

School / Facility Radon Testing Report Form

School Year: **24-25**

Facility:	Clarksburg High School		
Address:	22500 Wims Road		
	Clarksburg, MD 20871		
Reason for Testing:	Scheduled Re-Testing - <input checked="" type="checkbox"/> 2-year or <input type="checkbox"/> 5-year schedule <input checked="" 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 checked="" type="checkbox"/> Active Mitigation (2-year regular schedule) <input 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	108	Lowest Value (pCi/L)	< 0.3
Number of Rooms (≥ 4.0 -pCi/L)	0	Highest Value (pCi/L)	2.8

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
Shannon King		KCI Technologies, Inc.
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 <input type="checkbox"/> Long-Term	Length of Test (days):	3	Date of Deployment and Retrieval (mm/dd/yy):	02/18/25 02/21/25	03/25/25 03/28/25
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	99	4	8	0	111
Duplicates ²	11	1	1	0	13
Field Blanks ³	5	1	1	0	7
Grand Total					131

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:	99	1	8	0	108
Number of locations ≥ 8.0 -pCi/L:	0	0	0	0	0
Number of locations ≥ 4.0 and ≤ 8 -pCi/L:	0	0	0	0	0
Number of locations ≥ 2.7 and < 4 -pCi/L:	1	0	0	0	1
Number of locations ≥ 2.0 and < 2.7 -pCi/L:	2	0	0	0	2
Number of missing required test locations ³ :	3	0	0	0	3
Number of failed duplicate control locations:	1	0	0	0	1
Percentage of missing test locations for the facility ^{4,5} :	3.03%	0	0	0	2.77%

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		
Clarksburg High School		
Test Period: 2/18/2025 - 2/21/2025		
Kit Number	Room / Area	Result
11931759	101	< 0.3
11951172	102	< 0.3
11931764	103	< 0.3
11931767	105	< 0.3
11931763	106	1.0
11951190	107	< 0.3
11951184	108	< 0.3
11951188	108	< 0.3
11951187	110	0.8
11951186	114	< 0.3
11951189	114	< 0.3
11951191	116	< 0.3
11951193	117	< 0.3
11951194	118	0.7
11951192	119	0.9
11951157	120	Missing Kit
11951198	120	1.5
11931770	121	< 0.3
11931771	121	< 0.3
11951200	121	< 0.3
11951195	122	< 0.3
11951196	125	< 0.3
11931701	127	< 0.3
11931703	129	< 0.3
11951199	130	1.5
11931705	132	< 0.3
11931706	136	< 0.3
11931707	138	Missing Kit
11931775	140	< 0.3
11931758	141	< 0.3
11931773	142	< 0.3
11931765	143	< 0.3
11931774	144	< 0.3
11931777	144	< 0.3
11931766	145	< 0.3
11931756	146	< 0.3
11931760	146	< 0.3

Table 1- Radon Testing Results		
Clarksburg High School		
Test Period: 2/18/2025 - 2/21/2025		
Kit Number	Room / Area	Result
11931772	147	< 0.3
11931779	149	< 0.3
11931753	150	0.6
11931751	151	0.6
11931752	152	< 0.3
11931761	153	0.8
11931750	154	0.8
11931757	155	2.2
11931749	156	< 0.3
11931748	158	1.5
11931762	159	2.8
11931717	160	< 0.3
11931718	161	< 0.3
11931724	162	< 0.3
11931727	163	0.6
11931730	164	< 0.3
11931731	164	< 0.3
11931736	166	< 0.3
11931728	167	< 0.3
11931729	167	< 0.3
11931737	168	< 0.3
11931780	171	0.9
11931781	173	< 0.3
11931725	174	Missing Kit
11931738	177	< 0.3
11931739	177	< 0.3
11931726	181	< 0.3
11931732	181	0.7
11931733	184	0.8
11931745	191	< 0.3
11931746	191	< 0.3
11931734	192	0.9
11931741	194	1.1
11931742	195	< 0.3
11931747	195	< 0.3
11931735	196	0.6
11931783	200	< 0.3

Table 1- Radon Testing Results		
Clarksburg High School		
Test Period: 2/18/2025 - 2/21/2025		
Kit Number	Room / Area	Result
11931790	207	< 0.3
11931793	221	< 0.3
11931784	236	< 0.3
11931785	240	< 0.3
11931786	248	< 0.3
11931787	251	< 0.3
11931788	251	< 0.3
11931782	256	< 0.3
11931789	256	< 0.3
11931723	1000	< 0.3
11931710	1001	< 0.3
11931722	1002	< 0.3
11931721	1003	< 0.3
11931716	1004	< 0.3
11931719	1005	< 0.3
11931720	1005	< 0.3
11931709	1006	< 0.3
11931714	1007	< 0.3
11931715	1008	< 0.3
11931712	1010	0.8
11931711	1011	< 0.3
11931708	1012	< 0.3
11931713	1012	< 0.3
11931702	1013	< 0.3
11931704	1013	< 0.3
11951173	100A	< 0.3
11951175	100D	< 0.3
11951176	100F	< 0.3
11951177	100F	< 0.3
11951167	100H	< 0.3
11951168	100I	< 0.3
11951170	100K	< 0.3
11951171	100L	< 0.3
11931768	105A	< 0.3
11931769	105A	< 0.3
11951183	110A	0.7
11951174	110D	< 0.3

Table 1- Radon Testing Results		
Clarksburg High School		
Test Period: 2/18/2025 - 2/21/2025		
Kit Number	Room / Area	Result
11951179	110E	< 0.3
11951178	110F	0.8
11951180	110H	0.5
11951182	110J	1.0
11951185	110L	0.8
11931776	142A	< 0.3
11931778	144A	< 0.3
11931755	148A	< 0.3
11931754	152B	0.5
11931740	192A	0.6
11931744	194A	0.7
11931743	198B	2.0
11951169	MAIN OFFICE	< 0.3
11951181	RICHIE OFFICE	< 0.3

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Table 3 - QC Radon Testing Results			
Clarksburg High School			
Test Period: 2/18/2025 - 2/21/2025			
Kit Number	QC Type	Room / Area	Result
11951188	D	108	< 0.3
11951189	FB	114	< 0.3
11951198	D	120	1.5
11931771	D	121	< 0.3
11951200	FB	121	< 0.3
11931777	D	144	< 0.3
11931760	D	146	< 0.3
11931731	FB	164	< 0.3
11931729	D	167	< 0.3
11931739	D	177	< 0.3
11931747	D	195	< 0.3
11931788	D	251	< 0.3
11931789	FB	256	< 0.3
11931720	D	1005	< 0.3
11931713	FB	1012	< 0.3
11931704	D	1013	< 0.3
11951177	D	100F	< 0.3
11931769	FB	105A	< 0.3
11919902	OB	OFFICE BLANK	< 0.3
11919963	TB	TRAVEL BLANK	< 0.3

Table 3a - Duplicate Worksheet / Data Validation											
Clarksburg High School											
Test Period: 2/18/2025 - 2/21/2025											
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	
11951188	11951184	108	0.3	0.3	✓	0.6	PASS	0.3	<1-pCi/L	✓	
11951198	11951197	120	NA	NA	NA	NA	NA	NA	NA	NA	
11931770	11931771	121	0.3	0.3	✓	0.6	PASS	0.3	<1-pCi/L	✓	
11931774	11931777	144	0.3	0.3	✓	0.6	PASS	0.3	<1-pCi/L	✓	
11931756	11931760	146	0.3	0.3	✓	0.6	PASS	0.3	<1-pCi/L	✓	
11931728	11931729	167	0.3	0.3	✓	0.6	PASS	0.3	<1-pCi/L	✓	
11931738	11931739	177	0.3	0.3	✓	0.6	PASS	0.3	<1-pCi/L	✓	
11931742	11931747	195	0.3	0.3	✓	0.6	PASS	0.3	<1-pCi/L	✓	
11931787	11931788	251	0.3	0.3	✓	0.6	PASS	0.3	<1-pCi/L	✓	
11931719	11931720	1005	0.3	0.3	✓	0.6	PASS	0.3	<1-pCi/L	✓	
11931704	11931702	1013	0.3	0.3	✓	0.6	PASS	0.3	<1-pCi/L	✓	
11951177	11951176	100F	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							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

- 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

Table 1- Radon Testing Results		
Clarksburg High School RT		
Test Period: 3/25/2025 - 3/28/2025		
Kit Number	Room / Area	Result
11886556	120	1.1
11886576	120	1.1
11886679	120	0.7
11886689	120	0.9
11886690	120	1.3
11886985	120	< 0.3

[illegible]

Table 3 - QC Radon Testing Results			
Clarksburg High School RT			
Test Period: 3/25/2025 - 3/28/2025			
Kit Number	QC Type	Room / Area	Result
11886679	D	120	0.7
11886985	FB	120	< 0.3
11886692	OB	OFFICE BLANK	< 0.3
11886693	TB	TRAVEL BLANK	< 0.3

Table 3a - Duplicate Worksheet / Data Validation										
Clarksburg High School RT										
Test Period: 3/25/2025 - 3/28/2025										
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
11886679	11886556 11886576 11886689 11886690	120	1.2	0.8	✓	1.6	PASS	1.0	<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							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

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

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Attachment 2:

Laboratory Reports

Radon test result report for:

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11931723	1000	2025-02-18 @ 10:00 am	2025-02-21 @ 9:00 am	< 0.3	2025-02-24
11931710	1001	2025-02-18 @ 10:00 am	2025-02-21 @ 9:00 am	< 0.3	2025-02-24
11931722	1002	2025-02-18 @ 10:00 am	2025-02-21 @ 9:00 am	< 0.3	2025-02-24
11931721	1003	2025-02-18 @ 10:00 am	2025-02-21 @ 9:00 am	< 0.3	2025-02-24
11931716	1004	2025-02-18 @ 9:00 am	2025-02-21 @ 9:00 am	< 0.3	2025-02-24
11931719	1005	2025-02-18 @ 9:00 am	2025-02-21 @ 9:00 am	< 0.3	2025-02-24
11931720	1005	2025-02-18 @ 9:00 am	2025-02-21 @ 9:00 am	< 0.3	2025-02-24
11931709	1006	2025-02-18 @ 9:00 am	2025-02-21 @ 9:00 am	< 0.3	2025-02-24
11931714	1007	2025-02-18 @ 9:00 am	2025-02-21 @ 9:00 am	< 0.3	2025-02-24
11931715	1008	2025-02-18 @ 9:00 am	2025-02-21 @ 9:00 am	< 0.3	2025-02-24
11951173	100A	2025-02-18 @ 8:00 am	2025-02-21 @ 8:00 am	< 0.3	2025-02-24
11951175	100D	2025-02-18 @ 8:00 am	2025-02-21 @ 8:00 am	< 0.3	2025-02-24
11951176	100F	2025-02-18 @ 8:00 am	2025-02-21 @ 8:00 am	< 0.3	2025-02-24
11951177	100F	2025-02-18 @ 9:00 am	2025-02-21 @ 8:00 am	< 0.3	2025-02-24
11951167	100H	2025-02-18 @ 8:00 am	2025-02-21 @ 8:00 am	< 0.3	2025-02-24
11951168	100I	2025-02-18 @ 8:00 am	2025-02-21 @ 8:00 am	< 0.3	2025-02-24
11951170	100K	2025-02-18 @ 8:00 am	2025-02-21 @ 8:00 am	< 0.3	2025-02-24
11951171	100L	2025-02-18 @ 8:00 am	2025-02-21 @ 8:00 am	< 0.3	2025-02-24
11931759	101	2025-02-18 @ 11:00 am	2025-02-21 @ 10:00 am	< 0.3	2025-02-24
11931712	1010	2025-02-18 @ 9:00 am	2025-02-21 @ 9:00 am	0.8 ± 0.3	2025-02-24
11931711	1011	2025-02-18 @ 9:00 am	2025-02-21 @ 9:00 am	< 0.3	2025-02-24
11931713	1012	2025-02-18 @ 9:00 am	2025-02-21 @ 9:00 am	< 0.3	2025-02-24
11931708	1012	2025-02-18 @ 9:00 am	2025-02-21 @ 9:00 am	< 0.3	2025-02-24
11931704	1013	2025-02-18 @ 9:00 am	2025-02-21 @ 9:00 am	< 0.3	2025-02-24
11931702	1013	2025-02-18 @ 9:00 am	2025-02-21 @ 9:00 am	< 0.3	2025-02-24
11951172	102	2025-02-18 @ 8:00 am	2025-02-21 @ 8:00 am	< 0.3	2025-02-24
11931764	103	2025-02-18 @ 11:00 am	2025-02-21 @ 10:00 am	< 0.3	2025-02-24
11931767	105	2025-02-18 @ 11:00 am	2025-02-21 @ 10:00 am	< 0.3	2025-02-24
11931769	105A	2025-02-18 @ 11:00 am	2025-02-21 @ 10:00 am	< 0.3	2025-02-24
11931768	105A	2025-02-18 @ 11:00 am	2025-02-21 @ 10:00 am	< 0.3	2025-02-24
11931763	106	2025-02-18 @ 11:00 am	2025-02-21 @ 10:00 am	1.0 ± 0.3	2025-02-24
11951190	107	2025-02-18 @ 9:00 am	2025-02-21 @ 8:00 am	< 0.3	2025-02-24
11951184	108	2025-02-18 @ 9:00 am	2025-02-21 @ 10:00 am	< 0.3	2025-02-24
11951188	108	2025-02-18 @ 9:00 am	2025-02-21 @ 10:00 am	< 0.3	2025-02-24
11951187	110	2025-02-18 @ 9:00 am	2025-02-21 @ 8:00 am	0.8 ± 0.3	2025-02-24
11951183	110A	2025-02-18 @ 9:00 am	2025-02-21 @ 8:00 am	0.7 ± 0.3	2025-02-24
11951174	110D	2025-02-18 @ 8:00 am	2025-02-21 @ 8:00 am	< 0.3	2025-02-24

Radon test result report for:

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11951179	110E	2025-02-18 @ 9:00 am	2025-02-21 @ 8:00 am	< 0.3	2025-02-24
11951178	110F	2025-02-18 @ 9:00 am	2025-02-21 @ 8:00 am	0.8 ± 0.3	2025-02-24
11951180	110H	2025-02-18 @ 9:00 am	2025-02-21 @ 8:00 am	0.5 ± 0.3	2025-02-24
11951182	110J	2025-02-18 @ 9:00 am	2025-02-21 @ 8:00 am	1.0 ± 0.3	2025-02-24
11951185	110L	2025-02-18 @ 9:00 am	2025-02-21 @ 8:00 am	0.8 ± 0.3	2025-02-24
11951189	114	2025-02-18 @ 9:00 am	2025-02-21 @ 8:00 am	< 0.3	2025-02-24
11951186	114	2025-02-18 @ 9:00 am	2025-02-21 @ 8:00 am	< 0.3	2025-02-24
11951191	116	2025-02-18 @ 9:00 am	2025-02-21 @ 8:00 am	< 0.3	2025-02-24
11951193	117	2025-02-18 @ 9:00 am	2025-02-21 @ 8:00 am	< 0.3	2025-02-24
11951194	118	2025-02-18 @ 9:00 am	2025-02-21 @ 8:00 am	0.7 ± 0.3	2025-02-24
11951192	119	2025-02-18 @ 9:00 am	2025-02-21 @ 8:00 am	0.9 ± 0.3	2025-02-24
11951198	120	2025-02-18 @ 9:00 am	2025-02-21 @ 9:00 am	1.5 ± 0.3	2025-02-24
11931771	121	2025-02-18 @ 11:00 am	2025-02-21 @ 9:00 am	< 0.3	2025-02-24
11951200	121	2025-02-18 @ 9:00 am	2025-02-21 @ 9:00 am	< 0.3	2025-02-24
11931770	121	2025-02-18 @ 11:00 am	2025-02-21 @ 9:00 am	< 0.3	2025-02-24
11951195	122	2025-02-18 @ 9:00 am	2025-02-21 @ 9:00 am	< 0.3	2025-02-24
11951196	125	2025-02-18 @ 9:00 am	2025-02-21 @ 9:00 am	< 0.3	2025-02-24
11931701	127	2025-02-18 @ 9:00 am	2025-02-21 @ 9:00 am	< 0.3	2025-02-24
11931703	129	2025-02-18 @ 9:00 am	2025-02-21 @ 9:00 am	< 0.3	2025-02-24
11951199	130	2025-02-18 @ 9:00 am	2025-02-21 @ 9:00 am	1.5 ± 0.3	2025-02-24
11931705	132	2025-02-18 @ 9:00 am	2025-02-21 @ 9:00 am	< 0.3	2025-02-24
11931706	136	2025-02-18 @ 9:00 am	2025-02-21 @ 9:00 am	< 0.3	2025-02-24
11931775	140	2025-02-18 @ 11:00 am	2025-02-21 @ 10:00 am	< 0.3	2025-02-24
11931758	141	2025-02-18 @ 11:00 am	2025-02-21 @ 10:00 am	< 0.3	2025-02-24
11931773	142	2025-02-18 @ 11:00 am	2025-02-21 @ 10:00 am	< 0.3	2025-02-24
11931776	142A	2025-02-18 @ 11:00 am	2025-02-21 @ 10:00 am	< 0.3	2025-02-24
11931765	143	2025-02-18 @ 11:00 am	2025-02-21 @ 10:00 am	< 0.3	2025-02-24
11931777	144	2025-02-18 @ 11:00 am	2025-02-21 @ 10:00 am	< 0.3	2025-02-24
11931774	144	2025-02-18 @ 11:00 am	2025-02-21 @ 10:00 am	< 0.3	2025-02-24
11931778	144A	2025-02-18 @ 11:00 am	2025-02-21 @ 10:00 am	< 0.3	2025-02-24
11931766	145	2025-02-18 @ 11:00 am	2025-02-21 @ 10:00 am	< 0.3	2025-02-24
11931760	146	2025-02-18 @ 11:00 am	2025-02-21 @ 10:00 am	< 0.3	2025-02-24
11931756	146	2025-02-18 @ 11:00 am	2025-02-21 @ 10:00 am	< 0.3	2025-02-24
11931772	147	2025-02-18 @ 11:00 am	2025-02-21 @ 10:00 am	< 0.3	2025-02-24
11931755	148A	2025-02-18 @ 11:00 am	2025-02-21 @ 10:00 am	< 0.3	2025-02-24
11931779	149	2025-02-18 @ 11:00 am	2025-02-21 @ 10:00 am	< 0.3	2025-02-24
11931753	150	2025-02-18 @ 11:00 am	2025-02-21 @ 10:00 am	0.6 ± 0.3	2025-02-24

Radon test result report for:

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11931751	151	2025-02-18 @ 10:00 am	2025-02-21 @ 10:00 am	0.6 ± 0.3	2025-02-24
11931752	152	2025-02-18 @ 11:00 am	2025-02-21 @ 10:00 am	< 0.3	2025-02-24
11931754	152B	2025-02-18 @ 11:00 am	2025-02-21 @ 10:00 am	0.5 ± 0.3	2025-02-24
11931761	153	2025-02-18 @ 11:00 am	2025-02-21 @ 10:00 am	0.8 ± 0.3	2025-02-24
11931750	154	2025-02-18 @ 10:00 am	2025-02-21 @ 10:00 am	0.8 ± 0.3	2025-02-24
11931757	155	2025-02-18 @ 11:00 am	2025-02-21 @ 10:00 am	2.2 ± 0.3	2025-02-24
11931749	156	2025-02-18 @ 10:00 am	2025-02-21 @ 10:00 am	< 0.3	2025-02-24
11931748	158	2025-02-18 @ 10:00 am	2025-02-21 @ 10:00 am	1.5 ± 0.3	2025-02-24
11931762	159	2025-02-18 @ 11:00 am	2025-02-21 @ 10:00 am	2.8 ± 0.3	2025-02-24
11931717	160	2025-02-18 @ 10:00 am	2025-02-21 @ 9:00 am	< 0.3	2025-02-24
11931718	161	2025-02-18 @ 10:00 am	2025-02-21 @ 9:00 am	< 0.3	2025-02-24
11931724	162	2025-02-18 @ 10:00 am	2025-02-21 @ 10:00 am	< 0.3	2025-02-24
11931727	163	2025-02-18 @ 10:00 am	2025-02-21 @ 9:00 am	0.6 ± 0.3	2025-02-24
11931730	164	2025-02-18 @ 10:00 am	2025-02-21 @ 9:00 am	< 0.3	2025-02-24
11931731	164	2025-02-18 @ 10:00 am	2025-02-21 @ 9:00 am	< 0.3	2025-02-24
11931736	166	2025-02-18 @ 10:00 am	2025-02-21 @ 9:00 am	< 0.3	2025-02-24
11931729	167	2025-02-18 @ 10:00 am	2025-02-21 @ 9:00 am	< 0.3	2025-02-24
11931728	167	2025-02-18 @ 10:00 am	2025-02-21 @ 9:00 am	< 0.3	2025-02-24
11931737	168	2025-02-18 @ 10:00 am	2025-02-21 @ 9:00 am	< 0.3	2025-02-24
11931780	171	2025-02-18 @ 11:00 am	2025-02-21 @ 9:00 am	0.9 ± 0.3	2025-02-24
11931781	173	2025-02-18 @ 11:00 am	2025-02-21 @ 9:00 am	< 0.3	2025-02-24
11931738	177	2025-02-18 @ 10:00 am	2025-02-21 @ 9:00 am	< 0.3	2025-02-24
11931739	177	2025-02-18 @ 10:00 am	2025-02-21 @ 9:00 am	< 0.3	2025-02-24
11931732	181	2025-02-18 @ 10:00 am	2025-02-21 @ 9:00 am	0.7 ± 0.3	2025-02-24
11931726	181	2025-02-18 @ 10:00 am	2025-02-21 @ 9:00 am	< 0.3	2025-02-24
11931733	184	2025-02-18 @ 10:00 am	2025-02-21 @ 9:00 am	0.8 ± 0.3	2025-02-24
11931746	191	2025-02-18 @ 10:00 am	2025-02-21 @ 10:00 am	< 0.3	2025-02-24
11931745	191	2025-02-18 @ 10:00 am	2025-02-21 @ 10:00 am	< 0.3	2025-02-24
11931734	192	2025-02-18 @ 10:00 am	2025-02-21 @ 9:00 am	0.9 ± 0.3	2025-02-24
11931740	192A	2025-02-18 @ 10:00 am	2025-02-21 @ 9:00 am	0.6 ± 0.3	2025-02-24
11931741	194	2025-02-18 @ 10:00 am	2025-02-21 @ 9:00 am	1.1 ± 0.3	2025-02-24
11931744	194A	2025-02-18 @ 10:00 am	2025-02-21 @ 9:00 am	0.7 ± 0.3	2025-02-24
11931742	195	2025-02-18 @ 10:00 am	2025-02-21 @ 10:00 am	< 0.3	2025-02-24
11931747	195	2025-02-18 @ 10:00 am	2025-02-21 @ 10:00 am	< 0.3	2025-02-24
11931735	196	2025-02-18 @ 10:00 am	2025-02-21 @ 9:00 am	0.6 ± 0.3	2025-02-24
11931743	198B	2025-02-18 @ 10:00 am	2025-02-21 @ 9:00 am	2.0 ± 0.3	2025-02-24
11931783	200	2025-02-18 @ 11:00 am	2025-02-21 @ 10:00 am	< 0.3	2025-02-24

February 24, 2025

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11931790	207	2025-02-18 @ 12:00 pm	2025-02-21 @ 10:00 am	< 0.3	2025-02-24
11931793	221	2025-02-18 @ 11:00 am	2025-02-21 @ 10:00 am	< 0.3	2025-02-24
11931784	236	2025-02-18 @ 11:00 am	2025-02-21 @ 10:00 am	< 0.3	2025-02-24
11931785	240	2025-02-18 @ 11:00 am	2025-02-21 @ 10:00 am	< 0.3	2025-02-24
11931786	248	2025-02-18 @ 11:00 am	2025-02-21 @ 10:00 am	< 0.3	2025-02-24
11931788	251	2025-02-18 @ 11:00 am	2025-02-21 @ 10:00 am	< 0.3	2025-02-24
11931787	251	2025-02-18 @ 11:00 am	2025-02-21 @ 10:00 am	< 0.3	2025-02-24
11931789	256	2025-02-18 @ 11:00 am	2025-02-21 @ 10:00 am	< 0.3	2025-02-24
11931782	256	2025-02-18 @ 11:00 am	2025-02-21 @ 10:00 am	< 0.3	2025-02-24
11951169	MAIN OFFICE	2025-02-18 @ 8:00 am	2025-02-21 @ 8:00 am	< 0.3	2025-02-24
11951181	RICHIE OFFICE	2025-02-18 @ 9:00 am	2025-02-21 @ 8:00 am	< 0.3	2025-02-24

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February 26, 2025

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

**OFFICE
MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11919902	OB	2025-02-18 @ 11:00 am	2025-02-21 @ 11:00 am	< 0.3	2025-02-24

February 26, 2025

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

**TRAVEL
MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11919963	TB	2025-02-18 @ 11:00 am	2025-02-21 @ 11:00 am	< 0.3	2025-02-24

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 February 18th – February 21st, 2025

Name of Schools:

1. Cashell ES
2. Cedar Grove ES
3. Clarksburg ES
4. Clarksburg HS
5. Clarksburg Annex
6. Damascus ES
7. Darnestown ES

	Date	Initials
Radon Test Kits Deployed	2/18/2025	on
Radon Test Kits Collected	2/21/2025	Sm
Radon Test Kits Shipped to Lab*	2/21/2025	dm
Radon Test Kits Received by Lab*	2/24/2025	Sm

*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:

**CLARKSBURG HS
MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11886556	120	2025-03-25 @ 11:00 am	2025-03-28 @ 10:00 am	1.1 ± 0.4	2025-04-02
11886576	120	2025-03-25 @ 11:00 am	2025-03-28 @ 10:00 am	1.1 ± 0.4	2025-04-02
11886679	120	2025-03-25 @ 11:00 am	2025-03-28 @ 10:00 am	0.7 ± 0.4	2025-04-02
11886689	120	2025-03-25 @ 11:00 am	2025-03-28 @ 10:00 am	0.9 ± 0.4	2025-04-02
11886690	120	2025-03-25 @ 11:00 am	2025-03-28 @ 10:00 am	1.3 ± 0.4	2025-04-02
11886985	120	2025-03-25 @ 11:00 am	2025-03-28 @ 10:00 am	< 0.3	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 – Testing March 25th – March 28th, 2025

Name of Schools:

- | | |
|--------------------|-------------------------------|
| 1. Wheaton HS | 7. Goshen ES |
| 2. Clarksburg HS | 8. Great Seneca Creek ES |
| 3. Darnestown ES | 9. Lake Seneca ES |
| 4. Diamond ES | 10. Lathrop E. Smith Center |
| 5. Gaithersburg ES | 11. Martin Luther King Jr. MS |
| 6. Germantown ES | |

	Date	Initials
Radon Test Kits Deployed	3/25/2025	BMM
Radon Test Kits Collected	3/28/2025	BMM
Radon Test Kits Shipped to Lab*	3/28/2025	BMM
Radon Test Kits Received by Lab*	4/01/2025	BMM

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

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:	Clarksburg High School
Address:	22500 Wims Road
	Clarksburg, MD 20871

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 checked="" type="checkbox"/> Active Mitigation (2-year regular schedule) <input type="checkbox"/> No Active Mitigation (5-year regular schedule) <input type="checkbox"/> Not Previously Tested
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 or Considered <input type="checkbox"/> Required (>8.0 -pCi/L) <input checked="" type="checkbox"/> Required (≥ 4.0 -pCi/L) Room: 134B <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)

School / Facility Radon Testing Report Form

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	
Tyler McCleaf			KCI Technologies, Inc.	
If noncertified individuals, the qualified measurement professional providing oversight -				
Tyler McCleaf, CSP – Cert. #111004-RMP				

Testing

<input checked="" type="checkbox"/> Short-Term	Length of Test (days):	3	Date of Deployment and Retrieval (mm/dd/yy):	02/20/2024
<input type="checkbox"/> Long-Term				02/23/2024
Does the test period include weekends, school breaks or holidays?				<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
If “Yes” please explain/detail in the space below:				
Was HVAC operating under occupied conditions?				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
If “No” please explain/detail in the space below:				

Testing (continued)

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

1 – include all detectors deployed (duplicates, field blanks); 1 detector per occupied (or intended to be occupied) ground-contact space \leq 2,000-square feet; large spaces \geq 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
----------------------------	---	----------------------------	---	--------------------------------	---

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 \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 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:	1	0	1
Number of locations ≥ 8.0 -pCi/L:	0	0	0
Number of locations ≥ 4.0 and ≤ 8 -pCi/L:	1	0	1
Number of locations ≥ 2.7 and ≤ 4 -pCi/L:	1	0	1
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.

School / Facility Radon Testing Report Form

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
If Yes to both above – then Testing Status – ‘No Further Testing Needed’ mark ‘NA’ below and complete Conclusions section	
If No to either above, were all results obtained under 4.0-pCi/L and were there sufficient valid measurements obtained?^{1,2} If Yes – then Testing Status - ‘No Further Testing Needed’ complete Conclusion section If No, then Testing Status - ‘Follow-up Testing Required’ continue below	<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 Retesting Results		
Clarksburg High School		
Test Period: 02/20/2024 - 02/23/2024		
Kit Number	Room / Area	Result
11463996	134B	4.5
11478185	134B	3.9
11478471	134B	<0.3

Table 3 - QC Radon Retesting Results			
Clarksburg High School			
Test Period: 02/20/2024 - 02/23/2024			
Kit Number	QC Type	Room / Area	Result
11478185	D	134B	3.9
11478471	FB	134B	<0.3

[illegible]

[illegible]

Attachment 2:

Laboratory Reports

February 28, 2024

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:
CLARKSBURG HS
MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11463996	134B	2024-02-20 @ 12:00 pm	2024-02-23 @ 11:00 am	4.5 ± 0.4	2024-02-27
11478185	134B	2024-02-20 @ 12:00 pm	2024-02-23 @ 11:00 am	3.9 ± 0.4	2024-02-27
11478471	134B	2024-02-20 @ 12:00 pm	2024-02-23 @ 11:00 am	< 0.3	2024-02-27

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

February 27, 2024

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

KCI

MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11477832	OB	2024-02-23 @ 8:00 am	2024-02-26 @ 11:00 am	< 0.3	2024-02-27
11482793	OB	2024-02-23 @ 8:00 am	2024-02-26 @ 11:00 am	< 0.3	2024-02-27
11477841	TB	2024-02-23 @ 8:00 am	2024-02-26 @ 11:00 am	< 0.3	2024-02-27
11482795	TB	2024-02-23 @ 8:00 am	2024-02-26 @ 11:00 am	< 0.3	2024-02-27

EXPOSURE IN BOWSER-MORNER RADON CHAMBER

CLIENT KCI TECHNOLOGIES, Inc Job Number 213 819

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 μ R/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



Radon Test Kit Chain of Custody

Project Name: MCPS Radon – Testing February 20th – February 23rd, 2024

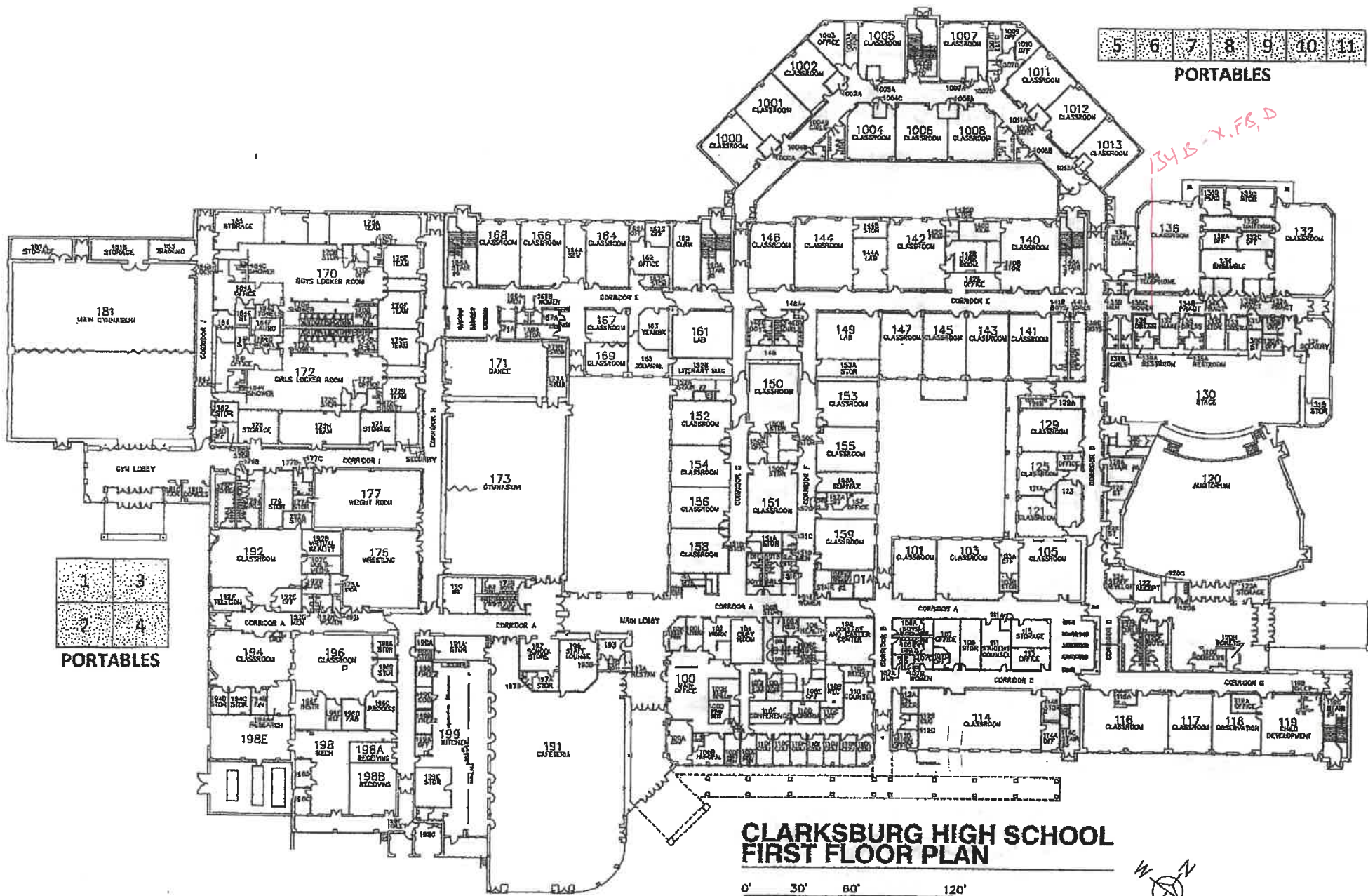
Name of Schools:

- | | |
|--------------------|---------------------|
| 1. Cabin Branch ES | 5. JFK HS |
| 2. Clarksburg HS | 6. John T. Baker MS |
| 3. Fairland ES | 7. White Oak MS |
| 4. Jackson Road ES | |

	Date	Initials
Radon Test Kits Deployed	02/20/2024	JM
Radon Test Kits Collected	02/23/2024	AM
Radon Test Kits Shipped to Lab*	02/23/2024	AM
Radon Test Kits Received by Lab*	02/27/2024	AM

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

Attachment 3:
Sampling Location Map



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:	Clarksburg High School
Address:	22500 Wims Road
	Clarksburg, MD 20871

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 checked="" type="checkbox"/> Active Mitigation (2-year regular schedule) <input 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 type="checkbox"/> No Further Testing Needed -or- <input checked="" type="checkbox"/> Follow-Up Testing Required

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

Mitigation -	Facility Radon Status:
<input 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 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)

School / Facility Radon Testing Report Form

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	
Evy Rahmey			KCI Technologies, Inc.	
If noncertified individuals, the qualified measurement professional providing oversight -				
Tyler McCleaf, CSP – Cert. #111004-RMP				

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
If “Yes” please explain/detail in the space below:				
Was HVAC operating under occupied conditions?				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
If “No” please explain/detail in the space below:				

Testing (continued)

	Detectors Deployed		
	Ground-Contact	Upper-Level(s)	Total
Test Locations ¹	145	11	156
Duplicates ²	17	1	18
Field Blanks ³	8	1	9
Grand Total			183

1 – include all detectors deployed (duplicates, field blanks); 1 detector per occupied (or intended to be occupied) ground-contact space \leq 2,000-square feet; large spaces \geq 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	2	Office Blank(s) ^{3,4}	2
----------------------------	---	----------------------------	---	--------------------------------	---

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 \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 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:	145	11	156
Number of locations ≥ 8.0 -pCi/L:	0	0	0
Number of locations ≥ 4.0 and ≤ 8 -pCi/L:	1	0	1
Number of locations ≥ 2.7 and ≤ 4 -pCi/L:	1	0	1
Number of locations ≥ 2.0 and ≤ 4 -pCi/L:	4	0	4
Number of missing required test locations ³ :	13	0	13
Percentage of missing test locations for the facility ^{4,5} :	8.9%	0	8.9%

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.

School / Facility Radon Testing Report Form

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 type="checkbox"/> Yes <input checked="" 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
If Yes to both above – then Testing Status – ‘No Further Testing Needed’ mark ‘NA’ below and complete Conclusions section	
If No to either above, were all results obtained under 4.0-pCi/L and were there sufficient valid measurements obtained?^{1,2} If Yes – then Testing Status - ‘No Further Testing Needed’ complete Conclusion section If No, then Testing Status - ‘Follow-up Testing Required’ continue below	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input 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		
Clarksburg High School		
Test Period: 02/05/2024 - 02/08/2024		
Kit Number	Room / Area	Result
11469993	100	< 0.3
11469936	101	0.7
11470041	102	< 0.3
11469946	103	0.7
11469952	103	0.6
11470037	104	< 0.3
11469959	105	0.9
11469995	106	0.7
11469972	107	< 0.3
11469935	108	< 0.3
11469976	110	0.6
11469965	111	< 0.3
11469966	111	< 0.3
11469990	111	< 0.3
11469944	114	< 0.3
11469949	116	< 0.3
11469937	117	< 0.3
11469938	118	0.9
11469975	119	1.4
11469921	120	1.5
11469924	120	2.0
11469921	120	N/A
11469967	122	1.3
11469922	130	1.9
11469907	131	1.2
11469908	131	< 0.3
11469909	131	1.2
11469912	132	< 0.3
11470003	133	0.8
11469910	134	0.5
11470004	135	< 0.3
11469917	136	< 0.3
11470005	137	0.9
11469915	138	1.2
11470006	139	1.0
11469928	140	0.8
11469930	141	< 0.3
11469931	141	< 0.3

Table 1- Radon Testing Results		
Clarksburg High School		
Test Period: 02/05/2024 - 02/08/2024		
Kit Number	Room / Area	Result
11469948	142	< 0.3
11469929	143	< 0.3
11469940	144	< 0.3
11469939	145	< 0.3
11469941	146	< 0.3
11469927	147	< 0.3
11469981	149	< 0.3
11469982	149	< 0.3
11469988	149	< 0.3
11469974	150	< 0.3
11469956	151	< 0.3
11470011	152	< 0.3
11469980	153	< 0.3
11470014	154	< 0.3
11469963	155	0.5
11470012	156	< 0.3
11470027	156	< 0.3
11470019	158	0.7
11469950	159	< 0.3
11470063	160	< 0.3
11470034	161	< 0.3
11470007	162	< 0.3
11470064	163	< 0.3
11470052	164	< 0.3
11470060	165	2.2
11470045	166	< 0.3
11470068	167	< 0.3
11470062	168	< 0.3
11470070	168	< 0.3
11470071	168	< 0.3
11470066	170	N/A
11470049	171	0.8
11470079	172	N/A
11470033	173	0.6
11470033	173	N/A
11470008	174	< 0.3
11470024	175	1.1
11470029	175	< 0.3

Table 1- Radon Testing Results		
Clarksburg High School		
Test Period: 02/05/2024 - 02/08/2024		
Kit Number	Room / Area	Result
11470031	175	0.8
11470051	177	0.7
11470016	181	0.8
11470039	181	0.6
11470094	183	< 0.3
11470085	184	< 0.3
11470084	184	< 0.3
11470086	184	< 0.3
11470032	190	1.4
11470025	191	< 0.3
11470026	191	< 0.3
11470002	192	< 0.3
11470038	194	< 0.3
11470047	195	0.5
11470067	196	< 0.3
11470010	200	< 0.3
11470046	200	< 0.3
11470017	207	< 0.3
11470018	207	< 0.3
11470054	207	< 0.3
11470056	219	< 0.3
11470057	224	< 0.3
11470009	227	< 0.3
11470076	234	< 0.3
11470078	248	< 0.3
11470077	252	< 0.3
11469913	1000	< 0.3
11469901	1004	< 0.3
11469919	1006	< 0.3
11469933	1008	< 0.3
11469920	1011	2.6
11469925	1012	1.1
11469903	1013	0.5
11469904	1013	< 0.3
11469914	1013	< 0.3
11469985	100A	< 0.3
11469986	100B	< 0.3
11469991	100D	0.8

Table 1- Radon Testing Results		
Clarksburg High School		
Test Period: 02/05/2024 - 02/08/2024		
Kit Number	Room / Area	Result
11469987	100F	0.7
11469978	100H	0.7
11469992	100I	1.6
11469994	100J	2.0
11470043	100K	< 0.3
11470058	100L	< 0.3
11469951	103A	0.6
11469997	106A	0.6
11470000	106A	0.7
11469996	106E	1.4
11469999	107D	< 0.3
11469945	110A	< 0.3
11469979	110C1	< 0.3
11469962	110C2	0.7
11469968	110C2	1.0
11469970	110C2	< 0.3
11469971	110D	< 0.3
11469961	110E	< 0.3
11469954	110F	0.9
11469960	110G	< 0.3
11469969	110H	< 0.3
11469932	110I	1.3
11469977	110J	1.5
11469984	110K	1.4
11469953	110L	< 0.3
11469998	112A	< 0.3
11469943	112D	< 0.3
11469964	114A	< 0.3
11469926	130B	1.6
11469918	132A	< 0.3
11469902	132B	0.7
11469916	132C	1.0
11469906	134A	< 0.3
11469905	134B	2.9
11469923	134B	5.8
11469911	136A	0.6
11469942	140C	< 0.3
11469957	142A	0.6

Table 1- Radon Testing Results		
Clarksburg High School		
Test Period: 02/05/2024 - 02/08/2024		
Kit Number	Room / Area	Result
11469989	142B	< 0.3
11469983	144A	< 0.3
11469947	144B	< 0.3
11470013	148A	< 0.3
11469973	150A	< 0.3
11470028	152B	1.0
11469955	155A	0.7
11469958	155A	0.6
11470059	162A	< 0.3
11470044	162B	< 0.3
11470055	162B	< 0.3
11470069	164A	< 0.3
11470081	170A	0.7
11470075	170E	0.6
11470083	170F	< 0.3
11470065	172C	0.9
11470050	172D	< 0.3
11470061	172D	0.9
11470042	172H	< 0.3
11470091	184 GIRLS PE OFFICE	0.7
11470020	192B	0.8
11470030	192C	< 0.3
11470021	192E	0.6
11470015	192F	1.1
11470040	196B	< 0.3
11470048	196C	0.5
11470053	196F	< 0.3
11470023	198A	< 0.3
11470001	198B	1.2
11470022	198B	0.7
11470035	199A	< 0.3

[illegible]

Table 3 - QC Radon Testing Results			
Clarksburg High School			
Test Period: 02/05/2024 - 02/08/2024			
Kit Number	QC Type	Room / Area	Result
11469946	D	103	0.7
11469965	D	111	<0.3
11469990	FB	111	<0.3
11469908	FB	131	<0.3
11469909	D	131	1.2
11469930	D	141	<0.3
11469981	FB	149	<0.3
11469982	D	149	<0.3
11470027	D	156	<0.3
11470070	FB	168	<0.3
11470071	D	168	<0.3
11470024	D	175	1.1
11470029	FB	175	<0.3
11470084	D	184	N/A
11470086	FB	184	N/A
11470018	FB	207	<0.3
11470054	D	207	<0.3
11469904	FB	1013	<0.3
11469914	D	1013	<0.3
11469997	D	106A	0.6
11469968	D	110C2	1.0
11469970	FB	110C2	<0.3
11469905	D	134B	2.9
11469955	D	155A	0.7
11470055	D	162B	<0.3
11470061	D	172D	0.9
11470022	D	198B	0.7
11470089	OB	OFFICE BLANK	< 0.3
11470096	TB	TRAVEL BLANK	< 0.3

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Attachment 2:

Laboratory Reports

Radon test result report for:

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11469993	100	2024-02-05 @ 9:00 am	2024-02-08 @ 9:00 am	< 0.3	2024-02-12
11469913	1000	2024-02-05 @ 11:00 am	2024-02-08 @ 10:00 am	< 0.3	2024-02-12
11469901	1004	2024-02-05 @ 11:00 am	2024-02-08 @ 10:00 am	< 0.3	2024-02-12
11469919	1006	2024-02-05 @ 11:00 am	2024-02-08 @ 10:00 am	< 0.3	2024-02-12
11469933	1008	2024-02-05 @ 11:00 am	2024-02-08 @ 10:00 am	< 0.3	2024-02-12
11469985	100A	2024-02-05 @ 9:00 am	2024-02-08 @ 9:00 am	< 0.3	2024-02-12
11469986	100B	2024-02-05 @ 9:00 am	2024-02-08 @ 9:00 am	< 0.3	2024-02-12
11469991	100D	2024-02-05 @ 9:00 am	2024-02-08 @ 9:00 am	0.8 ± 0.4	2024-02-12
11469987	100F	2024-02-05 @ 9:00 am	2024-02-08 @ 9:00 am	0.7 ± 0.4	2024-02-12
11469978	100H	2024-02-05 @ 9:00 am	2024-02-08 @ 9:00 am	0.7 ± 0.4	2024-02-12
11469992	100I	2024-02-05 @ 9:00 am	2024-02-08 @ 9:00 am	1.6 ± 0.4	2024-02-12
11469994	100J	2024-02-05 @ 9:00 am	2024-02-08 @ 9:00 am	2.0 ± 0.4	2024-02-12
11470043	100K	2024-02-05 @ 4:00 pm	2024-02-08 @ 1:00 pm	< 0.3	2024-02-12
11470058	100L	2024-02-05 @ 4:00 pm	2024-02-08 @ 1:00 pm	< 0.3	2024-02-12
11469936	101	2024-02-05 @ 9:00 am	2024-02-08 @ 9:00 am	0.7 ± 0.4	2024-02-12
11469920	1011	2024-02-05 @ 11:00 am	2024-02-08 @ 10:00 am	2.6 ± 0.4	2024-02-12
11469925	1012	2024-02-05 @ 12:00 pm	2024-02-08 @ 10:00 am	1.1 ± 0.4	2024-02-12
11469904	1013	2024-02-05 @ 12:00 pm	2024-02-08 @ 10:00 am	< 0.3	2024-02-12
11469914	1013	2024-02-05 @ 12:00 pm	2024-02-08 @ 10:00 am	< 0.3	2024-02-12
11469903	1013	2024-02-05 @ 12:00 pm	2024-02-08 @ 10:00 am	0.5 ± 0.3	2024-02-12
11470041	102	2024-02-05 @ 4:00 pm	2024-02-08 @ 9:00 am	< 0.3	2024-02-12
11469952	103	2024-02-05 @ 9:00 am	2024-02-08 @ 9:00 am	0.6 ± 0.4	2024-02-12
11469946	103	2024-02-05 @ 9:00 am	2024-02-08 @ 9:00 am	0.7 ± 0.4	2024-02-12
11469951	103A	2024-02-05 @ 10:00 am	2024-02-08 @ 10:00 am	0.6 ± 0.4	2024-02-12
11470037	104	2024-02-05 @ 1:00 pm	2024-02-08 @ 1:00 pm	< 0.3	2024-02-12
11469959	105	2024-02-05 @ 10:00 am	2024-02-08 @ 10:00 am	0.9 ± 0.4	2024-02-12
11469995	106	2024-02-05 @ 9:00 am	2024-02-08 @ 12:00 pm	0.7 ± 0.3	2024-02-12
11469997	106A	2024-02-05 @ 9:00 am	2024-02-08 @ 12:00 pm	0.6 ± 0.3	2024-02-12
11470000	106A	2024-02-05 @ 9:00 am	2024-02-08 @ 12:00 pm	0.7 ± 0.3	2024-02-12
11469996	106E	2024-02-05 @ 9:00 am	2024-02-08 @ 12:00 pm	1.4 ± 0.4	2024-02-12
11469972	107	2024-02-05 @ 10:00 am	2024-02-08 @ 1:00 pm	< 0.3	2024-02-12
11469999	107D	2024-02-05 @ 10:00 am	2024-02-08 @ 1:00 pm	< 0.3	2024-02-12
11469935	108	2024-02-05 @ 9:00 am	2024-02-08 @ 9:00 am	< 0.3	2024-02-12
11469976	110	2024-02-05 @ 9:00 am	2024-02-08 @ 9:00 am	0.6 ± 0.3	2024-02-12
11469945	110A	2024-02-05 @ 9:00 am	2024-02-08 @ 9:00 am	< 0.3	2024-02-12
11469979	110C1	2024-02-05 @ 9:00 am	2024-02-08 @ 9:00 am	< 0.3	2024-02-12
11469968	110C2	2024-02-05 @ 9:00 am	2024-02-08 @ 9:00 am	1.0 ± 0.4	2024-02-12

Radon test result report for:

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11469962	110C2	2024-02-05 @ 9:00 am	2024-02-08 @ 9:00 am	0.7 ± 0.3	2024-02-12
11469970	110C2	2024-02-05 @ 9:00 am	2024-02-08 @ 9:00 am	< 0.3	2024-02-12
11469971	110D	2024-02-05 @ 9:00 am	2024-02-08 @ 9:00 am	< 0.3	2024-02-12
11469961	110E	2024-02-05 @ 9:00 am	2024-02-08 @ 9:00 am	< 0.3	2024-02-12
11469954	110F	2024-02-05 @ 9:00 am	2024-02-08 @ 9:00 am	0.9 ± 0.4	2024-02-12
11469960	110G	2024-02-05 @ 9:00 am	2024-02-08 @ 9:00 am	< 0.3	2024-02-12
11469969	110H	2024-02-05 @ 9:00 am	2024-02-08 @ 9:00 am	< 0.3	2024-02-12
11469932	110I	2024-02-05 @ 10:00 am	2024-02-08 @ 9:00 am	1.3 ± 0.4	2024-02-12
11469977	110J	2024-02-05 @ 9:00 am	2024-02-08 @ 9:00 am	1.5 ± 0.4	2024-02-12
11469984	110K	2024-02-05 @ 9:00 am	2024-02-08 @ 9:00 am	1.4 ± 0.4	2024-02-12
11469953	110L	2024-02-05 @ 9:00 am	2024-02-08 @ 9:00 am	< 0.3	2024-02-12
11469965	111	2024-02-05 @ 10:00 am	2024-02-08 @ 1:00 pm	< 0.3	2024-02-12
11469966	111	2024-02-05 @ 10:00 am	2024-02-08 @ 1:00 pm	< 0.3	2024-02-12
11469990	111	2024-02-05 @ 10:00 am	2024-02-08 @ 1:00 pm	< 0.3	2024-02-12
11469998	112A	2024-02-05 @ 10:00 am	2024-02-08 @ 1:00 pm	< 0.3	2024-02-12
11469943	112D	2024-02-05 @ 10:00 am	2024-02-08 @ 1:00 pm	< 0.3	2024-02-12
11469944	114	2024-02-05 @ 10:00 am	2024-02-08 @ 1:00 pm	< 0.3	2024-02-12
11469964	114A	2024-02-05 @ 10:00 am	2024-02-08 @ 1:00 pm	< 0.3	2024-02-12
11469949	116	2024-02-05 @ 10:00 am	2024-02-08 @ 1:00 pm	< 0.3	2024-02-12
11469937	117	2024-02-05 @ 10:00 am	2024-02-08 @ 1:00 pm	< 0.3	2024-02-12
11469938	118	2024-02-05 @ 10:00 am	2024-02-08 @ 1:00 pm	0.9 ± 0.3	2024-02-12
11469975	119	2024-02-05 @ 10:00 am	2024-02-08 @ 1:00 pm	1.4 ± 0.3	2024-02-12
11469924	120	2024-02-05 @ 12:00 pm	2024-02-08 @ 10:00 am	2.0 ± 0.4	2024-02-12
11469921	120	2024-02-05 @ 12:00 pm	2024-02-08 @ 10:00 am	1.5 ± 0.4	2024-02-12
11469967	122	2024-02-05 @ 10:00 am	2024-02-08 @ 1:00 pm	1.3 ± 0.4	2024-02-12
11469922	130	2024-02-05 @ 12:00 pm	2024-02-08 @ 10:00 am	1.9 ± 0.4	2024-02-12
11469926	130B	2024-02-05 @ 12:00 pm	2024-02-08 @ 10:00 am	1.6 ± 0.4	2024-02-12
11469909	131	2024-02-05 @ 12:00 pm	2024-02-08 @ 10:00 am	1.2 ± 0.4	2024-02-12
11469907	131	2024-02-05 @ 12:00 pm	2024-02-08 @ 10:00 am	1.2 ± 0.4	2024-02-12
11469908	131	2024-02-05 @ 12:00 pm	2024-02-08 @ 10:00 am	< 0.3	2024-02-12
11469912	132	2024-02-05 @ 12:00 pm	2024-02-08 @ 10:00 am	< 0.3	2024-02-12
11469918	132A	2024-02-05 @ 12:00 pm	2024-02-08 @ 10:00 am	< 0.3	2024-02-12
11469902	132B	2024-02-05 @ 12:00 pm	2024-02-08 @ 10:00 am	0.7 ± 0.4	2024-02-12
11469916	132C	2024-02-05 @ 12:00 pm	2024-02-08 @ 10:00 am	1.0 ± 0.4	2024-02-12
11470003	133	2024-02-05 @ 1:00 pm	2024-02-08 @ 10:00 am	0.8 ± 0.4	2024-02-12
11469910	134	2024-02-05 @ 12:00 pm	2024-02-08 @ 10:00 am	0.5 ± 0.3	2024-02-12
11469906	134A	2024-02-05 @ 12:00 pm	2024-02-08 @ 10:00 am	< 0.3	2024-02-12

Radon test result report for:

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11469905	134B	2024-02-05 @ 12:00 pm	2024-02-08 @ 1:00 pm	2.9 ± 0.4	2024-02-12
11469923	134B	2024-02-05 @ 12:00 pm	2024-02-08 @ 10:00 am	5.8 ± 0.5	2024-02-12
11470004	135	2024-02-05 @ 1:00 pm	2024-02-08 @ 10:00 am	< 0.3	2024-02-12
11469917	136	2024-02-05 @ 12:00 pm	2024-02-08 @ 10:00 am	< 0.3	2024-02-12
11469911	136A	2024-02-05 @ 12:00 pm	2024-02-08 @ 10:00 am	0.6 ± 0.3	2024-02-12
11470005	137	2024-02-05 @ 1:00 pm	2024-02-08 @ 10:00 am	0.9 ± 0.4	2024-02-12
11469915	138	2024-02-05 @ 12:00 pm	2024-02-08 @ 10:00 am	1.2 ± 0.4	2024-02-12
11470006	139	2024-02-05 @ 1:00 pm	2024-02-08 @ 10:00 am	1.0 ± 0.4	2024-02-12
11469928	140	2024-02-05 @ 11:00 am	2024-02-08 @ 10:00 am	0.8 ± 0.4	2024-02-12
11469942	140C	2024-02-05 @ 11:00 am	2024-02-08 @ 10:00 am	< 0.3	2024-02-12
11469931	141	2024-02-05 @ 11:00 am	2024-02-08 @ 10:00 am	< 0.3	2024-02-12
11469930	141	2024-02-05 @ 11:00 am	2024-02-08 @ 10:00 am	< 0.3	2024-02-12
11469948	142	2024-02-05 @ 11:00 am	2024-02-08 @ 10:00 am	< 0.3	2024-02-12
11469957	142A	2024-02-05 @ 11:00 am	2024-02-08 @ 10:00 am	0.6 ± 0.4	2024-02-12
11469989	142B	2024-02-05 @ 11:00 am	2024-02-08 @ 10:00 am	< 0.3	2024-02-12
11469929	143	2024-02-05 @ 11:00 am	2024-02-08 @ 10:00 am	< 0.3	2024-02-12
11469940	144	2024-02-05 @ 11:00 am	2024-02-08 @ 10:00 am	< 0.3	2024-02-12
11469983	144A	2024-02-05 @ 11:00 am	2024-02-08 @ 10:00 am	< 0.3	2024-02-12
11469947	144B	2024-02-05 @ 11:00 am	2024-02-08 @ 10:00 am	< 0.3	2024-02-12
11469939	145	2024-02-05 @ 11:00 am	2024-02-08 @ 10:00 am	< 0.3	2024-02-12
11469941	146	2024-02-05 @ 11:00 am	2024-02-08 @ 10:00 am	< 0.3	2024-02-12
11469927	147	2024-02-05 @ 11:00 am	2024-02-08 @ 10:00 am	< 0.3	2024-02-12
11470013	148A	2024-02-05 @ 1:00 pm	2024-02-08 @ 12:00 pm	< 0.3	2024-02-12
11469981	149	2024-02-05 @ 10:00 am	2024-02-08 @ 10:00 am	< 0.3	2024-02-12
11469982	149	2024-02-05 @ 11:00 am	2024-02-08 @ 10:00 am	< 0.3	2024-02-12
11469988	149	2024-02-05 @ 11:00 am	2024-02-08 @ 10:00 am	< 0.3	2024-02-12
11469974	150	2024-02-05 @ 11:00 am	2024-02-08 @ 12:00 pm	< 0.3	2024-02-12
11469973	150A	2024-02-05 @ 11:00 am	2024-02-08 @ 12:00 pm	< 0.3	2024-02-12
11469956	151	2024-02-05 @ 10:00 am	2024-02-08 @ 1:00 pm	< 0.3	2024-02-12
11470011	152	2024-02-05 @ 1:00 pm	2024-02-08 @ 12:00 pm	< 0.3	2024-02-12
11470028	152B	2024-02-05 @ 1:00 pm	2024-02-08 @ 12:00 pm	1.0 ± 0.4	2024-02-12
11469980	153	2024-02-05 @ 11:00 am	2024-02-08 @ 11:00 am	< 0.3	2024-02-12
11470014	154	2024-02-05 @ 1:00 pm	2024-02-08 @ 12:00 pm	< 0.3	2024-02-12
11469963	155	2024-02-05 @ 11:00 am	2024-02-08 @ 11:00 am	0.5 ± 0.3	2024-02-12
11469958	155A	2024-02-05 @ 10:00 am	2024-02-08 @ 11:00 am	0.6 ± 0.3	2024-02-12
11469955	155A	2024-02-05 @ 10:00 am	2024-02-08 @ 11:00 am	0.7 ± 0.3	2024-02-12
11470012	156	2024-02-05 @ 1:00 pm	2024-02-08 @ 12:00 pm	< 0.3	2024-02-12

Radon test result report for:

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11470027	156	2024-02-05 @ 1:00 pm	2024-02-08 @ 12:00 pm	< 0.3	2024-02-12
11470019	158	2024-02-05 @ 1:00 pm	2024-02-08 @ 12:00 pm	0.7 ± 0.4	2024-02-12
11469950	159	2024-02-05 @ 10:00 am	2024-02-08 @ 11:00 am	< 0.3	2024-02-12
11470063	160	2024-02-05 @ 3:00 pm	2024-02-08 @ 11:00 am	< 0.3	2024-02-12
11470034	161	2024-02-05 @ 3:00 pm	2024-02-08 @ 11:00 am	< 0.3	2024-02-12
11470007	162	2024-02-05 @ 3:00 pm	2024-02-08 @ 11:00 am	< 0.3	2024-02-12
11470059	162A	2024-02-05 @ 3:00 pm	2024-02-08 @ 11:00 am	< 0.3	2024-02-12
11470055	162B	2024-02-05 @ 3:00 pm	2024-02-08 @ 11:00 am	< 0.3	2024-02-12
11470044	162B	2024-02-05 @ 3:00 pm	2024-02-08 @ 11:00 am	< 0.3	2024-02-12
11470064	163	2024-02-05 @ 3:00 pm	2024-02-08 @ 11:00 am	< 0.3	2024-02-12
11470052	164	2024-02-05 @ 3:00 pm	2024-02-08 @ 11:00 am	< 0.3	2024-02-12
11470069	164A	2024-02-05 @ 3:00 pm	2024-02-08 @ 11:00 am	< 0.3	2024-02-12
11470060	165	2024-02-05 @ 3:00 pm	2024-02-08 @ 12:00 pm	2.2 ± 0.4	2024-02-12
11470045	166	2024-02-05 @ 3:00 pm	2024-02-08 @ 11:00 am	< 0.3	2024-02-12
11470068	167	2024-02-05 @ 3:00 pm	2024-02-08 @ 11:00 am	< 0.3	2024-02-12
11470062	168	2024-02-05 @ 2:00 pm	2024-02-08 @ 11:00 am	< 0.3	2024-02-12
11470070	168	2024-02-05 @ 2:00 pm	2024-02-08 @ 12:00 pm	< 0.3	2024-02-12
11470071	168	2024-02-05 @ 2:00 pm	2024-02-08 @ 11:00 am	< 0.3	2024-02-12
11470081	170A	2024-02-05 @ 4:00 pm	2024-02-08 @ 11:00 am	0.7 ± 0.4	2024-02-12
11470075	170E	2024-02-05 @ 4:00 pm	2024-02-08 @ 11:00 am	0.6 ± 0.4	2024-02-12
11470083	170F	2024-02-05 @ 4:00 pm	2024-02-08 @ 11:00 am	< 0.3	2024-02-12
11470049	171	2024-02-05 @ 4:00 pm	2024-02-08 @ 11:00 am	0.8 ± 0.3	2024-02-12
11470065	172C	2024-02-05 @ 4:00 pm	2024-02-08 @ 11:00 am	0.9 ± 0.4	2024-02-12
11470050	172D	2024-02-05 @ 4:00 pm	2024-02-08 @ 11:00 am	< 0.3	2024-02-12
11470061	172D	2024-02-05 @ 4:00 pm	2024-02-08 @ 11:00 am	0.9 ± 0.4	2024-02-12
11470042	172H	2024-02-05 @ 4:00 pm	2024-02-08 @ 11:00 am	< 0.3	2024-02-12
11470033	173	2024-02-05 @ 1:00 pm	2024-02-08 @ 11:00 am	0.6 ± 0.3	2024-02-12
11470008	174	2024-02-05 @ 2:00 pm	2024-02-08 @ 12:00 pm	< 0.3	2024-02-12
11470029	175	2024-02-05 @ 1:00 pm	2024-02-08 @ 12:00 pm	< 0.3	2024-02-12
11470024	175	2024-02-05 @ 1:00 pm	2024-02-08 @ 12:00 pm	1.1 ± 0.4	2024-02-12
11470031	175	2024-02-05 @ 1:00 pm	2024-02-08 @ 12:00 pm	0.8 ± 0.4	2024-02-12
11470051	177	2024-02-05 @ 2:00 pm	2024-02-08 @ 11:00 am	0.7 ± 0.3	2024-02-12
11470039	181	2024-02-05 @ 2:00 pm	2024-02-08 @ 11:00 am	0.6 ± 0.4	2024-02-12
11470016	181	2024-02-05 @ 2:00 pm	2024-02-08 @ 11:00 am	0.8 ± 0.4	2024-02-12
11470094	183	2024-02-05 @ 4:00 pm	2024-02-08 @ 1:00 pm	< 0.3	2024-02-12
11470091	184 GIRLS PE OFFICE	2024-02-05 @ 4:00 pm	2024-02-08 @ 11:00 am	0.7 ± 0.4	2024-02-12
11470032	190	2024-02-05 @ 1:00 pm	2024-02-08 @ 12:00 pm	1.4 ± 0.4	2024-02-12

Radon test result report for:

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11470026	191	2024-02-05 @ 1:00 pm	2024-02-08 @ 12:00 pm	< 0.3	2024-02-12
11470025	191	2024-02-05 @ 1:00 pm	2024-02-08 @ 12:00 pm	< 0.3	2024-02-12
11470002	192	2024-02-05 @ 2:00 pm	2024-02-08 @ 12:00 pm	< 0.3	2024-02-12
11470020	192B	2024-02-05 @ 2:00 pm	2024-02-08 @ 12:00 pm	0.8 ± 0.4	2024-02-12
11470030	192C	2024-02-05 @ 2:00 pm	2024-02-08 @ 12:00 pm	< 0.3	2024-02-12
11470021	192E	2024-02-05 @ 2:00 pm	2024-02-08 @ 12:00 pm	0.6 ± 0.4	2024-02-12
11470015	192F	2024-02-05 @ 2:00 pm	2024-02-08 @ 12:00 pm	1.1 ± 0.4	2024-02-12
11470038	194	2024-02-05 @ 2:00 pm	2024-02-08 @ 12:00 pm	< 0.3	2024-02-12
11470047	195	2024-02-05 @ 2:00 pm	2024-02-08 @ 12:00 pm	0.5 ± 0.3	2024-02-12
11470067	196	2024-02-05 @ 2:00 pm	2024-02-08 @ 12:00 pm	< 0.3	2024-02-12
11470040	196B	2024-02-05 @ 2:00 pm	2024-02-08 @ 12:00 pm	< 0.3	2024-02-12
11470048	196C	2024-02-05 @ 2:00 pm	2024-02-08 @ 12:00 pm	0.5 ± 0.3	2024-02-12
11470053	196F	2024-02-05 @ 2:00 pm	2024-02-08 @ 12:00 pm	< 0.3	2024-02-12
11470023	198A	2024-02-05 @ 2:00 pm	2024-02-08 @ 12:00 pm	< 0.3	2024-02-12
11470001	198B	2024-02-05 @ 2:00 pm	2024-02-08 @ 12:00 pm	1.2 ± 0.4	2024-02-12
11470022	198B	2024-02-05 @ 2:00 pm	2024-02-08 @ 12:00 pm	0.7 ± 0.3	2024-02-12
11470035	199A	2024-02-05 @ 1:00 pm	2024-02-08 @ 12:00 pm	< 0.3	2024-02-12
11470010	200	2024-02-05 @ 3:00 pm	2024-02-08 @ 12:00 pm	< 0.3	2024-02-12
11470046	200	2024-02-05 @ 3:00 pm	2024-02-08 @ 12:00 pm	< 0.3	2024-02-12
11470017	207	2024-02-05 @ 3:00 pm	2024-02-08 @ 12:00 pm	< 0.3	2024-02-12
11470018	207	2024-02-05 @ 3:00 pm	2024-02-08 @ 12:00 pm	< 0.3	2024-02-12
11470054	207	2024-02-05 @ 3:00 pm	2024-02-08 @ 12:00 pm	< 0.3	2024-02-12
11470056	219	2024-02-05 @ 4:00 pm	2024-02-08 @ 12:00 pm	< 0.3	2024-02-12
11470057	224	2024-02-05 @ 4:00 pm	2024-02-08 @ 12:00 pm	< 0.3	2024-02-12
11470009	227	2024-02-05 @ 3:00 pm	2024-02-08 @ 12:00 pm	< 0.3	2024-02-12
11470076	234	2024-02-05 @ 3:00 pm	2024-02-08 @ 12:00 pm	< 0.3	2024-02-12
11470078	248	2024-02-05 @ 3:00 pm	2024-02-08 @ 12:00 pm	< 0.3	2024-02-12
11470077	252	2024-02-05 @ 3:00 pm	2024-02-08 @ 12:00 pm	< 0.3	2024-02-12

February 13, 2024

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:
CLARKSBURG HS
MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11470084	184	2024-02-05 @ 3:00 pm	2024-02-08 @ 2:00 pm	< 0.3	2024-02-12
11470085	184	2024-02-05 @ 3:00 pm	2024-02-08 @ 2:00 pm	< 0.3	2024-02-12
11470086	184	2024-02-05 @ 3:00 pm	2024-02-08 @ 2:00 pm	< 0.3	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

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

EXPOSURE IN BOWSER-MORNER RADON CHAMBER

CLIENT KCI TECHNOLOGIES, Inc Job Number 213 819

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 μ R/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



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 – Testing February 5th to February 8th 2024

Name of Schools:

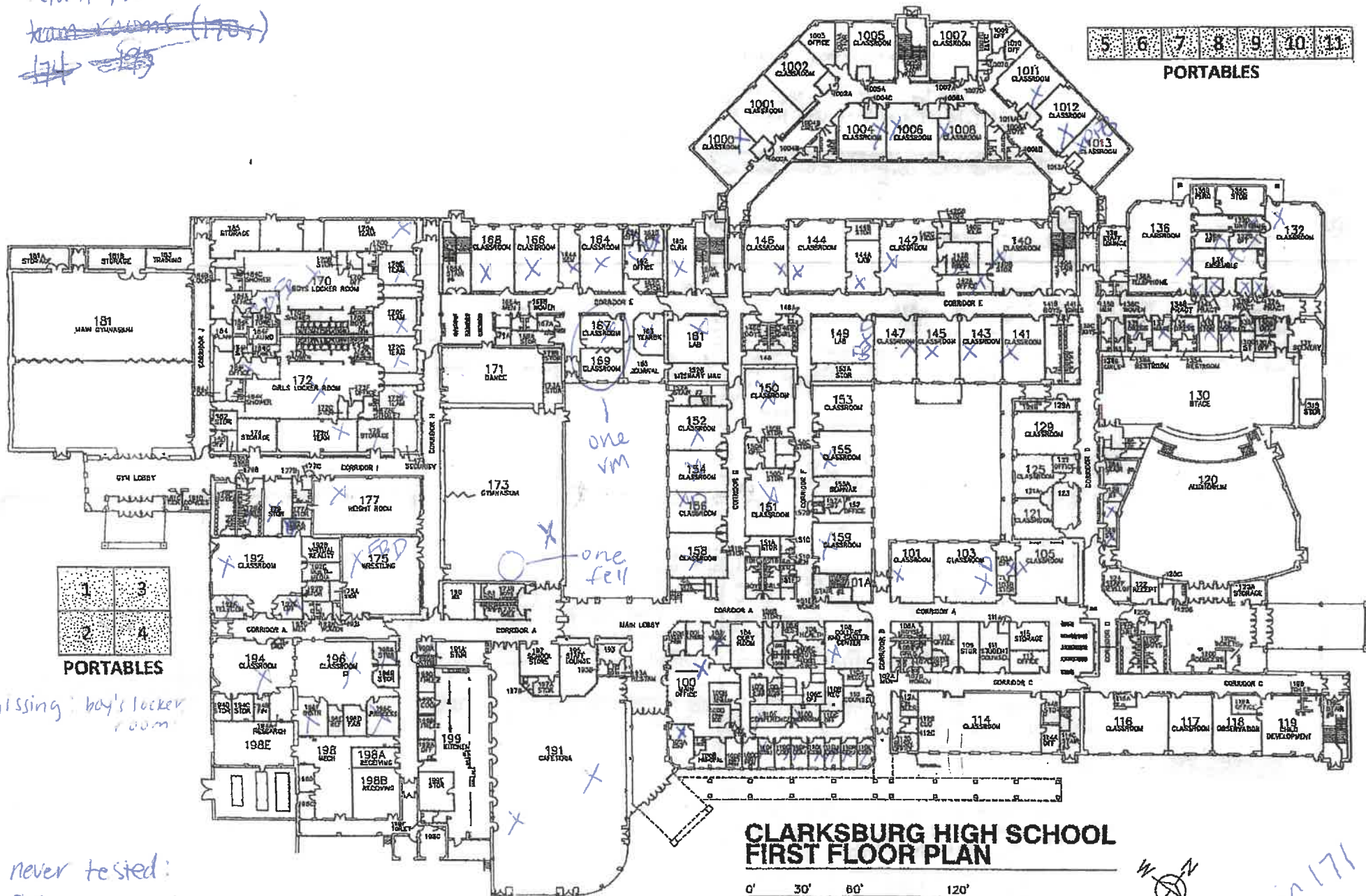
- | | |
|------------------------|------------------------------|
| 1. Cedar Grove ES | 5. Bayard Rustin ES |
| 2. College Gardens ES | 6. Sequoyah ES |
| 3. Lois P. Rockwell ES | 7. Sherwood ES |
| 4. Clarksburg HS | 8. Carver Educational Center |

	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

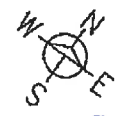
*All samples sent to Air Check, Inc., 2 Saber Way, Ward Hill, MA 01835

Attachment 3:
Sampling Location Map

return to:
 team rooms (170)
 174 175



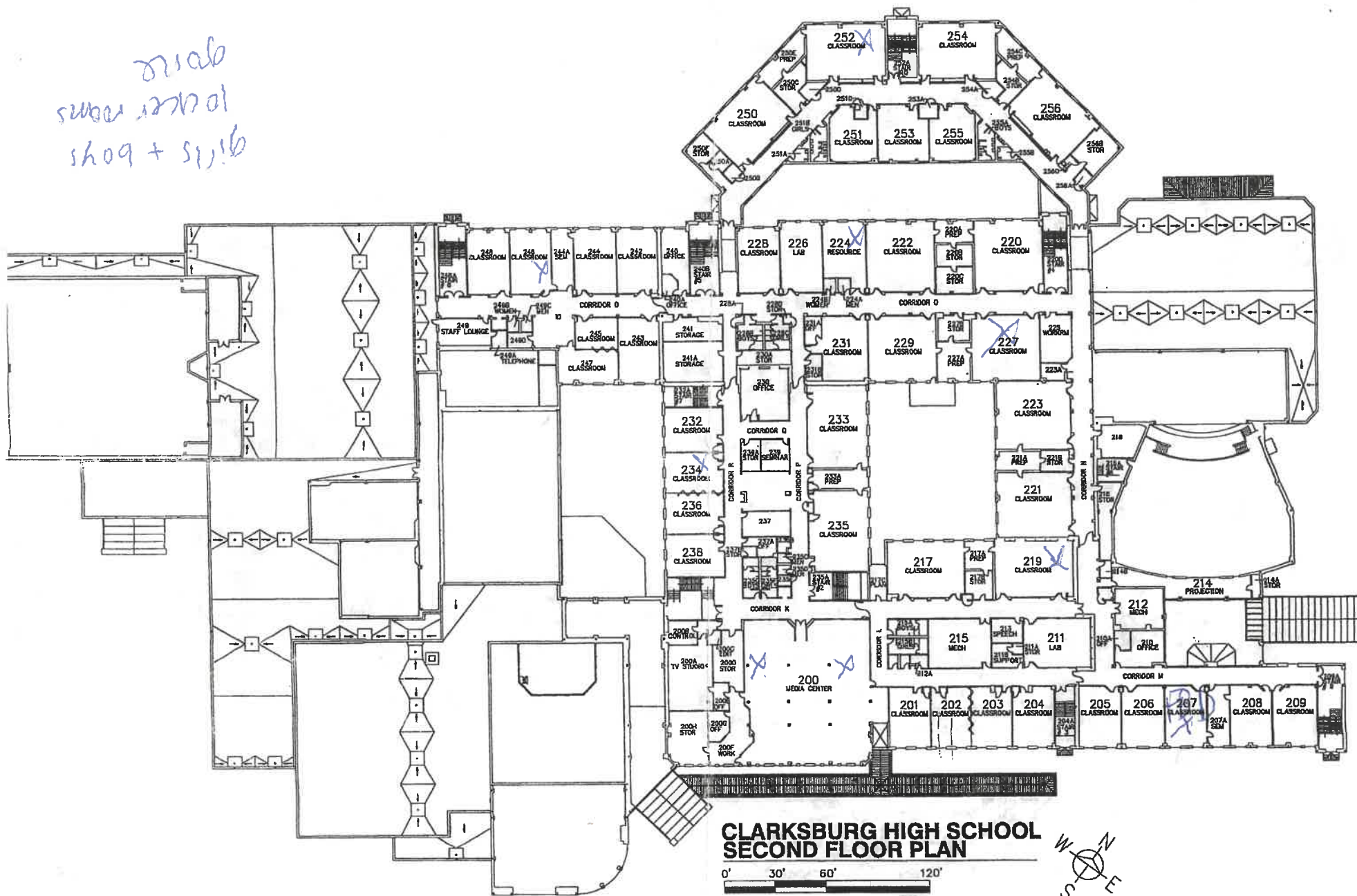
CLARKSBURG HIGH SCHOOL FIRST FLOOR PLAN



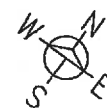
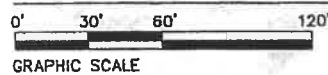
fan on in 171

11062: X D FB

girls + boys
locker rooms
gym



CLARKSBURG HIGH SCHOOL
SECOND FLOOR PLAN





MCPS RADON TESTING – EXECUTIVE SUMMARY

Site Name	Clarksburg High 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	33
# Rooms \geq 4.0 pCi/L	0
Lowest Value	<0.3 pCi/L
Highest Value	1.2 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: Clarksburg High School
22500 Wims Rd.
Clarksburg, MD 20871

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 Clarksburg High School, located at 2250 Wims Rd. Clarksburg, MD 20871 (subject site).

Scope of Services:

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

KCI visited the site on March 22, 2022 and deployed thirty-seven (37) 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 25, 2022 to retrieve the radon sampling test kits. KCI shipped all radon tests via overnight delivery to Airchek, Inc. for analysis by gamma-ray spectroscopy. Airchek, Inc. is a NRSB certified analytical laboratory for radon analysis (certification # ARL1402) located at 1936 Butler Bridge Road, Mills River, North Carolina.

Evaluation of Testing Conditions:

These tests represent:

- Follow-up to initial testing.

These tests were conducted to:

- Evaluate radon concentration levels at the facility.

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

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

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

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

Results:

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

The results of the radon test analysis indicated the following:

Radon Concentration	Room	Result
≥4.0 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		
Clarksburg HS RT		
Test Period: 03/22/2022 - 03/25/2022		
Kit Number	Room / Area	Result
11131757	104	< 0.3
11131774	113	< 0.3
11131772	117	< 0.3
11131767	118	< 0.3
11131756	119	< 0.3
11131744	120	0.9
11131749	120	0.6
11131735	121	< 0.3
11131741	124	< 0.3
11131769	130	1.0
11131742	131	< 0.3
11131760	148	< 0.3
11131782	153	< 0.3
11131766	157	0.8
11131762	159	0.6
11131764	183	0.5
11131743	1007	< 0.3
11131761	1007	0.5
11131728	100I	< 0.3
11131721	100J	1.2
11131763	100K	< 0.3
11131781	110 BETWEEN C AND D	< 0.3
11131775	110C	< 0.3
11131727	110D	< 0.3
11131758	110D	< 0.3
11131777	110H	< 0.3
11131778	110H	< 0.3
11131783	110H	< 0.3
11131784	110I	< 0.3
11131776	110J	< 0.3
11131750	110K	0.7
11131773	110L	< 0.3
11131768	119A	< 0.3
11131770	132C	< 0.3
11131771	150A	< 0.3
11131736	157A	0.8
11131765	192E	< 0.3

Table 2- Radon Testing Results			
Clarksburg HS RT			
Test Period: 03/22/2022 - 03/25/2022			
Kit Number	QC Type	Room / Area	Result
11131778	D	110h	< 0.3
11131777	FB	110H	< 0.3
11131743	D	1007	< 0.3
11131758	D	110d	< 0.3
11139902	OB	OFFICE BLANK	< 0.3
11139928	TB	TRAVEL BLANK	< 0.3

ATTACHMENT C

Laboratory Analytical Results

Radon test result report for:
CLARKSBURG HS

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11131761	1007	2022-03-22 @ 10:00 am	2022-03-25 @ 9:00 am	0.5 ± 0.3	2022-03-28
11131743	1007	2022-03-22 @ 10:00 am	2022-03-25 @ 9:00 am	< 0.3	2022-03-28
11131728	100I	2022-03-22 @ 11:00 am	2022-03-25 @ 9:00 am	< 0.3	2022-03-28
11131721	100J	2022-03-22 @ 11:00 am	2022-03-25 @ 9:00 am	1.2 ± 0.3	2022-03-28
11131763	100K	2022-03-22 @ 11:00 am	2022-03-25 @ 9:00 am	< 0.3	2022-03-28
11131757	104	2022-03-22 @ 11:00 am	2022-03-25 @ 10:00 am	< 0.3	2022-03-28
11131781	110 BETWEEN C AND D	2022-03-22 @ 10:00 am	2022-03-25 @ 9:00 am	< 0.3	2022-03-28
11131775	110C	2022-03-22 @ 10:00 am	2022-03-25 @ 10:00 am	< 0.3	2022-03-28
11131758	110D	2022-03-22 @ 11:00 am	2022-03-25 @ 9:00 am	< 0.3	2022-03-28
11131727	110D	2022-03-22 @ 11:00 am	2022-03-25 @ 9:00 am	< 0.3	2022-03-28
11131783	110H	2022-03-22 @ 10:00 am	2022-03-25 @ 9:00 am	< 0.3	2022-03-28
11131777	110H	2022-03-22 @ 10:00 am	2022-03-25 @ 9:00 am	< 0.3	2022-03-28
11131778	110H	2022-03-22 @ 10:00 am	2022-03-25 @ 9:00 am	< 0.3	2022-03-28
11131784	110I	2022-03-22 @ 10:00 am	2022-03-25 @ 9:00 am	< 0.3	2022-03-28
11131776	110J	2022-03-22 @ 10:00 am	2022-03-25 @ 10:00 am	< 0.3	2022-03-28
11131750	110K	2022-03-22 @ 10:00 am	2022-03-25 @ 9:00 am	0.7 ± 0.3	2022-03-28
11131773	110L	2022-03-22 @ 10:00 am	2022-03-25 @ 9:00 am	< 0.3	2022-03-28
11131774	113	2022-03-22 @ 10:00 am	2022-03-25 @ 10:00 am	< 0.3	2022-03-28
11131772	117	2022-03-22 @ 10:00 am	2022-03-25 @ 9:00 am	< 0.3	2022-03-28
11131767	118	2022-03-22 @ 10:00 am	2022-03-25 @ 9:00 am	< 0.3	2022-03-28
11131756	119	2022-03-22 @ 10:00 am	2022-03-25 @ 9:00 am	< 0.3	2022-03-28
11131768	119A	2022-03-22 @ 10:00 am	2022-03-25 @ 9:00 am	< 0.3	2022-03-28
11131749	120	2022-03-22 @ 10:00 am	2022-03-25 @ 9:00 am	0.6 ± 0.3	2022-03-28
11131744	120	2022-03-22 @ 10:00 am	2022-03-25 @ 9:00 am	0.9 ± 0.3	2022-03-28
11131735	121	2022-03-22 @ 10:00 am	2022-03-25 @ 9:00 am	< 0.3	2022-03-28
11131741	124	2022-03-22 @ 10:00 am	2022-03-25 @ 10:00 am	< 0.3	2022-03-28
11131769	130	2022-03-22 @ 10:00 am	2022-03-25 @ 9:00 am	1.0 ± 0.3	2022-03-28
11131742	131	2022-03-22 @ 10:00 am	2022-03-25 @ 9:00 am	< 0.3	2022-03-28
11131770	132C	2022-03-22 @ 10:00 am	2022-03-25 @ 9:00 am	< 0.3	2022-03-28
11131760	148	2022-03-22 @ 10:00 am	2022-03-25 @ 10:00 am	< 0.3	2022-03-28
11131771	150A	2022-03-22 @ 10:00 am	2022-03-25 @ 10:00 am	< 0.3	2022-03-28
11131782	153	2022-03-22 @ 11:00 am	2022-03-25 @ 10:00 am	< 0.3	2022-03-28
11131766	157	2022-03-22 @ 11:00 am	2022-03-25 @ 10:00 am	0.8 ± 0.3	2022-03-28
11131736	157A	2022-03-22 @ 11:00 am	2022-03-25 @ 10:00 am	0.8 ± 0.3	2022-03-28
11131762	159	2022-03-22 @ 11:00 am	2022-03-25 @ 10:00 am	0.6 ± 0.3	2022-03-28
11131764	183	2022-03-22 @ 11:00 am	2022-03-25 @ 10:00 am	0.5 ± 0.3	2022-03-28
11131765	192E	2022-03-22 @ 11:00 am	2022-03-25 @ 10:00 am	< 0.3	2022-03-28

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 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 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



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

Radon Test Kit Chain of Custody

Project Name: MCPS Radon – March 2022 Schools – Retesting

Name of Schools:

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

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

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



MCPS RADON TESTING – EXECUTIVE SUMMARY

Site Name	Clarksburg High School
Date of Test Report	4/6/2022
Round of Testing	Initial Follow-up Post Remediation 2 Year Testing 5 Year Testing HVAC Upgrade Window Replacement New Addition New Facility
# Rooms Tested	129
# Rooms ≥ 4.0 pCi/L	0
Lowest Value	<0.3 pCi/L
Highest Value	2.7 pCi/L

Project Status:

Initial testing completed; Missing, or compromised samples need re-sampling



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April 6, 2022

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

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

Location: Clarksburg HS
22500 Wims Rd.
Clarksburg, MD 20871

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 Clarksburg HS, located at 22500 Wims Rd. Clarksburg, MD 20871 (subject site).

Scope of Services:

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

KCI visited the site on February 14, 2022 and deployed one hundred and fifty (150) activated charcoal (AC) radon test kits. KCI deployed radon test kits in all frequently-occupied ground contact rooms, and other areas, (if applicable) in accordance with AARST guidance.

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

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

KCI returned to the site on February 17, 2022 to retrieve the radon sampling test kits. KCI shipped all radon tests via overnight delivery to Airchek, Inc. for analysis by gamma-ray spectroscopy. Airchek, Inc.

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

Evaluation of Testing Conditions:

These tests represent:

- Follow-up to post-mitigation biennial testing.

These tests were conducted to:

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

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

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

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

KCI also compiled weather data for the testing period and conducted observations of relevant field conditions. During the test period, weather records indicate low temperatures were in the 20s and high temperatures ranged from the high 30s to the high 40s Fahrenheit. Maximum sustained winds ranged from 5-18 miles per hour. Average humidity was around 15% with 1.5 inches of precipitation (rain) was recorded during testing period.

Results:

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

The results of the radon test analysis indicated the following:

Radon Concentration	Room	Result
≥4.0 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		
Clarksburg HS		
Test Period: 02/14/2022 - 02/17/2022		
Kit Number	Room / Area	Result
11114082	101	< 0.3
11124109	102	0.6
11114062	103	< 0.3
11114061	105	0.6
11114063	107	< 0.3
11114090	107	0.6
11114075	108	< 0.3
11113956	110	< 0.3
11114067	110	< 0.3
11114068	110	< 0.3
11114065	111	< 0.3
11114071	114	0.6
11114070	121	< 0.3
11114085	122	0.8
11114087	123	< 0.3
11114060	125	< 0.3
11114056	127	< 0.3
11114072	129	0.7
11114081	129	< 0.3
11113957	130	1.7
11114069	130	1.7
11113959	132	0.7
11113960	133	< 0.3
11113991	134	0.7
11113961	135	0.7
11113971	136	0.9
11113964	137	0.8
11113973	139	1.4
11113962	140	< 0.3
11113968	140	0.8
11113974	141	< 0.3
11113994	142	< 0.3
11113984	143	0.6
11113986	144	< 0.3
11113970	145	< 0.3
11113976	145	< 0.3
11113982	145	< 0.3
11113979	146	< 0.3
11113980	147	< 0.3
11113988	149	< 0.3
11113998	150	< 0.3
11124101	151	< 0.3

Table 1- Radon Testing Results		
Clarksburg HS		
Test Period: 02/14/2022 - 02/17/2022		
Kit Number	Room / Area	Result
11113999	152	< 0.3
11124103	154	< 0.3
11124102	156	0.8
11124104	158	1.0
11113987	160	< 0.3
11113981	161	< 0.3
11113978	162	< 0.3
11113996	163	< 0.3
11113985	164	< 0.3
11113920	165	1.3
11113995	166	< 0.3
11113997	167	< 0.3
11114013	168	< 0.3
11113992	171	0.7
11124113	173	1.1
11124114	173	< 0.3
11124107	174	0.8
11124108	177	0.8
11124136	180	1
11124116	181	1.5
11124124	181	0.9
11124130	181	< 0.3
11124144	183	NA
11124137	184	< 0.3
11124119	190	1.2
11124120	192	< 0.3
11124129	194	0.7
11124112	195	< 0.3
11124125	196	< 0.3
11124166	205	< 0.3
11124170	205	< 0.3
11124175	205	< 0.3
11124176	213	< 0.3
11124177	221	< 0.3
11124184	231	< 0.3
11124157	248	< 0.3
11124178	256	< 0.3
11124142	1000	0.8
11124145	1001	< 0.3
11124149	1002	0.7
11124150	1002	< 0.3
11124151	1002	< 0.3

Table 1- Radon Testing Results		
Clarksburg HS		
Test Period: 02/14/2022 - 02/17/2022		
Kit Number	Room / Area	Result
11124139	1003	< 0.3
11124159	1004	< 0.3
11124146	1005	0.6
11124158	1006	< 0.3
11124153	1007	NA
11124152	1008	0.6
11124154	1009	1.0
11124160	1009	< 0.3
11124167	1010	1.3
11124161	1011	1.0
11124162	1012	0.8
11124168	1013	< 0.3
11114083	1000D	< 0.3
11114084	100A	< 0.3
11114066	100B	< 0.3
11114091	100COLEMAN	0.5
11114057	100D	0.8
11114097	100D	0.7
11114098	100D	< 0.3
11114095	100G	< 0.3
11114064	100H	< 0.3
11114096	100I	< 0.3
11114055	100J	2.0
11124106	100L	< 0.3
11114048	107D	< 0.3
11114086	110A	0.7
11114080	110E	0.7
11114079	110F	< 0.3
11114093	110F	0.9
11114076	110G	< 0.3
11114092	110H	< 0.3
11114058	110J	1.2
11114089	110L	< 0.3
11114094	112A	1.1
11114088	112D	< 0.3
11113990	130A	< 0.3
11113963	130B	1.2
11113958	132A	< 0.3
11113965	132B	0.9
11113966	132B	0.9
11113927	134A	0.6
11113972	134B	2.7

Table 1- Radon Testing Results		
Clarksburg HS		
Test Period: 02/14/2022 - 02/17/2022		
Kit Number	Room / Area	Result
11113969	140C	1.3
11113967	142A	< 0.3
11114000	152B	< 0.3
11113975	162A	< 0.3
11113977	162B	0.6
11113983	164A	< 0.3
11113989	164A	< 0.3
11113993	164A	< 0.3
11124135	181C	0.9
11124138	184A	0.7
11124140	184F	< 0.3
11124132	184I	0.7
11124127	192B	< 0.3
11124121	192F	0.6
11124118	194A	< 0.3
11124126	194B	< 0.3
11124133	196C	< 0.3
11124134	196D	< 0.3
11124122	196E	< 0.3
11124123	196F	< 0.3
11124115	198B	1.6
11113955	AUDITORIUM 120	1.7
11114077	AUDITORIUM 120	1.8
11124110	CAFETERIA	0.9
11124111	CAFETERIA	0.8
11124117	CAFETERIA	< 0.3

Table 2- Radon Testing Results			
Clarksburg HS			
Test Period: 02/14/2022 - 02/17/2022			
Kit Number	QC Type	Room / Area	Result
11114093	D	110F	0.9
11114067	D	110	< 0.3
11113956	FB	110	< 0.3
11114063	D	107	< 0.3
11113955	D	Auditorium	1.7
11114078	D	129	NA
11114081	FB	129	< 0.3
11113957	D	130	1.7
11113965	D	132B	0.9
11113370	D	145	< 0.3
11113982	FB	145	< 0.3
11113983	D	164A	< 0.3
11113989	FB	164A	< 0.3
11124111	D	Cafeteria	0.8
11124117	FB	Cafeteria	< 0.3
11124114	D	173	< 0.3
11124116	D	181C	1.5
11124130	FB	181C	< 0.3
11124150	D	1002	< 0.3
11124151	FB	1002	< 0.3
11124154	D	1009	1.0
11124166	D	205	< 0.3
11124175	FB	205	< 0.3
11114057	D	100D	0.8
11114098	FB	100D	< 0.3
11107385	OB	OFFICE BLANK	< 0.3
11123161	TB	TRAVEL BLANK	< 0.3

ATTACHMENT C

Laboratory Analytical Results

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Kit Number	Start Date	Start Time	End Date	End Time	Temp.	Facility	Building	Room	Project ID	Floor	Result
11113920	2022-02-14	1:00 pm	2022-02-17	2:00 pm	70		CLARKSBURG HS	165	CLARKSBURG HIGH SCHOOL	1	1.3
11113927	2022-02-14	12:00 pm	2022-02-17	1:00 pm	70		CLARKSBURG HS	134A	CLARKSBURG HIGH SCHOOL	1	0.6
11113955	2022-02-14	11:00 am	2022-02-17	4:00 pm	70		CLARKSBURG HS	AUDITORIUM 120	CLARKSBURG HIGH SCHOOL	1	1.7
11113956	2022-02-14	10:00 am	2022-02-17	12:00 pm	70		CLARKSBURG HS	110	CLARKSBURG HIGH SCHOOL	1	< 0.3
11113957	2022-02-14	11:00 am	2022-02-17	1:00 pm	70		CLARKSBURG HS	130	CLARKSBURG HIGH SCHOOL	1	1.7
11113958	2022-02-14	11:00 am	2022-02-17	1:00 pm	70		CLARKSBURG HS	132A	CLARKSBURG HIGH SCHOOL	1	< 0.3
11113959	2022-02-14	11:00 am	2022-02-17	1:00 pm	70		CLARKSBURG HS	132	CLARKSBURG HIGH SCHOOL	1	0.7
11113960	2022-02-14	12:00 pm	2022-02-17	1:00 pm	70		CLARKSBURG HS	133	CLARKSBURG HIGH SCHOOL	1	< 0.3
11113961	2022-02-14	12:00 pm	2022-02-17	1:00 pm	70		CLARKSBURG HS	135	CLARKSBURG HIGH SCHOOL	1	0.7
11113962	2022-02-14	12:00 pm	2022-02-17	2:00 pm	70		CLARKSBURG HS	140	CLARKSBURG HIGH SCHOOL	1	< 0.3
11113963	2022-02-14	11:00 am	2022-02-17	1:00 pm	70		CLARKSBURG HS	130B	CLARKSBURG HIGH SCHOOL	1	1.2
11113964	2022-02-14	12:00 pm	2022-02-17	1:00 pm	70		CLARKSBURG HS	137	CLARKSBURG HIGH SCHOOL	1	0.8
11113965	2022-02-14	11:00 am	2022-02-17	1:00 pm	70		CLARKSBURG HS	132B	CLARKSBURG HIGH SCHOOL	1	0.9
11113966	2022-02-14	11:00 am	2022-02-17	1:00 pm	70		CLARKSBURG HS	132B	CLARKSBURG HIGH SCHOOL	1	0.9
11113967	2022-02-14	12:00 pm	2022-02-17	2:00 pm	70		CLARKSBURG HS	142A	CLARKSBURG HIGH SCHOOL	1	< 0.3
11113968	2022-02-14	12:00 pm	2022-02-17	2:00 pm	70		CLARKSBURG HS	140	CLARKSBURG HIGH SCHOOL	1	0.8
11113969	2022-02-14	12:00 pm	2022-02-17	2:00 pm	70		CLARKSBURG HS	140C	CLARKSBURG HIGH SCHOOL	1	1.3
11113970	2022-02-14	12:00 pm	2022-02-17	2:00 pm	70		CLARKSBURG HS	145	CLARKSBURG HIGH SCHOOL	1	< 0.3
11113971	2022-02-14	12:00 pm	2022-02-17	1:00 pm	70		CLARKSBURG HS	136	CLARKSBURG HIGH SCHOOL	1	0.9
11113972	2022-02-14	12:00 pm	2022-02-17	1:00 pm	70		CLARKSBURG HS	134B	CLARKSBURG HIGH SCHOOL	1	2.7
11113973	2022-02-14	12:00 pm	2022-02-17	1:00 pm	70		CLARKSBURG HS	139	CLARKSBURG HIGH SCHOOL	1	1.4
11113974	2022-02-14	12:00 pm	2022-02-17	2:00 pm	70		CLARKSBURG HS	141	CLARKSBURG HIGH SCHOOL	1	< 0.3
11113975	2022-02-14	12:00 pm	2022-02-17	2:00 pm	70		CLARKSBURG HS	162A	CLARKSBURG HIGH SCHOOL	1	< 0.3
11113976	2022-02-14	12:00 pm	2022-02-17	2:00 pm	70		CLARKSBURG HS	145	CLARKSBURG HIGH SCHOOL	1	< 0.3
11113977	2022-02-14	12:00 pm	2022-02-17	2:00 pm	70		CLARKSBURG HS	162B	CLARKSBURG HIGH SCHOOL	1	0.6
11113978	2022-02-14	12:00 pm	2022-02-17	2:00 pm	70		CLARKSBURG HS	162	CLARKSBURG HIGH SCHOOL	1	< 0.3
11113979	2022-02-14	12:00 pm	2022-02-17	2:00 pm	70		CLARKSBURG HS	146	CLARKSBURG HIGH SCHOOL	1	< 0.3
11113980	2022-02-14	12:00 pm	2022-02-17	2:00 pm	70		CLARKSBURG HS	147	CLARKSBURG HIGH SCHOOL	1	< 0.3
11113981	2022-02-14	12:00 pm	2022-02-17	2:00 pm	70		CLARKSBURG HS	161	CLARKSBURG HIGH SCHOOL	1	< 0.3
11113982	2022-02-14	12:00 pm	2022-02-17	2:00 pm	70		CLARKSBURG HS	145	CLARKSBURG HIGH SCHOOL	1	< 0.3
11113983	2022-02-14	1:00 pm	2022-02-17	2:00 pm	70		CLARKSBURG HS	164A	CLARKSBURG HIGH SCHOOL	1	< 0.3
11113984	2022-02-14	12:00 pm	2022-02-17	2:00 pm	70		CLARKSBURG HS	143	CLARKSBURG HIGH SCHOOL	1	0.6
11113985	2022-02-14	1:00 pm	2022-02-17	2:00 pm	70		CLARKSBURG HS	164	CLARKSBURG HIGH SCHOOL	1	< 0.3
11113986	2022-02-14	12:00 pm	2022-02-17	2:00 pm	70		CLARKSBURG HS	144	CLARKSBURG HIGH SCHOOL	1	< 0.3
11113987	2022-02-14	12:00 pm	2022-02-17	2:00 pm	70		CLARKSBURG HS	160	CLARKSBURG HIGH SCHOOL	1	< 0.3

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Kit Number	Start Date	Start Time	End Date	End Time	Temp.	Facility	Building	Room	Project ID	Floor	Result
11113988	2022-02-14	12:00 pm	2022-02-17	2:00 pm	70		CLARKSBURG HS	149	CLARKSBURG HIGH SCHOOL	1	< 0.3
11113989	2022-02-14	1:00 pm	2022-02-17	2:00 pm	70		CLARKSBURG HS	164A	CLARKSBURG HIGH SCHOOL	1	< 0.3
11113990	2022-02-14	11:00 am	2022-02-17	1:00 pm	70		CLARKSBURG HS	130A	CLARKSBURG HIGH SCHOOL	1	< 0.3
11113991	2022-02-14	12:00 pm	2022-02-17	1:00 pm	70		CLARKSBURG HS	134	CLARKSBURG HIGH SCHOOL	1	0.7
11113992	2022-02-14	1:00 pm	2022-02-17	5:00 pm	70		CLARKSBURG HS	171	CLARKSBURG HIGH SCHOOL	1	0.7
11113993	2022-02-14	1:00 pm	2022-02-17	2:00 pm	70		CLARKSBURG HS	164A	CLARKSBURG HIGH SCHOOL	1	< 0.3
11113994	2022-02-14	12:00 pm	2022-02-17	2:00 pm	70		CLARKSBURG HS	142	CLARKSBURG HIGH SCHOOL	1	< 0.3
11113995	2022-02-14	1:00 pm	2022-02-17	2:00 pm	70		CLARKSBURG HS	166	CLARKSBURG HIGH SCHOOL	1	< 0.3
11113996	2022-02-14	12:00 pm	2022-02-17	2:00 pm	70		CLARKSBURG HS	163	CLARKSBURG HIGH SCHOOL	1	< 0.3
11113997	2022-02-14	1:00 pm	2022-02-17	2:00 pm	70		CLARKSBURG HS	167	CLARKSBURG HIGH SCHOOL	1	< 0.3
11113998	2022-02-14	1:00 pm	2022-02-17	2:00 pm	70		CLARKSBURG HS	150	CLARKSBURG HIGH SCHOOL	1	< 0.3
11113999	2022-02-14	1:00 pm	2022-02-17	2:00 pm	70		CLARKSBURG HS	152	CLARKSBURG HIGH SCHOOL	1	< 0.3
11114000	2022-02-14	1:00 pm	2022-02-17	2:00 pm	70		CLARKSBURG HS	152B	CLARKSBURG HIGH SCHOOL	1	< 0.3
11114013	2022-02-14	1:00 pm	2022-02-17	3:00 pm	70		CLARKSBURG HS	168	CLARKSBURG HIGH SCHOOL	1	< 0.3
11114048	2022-02-14	11:00 am	2022-02-17	1:00 pm	70		CLARKSBURG HS	107D	CLARKSBURG HIGH SCHOOL	1	< 0.3
11114055	2022-02-14	10:00 am	2022-02-17	12:00 pm	70		CLARKSBURG HS	100J	CLARKSBURG HIGH SCHOOL	1	2.0
11114056	2022-02-14	11:00 am	2022-02-17	1:00 pm	70		CLARKSBURG HS	127	CLARKSBURG HIGH SCHOOL	1	< 0.3
11114057	2022-02-14	9:00 am	2022-02-17	12:00 pm	70		CLARKSBURG HS	100D	CLARKSBURG HIGH SCHOOL	1	0.8
11114060	2022-02-14	11:00 am	2022-02-17	4:00 pm	70		CLARKSBURG HS	125	CLARKSBURG HIGH SCHOOL	1	< 0.3
11114061	2022-02-14	10:00 am	2022-02-17	1:00 pm	70		CLARKSBURG HS	105	CLARKSBURG HIGH SCHOOL	1	0.6
11114062	2022-02-14	10:00 am	2022-02-17	1:00 pm	70		CLARKSBURG HS	103	CLARKSBURG HIGH SCHOOL	1	< 0.3
11114063	2022-02-14	11:00 am	2022-02-17	1:00 pm	70		CLARKSBURG HS	107	CLARKSBURG HIGH SCHOOL	1	< 0.3
11114065	2022-02-14	10:00 am	2022-02-17	1:00 pm	70		CLARKSBURG HS	111	CLARKSBURG HIGH SCHOOL	1	< 0.3
11114066	2022-02-14	9:00 am	2022-02-17	12:00 pm	70		CLARKSBURG HS	100B	CLARKSBURG HIGH SCHOOL	1	< 0.3
11114067	2022-02-14	10:00 am	2022-02-17	12:00 pm	70		CLARKSBURG HS	110	CLARKSBURG HIGH SCHOOL	1	< 0.3
11114068	2022-02-14	10:00 am	2022-02-17	12:00 pm	70		CLARKSBURG HS	110	CLARKSBURG HIGH SCHOOL	1	< 0.3
11114069	2022-02-14	11:00 am	2022-02-17	1:00 pm	70		CLARKSBURG HS	130	CLARKSBURG HIGH SCHOOL	1	1.7
11114070	2022-02-14	11:00 am	2022-02-17	1:00 pm	70		CLARKSBURG HS	121	CLARKSBURG HIGH SCHOOL	1	< 0.3
11114071	2022-02-14	11:00 am	2022-02-17	1:00 pm	70		CLARKSBURG HS	114	CLARKSBURG HIGH SCHOOL	1	0.6
11114072	2022-02-14	11:00 am	2022-02-17	1:00 pm	70		CLARKSBURG HS	129	CLARKSBURG HIGH SCHOOL	1	0.7
11114075	2022-02-14	10:00 am	2022-02-17	12:00 pm	70		CLARKSBURG HS	108	CLARKSBURG HIGH SCHOOL	1	< 0.3
11114077	2022-02-14	11:00 am	2022-02-17	4:00 pm	70		CLARKSBURG HS	AUDITORIUM 120	CLARKSBURG HIGH SCHOOL	1	1.8
11114081	2022-02-14	11:00 am	2022-02-17	1:00 pm	70		CLARKSBURG HS	129	CLARKSBURG HIGH SCHOOL	1	< 0.3
11114082	2022-02-14	10:00 am	2022-02-17	1:00 pm	70		CLARKSBURG HS	101	CLARKSBURG HIGH SCHOOL	1	< 0.3
11114083	2022-02-14	10:00 am	2022-02-17	12:00 pm	70		CLARKSBURG HS	1000D	CLARKSBURG HIGH SCHOOL	1	< 0.3

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Kit Number	Start Date	Start Time	End Date	End Time	Temp.	Facility	Building	Room	Project ID	Floor	Result
11114084	2022-02-14	9:00 am	2022-02-17	12:00 pm	70		CLARKSBURG HS	100A	CLARKSBURG HIGH SCHOOL	1	< 0.3
11114085	2022-02-14	11:00 am	2022-02-17	4:00 pm	70		CLARKSBURG HS	122	CLARKSBURG HIGH SCHOOL	1	0.8
11114086	2022-02-14	10:00 am	2022-02-17	12:00 pm	70		CLARKSBURG HS	110A	CLARKSBURG HIGH SCHOOL	1	0.7
11114087	2022-02-14	11:00 am	2022-02-17	1:00 pm	70		CLARKSBURG HS	123	CLARKSBURG HIGH SCHOOL	1	< 0.3
11114088	2022-02-14	11:00 am	2022-02-17	1:00 pm	70		CLARKSBURG HS	112D	CLARKSBURG HIGH SCHOOL	1	< 0.3
11114089	2022-02-14	10:00 am	2022-02-17	12:00 pm	70		CLARKSBURG HS	110L	CLARKSBURG HIGH SCHOOL	1	< 0.3
11114090	2022-02-14	11:00 am	2022-02-17	1:00 pm	70		CLARKSBURG HS	107	CLARKSBURG HIGH SCHOOL	1	0.6
11114091	2022-02-14	10:00 am	2022-02-17	12:00 pm	70		CLARKSBURG HS	100COLEMAN	CLARKSBURG HIGH SCHOOL	1	0.5
11114092	2022-02-14	10:00 am	2022-02-17	12:00 pm	70		CLARKSBURG HS	110H	CLARKSBURG HIGH SCHOOL	1	< 0.3
11114094	2022-02-14	11:00 am	2022-02-17	1:00 pm	70		CLARKSBURG HS	112A	CLARKSBURG HIGH SCHOOL	1	1.1
11114097	2022-02-14	9:00 am	2022-02-17	12:00 pm	70		CLARKSBURG HS	100D	CLARKSBURG HIGH SCHOOL	1	0.7
11114098	2022-02-14	9:00 am	2022-02-17	12:00 pm	70		CLARKSBURG HS	100D	CLARKSBURG HIGH SCHOOL	1	< 0.3
11124101	2022-02-14	1:00 pm	2022-02-17	2:00 pm	70		CLARKSBURG HS	151	CLARKSBURG HIGH SCHOOL	1	< 0.3
11124102	2022-02-14	1:00 pm	2022-02-17	2:00 pm	70		CLARKSBURG HS	156	CLARKSBURG HIGH SCHOOL	1	0.8
11124103	2022-02-14	1:00 pm	2022-02-17	2:00 pm	70		CLARKSBURG HS	154	CLARKSBURG HIGH SCHOOL	1	< 0.3
11124104	2022-02-14	1:00 pm	2022-02-17	2:00 pm	70		CLARKSBURG HS	158	CLARKSBURG HIGH SCHOOL	1	1.0
11124106	2022-02-14	3:00 pm	2022-02-17	12:00 pm	70		CLARKSBURG HS	100L	CLARKSBURG HIGH SCHOOL	1	< 0.3
11124107	2022-02-14	3:00 pm	2022-02-17	5:00 pm	70		CLARKSBURG HS	174	CLARKSBURG HIGH SCHOOL	1	0.8
11124108	2022-02-14	4:00 pm	2022-02-17	3:00 pm	70		CLARKSBURG HS	177	CLARKSBURG HIGH SCHOOL	1	0.8
11124109	2022-02-14	1:00 pm	2022-02-17	12:00 pm	70		CLARKSBURG HS	102	CLARKSBURG HIGH SCHOOL	1	0.6
11124110	2022-02-14	1:00 pm	2022-02-17	3:00 pm	70		CLARKSBURG HS	CAFETERIA	CLARKSBURG HIGH SCHOOL	1	0.9
11124111	2022-02-14	1:00 pm	2022-02-17	3:00 pm	70		CLARKSBURG HS	CAFETERIA	CLARKSBURG HIGH SCHOOL	1	0.8
11124112	2022-02-14	1:00 pm	2022-02-17	3:00 pm	70		CLARKSBURG HS	195	CLARKSBURG HIGH SCHOOL	1	< 0.3
11124113	2022-02-14	3:00 pm	2022-02-17	3:00 pm	70		CLARKSBURG HS	173	CLARKSBURG HIGH SCHOOL	1	1.1
11124114	2022-02-14	3:00 pm	2022-02-17	3:00 pm	70		CLARKSBURG HS	173	CLARKSBURG HIGH SCHOOL	1	< 0.3
11124115	2022-02-14	3:00 pm	2022-02-17	3:00 pm	70		CLARKSBURG HS	198B	CLARKSBURG HIGH SCHOOL	1	1.6
11124116	2022-02-14	4:00 pm	2022-02-17	3:00 pm	70		CLARKSBURG HS	181	CLARKSBURG HIGH SCHOOL	1	1.5
11124117	2022-02-14	1:00 pm	2022-02-17	3:00 pm	70		CLARKSBURG HS	CAFETERIA	CLARKSBURG HIGH SCHOOL	1	< 0.3
11124118	2022-02-14	3:00 pm	2022-02-17	3:00 pm	70		CLARKSBURG HS	194A	CLARKSBURG HIGH SCHOOL	1	< 0.3
11124119	2022-02-14	3:00 pm	2022-02-17	3:00 pm	70		CLARKSBURG HS	190	CLARKSBURG HIGH SCHOOL	1	1.2
11124120	2022-02-14	3:00 pm	2022-02-17	3:00 pm	70		CLARKSBURG HS	192	CLARKSBURG HIGH SCHOOL	1	< 0.3
11124121	2022-02-14	3:00 pm	2022-02-17	3:00 pm	70		CLARKSBURG HS	192F	CLARKSBURG HIGH SCHOOL	1	0.6
11124122	2022-02-14	3:00 pm	2022-02-17	4:00 pm	70		CLARKSBURG HS	196E	CLARKSBURG HIGH SCHOOL	1	< 0.3
11124123	2022-02-14	3:00 pm	2022-02-17	4:00 pm	70		CLARKSBURG HS	196F	CLARKSBURG HIGH SCHOOL	1	< 0.3
11124124	2022-02-14	4:00 pm	2022-02-17	3:00 pm	70		CLARKSBURG HS	181	CLARKSBURG HIGH SCHOOL	1	0.9

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Kit Number	Start Date	Start Time	End Date	End Time	Temp.	Facility	Building	Room	Project ID	Floor	Result
11124125	2022-02-14	3:00 pm	2022-02-17	4:00 pm	70		CLARKSBURG HS	196	CLARKSBURG HIGH SCHOOL	1	< 0.3
11124126	2022-02-14	3:00 pm	2022-02-17	3:00 pm	70		CLARKSBURG HS	194B	CLARKSBURG HIGH SCHOOL	1	< 0.3
11124127	2022-02-14	3:00 pm	2022-02-17	3:00 pm	70		CLARKSBURG HS	192B	CLARKSBURG HIGH SCHOOL	1	< 0.3
11124129	2022-02-14	3:00 pm	2022-02-17	3:00 pm	70		CLARKSBURG HS	194	CLARKSBURG HIGH SCHOOL	1	0.7
11124130	2022-02-14	4:00 pm	2022-02-17	3:00 pm	70		CLARKSBURG HS	181	CLARKSBURG HIGH SCHOOL	1	< 0.3
11124132	2022-02-14	4:00 pm	2022-02-17	3:00 pm	70		CLARKSBURG HS	184I	CLARKSBURG HIGH SCHOOL	1	0.7
11124133	2022-02-14	3:00 pm	2022-02-17	4:00 pm	70		CLARKSBURG HS	196C	CLARKSBURG HIGH SCHOOL	1	< 0.3
11124134	2022-02-14	3:00 pm	2022-02-17	4:00 pm	70		CLARKSBURG HS	196D	CLARKSBURG HIGH SCHOOL	1	< 0.3
11124135	2022-02-14	4:00 pm	2022-02-17	5:00 pm	70		CLARKSBURG HS	181C	CLARKSBURG HIGH SCHOOL	1	0.9
11124136	2022-02-14	4:00 pm	2022-02-17	3:00 pm	70		CLARKSBURG HS	180	CLARKSBURG HIGH SCHOOL	1	1.0
11124137	2022-02-14	4:00 pm	2022-02-17	3:00 pm	70		CLARKSBURG HS	184	CLARKSBURG HIGH SCHOOL	1	< 0.3
11124138	2022-02-14	4:00 pm	2022-02-17	3:00 pm	70		CLARKSBURG HS	184A	CLARKSBURG HIGH SCHOOL	1	0.7
11124139	2022-02-14	4:00 pm	2022-02-17	4:00 pm	70		CLARKSBURG HS	1003	CLARKSBURG HIGH SCHOOL	1	< 0.3
11124140	2022-02-14	4:00 pm	2022-02-17	3:00 pm	70		CLARKSBURG HS	184F	CLARKSBURG HIGH SCHOOL	1	< 0.3
11124142	2022-02-14	4:00 pm	2022-02-17	4:00 pm	70		CLARKSBURG HS	1000	CLARKSBURG HIGH SCHOOL	1	0.8
11124144	2022-02-14	4:00 pm	2022-02-17	3:00 pm	70		CLARKSBURG HS	183	CLARKSBURG HIGH SCHOOL	1	
11124145	2022-02-14	4:00 pm	2022-02-17	4:00 pm	70		CLARKSBURG HS	1001	CLARKSBURG HIGH SCHOOL	1	< 0.3
11124146	2022-02-14	4:00 pm	2022-02-17	4:00 pm	70		CLARKSBURG HS	1005	CLARKSBURG HIGH SCHOOL	1	0.6
11124149	2022-02-14	4:00 pm	2022-02-17	4:00 pm	70		CLARKSBURG HS	1002	CLARKSBURG HIGH SCHOOL	1	0.7
11124150	2022-02-14	4:00 pm	2022-02-17	4:00 pm	70		CLARKSBURG HS	1002	CLARKSBURG HIGH SCHOOL	1	< 0.3
11124151	2022-02-14	4:00 pm	2022-02-17	4:00 pm	70		CLARKSBURG HS	1002	CLARKSBURG HIGH SCHOOL	1	< 0.3
11124152	2022-02-14	5:00 pm	2022-02-17	4:00 pm	70		CLARKSBURG HS	1008	CLARKSBURG HIGH SCHOOL	1	0.6
11124153	2022-02-14	5:00 pm	2022-02-17	4:00 pm	70		CLARKSBURG HS	1007	CLARKSBURG HIGH SCHOOL	1	
11124154	2022-02-14	5:00 pm	2022-02-17	4:00 pm	70		CLARKSBURG HS	1009	CLARKSBURG HIGH SCHOOL	1	1.0
11124157	2022-02-14	5:00 pm	2022-02-17	5:00 pm	70		CLARKSBURG HS	248	CLARKSBURG HIGH SCHOOL	2	< 0.3
11124158	2022-02-14	5:00 pm	2022-02-17	4:00 pm	70		CLARKSBURG HS	1006	CLARKSBURG HIGH SCHOOL	1	< 0.3
11124159	2022-02-14	5:00 pm	2022-02-17	4:00 pm	70		CLARKSBURG HS	1004	CLARKSBURG HIGH SCHOOL	1	< 0.3
11124160	2022-02-14	5:00 pm	2022-02-17	4:00 pm	70		CLARKSBURG HS	1009	CLARKSBURG HIGH SCHOOL	1	< 0.3
11124161	2022-02-14	5:00 pm	2022-02-17	4:00 pm	70		CLARKSBURG HS	1011	CLARKSBURG HIGH SCHOOL	1	1.0
11124162	2022-02-14	5:00 pm	2022-02-17	4:00 pm	70		CLARKSBURG HS	1012	CLARKSBURG HIGH SCHOOL	1	0.8
11124166	2022-02-14	5:00 pm	2022-02-17	5:00 pm	70		CLARKSBURG HS	205	CLARKSBURG HIGH SCHOOL	2	< 0.3
11124167	2022-02-14	5:00 pm	2022-02-17	4:00 pm	70		CLARKSBURG HS	1010	CLARKSBURG HIGH SCHOOL	1	1.3
11124168	2022-02-14	5:00 pm	2022-02-17	4:00 pm	70		CLARKSBURG HS	1013	CLARKSBURG HIGH SCHOOL	1	< 0.3
11124170	2022-02-14	5:00 pm	2022-02-17	5:00 pm	70		CLARKSBURG HS	205	CLARKSBURG HIGH SCHOOL	2	< 0.3
11124175	2022-02-14	5:00 pm	2022-02-17	5:00 pm	70		CLARKSBURG HS	205	CLARKSBURG HIGH SCHOOL	2	< 0.3

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Kit Number	Start Date	Start Time	End Date	End Time	Temp.	Facility	Building	Room	Project ID	Floor	Result
11124176	2022-02-14	5:00 pm	2022-02-17	5:00 pm	70		CLARKSBURG HS	213	CLARKSBURG HIGH SCHOOL	2	< 0.3
11124177	2022-02-14	5:00 pm	2022-02-17	5:00 pm	70		CLARKSBURG HS	221	CLARKSBURG HIGH SCHOOL	2	< 0.3
11124178	2022-02-14	5:00 pm	2022-02-17	5:00 pm	70		CLARKSBURG HS	256	CLARKSBURG HIGH SCHOOL	2	< 0.3
11124184	2022-02-14	5:00 pm	2022-02-17	5:00 pm	70		CLARKSBURG HS	231	CLARKSBURG HIGH SCHOOL	2	< 0.3

February 23, 2022

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

**CLARKSBURG HS
MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11114095	100G	2022-02-14 @ 8:00 am	2022-02-17 @ 9:00 am	< 0.3	2022-02-22
11114064	100H	2022-02-14 @ 8:00 am	2022-02-17 @ 9:00 am	< 0.3	2022-02-22
11114096	100I	2022-02-14 @ 8:00 am	2022-02-17 @ 9:00 am	< 0.3	2022-02-22
11114080	110E	2022-02-14 @ 9:00 am	2022-02-17 @ 10:00 am	0.7 ± 0.4	2022-02-22
11114079	110F	2022-02-14 @ 9:00 am	2022-02-17 @ 9:00 am	< 0.3	2022-02-22
11114093	110F	2022-02-14 @ 9:00 am	2022-02-17 @ 9:00 am	0.9 ± 0.4	2022-02-22
11114076	110G	2022-02-14 @ 9:00 am	2022-02-17 @ 9:00 am	< 0.3	2022-02-22
11114058	110J	2022-02-14 @ 9:00 am	2022-02-17 @ 10:00 am	1.2 ± 0.4	2022-02-22

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 204186

NOMINAL Conditions: Radon Conc 25.8 pCi/L Rel. Hum 50.1 % Temp. 70.9 F

Date Start: 2/18/22 Date Stop: 2/21/22 Date Start: _____ Date Stop: _____

Time Start: 0911 Time Stop: 0911 Time Start: _____ Time Stop: _____

Device No.'s: (3) Char Bags - Device No.'s: _____

11113484, 1112998, 20107126 _____

23 Right

Date Start: _____ Date Stop: _____ Date Start: _____ Date Stop: _____

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

Device No.'s: _____ Device No.'s: _____

Date Start: _____ Date Stop: _____ Date Start: _____ Date Stop: _____

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

Device No.'s: _____ Device No.'s: _____

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

March 14, 2022

**** LABORATORY ANALYSIS REPORT ****

Pg 1 of 1

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

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 – February 2022 Schools

Name of Schools:

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

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

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

MCPS RADON TESTING - EXECUTIVE SUMMARY

Site Name	Clarksburg High School
Date of Report	2/28/2020
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	18
# Rooms ≥ 4.0 pCi/L	0
Lowest Value	<0.3 pCi/L
Highest Value	1.7 pCi/L

Project Status

Current Project Status at this time: Retesting completed; no further action.



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

2/28/2020

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

Re: Radon Testing Services

KCI Job #1214634188

Location: Clarksburg High School

22500 Wims Road
Clarksburg, Maryland 20871

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 Clarksburg High School, located at 22500 Wims Road in Clarksburg, Maryland 20871 (subject site).

SCOPE OF SERVICES

KCI conducted radon testing at the subject site to evaluate indoor radon levels relative to the USEPA's recommended action level of 4.0 picocuries per Liter (pCi/L) - the level at which EPA recommends that schools take action to reduce the level. KCI conducted the radon testing in accordance with American Association of Radon Scientists and Technologists (AARST) *Protocol for Conducting Measurements of Radon and Radon Decay Products in Schools and Large Buildings*. A National Radon Safety Board (NRSB) Radon Measurement Specialist (certification #111004 RT) 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 2/3/2020 and deployed twenty-four (24) 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.

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

1. Rooms with missing test kits from the December 2019 testing period (i.e. test kit was deployed but not recovered),

-
2. Rooms with invalidated test kits from the December 2019 testing period (e.g. an open window in the room or disturbed test kit),
 3. Rooms which were locked/inaccessible during the December 2019 testing period,
 4. Rooms with elevated December 2019 results (i.e. ≥ 3.5 pCi/L),
 5. Rooms previously tested for radon but not tested in December 2019, and
 6. Additional rooms that require testing (if applicable.)

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 six (6) 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 2/6/2020 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 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 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 ranged from the mid-30s to the low-50s; and high temperatures ranged from the upper-40s to the mid-60s. Maximum sustained winds ranged from 13-21 miles per hour. Average humidity was approximately 76%. A total of 1.09 Inches of rain were recorded during the testing period. The weather conditions during the testing period may have resulted in atypical radon test results for this facility.

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). Follow-up 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
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

Floor Plan Legend

X-Sample Location (in red)

X- Previous Sample Location

1- Not Samled; No Ground Contact

2- Not Samled; Unoccupied (e.g. Storage, Mechanical)

3- Not Samled; High Humidity/Moisture

4- Not Samled; Bathroom/Hallway

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		
Clarksburg High School		
Test Period: 02/03/20-02/06/20		
Kit Number	Room / Area	Result
9339988	103A	0.6
9339973	112A	1
9339991	112D	0.7
9339983	124	1.7
9339981	132A	0.8
9339986	132B	0.6
9339980	134A	<0.3
9339975	134B	1.7
9339987	144A	1.5
9339968	150A	<0.3
9339969	163	<0.3
9339997	170C	<0.3
9339998	170C	0.9
9339994	172F	1
9339990	184B	0.9
9339992	191	<0.3
9339993	191	0.7
9339984	191	<0.3
9339989	191	<0.3
9339974	197	0.8
9339985	199A	<0.3
9339979	243	<0.3
9334909	OFFICE BLANK	<0.3
9334910	OFFICE BLANK	<0.3

Table 2- Radon Testing Results			
Clarksburg High School			
Test Period: 02/03/20-02/06/20			
Kit Number	QC Type	Room / Area	Result
9339998	D	170C	0.9
9339984	D	191	<0.3
9339989	FB	191	<0.3
9334902	TRANSIT BLANK	NA	<0.3

ATTACHMENT C

Laboratory Analytical Results

February 11, 2020

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

**CLARKSBURG HIGH SCHOOL
MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
9339988	103A	2020-02-03 @ 9:00 am	2020-02-06 @ 8:00 am	0.6 ± 0.4	2020-02-11
9339973	112A	2020-02-03 @ 9:00 am	2020-02-06 @ 8:00 am	1.0 ± 0.4	2020-02-11
9339991	112D	2020-02-03 @ 9:00 am	2020-02-06 @ 8:00 am	0.7 ± 0.4	2020-02-11
9339983	124	2020-02-03 @ 9:00 am	2020-02-06 @ 8:00 am	1.7 ± 0.5	2020-02-11
9339981	132A	2020-02-03 @ 8:00 am	2020-02-06 @ 9:00 am	0.8 ± 0.4	2020-02-11
9339986	132B	2020-02-03 @ 8:00 am	2020-02-06 @ 8:00 am	0.6 ± 0.4	2020-02-11
9339980	134A	2020-02-03 @ 8:00 am	2020-02-06 @ 9:00 am	< 0.3	2020-02-11
9339975	134B	2020-02-03 @ 8:00 am	2020-02-06 @ 9:00 am	1.7 ± 0.5	2020-02-11
9339987	144A	2020-02-03 @ 8:00 am	2020-02-06 @ 8:00 am	1.5 ± 0.5	2020-02-11
9339968	150A	2020-02-03 @ 9:00 am	2020-02-06 @ 8:00 am	< 0.3	2020-02-11
9339969	163	2020-02-03 @ 9:00 am	2020-02-06 @ 8:00 am	< 0.3	2020-02-11
9339997	170C	2020-02-03 @ 8:00 am	2020-02-06 @ 8:00 am	< 0.3	2020-02-11
9339998	170C	2020-02-03 @ 8:00 am	2020-02-06 @ 8:00 am	0.9 ± 0.4	2020-02-11
9339994	172F	2020-02-03 @ 8:00 am	2020-02-06 @ 8:00 am	1.0 ± 0.4	2020-02-11
9339990	184B	2020-02-03 @ 9:00 am	2020-02-06 @ 8:00 am	0.9 ± 0.4	2020-02-11
9339992	191	2020-02-03 @ 9:00 am	2020-02-06 @ 8:00 am	< 0.3	2020-02-11
9339993	191	2020-02-03 @ 9:00 am	2020-02-06 @ 8:00 am	0.7 ± 0.4	2020-02-11
9339984	191	2020-02-03 @ 9:00 am	2020-02-06 @ 8:00 am	< 0.3	2020-02-11
9339989	191	2020-02-03 @ 9:00 am	2020-02-06 @ 8:00 am	< 0.3	2020-02-11
9339974	197	2020-02-03 @ 8:00 am	2020-02-06 @ 8:00 am	0.8 ± 0.4	2020-02-11
9339985	199A	2020-02-03 @ 8:00 am	2020-02-06 @ 8:00 am	< 0.3	2020-02-11
9339979	243	2020-02-03 @ 9:00 am	2020-02-06 @ 8:00 am	< 0.3	2020-02-11

EXPOSURE IN BOWSER-MORNER RADON CHAMBER

CLIENT KCI Technologies, Inc. Job Number 194523

NOMINAL Conditions: Radon Conc 25.8 pCi/L Rel. Hum 49.8 % Temp. 70.2 F

Date Start: 2/21/20 Date Stop: 2/24/20 Date Start: _____ Date Stop: _____

Time Start: 0745 Time Stop: 0745 Time Start: _____ Time Stop: _____

Device No.'s: (9) Char Bags - Device No.'s: _____

9341725 thru 9341733

52 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

February 28, 2020

**** 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
9341725	N/A	2020-02-21 @ 8:00 am	2020-02-24 @ 8:00 am	26.9 \pm 1.6	2020-02-26
9341730	N/A	2020-02-21 @ 8:00 am	2020-02-24 @ 8:00 am	26.1 \pm 1.6	2020-02-26
9341728	N/A	2020-02-21 @ 8:00 am	2020-02-24 @ 8:00 am	26.9 \pm 1.6	2020-02-26
9341726	N/A	2020-02-21 @ 8:00 am	2020-02-24 @ 8:00 am	25.8 \pm 1.5	2020-02-26
9341731	N/A	2020-02-21 @ 8:00 am	2020-02-24 @ 8:00 am	25.1 \pm 1.5	2020-02-26
9341729	N/A	2020-02-21 @ 8:00 am	2020-02-24 @ 8:00 am	26.2 \pm 1.6	2020-02-26
9341727	N/A	2020-02-21 @ 8:00 am	2020-02-24 @ 8:00 am	27.2 \pm 1.6	2020-02-26
9341732	N/A	2020-02-21 @ 8:00 am	2020-02-24 @ 8:00 am	27.3 \pm 1.6	2020-02-26

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 1 Retesting

Name of Schools:

1. Belmont E.S.
2. Clarksburg H.S.
3. Damascus E.S.
4. Damascus H.S.
5. DuFief E.S.
6. Fields Road E.S.
7. Gaithersburg E.S.
8. McAuliffe E.S.
9. Quince Orchard H.S.
10. Snowden Farms E.S.
11. South Lake E.S.
12. Stone Mill E.S.
13. Travilah ES
14. Watkins Mill ES
15. Whitman H.S.

	Date	Initials
Radon Test Kits Deployed	02/03/20 to 02/04/20	TM
Radon Test Kits Collected	02/06/20 to 02/07/20	TM
Radon Test Kits Shipped to Lab*	02/07/20	TM
Radon Test Kits Received by Lab*	02/10/20	TM

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

MCPS RADON TESTING - EXECUTIVE SUMMARY

Site Name	Clarksburg High School
Date of Report	1/28/2020
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	144
# Rooms ≥ 4.0 pCi/L	0
Lowest Value	<0.3 pCi/L
Highest Value	2.2 pCi/L

Project Status

Current Project Status at this time: Testing Complete; missed locations and missing/compromised tests to be sampled; elevated tests to be re-sampled.



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

1/28/2020

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: Clarksburg High School

22500 Wims Road
Clarksburg, Maryland 20871

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 Clarksburg High School, located at 22500 Wims Road in Clarksburg, Maryland 20871 (subject site).

SCOPE OF SERVICES

KCI conducted radon testing at the subject site to evaluate indoor radon levels relative to the USEPA's recommended action level of 4.0 picocuries per Liter (pCi/L) - the level at which EPA recommends that schools take action to reduce the level. KCI conducted the radon testing in accordance with American Association of Radon Scientists and Technologists (AARST) *Protocol for Conducting Measurements of Radon and Radon Decay Products in Schools and Large Buildings*. A National Radon Proficiency Program (NRPP) Radon Measurement Specialist (certification #111004 RT) supervised the testing. Additional information on radon management and the health effects of radon exposure is available from <https://www.montgomeryschoolsmd.org/departments/facilities/maintenance/default.aspx?id=458858> or www.epa.gov/radon.

KCI visited the site on 12/9/2019 and deployed one-hundred and seventy-four (174) 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 12/12/2019 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 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 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 upper-30s and high temperatures ranged from the upper-30s to the mid-50s. Maximum sustained winds ranged from 7-21 miles per hour. Average humidity was around 75%. 0.52 inches of precipitation (rain) 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		
Clarksburg High School		
Test Period: 12/9/2019-12/12/2019		
Kit Number	Room / Area	Result
9334301	193	< 0.3
9334303	100	0.7
9334304	191	< 0.3
9334305	195	< 0.3
9334306	100L	0.6
9334307	110I	0.8
9334308	110H	0.8
9334309	100F	0.7
9334310	100K	< 0.3
9334311	102	< 0.3
9334312	100B	0.5
9334313	100A	< 0.3
9334314	100A	0.5
9334315	100G	1.3
9334316	110D	< 0.3
9334317	100H	0.7
9334318	106	0.5
9334319	100D	< 0.3
9334320	100G	< 0.3
9334321	100I	2.2
9334322	110F	1.9
9334323	110D	< 0.3
9334324	110D	< 0.3
9334325	110C	0.5
9334326	106E	1
9334327	110CC	1
9334328	110J	1.7
9334329	110K	1.4
9334330	110L	0.7
9334331	110E	0.6
9334332	110E	0.6
9334333	111	< 0.3
9334334	111	0.6
9334335	111	0.5
9334336	105	0.7
9334337	110A	0.5
9334338	110	0.5
9334339	108	0.6
9334340	103	< 0.3
9334341	101	0.6
9334342	104	< 0.3
9334343	113	< 0.3
9334344	107D	0.6
9334345	114	< 0.3
9334346	117	0.6
9334347	130	1.7
9334348	107	< 0.3
9334349	114	< 0.3
9334350	114A	< 0.3
9334351	117	< 0.3

9334352	116	< 0.3
9334353	118	1.3
9334354	123	< 0.3
9334355	119	1.5
9334356	122	1.2
9334357	127	< 0.3
9334358	129	< 0.3
9334359	121	< 0.3
9334360	126	0.8
9334361	125	0.5
9334362	129	< 0.3
9334363	129	< 0.3
9334364	128	0.7
9334365	120	2
9334366	120	1.8
9334367	130	1.7
9334368	134	1
9334369	134	0.8
9334370	138	1.1
9334371	130A	1
9334372	130B	1.2
9334373	1013	0.6
9334374	1012	1.6
9334375	1011	1.8
9334376	1010	2.2
9334377	132	< 0.3
9334378	132	< 0.3
9334379	1009	0.7
9334380	1008	0.6
9334381	1007	< 0.3
9334382	132	0.6
9334383	136	< 0.3
9334384	1006	< 0.3
9334385	1001	0.6
9334386	146	< 0.3
9334387	1005	1
9334388	1002	0.6
9334389	1003	0.7
9334390	1004	< 0.3
9334391	1000	< 0.3
9334392	1000	< 0.3
9334393	144	< 0.3
9334394	145	0.8
9334395	142	0.7
9334396	142A	0.7
9334397	149	0.8
9334398	147	< 0.3
9334399	143	< 0.3
9334400	141	< 0.3
9335001	141	< 0.3
9335002	141	< 0.3
9335003	140	0.7
9335004	155	< 0.3
9335005	157	1.3
9335006	151	< 0.3

9335007	150	< 0.3
9335008	157A	1.8
9335009	155A	0.8
9335010	148	0.6
9335011	153	0.7
9335012	159	0.6
9335013	157	1.1
9335014	163	0.7
9335015	163	< 0.3
9335016	165	< 0.3
9335017	167	< 0.3
9335018	162B	< 0.3
9335019	163	< 0.3
9335020	164	< 0.3
9335021	152B	0.8
9335022	152	< 0.3
9335023	156	0.7
9335024	154	0.6
9335025	160	< 0.3
9335026	168	0.5
9335027	164A	< 0.3
9335028	161	< 0.3
9335029	166	< 0.3
9335030	158	< 0.3
9335031	162A	< 0.3
9335032	162	< 0.3
9335033	166	< 0.3
9335034	171	0.7
9335035	173	0.7
9335036	173	0.6
9335037	170E	< 0.3
9335038	172C	< 0.3
9335039	172C	1
9335040	172C	0.7
9335041	170	< 0.3
9335042	170F	0.5
9335043	172D	0.6
9335044	184A	0.9
9335045	180	0.8
9335046	184	0.8
9335047	170A	0.5
9335048	178	< 0.3
9335049	172H	< 0.3
9335050	183	< 0.3
9335051	177	0.5
9335052	192F	< 0.3
9335053	192C	< 0.3
9335054	MAIN GYM	0.9
9335055	183	< 0.3
9335056	MAIN GYM	0.6
9335057	175	0.6
9335058	196C	< 0.3
9335059	192B	< 0.3
9335060	192B	< 0.3
9335061	196F	0.7

9335062	194	< 0.3
9335063	192	0.7
9335064	192E	< 0.3
9335065	192B	< 0.3
9335066	196	< 0.3
9335067	198A	0.7
9335068	235	0.6
9335069	240	< 0.3
9335071	233	< 0.3
9335072	190	< 0.3
9335073	233	< 0.3
9335074	220	0.6
9335075	256	< 0.3
9335077	229	< 0.3
9335079	205	< 0.3
9334917	OFFICE BLANK	< 0.3
9334392	191	MISSING
9335014	163	MISSING
9335070	243	MISSING

Table 2- Radon Testing Results			
Clarksburg High School			
Test Period: 12/9/2019-12/12/2019			
Kit Number	QC Type	Room / Area	Result
9334313	D	100A	<0.3
9334323	D	110D	<0.3
9334316	FB	110D	<0.3
9334332	D	110E	0.6
9334334	D	111	0.6
9334333	FB	111	<0.3
9334346	D	117	0.6
9334363	D	129	<0.3
9334362	FB	129	<0.3
9334369	D	134	0.8
9334377	D	132	<0.3
9334378	FB	132	<0.3
9334391	D	1000	<0.3
9334400	D	141	<0.3
9335002	FB	141	<0.3
9335008	D	157A	1.8
9335014	D	163	0.7
9335019	FB	163	<0.3
9335029	D	166	<0.3
9335039	D	172C	1
9335050	D	183	<0.3
9335065	D	192B	<0.3
9335060	FB	192B	<0.3
9335071	D	233	<0.3
9334850	TRANSIT BLANK	NA	< 0.3
9334914	TRANSIT BLANK	NA	< 0.3
9334916	TRANSIT BLANK	NA	< 0.3
9334963	TRANSIT BLANK	NA	< 0.3

ATTACHMENT C

Laboratory Analytical Results

EXPOSURE IN BOWSER-MORNER RADON CHAMBER

CLIENT KEI Technologies Inc. Job Number 193475

NOMINAL Conditions: Radon Conc 25.7 pCi/L Rel. Hum 74.6 % Temp. 69.9 F

Date Start: 12/13/19 Date Stop: 12/16/19

Date Start: _____ Date Stop: _____

Time Start: 0806 Time Stop: 0806

Time Start: _____ Time Stop: _____

(Group 1)

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

Device No.'s: _____

9334502 thru 9334519,
9334514, 9334516, 9334517,
acm 9334517, 9334519
9334522 thru 9334528

B4

Date Start: 12/13/19 Date Stop: 12/16/19

Date Start: _____ Date Stop: _____

0811

Time Start: ~~0806~~ acm Time Stop: 0811

Time Start: _____ Time Stop: _____

(Group 2)

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

Device No.'s: _____

9334529 thru 9334538,
9334540,
9334542 thru 9334550

B3

Date Start: 12/13/19 Date Stop: 12/16/19

Date Start: _____ Date Stop: _____

Time Start: 0816 Time Stop: 0816

Time Start: _____ Time Stop: _____

(Group 3)

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

Device No.'s: _____

9334551, 9334552, 9334562,
9334555 thru 9334559,
9334569, 9334576, 9334579,
9334580, 9334583, 9334584,
9334591, 9334593, 9334594,
9334597, 9334598, 9334599

B2

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

December 17, 2019

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

CLARKSBURG HIGH SCHOOL

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
9334352	116	2019-12-09 @ 11:00 am	2019-12-12 @ 8:00 am	< 0.3	2019-12-17
9334346	117	2019-12-09 @ 11:00 am	2019-12-12 @ 8:00 am	0.6 ± 0.4	2019-12-16
9334351	117	2019-12-09 @ 11:00 am	2019-12-12 @ 8:00 am	< 0.3	2019-12-16
9334353	118	2019-12-09 @ 11:00 am	2019-12-12 @ 8:00 am	1.3 ± 0.4	2019-12-16
9334355	119	2019-12-09 @ 11:00 am	2019-12-12 @ 8:00 am	1.5 ± 0.4	2019-12-16

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

Radon test result report for:**CLARKSBURG HIGH SCHOOL****249**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
9334303	100	2019-12-09 @ 8:00 am	2019-12-12 @ 7:00 am	0.7 ± 0.3	2019-12-16
9334391	1000	2019-12-09 @ 1:00 pm	2019-12-12 @ 9:00 am	< 0.3	2019-12-16
9334392	1000	2019-12-09 @ 1:00 pm	2019-12-12 @ 9:00 am	< 0.3	2019-12-16
9334385	1001	2019-12-09 @ 1:00 pm	2019-12-12 @ 9:00 am	0.6 ± 0.4	2019-12-16
9334388	1002	2019-12-09 @ 1:00 pm	2019-12-12 @ 9:00 am	0.6 ± 0.3	2019-12-16
9334389	1003	2019-12-09 @ 1:00 pm	2019-12-12 @ 9:00 am	0.7 ± 0.3	2019-12-16
9334390	1004	2019-12-09 @ 1:00 pm	2019-12-12 @ 9:00 am	< 0.3	2019-12-16
9334387	1005	2019-12-09 @ 1:00 pm	2019-12-12 @ 9:00 am	1.0 ± 0.4	2019-12-16
9334384	1006	2019-12-09 @ 1:00 pm	2019-12-12 @ 9:00 am	< 0.3	2019-12-17
9334381	1007	2019-12-09 @ 1:00 pm	2019-12-12 @ 9:00 am	< 0.3	2019-12-16
9334380	1008	2019-12-09 @ 1:00 pm	2019-12-12 @ 9:00 am	0.6 ± 0.3	2019-12-16
9334379	1009	2019-12-09 @ 1:00 pm	2019-12-12 @ 9:00 am	0.7 ± 0.4	2019-12-16
9334313	100A	2019-12-09 @ 9:00 am	2019-12-12 @ 7:00 am	< 0.3	2019-12-16
9334314	100A	2019-12-09 @ 9:00 am	2019-12-12 @ 7:00 am	0.5 ± 0.3	2019-12-16
9334312	100B	2019-12-09 @ 8:00 am	2019-12-12 @ 7:00 am	0.5 ± 0.3	2019-12-16
9334319	100D	2019-12-09 @ 9:00 am	2019-12-12 @ 7:00 am	< 0.3	2019-12-16
9334309	100F	2019-12-09 @ 9:00 am	2019-12-12 @ 7:00 am	0.7 ± 0.3	2019-12-16
9334315	100G	2019-12-09 @ 9:00 am	2019-12-12 @ 8:00 am	1.3 ± 0.4	2019-12-16
9334320	100G	2019-12-09 @ 9:00 am	2019-12-12 @ 7:00 am	< 0.3	2019-12-16
9334317	100H	2019-12-09 @ 9:00 am	2019-12-12 @ 8:00 am	0.7 ± 0.3	2019-12-16
9334321	100I	2019-12-09 @ 9:00 am	2019-12-12 @ 8:00 am	2.2 ± 0.4	2019-12-16
9334310	100K	2019-12-09 @ 8:00 am	2019-12-12 @ 7:00 am	< 0.3	2019-12-16
9334306	100L	2019-12-09 @ 8:00 am	2019-12-12 @ 7:00 am	0.6 ± 0.3	2019-12-16
9334341	101	2019-12-09 @ 10:00 am	2019-12-12 @ 11:00 am	0.6 ± 0.3	2019-12-16
9334376	1010	2019-12-09 @ 1:00 pm	2019-12-12 @ 9:00 am	2.2 ± 0.4	2019-12-16
9334375	1011	2019-12-09 @ 12:00 pm	2019-12-12 @ 9:00 am	1.8 ± 0.4	2019-12-17
9334374	1012	2019-12-09 @ 12:00 pm	2019-12-12 @ 9:00 am	1.6 ± 0.4	2019-12-17
9334373	1013	2019-12-09 @ 12:00 pm	2019-12-12 @ 9:00 am	0.6 ± 0.3	2019-12-16
9334311	102	2019-12-09 @ 8:00 am	2019-12-12 @ 7:00 am	< 0.3	2019-12-16
9334340	103	2019-12-09 @ 10:00 am	2019-12-12 @ 11:00 am	< 0.3	2019-12-16
9334342	104	2019-12-09 @ 10:00 am	2019-12-12 @ 12:00 pm	< 0.3	2019-12-16
9334336	105	2019-12-09 @ 10:00 am	2019-12-12 @ 11:00 am	0.7 ± 0.4	2019-12-16
9334318	106	2019-12-09 @ 9:00 am	2019-12-12 @ 8:00 am	0.5 ± 0.3	2019-12-16
9334326	106E	2019-12-09 @ 9:00 am	2019-12-12 @ 8:00 am	1.0 ± 0.4	2019-12-16
9334348	107	2019-12-09 @ 10:00 am	2019-12-12 @ 8:00 am	< 0.3	2019-12-16
9334344	107D	2019-12-09 @ 10:00 am	2019-12-12 @ 8:00 am	0.6 ± 0.4	2019-12-16
9334339	108	2019-12-09 @ 10:00 am	2019-12-12 @ 8:00 am	0.6 ± 0.4	2019-12-16

Radon test result report for:**CLARKSBURG HIGH SCHOOL****249**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
9334338	110	2019-12-09 @ 10:00 am	2019-12-12 @ 8:00 am	0.5 ± 0.3	2019-12-16
9334337	110A	2019-12-09 @ 10:00 am	2019-12-12 @ 8:00 am	0.5 ± 0.4	2019-12-16
9334325	110C	2019-12-09 @ 9:00 am	2019-12-12 @ 8:00 am	0.5 ± 0.3	2019-12-16
9334327	110CC	2019-12-09 @ 9:00 am	2019-12-12 @ 8:00 am	1.0 ± 0.4	2019-12-16
9334323	110D	2019-12-09 @ 9:00 am	2019-12-12 @ 8:00 am	< 0.3	2019-12-16
9334316	110D	2019-12-09 @ 9:00 am	2019-12-12 @ 8:00 am	< 0.3	2019-12-16
9334324	110D	2019-12-09 @ 9:00 am	2019-12-12 @ 8:00 am	< 0.3	2019-12-17
9334332	110E	2019-12-09 @ 10:00 am	2019-12-12 @ 8:00 am	0.6 ± 0.4	2019-12-16
9334331	110E	2019-12-09 @ 10:00 am	2019-12-12 @ 8:00 am	0.6 ± 0.4	2019-12-16
9334322	110F	2019-12-09 @ 9:00 am	2019-12-12 @ 8:00 am	1.9 ± 0.4	2019-12-16
9334308	110H	2019-12-09 @ 9:00 am	2019-12-12 @ 8:00 am	0.8 ± 0.4	2019-12-17
9334307	110I	2019-12-09 @ 9:00 am	2019-12-12 @ 8:00 am	0.8 ± 0.4	2019-12-16
9334328	110J	2019-12-09 @ 10:00 am	2019-12-12 @ 8:00 am	1.7 ± 0.4	2019-12-16
9334329	110K	2019-12-09 @ 10:00 am	2019-12-12 @ 8:00 am	1.4 ± 0.4	2019-12-17
9334330	110L	2019-12-09 @ 10:00 am	2019-12-12 @ 8:00 am	0.7 ± 0.3	2019-12-16
9334335	111	2019-12-09 @ 10:00 am	2019-12-12 @ 8:00 am	0.5 ± 0.4	2019-12-16
9334334	111	2019-12-09 @ 10:00 am	2019-12-12 @ 8:00 am	0.6 ± 0.4	2019-12-16
9334333	111	2019-12-09 @ 10:00 am	2019-12-12 @ 8:00 am	< 0.3	2019-12-17
9334343	113	2019-12-09 @ 10:00 am	2019-12-12 @ 8:00 am	< 0.3	2019-12-16
9334345	114	2019-12-09 @ 11:00 am	2019-12-12 @ 8:00 am	< 0.3	2019-12-16
9334349	114	2019-12-09 @ 10:00 am	2019-12-12 @ 8:00 am	< 0.3	2019-12-16
9334350	114A	2019-12-09 @ 11:00 am	2019-12-12 @ 8:00 am	< 0.3	2019-12-17
9334365	120	2019-12-09 @ 12:00 pm	2019-12-12 @ 8:00 am	2.0 ± 0.4	2019-12-16
9334366	120	2019-12-09 @ 12:00 pm	2019-12-12 @ 8:00 am	1.8 ± 0.4	2019-12-16
9334359	121	2019-12-09 @ 11:00 am	2019-12-12 @ 8:00 am	< 0.3	2019-12-17
9334356	122	2019-12-09 @ 11:00 am	2019-12-12 @ 8:00 am	1.2 ± 0.4	2019-12-16
9334354	123	2019-12-09 @ 11:00 am	2019-12-12 @ 8:00 am	< 0.3	2019-12-17
9334361	125	2019-12-09 @ 11:00 am	2019-12-12 @ 9:00 am	0.5 ± 0.4	2019-12-16
9334360	126	2019-12-09 @ 11:00 am	2019-12-12 @ 9:00 am	0.8 ± 0.4	2019-12-16
9334357	127	2019-12-09 @ 11:00 am	2019-12-12 @ 9:00 am	< 0.3	2019-12-16
9334364	128	2019-12-09 @ 12:00 pm	2019-12-12 @ 8:00 am	0.7 ± 0.3	2019-12-16
9334362	129	2019-12-09 @ 11:00 am	2019-12-12 @ 1:00 pm	< 0.3	2019-12-16
9334358	129	2019-12-09 @ 11:00 am	2019-12-12 @ 8:00 am	< 0.3	2019-12-16
9334363	129	2019-12-09 @ 11:00 am	2019-12-12 @ 8:00 am	< 0.3	2019-12-17
9334347	130	2019-12-09 @ 12:00 pm	2019-12-12 @ 8:00 am	1.7 ± 0.4	2019-12-16
9334367	130	2019-12-09 @ 12:00 pm	2019-12-12 @ 8:00 am	1.7 ± 0.4	2019-12-16
9334371	130A	2019-12-09 @ 12:00 pm	2019-12-12 @ 9:00 am	1.0 ± 0.3	2019-12-16

Radon test result report for:**CLARKSBURG HIGH SCHOOL****249**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
9334372	130B	2019-12-09 @ 12:00 pm	2019-12-12 @ 9:00 am	1.2 ± 0.4	2019-12-16
9334377	132	2019-12-09 @ 1:00 pm	2019-12-12 @ 9:00 am	< 0.3	2019-12-16
9334378	132	2019-12-09 @ 1:00 pm	2019-12-12 @ 9:00 am	< 0.3	2019-12-16
9334382	132	2019-12-09 @ 1:00 pm	2019-12-12 @ 9:00 am	0.6 ± 0.3	2019-12-17
9334369	134	2019-12-09 @ 12:00 pm	2019-12-12 @ 9:00 am	0.8 ± 0.4	2019-12-16
9334368	134	2019-12-09 @ 12:00 pm	2019-12-12 @ 9:00 am	1.0 ± 0.4	2019-12-16
9334383	136	2019-12-09 @ 1:00 pm	2019-12-12 @ 9:00 am	< 0.3	2019-12-16
9334370	138	2019-12-09 @ 12:00 pm	2019-12-12 @ 9:00 am	1.1 ± 0.4	2019-12-16
9335003	140	2019-12-09 @ 2:00 pm	2019-12-12 @ 9:00 am	0.7 ± 0.3	2019-12-16
9335001	141	2019-12-09 @ 2:00 pm	2019-12-12 @ 9:00 am	< 0.3	2019-12-16
9335002	141	2019-12-09 @ 2:00 pm	2019-12-12 @ 9:00 am	< 0.3	2019-12-16
9334400	141	2019-12-09 @ 2:00 pm	2019-12-12 @ 9:00 am	< 0.3	2019-12-16
9334395	142	2019-12-09 @ 1:00 pm	2019-12-12 @ 9:00 am	0.7 ± 0.4	2019-12-16
9334396	142A	2019-12-09 @ 1:00 pm	2019-12-12 @ 9:00 am	0.7 ± 0.4	2019-12-16
9334399	143	2019-12-09 @ 2:00 pm	2019-12-12 @ 9:00 am	< 0.3	2019-12-16
9334393	144	2019-12-09 @ 1:00 pm	2019-12-12 @ 9:00 am	< 0.3	2019-12-16
9334394	145	2019-12-09 @ 2:00 pm	2019-12-12 @ 9:00 am	0.8 ± 0.4	2019-12-17
9334386	146	2019-12-09 @ 1:00 pm	2019-12-12 @ 9:00 am	< 0.3	2019-12-17
9334398	147	2019-12-09 @ 2:00 pm	2019-12-12 @ 9:00 am	< 0.3	2019-12-17
9335010	148	2019-12-09 @ 2:00 pm	2019-12-12 @ 10:00 am	0.6 ± 0.4	2019-12-17
9334397	149	2019-12-09 @ 2:00 pm	2019-12-12 @ 9:00 am	0.8 ± 0.4	2019-12-16
9335007	150	2019-12-09 @ 2:00 pm	2019-12-12 @ 10:00 am	< 0.3	2019-12-17
9335006	151	2019-12-09 @ 2:00 pm	2019-12-12 @ 10:00 am	< 0.3	2019-12-16
9335022	152	2019-12-09 @ 3:00 pm	2019-12-12 @ 10:00 am	< 0.3	2019-12-16
9335021	152B	2019-12-09 @ 3:00 pm	2019-12-12 @ 10:00 am	0.8 ± 0.3	2019-12-16
9335011	153	2019-12-09 @ 2:00 pm	2019-12-12 @ 10:00 am	0.7 ± 0.4	2019-12-16
9335024	154	2019-12-09 @ 3:00 pm	2019-12-12 @ 10:00 am	0.6 ± 0.4	2019-12-16
9335004	155	2019-12-09 @ 2:00 pm	2019-12-12 @ 10:00 am	< 0.3	2019-12-16
9335009	155A	2019-12-09 @ 2:00 pm	2019-12-12 @ 10:00 am	0.8 ± 0.3	2019-12-16
9335023	156	2019-12-09 @ 3:00 pm	2019-12-12 @ 10:00 am	0.7 ± 0.4	2019-12-16
9335013	157	2019-12-09 @ 2:00 pm	2019-12-12 @ 10:00 am	1.1 ± 0.4	2019-12-16
9335005	157	2019-12-09 @ 2:00 pm	2019-12-12 @ 10:00 am	1.3 ± 0.4	2019-12-17
9335008	157A	2019-12-09 @ 2:00 pm	2019-12-12 @ 10:00 am	1.8 ± 0.4	2019-12-17
9335030	158	2019-12-09 @ 2:00 pm	2019-12-12 @ 10:00 am	< 0.3	2019-12-16
9335012	159	2019-12-09 @ 2:00 pm	2019-12-12 @ 10:00 am	0.6 ± 0.3	2019-12-16
9335025	160	2019-12-09 @ 3:00 pm	2019-12-12 @ 10:00 am	< 0.3	2019-12-17
9335028	161	2019-12-09 @ 3:00 pm	2019-12-12 @ 10:00 am	< 0.3	2019-12-16

Radon test result report for:**CLARKSBURG HIGH SCHOOL****249**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
9335032	162	2019-12-09 @ 3:00 pm	2019-12-12 @ 10:00 am	< 0.3	2019-12-16
9335031	162A	2019-12-09 @ 3:00 pm	2019-12-12 @ 10:00 am	< 0.3	2019-12-16
9335018	162B	2019-12-09 @ 3:00 pm	2019-12-12 @ 10:00 am	< 0.3	2019-12-16
9335019	163	2019-12-09 @ 3:00 pm	2019-12-12 @ 10:00 am	< 0.3	2019-12-16
9335014	163	2019-12-09 @ 3:00 pm	2019-12-12 @ 2:00 pm	0.7 ± 0.3	2019-12-17
9335020	164	2019-12-09 @ 3:00 pm	2019-12-12 @ 10:00 am	< 0.3	2019-12-16
9335027	164A	2019-12-09 @ 4:00 pm	2019-12-12 @ 10:00 am	< 0.3	2019-12-16
9335016	165	2019-12-09 @ 3:00 pm	2019-12-12 @ 10:00 am	< 0.3	2019-12-16
9335029	166	2019-12-09 @ 4:00 pm	2019-12-12 @ 10:00 am	< 0.3	2019-12-16
9335033	166	2019-12-09 @ 4:00 pm	2019-12-12 @ 10:00 am	< 0.3	2019-12-16
9335017	167	2019-12-09 @ 3:00 pm	2019-12-12 @ 10:00 am	< 0.3	2019-12-16
9335026	168	2019-12-09 @ 4:00 pm	2019-12-12 @ 10:00 am	0.5 ± 0.3	2019-12-16
9335041	170	2019-12-09 @ 4:00 pm	2019-12-12 @ 11:00 am	< 0.3	2019-12-16
9335047	170A	2019-12-09 @ 4:00 pm	2019-12-12 @ 12:00 pm	0.5 ± 0.3	2019-12-16
9335037	170E	2019-12-09 @ 4:00 pm	2019-12-12 @ 11:00 am	< 0.3	2019-12-16
9335042	170F	2019-12-09 @ 4:00 pm	2019-12-12 @ 11:00 am	0.5 ± 0.3	2019-12-16
9335034	171	2019-12-09 @ 4:00 pm	2019-12-12 @ 10:00 am	0.7 ± 0.3	2019-12-16
9335039	172C	2019-12-09 @ 4:00 pm	2019-12-12 @ 11:00 am	1.0 ± 0.4	2019-12-16
9335040	172C	2019-12-09 @ 4:00 pm	2019-12-12 @ 11:00 am	0.7 ± 0.3	2019-12-16
9335038	172C	2019-12-09 @ 4:00 pm	2019-12-12 @ 11:00 am	< 0.3	2019-12-16
9335043	172D	2019-12-09 @ 4:00 pm	2019-12-12 @ 11:00 am	0.6 ± 0.3	2019-12-16
9335049	172H	2019-12-09 @ 4:00 pm	2019-12-12 @ 11:00 am	< 0.3	2019-12-16
9335035	173	2019-12-09 @ 4:00 pm	2019-12-12 @ 10:00 am	0.7 ± 0.3	2019-12-16
9335036	173	2019-12-09 @ 4:00 pm	2019-12-12 @ 10:00 am	0.6 ± 0.3	2019-12-16
9335057	175	2019-12-09 @ 5:00 pm	2019-12-12 @ 10:00 am	0.6 ± 0.3	2019-12-16
9335051	177	2019-12-09 @ 5:00 pm	2019-12-12 @ 10:00 am	0.5 ± 0.3	2019-12-16
9335048	178	2019-12-09 @ 4:00 pm	2019-12-12 @ 1:00 pm	< 0.3	2019-12-16
9335045	180	2019-12-09 @ 4:00 pm	2019-12-12 @ 11:00 am	0.8 ± 0.4	2019-12-16
9335050	183	2019-12-09 @ 5:00 pm	2019-12-12 @ 12:00 pm	< 0.3	2019-12-16
9335055	183	2019-12-09 @ 5:00 pm	2019-12-12 @ 12:00 pm	< 0.3	2019-12-16
9335046	184	2019-12-09 @ 4:00 pm	2019-12-12 @ 11:00 am	0.8 ± 0.4	2019-12-16
9335044	184A	2019-12-09 @ 5:00 pm	2019-12-12 @ 12:00 pm	0.9 ± 0.3	2019-12-16
9335072	190	2019-12-09 @ 5:00 pm	2019-12-12 @ 10:00 am	< 0.3	2019-12-16
9334304	191	2019-12-09 @ 8:00 am	2019-12-12 @ 11:00 am	< 0.3	2019-12-16
9335063	192	2019-12-09 @ 5:00 pm	2019-12-12 @ 11:00 am	0.7 ± 0.4	2019-12-16
9335059	192B	2019-12-09 @ 5:00 pm	2019-12-12 @ 11:00 am	< 0.3	2019-12-16
9335060	192B	2019-12-09 @ 5:00 pm	2019-12-12 @ 11:00 am	< 0.3	2019-12-16

Radon test result report for:**CLARKSBURG HIGH SCHOOL****249**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
9335065	192B	2019-12-09 @ 5:00 pm	2019-12-12 @ 11:00 am	< 0.3	2019-12-16
9335053	192C	2019-12-09 @ 5:00 pm	2019-12-12 @ 11:00 am	< 0.3	2019-12-16
9335064	192E	2019-12-09 @ 5:00 pm	2019-12-12 @ 11:00 am	< 0.3	2019-12-16
9335052	192F	2019-12-09 @ 5:00 pm	2019-12-12 @ 11:00 am	< 0.3	2019-12-16
9334301	193	2019-12-09 @ 8:00 am	2019-12-12 @ 7:00 am	< 0.3	2019-12-17
9335062	194	2019-12-09 @ 5:00 pm	2019-12-12 @ 11:00 am	< 0.3	2019-12-16
9334305	195	2019-12-09 @ 8:00 am	2019-12-12 @ 11:00 am	< 0.3	2019-12-16
9335066	196	2019-12-09 @ 5:00 pm	2019-12-12 @ 11:00 am	< 0.3	2019-12-16
9335058	196C	2019-12-09 @ 5:00 pm	2019-12-12 @ 11:00 am	< 0.3	2019-12-16
9335061	196F	2019-12-09 @ 5:00 pm	2019-12-12 @ 11:00 am	0.7 ± 0.4	2019-12-17
9335067	198A	2019-12-09 @ 5:00 pm	2019-12-12 @ 11:00 am	0.7 ± 0.4	2019-12-16
9335079	205	2019-12-09 @ 5:00 pm	2019-12-12 @ 12:00 pm	< 0.3	2019-12-16
9335074	220	2019-12-09 @ 5:00 pm	2019-12-12 @ 12:00 pm	0.6 ± 0.4	2019-12-16
9335077	229	2019-12-09 @ 5:00 pm	2019-12-12 @ 12:00 pm	< 0.3	2019-12-16
9335073	233	2019-12-09 @ 5:00 pm	2019-12-12 @ 12:00 pm	< 0.3	2019-12-16
9335071	233	2019-12-09 @ 5:00 pm	2019-12-12 @ 12:00 pm	< 0.3	2019-12-16
9335068	235	2019-12-09 @ 5:00 pm	2019-12-12 @ 12:00 pm	0.6 ± 0.4	2019-12-16
9335069	240	2019-12-09 @ 5:00 pm	2019-12-12 @ 12:00 pm	< 0.3	2019-12-16
9335075	256	2019-12-09 @ 5:00 pm	2019-12-12 @ 12:00 pm	< 0.3	2019-12-16
9335056	MAIN GYM	2019-12-09 @ 5:00 pm	2019-12-12 @ 12:00 pm	0.6 ± 0.3	2019-12-16
9335054	MAIN GYM	2019-12-09 @ 5:00 pm	2019-12-12 @ 12:00 pm	0.9 ± 0.3	2019-12-16

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
9334583	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	23.3 \pm 1.4	2019-12-18
9334529	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	24.3 \pm 1.5	2019-12-18
9334597	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	23.8 \pm 1.4	2019-12-18
9334534	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	23.3 \pm 1.4	2019-12-18
9334540	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	23.9 \pm 1.4	2019-12-18
9334546	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	24.9 \pm 1.5	2019-12-18
9334551	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	23.3 \pm 1.4	2019-12-18
9334558	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	23.6 \pm 1.4	2019-12-18
9334579	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	23.6 \pm 1.4	2019-12-18
9334593	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	23.3 \pm 1.4	2019-12-18
9334532	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	23.6 \pm 1.4	2019-12-18
9334537	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	23.8 \pm 1.4	2019-12-18
9334544	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	23.5 \pm 1.4	2019-12-18
9334549	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	24.4 \pm 1.5	2019-12-18
9334556	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	24.1 \pm 1.4	2019-12-18
9334569	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	23.7 \pm 1.4	2019-12-18
9334584	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	24.4 \pm 1.5	2019-12-18
9334530	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	23.6 \pm 1.4	2019-12-18
9334598	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	23.7 \pm 1.4	2019-12-18
9334535	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	23.0 \pm 1.4	2019-12-18
9334542	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	23.7 \pm 1.4	2019-12-18
9334547	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	25.2 \pm 1.5	2019-12-18
9334552	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	24.2 \pm 1.4	2019-12-18
9334559	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	24.1 \pm 1.4	2019-12-18
9334580	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	24.1 \pm 1.4	2019-12-18
9334594	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	24.1 \pm 1.4	2019-12-18
9334533	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	24.3 \pm 1.5	2019-12-18
9334538	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	24.6 \pm 1.5	2019-12-18
9334545	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	24.0 \pm 1.4	2019-12-18
9334550	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	24.1 \pm 1.4	2019-12-18
9334557	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	24.6 \pm 1.5	2019-12-18
9334576	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	23.3 \pm 1.4	2019-12-18
9334591	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	23.7 \pm 1.4	2019-12-18
9334531	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	24.3 \pm 1.5	2019-12-18
9334599	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	23.8 \pm 1.4	2019-12-18
9334536	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	24.4 \pm 1.5	2019-12-18
9334543	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	24.4 \pm 1.5	2019-12-18

December 18, 2019

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

N/A

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
9334548	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	24.0 ± 1.4	2019-12-18
9334555	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	23.4 ± 1.4	2019-12-18
9334562	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	23.5 ± 1.4	2019-12-18

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

December 18, 2019

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

S

N/A

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
9334505	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	24.5 ± 1.5	2019-12-18
9334510	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	24.4 ± 1.5	2019-12-18
9334522	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	23.9 ± 1.4	2019-12-18
9334527	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	22.6 ± 1.4	2019-12-18
9334503	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	23.6 ± 1.4	2019-12-18
9334508	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	24.7 ± 1.5	2019-12-18
9334517	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	23.5 ± 1.4	2019-12-18
9334525	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	23.8 ± 1.4	2019-12-18
9334506	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	24.3 ± 1.5	2019-12-18
9334514	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	24.5 ± 1.5	2019-12-18
9334523	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	23.6 ± 1.4	2019-12-18
9334528	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	23.8 ± 1.4	2019-12-18
9334504	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	23.8 ± 1.4	2019-12-18
9334509	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	23.5 ± 1.4	2019-12-18
9334519	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	24.1 ± 1.4	2019-12-18
9334526	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	23.3 ± 1.4	2019-12-18
9334502	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	23.7 ± 1.4	2019-12-18
9334507	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	24.7 ± 1.5	2019-12-18
9334516	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	22.2 ± 1.3	2019-12-18
9334524	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	24.6 ± 1.5	2019-12-18



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 1

Name of Schools:

- | | |
|-----------------------------|-------------------------|
| 1. Baker M.S. | 13. Jones Lane E.S. |
| 2. Belmont E.S. | 14. Lake Seneca E.S. |
| 3. Clarksburg E.S. | 15. McAuliffe E.S. |
| 4. Clarksburg H.S. | 16. Quince Orchard H.S. |
| 5. Clearspring E.S. | 17. Rosa Parks M.S. |
| 6. Damascus E.S. | 18. Snowden Farm E.S. |
| 7. Damascus H.S. | 19. South Lake E.S. |
| 8. Dufief E.S. | 20. Stone Mill E.S. |
| 9. Fields Road E.S. | 21. Travilah E.S. |
| 10. Gaithersburg E.S. | 22. Watkins Mill E.S. |
| 11. Germantown E.S. | 23. Watkins Mill H.S. |
| 12. Great Seneca Creek E.S. | 24. Whitman H.S. |

	Date	Initials
Radon Test Kits Deployed	12/09/19 to 12/10/19	JM
Radon Test Kits Collected	12/12/19 to 12/13/19	JM
Radon Test Kits Shipped to Lab*	12/13/19	JM
Radon Test Kits Received by Lab*	12/16/19	JM

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

MCPS RADON TESTING - EXECUTIVE SUMMARY

Site Name	Clarksburg High School
Date of Report	March 12, 2018
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	21
# Rooms ≥ 4.0 pCi/L	0
Lowest Value	<0.3 pCi/L
Highest Value	2.5 pCi/L

Project Status

Current Project Status at this time: Retesting 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 12, 2018

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

Re: Radon Testing Services

KCI Job #1214634188

Location: Clarksburg High School

22500 Wims Rd.
Clarksburg, Maryland 20871

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 Clarksburg High School, located at 22500 Wims Rd. in Clarksburg, Maryland 20871 (subject site).

SCOPE OF SERVICES

KCI conducted radon testing at the subject site to evaluate indoor radon levels relative to the USEPA's recommended action level of 4.0 picocuries per Liter (pCi/L) - the level at which EPA recommends that schools take action to reduce the level. KCI conducted the radon testing in accordance with American Association of Radon Scientists and Technologists (AARST) *Protocol for Conducting Measurements of Radon and Radon Decay Products in Schools and Large Buildings*. A National Radon 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 February 13, 2018 and deployed twenty-six (26) 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.

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

1. Rooms not successfully tested,
2. Rooms with elevated November 2017 results (i.e. ≥ 3.5 pCi/L).

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 six (6) 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 February 16, 2018 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 NRSB certified analytical laboratory for radon analysis (certification #ARL1402) located at 1936 Butler Bridge Road, Mills River, North Carolina.

EVALUATION OF TESTING CONDITIONS

These tests represent:

- Follow-up to post-mitigation biennial testing.

These tests were conducted to:

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

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

KCI recorded observations of the following conditions in each room 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 ranged from the mid-20s to upper 40s and high temperatures ranged from the high-30s to the high-60s. Maximum sustained winds ranged from 10-18 miles per hour. Average humidity was around 73%. 0.30 Inches of precipitation 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). 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 field blank, 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,



Radon Measurement Specialist
KCI Technologies, Inc.

Attachments:

B - Radon Test Summary Spreadsheets

C- Laboratory Analytical Results

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		
Clarksburg High School		
Test Period: 02/13/18-02/16/18		
Kit Number	Room / Area	Result
7986572	104	< 0.3
7986559	124	0.8
7986592	155	0.5
7986578	156	0.5
7986566	157	2.5
7986569	165	2.2
7986553	169	1.1
7986567	171	1.4
7986562	173	0.9
7986552	178	0.8
7986579	181	0.9
7986581	181	1.3
7986586	114A	< 0.3
7986584	132C	< 0.3
7986568	144A	0.6
7986589	157A	2.3
7986563	172C	1.2
7986561	172H	0.7
7986585	190 ISS	1.5
7986575	196D	1.1
7986565	199A	0.8
7986573	KITCHEN	0.6

Table Note:

* Missing or Compromised Sample

Table 2- Radon Testing Results		
Clarksburg High School		
Test Period: 02/13/18-02/16/18		
Kit Number	QC Type	Result
7986593	D (104)	< 0.3
7986580	D (124)	0.9
7986574	D (156)	< 0.3
7986554	FB (104)	< 0.3

Table Note:

* Missing or Compromised Sample

ATTACHMENT C

Laboratory Analytical Results

Radon test result report for:**MCPS 2018****CLARKSBURG HIGH SCHOOL
MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7986554	104	2018-02-13 @ 8:00 am	2018-02-16 @ 8:00 am	< 0.3	2018-02-20
7986593	104	2018-02-13 @ 8:00 am	2018-02-16 @ 8:00 am	< 0.3	2018-02-20
7986572	104	2018-02-13 @ 8:00 am	2018-02-16 @ 8:00 am	< 0.3	2018-02-20
7986586	114A	2018-02-13 @ 10:00 am	2018-02-16 @ 8:00 am	< 0.3	2018-02-20
7986580	124	2018-02-13 @ 8:00 am	2018-02-16 @ 8:00 am	0.9	2018-02-20
7986559	124	2018-02-13 @ 8:00 am	2018-02-16 @ 8:00 am	0.8	2018-02-20
7986584	132C	2018-02-13 @ 10:00 am	2018-02-16 @ 9:00 am	< 0.3	2018-02-20
7986568	144A	2018-02-13 @ 10:00 am	2018-02-16 @ 8:00 am	0.6	2018-02-20
7986592	155	2018-02-13 @ 9:00 am	2018-02-16 @ 8:00 am	0.5	2018-02-20
7986574	156	2018-02-13 @ 8:00 am	2018-02-16 @ 9:00 am	< 0.3	2018-02-20
7986578	156	2018-02-13 @ 8:00 am	2018-02-16 @ 9:00 am	0.5	2018-02-20
7986566	157	2018-02-13 @ 10:00 am	2018-02-16 @ 9:00 am	2.5	2018-02-20
7986589	157A	2018-02-13 @ 10:00 am	2018-02-16 @ 9:00 am	2.3	2018-02-20
7986569	165	2018-02-13 @ 9:00 am	2018-02-16 @ 8:00 am	2.2	2018-02-20
7986553	169	2018-02-13 @ 8:00 am	2018-02-16 @ 8:00 am	1.1	2018-02-20
7986567	171	2018-02-13 @ 9:00 am	2018-02-16 @ 8:00 am	1.4	2018-02-20
7986563	172C	2018-02-13 @ 9:00 am	2018-02-16 @ 8:00 am	1.2	2018-02-20
7986561	172H	2018-02-13 @ 9:00 am	2018-02-16 @ 8:00 am	0.7	2018-02-20
7986562	173	2018-02-13 @ 9:00 am	2018-02-16 @ 8:00 am	0.9	2018-02-20
7986552	178	2018-02-13 @ 9:00 am	2018-02-16 @ 8:00 am	0.8	2018-02-20
7986581	181	2018-02-13 @ 9:00 am	2018-02-16 @ 8:00 am	1.3	2018-02-20
7986579	181	2018-02-13 @ 9:00 am	2018-02-16 @ 8:00 am	0.9	2018-02-20
7986585	190 ISS	2018-02-13 @ 9:00 am	2018-02-16 @ 8:00 am	1.5	2018-02-20
7986575	196D	2018-02-13 @ 9:00 am	2018-02-16 @ 9:00 am	1.1	2018-02-20
7986565	199A	2018-02-13 @ 9:00 am	2018-02-16 @ 8:00 am	0.8	2018-02-20
7986573	KITCHEN	2018-02-13 @ 9:00 am	2018-02-16 @ 8:00 am	0.6	2018-02-20



Radon Test Kit Chain of Custody

Project Name: MCPS Radon Phase

Names of Schools:

- | | |
|---------------------------------------|--|
| 1. Westbrook Elementary School | 21. E. Silver Spring Elementary School |
| 2. Westland Middle School | 22. Silver Spring Int. Middle School |
| 3. Walt Whitman High School | 23. Clarksburg High School |
| 4. Cloverly Elementary School | 24. Rosa Parks Middle School |
| 5. Sligo Middle School | 25. Greenwood Elementary School |
| 6. Flora Singer Elementary School | 26. Montgomery Knolls Elem. School |
| 7. Albert Einstein High School | 27. Watkins Mill Elementary School |
| 8. Roscoe Nix Elementary School | 28. Gaithersburg Elementary School |
| 9. Mario Loiederman Middle School | 29. Viers Mill Elementary School |
| 10. Sargent Shriver Elementary School | 30. Rock View Elementary School |
| 11. Whetstone Elementary School | |
| 12. Brooke Grove Elementary School | |
| 13. Clearspring Elementary School | |
| 14. Beall Elementary School | |
| 15. Maryvale Elementary School | |
| 16. Lathrop E. Smith Center | |
| 17. Laytonsville Elementary School | |
| 18. Germantown Elementary School | |
| 19. Spring Mill Center | |
| 20. Northwood High School | |

	Date	Initials
Radon Test Kits Deployed	2/13/18	JM
Radon Test Kits Collected	2/16/18	JM
Radon Test Kits Shipped to Lab*	2/16/18	JM
Radon Test Kits Received by Lab*	2/20/18	JM

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

February 27, 2018

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

OFFICE BLANKS

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7979482	1	2018-02-13 @ 1:00 pm	2018-02-16 @ 2:00 pm	< 0.3	2018-02-20
7986991	10	2018-02-13 @ 2:00 pm	2018-02-16 @ 2:00 pm	< 0.3	2018-02-20
7985684	11	2018-02-13 @ 2:00 pm	2018-02-16 @ 2:00 pm	< 0.3	2018-02-20
7986987	12	2018-02-13 @ 2:00 pm	2018-02-16 @ 2:00 pm	< 0.3	2018-02-20
7986993	13	2018-02-13 @ 2:00 pm	2018-02-16 @ 2:00 pm	< 0.3	2018-02-20
7986990	14	2018-02-13 @ 2:00 pm	2018-02-16 @ 2:00 pm	< 0.3	2018-02-20
7979485	2	2018-02-13 @ 1:00 pm	2018-02-16 @ 2:00 pm	< 0.3	2018-02-20
7985686	3	2018-02-13 @ 1:00 pm	2018-02-16 @ 2:00 pm	< 0.3	2018-02-20
7986995	4	2018-02-13 @ 1:00 pm	2018-02-16 @ 2:00 pm	< 0.3	2018-02-20
7986989	5	2018-02-13 @ 1:00 pm	2018-02-16 @ 2:00 pm	< 0.3	2018-02-20
7986998	6	2018-02-13 @ 2:00 pm	2018-02-16 @ 2:00 pm	< 0.3	2018-02-20
7986986	7	2018-02-13 @ 2:00 pm	2018-02-16 @ 2:00 pm	< 0.3	2018-02-20
7986985	8	2018-02-13 @ 2:00 pm	2018-02-16 @ 2:00 pm	< 0.3	2018-02-20
7986997	9	2018-02-13 @ 2:00 pm	2018-02-16 @ 2:00 pm	< 0.3	2018-02-20

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

February 27, 2018

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:
TRANSIT BLANKS

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7984188	1	2018-02-13 @ 2:00 pm	2018-02-16 @ 2:00 pm	< 0.3	2018-02-20
7984044	10	2018-02-13 @ 2:00 pm	2018-02-16 @ 2:00 pm	< 0.3	2018-02-20
7986582	11	2018-02-13 @ 2:00 pm	2018-02-16 @ 2:00 pm	< 0.3	2018-02-20
7986999	12	2018-02-13 @ 2:00 pm	2018-02-16 @ 2:00 pm	< 0.3	2018-02-20
7987000	13	2018-02-13 @ 2:00 pm	2018-02-16 @ 2:00 pm	< 0.3	2018-02-20
7984196	14	2018-02-13 @ 2:00 pm	2018-02-16 @ 2:00 pm	< 0.3	2018-02-20
7986996	2	2018-02-13 @ 2:00 pm	2018-02-16 @ 2:00 pm	< 0.3	2018-02-20
7986994	3	2018-02-13 @ 2:00 pm	2018-02-16 @ 2:00 pm	< 0.3	2018-02-20
7986992	4	2018-02-13 @ 2:00 pm	2018-02-16 @ 2:00 pm	< 0.3	2018-02-20
7985680	5	2018-02-13 @ 2:00 pm	2018-02-16 @ 2:00 pm	< 0.3	2018-02-20
7985698	6	2018-02-13 @ 2:00 pm	2018-02-16 @ 2:00 pm	< 0.3	2018-02-20
7985699	7	2018-02-13 @ 2:00 pm	2018-02-16 @ 2:00 pm	< 0.3	2018-02-20
7985700	8	2018-02-13 @ 2:00 pm	2018-02-16 @ 2:00 pm	< 0.3	2018-02-20
7985872	9	2018-02-13 @ 2:00 pm	2018-02-16 @ 2:00 pm	< 0.3	2018-02-20

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

February 28, 2018

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

MCPS - Spike Sample Laboratory Results. Measured values are satisfactory, i.e. within $\pm 25\%$ of the chamber's reference value (20.9 pCi/L).

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7984181	1	2018-02-16 @ 11:00 am	2018-02-19 @ 11:00 am	19.7 ± 0.8	2018-02-21
7986621	2	2018-02-16 @ 11:00 am	2018-02-19 @ 11:00 am	19.4 ± 0.8	2018-02-21
7985683	3	2018-02-16 @ 11:00 am	2018-02-19 @ 11:00 am	19.5 ± 0.8	2018-02-21
7984168	4	2018-02-16 @ 11:00 am	2018-02-19 @ 11:00 am	20.5 ± 0.8	2018-02-21
7986618	5	2018-02-16 @ 11:00 am	2018-02-19 @ 11:00 am	19.9 ± 0.8	2018-02-21
7984169	6	2018-02-16 @ 11:00 am	2018-02-19 @ 11:00 am	20.4 ± 0.8	2018-02-21

Air Chek, Inc. 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 183530

NOMINAL Conditions: Radon Conc 20.9 pCi/L Rel. Hum 49.8 % Temp. 79.1 F

Date Start: <u>2/16/18</u> Date Stop: <u>2/19/18</u>	Date Start: _____ Date Stop: _____
Time Start: <u>1052</u> Time Stop: <u>1052</u>	Time Start: _____ Time Stop: _____
Device No.'s: <u>(6) Char. Bags-</u>	Device No.'s: _____
<u>7984181, 7986621, 7985683</u>	_____
<u>7984168, 7986618, 7984169</u>	_____
<u>G3 Middle</u>	_____
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

MCPS RADON TESTING - EXECUTIVE SUMMARY

Site Name	Clarksburg High School
Date of Report	February 2, 2018
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	138
# Rooms ≥ 4.0 pCi/L	0
Lowest Value	< 0.3 pCi/L
Highest Value	2.6 pCi/L

Current Project Status at this time: Results satisfactory to date; missed locations and missing/
compromised tests to be sampled.



ENGINEERS • PLANNERS • SCIENTISTS • CONSTRUCTION MANAGERS

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

February 2, 2018

Mr. Richard Cox, MS
Team Leader
Montgomery County Public Schools
Division of Maintenance
Rockville, Maryland 20855

Re: Radon Testing Services

KCI Job #1214694182

Location: Clarksburg High School

22500 Wims Rd.
Clarksburg, Maryland 20871

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 Clarksburg High School, located at 22500 Wims Rd. in Clarksburg, Maryland 20871 (subject site).

SCOPE OF SERVICES

KCI conducted radon testing at the subject site to evaluate indoor radon levels relative to the USEPA's recommended action level of 4.0 picocuries per Liter (pCi/L) - the level at which EPA recommends that schools take action to reduce the level. KCI conducted the radon testing in accordance with American Association of Radon Scientists and Technologists (AARST) *Protocol for Conducting Measurements of Radon and Radon Decay Products in Schools and Large Buildings*. A National Radon 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 December 5, 2017 and deployed one-hundred-sixty-nine 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 six (6) 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 December 8, 2017 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 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:

- Post-mitigation biennial testing.

These tests were conducted to:

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

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

KCI recorded observations of the following conditions in each room 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 low-30s to mid-40s and high temperatures ranged from the upper-30s to mid-50s. Maximum sustained winds ranged from 4-17 miles per hour. Average humidity was around 60%. 0.16 Inches of precipitation was recorded during the testing period.

RESULTS

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

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 Moulds, CHMM
Radon Measurement Specialist
KCI Technologies, Inc.

Attachments:

B- Table 1-Radon Test Summary Spreadsheet

C- Laboratory Analytical Results

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		
Clarksburg High School		
Test Period: 12/05/17-12/08/17		
Kit Number	Room / Area	Result
7979220	100	< 0.3
7979222	102	< 0.3
7978931	103	0.7
7978934	105	1.3
7979227	106	< 0.3
7978926	107	0.7
7978957	108	< 0.3
7978928	109	1.0
7979208	110	0.7
7978929	111	< 0.3
7978930	113	0.6
7978923	114	< 0.3
7978922	116	0.8
7978921	116	1.1
7978920	117	1.1
7978919	118	1.7
7978918	119	1.8
7978914	120	2.6
7978915	120	2.1
7978936	121	0.7
7978917	122	1.4
7978937	123	0.8
7978938	125	0.9
7978939	127	0.9
7978940	129	0.7
7978912	130	2.3
7978913	130	1.9
7978941	132	1.0
7978943	134	1.3
7978945	136	0.9
7979268	138	0.8
7979266	140	1.8
7978909	141	1.0
7979265	142	0.7
7978908	143	< 0.3
7979263	144	< 0.3
7978907	145	< 0.3
7979262	146	0.7
7978906	147	< 0.3
7979293	148	< 0.3
7978904	149	0.8
7979290	150	< 0.3
7979287	151	0.7
7979291	152	0.6
7979299	153	0.5
7979289	154	0.7

Table Note:

* Missing or Compromised Sample

Radon Testing Results		
Clarksburg High School		
Test Period: 12/05/17-12/08/17		
Kit Number	Room / Area	Result
7979285	158	< 0.3
7978903	159	1.2
7979261	160	< 0.3
7979294	161	< 0.3
7979258	162	0.8
7979296	163	0.6
7979257	164	< 0.3
7979297	165	2.4
7979255	166	0.7
7979298	167	0.7
7979254	168	< 0.3
7978958	173	0.8
7979250	174	1.2
7979240	175	1.0
7979241	177	0.6
7979249	180	1.1
7979244	183	0.5
7979245	184	0.6
7979229	191	< 0.3
7979230	191	0.6
7979236	192	1.0
7979235	194	1.0
7979231	195	< 0.3
7979233	196	0.8
7978956	201	< 0.3
7978955	205	0.5
7978953	221	0.9
7978952	223	< 0.3
7978948	248	< 0.3
7978949	250	< 0.3
7978950	254	0.5
7978951	256	< 0.3
7979284	1000	0.6
7979283	1001	1.0
7979282	1002	0.8
7979280	1003	1.0
7979278	1004	0.7
7979279	1005	0.5
7979277	1006	< 0.3
7979275	1007	< 0.3
7979276	1008	0.9
7979274	1009	< 0.3
7979273	1010	2.1
7979271	1011	1.6
7979270	1012	1.6
7979269	1013	0.7
7979218	100A	0.6
7979219	100A	< 0.3
7979217	100B	< 0.3
7978964	100B	0.6

Table Note:

* Missing or Compromised Sample

Radon Testing Results		
Clarksburg High School		
Test Period: 12/05/17-12/08/17		
Kit Number	Room / Area	Result
7979216	100D	0.6
7979215	100F	0.8
7979214	100G	0.7
7979225	100H	0.8
7979226	100I	< 0.3
7979224	100K	< 0.3
7979223	100L	< 0.3
7978935	* 101 (Tampered)	< 0.3
7978933	103A	0.6
7979228	106E	0.7
7978927	107D	0.6
7979210	110A	1.0
7979211	110C	< 0.3
7979212	110D	< 0.3
7979213	110E	< 0.3
7979201	110F	< 0.3
7979202	110G	0.7
7979203	110H	0.7
7979204	110I	< 0.3
7979205	110J	0.7
7979206	110K	0.5
7979207	110L	0.6
7978924	112A	1.0
7978925	112D	0.6
7978916	120G	0.9
7978910	130A	1.2
7978911	130B	1.4
7978942	132C	0.7
7978947	136A	1.0
7979267	142A	0.7
7979264	144B	1.2
7979288	150A	< 0.3
7979292	152B	0.9
7978901	* 155 (Open Window)	0.6
7978902	155A	0.8
7979259	162A	< 0.3
7979260	162B	0.6
7979256	164A	0.8
7978959	* 173 (Tampered)	0.6
7979242	* 181 (Tampered)	1.4
7979243	* 181 (Tampered)	0.8
7979252	181C	1.5
7979253	181D	1.7
7979247	184A	0.7
7979248	184I	1.1
7979237	192B	1.0
7979238	192E	0.6
7979239	192F	0.8
7979234	196C	0.9
7979232	198B	2.1

Table Note:

* Missing or Compromised Sample

Radon Testing Results		
Clarksburg High School		
Test Period: 12/05/17-12/08/17		
Kit Number	QC Type	Result
7978962	D (100L)	< 0.3
7979272	D (1011)	1.9
7978963	D (102)	0.7
7978966	D (103)	< 0.3
7978965	D (106)	< 0.3
7978967	D (107)	< 0.3
7979209	D (110)	< 0.3
7978944	D (134)	1.4
7978946	D (136)	0.9
7978905	D (149)	0.7
7979295	D (161)	1.0
7978960	D (173)	< 0.3
7979251	D (174)	1.1
7979246	D (184)	1.1
7978954	D (221)	0.6
7979221	FB (100)	< 0.3
7979281	FB (1003)	< 0.3
7978932	FB (103)	< 0.3
7978968	FB (111)	< 0.3
7979300	FB (153)	< 0.3
7978961	FB (173)	< 0.3
7986195	OB (OFFICE BLANK)	< 0.3
7986196	OB (OFFICE BLANK)	< 0.3

Table Note:

* Missing or Compromised Sample

ATTACHMENT C

Laboratory Analytical Results

Radon test result report for:**CLARKSBURG HIGH SCHOOL
MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7979283	1001	2017-12-05 @ 10:00 am	2017-12-08 @ 10:00 am	1.0 ± 0.4	2017-12-13
7979282	1002	2017-12-05 @ 10:00 am	2017-12-08 @ 10:00 am	0.8 ± 0.4	2017-12-13
7979280	1003	2017-12-05 @ 10:00 am	2017-12-08 @ 10:00 am	1.0 ± 0.4	2017-12-13
7979281	1003	2017-12-05 @ 10:00 am	2017-12-08 @ 10:00 am	< 0.3	2017-12-13
7979278	1004	2017-12-05 @ 10:00 am	2017-12-08 @ 10:00 am	0.7 ± 0.4	2017-12-13
7979277	1006	2017-12-05 @ 10:00 am	2017-12-08 @ 10:00 am	< 0.3	2017-12-13
7979275	1007	2017-12-05 @ 10:00 am	2017-12-08 @ 10:00 am	< 0.3	2017-12-13
7979276	1008	2017-12-05 @ 10:00 am	2017-12-08 @ 10:00 am	0.9 ± 0.4	2017-12-13
7979218	100A	2017-12-05 @ 8:00 am	2017-12-08 @ 9:00 am	0.6 ± 0.4	2017-12-13
7979219	100A	2017-12-05 @ 8:00 am	2017-12-08 @ 9:00 am	< 0.3	2017-12-13
7979217	100B	2017-12-05 @ 8:00 am	2017-12-08 @ 9:00 am	< 0.3	2017-12-13
7978964	100B	2017-12-05 @ 1:00 pm	2017-12-08 @ 9:00 am	0.6 ± 0.4	2017-12-13
7979216	100D	2017-12-05 @ 8:00 am	2017-12-08 @ 9:00 am	0.6 ± 0.4	2017-12-13
7979214	100G	2017-12-05 @ 8:00 am	2017-12-08 @ 9:00 am	0.7 ± 0.4	2017-12-13
7979225	100H	2017-12-05 @ 8:00 am	2017-12-08 @ 9:00 am	0.8 ± 0.4	2017-12-13
7979224	100K	2017-12-05 @ 8:00 am	2017-12-08 @ 9:00 am	< 0.3	2017-12-13
7979223	100L	2017-12-05 @ 8:00 am	2017-12-08 @ 9:00 am	< 0.3	2017-12-13
7978962	100L	2017-12-05 @ 1:00 pm	2017-12-08 @ 9:00 am	< 0.3	2017-12-13
7978935	101	2017-12-05 @ 11:00 am	2017-12-08 @ 1:00 pm	< 0.3	2017-12-13
7979273	1010	2017-12-05 @ 10:00 am	2017-12-08 @ 10:00 am	2.1 ± 0.4	2017-12-13
7979271	1011	2017-12-05 @ 9:00 am	2017-12-08 @ 10:00 am	1.6 ± 0.5	2017-12-13
7979272	1011	2017-12-05 @ 10:00 am	2017-12-08 @ 10:00 am	1.9 ± 0.5	2017-12-13
7979270	1012	2017-12-05 @ 9:00 am	2017-12-08 @ 10:00 am	1.6 ± 0.4	2017-12-13
7979222	102	2017-12-05 @ 8:00 am	2017-12-08 @ 9:00 am	< 0.3	2017-12-13
7978932	103	2017-12-05 @ 12:00 pm	2017-12-08 @ 10:00 am	< 0.3	2017-12-13
7978966	103	2017-12-05 @ 2:00 pm	2017-12-08 @ 10:00 am	< 0.3	2017-12-13
7978933	103A	2017-12-05 @ 12:00 pm	2017-12-08 @ 10:00 am	0.6 ± 0.4	2017-12-13
7978934	105	2017-12-05 @ 12:00 pm	2017-12-08 @ 10:00 am	1.3 ± 0.4	2017-12-13
7978965	106	2017-12-05 @ 1:00 pm	2017-12-08 @ 9:00 am	< 0.3	2017-12-13
7979227	106	2017-12-05 @ 8:00 am	2017-12-08 @ 9:00 am	< 0.3	2017-12-13
7979228	106E	2017-12-05 @ 8:00 am	2017-12-08 @ 9:00 am	0.7 ± 0.4	2017-12-13
7978967	107	2017-12-05 @ 2:00 pm	2017-12-08 @ 11:00 am	< 0.3	2017-12-13
7978927	107D	2017-12-05 @ 12:00 pm	2017-12-08 @ 11:00 am	0.6 ± 0.4	2017-12-13
7978928	109	2017-12-05 @ 12:00 pm	2017-12-08 @ 11:00 am	1.0 ± 0.4	2017-12-13
7979208	110	2017-12-05 @ 8:00 am	2017-12-08 @ 9:00 am	0.7 ± 0.4	2017-12-13
7979209	110	2017-12-05 @ 8:00 am	2017-12-08 @ 9:00 am	< 0.3	2017-12-13
7979211	110C	2017-12-05 @ 8:00 am	2017-12-08 @ 9:00 am	< 0.3	2017-12-13

Radon test result report for:**CLARKSBURG HIGH SCHOOL
MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7979212	110D	2017-12-05 @ 8:00 am	2017-12-08 @ 9:00 am	< 0.3	2017-12-13
7979213	110E	2017-12-05 @ 8:00 am	2017-12-08 @ 9:00 am	< 0.3	2017-12-13
7979201	110F	2017-12-05 @ 7:00 am	2017-12-08 @ 9:00 am	< 0.3	2017-12-13
7979202	110G	2017-12-05 @ 7:00 am	2017-12-08 @ 9:00 am	0.7 ± 0.4	2017-12-13
7979203	110H	2017-12-05 @ 7:00 am	2017-12-08 @ 9:00 am	0.7 ± 0.4	2017-12-13
7979206	110K	2017-12-05 @ 7:00 am	2017-12-08 @ 9:00 am	0.5 ± 0.4	2017-12-13
7979207	110L	2017-12-05 @ 7:00 am	2017-12-08 @ 9:00 am	0.6 ± 0.4	2017-12-13
7978929	111	2017-12-05 @ 12:00 pm	2017-12-08 @ 11:00 am	< 0.3	2017-12-13
7978924	112A	2017-12-05 @ 12:00 pm	2017-12-08 @ 11:00 am	1.0 ± 0.4	2017-12-13
7978930	113	2017-12-05 @ 12:00 pm	2017-12-08 @ 11:00 am	0.6 ± 0.4	2017-12-13
7978923	114	2017-12-05 @ 12:00 pm	2017-12-08 @ 11:00 am	< 0.3	2017-12-13
7978921	116	2017-12-05 @ 12:00 pm	2017-12-08 @ 11:00 am	1.1 ± 0.4	2017-12-13
7978922	116	2017-12-05 @ 12:00 pm	2017-12-08 @ 11:00 am	0.8 ± 0.4	2017-12-13
7978919	118	2017-12-05 @ 12:00 pm	2017-12-08 @ 11:00 am	1.7 ± 0.5	2017-12-13
7978918	119	2017-12-05 @ 11:00 am	2017-12-08 @ 11:00 am	1.8 ± 0.5	2017-12-13
7978914	120	2017-12-05 @ 11:00 am	2017-12-08 @ 10:00 am	2.6 ± 0.5	2017-12-13
7978916	120G	2017-12-05 @ 11:00 am	2017-12-08 @ 11:00 am	0.9 ± 0.4	2017-12-13
7978917	122	2017-12-05 @ 11:00 am	2017-12-08 @ 11:00 am	1.4 ± 0.5	2017-12-13
7978937	123	2017-12-05 @ 12:00 pm	2017-12-08 @ 10:00 am	0.8 ± 0.4	2017-12-13
7978938	125	2017-12-05 @ 12:00 pm	2017-12-08 @ 10:00 am	0.9 ± 0.4	2017-12-13
7978939	127	2017-12-05 @ 12:00 pm	2017-12-08 @ 10:00 am	0.9 ± 0.4	2017-12-13
7978940	129	2017-12-05 @ 1:00 pm	2017-12-08 @ 10:00 am	0.7 ± 0.4	2017-12-13
7978912	130	2017-12-05 @ 11:00 am	2017-12-08 @ 10:00 am	2.3 ± 0.5	2017-12-13
7978913	130	2017-12-05 @ 11:00 am	2017-12-08 @ 10:00 am	1.9 ± 0.4	2017-12-13
7978911	130B	2017-12-05 @ 11:00 am	2017-12-08 @ 10:00 am	1.4 ± 0.4	2017-12-13
7978943	134	2017-12-05 @ 1:00 pm	2017-12-08 @ 10:00 am	1.3 ± 0.4	2017-12-13
7978944	134	2017-12-05 @ 1:00 pm	2017-12-08 @ 10:00 am	1.4 ± 0.5	2017-12-13
7978946	136	2017-12-05 @ 1:00 pm	2017-12-08 @ 10:00 am	0.9 ± 0.4	2017-12-13
7978945	136	2017-12-05 @ 1:00 pm	2017-12-08 @ 10:00 am	0.9 ± 0.4	2017-12-13
7979266	140	2017-12-05 @ 9:00 am	2017-12-08 @ 10:00 am	1.8 ± 0.4	2017-12-13
7979265	142	2017-12-05 @ 9:00 am	2017-12-08 @ 10:00 am	0.7 ± 0.4	2017-12-13
7979267	142A	2017-12-05 @ 9:00 am	2017-12-08 @ 10:00 am	0.7 ± 0.4	2017-12-13
7978908	143	2017-12-05 @ 11:00 am	2017-12-08 @ 10:00 am	< 0.3	2017-12-13
7979264	144B	2017-12-05 @ 9:00 am	2017-12-08 @ 10:00 am	1.2 ± 0.5	2017-12-13
7978907	145	2017-12-05 @ 11:00 am	2017-12-08 @ 10:00 am	< 0.3	2017-12-13
7979262	146	2017-12-05 @ 9:00 am	2017-12-08 @ 9:00 am	0.7 ± 0.4	2017-12-13
7978906	147	2017-12-05 @ 11:00 am	2017-12-08 @ 10:00 am	< 0.3	2017-12-13

Radon test result report for:**CLARKSBURG HIGH SCHOOL
MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7979293	148	2017-12-05 @ 10:00 am	2017-12-08 @ 12:00 pm	< 0.3	2017-12-13
7978905	149	2017-12-05 @ 12:00 pm	2017-12-08 @ 1:00 pm	0.7 ± 0.4	2017-12-13
7979288	150A	2017-12-05 @ 10:00 am	2017-12-08 @ 10:00 am	< 0.3	2017-12-13
7979287	151	2017-12-05 @ 10:00 am	2017-12-08 @ 10:00 am	0.7 ± 0.4	2017-12-13
7979291	152	2017-12-05 @ 10:00 am	2017-12-08 @ 10:00 am	0.6 ± 0.4	2017-12-13
7979292	152B	2017-12-05 @ 10:00 am	2017-12-08 @ 10:00 am	0.9 ± 0.4	2017-12-13
7979299	153	2017-12-05 @ 11:00 am	2017-12-08 @ 10:00 am	0.5 ± 0.4	2017-12-13
7979289	154	2017-12-05 @ 10:00 am	2017-12-08 @ 10:00 am	0.7 ± 0.4	2017-12-13
7978901	155	2017-12-05 @ 11:00 am	2017-12-08 @ 10:00 am	0.6 ± 0.4	2017-12-13
7978902	155A	2017-12-05 @ 11:00 am	2017-12-08 @ 10:00 am	0.8 ± 0.4	2017-12-13
7979286	156	@	@		
7978903	159	2017-12-05 @ 11:00 am	2017-12-08 @ 10:00 am	1.2 ± 0.4	2017-12-13
7979261	160	2017-12-05 @ 9:00 am	2017-12-08 @ 9:00 am	< 0.3	2017-12-13
7979294	161	2017-12-05 @ 10:00 am	2017-12-08 @ 11:00 am	< 0.3	2017-12-13
7979259	162A	2017-12-05 @ 9:00 am	2017-12-08 @ 9:00 am	< 0.3	2017-12-13
7979260	162B	2017-12-05 @ 9:00 am	2017-12-08 @ 9:00 am	0.6 ± 0.4	2017-12-13
7979296	163	2017-12-05 @ 11:00 am	2017-12-08 @ 10:00 am	0.6 ± 0.4	2017-12-13
7979257	164	2017-12-05 @ 9:00 am	2017-12-08 @ 9:00 am	< 0.3	2017-12-13
7979256	164A	2017-12-05 @ 9:00 am	2017-12-08 @ 9:00 am	0.8 ± 0.4	2017-12-13
7979297	165	2017-12-05 @ 11:00 am	2017-12-08 @ 10:00 am	2.4 ± 0.5	2017-12-13
7979255	166	2017-12-05 @ 9:00 am	2017-12-08 @ 9:00 am	0.7 ± 0.4	2017-12-13
7979298	167	2017-12-05 @ 11:00 am	2017-12-08 @ 12:00 pm	0.7 ± 0.4	2017-12-13
7979254	168	2017-12-05 @ 9:00 am	2017-12-08 @ 9:00 am	< 0.3	2017-12-13
7978960	173	2017-12-05 @ 1:00 pm	2017-12-08 @ 10:00 am	< 0.3	2017-12-13
7978961	173	2017-12-05 @ 1:00 pm	2017-12-08 @ 10:00 am	< 0.3	2017-12-13
7978959	173	2017-12-05 @ 1:00 pm	2017-12-08 @ 10:00 am	0.6 ± 0.4	2017-12-13
7979250	174	2017-12-05 @ 9:00 am	2017-12-08 @ 11:00 am	1.2 ± 0.4	2017-12-13
7979251	174	2017-12-05 @ 9:00 am	2017-12-08 @ 11:00 am	1.1 ± 0.4	2017-12-13
7979240	175	2017-12-05 @ 9:00 am	2017-12-08 @ 9:00 am	1.0 ± 0.4	2017-12-13
7979241	177	2017-12-05 @ 9:00 am	2017-12-08 @ 9:00 am	0.6 ± 0.4	2017-12-13
7979249	180	2017-12-05 @ 9:00 am	2017-12-08 @ 9:00 am	1.1 ± 0.4	2017-12-13
7979243	181	2017-12-05 @ 9:00 am	2017-12-08 @ 9:00 am	0.8 ± 0.4	2017-12-13
7979244	183	2017-12-05 @ 9:00 am	2017-12-08 @ 9:00 am	0.5 ± 0.4	2017-12-13
7979245	184	2017-12-05 @ 9:00 am	2017-12-08 @ 9:00 am	0.6 ± 0.4	2017-12-13
7979246	184	2017-12-05 @ 9:00 am	2017-12-08 @ 9:00 am	1.1 ± 0.5	2017-12-13
7979248	184I	2017-12-05 @ 9:00 am	2017-12-08 @ 9:00 am	1.1 ± 0.4	2017-12-13
7979229	191	2017-12-05 @ 8:00 am	2017-12-08 @ 9:00 am	< 0.3	2017-12-13

December 29, 2017

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

**CLARKSBURG HIGH SCHOOL
MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7979230	191	2017-12-05 @ 8:00 am	2017-12-08 @ 9:00 am	0.6 ± 0.4	2017-12-13
7979238	192E	2017-12-05 @ 8:00 am	2017-12-08 @ 9:00 am	0.6 ± 0.4	2017-12-13
7979239	192F	2017-12-05 @ 8:00 am	2017-12-08 @ 9:00 am	0.8 ± 0.4	2017-12-13
7979235	194	2017-12-05 @ 8:00 am	2017-12-08 @ 9:00 am	1.0 ± 0.4	2017-12-13
7979233	196	2017-12-05 @ 8:00 am	2017-12-08 @ 9:00 am	0.8 ± 0.4	2017-12-13
7979234	196C	2017-12-05 @ 8:00 am	2017-12-08 @ 9:00 am	0.9 ± 0.4	2017-12-13
7979232	198B	2017-12-05 @ 8:00 am	2017-12-08 @ 9:00 am	2.1 ± 0.5	2017-12-13
7978956	201	2017-12-05 @ 1:00 pm	2017-12-08 @ 11:00 am	< 0.3	2017-12-13
7978955	205	2017-12-05 @ 1:00 pm	2017-12-08 @ 11:00 am	0.5 ± 0.4	2017-12-13
7978953	221	2017-12-05 @ 1:00 pm	2017-12-08 @ 11:00 am	0.9 ± 0.4	2017-12-13
7978954	221	2017-12-05 @ 9:00 am	2017-12-08 @ 1:00 pm	0.6 ± 0.4	2017-12-13
7978948	248	2017-12-05 @ 1:00 pm	2017-12-08 @ 11:00 am	< 0.3	2017-12-13
7978949	250	2017-12-05 @ 1:00 pm	2017-12-08 @ 11:00 am	< 0.3	2017-12-13
7978950	254	2017-12-05 @ 1:00 pm	2017-12-08 @ 11:00 am	0.5 ± 0.4	2017-12-13
7978951	256	2017-12-05 @ 1:00 pm	2017-12-08 @ 11:00 am	< 0.3	2017-12-13
7986195	OFFICE BLANK	2017-12-05 @ 2:00 pm	2017-12-08 @ 2:00 pm	< 0.3	2017-12-13
7986196	OFFICE BLANK	2017-12-05 @ 2:00 pm	2017-12-08 @ 2:00 pm	< 0.3	2017-12-13



Radon Test Kit Chain of Custody

Project Name: MCPS Radon Phase

Names of Schools:

- | | |
|--|---------------------------------|
| 1. John T. Baker Middle School | 15. Whetstone Elementary School |
| 2. Cedar Grove Elementary School | |
| 3. Clarksburg Elementary School | |
| 4. Clarksburg Elementary School Annex | |
| 5. Clarksburg High School | |
| 6. Clearspring Elementary School | |
| 7. Damascus Elementary School | |
| 8. Damascus High School | |
| 9. Dr. Charles R. Drew Elementary School | |
| 10. Facilities Maintenance Depot - Shop | |
| 11. Lake Seneca Elementary School | |
| 12. Laytonville Elementary School | |
| 13. Watkins Mill Elementary School | |
| 14. Watkins Mill High School | |

	Date	Initials
Radon Test Kits Deployed	12/05/17	JM
Radon Test Kits Collected	12/08/17	JM
Radon Test Kits Shipped to Lab*	12/08/17	JM
Radon Test Kits Received by Lab*	12/13/17	JM

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

Radon test result report for:**TRANSIT 2
MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7193838	TRANSIT 1	2017-12-05 @ 2:00 pm	2017-12-08 @ 2:00 pm	< 0.3	2017-12-13
7979384	TRANSIT 10	2017-12-05 @ 2:00 pm	2017-12-08 @ 2:00 pm	< 0.3	2017-12-13
7979385	TRANSIT 11	2017-12-05 @ 2:00 pm	2017-12-08 @ 2:00 pm	< 0.3	2017-12-13
7984056	TRANSIT 12	2017-12-05 @ 2:00 pm	2017-12-08 @ 2:00 pm	< 0.3	2017-12-13
7983834	TRANSIT 13	2017-12-05 @ 2:00 pm	2017-12-08 @ 2:00 pm	< 0.3	2017-12-13
7194097	TRANSIT 14	2017-12-05 @ 2:00 pm	2017-12-08 @ 2:00 pm	< 0.3	2017-12-13
7194092	TRANSIT 15	2017-12-05 @ 2:00 pm	2017-12-08 @ 2:00 pm	< 0.3	2017-12-13
7193840	TRANSIT 16	2017-12-05 @ 2:00 pm	2017-12-08 @ 2:00 pm	< 0.3	2017-12-13
7979072	TRANSIT 17	2017-12-05 @ 2:00 pm	2017-12-08 @ 2:00 pm	< 0.3	2017-12-13
7979071	TRANSIT 18	2017-12-05 @ 2:00 pm	2017-12-08 @ 2:00 pm	< 0.3	2017-12-13
7979065	TRANSIT 19	2017-12-05 @ 2:00 pm	2017-12-08 @ 2:00 pm	0.6 ± 0.4	2017-12-13
7978194	TRANSIT 2	2017-12-05 @ 2:00 pm	2017-12-08 @ 2:00 pm	< 0.3	2017-12-13
7985660	TRANSIT 20	2017-12-05 @ 2:00 pm	2017-12-08 @ 2:00 pm	< 0.3	2017-12-13
7985661	TRANSIT 21	2017-12-05 @ 2:00 pm	2017-12-08 @ 2:00 pm	0.7 ± 0.4	2017-12-13
7193843	TRANSIT 22	2017-12-05 @ 2:00 pm	2017-12-08 @ 2:00 pm	< 0.3	2017-12-13
7984055	TRANSIT 23	2017-12-05 @ 2:00 pm	2017-12-08 @ 2:00 pm	< 0.3	2017-12-13
7983813	TRANSIT 24	2017-12-05 @ 2:00 pm	2017-12-08 @ 2:00 pm	< 0.3	2017-12-13
7983827	TRANSIT 25	2017-12-05 @ 2:00 pm	2017-12-08 @ 2:00 pm	< 0.3	2017-12-13
7978193	TRANSIT 3	2017-12-05 @ 2:00 pm	2017-12-08 @ 2:00 pm	< 0.3	2017-12-13
7978189	TRANSIT 4	2017-12-05 @ 2:00 pm	2017-12-08 @ 2:00 pm	0.5 ± 0.4	2017-12-13
7986187	TRANSIT 5	2017-12-05 @ 2:00 pm	2017-12-08 @ 2:00 pm	< 0.3	2017-12-13
7986188	TRANSIT 6	2017-12-05 @ 2:00 pm	2017-12-08 @ 2:00 pm	< 0.3	2017-12-13
7986177	TRANSIT 7	2017-12-05 @ 2:00 pm	2017-12-08 @ 2:00 pm	< 0.3	2017-12-13
7979077	TRANSIT 8	2017-12-05 @ 2:00 pm	2017-12-08 @ 2:00 pm	< 0.3	2017-12-13
7979386	TRANSIT 9	2017-12-05 @ 2:00 pm	2017-12-08 @ 2:00 pm	< 0.3	2017-12-13

December 19, 2017

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

MCPS - Spike Sample Laboratory Results. Measured values are satisfactory, i.e. within $\pm 25\%$ of the chamber's reference value (27.7 pCi/L).

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7975075	S1	2017-12-01 @ 11:00 am	2017-12-04 @ 11:00 am	25.6 \pm 0.7	2017-12-07
7975064	S2	2017-12-01 @ 11:00 am	2017-12-04 @ 11:00 am	27.4 \pm 0.8	2017-12-07
7975063	S3	2017-12-01 @ 11:00 am	2017-12-04 @ 11:00 am	26.3 \pm 0.7	2017-12-07
7975065	S4	2017-12-01 @ 11:00 am	2017-12-04 @ 11:00 am	23.0 \pm 0.7	2017-12-07
7975069	S5	2017-12-01 @ 11:00 am	2017-12-04 @ 11:00 am	25.6 \pm 0.7	2017-12-07
7975070	S6	2017-12-01 @ 11:00 am	2017-12-04 @ 11:00 am	23.0 \pm 0.7	2017-12-07

Air Chek, Inc. 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 182393

NOMINAL Conditions: Radon Conc 27.7 pCi/L Rel. Hum 49.1 % Temp. 70.1 F

Date Start: 12/1/17 Date Stop: 12/4/17 Date Start: _____ Date Stop: _____

Time Start: 1049 Time Stop: 1049 Time Start: _____ Time Stop: _____

Device No.'s: (6) Chan. Bags. Device No.'s: _____

7975075, 7975064, 7975063, _____

7975065, 7975069, 7975070 _____

F4 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



MCPS RADON TESTING

Executive Summary: Clarksburg High School

Date of Test Report:	10/18/2016
Round of Testing:	Initial Follow-up Post Remediation
# Rooms Tested:	11
# Rooms \geq 4.0 pCi/L:	0
Low Value:	< 0.3
High Value:	0.6

Project Status:

Post remediation 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

October 18, 2016

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

Re: **Radon Testing Services**
KCI Job # 12146341.54

Location: Clarksburg High School
22500 Wims Road
Clarksburg, Maryland 20871

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 Clarksburg High School, located at 22500 Wims Road in Clarksburg, Maryland 20871 (subject site).

Scope of Services:

KCI conducted radon testing at the subject site to evaluate indoor radon levels relative to the USEPA's recommended action level of 4.0 picocuries per Liter (pCi/L) - the level at which EPA recommends that schools take action to reduce the level. KCI conducted the radon testing in accordance with American Association of Radon Scientists and Technologists (AARST) *Protocol for Conducting Measurements of Radon and Radon Decay Products in Schools and Large Buildings*. A National Radon 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 September 27, 2016 and deployed fourteen (14) 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 September 30, 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:

These tests represent:

- Post-mitigation testing for radon mitigation systems installed recently

To expedite the testing, tests were conducted in September as soon as students and staff returned to:

- Confirm the success of the mitigation system(s)

Future periodic testing should be conducted during the heating season in ideal conditions as described below. 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 cooling mode; therefore, KCI concludes that this test was not 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 50s and high temperatures in the mid-60s to mid-70s. Maximum sustained winds ranged from 3-15 miles per hour. Average humidity ranged from 71 to 89 percent. Rain (1.83 inches in Gaithersburg, MD) was recorded on 9/29/16. The weather conditions during the testing period may have resulted in atypical radon test results for this facility.

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 blank, office blanks, 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

Radon Testing Results		
Clarksburg High School		
Test Period: 09/27/16-09/30/16		
Kit Number	Room / Area	Result
7802041	132	< 0.3
7802028	134	0.6
7802071	136	0.5
7802034	195	< 0.3
7802068	195	< 0.3
7802003	197	< 0.3
7802040	110J	< 0.3
7802066	110K	< 0.3
7802065	110L	< 0.3
7802064	132C	< 0.3
7802067	136A	< 0.3
7802021	* 193 (Fan on)	< 0.3

Table Note:

* Missing or Compromised Sample

Radon Testing Results		
Clarksburg High School		
Test Period: 09/27/16-09/30/16		
Kit Number	QC Type	Result
7802059	D (110J)	< 0.3
7802058	FB (110J)	< 0.3

Table Note:

* Missing or Compromised Sample

ATTACHMENT C

Laboratory Analytical Results

October 7, 2016

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

**CLARKSBURG HIGH SCHOOL
MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7802059	110J	2016-09-27 @ 4:00 pm	2016-09-30 @ 12:00 pm	< 0.3	2016-10-03
7802040	110J	2016-09-27 @ 4:00 pm	2016-09-30 @ 12:00 pm	< 0.3	2016-10-03
7802058	110J	2016-09-27 @ 4:00 pm	2016-09-30 @ 12:00 pm	< 0.3	2016-10-03
7802066	110K	2016-09-27 @ 5:00 pm	2016-09-30 @ 12:00 pm	< 0.3	2016-10-03
7802065	110L	2016-09-27 @ 5:00 pm	2016-09-30 @ 12:00 pm	< 0.3	2016-10-03
7802041	132	2016-09-27 @ 5:00 pm	2016-09-30 @ 12:00 pm	< 0.3	2016-10-03
7802064	132C	2016-09-27 @ 5:00 pm	2016-09-30 @ 12:00 pm	< 0.3	2016-10-03
7802028	134	2016-09-27 @ 5:00 pm	2016-09-30 @ 12:00 pm	0.6 ± 0.2	2016-10-03
7802071	136	2016-09-27 @ 5:00 pm	2016-09-30 @ 12:00 pm	0.5 ± 0.3	2016-10-03
7802067	136A	2016-09-27 @ 5:00 pm	2016-09-30 @ 12:00 pm	< 0.3	2016-10-03
7802021	193	2016-09-27 @ 5:00 pm	2016-09-30 @ 12:00 pm	< 0.3	2016-10-03
7802034	195	2016-09-27 @ 5:00 pm	2016-09-30 @ 12:00 pm	< 0.3	2016-10-03
7802068	195	2016-09-27 @ 5:00 pm	2016-09-30 @ 12:00 pm	< 0.3	2016-10-03
7802003	197	2016-09-27 @ 5:00 pm	2016-09-30 @ 12:00 pm	< 0.3	2016-10-03

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

October 7, 2016

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

MCPS Radon

Phase 18 Office Blanks

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7802697	1	2016-09-26 @ 11:00 am	2016-09-29 @ 11:00 am	< 0.3	2016-10-03
7801899	10	2016-09-26 @ 11:00 am	2016-09-29 @ 11:00 am	< 0.3	2016-10-03
7802932	11	2016-09-26 @ 11:00 am	2016-09-29 @ 11:00 am	< 0.3	2016-10-03
7802935	12	2016-09-26 @ 11:00 am	2016-09-29 @ 11:00 am	< 0.3	2016-10-03
7802915	13	2016-09-26 @ 11:00 am	2016-09-29 @ 11:00 am	< 0.3	2016-10-03
7802941	2	2016-09-26 @ 11:00 am	2016-09-29 @ 11:00 am	< 0.3	2016-10-03
7802942	3	2016-09-26 @ 11:00 am	2016-09-29 @ 11:00 am	< 0.3	2016-10-03
7802919	4	2016-09-26 @ 11:00 am	2016-09-29 @ 11:00 am	< 0.3	2016-10-03
7802918	5	2016-09-26 @ 11:00 am	2016-09-29 @ 11:00 am	< 0.3	2016-10-03
7802917	6	2016-09-26 @ 11:00 am	2016-09-29 @ 11:00 am	< 0.3	2016-10-03
7802916	7	2016-09-26 @ 11:00 am	2016-09-29 @ 11:00 am	< 0.3	2016-10-03
7802952	8	2016-09-26 @ 11:00 am	2016-09-29 @ 11:00 am	< 0.3	2016-10-03
7802928	9	2016-09-26 @ 11:00 am	2016-09-29 @ 11:00 am	< 0.3	2016-10-03

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October 7, 2016

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

MCPS Radon

Phase 18 Transit Blanks

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7714274	1	2016-09-26 @ 10:00 am	2016-09-29 @ 10:00 am	< 0.3	2016-10-03
7802962	10	2016-09-26 @ 10:00 am	2016-09-29 @ 10:00 am	< 0.3	2016-10-03
7714295	11	2016-09-26 @ 10:00 am	2016-09-29 @ 10:00 am	< 0.3	2016-10-03
7714299	12	2016-09-26 @ 10:00 am	2016-09-29 @ 10:00 am	< 0.3	2016-10-03
7714273	13	2016-09-26 @ 10:00 am	2016-09-29 @ 10:00 am	< 0.3	2016-10-03
7714270	14	2016-09-26 @ 10:00 am	2016-09-29 @ 10:00 am	< 0.3	2016-10-03
7802965	2	2016-09-26 @ 10:00 am	2016-09-29 @ 10:00 am	< 0.3	2016-10-03
7802696	3	2016-09-26 @ 10:00 am	2016-09-29 @ 10:00 am	< 0.3	2016-10-03
7802690	4	2016-09-26 @ 10:00 am	2016-09-29 @ 10:00 am	< 0.3	2016-10-03
7714275	5	2016-09-26 @ 10:00 am	2016-09-29 @ 10:00 am	< 0.3	2016-10-03
7714298	6	2016-09-26 @ 10:00 am	2016-09-29 @ 10:00 am	< 0.3	2016-10-03
7802990	7	2016-09-26 @ 10:00 am	2016-09-29 @ 10:00 am	< 0.3	2016-10-03
7802974	8	2016-09-26 @ 10:00 am	2016-09-29 @ 10:00 am	< 0.3	2016-10-03
7802694	9	2016-09-26 @ 10:00 am	2016-09-29 @ 10:00 am	< 0.3	2016-10-03

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

October 12, 2016

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:
MCPS Radon
Spike Sample Results

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7769880	101	2016-09-24 @ 8:00 am	2016-09-26 @ 8:00 am	22.9 ± 1.0	2016-09-28
7769884	102	2016-09-24 @ 8:00 am	2016-09-26 @ 8:00 am	22.4 ± 1.0	2016-09-28
7769885	103	2016-09-24 @ 8:00 am	2016-09-26 @ 8:00 am	23.0 ± 1.0	2016-09-28
7769890	104	2016-09-24 @ 8:00 am	2016-09-26 @ 8:00 am	22.3 ± 1.0	2016-09-28
7769891	105	2016-09-24 @ 8:00 am	2016-09-26 @ 8:00 am	26.8 ± 1.2	2016-09-28
7769899	106	2016-09-24 @ 8:00 am	2016-09-26 @ 8:00 am	24.1 ± 1.1	2016-09-28

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 176788

NOMINAL Conditions: Radon Conc 26.1 pCi/L Rel. Hum 49.6 % Temp. 70.0 F

Date Start: 9/24/16 Date Stop: 9/26/16 Date Start: _____ Date Stop: _____

Time Start: 0758 Time Stop: 0758 Time Start: _____ Time Stop: _____

Device No.'s: (6) Char. Bags - Device No.'s: _____

7769899, 7769884, 7769885, _____

7769889, 7769890, 7769891 _____

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



Radon Test Kit Chain of Custody

Project Name: MCPS Radon Phase 18

Name of Schools:

- | | |
|-------------------------------------|--|
| 1. Wood Acres Elementary School | 14. Lourie Center |
| 2. Walt Whitman High School | 15. Shriver Elementary School |
| 3. Burning Tree Elementary School | 16. Viers Mill Elementary School |
| 4. Ashburton Elementary School | 17. Highland Elementary School |
| 5. Bethesda Maintenance | 18. Newport Middle School |
| 6. Bethesda Transportation | 19. Albert Einstein High School |
| 7. Herbert Hoover Middle School | 20. Sligo Middle School |
| 8. Cold Spring Elementary School | 21. East Silver Spring Elementary School |
| 9. Garret Park Elementary School | 22. Oak View Elementary School |
| 10. Rock View Elementary School | 23. Roscoe Nix Elementary School |
| 11. Francis Scott Key Middle School | 24. Northwood High School |
| 12. Montgomery Blair High School | 25. Springbrook High School |
| 13. Stephen Knolls School | 26. John F. Kennedy High School |

	Date	Initials
Radon Test Kits Deployed	9/26/16	JM
Radon Test Kits Collected	9/29/16	JM
Radon Test Kits Shipped to Lab*	9/30/16	JM
Radon Test Kits Received by Lab*	10/03/16	JM

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



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 Phase 18

Name of Schools:

- | | |
|--|-----------------------------------|
| 1. Damascus High School | 17. Watkins Mills High School |
| 2. Cedar Grove Elementary School | 18. Forest Oak Middle School |
| 3. Hallie Wells Middle School | 19. Gaithersburg Middle School |
| 4. Clarksburg Elementary School | 20. Emory Grove |
| 5. Clarksburg High School | 21. Fields Road Elementary School |
| 6. Woodlin Elementary School | 22. Beall Elementary School |
| 7. Flora Singer Elementary School | 23. Julius West Middle School |
| 8. Spring Mill Center | 24. Thomas Wootton High School |
| 9. Dr. Charles Drew Elementary School | 25. Robert Frost High School |
| 10. William Farquah Middle School | 26. Travilah Elementary School |
| 11. Rosa Parks Middle School | 27. Jones Lane Elementary School |
| 12. Blair Ewing Center | 28. Longview School |
| 13. Lathrop Smith Environmental Center | 29. Rock Terrace High School |
| 14. Sequoyah Elementary School | 30. Germantown Elementary School |
| 15. Shady Grove Middle School | 31. Lake Seneca Elementary School |
| 16. Captain James Daly Elementary School | |

	Date	Initials
Radon Test Kits Deployed	9/27/16	JM
Radon Test Kits Collected	9/30/16	JM
Radon Test Kits Shipped to Lab*	9/30/16	JM
Radon Test Kits Received by Lab*	10/03/16	JM

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

RADON SCREENING SURVEY – FOLLOW-UP CLARKSBURG HIGH SCHOOL

22500 Wims Road, Clarksburg, Maryland 20871

EXECUTIVE SUMMARY

Date of Test Report:	4/20/16 Follow-Up
Round of Testing:	Initial Follow-up Post Remediation
# Rooms Tested	14
# Rooms \geq 4.0 pCi/L:	3
Low Value:	<0.4
High Value:	8.1
Confirmed Rooms \geq 4.0 pCi/L US EPA Action Level	3

Summary of Sampling Events \geq 4.0 pCi/L

Room	Result (pCi/L) 1/11/16 Initial	Result (pCi/L) 3/18/16 Follow-Up	Result (pCi/L) 4/20/16 Follow-Up	Average Result (pCi/L)
100	--- Missing	1.8	Not Tested	1.8
106	--- Missing	Not Tested	1.2	1.2
110K	3.8	8.8	4.0	5.6
110L	3.9	3.9	8.1	5.3
114	<0.3 Tampered	<0.3	Not Tested	<0.3
120	0.6 Tampered	0.6	0.5	0.6
120G	1.0 Tampered	0.7 Tampered	2.1	1.3
129	<0.3	<0.3	Not Tested	<0.3
132 C	3.9 Tampered	--- Missing	5.1	4.5
134	3.9	4.3	3.0	3.8
136A	3.4	5.0	3.0	3.8
138	--- Missing	--- Missing	2.1	2.1
141	--- Missing	1.0	Not Tested	1.0
145	--- Missing	<0.3	Not Tested	<0.3
146	--- Missing	0.6	Not Tested	0.6
148	--- Missing	0.6	Not Tested	0.6
163	<0.3 Tampered	--- Missing	<0.4	<0.4
164	--- Missing	<0.3	Not Tested	<0.3
173	--- Missing	--- Missing	<0.4	<0.4
173	<0.3 Tampered	--- Missing	<0.4	<0.4
174	--- Missing	Not Tested	Not Tested	n/a
178	--- Missing	<0.3	Not Tested	<0.3
181	--- Missing	--- Missing	0.7	0.7
192E	--- Missing	1.1	Not Tested	1.1

195	1.4 Tampered	5.1	0.6	2.4
CAFÉ	--- Missing	<0.3	<0.4	<0.4
CAFÉ	<0.3 Tampered	Not Tested	<0.4	<0.4

Samples with Average result of 'n/a' will be resampled after a mitigation system has been installed



MCPS RADON TESTING

Executive Summary: Clarksburg High School

Date of Test Report:	4/20/2016
Round of Testing:	Initial Follow-up Post Remediation
# Rooms Tested:	14
# Rooms ≥ 4.0 pCi/L:	3
Low Value:	< 0.4
High Value:	8.1

Rooms with results ≥ 4.0 pCi/L:

110L (8.1 pCi/L), 132C (5.1 pCi/L), 110K (4.0 pCi/L)

Project Status:

Retesting completed; use the average of the initial and re-test results in a room to determine if remediation is necessary.



ENGINEERS • PLANNERS • SCIENTISTS • CONSTRUCTION MANAGERS

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

April 20, 2016

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

Re: **Radon Testing Services**
KCI Job # 12146341.34

Location: Clarksburg High School
22500 Wims Road
Clarksburg, Maryland 20871

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 Clarksburg High School, located at 22500 Wims Road in Clarksburg, Maryland 20871 (subject site).

Scope of Services:

KCI conducted radon testing at the subject site to evaluate indoor radon levels relative to the USEPA's recommended action level of 4.0 picocuries per Liter (pCi/L) - the level at which EPA recommends that schools take action to reduce the level. KCI conducted the radon testing in accordance with American Association of Radon Scientists and Technologists (AARST) *Protocol for Conducting Measurements of Radon and Radon Decay Products in Schools and Large Buildings*. A National Radon 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 March 29, 2016 and deployed twenty-three (23) 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 TCS Industries Inc. as spike samples. The spiked tests were exposed to a known radon concentration by TCS prior to being returned to the laboratory for analysis.

KCI returned to the site on April 1, 2016 to retrieve the radon sampling test kits. KCI shipped all radon tests via overnight delivery to AccuStar Labs for analysis by gamma-ray spectroscopy. Accustar Labs is a NRSB certified analytical laboratory for radon analysis (certification # ARL0007) located at 929 Mount

Zion Road, Lebanon, Pennsylvania.

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 $\leq 65^{\circ}\text{F}$.

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	110L	8.1
	132C	5.1
	110K	4.0
< 4.0 pCi/L	See Attachment B	

Notes:

D- Duplicate sample

The office blank and lab transit blanks had test results of less than the laboratory detection limit of 0.4 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

*Office blanks were submitted at a rate of 1% for all samples deployed in Phase 13 testing. Office blanks were not submitted under each school individually.

Radon Testing Results		
Clarksburg High School		
Test Period: 03/29/16-04/01/16		
Kit Number	Room / Area	Result
3029261	106	1.2
3029239	120	0.5
3029240	120	<0.4
3029279	120	<0.4
3029277	134	3.0
3029275	138	2.1
3029272	163	<0.4
3029238	173	<0.4
3029234	173	<0.4
3029291	173	<0.4
3029294	173	<0.4
3029271	181	0.6
9029298	181	<0.4
3029222	181	0.7
3029280	CAFE	<0.4
3029231	CAFE	<0.4
3029296	195	0.6
3029295	110K	4.0
3029274	110L	8.1
3029297	120G	2.1
3029293	132C	5.1
3029200	136A	3.0

Table Note:

* Missing or Compromised Sample

Radon Testing Results		
Clarksburg High School		
Test Period: 03/29/16-04/01/16		
Kit Number	QC Type	Result
3029278	D (181)	<0.4

Table Note:

* Missing or Compromised Sample

ATTACHMENT C

Laboratory Analytical Results

NRPP 10511AL
NRSB ARL0007

EPA Method #402-R-92-004
Charcoal Canister
NRPP Device Code 6048
NRSB Device Code 10317

Laboratory Report for:

Property Tested: Project # 12146341

KCI Technologies
936 Ridgebrook Rd
Sparks MD 21152

Clarksburg H.S.
22500 Wims Rd
Clarksburg MD 20871

Log Number	Device Number	Test Exposure Duration:		Area Tested	Result (pCi/L)
3019569	3029295	03/29/2016 6:29 am	04/01/2016 6:42 am	Unit 110K First Floor	4.0
3019570	3029274	03/29/2016 6:31 am	04/01/2016 6:43 am	Unit 110L First Floor	8.1
3019571	3029240	03/29/2016 6:41 am	04/01/2016 6:50 am	Unit 120 First Floor	<0.4
3019572	3029239	03/29/2016 6:39 am	04/01/2016 6:49 am	Unit 120 First Floor	0.5
3019573	3029279	03/29/2016 6:43 am	04/01/2016 6:47 am	Unit 120 First Floor	<0.4
3019574	3029297	03/29/2016 6:46 am	04/01/2016 6:51 am	Unit 120G First Floor	2.1
3019575	3029261	03/29/2016 7:08 am	04/01/2016 6:44 am	Unit 106 First Floor	1.2
3019576	3029293	03/29/2016 6:50 am	04/01/2016 6:54 am	Unit 132C First Floor	5.1
3019577	3029277	03/29/2016 6:52 am	04/01/2016 6:58 am	Unit 134 First Floor	3.0
3019578	3029300	03/29/2016 6:55 am	04/01/2016 6:55 am	Unit 136A First Floor	3.0

Comment: A copy of this report was emailed to tehsin@kci.com.

Distributed by: KCI Technologies, Inc.

Date Received: 04/05/2016 Date Logged: 04/05/2016 Date Analyzed: 04/05/2016 Date Reported: 04/06/2016

Report Reviewed By: Carolyn D. Koke

Report Approved By: Carolyn D. Koke

Disclaimer:

Carolyn D. Koke, President, AccuStar Labs

The uncertainty of this radon measurement is $\pm 10\%$. Factors contributing to uncertainty include statistical variations, daily and seasonal variations in radon concentrations, sample collection techniques and operation of the dwelling. Interference with test conditions may influence the test results.

This report may only be transferred to a third party in its entirety. Analytical results relate to the samples AS RECEIVED BY THE LABORATORY. Results shown on this report represent levels of radon gas measured between the dates shown in the room or area of the site identified above as "Property Tested". Incorrect information will affect results. The results may not be construed as either predictive or supportive of measurements conducted in any area of this structure at any other time. AccuStar Labs, its employees and agents are not responsible for the consequences of any action taken or not taken based upon the results reported or any verbal or written interpretation of the results.

NRPP 10511AL
NRSB ARL0007

EPA Method #402-R-92-004
Charcoal Canister
NRPP Device Code 6048
NRSB Device Code 10317

Laboratory Report for:

Property Tested: Project # 12146341

KCI Technologies
936 Ridgebrook Rd
Sparks MD 21152

Clarksburg H.S.
22500 Wims Rd
Clarksburg MD 20871

Log Number	Device Number	Test Exposure Duration:		Area Tested	Result (pCi/L)
3019579	3029275	03/29/2016 6:58 am	04/01/2016 6:59 am	Unit 138 First Floor	2.1
3019580	3029234	03/29/2016 7:12 am	04/01/2016 7:01 am	Unit 173 First Floor	<0.4
3019581	3029238	03/29/2016 7:14 am	04/01/2016 7:03 am	Unit 173 First Floor	<0.4
3019582	3029291	03/29/2016 7:19 am	04/01/2016 7:04 am	Unit 173 First Floor	<0.4
3019583	3029294	03/29/2016 7:22 am	04/01/2016 7:05 am	Unit 173 First Floor	<0.4
3019584	3029272	03/29/2016 7:50 am	04/01/2016 7:13 am	Unit 163 First Floor	<0.4
3019585	3029298	03/29/2016 7:40 am	04/01/2016 7:07 am	Unit 181 First Floor	<0.4
3019586	3029271	03/29/2016 7:43 am	04/01/2016 7:08 am	Unit 181 First Floor	0.6
3019587	3029222	03/29/2016 7:45 am	04/01/2016 7:09 am	Unit 181 First Floor	0.7
3019588	3029278	03/29/2016 7:46 am	04/01/2016 7:10 am	Unit 181 First Floor	<0.4

Comment: A copy of this report was emailed to tehsin@kci.com.

Distributed by: KCI Technologies, Inc.

Date Received: 04/05/2016 Date Logged: 04/05/2016 Date Analyzed: 04/05/2016 Date Reported: 04/06/2016

Report Reviewed By: 

Report Approved By: 

Carolyn D. Koke, President, AccuStar Labs

Disclaimer:

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NRPP 10511AL
NRSB ARL0007

EPA Method #402-R-92-004
Charcoal Canister
NRPP Device Code 6048
NRSB Device Code 10317

Laboratory Report for:

Property Tested: Project # 12146341

KCI Technologies
936 Ridgebrook Rd
Sparks MD 21152

Clarksburg H.S.
22500 Wims Rd
Clarksburg MD 20871

Log Number	Device Number	Test Exposure Duration:		Area Tested	Result (pCi/L)
3019589	3029296	03/29/2016 7:55 am	04/01/2016 7:16 am	Unit 195 First Floor	0.6
3019590	3029280	03/29/2016 7:59 am	04/01/2016 7:18 am	Unit 191 First Floor	<0.4
3019591	3029231	03/29/2016 8:01 am	04/01/2016 7:19 am	Unit 191 First Floor	<0.4

Comment: A copy of this report was emailed to tehsin@kci.com.

Distributed by: KCI Technologies, Inc.

Date Received: 04/05/2016 Date Logged: 04/05/2016 Date Analyzed: 04/05/2016 Date Reported: 04/06/2016

Report Reviewed By: Christie Bates

Report Approved By: Carolyn D. Koke

Disclaimer:

Carolyn D. Koke, President, AccuStar Labs

The uncertainty of this radon measurement is $\pm 10\%$. Factors contributing to uncertainty include statistical variations, daily and seasonal variations in radon concentrations, sample collection techniques and operation of the dwelling. Interference with test conditions may influence the test results.

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Radon Device Type Open Face Canister

Send Written Report To:

Name	KCI Technologies, Inc
Address	936 Ridgebrook Road
Address	
City / Town	Sparks
State/Province Postal Code	MD 21152
Report Country	Baltimore County
Email Address	tehsin@kci.com

Site Tested:

Site Name	Clarksburg H.S.
Address	22500 Wims Rd
Address	
City / Town	Clarksburg
State/Province Postal Code	MD 20871
Test Country	Montgomery County
Project Number	12146341

Contact Information:

Contact	Tehsin Aurangabadwala
Telephone	410-891-1726
Technician	
Cert. Number	
Signature	

Lab Use Only	Device Number	Building Number	Unit Number	Floor	Name of Room	Temp	Start Date mm/dd/yyyy	Start Time hh:mm am / pm	Stop Date mm/dd/yyyy	Stop Time hh:mm am / pm	Lab Use Only
	3029225		110K	1		52°	3/29/16	06:29	4/01/16	06:42	
	3029274		110L					06:31		06:43	
	3029240		120					06:41		06:50	
	3029239		120					06:39		06:49	
	3029279		120					06:43		06:47	
	3029297		120G					06:46		06:51	
	3029261		106					07:08		06:44	
	3029293		132C					06:50		06:54	
	3029277		134					06:52		06:58	
	3029300		136A					06:55		06:55	

Radon Device Type Open Face Canister

Send Written Report To:

Name	KCI Technologies, Inc
Address	936 Ridgebrook Road
Address	
City / Town	Sparks
State/Province Postal Code	MD 21152
Report Country	Baltimore County
Email Address	tehsin@kci.com

Site Tested:

Site Name	Clarksburg H.S.
Address	22500 Wims Rd
Address	
City / Town	Clarksburg
State/Province Postal Code	MD 20871
Test Country	Montgomery County
Project Number	12146341

Contact Information:

Contact	Tehsin Aurangabadwala
Telephone	410-891-1726
Technician	
Cert. Number	
Signature	

Lab Use Only	Device Number	Building Number	Unit Number	Floor	Name of Room	Temp	Start Date mm/dd/yyyy	Start Time hh:mm am / pm	Stop Date mm/dd/yyyy	Stop Time hh:mm am / pm	Lab Use Only
	3029275		138	1		56°	3/29/16	06:58	4/01/16	06:59	
	3029234		173					07:12		07:01	
	3029238		173					07:14		07:03	
	3029251		173					07:19		07:04	
	3029294		173					07:22		07:05	
	3029272 302		163 174					07:50		07:13	
	3029298		181					07:40		07:07	
	3029271		181					07:43		07:08	
	3029222		181					07:45		07:09	
	3029278		181					07:46		07:10	

NRPP 10511AL
NRSB ARL0007

EPA Method #402-R-92-004
Charcoal Canister
NRPP Device Code 6048
NRSB Device Code 10317

Laboratory Report for:

Property Tested: Project # 12146341

KCI Technologies
936 Ridgebrook Rd
Sparks MD 21152

MCPS PHASE 13 Office Blank

Log Number	Device Number	Test Exposure Duration:	Area Tested	Result (pCi/L)
3019508	3029183	03/29/2016 9:40 am 04/01/2016 9:40 am	Office First Floor	<0.4

Comment: A copy of this report was emailed to tehsin@kci.com.

Distributed by: KCI Technologies, Inc.

Date Received: 04/05/2016 Date Logged: 04/05/2016 Date Analyzed: 04/05/2016 Date Reported: 04/05/2016

Report Reviewed By: Grace Heubling

Report Approved By: Carolyn D. Koke

Disclaimer:

Carolyn D. Koke, President, AccuStar Labs

The uncertainty of this radon measurement is $\sim \pm 10\%$. Factors contributing to uncertainty include statistical variations, daily and seasonal variations in radon concentrations, sample collection techniques and operation of the dwelling. Interference with test conditions may influence the test results.

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Send Written Report To:

Name	KCI Technologies, Inc		
Address	936 Ridgebrook Road		
Address			
City / Town	Sparks		
State/Province	Postal Code	MD 21152	
Report Country	Baltimore County		
Email Address	tehsin@kci.com		

Site Tested:

Site Name	KCI OFFICE	
Address	936 RIDGEBROOK RD.	
Address		
City / Town	SPARKS	
State/Province	Postal Code	MD
Test Country	Montgomery County	
Project Number	12146341	

Contact Information:

Contact	Tehsin Aurangabadwala
Telephone	410-891-1726
Technician	
Cert. Number	
Signature	

[illegible]

NRPP 10511AL
NRSB ARL0007

EPA Method #402-R-92-004
Charcoal Canister
NRPP Device Code 6048
NRSB Device Code 10317

Laboratory Report for:

Property Tested:

KCI Technologies
936 Ridgebrook Rd
Sparks MD 21152

MCPS
Transit Blanks

Log Number	Device Number	Test Exposure Duration:		Area Tested	Result (pCi/L)
3010588	3028953	01/19/2016 1:00 pm	01/22/2016 9:30 am	1	< 0.4
3010589	3028955	01/19/2016 1:00 pm	01/22/2016 9:30 am	2	< 0.4
3010590	3028954	01/19/2016 1:00 pm	01/22/2016 9:30 am	3	< 0.4
3010591	3028997	01/19/2016 1:00 pm	01/22/2016 9:30 am	4	< 0.4

Comment: AMENDED REPORT for 3028953-8955, 3028997 on 2/22/16 to add all missing information from the blank datasheet. A copy of this report was emailed to james.mouldsdales@kci.com.

Distributed by: KCI Technologies, Inc.

Date Received: 01/27/2016 Date Logged: 01/27/2016 Date Analyzed: 01/28/2016 Date Reported: 01/28/2016

Report Reviewed By: Christie Bates

Report Approved By: Carolyn D. Koke

Disclaimer:

Carolyn D. Koke, President, AccuStar Labs

The uncertainty of this radon measurement is +/- 10 %. Factors contributing to uncertainty include statistical variations, daily and seasonal variations in radon concentrations, sample collection techniques and operation of the dwelling. Interference with test conditions may influence the test results.

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TCS INDUSTRIES, INC.

(717) 657-7032

RADON GAS DETECTION

www.radondetek.com

4326 Crestview Road, Harrisburg, PA 17112

James Mouldsdale
KCI
936 Ridgebrook Rd.
Sparks, MD 21152

April 04, 2016

Dear Mr. Mouldsdale:

The spike exposure data were:

Start 04/04/16 @ 1110 hrs EDT
End 04/06/16 @ 1113 hrs EDT

AC 3029218, 3029219, 3029220, 3029217, 3029214, 3029217, and 3029166

Average radon concentration was 10.6 pCi/L +/- 5%

Avg. Temp. was 71F
Avg. RH was 51%
Elevation was 490 feet above sea level

Sincerely,



Carl H. Distenfeld, CHP

TCS Radon Chamber NRSB CHM 0002

NRPP 10511AL
NRSB ARL0007

EPA Method #402-R-92-004
Charcoal Canister
NRPP Device Code 6048
NRSB Device Code 10317

Laboratory Report for:

Property Tested:

KCI Technologies
936 Ridgebrook Rd
Sparks MD 21152

MCPS
Radon Spike Sample Laboratory Results

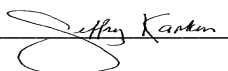
Log Number	Device Number	Test Exposure Duration:		Area Tested	Result (pCi/L)
3020102	3029166	04/04/2016 11:10 am	04/06/2016 11:13 am	Not Indicated	11.9
3020103	3029214	04/04/2016 11:10 am	04/06/2016 11:13 am	Not Indicated	11.5
3020104	3029217	04/04/2016 11:10 am	04/06/2016 11:13 am	Not Indicated	10.7
3020105	3029218	04/04/2016 11:10 am	04/06/2016 11:13 am	Not Indicated	11.3
3020106	3029219	04/04/2016 11:10 am	04/06/2016 11:13 am	Not Indicated	11.0
3020107	3029220	04/04/2016 11:10 am	04/06/2016 11:13 am	Not Indicated	10.5

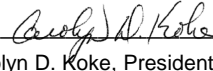
Comment: A copy of this report was emailed to james.mouldsdale@kci.com.

Distributed by: KCI Technologies, Inc.

Date Received: 04/07/2016 Date Logged: 04/07/2016 Date Analyzed: 04/07/2016 Date Reported: 04/08/2016

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.

Report Reviewed By: 

Report Approved By: 
Carolyn D. Koke, President, AccuStar Labs

Disclaimer:

The uncertainty of this radon measurement is $\pm 10\%$. Factors contributing to uncertainty include statistical variations, daily and seasonal variations in radon concentrations, sample collection techniques and operation of the dwelling. Interference with test conditions may influence the test results.

This report may only be transferred to a third party in its entirety. Analytical results relate to the samples AS RECEIVED BY THE LABORATORY. Results shown on this report represent levels of radon gas measured between the dates shown in the room or area of the site identified above as "Property Tested". Incorrect information will affect results. The results may not be construed as either predictive or supportive of measurements conducted in any area of this structure at any other time. AccuStar Labs, its employees and agents are not responsible for the consequences of any action taken or not taken based upon the results reported or any verbal or written interpretation of the results.



MCPS RADON TESTING

Executive Summary: Clarksburg High School

Date of Test Report:	3/18/2016
Round of Testing:	Initial Follow-up Post Remediation
# Rooms Tested:	24
# Rooms ≥ 4.0 pCi/L:	4
Low Value:	< 0.3
High Value:	8.8

Rooms with results ≥ 4.0 pCi/L:

Room 110K (8.8 pCi/L), Room 195 (5.1 pCi/L), Room 136A (5.0 pCi/L), and Room 134 (4.3 pCi/L).

Project Status:

Retesting completed; use the average of the initial and re-test results in a room to determine if remediation is necessary.

Retesting completed; missing or compromised samples need re-test and locked/inaccessible rooms need testing (Room 174). Re-testing also needed for Room 195.



ENGINEERS • PLANNERS • SCIENTISTS • CONSTRUCTION MANAGERS

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

March 18, 2016

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

Re: **Radon Testing Services**
KCI Job # 12146341.29

Location: Clarksburg High School
22500 Wims Road
Clarksburg, Maryland 20871

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 Clarksburg High School, located at 22500 Wims Road in Clarksburg, Maryland 20871 (subject site).

Scope of Services:

KCI conducted radon testing at the subject site to evaluate indoor radon levels relative to the USEPA's recommended action level of 4.0 picocuries per Liter (pCi/L) - the level at which EPA recommends that schools take action to reduce the level. KCI conducted the radon testing in accordance with American Association of Radon Scientists and Technologists (AARST) *Protocol for Conducting Measurements of Radon and Radon Decay Products in Schools and Large Buildings*. A National Radon 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 February 22, 2016 and deployed thirty-four (34) 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 February 25, 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 $\leq 65^{\circ}\text{F}$.

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. Note that strong storms and heavy rainfall were recorded during the test period. The unusual weather conditions may have resulted in atypical radon test results for this facility.

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	110K	8.8
	195	5.1
	136A	5.0
	134	4.3
< 4.0 pCi/L	See Attachment B	

Notes:

D- Duplicate sample

The field blank, office blanks, 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

*Office blanks were submitted at a rate of 1% for all samples deployed in Phase 9 testing. Office blanks were not submitted under each school individually.

Radon Testing Results		
Clarksburg High School		
Test Period: 02/22/16-02/25/16		
Kit Number	Room / Area	Result
7731694	100	1.8
7731692	114	< 0.3
7731682	120	0.5
7731683	120	0.6
7731684	120	0.6
7731688	120	0.5
7721410	129	< 0.3
7721435	134	4.3
7731671	141	1.0
7731676	145	< 0.3
7726797	146	0.6
7726792	148	0.6
7726796	164	< 0.3
7726789	178	< 0.3
7731639	195	5.1
7731686	* 106 (Missing)	-
7721411	110 K	8.8
7731687	110 L	3.9
7731689	* 120 (Tampered)	< 0.3
7731690	* 120G (Tampered)	0.7
7731642	* 132 C (Missing)	-
7731685	136A	5.0
7726786	* 138 (Missing)	-
7731677	* 163 (Missing)	-
7731670	* 173 (Missing)	-
7731673	* 173 (Missing)	-
7731680	* 181 (Missing)	-
7731675	* 181 (Tampered)	< 0.3
7731681	192E	1.1
7731640	* CAFE (Tampered)	< 0.3

Table Note:

* Missing or Compromised Sample

Radon Testing Results		
Clarksburg High School		
Test Period: 02/22/16-02/25/16		
Kit Number	QC Type	Result
7726791	D (141)	< 0.3
7726795	D (164)	< 0.3
7731641	D (CAFE)	0.9
7731693	FB (110K)	< 0.3

Table Note:

* Missing or Compromised Sample

ATTACHMENT C

Laboratory Analytical Results

March 8, 2016** **LABORATORY ANALYSIS
REPORT ****

Radon test result report for:
**CLARKSBURG HIGH SCHOOL
MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7731694	100	2016-02-22 @ 12:00 pm	2016-02-25 @ 10:00 am	1.8 ± 0.3	2016-02-29
7731686	106	@	@		
7721411	110 K	2016-02-22 @ 2:00 pm	2016-02-25 @ 10:00 am	8.8 ± 0.6	2016-02-29
7731687	110 L	2016-02-22 @ 2:00 pm	2016-02-25 @ 10:00 am	3.9 ± 0.4	2016-02-29
7731693	110K	2016-02-22 @ 2:00 pm	2016-02-25 @ 10:00 am	< 0.3	2016-02-29
7731692	114	2016-02-22 @ 12:00 pm	2016-02-25 @ 10:00 am	< 0.3	2016-02-29
7731682	120	2016-02-22 @ 12:00 pm	2016-02-25 @ 10:00 am	0.5 ± 0.3	2016-02-29
7731683	120	2016-02-22 @ 12:00 pm	2016-02-25 @ 10:00 am	0.6 ± 0.3	2016-02-29
7731684	120	2016-02-22 @ 12:00 pm	2016-02-25 @ 10:00 am	0.6 ± 0.3	2016-02-29
7731688	120	2016-02-22 @ 12:00 pm	2016-02-25 @ 10:00 am	0.5 ± 0.3	2016-02-29
7731689	120	2016-02-22 @ 12:00 pm	2016-02-25 @ 10:00 am	< 0.3	2016-02-29
7731690	120G	2016-02-22 @ 12:00 pm	2016-02-25 @ 10:00 am	0.7 ± 0.3	2016-02-29
7721410	129	2016-02-22 @ 1:00 pm	2016-02-25 @ 10:00 am	< 0.3	2016-02-29
7731642	132 C	@	@		
7721435	134	2016-02-22 @ 1:00 pm	2016-02-25 @ 10:00 am	4.3 ± 0.5	2016-02-29
7731685	136A	2016-02-22 @ 1:00 pm	2016-02-25 @ 10:00 am	5.0 ± 0.5	2016-02-29
7726786	138	@	@		
7726791	141	2016-02-22 @ 1:00 pm	2016-02-25 @ 10:00 am	< 0.3	2016-02-29
7731671	141	2016-02-22 @ 1:00 pm	2016-02-25 @ 10:00 am	1.0 ± 0.3	2016-02-29
7731676	145	2016-02-22 @ 1:00 pm	2016-02-25 @ 10:00 am	< 0.3	2016-02-29
7726797	146	2016-02-22 @ 1:00 pm	2016-02-25 @ 10:00 am	0.6 ± 0.3	2016-02-29
7726792	148	2016-02-22 @ 1:00 pm	2016-02-25 @ 10:00 am	0.6 ± 0.3	2016-02-29
7731677	163	@	@		
7726795	164	2016-02-22 @ 1:00 pm	2016-02-25 @ 10:00 am	< 0.3	2016-02-29
7726796	164	2016-02-22 @ 1:00 pm	2016-02-25 @ 10:00 am	< 0.3	2016-02-29
7731670	173	@	@		
7731673	173	@	@		
7726789	178	2016-02-22 @ 1:00 pm	2016-02-25 @ 10:00 am	< 0.3	2016-02-29
7731680	181	@	@		
7731675	181	2016-02-22 @ 1:00 pm	2016-02-25 @ 10:00 am	< 0.3	2016-02-29
7731681	192E	2016-02-22 @ 1:00 pm	2016-02-25 @ 10:00 am	1.1 ± 0.3	2016-02-29
7731639	195	2016-02-22 @ 1:00 pm	2016-02-25 @ 10:00 am	5.1 ± 0.5	2016-02-29
7731640	CAFE	2016-02-22 @ 1:00 pm	2016-02-25 @ 10:00 am	< 0.3	2016-02-29
7731641	CAFE	2016-02-22 @ 1:00 pm	2016-02-25 @ 10:00 am	0.9 ± 0.3	2016-02-29

March 9, 2016

**** LABORATORY ANALYSIS
REPORT ****

Radon test result report for:

MCPS

Phase 9 Office Blanks

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7712568	0	2016-02-22 @ 6:00 pm	2016-02-25 @ 3:00 pm	< 0.3	2016-02-29
7712584	0	2016-02-22 @ 6:00 pm	2016-02-25 @ 3:00 pm	< 0.3	2016-02-29
7719460	0	2016-02-22 @ 6:00 pm	2016-02-25 @ 3:00 pm	< 0.3	2016-02-29
7719481	0	2016-02-22 @ 6:00 pm	2016-02-25 @ 3:00 pm	< 0.3	2016-02-29
7719497	0	2016-02-22 @ 6:00 pm	2016-02-25 @ 3:00 pm	< 0.3	2016-02-29
7719498	0	2016-02-22 @ 6:00 pm	2016-02-25 @ 3:00 pm	< 0.3	2016-02-29

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

March 9, 2016

**** LABORATORY ANALYSIS
REPORT ****

Radon test result report for:

MCPS

Phase 9 Office Blanks

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7731626	0	2016-02-23 @ 2:00 pm	2016-02-26 @ 3:00 pm	< 0.3	2016-03-01
7731633	0	2016-02-23 @ 2:00 pm	2016-02-26 @ 3:00 pm	< 0.3	2016-03-01
7735204	0	2016-02-23 @ 2:00 pm	2016-02-26 @ 3:00 pm	< 0.3	2016-03-01

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

Radon test result report for:
TRANSIT- PHASE 7, 8, 9
NONE

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7734937	1	2016-02-19 @ 3:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23
7734946	10	2016-02-19 @ 4:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23
7734955	11	2016-02-19 @ 4:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23
7734956	12	2016-02-19 @ 4:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23
7734959	13	2016-02-19 @ 4:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23
7734930	14	2016-02-19 @ 4:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23
7734953	15	2016-02-19 @ 4:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23
7734954	16	2016-02-19 @ 4:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23
7734940	17	2016-02-19 @ 4:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23
7734949	18	2016-02-19 @ 4:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23
7734948	19	2016-02-19 @ 4:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23
7734939	2	2016-02-19 @ 3:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23
7734942	20	2016-02-19 @ 4:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23
7734929	21	2016-02-19 @ 4:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23
7734933	22	2016-02-19 @ 4:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23
7734934	23	2016-02-19 @ 4:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23
7734936	24	2016-02-19 @ 4:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23
7734943	25	2016-02-19 @ 4:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23
7734944	26	2016-02-19 @ 4:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23
7734935	27	2016-02-19 @ 4:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23
7734928	28	2016-02-19 @ 4:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23
7734952	29	2016-02-19 @ 4:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23
7734947	3	2016-02-19 @ 3:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23
7734931	30	2016-02-19 @ 4:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23
7734932	31	2016-02-19 @ 4:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23
7718520	32	2016-02-19 @ 4:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23
7718523	33	2016-02-19 @ 4:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23
7718522	34	2016-02-19 @ 4:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23
7718521	35	2016-02-19 @ 4:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23
7734945	4	2016-02-19 @ 3:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23
7734960	5	2016-02-19 @ 4:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23
7734958	6	2016-02-19 @ 4:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23
7734951	7	2016-02-19 @ 4:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23
7734957	8	2016-02-19 @ 4:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23
7734938	9	2016-02-19 @ 4:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23

February
15,
2016

**** LABORATORY ANALYSIS
REPORT ****

Spike Sample Laboratory Results

Radon test result report for:
MCPS

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7718273	101A	2016-01-30 @ 9:00 am	2016-02-01 @ 9:00 am	6.5 ± 0.6	2016-02-04
7718281	102B	2016-01-30 @ 9:00 am	2016-02-01 @ 9:00 am	6.4 ± 0.6	2016-02-04
7718282	103C	2016-01-30 @ 9:00 am	2016-02-01 @ 9:00 am	6.3 ± 0.6	2016-02-04
7718288	104D	2016-01-30 @ 9:00 am	2016-02-01 @ 9:00 am	6.7 ± 0.6	2016-02-04
7718289	105E	2016-01-30 @ 9:00 am	2016-02-01 @ 9:00 am	6.6 ± 0.6	2016-02-04
7718291	106F	2016-01-30 @ 9:00 am	2016-02-01 @ 9:00 am	6.5 ± 0.6	2016-02-04

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 KCF Technologies Inc. Job Number 173704

NOMINAL Conditions: Radon Conc 5.9 pCi/L Rel. Hum 45.9 % Temp. 79.0 F

Date Start: 11/30/16 Date Stop: 2/1/16

Date Start: _____ Date Stop: _____

Time Start: 0926 Time Stop: 0926

Time Start: _____ Time Stop: _____

Device No.'s: (6) Char. Bags -

Device No.'s: _____

7718281, 7718282, 7718291,

7718288, 7718289, 7718273

3 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



Radon Test Kit Chain of Custody

Project Name: MCPS Radon Phase 9

Name of Schools:

- | | | |
|--------------------------|---------------------------|------------------------|
| 1. Rocking Horse Road ES | 16. Broad Acres ES | 31. Rosa Parks MS |
| 2. Rockwell ES | 17. Belmont ES | 32. Rosemary Hills ES |
| 3. Oakland Terrace ES | 18. Emory Grove Center | 33. Sequoyah ES |
| 4. Rosemont ES | 19. Forest Knolls ES | 34. Damascus HS |
| 5. Beall ES | 20. Baker MS | 35. Einstein ES |
| 6. Cresthaven ES | 21. MLK MS | 36. Forest Oak MS |
| 7. Quince Orchard HS | 22. Richard Montgomery HS | 37. Hoover MS |
| 8. Smith Center | 23. Sherwood HS | 38. Julius West MS |
| 9. Ashburton ES | 24. Walter Johnson HS | 39. John F. Kennedy HS |
| 10. Bannockburn ES | 25. Diamond ES | 40. Travilah ES |
| 11. Bradley Hills ES | 26. Newport Mill MS | 41. Watkins Mill HS |
| 12. Cannon Road ES | 27. Drew ES | 42. Northwood HS |
| 13. Flora M. Singer ES | 28. Monocacy ES | 43. Lincoln Center |
| 14. Clarksburg HS | 29. Potomac ES | |
| 15. Briggs Chaney MS | 30. Rock Terrace School | |

	Date	Initials
Radon Test Kits Deployed	2/22/16	JM
Radon Test Kits Collected	2/25/16	JM
Radon Test Kits Shipped to Lab*	2/25/16	JM
Radon Test Kits Received by Lab*	2/29/16	JM

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



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 Phase 9

Name of Schools:

- | | |
|----------------------------|-------------------------|
| 1. Banneker MS | 10. Maryvale ES |
| 2. Bethesda-Chevy Chase HS | 11. Montgomery Blair HS |
| 3. Burtonsville ES | 12. Poolesville HS |
| 4. Chevy Chase ES | 13. Rachel Carson ES |
| 5. Clopper Mill ES | 14. Stedwick ES |
| 6. Edison HS | 15. Watkins Mill ES |
| 7. Flower Hill ES | 16. Laytonsville ES |
| 8. Flower Valley ES | 17. Lincoln Center |
| 9. Greencastle ES | |

	Date	Initials
Radon Test Kits Deployed	2/23/16	JM
Radon Test Kits Collected	2/26/16	JM
Radon Test Kits Shipped to Lab*	2/26/16	JM
Radon Test Kits Received by Lab*	3/01/16	JM

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



MCPS RADON TESTING

Executive Summary: Clarksburg High School

Date of Test Report:	1/11/2016
Round of Testing:	<u>Initial</u> Follow-up Post Remediation
# Rooms Tested:	137
# Rooms \geq 4.0 pCi/L:	0
Low Value:	< 0.3
High Value:	3.9

Project Status:

Initial testing completed; missing or compromised samples need re-test.



January 11, 2016

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

Re: **Radon Testing Services**
KCI Job # 12146341.20

Location: Clarksburg High School
22500 Wims Road
Clarksburg, MD 20871

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 Clarksburg High School, located at 22500 Wims Road in Clarksburg, Maryland 20871 (subject site).

Scope of Services:

KCI conducted radon testing at the subject site to evaluate indoor radon levels relative to the USEPA's recommended action level of 4.0 picocuries per Liter (pCi/L) - the level at which EPA recommends that schools take action to reduce the level. KCI conducted the radon testing in accordance with American Association of Radon Scientists and Technologists (AARST) *Protocol for Conducting Measurements of Radon and Radon Decay Products in Schools and Large Buildings*. A National Radon 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 December 21, 2015 and deployed one hundred fifty-nine (159) 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 14 duplicate samples (10%), 6 field blanks (3%), and 2 office blanks (1%). Prior to sampling, KCI returned 1% of the test batch to the laboratory for analysis as lab transit blanks. 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 December 24, 2015 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 during the 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 blanks, 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. Mouldale
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 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		
Clarksburg High School		
Test Period: 12/21/15-12/24/15		
Kit Number	Room / Area	Result
7707388	101	0.6
7707301	102	1.1
7707389	103	< 0.3
7707391	105	0.9
7707386	107	< 0.3
7707394	108	< 0.3
7707395	110	1.6
7707385	111	< 0.3
7707378	116	< 0.3
7707380	117	< 0.3
7707381	118	< 0.3
7707382	119	0.7
7707375	120	0.7
7707373	121	< 0.3
7707376	122	0.8
7712300	123	< 0.3
7707371	125	< 0.3
7712299	127	< 0.3
7712297	129	< 0.3
7712240	132	0.7
7712241	132	0.6
7712239	134	3.9
7712234	136	0.9
7712235	136	0.7
7712244	140	1.4
7712251	142	0.6
7712247	143	< 0.3
7712253	144	0.6
7712249	147	< 0.3
7712252	149	0.6
7707358	150	< 0.3
7707359	151	1
7707357	152	< 0.3
7712296	153	0.5
7707356	154	0.6
7712294	155	0.8
7707360	156	< 0.3
7707362	158	0.7
7712290	159	1.1
7707352	160	< 0.3
7707343	161	< 0.3
7712256	162	0.6
7707347	165	0.9
7712263	166	< 0.3
7712260	167	0.7
7712264	168	0.6

Table Note:

* Missing or Compromised Sample

Radon Testing Results		
Clarksburg High School		
Test Period: 12/21/15-12/24/15		
Kit Number	Room / Area	Result
7712265	171	< 0.3
7712279	174	< 0.3
7712266	175	< 0.3
7712278	177	< 0.3
7712283	180	< 0.3
7712282	181	< 0.3
7712289	183	< 0.3
7712285	184	0.8
7712271	192	0.8
7712275	194	0.7
7712267	196	0.8
7707308	226	< 0.3
7707309	228	< 0.3
7707305	231	< 0.3
7707304	233	0.6
7707302	235	< 0.3
7707354	1000	< 0.3
7707353	1001	< 0.3
7707348	1002	< 0.3
7707341	1003	< 0.3
7707349	1004	< 0.3
7707345	1005	0.6
7707350	1006	0.5
7712227	1007	< 0.3
7707333	1008	0.5
7712228	1009	0.6
7712229	1010	< 0.3
7712230	1011	< 0.3
7712231	1012	< 0.3
7712232	1013	< 0.3
7707298	* 100 (missing)	-
7707296	100A	1.2
7707295	100B	1.2
7707297	100D	1.3
7707294	100F	1.3
7707293	100G	1.3
7707299	100K	1.4
7707300	100L	0.9
7707390	103A	< 0.3
7707392	* 106 (missing)	-
7707393	106E	1.7
7707387	107D	< 0.3
7707396	110A	1
7707290	110C	1.9
7707291	110D	1.2
7707292	110E	1.4
7707289	110F	1.5
7707288	110G	1.2
7707287	110H	1
7707400	110I	1.4

Table Note:

* Missing or Compromised Sample

Radon Testing Results		
Clarksburg High School		
Test Period: 12/21/15-12/24/15		
Kit Number	Room / Area	Result
7707399	110J	1.8
7707398	110K	3.8
7707397	110L	3.9
7707383	* 114 (tampered)	< 0.3
7707384	114A	< 0.3
7707374	* 120 (tampered)	0.6
7707377	* 120G (tampered)	1
7712238	* 132C (tampered)	3.9
7712237	136A	3.4
7712233	* 138 (missing)	-
7712242	* 141 (missing)	-
7712246	142A	0.8
7712250	144A	0.7
7712248	* 145 (missing)	-
7712254	* 146 (missing)	-
7707346	* 148 (missing)	-
7707355	152B	0.9
7712293	155A	1.7
7712258	162A	0.6
7712259	162B	< 0.3
7712255	* 163 (tampered)	< 0.3
7712261	* 164 (missing)	-
7712262	164A	< 0.3
7707363	* 173 (missing)	-
7707361	* 173 (tampered)	< 0.3
7712277	* 174 (missing)	-
7712280	* 178 (missing)	-
7712281	* 181 (missing)	-
7712288	184A	0.8
7712287	184I	< 0.3
7712274	192B	0.6
7712272	* 192E (missing)	-
7712273	192F	0.8
7707368	* 195 (tampered)	1.4
7712268	196C	1
7712269	196D	0.9
7712270	198B	0.5
7707306	231A	< 0.3
7707303	233A	< 0.3
7707367	* CAFE (missing)	-
7707366	* CAFE (tampered)	< 0.3

Table Note:

* Missing or Compromised Sample

Radon Testing Results		
Clarksburg High School		
Test Period: 12/21/15-12/24/15		
Kit Number	QC Type	Result
7707342	D (1005)	0.6
7707379	D (116)	< 0.3
7707372	D (125)	< 0.3
7712298	* D (129:missing)	-
7712236	D (136)	0.7
7712245	D (140)	1.6
7712295	D (155)	1.1
7707365	D (158)	0.7
7712291	D (159)	0.9
7707351	D (160)	< 0.3
7712257	D (162)	< 0.3
7712284	D (180)	0.6
7712276	D (194)	< 0.3
7707370	* D (195:tampered)	2.2
7707344	FB (1005)	< 0.3
7712243	FB (141)	< 0.3
7707364	FB (158)	< 0.3
7712292	FB (159)	< 0.3
7712286	FB (184)	< 0.3
7707369	* FB (195:tampered)	< 0.3
7707281	OB (0)	< 0.3
7707282	OB (0)	< 0.3

Table Note:

* Missing or Compromised Sample

ATTACHMENT C

Laboratory Analytical Results

Radon test result report for:
CLARKSBURG H.S.
MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7707282	0	2015-12-22 @ 9:00 am	2015-12-24 @ 3:00 pm	< 0.3	2015-12-28
7707281	00	2015-12-22 @ 9:00 am	2015-12-24 @ 3:00 pm	< 0.3	2015-12-28
7707298	100	@	@		
7707354	1000	2015-12-21 @ 3:00 pm	2015-12-24 @ 11:00 am	< 0.3	2015-12-29
7707353	1001	2015-12-21 @ 3:00 pm	2015-12-24 @ 11:00 am	< 0.3	2015-12-28
7707348	1002	2015-12-21 @ 3:00 pm	2015-12-24 @ 11:00 am	< 0.3	2015-12-28
7707341	1003	2015-12-21 @ 3:00 pm	2015-12-24 @ 11:00 am	< 0.3	2015-12-28
7707349	1004	2015-12-21 @ 4:00 pm	2015-12-24 @ 11:00 am	< 0.3	2015-12-28
7707342	1005	2015-12-21 @ 4:00 pm	2015-12-24 @ 11:00 am	0.6 ± 0.3	2015-12-28
7707344	1005	2015-12-21 @ 4:00 pm	2015-12-24 @ 11:00 am	< 0.3	2015-12-28
7707345	1005	2015-12-21 @ 4:00 pm	2015-12-24 @ 11:00 am	0.6 ± 0.3	2015-12-28
7707350	1006	2015-12-21 @ 4:00 pm	2015-12-24 @ 11:00 am	0.5 ± 0.3	2015-12-28
7712227	1007	2015-12-21 @ 4:00 pm	2015-12-24 @ 11:00 am	< 0.3	2015-12-28
7707333	1008	2015-12-21 @ 4:00 pm	2015-12-24 @ 11:00 am	0.5 ± 0.3	2015-12-28
7712228	1009	2015-12-21 @ 4:00 pm	2015-12-24 @ 11:00 am	0.6 ± 0.3	2015-12-28
7707296	100A	2015-12-21 @ 8:00 pm	2015-12-24 @ 11:00 am	1.2 ± 0.3	2015-12-28
7707295	100B	2015-12-21 @ 8:00 pm	2015-12-24 @ 11:00 am	1.2 ± 0.3	2015-12-28
7707297	100D	2015-12-21 @ 8:00 pm	2015-12-24 @ 11:00 am	1.3 ± 0.3	2015-12-28
7707294	100F	2015-12-21 @ 8:00 pm	2015-12-24 @ 11:00 am	1.3 ± 0.3	2015-12-28
7707293	100G	2015-12-21 @ 7:00 pm	2015-12-24 @ 11:00 am	1.3 ± 0.3	2015-12-28
7707299	100K	2015-12-21 @ 8:00 pm	2015-12-24 @ 11:00 am	1.4 ± 0.3	2015-12-28
7707300	100L	2015-12-21 @ 8:00 pm	2015-12-24 @ 11:00 am	0.9 ± 0.3	2015-12-28
7707388	101	2015-12-21 @ 7:00 pm	2015-12-24 @ 11:00 am	0.6 ± 0.3	2015-12-28
7712229	1010	2015-12-21 @ 4:00 pm	2015-12-24 @ 11:00 am	< 0.3	2015-12-28
7712230	1011	2015-12-21 @ 4:00 pm	2015-12-24 @ 11:00 am	< 0.3	2015-12-28
7712231	1012	2015-12-21 @ 4:00 pm	2015-12-24 @ 11:00 am	< 0.3	2015-12-28
7712232	1013	2015-12-21 @ 4:00 pm	2015-12-24 @ 10:00 am	< 0.3	2015-12-28
7707301	102	2015-12-21 @ 8:00 pm	2015-12-24 @ 1:00 pm	1.1 ± 0.3	2015-12-28
7707389	103	2015-12-21 @ 7:00 pm	2015-12-24 @ 11:00 am	< 0.3	2015-12-28
7707390	103A	2015-12-21 @ 7:00 pm	2015-12-24 @ 11:00 am	< 0.3	2015-12-28
7707391	105	2015-12-21 @ 7:00 pm	2015-12-24 @ 11:00 am	0.9 ± 0.3	2015-12-28
7707392	106	@	@		
7707393	106E	2015-12-21 @ 7:00 pm	2015-12-24 @ 11:00 am	1.7 ± 0.3	2015-12-28
7707386	107	2015-12-21 @ 7:00 pm	2015-12-24 @ 11:00 am	< 0.3	2015-12-29
7707387	107D	2015-12-21 @ 7:00 pm	2015-12-24 @ 11:00 am	< 0.3	2015-12-28
7707394	108	2015-12-21 @ 7:00 pm	2015-12-24 @ 11:00 am	< 0.3	2015-12-28
7707395	110	2015-12-21 @ 7:00 pm	2015-12-24 @ 11:00 am	1.6 ± 0.3	2015-12-28

Radon test result report for:
CLARKSBURG H.S.
MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7707396	110A	2015-12-21 @ 7:00 pm	2015-12-24 @ 11:00 am	1.0 ± 0.3	2015-12-28
7707290	110C	2015-12-21 @ 7:00 pm	2015-12-24 @ 11:00 am	1.9 ± 0.4	2015-12-28
7707291	110D	2015-12-21 @ 7:00 pm	2015-12-24 @ 11:00 am	1.2 ± 0.3	2015-12-28
7707292	110E	2015-12-21 @ 7:00 pm	2015-12-24 @ 11:00 am	1.4 ± 0.3	2015-12-28
7707289	110F	2015-12-21 @ 7:00 pm	2015-12-24 @ 11:00 am	1.5 ± 0.3	2015-12-28
7707288	110G	2015-12-21 @ 7:00 pm	2015-12-24 @ 11:00 am	1.2 ± 0.3	2015-12-28
7707287	110H	2015-12-21 @ 7:00 pm	2015-12-24 @ 11:00 am	1.0 ± 0.3	2015-12-28
7707400	110I	2015-12-21 @ 7:00 pm	2015-12-24 @ 11:00 am	1.4 ± 0.3	2015-12-28
7707399	110J	2015-12-21 @ 7:00 pm	2015-12-24 @ 11:00 am	1.8 ± 0.3	2015-12-28
7707398	110K	2015-12-21 @ 7:00 pm	2015-12-24 @ 11:00 am	3.8 ± 0.5	2015-12-28
7707397	110L	2015-12-21 @ 7:00 pm	2015-12-24 @ 11:00 am	3.9 ± 0.4	2015-12-28
7707385	111	2015-12-21 @ 7:00 pm	2015-12-24 @ 11:00 am	< 0.3	2015-12-28
7707383	114	2015-12-21 @ 7:00 pm	2015-12-24 @ 11:00 am	< 0.3	2015-12-28
7707384	114A	2015-12-21 @ 7:00 pm	2015-12-24 @ 11:00 am	< 0.3	2015-12-28
7707378	116	2015-12-21 @ 7:00 pm	2015-12-24 @ 11:00 am	< 0.3	2015-12-28
7707379	116	2015-12-21 @ 7:00 pm	2015-12-24 @ 11:00 am	< 0.3	2015-12-28
7707380	117	2015-12-21 @ 7:00 pm	2015-12-24 @ 11:00 am	< 0.3	2015-12-28
7707381	118	2015-12-21 @ 7:00 pm	2015-12-24 @ 11:00 am	< 0.3	2015-12-28
7707382	119	2015-12-21 @ 7:00 pm	2015-12-24 @ 11:00 am	0.7 ± 0.3	2015-12-28
7707374	120	2015-12-21 @ 7:00 pm	2015-12-24 @ 11:00 am	0.6 ± 0.3	2015-12-28
7707375	120	2015-12-21 @ 7:00 pm	2015-12-24 @ 11:00 am	0.7 ± 0.3	2015-12-28
7707377	120G	2015-12-21 @ 7:00 pm	2015-12-24 @ 11:00 am	1.0 ± 0.3	2015-12-28
7707373	121	2015-12-21 @ 7:00 pm	2015-12-24 @ 11:00 am	< 0.3	2015-12-28
7707376	122	2015-12-21 @ 7:00 pm	2015-12-24 @ 11:00 am	0.8 ± 0.3	2015-12-28
7712300	123	2015-12-21 @ 6:00 pm	2015-12-24 @ 11:00 am	< 0.3	2015-12-28
7707371	125	2015-12-21 @ 6:00 pm	2015-12-24 @ 11:00 am	< 0.3	2015-12-28
7707372	125	2015-12-21 @ 6:00 pm	2015-12-24 @ 11:00 am	< 0.3	2015-12-28
7712299	127	2015-12-21 @ 6:00 pm	2015-12-24 @ 11:00 am	< 0.3	2015-12-28
7712298	129	@	@		
7712297	129	2015-12-21 @ 6:00 pm	2015-12-24 @ 11:00 am	< 0.3	2015-12-28
7712240	132	2015-12-21 @ 4:00 pm	2015-12-24 @ 11:00 am	0.7 ± 0.3	2015-12-28
7712241	132	2015-12-21 @ 4:00 pm	2015-12-24 @ 11:00 am	0.6 ± 0.3	2015-12-28
7712238	132C	2015-12-21 @ 4:00 pm	2015-12-24 @ 11:00 am	3.9 ± 0.5	2015-12-28
7712239	134	2015-12-21 @ 4:00 pm	2015-12-24 @ 11:00 am	3.9 ± 0.5	2015-12-28
7712235	136	2015-12-21 @ 4:00 pm	2015-12-24 @ 11:00 am	0.7 ± 0.3	2015-12-28
7712236	136	2015-12-21 @ 4:00 pm	2015-12-24 @ 11:00 am	0.7 ± 0.3	2015-12-28
7712234	136	2015-12-21 @ 4:00 pm	2015-12-24 @ 11:00 am	0.9 ± 0.3	2015-12-29

January 12, 2016

**LABORATORY ANALYSIS
REPORT ****

Radon test result report for:
**CLARKSBURG H.S.
MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7712237	136A	2015-12-21 @ 4:00 pm	2015-12-24 @ 11:00 am	3.4 ± 0.4	2015-12-28
7712233	138	@	@		
7712244	140	2015-12-21 @ 4:00 pm	2015-12-24 @ 10:00 am	1.4 ± 0.3	2015-12-28
7712245	140	2015-12-21 @ 4:00 pm	2015-12-24 @ 10:00 am	1.6 ± 0.3	2015-12-28
7712242	141	@	@		
7712243	141	2015-12-21 @ 4:00 pm	2015-12-24 @ 10:00 am	< 0.3	2015-12-28
7712251	142	2015-12-21 @ 5:00 pm	2015-12-24 @ 10:00 am	0.6 ± 0.3	2015-12-28
7712246	142A	2015-12-21 @ 4:00 pm	2015-12-24 @ 10:00 am	0.8 ± 0.3	2015-12-28
7712247	143	2015-12-21 @ 4:00 pm	2015-12-24 @ 10:00 am	< 0.3	2015-12-28
7712253	144	2015-12-21 @ 5:00 pm	2015-12-24 @ 10:00 am	0.6 ± 0.3	2015-12-28
7712250	144A	2015-12-21 @ 5:00 pm	2015-12-24 @ 10:00 am	0.7 ± 0.3	2015-12-28
7712248	145	@	@		
7712254	146	@	@		
7712249	147	2015-12-21 @ 5:00 pm	2015-12-24 @ 10:00 am	< 0.3	2015-12-28
7707346	148	@	@		
7712252	149	2015-12-21 @ 5:00 pm	2015-12-24 @ 10:00 am	0.6 ± 0.3	2015-12-28
7707358	150	2015-12-21 @ 3:00 pm	2015-12-24 @ 10:00 am	< 0.3	2015-12-28
7707359	151	2015-12-21 @ 3:00 pm	2015-12-24 @ 10:00 am	1.0 ± 0.3	2015-12-28
7707357	152	2015-12-21 @ 3:00 pm	2015-12-24 @ 10:00 am	< 0.3	2015-12-28
7707355	152B	2015-12-21 @ 3:00 pm	2015-12-24 @ 10:00 am	0.9 ± 0.3	2015-12-28
7712296	153	2015-12-21 @ 6:00 pm	2015-12-24 @ 12:00 pm	0.5 ± 0.3	2015-12-28
7707356	154	2015-12-21 @ 3:00 pm	2015-12-24 @ 10:00 am	0.6 ± 0.3	2015-12-28
7712294	155	2015-12-21 @ 6:00 pm	2015-12-24 @ 12:00 pm	0.8 ± 0.3	2015-12-28
7712295	155	2015-12-21 @ 6:00 pm	2015-12-24 @ 12:00 pm	1.1 ± 0.3	2015-12-28
7712293	155A	2015-12-21 @ 6:00 pm	2015-12-24 @ 12:00 pm	1.7 ± 0.3	2015-12-28
7707360	156	2015-12-21 @ 3:00 pm	2015-12-24 @ 10:00 am	< 0.3	2015-12-28
7707362	158	2015-12-21 @ 3:00 pm	2015-12-24 @ 10:00 am	0.7 ± 0.3	2015-12-28
7707364	158	2015-12-21 @ 5:00 pm	2015-12-24 @ 10:00 am	< 0.3	2015-12-28
7707365	158	2015-12-21 @ 3:00 pm	2015-12-24 @ 10:00 am	0.7 ± 0.3	2015-12-28
7712290	159	2015-12-21 @ 6:00 pm	2015-12-24 @ 12:00 pm	1.1 ± 0.3	2015-12-28
7712291	159	2015-12-21 @ 6:00 pm	2015-12-24 @ 12:00 pm	0.9 ± 0.3	2015-12-28
7712292	159	2015-12-21 @ 6:00 pm	2015-12-24 @ 12:00 pm	< 0.3	2015-12-28
7707352	160	2015-12-21 @ 3:00 pm	2015-12-24 @ 10:00 am	< 0.3	2015-12-28
7707351	160	2015-12-21 @ 3:00 pm	2015-12-24 @ 10:00 am	< 0.3	2015-12-28
7707343	161	2015-12-21 @ 3:00 pm	2015-12-24 @ 10:00 am	< 0.3	2015-12-28
7712256	162	2015-12-21 @ 5:00 pm	2015-12-24 @ 12:00 pm	0.6 ± 0.3	2015-12-28
7712257	162	2015-12-21 @ 5:00 pm	2015-12-24 @ 12:00 pm	< 0.3	2015-12-28

Radon test result report for:
**CLARKSBURG H.S.
MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7712258	162A	2015-12-21 @ 5:00 pm	2015-12-24 @ 12:00 pm	0.6 ± 0.3	2015-12-28
7712259	162B	2015-12-21 @ 5:00 pm	2015-12-24 @ 12:00 pm	< 0.3	2015-12-28
7712255	163	2015-12-21 @ 5:00 pm	2015-12-24 @ 12:00 pm	< 0.3	2015-12-28
7712261	164	@	@		
7712262	164A	2015-12-21 @ 5:00 pm	2015-12-24 @ 1:00 pm	< 0.3	2015-12-28
7707347	165	2015-12-21 @ 3:00 pm	2015-12-24 @ 10:00 am	0.9 ± 0.3	2015-12-28
7712263	166	2015-12-21 @ 5:00 pm	2015-12-24 @ 1:00 pm	< 0.3	2015-12-28
7712260	167	2015-12-21 @ 5:00 pm	2015-12-24 @ 12:00 pm	0.7 ± 0.3	2015-12-28
7712264	168	2015-12-21 @ 5:00 pm	2015-12-24 @ 1:00 pm	0.6 ± 0.3	2015-12-28
7712265	171	2015-12-21 @ 5:00 pm	2015-12-24 @ 12:00 pm	< 0.3	2015-12-28
7707363	173	@	@		
7707361	173	2015-12-21 @ 3:00 pm	2015-12-24 @ 12:00 pm	< 0.3	2015-12-28
7712277	174	@	@		
7712279	174	2015-12-21 @ 6:00 pm	2015-12-24 @ 12:00 pm	< 0.3	2015-12-28
7712266	175	2015-12-21 @ 5:00 pm	2015-12-24 @ 1:00 pm	< 0.3	2015-12-28
7712278	177	2015-12-21 @ 6:00 pm	2015-12-24 @ 12:00 pm	< 0.3	2015-12-28
7712280	178	@	@		
7712283	180	2015-12-21 @ 6:00 pm	2015-12-24 @ 12:00 pm	< 0.3	2015-12-28
7712284	180	2015-12-21 @ 6:00 pm	2015-12-24 @ 12:00 pm	0.6 ± 0.3	2015-12-28
7712281	181	@	@		
7712282	181	2015-12-21 @ 6:00 pm	2015-12-24 @ 12:00 pm	< 0.3	2015-12-28
7712289	183	2015-12-21 @ 6:00 pm	2015-12-24 @ 12:00 pm	< 0.3	2015-12-29
7712285	184	2015-12-21 @ 6:00 pm	2015-12-24 @ 12:00 pm	0.8 ± 0.3	2015-12-28
7712286	184	2015-12-21 @ 6:00 pm	2015-12-24 @ 12:00 pm	< 0.3	2015-12-28
7712288	184A	2015-12-21 @ 6:00 pm	2015-12-24 @ 12:00 pm	0.8 ± 0.3	2015-12-28
7712287	184I	2015-12-21 @ 6:00 pm	2015-12-24 @ 12:00 pm	< 0.3	2015-12-28
7712271	192	2015-12-21 @ 5:00 pm	2015-12-24 @ 12:00 pm	0.8 ± 0.3	2015-12-28
7712274	192B	2015-12-21 @ 5:00 pm	2015-12-24 @ 12:00 pm	0.6 ± 0.3	2015-12-28
7712272	192E	@	@		
7712273	192F	2015-12-21 @ 5:00 pm	2015-12-24 @ 12:00 pm	0.8 ± 0.3	2015-12-28
7712275	194	2015-12-21 @ 5:00 pm	2015-12-24 @ 12:00 pm	0.7 ± 0.3	2015-12-28
7712276	194	2015-12-21 @ 5:00 pm	2015-12-24 @ 12:00 pm	< 0.3	2015-12-28
7707368	195	2015-12-21 @ 2:00 pm	2015-12-24 @ 12:00 pm	1.4 ± 0.3	2015-12-28
7707369	195	2015-12-21 @ 2:00 pm	2015-12-24 @ 12:00 pm	< 0.3	2015-12-28
7707370	195	2015-12-21 @ 2:00 pm	2015-12-24 @ 12:00 pm	2.2 ± 0.4	2015-12-28
7712267	196	2015-12-21 @ 5:00 pm	2015-12-24 @ 12:00 pm	0.8 ± 0.3	2015-12-28
7712268	196C	2015-12-21 @ 5:00 pm	2015-12-24 @ 12:00 pm	1.0 ± 0.3	2015-12-28

January 12, 2016

**** LABORATORY ANALYSIS
REPORT ****

Radon test result report for:
CLARKSBURG H.S.
MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7712269	196D	2015-12-21 @ 5:00 pm	2015-12-24 @ 12:00 pm	0.9 ± 0.3	2015-12-28
7712270	198B	2015-12-21 @ 5:00 pm	2015-12-24 @ 12:00 pm	0.5 ± 0.3	2015-12-28
7707308	226	2015-12-21 @ 8:00 pm	2015-12-24 @ 1:00 pm	< 0.3	2015-12-28
7707309	228	2015-12-21 @ 8:00 pm	2015-12-24 @ 1:00 pm	< 0.3	2015-12-29
7707305	231	2015-12-21 @ 8:00 pm	2015-12-24 @ 1:00 pm	< 0.3	2015-12-28
7707306	231A	2015-12-21 @ 8:00 pm	2015-12-24 @ 1:00 pm	< 0.3	2015-12-28
7707304	233	2015-12-21 @ 8:00 pm	2015-12-24 @ 1:00 pm	0.6 ± 0.3	2015-12-28
7707303	233A	2015-12-21 @ 8:00 pm	2015-12-24 @ 1:00 pm	< 0.3	2015-12-28
7707302	235	2015-12-21 @ 8:00 pm	2015-12-24 @ 1:00 pm	< 0.3	2015-12-28
7707367	CAFE	@	@		
7707366	CAFE	2015-12-21 @ 2:00 pm	2015-12-24 @ 12:00 pm	< 0.3	2015-12-29

December
29,
2015

****LABORATORY ANALYSIS
REPORT ****

Radon test result report for:
TRANSIT DEC 14 2015
NONE

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7704395	TRANSIT 1	2015-12-13 @ 10:00 am	2015-12-15 @ 10:00 am	< 0.3	2015-12-16
7706508	TRANSIT 10	2015-12-13 @ 10:00 am	2015-12-15 @ 10:00 am	< 0.3	2015-12-16
7706510	TRANSIT 11	2015-12-13 @ 10:00 am	2015-12-15 @ 10:00 am	< 0.3	2015-12-16
7706511	TRANSIT 12	2015-12-13 @ 10:00 am	2015-12-15 @ 10:00 am	< 0.3	2015-12-16
7706505	TRANSIT 13	2015-12-13 @ 10:00 am	2015-12-15 @ 10:00 am	< 0.3	2015-12-16
7704371	TRANSIT 14	2015-12-13 @ 10:00 am	2015-12-15 @ 10:00 am	< 0.3	2015-12-16
7706506	TRANSIT 15	2015-12-13 @ 10:00 am	2015-12-15 @ 10:00 am	< 0.3	2015-12-16
7704381	TRANSIT 16	2015-12-13 @ 10:00 am	2015-12-15 @ 10:00 am	< 0.3	2015-12-16
7704399	TRANSIT 17	2015-12-13 @ 10:00 am	2015-12-15 @ 10:00 am	< 0.3	2015-12-16
7704390	TRANSIT 18	2015-12-13 @ 10:00 am	2015-12-15 @ 10:00 am	< 0.3	2015-12-16
7704396	TRANSIT 2	2015-12-13 @ 10:00 am	2015-12-15 @ 10:00 am	< 0.3	2015-12-16
7704364	TRANSIT 3	2015-12-13 @ 10:00 am	2015-12-15 @ 10:00 am	< 0.3	2015-12-16
7704370	TRANSIT 4	2015-12-13 @ 10:00 am	2015-12-15 @ 10:00 am	< 0.3	2015-12-16
7704368	TRANSIT 5	2015-12-13 @ 10:00 am	2015-12-15 @ 10:00 am	< 0.3	2015-12-16
7706524	TRANSIT 6	2015-12-13 @ 10:00 am	2015-12-15 @ 10:00 am	< 0.3	2015-12-16
7706526	TRANSIT 7	2015-12-13 @ 10:00 am	2015-12-15 @ 10:00 am	< 0.3	2015-12-16
7706518	TRANSIT 8	2015-12-13 @ 10:00 am	2015-12-15 @ 10:00 am	< 0.3	2015-12-16
7706516	TRANSIT 9	2015-12-13 @ 10:00 am	2015-12-15 @ 10:00 am	< 0.3	2015-12-16

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 II

School Names:

- | | | |
|---------------------------|-----------------------------|---------------------------|
| 1. Bannockburn ES | 11. Sherwood HS | 21. Fairland ES |
| 2. Walt Whitman HS | 12. Hadley Farms | 22. Cannon Road ES |
| 3. Walter Johnson HS | 13. S. Christa McAuliffe ES | 23. Richard Montgomery HS |
| 4. North Chevy Chase ES | 14. Ronald A. McNair ES | 24. Brooke Grove ES |
| 5. Piney Branch ES | 15. MLK MS | 25. Belmont ES |
| 6. Forest Knolls ES | 16. Ashburton ES | 26. Emory Grove |
| 7. Newport Mill MS | 17. Bradley Hills ES | 27. Clarksburg HS |
| 8. Broad Acres ES | 18. Flora M. Singer ES | 28. Clarksburg ES |
| 9. Briggs Chaney MS | 19. Woodlin ES | 29. John T. Baker MS |
| 10. Blair G. Ewing Center | 20. Montgomery Knolls ES | |

	Date	Initials
Radon Test Kits Deployed	12/21/2015	JM
Radon Test Kits Collected	12/24/2015	JM
Radon Test Kits Shipped to Lab*	12/24/2015	JM
Radon Test Kits Received by Lab*	12/28/2015	JM

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