3
9341341	122	< 0.3
9341342	122B	< 0.3
9341343	122B	0.9
9341344	120	< 0.3
9341345	120	< 0.3
9341346	116	< 0.3
9341347	114	< 0.3
9341348	112	0.8
9341349	110	0.6
9341350	104	< 0.3
9341351	246	< 0.3
9341352	221	0.9
9341353	238	0.6
9341354	252	< 0.3

9341355	217	0.7
9341357	200	0.9
9341358	221	< 0.3
9341373	OFFICE BLANK	< 0.3
9341328	135	< 0.3
9341329	139	0.6
9341330	141	< 0.3
9341331	145	0.7

Table 2- Radon Testing Results			
Beverly Farms Elementary School			
Test Period: 12/16/2019-12/19/2019			
Kit Number	QC Type	Room / Area	Result
9341309	D	100G	<0.3
9341320	D	117	<0.3
9341321	FB	117	<0.3
9341331	D	145	0.7
9341341	D	122	<0.3
9341342	FB	122B	<0.3
9341358	D	221	<0.3
9341377	TRANSIT BLANK	NA	0.5
9341379	TRANSIT BLANK	NA	< 0.3
9341380	TRANSIT BLANK	NA	< 0.3
9341398	TRANSIT BLANK	NA	< 0.3

ATTACHMENT C

Laboratory Analytical Results

December 23, 2019

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
9341328	135	2019-12-16 @ 9:00 am	2019-12-19 @ 10:00 am	< 0.3	2019-12-23
9341329	139	2019-12-16 @ 9:00 am	2019-12-19 @ 10:00 am	0.6 ± 0.4	2019-12-23
9341330	141	2019-12-16 @ 9:00 am	2019-12-19 @ 10:00 am	< 0.3	2019-12-23
9341331	145	2019-12-16 @ 10:00 am	2019-12-19 @ 10:00 am	0.7 ± 0.3	2019-12-23

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Radon test result report for:
BEVERLY FARMS ES
MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
9341301	100	2019-12-16 @ 8:00 am	2019-12-19 @ 9:00 am	< 0.3	2019-12-23
9341302	100A	2019-12-16 @ 8:00 am	2019-12-19 @ 9:00 am	0.6 ± 0.3	2019-12-23
9341303	100A.2 ISO	2019-12-16 @ 8:00 am	2019-12-19 @ 9:00 am	0.7 ± 0.3	2019-12-23
9341304	100A.3	2019-12-16 @ 8:00 am	2019-12-19 @ 9:00 am	0.7 ± 0.3	2019-12-23
9341307	100B	2019-12-16 @ 8:00 am	2019-12-19 @ 9:00 am	0.9 ± 0.4	2019-12-23
9341308	100C	2019-12-16 @ 8:00 am	2019-12-19 @ 9:00 am	< 0.3	2019-12-23
9341305	100D	2019-12-16 @ 8:00 am	2019-12-19 @ 9:00 am	0.9 ± 0.3	2019-12-23
9341306	100E	2019-12-16 @ 8:00 am	2019-12-19 @ 9:00 am	1.0 ± 0.4	2019-12-23
9341311	100F	2019-12-16 @ 8:00 am	2019-12-19 @ 9:00 am	0.6 ± 0.4	2019-12-23
9341310	100G	2019-12-16 @ 8:00 am	2019-12-19 @ 9:00 am	0.8 ± 0.4	2019-12-23
9341309	100G	2019-12-16 @ 8:00 am	2019-12-19 @ 9:00 am	< 0.3	2019-12-23
9341312	100H	2019-12-16 @ 8:00 am	2019-12-19 @ 9:00 am	< 0.3	2019-12-23
9341313	100M	2019-12-16 @ 8:00 am	2019-12-19 @ 9:00 am	1.0 ± 0.3	2019-12-23
9341315	101	2019-12-16 @ 9:00 am	2019-12-19 @ 9:00 am	0.8 ± 0.3	2019-12-23
9341314	102	2019-12-16 @ 8:00 am	2019-12-19 @ 9:00 am	< 0.3	2019-12-23
9341350	104	2019-12-16 @ 10:00 am	2019-12-19 @ 10:00 am	< 0.3	2019-12-23
9341316	105	2019-12-16 @ 9:00 am	2019-12-19 @ 9:00 am	0.9 ± 0.4	2019-12-23
9341317	109	2019-12-16 @ 9:00 am	2019-12-19 @ 9:00 am	< 0.3	2019-12-23
9341318	109	2019-12-16 @ 9:00 am	2019-12-19 @ 9:00 am	0.6 ± 0.3	2019-12-23
9341319	109B.3	2019-12-16 @ 9:00 am	2019-12-19 @ 10:00 am	< 0.3	2019-12-23
9341349	110	2019-12-16 @ 10:00 am	2019-12-19 @ 10:00 am	0.6 ± 0.3	2019-12-23
9341348	112	2019-12-16 @ 10:00 am	2019-12-19 @ 10:00 am	0.8 ± 0.4	2019-12-23
9341347	114	2019-12-16 @ 10:00 am	2019-12-19 @ 10:00 am	< 0.3	2019-12-23
9341346	116	2019-12-16 @ 10:00 am	2019-12-19 @ 10:00 am	< 0.3	2019-12-23
9341322	117	2019-12-16 @ 9:00 am	2019-12-19 @ 10:00 am	< 0.3	2019-12-23
9341320	117	2019-12-16 @ 9:00 am	2019-12-19 @ 10:00 am	< 0.3	2019-12-23
9341321	117	2019-12-16 @ 9:00 am	2019-12-19 @ 10:00 am	< 0.3	2019-12-23
9341344	120	2019-12-16 @ 10:00 am	2019-12-19 @ 10:00 am	< 0.3	2019-12-23
9341345	120	2019-12-16 @ 10:00 am	2019-12-19 @ 10:00 am	< 0.3	2019-12-23
9341323	121	2019-12-16 @ 9:00 am	2019-12-19 @ 10:00 am	< 0.3	2019-12-23
9341340	122	2019-12-16 @ 10:00 am	2019-12-19 @ 10:00 am	< 0.3	2019-12-23
9341341	122	2019-12-16 @ 10:00 am	2019-12-19 @ 10:00 am	< 0.3	2019-12-23
9341342	122B	2019-12-16 @ 10:00 am	2019-12-19 @ 10:00 am	< 0.3	2019-12-23
9341343	122B	2019-12-16 @ 10:00 am	2019-12-19 @ 10:00 am	0.9 ± 0.4	2019-12-23
9341324	123	2019-12-16 @ 9:00 am	2019-12-19 @ 10:00 am	< 0.3	2019-12-23
9341339	124	2019-12-16 @ 10:00 am	2019-12-19 @ 10:00 am	< 0.3	2019-12-23
9341325	127	2019-12-16 @ 9:00 am	2019-12-19 @ 10:00 am	< 0.3	2019-12-23

December 23, 2019

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:
BEVERLY FARMS ES
MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
9341338	128	2019-12-16 @ 10:00 am	2019-12-19 @ 10:00 am	< 0.3	2019-12-23
9341326	129	2019-12-16 @ 9:00 am	2019-12-19 @ 10:00 am	< 0.3	2019-12-23
9341336	130	2019-12-16 @ 10:00 am	2019-12-19 @ 10:00 am	0.7 ± 0.4	2019-12-23
9341337	132	2019-12-16 @ 10:00 am	2019-12-19 @ 10:00 am	0.6 ± 0.4	2019-12-23
9341327	133	2019-12-16 @ 9:00 am	2019-12-19 @ 10:00 am	< 0.3	2019-12-23
9341332	145	2019-12-16 @ 10:00 am	2019-12-19 @ 10:00 am	< 0.3	2019-12-23
9341334	146	2019-12-16 @ 10:00 am	2019-12-19 @ 10:00 am	1.6 ± 0.4	2019-12-23
9341333	146	2019-12-16 @ 10:00 am	2019-12-19 @ 10:00 am	1.2 ± 0.3	2019-12-23
9341335	146B	2019-12-16 @ 10:00 am	2019-12-19 @ 10:00 am	2.0 ± 0.4	2019-12-23
9341357	200	2019-12-16 @ 10:00 am	2019-12-19 @ 10:00 am	0.9 ± 0.3	2019-12-23
9341355	217	2019-12-16 @ 10:00 am	2019-12-19 @ 10:00 am	0.7 ± 0.3	2019-12-23
9341352	221	2019-12-16 @ 11:00 am	2019-12-19 @ 10:00 am	0.9 ± 0.3	2019-12-23
9341358	221	2019-12-16 @ 10:00 am	2019-12-19 @ 10:00 am	< 0.3	2019-12-23
9341353	238	2019-12-16 @ 11:00 am	2019-12-19 @ 10:00 am	0.6 ± 0.3	2019-12-23
9341351	246	2019-12-16 @ 11:00 am	2019-12-19 @ 10:00 am	< 0.3	2019-12-23
9341354	252	2019-12-16 @ 11:00 am	2019-12-19 @ 10:00 am	< 0.3	2019-12-23

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 193598

NOMINAL Conditions: Radon Conc _____ pCi/L Rel. Hum _____ % Temp. _____ F

Date Start: 12/21/19 Date Stop: 12/23/19

Time Start: 0815 Time Stop: 0815

(Group 1)

Device No.'s: (20) Char. Bags-

9340001 thru 9340020

55

Date Start: 12/21/19 Date Stop: 12/23/19

Time Start: 0829 Time Stop: 0820

(Group 2)

Device No.'s: (20) Char. Bags-

9340021 thru 9340040

54

Date Start: 12/21/19 Date Stop: 12/23/19

Time Start: 0825 Time Stop: 0825

(Group 3)

Device No.'s: (20) Char. Bags-

9340041 thru 9340060

53

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

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
9340067	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	25.1 \pm 2.4 D	2020-01-03
9340035	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	22.5 \pm 2.3 D	2020-01-03
9340003	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	25.2 \pm 2.4 D	2020-01-03
9340089	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	23.3 \pm 2.3 D	2020-01-03
9340072	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	18.3 \pm 2.0 D	2020-01-03
9340040	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	27.3 \pm 2.6 D	2020-01-03
9340008	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	24.8 \pm 2.5 D	2020-01-03
9340094	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	24.7 \pm 2.5 D	2020-01-03
9340099	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	27.5 \pm 2.6 D	2020-01-03
9340077	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	25.2 \pm 2.5 D	2020-01-03
9340045	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	24.7 \pm 2.4 D	2020-01-03
9340013	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	25.9 \pm 2.6 D	2020-01-03
9340018	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	29.1 \pm 2.8 D	2020-01-03
9341704	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	25.1 \pm 2.4 D	2020-01-03
9340050	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	27.2 \pm 2.6 D	2020-01-03
9340023	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	28.2 \pm 2.7 D	2020-01-03
9341709	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	25.5 \pm 2.4 D	2020-01-03
9340055	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	27.8 \pm 2.6 D	2020-01-03
9340060	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	27.3 \pm 2.5 D	2020-01-03
9340028	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	23.9 \pm 2.3 D	2020-01-03
9341714	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	28.3 \pm 2.7 D	2020-01-03
9340082	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	26.4 \pm 2.6 D	2020-01-03
9340065	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	24.2 \pm 2.4 D	2020-01-03
9340033	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	26.2 \pm 2.5 D	2020-01-03
9341719	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	26.7 \pm 2.5 D	2020-01-03
9340001	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	26.3 \pm 2.5 D	2020-01-03
9340087	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	24.8 \pm 2.4 D	2020-01-03
9340070	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	19.5 \pm 2.4 D	2020-01-03
9340038	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	24.7 \pm 2.3 D	2020-01-03
9340006	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	25.2 \pm 2.4 D	2020-01-03
9340092	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	31.4 \pm 2.8 D	2020-01-03
9340097	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	26.7 \pm 2.5 D	2020-01-03
9340075	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	29.6 \pm 2.6 D	2020-01-03
9340043	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	28.1 \pm 2.6 D	2020-01-03
9340011	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	26.8 \pm 2.5 D	2020-01-03
9340016	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	23.2 \pm 2.4 D	2020-01-03
9341702	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	26.8 \pm 2.5 D	2020-01-03

Radon test result report for:**S****N/A**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
9340048	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	25.5 ± 2.4 D	2020-01-03
9340021	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	26.7 ± 2.6 D	2020-01-03
9341707	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	25.8 ± 2.4 D	2020-01-03
9340053	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	25.8 ± 2.5 D	2020-01-03
9340058	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	28.5 ± 2.7 D	2020-01-03
9340026	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	25.9 ± 2.4 D	2020-01-03
9341712	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	24.3 ± 2.4 D	2020-01-03
9340080	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	25.1 ± 2.4 D	2020-01-03
9340063	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	25.8 ± 2.5 D	2020-01-03
9340031	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	24.9 ± 2.4 D	2020-01-03
9341717	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	25.7 ± 2.4 D	2020-01-03
9340085	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	26.9 ± 2.5 D	2020-01-03
9340068	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	26.2 ± 2.5 D	2020-01-03
9340036	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	23.6 ± 2.3 D	2020-01-03
9340004	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	26.9 ± 2.6 D	2020-01-03
9340090	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	26.3 ± 2.5 D	2020-01-03
9340073	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	26.8 ± 2.5 D	2020-01-03
9340041	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	25.6 ± 2.4 D	2020-01-03
9340009	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	24.1 ± 2.4 D	2020-01-03
9340095	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	25.2 ± 2.5 D	2020-01-03
9340100	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	24.5 ± 2.4 D	2020-01-03
9340078	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	25.0 ± 2.4 D	2020-01-03
9340046	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	28.0 ± 2.6 D	2020-01-03
9340014	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	21.8 ± 2.8 D	2020-01-03
9340019	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	26.0 ± 2.5 D	2020-01-03
9341705	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	27.8 ± 2.6 D	2020-01-03
9340051	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	25.5 ± 2.4 D	2020-01-03
9340056	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	27.7 ± 2.6 D	2020-01-03
9340024	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	28.3 ± 2.5 D	2020-01-03
9341710	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	24.2 ± 2.3 D	2020-01-03
9340061	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	28.9 ± 2.6 D	2020-01-03
9340029	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	23.0 ± 2.3 D	2020-01-03
9341715	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	27.0 ± 2.5 D	2020-01-03
9340083	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	24.9 ± 2.4 D	2020-01-03
9340066	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	25.1 ± 2.4 D	2020-01-03
9340034	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	26.4 ± 2.5 D	2020-01-03
9341720	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	25.3 ± 2.5 D	2020-01-03

Radon test result report for:**S****N/A**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
9340002	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	25.7 ± 2.5 D	2020-01-03
9340088	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	26.4 ± 2.5 D	2020-01-03
9340071	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	24.9 ± 2.4 D	2020-01-03
9340039	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	26.9 ± 2.5 D	2020-01-03
9340007	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	26.9 ± 2.4 D	2020-01-03
9340093	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	25.1 ± 2.5 D	2020-01-03
9340098	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	26.8 ± 2.5 D	2020-01-03
9340076	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	25.1 ± 2.5 D	2020-01-03
9340044	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	25.2 ± 2.5 D	2020-01-03
9340012	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	22.5 ± 2.2 D	2020-01-03
9340017	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	25.3 ± 2.5 D	2020-01-03
9341703	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	26.0 ± 2.5 D	2020-01-03
9340049	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	26.0 ± 2.5 D	2020-01-03
9340022	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	28.6 ± 2.6 D	2020-01-03
9341708	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	28.8 ± 2.8 D	2020-01-03
9340054	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	26.8 ± 2.5 D	2020-01-03
9340059	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	26.5 ± 2.6 D	2020-01-03
9340027	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	26.6 ± 2.5 D	2020-01-03
9341713	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	26.5 ± 2.5 D	2020-01-03
9340081	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	18.4 ± 2.1 D	2020-01-03
9340064	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	26.5 ± 2.5 D	2020-01-03
9340032	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	26.1 ± 2.4 D	2020-01-03
9341718	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	23.7 ± 2.4 D	2020-01-03
9340086	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	26.9 ± 2.6 D	2020-01-03
9340069	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	25.6 ± 2.5 D	2020-01-03
9340037	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	28.4 ± 2.6 D	2020-01-03
9340005	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	???? DIF1	2020-01-03
9340091	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	26.5 ± 2.5 D	2020-01-03
9340096	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	26.2 ± 2.5 D	2020-01-03
9340074	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	27.7 ± 2.5 D	2020-01-03
9340042	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	26.6 ± 2.5 D	2020-01-03
9340010	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	27.5 ± 2.5 D	2020-01-03
9341701	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	22.9 ± 2.3 D	2020-01-03
9340047	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	26.7 ± 2.5 D	2020-01-03
9340015	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	25.4 ± 2.5 D	2020-01-03
9340020	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	24.1 ± 2.4 D	2020-01-03
9341706	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	31.0 ± 2.7 D	2020-01-03

January 3, 2020

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

S

N/A

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
9340052	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	27.4 ± 2.6 D	2020-01-03
9340057	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	27.3 ± 2.5 D	2020-01-03
9340025	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	25.1 ± 2.4 D	2020-01-03
9341711	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	22.5 ± 2.2 D	2020-01-03
9340079	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	26.9 ± 2.5 D	2020-01-03
9340062	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	25.6 ± 2.5 D	2020-01-03
9340030	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	25.0 ± 2.4 D	2020-01-03
9341716	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	25.1 ± 2.4 D	2020-01-03
9340084	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	24.5 ± 2.3 D	2020-01-03

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






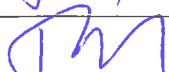
ENGINEERS • PLANNERS • SCIENTISTS • CONSTRUCTION MANAGERS
Corporate Office: 936 Ridgebrook road • Sparks , Maryland 21152 • 410-316-7800 • (Fax) 410-316-7935

Radon Test Kit Chain of Custody

Project Name: MCPS Radon 2019 Week 2

Name of Schools:

- | | |
|-------------------------------|---------------------|
| 1. Argyle M.S. | 13. Candelwood E.S. |
| 2. Banneker M.S. | 14. Drew E.S. |
| 3. Bel Pre E.S. | 15. Fallsmead E.S. |
| 4. Bells Mill E.S. | 16. Farquhar M.S. |
| 5. Bethesda Maintenance Depot | 17. Kennedy H.S. |
| 6. Beverly Farms E.S. | 18. Luxmanor E.S. |
| 7. Blake H.S. | 19. Magruder H.S. |
| 8. Dufief E.S. | 20. Redland M.S. |
| 9. Briggs Chaney M.S. | 21. Shriver E.S. |
| 10. Brookhaven E.S. | 22. Smith Center |
| 11. Burtonsville E.S. | 23. Viers Mill E.S. |
| 12. Cabin John M.S. | 24. Wheaton H.S. |

	Date	Initials
Radon Test Kits Deployed	12/16/19 to 12/17/19	
Radon Test Kits Collected	12/19/19 to 12/20/19	
Radon Test Kits Shipped to Lab*	12/20/19	
Radon Test Kits Received by Lab*	12/23/19	

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



MCPS RADON TESTING

Executive Summary: Beverly Farms Elementary School

Date of Test Report:	3/15/2016 (Rev 1)
Round of Testing:	Initial Follow-up Post Remediation
# Rooms Tested:	43
# Rooms \geq 4.0 pCi/L:	0
Low Value:	< 0.3
High Value:	1.0

Project Status:

Initial testing completed; no further action at this time.



ENGINEERS • PLANNERS • SCIENTISTS • CONSTRUCTION MANAGERS

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

March 15, 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 # 12146341.23

Location: Beverly Farms Elementary School
8501 Postoak Road
Potomac, MD 20854

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 Beverly Farms Elementary School, located at 8501 Postoak Road in Potomac, Maryland 20854 (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 4, 2016 and deployed fifty-seven (57) 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 7, 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

The 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,



James M. Moulds
Radon Measurement Specialist
KCI Technologies, Inc.

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

ATTACHMENT A

Floor Plan With Test Locations

ATTACHMENT B

Radon Test Summary Spreadsheet

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

Radon Testing Results		
Beverly Farms E.S.		
Test Period: 01/04/16-01/07/16		
Kit Number	Room / Area	Result
7704803	100	0.7
7704805	101	< 0.3
7704801	102	0.6
7704660	104	< 0.3
7706586	105	< 0.3
7704033	109	0.9
7706585	109	0.8
7704664	110	0.7
7704608	112	< 0.3
7706587	114	0.7
7706581	116	< 0.3
7704008	117	0.7
7706578	120	< 0.3
7706582	120	0.8
7706583	121	< 0.3
7706575	122	< 0.3
7706592	123	0.5
7704256	124	0.6
7706591	127	< 0.3
7706550	128	< 0.3
7706589	129	< 0.3
7708390	130	0.5
7706512	132	< 0.3
7706588	133	< 0.3
7706541	135	0.6
7706531	139	< 0.3
7704231	141	< 0.3
7706544	145	< 0.3
7704228	146	0.9
7706540	146	< 0.3
7710057	205	< 0.3
7708620	213	< 0.3
7710058	221	0.7
7706713	226	< 0.3
7704238	100A	< 0.3
7706706	100A.3	0.5
7704804	100B	< 0.3
7704224	100C	< 0.3
7706461	100D	0.9
7704605	100E	0.9
7704245	100F	0.8
7704246	100G	0.6
7704247	100H	< 0.3
7704802	100M	0.7
7704602	120B	0.7
7710054	146B	1.0

Table Note:

* Missing or Compromised Sample

Radon Testing Results		
Beverly Farms E.S.		
Test Period: 01/04/16-01/07/16		
Kit Number	QC Type	Result
7706721	D (102)	< 0.3
7710056	D (104)	< 0.3
7706452	D (110)	< 0.3
7704239	D (121)	< 0.3
7706741	D (145)	0.6
7706535	D (205)	0.8
7706716	D (226)	< 0.3
7710059	FB (112)	< 0.3
7706590	FB (123)	< 0.3
7710055	FB (221)	< 0.3
7710053	OB (0)	< 0.3

Table Note:

* Missing or Compromised Sample

ATTACHMENT C

Laboratory Analytical Results

Radon test result report for:
BEVERLY FARMS E.S.

1

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7710053	0	2016-01-04 @ 10:00 am	2016-01-07 @ 2:00 pm	< 0.3	2016-01-11
7704803	100	2016-01-04 @ 2:00 pm	2016-01-07 @ 12:00 pm	0.7 ± 0.3	2016-01-12
7704238	100A	2016-01-04 @ 3:00 pm	2016-01-07 @ 1:00 pm	< 0.3	2016-01-11
7706706	100A.3	2016-01-04 @ 3:00 pm	2016-01-07 @ 1:00 pm	0.5 ± 0.3	2016-01-12
7704804	100B	2016-01-04 @ 2:00 pm	2016-01-07 @ 1:00 pm	< 0.3	2016-01-11
7704224	100C	2016-01-04 @ 2:00 pm	2016-01-07 @ 1:00 pm	< 0.3	2016-01-11
7706461	100D	2016-01-04 @ 2:00 pm	2016-01-07 @ 1:00 pm	0.9 ± 0.4	2016-01-12
7704605	100E	2016-01-04 @ 2:00 pm	2016-01-07 @ 12:00 pm	0.9 ± 0.3	2016-01-12
7704245	100F	2016-01-04 @ 2:00 pm	2016-01-07 @ 1:00 pm	0.8 ± 0.3	2016-01-12
7704246	100G	2016-01-04 @ 2:00 pm	2016-01-07 @ 12:00 pm	0.6 ± 0.3	2016-01-12
7704247	100H	2016-01-04 @ 3:00 pm	2016-01-07 @ 1:00 pm	< 0.3	2016-01-12
7704802	100M	2016-01-04 @ 3:00 pm	2016-01-07 @ 12:00 pm	0.7 ± 0.3	2016-01-12
7704805	101	2016-01-04 @ 3:00 pm	2016-01-07 @ 1:00 pm	< 0.3	2016-01-12
7704801	102	2016-01-04 @ 3:00 pm	2016-01-07 @ 1:00 pm	0.6 ± 0.3	2016-01-12
7706721	102	2016-01-04 @ 3:00 pm	2016-01-07 @ 1:00 pm	< 0.3	2016-01-12
7704660	104	2016-01-04 @ 3:00 pm	2016-01-07 @ 1:00 pm	< 0.3	2016-01-11
7710056	104	2016-01-04 @ 3:00 pm	2016-01-07 @ 1:00 pm	< 0.3	2016-01-12
7706586	105	2016-01-04 @ 3:00 pm	2016-01-07 @ 1:00 pm	< 0.3	2016-01-12
7706585	109	2016-01-04 @ 3:00 pm	2016-01-07 @ 1:00 pm	0.8 ± 0.3	2016-01-12
7704033	109	2016-01-04 @ 3:00 pm	2016-01-07 @ 1:00 pm	0.9 ± 0.4	2016-01-12
7704664	110	2016-01-04 @ 3:00 pm	2016-01-07 @ 12:00 pm	0.7 ± 0.3	2016-01-12
7706452	110	2016-01-04 @ 3:00 pm	2016-01-07 @ 1:00 pm	< 0.3	2016-01-12
7704608	112	2016-01-04 @ 3:00 pm	2016-01-07 @ 1:00 pm	< 0.3	2016-01-12
7710059	112	2016-01-04 @ 3:00 pm	2016-01-07 @ 1:00 pm	< 0.3	2016-01-12
7706587	114	2016-01-04 @ 3:00 pm	2016-01-07 @ 1:00 pm	0.7 ± 0.3	2016-01-12
7706581	116	2016-01-04 @ 3:00 pm	2016-01-07 @ 1:00 pm	< 0.3	2016-01-12
7704008	117	2016-01-04 @ 3:00 pm	2016-01-07 @ 1:00 pm	0.7 ± 0.3	2016-01-12
7706578	120	2016-01-04 @ 3:00 pm	2016-01-07 @ 1:00 pm	< 0.3	2016-01-12
7706582	120	2016-01-04 @ 3:00 pm	2016-01-07 @ 1:00 pm	0.8 ± 0.3	2016-01-12
7704602	120B	2016-01-04 @ 3:00 pm	2016-01-07 @ 1:00 pm	0.7 ± 0.3	2016-01-11
7704239	121	2016-01-04 @ 3:00 pm	2016-01-07 @ 12:00 pm	< 0.3	2016-01-12
7706583	121	2016-01-04 @ 3:00 pm	2016-01-07 @ 12:00 pm	< 0.3	2016-01-12
7706575	122	2016-01-04 @ 3:00 pm	2016-01-07 @ 1:00 pm	< 0.3	2016-01-12
7706590	123	2016-01-04 @ 3:00 pm	2016-01-07 @ 1:00 pm	< 0.3	2016-01-12
7706592	123	2016-01-04 @ 3:00 pm	2016-01-07 @ 1:00 pm	0.5 ± 0.3	2016-01-12
7704256	124	2016-01-04 @ 3:00 pm	2016-01-07 @ 12:00 pm	0.6 ± 0.3	2016-01-12
7706591	127	2016-01-04 @ 3:00 pm	2016-01-07 @ 1:00 pm	< 0.3	2016-01-11

Radon test result report for:
BEVERLY FARMS E.S.

1

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7706550	128	2016-01-04 @ 3:00 pm	2016-01-07 @ 12:00 pm	< 0.3	2016-01-12
7706589	129	2016-01-04 @ 3:00 pm	2016-01-07 @ 12:00 pm	< 0.3	2016-01-12
7708390	130	2016-01-04 @ 3:00 pm	2016-01-07 @ 1:00 pm	0.5 ± 0.3	2016-01-12
7706512	132	2016-01-04 @ 3:00 pm	2016-01-07 @ 1:00 pm	< 0.3	2016-01-11
7706588	133	2016-01-04 @ 3:00 pm	2016-01-07 @ 1:00 pm	< 0.3	2016-01-12
7706541	135	2016-01-04 @ 3:00 pm	2016-01-07 @ 12:00 pm	0.6 ± 0.3	2016-01-11
7706531	139	2016-01-04 @ 3:00 pm	2016-01-07 @ 12:00 pm	< 0.3	2016-01-12
7704231	141	2016-01-04 @ 3:00 pm	2016-01-07 @ 12:00 pm	< 0.3	2016-01-11
7706544	145	2016-01-04 @ 3:00 pm	2016-01-07 @ 12:00 pm	< 0.3	2016-01-11
7706741	145	2016-01-04 @ 4:00 pm	2016-01-07 @ 1:00 pm	0.6 ± 0.4	2016-01-12
7706540	146	2016-01-04 @ 3:00 pm	2016-01-07 @ 12:00 pm	< 0.3	2016-01-12
7704228	146	2016-01-04 @ 3:00 pm	2016-01-07 @ 1:00 pm	0.9 ± 0.4	2016-01-12
7710054	146B	2016-01-04 @ 4:00 pm	2016-01-07 @ 12:00 pm	1.0 ± 0.4	2016-01-12
7710057	205	2016-01-04 @ 3:00 pm	2016-01-07 @ 1:00 pm	< 0.3	2016-01-12
7706535	205	2016-01-04 @ 3:00 pm	2016-01-07 @ 1:00 pm	0.8 ± 0.3	2016-01-12
7708620	213	2016-01-04 @ 3:00 pm	2016-01-07 @ 1:00 pm	< 0.3	2016-01-12
7710055	221	2016-01-04 @ 3:00 pm	2016-01-07 @ 1:00 pm	< 0.3	2016-01-12
7710058	221	2016-01-04 @ 3:00 pm	2016-01-07 @ 1:00 pm	0.7 ± 0.3	2016-01-12
7706713	226	2016-01-04 @ 3:00 pm	2016-01-07 @ 1:00 pm	< 0.3	2016-01-12
7706716	226	2016-01-04 @ 3:00 pm	2016-01-07 @ 1:00 pm	< 0.3	2016-01-12

Radon test result report for:
MCPS PHASE 3 & 4
TRANSIT BLANKS

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7708218	TRANSIT 4	2015-12-18 @ 12:00 pm	2015-12-21 @ 12:00 pm	< 0.3	2015-12-23
7708200	TRANSIT 1	2015-12-18 @ 12:00 pm	2015-12-21 @ 12:00 pm	< 0.3	2015-12-23
7708190	TRANSIT 10	2015-12-18 @ 12:00 pm	2015-12-21 @ 12:00 pm	< 0.3	2015-12-23
7708189	TRANSIT 11	2015-12-18 @ 12:00 pm	2015-12-21 @ 12:00 pm	< 0.3	2015-12-23
7708191	TRANSIT 12	2015-12-18 @ 12:00 pm	2015-12-21 @ 12:00 pm	< 0.3	2015-12-23
7708188	TRANSIT 13	2015-12-18 @ 12:00 pm	2015-12-21 @ 12:00 pm	< 0.3	2015-12-23
7708197	TRANSIT 14	2015-12-18 @ 12:00 pm	2015-12-21 @ 12:00 pm	< 0.3	2015-12-23
7708186	TRANSIT 15	2015-12-18 @ 12:00 pm	2015-12-21 @ 12:00 pm	< 0.3	2015-12-23
7708185	TRANSIT 16	2015-12-18 @ 12:00 pm	2015-12-21 @ 12:00 pm	< 0.3	2015-12-23
7708184	TRANSIT 17	2015-12-18 @ 12:00 pm	2015-12-21 @ 12:00 pm	< 0.3	2015-12-23
7708182	TRANSIT 18	2015-12-18 @ 12:00 pm	2015-12-21 @ 12:00 pm	< 0.3	2015-12-23
7708187	TRANSIT 18	2015-12-18 @ 12:00 pm	2015-12-21 @ 12:00 pm	< 0.3	2015-12-23
7708199	TRANSIT 2	2015-12-18 @ 12:00 pm	2015-12-21 @ 12:00 pm	< 0.3	2015-12-23
7708181	TRANSIT 20	2015-12-18 @ 12:00 pm	2015-12-21 @ 12:00 pm	< 0.3	2015-12-23
7708180	TRANSIT 21	2015-12-18 @ 12:00 pm	2015-12-21 @ 12:00 pm	< 0.3	2015-12-23
7708183	TRANSIT 22	2015-12-18 @ 12:00 pm	2015-12-21 @ 12:00 pm	< 0.3	2015-12-23
7708178	TRANSIT 23	2015-12-18 @ 12:00 pm	2015-12-21 @ 12:00 pm	< 0.3	2015-12-23
7708179	TRANSIT 24	2015-12-18 @ 12:00 pm	2015-12-21 @ 12:00 pm	< 0.3	2015-12-23
7708177	TRANSIT 25	2015-12-18 @ 12:00 pm	2015-12-21 @ 12:00 pm	< 0.3	2015-12-23
7708176	TRANSIT 26	2015-12-18 @ 12:00 pm	2015-12-21 @ 12:00 pm	< 0.3	2015-12-23
7708174	TRANSIT 27	2015-12-18 @ 12:00 pm	2015-12-21 @ 12:00 pm	< 0.3	2015-12-23
7708173	TRANSIT 28	2015-12-18 @ 12:00 pm	2015-12-21 @ 12:00 pm	< 0.3	2015-12-23
7708175	TRANSIT 29	2015-12-18 @ 12:00 pm	2015-12-21 @ 12:00 pm	< 0.3	2015-12-23
7708198	TRANSIT 3	2015-12-18 @ 12:00 pm	2015-12-21 @ 12:00 pm	< 0.3	2015-12-23
7708172	TRANSIT 30	2015-12-18 @ 12:00 pm	2015-12-21 @ 12:00 pm	< 0.3	2015-12-23
7708194	TRANSIT 5	2015-12-18 @ 12:00 pm	2015-12-21 @ 12:00 pm	< 0.3	2015-12-23
7708196	TRANSIT 6	2015-12-18 @ 12:00 pm	2015-12-21 @ 12:00 pm	< 0.3	2015-12-23
7708193	TRANSIT 7	2015-12-18 @ 12:00 pm	2015-12-21 @ 12:00 pm	< 0.3	2015-12-23
7708192	TRANSIT 8	2015-12-18 @ 12:00 pm	2015-12-21 @ 12:00 pm	< 0.3	2015-12-23
7708195	TRANSIT 9	2015-12-18 @ 12:00 pm	2015-12-21 @ 12:00 pm	< 0.3	2015-12-23

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



ENGINEERS • PLANNERS • SCIENTISTS • CONSTRUCTION MANAGERS

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

Chain of Custody

Project Name: MCPS Radon Phase IV

Name of Schools:

- | | | |
|----------------------------|----------------------------|---------------------------|
| 1. Albert Einstein HS | 12. Herbert Hoover MS | 23. Stephen Knolls School |
| 2. Bel Pre ES | 13. Kohn F. Kennedy HS | 24. Strathmore ES |
| 3. Benjamin Banneker MS | 14. Julius West MS | 25. Summit Hall ES |
| 4. Bethesda Chevy Chase HS | 15. Kensington Parkwood ES | 26. Travilah ES |
| 5. Beverly Farms ES | 16. Lakewood ES | 27. Twinbrook ES |
| 6. Cabin John MS | 17. Mill Creek ES | 28. Waters Landing ES |
| 7. Chevy Chase ES | 18. Montgomery Blair HS | 29. Watkins Mill HAS |
| 8. Farmland ES | 19. Montgomery Village MS | 30. Weller Road ES |
| 9. Forest Oak MS | 20. Northwood HS | 31. White Oak MS |
| 10. Gaithersburg HS | 21. Paint Branch ES | 32. Winston Churchill HS |
| 11. Garrett Park ES | 22. Rock Creek Forest ES | |
-

	Date	Initials
Radon Test Kits Deployed	1/4/16	JM
Radon Test Kits Sampled	1/7/16	JM
Radon Test Kits Shipped to Lab*	1/8/16	JM
Radon Test Kits Received by Lab*	1/11/16	JM

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

Note: tests kits deployed at Montgomery Blair HS 1/4/16 and 1/5/16, test kits sampled at Montgomery Blair HS 1/7/16 and 1/8/16