

School / Facility Radon Testing Report Form

School Year: 24-25

Facility:	Ridgevie	Ridgeview Middle School			
Addrocci	16600 R	16600 Raven Rock Drive			
Address.	Gaithers	sburg, MD 20878			
		Scheduled Re-Testing - 🔲 2-year or 🛛 5-year schedule			
Reason for T	octina.	Clearance Testing (Post-Mitigation)			
Reason for resting.		Building Envelope or HVAC Upgrades			
		New Construction – Addition or Facility			
		Active Mitigation (2-year regular schedule)			
Current Rador	n Status:	No Active Mitigation (5-year regular schedule)			
		Not Previously Tested (New Facility)			
Round of Testing:		□ Initial Testing <b>-or-</b> ⊠ Follow-up Testing			
Testing Status:		No Further Testing Needed -or- D Follow-Up Testing Required			

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

Mitigation -	Facility Radon Status:			
🛛 Not Required	No Change in Status			
□ Required (≥4.0-pCi/L)	Active Mitigation (2-year regular schedule)			
Rooms:	□ No Active Mitigation (5-year regular schedule)			
Number of Rooms Tested	82	Lowest Value (pCi/L)	< 0.3	
Number of Rooms (≥4.0-pCi/L)	0	Highest Value (pCi/L)	2.1	

**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:	<ul> <li>☑ Passive</li> <li>☑ Charcoal Absorption (CAD) □ Alpha Track (ATD) □ Other</li> <li>□ Continuous</li> <li>□ Electret ion Chamber (EIC) □ Electronic Integration (EID)</li> <li>Other-Specify here:</li> </ul>				
Detector/Device Name:	Air Chek – Radon T	Air Chek – Radon Test Kits			
Manufacturer:	Radon Lab				
Person(s) Deploying or Retrieving Test Dev certification number		est Devices and	Organization/Company		
Shakia Dawkins			KCI Technologies, Inc.		
If noncertified individuals, the qualified measurement professional providing oversight -					
Tyler McCleaf, CSP – Cert. #111004 – RMP		MP	KCI Technologies, Inc.		

# Testing

Short-Term	Length of	2	Date of Deployment and	03/04/25	03/31/25		
Long-Term	Test (days):	5	Retrieval (mm/dd/yy):	03/07/25	04/03/25		
Does the test pe	🗆 Yes 🛛	3 No					
If " <b>Yes</b> " please explo	ain/detail in the s	pace below:					
				1			
Was HVAC opera	Was HVAC operating under occupied conditions?						
If "No" please explain/detail in the space below:							



#### Testing (continued)

	Detectors Deployed				
	Ground-Contact		Upper-Level(s)		Tatal
Round of Testing	Initial	Follow-Up	Initial	Follow-Up	Total
Test Locations <sup>1</sup>	73	2	9	0	84
Duplicates <sup>2</sup>	7	1	1	0	9
Field Blanks <sup>3</sup>	2	1	1	0	4
Grand Total			nd Total	97	

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 <u>per floor</u> (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.

	QA/QC Samples Initial Follow-Up		Total
Round of Testing			TULAI
Spikes <sup>1</sup>	Spikes <sup>1</sup> Not applicable		10
Trip Blanks <sup>2</sup>	1	1	2
Office Blanks <sup>3, 4</sup>	1	1	2
			14

1 - 3% of EIC detectors; and 3% from <u>each LOT</u> of CAD and ATD detectors; a <u>maximum of 6-spiked</u> <u>measurements</u> per month for both EIC detectors and <u>each LOT</u> 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, <u>analyzed prior to deployment</u>, 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 ± 25% of the chamber's reference value?	🛛 Yes	🗆 No
Quality Control measurements comply with QA/QC requirements in the submitted testing organization's/company's QA plan?		🗆 No
Round of Testing	Initial	Follow-Up
All Field, Trip and Office Blanks are ≤ (less than or equal to)	🛛 Yes	🛛 Yes
to the Method Detection Limit?	🗆 No	🗆 No
For all Duplicate Samples <sup>1</sup> , the higher value is $< 2x$ the lower value?	🛛 Yes	🛛 Yes
For all Duplicate samples, the figher value is 2 2x the lower value?	🗌 No	🗌 No
For all Duplicate Samples <sup>1</sup> , Relative Percent Difference(s) (RPD) <sup>2</sup> are	🛛 Yes	🛛 Yes
less than the Warning Level <sup>3</sup> ?	🗆 No	🗆 No
For all Duplicate Samples <sup>1</sup> , Relative Percent Difference(s) (RPD) <sup>2</sup> are	🛛 Yes	🛛 Yes
less than the Control Level <sup>3</sup> ?	🗆 No	🗆 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





	Ground-Contact		Upper-Level(s)		Total	
Round of Testing	Initial	Follow-Up	Initial	Follow-Up	Total	
Number of test locations:	73	1	9	0	83	
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:	0	0	0	0	0	
Number of locations ≥2.0 and <2.7-pCi/L:	1	0	0	0	1	
Number of missing required test locations <sup>3</sup> :	0	0	0	0	0	
Number of failed duplicate control locations:	1	0	0	0	1	
Percentage of missing test locations for the facility <sup>4,5</sup> :	1.37%	0	0	0	0	

## Summary of Test Results<sup>1</sup> and Determination of Valid Measurements<sup>2</sup>

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  $\geq$ 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  $\geq$ 4.0-pCi/L and the total number of test locations are  $\geq$ 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 Results<sup>1</sup> and Determination of Valid Measurements<sup>2</sup> (continued)

Round of Testing	Initial	Follow-Up
Were test devices deployed in all occupied and intended to be occupied rooms in	🗆 Yes	🛛 Yes
contact with the ground, and, if applicable, 10% of upper floor rooms?	🛛 No	🗆 No
Were valid measurements obtained in all occupied and intended to be occupied	🗌 Yes	🛛 Yes
rooms in contact with the ground, and, if applicable, 10% of upper floor rooms?	🛛 No	🗆 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	🗆 Yes	🛛 Yes
were sufficient valid measurements obtained? <sup>1,2</sup>	🛛 No	🗆 No
If No, then - 'Follow-up Testing Required' continue below.	🗆 NA	🗆 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 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 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  $\geq$  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	Follow same procedures as Initial	Not	Follow Initial Testing
Measurements Testing		Applicable	procedures
Results ≥ 4.0-pCi/L	Deploy two Short-term follow-up	≥4.0	Mitigation Required
	tests and required blanks and	≥2.0 and <4.0	Consider Mitigation
Failed QC checks	duplicates; Average the results of the	<2.0	Mitigation Not
	two tests	<2.0	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					
	Ridgeview Middle School				
Te	est Period: 3/4/2025 - 3/7/20	25			
Kit Number	Room / Area	Result			
11887383	2	0.6			
11887382	3	0.9			
11887381	4	0.5			
11887379	5	0.8			
11887380	6	< 0.3			
11887378	7	0.7			
11887388	16	0.8			
11887384	18	< 0.3			
11887353	20	1.9			
11887355	20	2.1			
11887375	21	0.9			
11887376	23	1.3			
11887357	24	1.0			
11887377	25	1.2			
11887354	26	0.7			
11887329	27	< 0.3			
11887346	27	1.1			
11887326	100	0.6			
11887332	101	< 0.3			
11887325	102	< 0.3			
11887323	103	0.6			
11919999	104	1.2			
11920089	105	0.5			
11919971	106	< 0.3			
11887320	107	0.6			
11920090	108	< 0.3			
11919956	109	0.7			
11887322	110	0.5			
11887328	110	< 0.3			
11887319	111	0.7			
11887327	111	1.0			
11887321	112	1.4			
11887341	113	0.9			
11887340	114	1.0			
11887339	115	1.1			
11887348	116	< 0.3			
11887369	117	< 0.3			
11887370	117	0.5			

Table 1- Radon Testing Results							
Ridgeview Middle School							
Test Period: 3/4/2025 - 3/7/2025							
11887372	119	0.8					
11887361	120	0.8					
11887362	122	1.0					
11887352	202	< 0.3					
11887359	202	< 0.3					
11887347	220	< 0.3					
11887349	221	0.6					
11887337	222	< 0.3					
11887330	223	0.7					
11887367	225	0.6					
11887366	226	< 0.3					
11887335	230	< 0.3					
11887365	230	0.7					
11887201	232	0.6					
11887202	232	< 0.3					
11887389	01 MAIN	0.6					
11887390	01 MAIN	< 0.3					
11887331	101A	< 0.3					
11887333	102A	< 0.3					
11887334	102B	< 0.3					
11887318	103A	1.3					
11887324	103A	1.2					
11919992	106A	0.9					
11919990	108A	0.6					
11919997	108C	0.5					
11887387	11 HEALTH	0.5					
11887342	116A	0.9					
11887374	121 BLR	0.6					
11887344	206A	< 0.3					
11887350	212A	< 0.3					
11887343	220A	< 0.3					
11887345	220A	0.7					
11887338	220B	0.6					
11887336	225A	< 0.3					
11887360	226A	< 0.3					
11887371	BLR OFFICE	0.9					
11887385	CAFETERIA	< 0.3					
11887397	CAFETERIA	< 0.3					
11887373	GLR OFFICE	0.9					

Table 1- Radon Testing Results									
	Ridgeview Middle School								
Te	est Period: 3/4/2025 - 3/7/20	25							
11887363	GYM	< 0.3							
11887364	GYM	< 0.3							
11887398	KITCHEN OFFICE	0.7							
11887358	MEDIA CENTER	< 0.3							
11887368	MEDIA CENTER	< 0.3							
11887351	MEDIA OFFICE	0.6							
11887392	SS1	0.7							
11887394	SS1	< 0.3							
11887400	SS2	< 0.3							
11887395	SS3	< 0.3							
11887399	SS4	< 0.3							
11887393	SS5	0.7							
11887391	SS6	< 0.3							
11887396	SS7	< 0.3							
11887356	STUDENT SERVICES	< 0.3							
11887386	STUDENT SERVICES	0.5							
-									

Table 2 - Summary Testing Results ≥2.0 pCi/L										
	Ridgeview Middle School									
		Т	est Period: 3/4	4/2025 - 3/7/202	5					
≥2.0 and <	<2.7 pCi/L	≥2.7 and <	4.0 pCi/L	≥4.0 and •	<8.0 pCi/l	≥8.0	oCi/L			
Room / Area	Result	Room / Area	Result	Room / Area	Result	Room / Area	Result			
20	2.1	N/A	N/A	N/A	N/A	N/A	N/A			

Table 3 - QC Radon Testing Results								
	Ridgeview Middle School							
1	Test Period:	3/4/2025 - 3/7/2025						
Kit Number	QC Type	Room / Area	Result					
11887355	D	20	2.1					
11887329	FB	27	< 0.3					
11887328	FB	110	< 0.3					
11887327	D	111	1.0					
11887370	D	117	0.5					
11887352	D	202	< 0.3					
11887335	FB	230	< 0.3					
11887201	D	232	< 0.3					
11887318	D	103A	1.3					
11887345	D	220A	0.7					
11887386	D	Student Services	0.5					
11887000	OB	OFFICE BLANK	< 0.3					
11886974	ΤB	TRAVEL BLANK	< 0.3					

	Table 3a - Duplicate Worksheet / Data Validation									
				R	idgeview Mic	ddle Schoo	1			
				Test	Period: 3/4/2	2025 - 3/7/2	025			
	Sample	ID			Dup	licate Conc	entrations (p	oCi/L) and C	OC Checks	
Kit Nu	umbers	Room / Area	Higher	Lower	Check #1 (Pass/Fail)	2x the Lower	Check #2 (Pass/Fail)	Average	Relative Percent Difference (RPD)	Check #3
11887355	11887353	20	2.1	1.9	$\checkmark$	3.8	PASS	2.0	10.0%	$\checkmark$
11887327	11887319	111	1.0	0.7	$\checkmark$	1.4	PASS	0.9	<1-pCi/L	>
11887370	11887369	117	0.5	0.3	<b>~</b>	0.6	PASS	0.4	<1-pCi/L	<b>V</b>
11887352	11887359	202	0.3	0.3	<b>~</b>	0.6	PASS	0.3	<1-pCi/L	$\checkmark$
11887201	11887202	232	0.6	0.3	$\checkmark$	0.6	PASS	0.5	<1-pCi/L	$\checkmark$
11887318	11887324	103A	1.3	1.2	$\checkmark$	2.4	PASS	1.3	<1-pCi/L	$\checkmark$
11887345	11887343	220A	0.7	0.3	<b>~</b>	0.6	FAIL	0.5	<1-pCi/L	$\checkmark$
11887386	11887356	Student Services	0.5	0.3	~	0.6	PASS	0.4	<1-pCi/L	~
NOTES:	NOTES:						Average	(pCi/L)	Warning Level	Control Level
QC Check #	QC Check #1 - Data Entry					< 2	.0	1-pCi/L	NA	
QC Check #	QC Check #2 - Higher duplicate concentration is < or = to 2x the Lower						Between 2	.0 and 3.9	50% RPD	67% RPD

≥ 4.0

28% RPD

36% RPD

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

	Test Period: 3/4/25 -	3///20				
Kit Number	Room/Area	Reason				
N/A	224	Missed Location				

Table 1- Radon Testing Results						
Ridgeview Middle School RT						
Test Period: 3/31/2025 - 4/3/2025						
Kit Number Room / Area Result						
11887288	220A	< 0.3				
11887287	220A	0.6				
11887279	220A	0.6				
11887271	220A	< 0.3				

Table 2 - Summary Testing Results ≥2.0 pCi/L										
	Ridgeview MS Middle School RT									
	Test Period: 3/31/2025 - 4/03/2025									
≥2.0 and <	:2.7 pCi/L	≥2.7 and <	4.0 pCi/L	≥4.0 and ·	<8.0 pCi/l	≥8.0	oCi/L			
Room / Area	Result	Room / Area	Result	Room / Area	Result	Room / Area	Result			
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A			

Table 3 - QC Radon Testing Results							
	Ridgeview Middle School RT						
	Test Perio	d: 3/31/2025 - 4/3/2025					
Kit Number	Kit Number QC Type Room / Area Result						
11887279	D	220A	0.6				
11887271	FB	220A	< 0.3				
11886694	OB	OFFICE BLANK	< 0.3				
11886589	TB	TRAVEL BLANK	< 0.3				

Table 3a - Duplicate Worksheet / Data Validation										
	Ridgeview Middle School RT									
				Test Per	iod: 3/31/202	5 - 4/3/2025	5			
	Samp	le ID			Dup	licate Conc	entrations (p	Ci/L) and O	C Checks	
Kit Nı	umbers	Room / Area	Higher	Lower	Check #1 (Pass/Fail)	2x the Lower	Check #2 (Pass/Fail) Average		Relative Percent Difference (RPD)	Check #3
11887279	11887287 11887288	220A	0.6	0.4	~	0.8	PASS	0.5	<1-pCi/L	<b>v</b>
NOTES:			_				Average	(pCi/L)	Warning Level	Control Level
QC Check #1 - Data Entry						< 2.0		1-pCi/L	NA	
QC Check #	QC Check #2 - Higher duplicate concentration is < or = to 2x the Lower						Between 2	Between 2.0 and 3.9 50% RPD 67		67% RPD
QC Check #	3 - Meets RPD	) Limits, by average duplic	ate concen	tration			≥ 4	≥ 4.0 28% RPD 36% RP		

- 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 4 - Summary of Invalid Measurement Locations								
Ridgeview Middle School RT								
	Test Period: 3/31/2025 - 4/03/2025							
Kit Number	Room/Area	Reason						
N/A	N/A	N/A						

Attachment 2: Laboratory Reports

#### March 12, 2025

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

Radon test result report for:

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11887389	01 MAIN	2025-03-04 @ 11:00 am	2025-03-07 @ 9:00 am	$0.6 \pm 0.3$	2025-03-11
11887390	01 MAIN	2025-03-04 @ 11:00 am	2025-03-07 @ 9:00 am	< 0.3	2025-03-11
11887383	02	2025-03-04 @ 11:00 am	2025-03-07 @ 10:00 am	$0.6 \pm 0.3$	2025-03-11
11887382	03	2025-03-04 @ 11:00 am	2025-03-07 @ 10:00 am	$0.9 \pm 0.3$	2025-03-11
11887381	04	2025-03-04 @ 11:00 am	2025-03-07 @ 10:00 am	$0.5 \pm 0.3$	2025-03-11
11887379	05	2025-03-04 @ 11:00 am	2025-03-07 @ 10:00 am	$0.8 \pm 0.3$	2025-03-11
11887380	06	2025-03-04 @ 11:00 am	2025-03-07 @ 10:00 am	< 0.3	2025-03-11
11887378	07	2025-03-04 @ 11:00 am	2025-03-07 @ 10:00 am	$0.7 \pm 0.3$	2025-03-11
11887326	100	2025-03-04 @ 9:00 am	2025-03-07 @ 9:00 am	$0.6 \pm 0.3$	2025-03-11
11887332	101	2025-03-04 @ 9:00 am	2025-03-07 @ 10:00 am	< 0.3	2025-03-11
11887331	101A	2025-03-04 @ 9:00 am	2025-03-07 @ 9:00 am	< 0.3	2025-03-11
11887325	102	2025-03-04 @ 9:00 am	2025-03-07 @ 10:00 am	< 0.3	2025-03-11
11887333	102A	2025-03-04 @ 9:00 am	2025-03-07 @ 10:00 am	< 0.3	2025-03-11
11887334	102B	2025-03-04 @ 9:00 am	2025-03-07 @ 10:00 am	< 0.3	2025-03-11
11887323	103	2025-03-04 @ 10:00 am	2025-03-07 @ 10:00 am	$0.6 \pm 0.3$	2025-03-11
11887324	103A	2025-03-04 @ 10:00 am	2025-03-07 @ 10:00 am	$1.2 \pm 0.3$	2025-03-11
11887318	103A	2025-03-04 @ 10:00 am	2025-03-07 @ 10:00 am	$1.3 \pm 0.3$	2025-03-11
11919999	104	2025-03-04 @ 10:00 am	2025-03-07 @ 10:00 am	$1.2 \pm 0.3$	2025-03-11
11920089	105	2025-03-04 @ 10:00 am	2025-03-07 @ 10:00 am	$0.5 \pm 0.3$	2025-03-11
11919971	106	2025-03-04 @ 10:00 am	2025-03-07 @ 10:00 am	< 0.3	2025-03-11
11919992	106A	2025-03-04 @ 10:00 am	2025-03-07 @ 10:00 am	$0.9 \pm 0.3$	2025-03-11
11887320	107	2025-03-04 @ 9:00 am	2025-03-07 @ 10:00 am	$0.6 \pm 0.3$	2025-03-11
11920090	108	2025-03-04 @ 10:00 am	2025-03-07 @ 9:00 am	< 0.3	2025-03-11
11919990	108A	2025-03-04 @ 10:00 am	2025-03-07 @ 10:00 am	$0.6 \pm 0.3$	2025-03-11
11919997	108C	2025-03-04 @ 10:00 am	2025-03-07 @ 9:00 am	$0.5 \pm 0.3$	2025-03-11
11919956	109	2025-03-04 @ 10:00 am	2025-03-07 @ 10:00 am	$0.7 \pm 0.3$	2025-03-11
11887387	11 HEALTH	2025-03-04 @ 11:00 am	2025-03-07 @ 10:00 am	$0.5 \pm 0.3$	2025-03-11
11887328	110	2025-03-04 @ 10:00 am	2025-03-07 @ 10:00 am	< 0.3	2025-03-11
11887322	110	2025-03-04 @ 10:00 am	2025-03-07 @ 10:00 am	$0.5 \pm 0.3$	2025-03-11
11887327	111	2025-03-04 @ 10:00 am	2025-03-07 @ 10:00 am	$1.0 \pm 0.3$	2025-03-11
11887319	111	2025-03-04 @ 10:00 am	2025-03-07 @ 10:00 am	$0.7 \pm 0.3$	2025-03-11
11887321	112	2025-03-04 @ 10:00 am	2025-03-07 @ 10:00 am	$1.4 \pm 0.3$	2025-03-11
11887341	113	2025-03-04 @ 10:00 am	2025-03-07 @ 10:00 am	$0.9 \pm 0.3$	2025-03-11
11887340	114	2025-03-04 @ 10:00 am	2025-03-07 @ 10:00 am	$1.0 \pm 0.3$	2025-03-11
11887339	115	2025-03-04 @ 10:00 am	2025-03-07 @ 10:00 am	$1.1 \pm 0.3$	2025-03-11
11887348	116	2025-03-04 @ 10:00 am	2025-03-07 @ 9:00 am	< 0.3	2025-03-11
11887342	116A	2025-03-04 @ 10:00 am	2025-03-07 @ 10:00 am	$0.9 \pm 0.3$	2025-03-11

March 12, 2025

Radon test result report for:

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11887369	117	2025-03-04 @ 10:00 am	2025-03-07 @ 10:00 am	< 0.3	2025-03-11
11887370	117	2025-03-04 @ 10:00 am	2025-03-07 @ 10:00 am	$0.5 \pm 0.3$	2025-03-11
11887372	119	2025-03-04 @ 10:00 am	2025-03-07 @ 10:00 am	$0.8 \pm 0.3$	2025-03-11
11887361	120	2025-03-04 @ 10:00 am	2025-03-07 @ 9:00 am	$0.8 \pm 0.3$	2025-03-11
11887374	121 BLR	2025-03-04 @ 10:00 am	2025-03-07 @ 9:00 am	$0.6 \pm 0.3$	2025-03-11
11887362	122	2025-03-04 @ 10:00 am	2025-03-07 @ 9:00 am	$1.0 \pm 0.4$	2025-03-11
11887388	16	2025-03-04 @ 11:00 am	2025-03-07 @ 10:00 am	$0.8 \pm 0.3$	2025-03-11
11887384	18	2025-03-04 @ 11:00 am	2025-03-07 @ 10:00 am	< 0.3	2025-03-11
11887355	20	2025-03-04 @ 11:00 am	2025-03-07 @ 10:00 am	$2.1 \pm 0.4$	2025-03-11
11887353	20	2025-03-04 @ 11:00 am	2025-03-07 @ 10:00 am	$1.9 \pm 0.4$	2025-03-11
11887359	202	2025-03-04 @ 10:00 am	2025-03-07 @ 10:00 am	< 0.3	2025-03-11
11887352	202	2025-03-04 @ 11:00 am	2025-03-07 @ 10:00 am	< 0.3	2025-03-11
11887344	206A	2025-03-04 @ 11:00 am	2025-03-07 @ 10:00 am	< 0.3	2025-03-11
11887375	21	2025-03-04 @ 11:00 am	2025-03-07 @ 10:00 am	$0.9 \pm 0.3$	2025-03-11
11887350	212A	2025-03-04 @ 11:00 am	2025-03-07 @ 10:00 am	< 0.3	2025-03-11
11887347	220	2025-03-04 @ 11:00 am	2025-03-07 @ 10:00 am	< 0.3	2025-03-11
11887345	220A	2025-03-04 @ 11:00 am	2025-03-07 @ 10:00 am	$0.7 \pm 0.3$	2025-03-11
11887343	220A	2025-03-04 @ 11:00 am	2025-03-07 @ 10:00 am	< 0.3	2025-03-11
11887338	220B	2025-03-04 @ 11:00 am	2025-03-07 @ 10:00 am	$0.6 \pm 0.3$	2025-03-11
11887349	221	2025-03-04 @ 11:00 am	2025-03-07 @ 10:00 am	$0.6 \pm 0.3$	2025-03-11
11887337	222	2025-03-04 @ 11:00 am	2025-03-07 @ 10:00 am	< 0.3	2025-03-11
11887330	223	2025-03-04 @ 11:00 am	2025-03-07 @ 10:00 am	$0.7 \pm 0.3$	2025-03-11
11887367	225	2025-03-04 @ 11:00 am	2025-03-07 @ 10:00 am	$0.6 \pm 0.3$	2025-03-11
11887336	225A	2025-03-04 @ 11:00 am	2025-03-07 @ 10:00 am	< 0.3	2025-03-11
11887366	226	2025-03-04 @ 11:00 am	2025-03-07 @ 10:00 am	< 0.3	2025-03-11
11887360	226A	2025-03-04 @ 11:00 am	2025-03-07 @ 10:00 am	< 0.3	2025-03-11
11887376	23	2025-03-04 @ 11:00 am	2025-03-07 @ 10:00 am	$1.3 \pm 0.4$	2025-03-11
11887335	230	2025-03-04 @ 11:00 am	2025-03-07 @ 10:00 am	< 0.3	2025-03-11
11887365	230	2025-03-04 @ 11:00 am	2025-03-07 @ 10:00 am	$0.7 \pm 0.3$	2025-03-11
11887201	232	2025-03-04 @ 12:00 pm	2025-03-07 @ 10:00 am	$0.6 \pm 0.3$	2025-03-11
11887202	232	2025-03-04 @ 12:00 pm	2025-03-07 @ 10:00 am	< 0.3	2025-03-11
11887357	24	2025-03-04 @ 11:00 am	2025-03-07 @ 10:00 am	$1.0 \pm 0.3$	2025-03-11
11887377	25	2025-03-04 @ 11:00 am	2025-03-07 @ 10:00 am	$1.2 \pm 0.3$	2025-03-11
11887354	26	2025-03-04 @ 11:00 am	2025-03-07 @ 10:00 am	$0.7 \pm 0.3$	2025-03-11
11887346	27	2025-03-04 @ 11:00 am	2025-03-07 @ 10:00 am	$1.1 \pm 0.3$	2025-03-11
11887329	27	2025-03-04 @ 11:00 am	2025-03-07 @ 10:00 am	< 0.3	2025-03-11
11887371	BLR OFFICE	2025-03-04 @ 10:00 am	2025-03-07 @ 9:00 am	$0.9 \pm 0.3$	2025-03-11

March 12, 2025

Radon test result report for:

Kit #	Room Id	Started		Ended	pCi/L	Analyzed
11887397	CAFETERIA	2025-03-04 @	) 12:00 pm	2025-03-07 @ 10:00 an	n < 0.3	2025-03-11
11887385	CAFETERIA	2025-03-04 @	12:00 pm	2025-03-07 @ 10:00 an	n < 0.3	2025-03-11
11887373	GLR OFFICE	2025-03-04 @	0 10:00 am	2025-03-07 @ 9:00 am	$0.9 \pm 0.3$	2025-03-11
11887364	GYM	2025-03-04 @	0 10:00 am	2025-03-07 @ 10:00 an	n < 0.3	2025-03-11
11887363	GYM	2025-03-04 @	0 10:00 am	2025-03-07 @ 10:00 an	n < 0.3	2025-03-11
11887398	KITCHEN OFFICE	2025-03-04 @	) 12:00 pm	2025-03-07 @ 10:00 an	n $0.7 \pm 0.3$	2025-03-11
11887358	MEDIA CENTER	2025-03-04 @	) 11:00 am	2025-03-07 @ 10:00 an	n < 0.3	2025-03-11
11887368	MEDIA CENTER	2025-03-04 @	) 11:00 am	2025-03-07 @ 10:00 an	n < 0.3	2025-03-11
11887351	MEDIA OFFICE	2025-03-04 @	) 11:00 am	2025-03-07 @ 10:00 an	n $0.6 \pm 0.3$	2025-03-11
11887392	SS1	2025-03-04 @	) 12:00 pm	2025-03-07 @ 10:00 an	n $0.7 \pm 0.3$	2025-03-11
11887394	SS1	2025-03-04 @	) 12:00 pm	2025-03-07 @ 10:00 an	n < 0.3	2025-03-11
11887400	SS2	2025-03-04 @	) 12:00 pm	2025-03-07 @ 10:00 an	n < 0.3	2025-03-11
11887395	SS3	2025-03-04 @	) 12:00 pm	2025-03-07 @ 10:00 an	n < 0.3	2025-03-11
11887399	SS4	2025-03-04 @	) 12:00 pm	2025-03-07 @ 10:00 an	n < 0.3	2025-03-11
11887393	SS5	2025-03-04 @	) 12:00 pm	2025-03-07 @ 10:00 an	n $0.7 \pm 0.3$	2025-03-11
11887391	SS6	2025-03-04 @	) 12:00 pm	2025-03-07 @ 10:00 an	n < 0.3	2025-03-11
11887396	SS7	2025-03-04 @	) 12:00 pm	2025-03-07 @ 10:00 an	n < 0.3	2025-03-11
11887356	STUDENT SERVICES	2025-03-04 @	) 11:00 am	2025-03-07 @ 10:00 an	n < 0.3	2025-03-11
11887386	STUDENT SERVICES	2025-03-04 @	2 12:00 pm	2025-03-07 @ 10:00 an	n $0.5 \pm 0.3$	2025-03-11

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

Radon test result report for: OFFICE MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11887000	OB	2025-03-04 @ 11:00 am	2025-03-07 @ 11:00 am	< 0.3	2025-03-11

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

Radon test result report for: TRAVEL MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11886974	TB	2025-03-04 @ 11:00 am	2025-03-07 @ 11:00 am	< 0.3	2025-03-11

EM OSORE IN DOWSER-IN	IUNITER RADUN CHAMBER
CLIENT KCI TECHNOLOGIES	Job Number 2000 1560
NOMINAL Conditions: Radon Conc 50.6	pCi/L Rel. Hum <u>50.6</u> % Temp. <u>70.8</u>
Date Start: 12/14/24 Date Stop: 13/17/24	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	
By 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:

# **EXPOSURE IN BOWSER-MORNER RADON CHAMBER**

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

#### **\*\* 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	$52.0 \pm 4.2$	2024-12-23
11477883	SK2	2024-12-14 @ 8:00 am	2024-12-17 @ 8:00 am	$54.6 \pm 4.4$	2024-12-23
11477896	SK3	2024-12-14 @ 8:00 am	2024-12-17 @ 8:00 am	$45.5 \pm 3.6$	2024-12-23



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## **Radon Test Kit Chain of Custody**

Project Name: MCPS Radon – Testing March 4<sup>th</sup> – March 7<sup>th</sup>, 2025

Name of Schools:

- 1. Poolesville HS
- 2. Quince Orchard HS
- 3. Redland MS
- 4. Ridgeview MS
- 5. Rocky Hill MS
- 6. Rosemont ES
- 7. Poolesville ES

	Date	Initials
Radon Test Kits Deployed	3/4/2025	IM
Radon Test Kits Collected	3/7/2025	M
Radon Test Kits Shipped to Lab*	3/7/2025	M
Radon Test Kits Received by Lab*	3/10/2025	Ĩ

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

#### April 29, 2025

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

Radon test result report for:

Kit #	Room Id	Started		Ended	pCi/L	Analyzed
11887271	220A	2025-03-31	@ 8:00 am	2025-04-03 @ 12:00 pm	< 0.3	2025-04-07
11887279	220A	2025-03-31	@ 7:00 am	2025-04-03 @ 12:00 pm	$0.6 \pm 0.3$	2025-04-07
11887287	220A	2025-03-31	@ 7:00 am	2025-04-03 @ 12:00 pm	$0.6 \pm 0.3$	2025-04-07
11887288	220A	2025-03-31	@ 7:00 am	2025-04-03 @ 12:00 pm	< 0.3	2025-04-07

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

Radon test result report for: KCI MAIN

11886694 OB 2025-03-31 @ 11.00 am 2025-04-0	1 @ 0.00 +0.2 2025 04 07
11000000 OD 2025 05 51 C 11.00 uni 2025 01 C	14 @ 9:00 am < 0.5 2025-04-07
11886589 TB 2025-03-31 @ 11:00 am 2025-04-0	04 @ 9:00 am < 0.3 2025-04-07

# **EXPOSURE IN BOWSER-MORNER RADON CHAMBER**

CLIENT KCI TECHNOLOGIC	5. INC Job Number 2000 2919
NOMINAL Conditions: Radon Conc 7.0	pCi/L Rel. Hum 51.4 % Temp. 79.7 F
Date Start: 3/1/23 Date Stop: 3/10/2	Date Start: Date Stop:
Time Start: 0833 Time Stop: 0833	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 μR/h Elevation = 820 ft

#### **\*\* 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	$7.8 \pm 1.1$	2025-03-19
11886405	SK2	2025-03-07 @ 9:00 am	2025-03-10 @ 9:00 am	$7.1 \pm 1.1$	2025-03-19
11886406	SK3	2025-03-07 @ 9:00 am	2025-03-10 @ 9:00 am	$7.7 \pm 1.1$	2025-03-19
11886403	SK4	2025-03-07 @ 9:00 am	2025-03-10 @ 9:00 am	$7.9 \pm 1.2$	2025-03-19
11886404	SK5	2025-03-07 @ 9:00 am	2025-03-10 @ 9:00 am	$7.6 \pm 1.2$	2025-03-19
11886410	SK6	2025-03-07 @ 9:00 am	2025-03-10 @ 9:00 am	$7.0 \pm 1.1$	2025-03-19
11886402	SK7	2025-03-07 @ 9:00 am	2025-03-10 @ 9:00 am	$8.6 \pm 1.2$	2025-03-19



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# **Radon Test Kit Chain of Custody**

Project Name: MCPS Radon – Testing March 31st – April 3rd, 2025

Name of Schools:

- 1. Hallie Wells MS
- 2. Neelsville MS
- 3. Quince Orchard HS
- 4. Redland MS
- 5. Ridgeview MS
- 6. Rosemont ES

	Date	Initials
Radon Test Kits Deployed	3/31/2025	BUUI
Radon Test Kits Collected	4/03/2025	BMM
Radon Test Kits Shipped to Lab*	4/03/2025	BMM
Radon Test Kits Received by Lab*	4/07/2025	RAM

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

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Site Name	Ridgeview Middle	
	School	
Date of Test Report	4/26/2022	
Round of Testing	Initial	
-	Follow-up	
	Post Remediation	
	2 Year Testing	
	Year Testing	
	HVAC Upgrade	
	Window Replacement	
	New Addition	
	New Facility	
# Rooms Tested	73	
# Rooms $\geq$ 4.0 pCi/L	0	
Lowest Value	<0.3 pCi/L	
Highest Value	1.7 pCi/L	

#### MCPS RADON TESTING – EXECUTIVE SUMMARY

Project Status: Initial testing completed; no further action needed.



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April 26, 2022

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

Re:	<b>Radon Testing Services</b>		
	KCI Job # 122108316		
Location:	Ridgeview Middle School		
	16600 Raven Rock Rd.		
	Gaithersburg, MD 20878		

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 Ridgeview MS, located at 16600 Raven Rock Rd. Gaithersburg, MD 20878 (subject site).

#### Scope of Services:

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

KCI visited the site on February 28, 2022 and deployed eighty five (85) activated charcoal (AC) radon test kits. KCI deployed radon test kits in all frequently-occupied ground contact rooms, and other areas, (if applicable) in accordance with AARST guidance.

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

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

KCI returned to the site on March 3, 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 in 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 20s and high temperatures ranged from the high 50s to the low 60s Fahrenheit. Maximum sustained winds ranged from 9-17 miles per hour. Average humidity was around 40% with 0 inches of precipitation (rain) was recorded during testing period.

#### **Results:**

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

The results of the radon test analysis indicated the following:

Radon Concentration	Room	Result			
≥4.0 piC/L	Gym	4.5			
<4.0 piC/L	See Attachment B				
Quality Control Samples					
---	---	--	--	--	--
Results of Blank Canisters:	The office blanks, and lab transit blanks had test results of				
less than the laboratory detection limit of 0.3 pCi/L.					
Adequate Laboratory Precision?	Review of the duplicate sample analysis indicates that				
adequate laboratory measurement precision was achieved					
Spike Sample Analysis: The Spike Sample analysis results indicate the labor					
	operating within statistical control limits.				

Our professional services have been performed in accordance with customary principles and practices in the field of industrial hygiene and engineering. If you have any questions or comments regarding this report, please feel free to contact me at (410) 891-1769.

Sincerely,

Tyler McCleaf

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

Attachments:

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

# 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				
Ridgeview MS				
Te	est Period: 02/28/2022 - 03/03/2022			
Kit Number	Room / Area	Result		
11131452	1	0.8		
11131466	2	1.0		
11131458	3	0.9		
11123599	4	0.7		
11123598	5	0.6		
11123597	6	0.5		
11123595	7	0.8		
11123596	7	1.0		
11123600	11	0.8		
11131465	11	1.0		
11131451	18	0.6		
11123591	20	1.5		
11132852	21	< 0.3		
11132869	21	1.1		
11132859	23	0.7		
11123585	24	0.7		
11132841	25	1.4		
11132864	25	1.2		
11123538	26	< 0.3		
11123592	27	1.1		
11132890	100	1.0		
11132881	101	0.7		
11132882	102	0.7		
11132888	103	< 0.3		
11132899	103	1.0		
11132889	104	1.2		
11132873	105	0.9		
11132900	106	0.8		
11132897	107	1.0		
11122074	107	0.0		
11122211	100	0.0 N Q		
11133311	110	1.2		
11122212	111	1 1		
11133313	117	<u> </u>		
11133301	112	< 0.3		
11133305	113	1 3		
11133304	114	<u> </u>		
11133302	115	0.9		
11133306	116	0.8		
11133309	117	1.2		
11132895	214	1.1		

Table 1- Radon Testing Results					
	Ridgeview MS				
Te	est Period: 02/28/2022 - 03/03/2022				
Kit Number	Room / Area	Result			
11132893	218	0.5			
11132894	219	1.0			
11132875	220	0.9			
11132883	221	1.0			
11132884	221	1.0			
11132892	222	1.0			
11132885	223	1.2			
11132887	224	< 0.3			
11132850	225	0.6			
11132865	225	0.8			
11132851	226	< 0.3			
11132857	228	0.6			
11132886	228	< 0.3			
11131489	230	0.8			
11132879	232	0.6			
11132891	102A	0.7			
11132896	102B	< 0.3			
11132866	220A	0.6			
11132868	225A	0.9			
11132867	226A	0.7			
11133315	AUXGYM	0.7			
11133317	BOYS LOCKER	1.2			
11133318	BOYS LOCKER	1.1			
11133314	BOYSLOCKER ROOM	0.8			
11123593	CAFETERIA	0.8			
11123594	CAFETERIA	0.8			
11132872	DAVID EARLY OFFICE	0.5			
11132870	ERI F KANE OFFICE	0.7			
11133310	GIRL LOCKER ROOM	0.9			
11133316	GIRLS LOCKER ROOM	0.8			
11133308	GIRLSLOCKER ROOM	< 0.3			
11131488	GYM	< 0.3			
11132849	GYM	< 0.3			
11132860	JEANNE CAN CORMACK OFFICE	0.9			
11132877	JEANNE MCCORMACK OFFICE	1.5			
11131467	KITCHEN	1.7			
11132858	KRISTEN FRALEY OFFICE	1.1			
11132876	MEDIA CENTER	< 0.3			
11133321	MEDIA CENTER	0.6			
11133320	MEDIA CENTER OFFICE	< 0.3			
11132871	MICHAEL HYMAN	< 0.3			
11132878	PSGYCOLOGIST	0.9			

Table 1- Radon Testing Results				
	Ridgeview MS			
Τe	Test Period: 02/28/2022 - 03/03/2022			
Kit Number Room / Area Result				
11132880 STUDENT SERVICES 0.6				

Table 2- Radon Testing Results					
	Ridgeview MS				
	Test Period: 02/28,	/2022 - 03/03/2022			
Kit Number	QC Type	Room / Area	Result		
11123595	D	7	0.8		
11132864	D	25	1.2		
11132852	FB	21	< 0.3		
11132877	11132877 D Jeanne mccormack		1.5		
11132865	11132865 D 225		0.8		
11132886	FB	228	< 0.3		
11132883	D	221	1.0		
11132898	D	107	0.6		
11132888	FB	103	< 0.3		
11133303	D	112	< 0.3		
11133317	D	Boys locker	1.2		
11133308	FB	Girls locker room	< 0.3		
11130811	OB	OFFICE BLANK	< 0.3		
11130816	ТВ	TRAVEL BLANK	< 0.3		

Summary of Missed Locations							
Ridgeview MS							
Test	t Period: 02/28/2022 - 03/03/20	22					
Kit Number	Kit Number Room/Area Resul						
	NA						

Summary of Missing, Compromised and >/= 4 piC/L Tests						
Ridgeview MS						
T	est Period: 02/28/2022 - 03/03/202	22				
Kit Number	Kit Number Room/Area					
	NA					

Table Note:

\* Missing or Compromised Sample

# ATTACHMENT C

# Laboratory Analytical Results

#### Radon test result report for: RIDGEVIEW MS MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11131466	002	2022-02-28 @ 11:00 am	2022-03-03 @ 8:00 am	$1.0 \pm 0.4$	2022-03-07

Radon test result report for: RIDGEVIEW MS MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11131452	001	2022-02-28 @ 11:00 am	2022-03-03 @ 8:00 am	$0.8 \pm 0.3$	2022-03-07
11131458	003	2022-02-28 @ 11:00 am	2022-03-03 @ 8:00 am	$0.9 \pm 0.4$	2022-03-07
11131465	011	2022-02-28 @ 11:00 am	2022-03-03 @ 8:00 am	$1.0 \pm 0.3$	2022-03-07
11131451	018	2022-02-28 @ 11:00 am	2022-03-03 @ 8:00 am	$0.6 \pm 0.3$	2022-03-07
11131489	230	2022-02-28 @ 12:00 pm	2022-03-03 @ 9:00 am	$0.8 \pm 0.4$	2022-03-07
11131488	GYM	2022-02-28 @ 12:00 pm	2022-03-03 @ 9:00 am	< 0.3	2022-03-07
11131467	KITCHEN	2022-02-28 @ 11:00 am	2022-03-03 @ 9:00 am	$1.7 \pm 0.4$	2022-03-07

#### Radon test result report for: RIDGEVIEW MS MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11123599	004	2022-02-28 @ 11:00 am	2022-03-03 @ 8:00 am	$0.7 \pm 0.3$	2022-03-07
11123598	005	2022-02-28 @ 11:00 am	2022-03-03 @ 8:00 am	$0.6 \pm 0.3$	2022-03-07
11123597	006	2022-02-28 @ 11:00 am	2022-03-03 @ 8:00 am	$0.5 \pm 0.3$	2022-03-07
11123596	007	2022-02-28 @ 11:00 am	2022-03-03 @ 8:00 am	$1.0 \pm 0.4$	2022-03-07
11123595	007	2022-02-28 @ 11:00 am	2022-03-03 @ 8:00 am	$0.8 \pm 0.3$	2022-03-07
11123600	011	2022-02-28 @ 11:00 am	2022-03-03 @ 8:00 am	$0.8 \pm 0.4$	2022-03-07
11132841	025	2022-02-28 @ 11:00 am	2022-03-03 @ 8:00 am	$1.4 \pm 0.4$	2022-03-07
11132864	025	2022-02-28 @ 11:00 am	2022-03-03 @ 8:00 am	$1.2 \pm 0.4$	2022-03-07
11132890	100	2022-02-28 @ 12:00 pm	2022-03-03 @ 9:00 am	$1.0 \pm 0.3$	2022-03-07
11132881	101	2022-02-28 @ 12:00 pm	2022-03-03 @ 9:00 am	$0.7 \pm 0.3$	2022-03-07
11132882	102	2022-02-28 @ 12:00 pm	2022-03-03 @ 9:00 am	$0.7 \pm 0.3$	2022-03-07
11132891	102A	2022-02-28 @ 12:00 pm	2022-03-03 @ 9:00 am	$0.7 \pm 0.3$	2022-03-07
11132896	102B	2022-02-28 @ 12:00 pm	2022-03-03 @ 9:00 am	< 0.3	2022-03-07
11132888	103	2022-02-28 @ 12:00 pm	2022-03-03 @ 9:00 am	< 0.3	2022-03-07
11132899	103	2022-02-28 @ 12:00 pm	2022-03-03 @ 9:00 am	$1.0 \pm 0.3$	2022-03-07
11132889	104	2022-02-28 @ 12:00 pm	2022-03-03 @ 9:00 am	$1.2 \pm 0.3$	2022-03-07
11132873	105	2022-02-28 @ 12:00 pm	2022-03-03 @ 9:00 am	$0.9 \pm 0.3$	2022-03-07
11132900	106	2022-02-28 @ 12:00 pm	2022-03-03 @ 9:00 am	$0.8 \pm 0.3$	2022-03-07
11132897	107	2022-02-28 @ 12:00 pm	2022-03-03 @ 9:00 am	$1.0 \pm 0.3$	2022-03-07
11132898	107	2022-02-28 @ 12:00 pm	2022-03-03 @ 9:00 am	$0.6 \pm 0.3$	2022-03-07
11132874	108	2022-02-28 @ 1:00 pm	2022-03-03 @ 9:00 am	$0.8 \pm 0.3$	2022-03-07
11133311	109	2022-02-28 @ 1:00 pm	2022-03-03 @ 9:00 am	$0.9 \pm 0.3$	2022-03-07
11133312	110	2022-02-28 @ 1:00 pm	2022-03-03 @ 9:00 am	$1.2 \pm 0.3$	2022-03-07
11133313	111	2022-02-28 @ 1:00 pm	2022-03-03 @ 9:00 am	$1.1 \pm 0.4$	2022-03-07
11133301	112	2022-02-28 @ 1:00 pm	2022-03-03 @ 9:00 am	< 0.3	2022-03-07
11133303	112	2022-02-28 @ 1:00 pm	2022-03-03 @ 9:00 am	< 0.3	2022-03-07
11133305	113	2022-02-28 @ 1:00 pm	2022-03-03 @ 9:00 am	$1.3 \pm 0.4$	2022-03-07
11133304	114	2022-02-28 @ 1:00 pm	2022-03-03 @ 9:00 am	$0.9 \pm 0.3$	2022-03-07
11133302	115	2022-02-28 @ 1:00 pm	2022-03-03 @ 9:00 am	$0.9 \pm 0.3$	2022-03-07
11133306	116	2022-02-28 @ 1:00 pm	2022-03-03 @ 9:00 am	$0.8 \pm 0.3$	2022-03-07
11133309	117	2022-02-28 @ 1:00 pm	2022-03-03 @ 9:00 am	$1.2 \pm 0.4$	2022-03-07
11123591	20	2022-02-28 @ 11:00 am	2022-03-03 @ 8:00 am	$1.5 \pm 0.4$	2022-03-07
11132852	21	2022-02-28 @ 11:00 am	2022-03-03 @ 8:00 am	< 0.3	2022-03-07
11132869	21	2022-02-28 @ 11:00 am	2022-03-03 @ 8:00 am	$1.1 \pm 0.4$	2022-03-07
11132895	214	2022-02-28 @ 12:00 pm	2022-03-03 @ 10:00 am	$1.1 \pm 0.3$	2022-03-07
11132893	218	2022-02-28 @ 12:00 pm	2022-03-03 @ 9:00 am	$0.5 \pm 0.3$	2022-03-07
11132894	219	2022-02-28 @ 12:00 pm	2022-03-03 @ 9:00 am	$1.0 \pm 0.3$	2022-03-07

#### Radon test result report for: RIDGEVIEW MS MAIN

Kit #	Room Id	Started		Ended	pCi/L	Analyzed
11132875	220	2022-02-28 @ 12:	:00 pm	2022-03-03 @ 9:00 am	$0.9 \pm 0.3$	2022-03-07
11132866	220A	2022-02-28 @ 12:	:00 pm	2022-03-03 @ 9:00 am	$0.6 \pm 0.4$	2022-03-07
11132884	221	2022-02-28 @ 12:	:00 pm	2022-03-03 @ 9:00 am	$1.0 \pm 0.3$	2022-03-07
11132883	221	2022-02-28 @ 12:	:00 pm	2022-03-03 @ 9:00 am	$1.0 \pm 0.3$	2022-03-07
11132892	222	2022-02-28 @ 12:	:00 pm	2022-03-03 @ 9:00 am	$1.0 \pm 0.3$	2022-03-07
11132885	223	2022-02-28 @ 12:	:00 pm	2022-03-03 @ 9:00 am	$1.2 \pm 0.3$	2022-03-07
11132887	224	2022-02-28 @ 12:	:00 pm	2022-03-03 @ 9:00 am	< 0.3	2022-03-07
11132850	225	2022-02-28 @ 12:	:00 pm	2022-03-03 @ 9:00 am	$0.6 \pm 0.4$	2022-03-07
11132865	225	2022-02-28 @ 12:	:00 pm	2022-03-03 @ 9:00 am	$0.8 \pm 0.3$	2022-03-07
11132868	225A	2022-02-28 @ 12:	:00 pm	2022-03-03 @ 9:00 am	$0.9 \pm 0.3$	2022-03-07
11132851	226	2022-02-28 @ 12:	:00 pm	2022-03-03 @ 9:00 am	< 0.3	2022-03-07
11132867	226A	2022-02-28 @ 12:	:00 pm	2022-03-03 @ 9:00 am	$0.7 \pm 0.4$	2022-03-07
11132886	228	2022-02-28 @ 12:	:00 pm	2022-03-03 @ 9:00 am	< 0.3	2022-03-07
11132857	228	2022-02-28 @ 12:	:00 pm	2022-03-03 @ 9:00 am	$0.6 \pm 0.3$	2022-03-07
11132859	23	2022-02-28 @ 11:	:00 am	2022-03-03 @ 8:00 am	$0.7 \pm 0.3$	2022-03-07
11132879	232	2022-02-28 @ 11:	:00 am	2022-03-03 @ 9:00 am	$0.6 \pm 0.3$	2022-03-07
11123585	24	2022-02-28 @ 11:	:00 am	2022-03-03 @ 8:00 am	$0.7 \pm 0.3$	2022-03-07
11123538	26	2022-02-28 @ 11:	:00 am	2022-03-03 @ 8:00 am	< 0.3	2022-03-07
11123592	27	2022-02-28 @ 11:	:00 am	2022-03-03 @ 8:00 am	$1.1 \pm 0.4$	2022-03-07
11133315	AUXGYM	2022-02-28 @ 1:0	)0 pm	2022-03-03 @ 9:00 am	$0.7 \pm 0.3$	2022-03-07
11133318	BOYS LOCKER	2022-02-28 @ 1:0	)0 pm	2022-03-03 @ 9:00 am	$1.1 \pm 0.3$	2022-03-07
11133317	BOYS LOCKER	2022-02-28 @ 1:0	)0 pm	2022-03-03 @ 9:00 am	$1.2 \pm 0.3$	2022-03-07
11133314	BOYSLOCKER ROOM	2022-02-28 @ 1:0	)0 pm	2022-03-03 @ 9:00 am	$0.8 \pm 0.3$	2022-03-07
11123593	CAFETERIA	2022-02-28 @ 11:	:00 am	2022-03-03 @ 8:00 am	$0.8 \pm 0.3$	2022-03-07
11123594	CAFETERIA	2022-02-28 @ 11:	:00 am	2022-03-03 @ 8:00 am	$0.8 \pm 0.3$	2022-03-07
11132872	DAVID EARLY OFFICE	2022-02-28 @ 11:	:00 am	2022-03-03 @ 9:00 am	$0.5 \pm 0.3$	2022-03-07
11132870	ERI F KANE OFFICE	2022-02-28 @ 11:	:00 am	2022-03-03 @ 9:00 am	$0.7 \pm 0.3$	2022-03-07
11133310	GIRL LOCKER ROOM	2022-02-28 @ 1:0	)0 pm	2022-03-03 @ 9:00 am	$0.9 \pm 0.4$	2022-03-07
11133316	GIRLS LOCKER ROOM	2022-02-28 @ 1:0	)0 pm	2022-03-03 @ 9:00 am	$0.8 \pm 0.3$	2022-03-07
11133308	GIRLSLOCKER ROOM	2022-02-28 @ 1:0	)0 pm	2022-03-03 @ 9:00 am	< 0.3	2022-03-07
11132849	GYM	2022-02-28 @ 12:	:00 pm	2022-03-03 @ 9:00 am	< 0.3	2022-03-07
11132860	JEANNE CAN CORMACK OFFICE	2022-02-28 @ 11:	:00 am	2022-03-03 @ 9:00 am	$0.9 \pm 0.3$	2022-03-07
11132877	JEANNE MCCORMACK OFFICE	2022-02-28 @ 11:	:00 am	2022-03-03 @ 9:00 am	$1.5 \pm 0.4$	2022-03-07
11132858	KRISTEN FRALEY OFFICE	2022-02-28 @ 11:	:00 am	2022-03-03 @ 9:00 am	$1.1 \pm 0.3$	2022-03-07
11132876	MEDIA CENTER	2022-02-28 @ 12:	:00 pm	2022-03-03 @ 9:00 am	< 0.3	2022-03-07
11133321	MEDIA CENTER	2022-02-28 @ 1:0	)0 pm	2022-03-03 @ 9:00 am	$0.6 \pm 0.3$	2022-03-07
11133320	MEDIA CENTER OFFICE	2022-02-28 @ 1:0	)0 pm	2022-03-03 @ 9:00 am	< 0.3	2022-03-07

Radon test result report for: RIDGEVIEW MS MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11132871	MICHAEL HYMAN	2022-02-28 @ 11:00 am	2022-03-03 @ 9:00 am	< 0.3	2022-03-07
11132878	PSGYCOLOGIST	2022-02-28 @ 11:00 am	2022-03-03 @ 9:00 am	$0.9 \pm 0.3$	2022-03-07
11132880	STUDENT SERVICES	2022-02-28 @ 11:00 am	2022-03-03 @ 9:00 am	$0.6 \pm 0.4$	2022-03-07

# EXPOSURE IN BOWSER-MORNER RADON CHAMBER

CLIENT KCI Technologies, I	Job N	umber 204620
NOMINAL Conditions: Radon Conc 27.0 p	Ci/L Rel. Hum 50, 1	_% Temp. <u>70.0</u> F
Date Start: 3/18/22 Date Stop: 3/21/22	Date Start:	Date Stop:
Time Start: 0705 Time Stop: 0705	Time Start:	Time Stop:
Device No.'s: (5) Char Bags-	Device No.'s:	
11139367, 11139368, 11139371,		
11139710, 11139717		е 
E3 Right	· · · · · · · · · · · · · · · · · · ·	
Date Start: Date Stop:	Date Start:	Date Stop:
Time Start: Time Stop:	Time Start:	Time Stop:
Device No.'s:	Device No.'s:	
	·	fi .
8 4 2		, m
Date Start: Date Stop:	Date Start:	Date Stop:
Time Start: Time Stop:	Time Start:	_ Time Stop:
Device No.'s:	Device No.'s:	
	2	

1

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

March 30, 2022

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

#### Radon test result report for:

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

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11139367	SK1	2022-03-18 @ 7:00 am	2022-03-21 @ 7:00 am	$25.9 \pm 2.1$	2022-03-30
11139368	SK2	2022-03-18 @ 7:00 am	2022-03-21 @ 7:00 am	$23.9 \pm 2.0$	2022-03-30
11139371	SK3	2022-03-18 @ 7:00 am	2022-03-21 @ 7:00 am	$25.7 \pm 2.1$	2022-03-30
11139710	SK4	2022-03-18 @ 7:00 am	2022-03-21 @ 7:00 am	$26.4 \pm 2.1$	2022-03-30
11139717	SK5	2022-03-18 @ 7:00 am	2022-03-21 @ 7:00 am	$24.6 \pm 2.0$	2022-03-30

Radon test result report for: RSH MAIN

11139726BASEMENT2022-03-20@ $8:00 \text{ am}$ $2022-03-23$ @ $7:00 \text{ am}$ $0.9 \pm 0.5$ $2022-03-20$ 11139725DINING2022 $03 20$ $@ 8:00 \text{ am}$ $2022 03 23$ $@ 7:00 \text{ am}$ $< 0.3$ $2022 03 20$	yzed	Analyze	pCi/L	Ended	Started	Room Id	Kit #
11130725 DINING 2022 03 20 @ 8:00 am 2022 03 23 @ 7:00 am < 0.3 2022 0	3-30	2022-03-30	$0.9 \pm 0.5$	2022-03-23 @ 7:00 am	2022-03-20 @ 8:00 am	BASEMENT	11139726
11139723 Dimino 2022-05-20 @ 8.00 and 2022-05-23 @ 7.00 and $< 0.5$ 2022-0	3-30	2022-03-30	< 0.3	2022-03-23 @ 7:00 am	2022-03-20 @ 8:00 am	DINING	11139725



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

### Radon Test Kit Chain of Custody

Project Name: MCPS Radon – March 2022 Schools

Name of Schools:

- 1. Marshall, Thurgood ES
- 2. Ridgeview MS
- 3. Travilah ES
- 4. Flower Hill ES
- 5. Resnik, Judith A. ES
- 6. Strawberry Knolls ES
- 7. Whetstone ES
- 8. Laytonsville ES
- 9. Stedwick ES
- **10.Watkins Mill ES**
- 11.Watkins Mill HS
- 12. Einstein, Albert E. HS

	Date	Initials
Radon Test Kits Deployed	02/28/2022	M
Radon Test Kits Collected	03/03/2022	M
Radon Test Kits Shipped to Lab*	03/3/2022	(M)
Radon Test Kits Received by Lab*	03/5/2022	an

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



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#### MCPS RADON TESTING

Executive Summary: Ridgeview Middle School

Date of Test Report:	2/29/2016 (Rev 1)
Round of Testing:	Initial
	Follow-up
	Post Remediation
# Rooms Tested:	53
# Rooms $\geq$ 4.0 pCi/L:	0
Low Value:	< 0.3
High Value:	0.9

Project Status: Initial testing completed; no further action at this time.



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February 29, 2016 (Rev 1)

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

Re:	<b>Radon Testing Services</b>
	KCI Job # 12146341.19
Location:	Ridgeview Middle School
	16600 Raven Rock Drive
	Gaithersburg, MD 20878

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 Ridgeview Middle School, located at 16600 Raven Rock Drive in Gaithersburg, Maryland 20878 (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 15, 2016 and deployed seventy (70) 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 December 18, 2016 to retrieve the radon sampling test kits. KCI shipped all radon tests via overnight delivery to Airchek, Inc. for analysis by gamma-ray spectroscopy. Airchek, Inc. is a NRSB certified analytical laboratory for radon analysis (certification # ARL1402) located at 1936

Butler Bridge Road, Mills River, North Carolina.

#### **Evaluation of Testing Conditions:**

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

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

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

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

#### **Results:**

The results of the radon test analysis indicated the following:

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

Notes:

D- Duplicate sample

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

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

Our professional services have been performed in accordance with customary principles and practices in the field of industrial hygiene and engineering. If you have any questions or comments regarding this report, please feel free to contact me at (410) 316-7800.

Mr. Richard Cox February 29, 2016 Page 4

Sincerely,

James Makler

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

Attachments:

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

# ATTACHMENT A

Floor Plan With Test Locations

# ATTACHMENT B

# Radon Test Summary Spreadsheet

### Table Notes:

- AC- Activated Charcoal
- ACI- Air Chek, Inc.
- D- Duplicate
- FB- Field Blank
- KCI- KCI Technologies, Inc.
- **OB- Office Blank**
- PM- Project Manager
- QC- Quality Control

Radon Testing Results					
Ridgeview M.S.					
Test Period: 12/15/15-12/18/15					
Kit Numbor	Boom / Aroa	Bocult			
7706734					
770674	2	< 0.3			
7706700	2	0.7			
7706726	3	< 0.3			
7706720	5	< 0.3			
7704742	<u> </u>	0.3			
7704742	7	0.7			
7704739	11	0.0			
7704711	16	0.7			
7704740	20	0.5			
7704714	20	0.0			
7704720	21	0.0			
7704725	23	0.0			
7704723	24	< 0.3			
7704730	25	< 0.5 0.6			
7704730	20				
7704727	100	< 0.3			
7704766	101	< 0.3			
7704755	101	< 0.3			
7704700	102	< 0.3			
7704790	103	< 0.3			
7704735	104	< 0.3			
7704733	105	< 0.3			
7704705	100	< 0.3			
7704703	107	< 0.3			
7704737	109	< 0.3			
7704738	110	< 0.3			
7704736	111	< 0.3			
7704702	112	< 0.3			
7704702	113	< 0.3			
7704721	114	< 0.3			
7704733	115	< 0.3			
7704791	116	< 0.3			
7704717	117	< 0.3			
7704701	119	0.0			
7706739	222	0.0			
7706724	222	0.0			
7706712	223	0.0			
7706737	227	<u> </u>			
7706722	223	- 0.5 0 A			
7706732	220	- 0.0 - 0.2			
770/73/	230	< 0.3			
7704754	1024	< 0.3			
770/723	102A	< 0.3			
7704744		< 0.3			
7706746		× 0.3			
1100140		> 0.3			

Table Note: \* Missing or Compromised Sample

Radon Testing Results						
	Ridgeview M.S.					
	Test Period: 12/15/15-12/18/15					
Kit Number	Room / Area	Result				
7706733	212 MEDIA	< 0.3				
7706735	212 MEDIA	< 0.3				
7706740	225A	< 0.3				
7706743	AUX GYM	0.9				
7706747	AUX GYM	0.9				
7706750	BOYS LOCKER OFF	0.6				
7704715	CAFETERIA	< 0.3				
7704718	CAFETERIA	< 0.3				
7706744	GIRLS LOCKER OFF	< 0.3				
7704716	KITCHEN	< 0.3				
7704729	KITCHEN	< 0.3				

Radon Testing Results					
Ridgeview M.S.					
	Test Period: 12/15/15-12/18/15	-			
Kit Number	QC Туре	Result			
7704755	D (102B)	< 0.3			
7704732	D (109)	< 0.3			
7704712	D (20)	0.8			
7706719	D (225A)	< 0.3			
7706742	D (AUX GYM)	0.7			
7706748	D (AUX GYM)	0.9			
7704713	D (KITCHEN)	0.5			
7704743	FB (102B)	< 0.3			
7704731	FB (109)	< 0.3			
7704728	FB (20)	< 0.3			
7706738	FB (230)	< 0.3			
7706745	FB (AUX GYM)	< 0.3			
7708207	OB (OFFICE BLANK)	< 0.3			

# ATTACHMENT C

# Laboratory Analytical Results

## December ABORATORY ANALYSIS 30, REPORT \*\*

#### Radon test result report for: RIDGEVIEW M.S. MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7706734	1	2015-12-15 @ 2:00 pm	2015-12-18 @ 10:00 am	< 0.3	2015-12-22
7704788	100	2015-12-15 @ 12:00 pm	2015-12-18 @ 10:00 am	< 0.3	2015-12-22
7704753	101	2015-12-15 @ 12:00 pm	2015-12-18 @ 10:00 am	< 0.3	2015-12-22
7704706	102	2015-12-15 @ 12:00 pm	2015-12-18 @ 10:00 am	< 0.3	2015-12-22
7704754	102A	2015-12-15 @ 12:00 pm	2015-12-18 @ 10:00 am	< 0.3	2015-12-22
7704723	102B	2015-12-15 @ 12:00 pm	2015-12-18 @ 10:00 am	< 0.3	2015-12-22
7704743	102B	2015-12-15 @ 12:00 pm	2015-12-18 @ 10:00 am	< 0.3	2015-12-22
7704755	102B	2015-12-15 @ 12:00 pm	2015-12-18 @ 10:00 am	< 0.3	2015-12-22
7704790	103	2015-12-15 @ 12:00 pm	2015-12-18 @ 10:00 am	< 0.3	2015-12-22
7704744	103A PREP	2015-12-15 @ 12:00 pm	2015-12-18 @ 10:00 am	< 0.3	2015-12-22
7704789	104	2015-12-15 @ 12:00 pm	2015-12-18 @ 10:00 am	< 0.3	2015-12-22
7704735	105	2015-12-15 @ 12:00 pm	2015-12-18 @ 10:00 am	< 0.3	2015-12-22
7704707	106	2015-12-15 @ 12:00 pm	2015-12-18 @ 10:00 am	< 0.3	2015-12-22
7706746	106A PREP	2015-12-15 @ 12:00 pm	2015-12-18 @ 10:00 am	< 0.3	2015-12-22
7704705	107	2015-12-15 @ 12:00 pm	2015-12-18 @ 10:00 am	< 0.3	2015-12-22
7704724	108	2015-12-15 @ 12:00 pm	2015-12-18 @ 10:00 am	< 0.3	2015-12-22
7704731	109	2015-12-15 @ 12:00 pm	2015-12-18 @ 10:00 am	< 0.3	2015-12-22
7704732	109	2015-12-15 @ 12:00 pm	2015-12-18 @ 10:00 am	< 0.3	2015-12-22
7704737	109	2015-12-15 @ 12:00 pm	2015-12-18 @ 10:00 am	< 0.3	2015-12-22
7704711	11	2015-12-15 @ 1:00 pm	2015-12-18 @ 10:00 am	$0.7 \pm 0.3$	2015-12-22
7704738	110	2015-12-15 @ 12:00 pm	2015-12-18 @ 10:00 am	< 0.3	2015-12-22
7704736	111	2015-12-15 @ 12:00 pm	2015-12-18 @ 10:00 am	< 0.3	2015-12-22
7704702	112	2015-12-15 @ 12:00 pm	2015-12-18 @ 10:00 am	< 0.3	2015-12-22
7704722	113	2015-12-15 @ 12:00 pm	2015-12-18 @ 10:00 am	< 0.3	2015-12-22
7704721	114	2015-12-15 @ 12:00 pm	2015-12-18 @ 10:00 am	< 0.3	2015-12-22
7704733	115	2015-12-15 @ 12:00 pm	2015-12-18 @ 10:00 am	< 0.3	2015-12-22
7704791	116	2015-12-15 @ 12:00 pm	2015-12-18 @ 10:00 am	< 0.3	2015-12-22
7704717	117	2015-12-15 @ 12:00 pm	2015-12-18 @ 10:00 am	< 0.3	2015-12-22
7704701	119	2015-12-15 @ 11:00 am	2015-12-18 @ 10:00 am	$0.6 \pm 0.3$	2015-12-22
7704740	16	2015-12-15 @ 1:00 pm	2015-12-18 @ 10:00 am	< 0.3	2015-12-22
7706749	2	2015-12-15 @ 2:00 pm	2015-12-18 @ 10:00 am	$0.7 \pm 0.3$	2015-12-22
7704728	20	2015-12-15 @ 1:00 pm	2015-12-18 @ 10:00 am	< 0.3	2015-12-22
7704712	20	2015-12-15 @ 1:00 pm	2015-12-18 @ 10:00 am	$0.8 \pm 0.3$	2015-12-22
7704714	20	2015-12-15 @ 1:00 pm	2015-12-18 @ 10:00 am	$0.8 \pm 0.3$	2015-12-22
7704726	21	2015-12-15 @ 1:00 pm	2015-12-18 @ 10:00 am	$0.6 \pm 0.3$	2015-12-22
7706735	212 MEDIA	2015-12-15 @ 2:00 pm	2015-12-18 @ 11:00 am	< 0.3	2015-12-22
7706733	212 MEDIA	2015-12-15 @ 2:00 pm	2015-12-18 @ 11:00 am	< 0.3	2015-12-22

## December ABORATORY ANALYSIS 30, REPORT \*\*

Radon test result report for: RIDGEVIEW M.S. MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7706739	222	2015-12-15 @ 2:00 pm	2015-12-18 @ 11:00 am	$0.8 \pm 0.3$	2015-12-22
7706724	223	2015-12-15 @ 2:00 pm	2015-12-18 @ 11:00 am	$0.8 \pm 0.3$	2015-12-22
7706712	224	2015-12-15 @ 2:00 pm	2015-12-18 @ 11:00 am	$0.6 \pm 0.3$	2015-12-22
7706737	225	2015-12-15 @ 2:00 pm	2015-12-18 @ 11:00 am	< 0.3	2015-12-22
7706740	225A	2015-12-15 @ 2:00 pm	2015-12-18 @ 11:00 am	< 0.3	2015-12-22
7706719	225A	2015-12-15 @ 2:00 pm	2015-12-18 @ 10:00 am	< 0.3	2015-12-22
7706722	226	2015-12-15 @ 2:00 pm	2015-12-18 @ 10:00 am	$0.6 \pm 0.3$	2015-12-22
7704720	23	2015-12-15 @ 1:00 pm	2015-12-18 @ 10:00 am	$0.8 \pm 0.3$	2015-12-22
7706738	230	2015-12-15 @ 2:00 pm	2015-12-18 @ 11:00 am	< 0.3	2015-12-22
7706732	230	2015-12-15 @ 2:00 pm	2015-12-18 @ 11:00 am	< 0.3	2015-12-22
7704734	233	2015-12-15 @ 1:00 pm	2015-12-18 @ 11:00 am	< 0.3	2015-12-22
7704725	24	2015-12-15 @ 1:00 pm	2015-12-18 @ 10:00 am	< 0.3	2015-12-22
7704719	25	2015-12-15 @ 1:00 pm	2015-12-18 @ 10:00 am	< 0.3	2015-12-22
7704730	26	2015-12-15 @ 1:00 pm	2015-12-18 @ 10:00 am	$0.6 \pm 0.3$	2015-12-22
7704727	27	2015-12-15 @ 1:00 pm	2015-12-18 @ 10:00 am	< 0.3	2015-12-22
7706709	3	2015-12-15 @ 1:00 pm	2015-12-18 @ 10:00 am	< 0.3	2015-12-22
7706726	4	2015-12-15 @ 1:00 pm	2015-12-18 @ 10:00 am	< 0.3	2015-12-22
7706727	5	2015-12-15 @ 1:00 pm	2015-12-18 @ 10:00 am	< 0.3	2015-12-22
7704742	6	2015-12-15 @ 1:00 pm	2015-12-18 @ 10:00 am	$0.7 \pm 0.3$	2015-12-22
7704739	7	2015-12-15 @ 1:00 pm	2015-12-18 @ 10:00 am	$0.6 \pm 0.3$	2015-12-22
7706742	AUX GYM	2015-12-15 @ 11:00 am	2015-12-18 @ 10:00 am	$0.7 \pm 0.3$	2015-12-22
7706743	AUX GYM	2015-12-15 @ 11:00 am	2015-12-18 @ 10:00 am	$0.9 \pm 0.3$	2015-12-22
7706745	AUX GYM	2015-12-15 @ 11:00 am	2015-12-18 @ 10:00 am	< 0.3	2015-12-22
7706747	AUX GYM	2015-12-15 @ 11:00 am	2015-12-18 @ 10:00 am	$0.9 \pm 0.3$	2015-12-22
7706748	AUX GYM	2015-12-15 @ 11:00 am	2015-12-18 @ 10:00 am	$0.9 \pm 0.3$	2015-12-22
7706750	BOYS LOCKER OFF	2015-12-15 @ 11:00 am	2015-12-18 @ 10:00 am	$0.6 \pm 0.3$	2015-12-22
7704715	CAFETERIA	2015-12-15 @ 1:00 pm	2015-12-18 @ 10:00 am	< 0.3	2015-12-22
7704718	CAFETERIA	2015-12-15 @ 12:00 pm	2015-12-18 @ 10:00 am	< 0.3	2015-12-22
7706744	GIRLS LOCKER OFF	5 2015-12-15 @ 11:00 am	2015-12-18 @ 10:00 am	< 0.3	2015-12-22
7704713	KITCHEN	2015-12-15 @ 1:00 pm	2015-12-18 @ 10:00 am	$0.5 \pm 0.3$	2015-12-22
7704716	KITCHEN	2015-12-15 @ 1:00 pm	2015-12-18 @ 10:00 am	< 0.3	2015-12-22
7704729	KITCHEN	2015-12-15 @ 1:00 pm	2015-12-18 @ 10:00 am	< 0.3	2015-12-22

## Decenaber LABORATORY ANALYSIS 30, REPORT \*\*

#### Radon test result report for: RIDGEVIEW M.S. OFFICE BLANK

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7708207	OFFICE BLANK	2015-12-15 @ 3:00 pm	2015-12-18 @ 3:00 pm	< 0.3	2015-12-22
		1	1		

## December LABORATORY ANALYSIS 29, 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	<b>TRANSIT 2</b>	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	<b>TRANSIT 4</b>	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	<b>TRANSIT 7</b>	2015-12-13 @ 10:00 am	2015-12-15 @ 10:00 am	< 0.3	2015-12-16
7706518	<b>TRANSIT 8</b>	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

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2015	KEPUKI **

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 <u>49.6</u> % Temp. <u>69.9</u> F
Date Start: $12/18/15$ Date Stop: $12/21/15$	Date Start: Date Stop:
Time Start: <u>0929</u> Time Stop: <u>0929</u>	Time Start: Time Stop:
Device No.'s: 7705132,7706208,	Device No.'s:
7706211,7706366,	
7706380, 7706381	
F3 Loft	
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:
5 6	
1	
	-

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


 $E\,\text{ngineers}\, \bullet\, P\,\text{lanners}\, \bullet\, S\,\text{cientists}\, \bullet\, C\,\text{onstruction}\,\, M\,\text{anagers}$ 

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 I

Name of Schools:

1. Westland M.S.	6. South Lake E.S.	11. Highland View E.S.	16. Ridgeview M.S.
2. East Silver Spring E.S.	7. Jones Lane E.S.	12. Cresthaven E.S.	17. Rockwell E.S.
3. Oakland Terrace E.S.	8. Quince Orchard H.S.	13. Viers Mill E.S.	18. Oak View E.S.
4. Rocking Horse Road E.S.	9. Damascus E.S.	14. Smith Center	19. Jackson Road E.S.
5. Beall E.S.	10. Westbrooke E.S.	15. Rosemont E.S.	20. Highland E.S.
			21. Watkins Mill E.S.

	Date	Initials
Radon Test Kits Deployed	12/15/15	14M
Radon Test Kits Collected	12/18/15	KM
Radon Test Kits Shipped to Lab*	12/18/15	KM
Radon Test Kits Received by Lab*	12/22/15	KM

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