

School Year: **24-25**

Facility:	Gaithersburg Middle School		
Address:	2 Teachers Way		
	Gaithersburg, MD 20877		
Reason for Testing:	Scheduled Re-Testing - <input checked="" type="checkbox"/> 2-year or <input type="checkbox"/> 5-year schedule <input type="checkbox"/> Clearance Testing (Post-Mitigation) <input checked="" 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 checked="" type="checkbox"/> Initial Testing -or- <input type="checkbox"/> Follow-up Testing		
Testing Status:	<input checked="" type="checkbox"/> No Further Testing Needed -or- <input type="checkbox"/> Follow-Up Testing Required		

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

Mitigation -	Facility Radon Status:		
<input checked="" type="checkbox"/> Not Required <input type="checkbox"/> Required ( $\geq 4.0$ -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	99	Lowest Value (pCi/L)	<0.3
Number of Rooms ( $\geq 4.0$ -pCi/L)	0	Highest Value (pCi/L)	3.0

**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  $\geq 2.0$ -pCi/L;  $\geq 2.7$ -pCi/L;  $\geq 4.0$ -pCi/L; and  $\geq 8.0$ -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 type="checkbox"/> Continuous	<input checked="" type="checkbox"/> Charcoal Absorption (CAD) <input type="checkbox"/> Alpha Track (ATD) <input type="checkbox"/> Other <input type="checkbox"/> Electret ion Chamber (EIC) <input type="checkbox"/> Electronic Integration (EID)	<i>Other—Specify here:</i>
Detector/Device Name:	Air Chek – Radon Test Kits		
Manufacturer:	Radon Labs		
Person(s) Deploying or Retrieving Test Devices and certification number		Organization/Company	
Shakia Dawkins		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):	2/25/2025
				2/28/2025
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				Total
	Ground-Contact		Upper-Level(s)		
	Initial	Follow-Up	Initial	Follow-Up	
Test Locations <sup>1</sup>	96	0	3	0	99
Duplicates <sup>2</sup>	7	0	0	0	7
Field Blanks <sup>3</sup>	5	0	0	0	5
Grand Total					111

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 <sup>1</sup>	Not applicable		10
Trip Blanks <sup>2</sup>	1	0	1
Office Blanks <sup>3, 4</sup>	1	0	1
			12

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
	<b>Initial</b> <b>Follow-Up</b>
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"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> No
For all Duplicate Samples <sup>1</sup> , the higher value is $\leq 2x$ the lower value?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> No
For all Duplicate Samples <sup>1</sup> , Relative Percent Difference(s) (RPD) <sup>2</sup> are less than the Warning Level <sup>3</sup> ?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> No
For all Duplicate Samples <sup>1</sup> , Relative Percent Difference(s) (RPD) <sup>2</sup> are less than the Control Level <sup>3</sup> ?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" 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
$\geq 4.0$ -pCi/L	28% RPD	36% RPD

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

Round of Testing	Ground-Contact		Upper-Level(s)		Total
	Initial	Follow-Up	Initial	Follow-Up	
Number of test locations:	96	0	3	0	99
Number of locations $\geq 8.0$ -pCi/L:	0	0	0	0	0
Number of locations $\geq 4.0$ and $\leq 8$ -pCi/L:	0	0	0	0	0
Number of locations $\geq 2.7$ and $< 4$ -pCi/L:	3	0	0	0	3
Number of locations $\geq 2.0$ and $< 2.7$ -pCi/L:	6	0	0	0	6
Number of missing required test locations <sup>3</sup> :	5	0	0	0	5
Number of failed duplicate control locations:	0	0	0	0	0
Percentage of missing test locations for the facility <sup>4,5</sup> :	5.2%	0	0	0	5.2%

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 contact with the ground, and, if applicable, 10% of upper floor rooms?		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<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 type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<i>If Yes to both above – then Testing Status – ‘No Further Testing Needed’ mark ‘NA’ below and complete Conclusions section</i>			
<b>If No to either above, were all results obtained under 4.0-pCi/L and were sufficient valid measurements obtained?<sup>1,2</sup></b> <i>If Yes, then - ‘No Further Testing Needed’ complete Conclusion section on first page. If No, then - ‘Follow-up Testing Required’ continue below.</i>		<input checked="" type="checkbox"/> Yes <input 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**

<b>Table 1- Radon Testing Results</b>		
<b>Gaithersburg Middle School</b>		
<b>Test Period: 2/25/2025 - 2/28/2025</b>		
Kit Number	Room / Area	Result
11951316	100	0.8
11951330	101	0.7
11951338	102	< 0.3
11951340	103	< 0.3
11951343	103	< 0.3
11951317	104	< 0.3
11951331	105	< 0.3
11951322	107	< 0.3
11951335	108	< 0.3
11951344	108	< 0.3
11951309	109	< 0.3
11951333	111	< 0.3
11951332	112	< 0.3
11951324	114	< 0.3
11951329	200	1.4
11951326	202	1.3
11951312	203	0.9
11951319	204	2.3
11951310	205	1.4
11951337	206	1.7
11951363	300	< 0.3
11951350	301	< 0.3
11951371	302	< 0.3
11951348	303	< 0.3
11951346	304	< 0.3
11951367	305	< 0.3
11951368	305	< 0.3
11951347	307	< 0.3
11951359	307	< 0.3
11951361	309	< 0.3
11951353	311	0.7
11951349	400	< 0.3
11951345	401	< 0.3
11951351	401	< 0.3
11951376	402	0.5
11951377	403	< 0.3
11951375	404	< 0.3

<b>Table 1- Radon Testing Results</b>		
<b>Gaithersburg Middle School</b>		
<b>Test Period: 2/25/2025 - 2/28/2025</b>		
Kit Number	Room / Area	Result
11951378	405	0.6
11951355	407	< 0.3
11951301	500	< 0.3
11951303	500	0.5
11951334	502	0.5
11951395	505	< 0.3
11951384	507	< 0.3
11951393	507	0.7
11951366	601	< 0.3
11951372	603	2.0
11951313	709	< 0.3
11951314	807	< 0.3
11951321	808	< 0.3
11951342	100 OFFICE	0.7
11951339	103 OFFICE	< 0.3
11951320	204B	3.0
11951318	205A	2.9
11951315	205B	2.1
11951308	205C	1.9
11951307	205D	1.3
11951328	205D	1.5
11951327	205E	2.1
11951341	205E	< 0.3
11951374	407A	< 0.3
11951358	407B	< 0.3
11951352	407C	< 0.3
11951360	407D	< 0.3
11951381	407D	< 0.3
11951364	603 OFFICE	1.2
11951382	ADMIN SECRETARY	< 0.3
11951386	AP	1.2
11951383	AP2	1.0
11951389	AP2	0.8
11951387	AP3	0.7
11951304	APR	< 0.3
11951311	APR	< 0.3
11951379	BOYS AUX GYM	1.6

<b>Table 1- Radon Testing Results</b>		
<b>Gaithersburg Middle School</b>		
<b>Test Period: 2/25/2025 - 2/28/2025</b>		
Kit Number	Room / Area	Result
11951365	BOYS LR	1.7
11951354	BOYS LR OFFICE	0.8
11951369	CONFERENCE	< 0.3
11920063	COUNSELING	0.8
11920079	COUNSELING 1	1.2
11920073	COUNSELING 2	1.6
11920074	COUNSELING 3	1.8
11951400	COUNSELING 3	2.1
11920078	COUNSELING 4	2.1
11920083	COUNSELING 5	3.0
11951380	GIRLS AUX GYM	< 0.3
11951362	GIRLS LR	< 0.3
11951373	GIRLS LR OFFICE	< 0.3
11951356	GYM	< 0.3
11951370	GYM	< 0.3
11920064	HEALTH	0.6
11951399	HEALTH OFFICE	< 0.3
11951306	KITCHEN OFFICE	< 0.3
11951391	MAIN OFFICE	< 0.3
11920062	MEDIA CENTER	0.6
11920076	MEDIA CENTER	0.9
11920071	MEDIA OFFICE	1.4
11920075	MEDIA WORKROOM	0.9
11951305	MEETING ROOM	1.0
11951388	PRINCIPAL	< 0.3
11951394	PSYCHOLOGIST	1.1
11951396	PSYCHOLOGIST	< 0.3
11951390	SECURITY	0.8
11920072	STAFF LOUNGE	< 0.3
11951323	STAFF WORKROOM	0.7
11951325	STAFF WORKROOM	0.7
11951357	STAGE	0.5
11951385	STUDIO OFFICE	0.7
11951398	STUDIO OFFICE	0.9
11920065	TV STUDIO	0.7
11951392	WELCOME CENTER	0.6
11951397	WORKROOM	0.7



<b>Table 3 - QC Radon Testing Results</b>			
<b>Gaithersburg Middle School</b>			
<b>Test Period: 2/25/2025 - 2/28/2025</b>			
<b>Kit Number</b>	<b>QC Type</b>	<b>Room / Area</b>	<b>Result</b>
11951340	D	103	< 0.3
11951335	D	108	< 0.3
11951368	FB	305	< 0.3
11951301	FB	500	< 0.3
11951384	FB	507	< 0.3
11951328	D	205D	1.5
11951341	FB	205E	< 0.3
11951381	D	407D	< 0.3
11951383	D	AP2	1.0
11951370	D	Gym	< 0.3
11951396	FB	Psychologist	< 0.3
11951385	D	Studio Office	0.7
11926885	OB	OFFICE BLANK	< 0.3
11926889	TB	TRAVEL BLANK	< 0.3

**Table 3a - Duplicate Worksheet / Data Validation**

**Gaithersburg Middle School**

**Test Period: 2/25/2025 - 2/28/2025**

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	
11951340	11951343	103	0.3	0.3	✓	0.6	PASS	0.3	<1-pCi/L	✓
11951335	11951344	108	0.3	0.3	✓	0.6	PASS	0.3	<1-pCi/L	✓
11951307	11951328	205D	1.5	1.3	✓	2.6	PASS	1.4	<1-pCi/L	✓
11951360	11951381	407D	0.3	0.3	✓	0.6	PASS	0.3	<1-pCi/L	✓
11951383	11951389	AP2	1.0	0.8	✓	1.6	PASS	0.9	<1-pCi/L	✓
11951356	11951370	Gym	0.3	0.3	✓	0.6	PASS	0.3	<1-pCi/L	✓
11951385	11951398	Studio Office	0.9	0.7	✓	1.4	PASS	0.8	<1-pCi/L	✓

**NOTES:**

QC Check #1 - Data Entry

QC Check #2 - Higher duplicate concentration is < or = to 2x the Lower

QC Check #3 - Meets RPD Limits, by average duplicate concentration

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

Average (pCi/L)	Warning Level	Control Level
< 2.0	1-pCi/L	NA
Between 2.0 and 3.9	50% RPD	67% RPD
≥ 4.0	28% RPD	36% RPD



**Attachment 2:**  
**Laboratory Reports**

Radon test result report for:

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11951316	100	2025-02-25 @ 8:00 am	2025-02-28 @ 8:00 am	0.8 ± 0.3	2025-03-04
11951342	100 OFFICE	2025-02-25 @ 8:00 am	2025-02-28 @ 8:00 am	0.7 ± 0.4	2025-03-04
11951330	101	2025-02-25 @ 8:00 am	2025-02-28 @ 8:00 am	0.7 ± 0.4	2025-03-04
11951338	102	2025-02-25 @ 8:00 am	2025-02-28 @ 8:00 am	< 0.3	2025-03-04
11951340	103	2025-02-25 @ 8:00 am	2025-02-28 @ 8:00 am	< 0.3	2025-03-04
11951343	103	2025-02-25 @ 8:00 am	2025-02-28 @ 8:00 am	< 0.3	2025-03-04
11951339	103 OFFICE	2025-02-25 @ 8:00 am	2025-02-28 @ 8:00 am	< 0.3	2025-03-04
11951317	104	2025-02-25 @ 8:00 am	2025-02-28 @ 8:00 am	< 0.3	2025-03-04
11951331	105	2025-02-25 @ 7:00 am	2025-02-28 @ 9:00 am	< 0.3	2025-03-04
11951322	107	2025-02-25 @ 7:00 am	2025-02-28 @ 8:00 am	< 0.3	2025-03-04
11951344	108	2025-02-25 @ 7:00 am	2025-02-28 @ 8:00 am	< 0.3	2025-03-04
11951335	108	2025-02-25 @ 7:00 am	2025-02-28 @ 8:00 am	< 0.3	2025-03-04
11951309	109	2025-02-25 @ 7:00 am	2025-02-28 @ 8:00 am	< 0.3	2025-03-04
11951333	111	2025-02-25 @ 7:00 am	2025-02-28 @ 8:00 am	< 0.3	2025-03-04
11951332	112	2025-02-25 @ 7:00 am	2025-02-28 @ 8:00 am	< 0.3	2025-03-04
11951324	114	2025-02-25 @ 7:00 am	2025-02-28 @ 8:00 am	< 0.3	2025-03-04
11951329	200	2025-02-25 @ 7:00 am	2025-02-28 @ 8:00 am	1.4 ± 0.4	2025-03-04
11951326	202	2025-02-25 @ 7:00 am	2025-02-28 @ 8:00 am	1.3 ± 0.4	2025-03-04
11951312	203	2025-02-25 @ 8:00 am	2025-02-28 @ 8:00 am	0.9 ± 0.4	2025-03-04
11951319	204	2025-02-25 @ 8:00 am	2025-02-28 @ 8:00 am	2.3 ± 0.4	2025-03-04
11951320	204B	2025-02-25 @ 8:00 am	2025-02-28 @ 8:00 am	3.0 ± 0.4	2025-03-04
11951310	205	2025-02-25 @ 7:00 am	2025-02-28 @ 8:00 am	1.4 ± 0.4	2025-03-04
11951318	205A	2025-02-25 @ 7:00 am	2025-02-28 @ 8:00 am	2.9 ± 0.4	2025-03-04
11951315	205B	2025-02-25 @ 7:00 am	2025-02-28 @ 8:00 am	2.1 ± 0.4	2025-03-04
11951308	205C	2025-02-25 @ 7:00 am	2025-02-28 @ 8:00 am	1.9 ± 0.4	2025-03-04
11951328	205D	2025-02-25 @ 7:00 am	2025-02-28 @ 8:00 am	1.5 ± 0.4	2025-03-04
11951307	205D	2025-02-25 @ 7:00 am	2025-02-28 @ 8:00 am	1.3 ± 0.4	2025-03-04
11951341	205E	2025-02-25 @ 7:00 am	2025-02-28 @ 8:00 am	< 0.3	2025-03-04
11951327	205E	2025-02-25 @ 7:00 am	2025-02-28 @ 8:00 am	2.1 ± 0.4	2025-03-04
11951337	206	2025-02-25 @ 7:00 am	2025-02-28 @ 8:00 am	1.7 ± 0.4	2025-03-04
11951363	300	2025-02-25 @ 9:00 am	2025-02-28 @ 8:00 am	< 0.3	2025-03-04
11951350	301	2025-02-25 @ 9:00 am	2025-02-28 @ 8:00 am	< 0.3	2025-03-04
11951371	302	2025-02-25 @ 9:00 am	2025-02-28 @ 8:00 am	< 0.3	2025-03-04
11951348	303	2025-02-25 @ 9:00 am	2025-02-28 @ 8:00 am	< 0.3	2025-03-04
11951346	304	2025-02-25 @ 8:00 am	2025-02-28 @ 8:00 am	< 0.3	2025-03-04
11951367	305	2025-02-25 @ 9:00 am	2025-02-28 @ 8:00 am	< 0.3	2025-03-04
11951368	305	2025-02-25 @ 8:00 am	2025-02-28 @ 8:00 am	< 0.3	2025-03-04

Radon test result report for:

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11951347	307	2025-02-25 @ 8:00 am	2025-02-28 @ 8:00 am	< 0.3	2025-03-04
11951359	307	2025-02-25 @ 8:00 am	2025-02-28 @ 8:00 am	< 0.3	2025-03-04
11951361	309	2025-02-25 @ 8:00 am	2025-02-28 @ 8:00 am	< 0.3	2025-03-04
11951353	311	2025-02-25 @ 8:00 am	2025-02-28 @ 8:00 am	0.7 ± 0.4	2025-03-04
11951349	400	2025-02-25 @ 9:00 am	2025-02-28 @ 8:00 am	< 0.3	2025-03-04
11951351	401	2025-02-25 @ 9:00 am	2025-02-28 @ 8:00 am	< 0.3	2025-03-04
11951345	401	2025-02-25 @ 9:00 am	2025-02-28 @ 8:00 am	< 0.3	2025-03-04
11951376	402	2025-02-25 @ 9:00 am	2025-02-28 @ 8:00 am	0.5 ± 0.3	2025-03-04
11951377	403	2025-02-25 @ 9:00 am	2025-02-28 @ 8:00 am	< 0.3	2025-03-04
11951375	404	2025-02-25 @ 9:00 am	2025-02-28 @ 8:00 am	< 0.3	2025-03-04
11951378	405	2025-02-25 @ 9:00 am	2025-02-28 @ 8:00 am	0.6 ± 0.3	2025-03-04
11951355	407	2025-02-25 @ 9:00 am	2025-02-28 @ 8:00 am	< 0.3	2025-03-04
11951374	407A	2025-02-25 @ 9:00 am	2025-02-28 @ 8:00 am	< 0.3	2025-03-04
11951358	407B	2025-02-25 @ 9:00 am	2025-02-28 @ 8:00 am	< 0.3	2025-03-04
11951352	407C	2025-02-25 @ 9:00 am	2025-02-28 @ 8:00 am	< 0.3	2025-03-04
11951381	407D	2025-02-25 @ 9:00 am	2025-02-28 @ 8:00 am	< 0.3	2025-03-04
11951360	407D	2025-02-25 @ 9:00 am	2025-02-28 @ 8:00 am	< 0.3	2025-03-04
11951301	500	2025-02-25 @ 8:00 am	2025-02-28 @ 8:00 am	< 0.3	2025-03-04
11951301	500	2025-02-25 @ 8:00 am	2025-02-28 @ 8:00 am	< 0.3	2025-03-04
11951303	500	2025-02-25 @ 8:00 am	2025-02-28 @ 8:00 am	0.5 ± 0.3	2025-03-04
11951334	502	2025-02-25 @ 8:00 am	2025-02-28 @ 8:00 am	0.5 ± 0.3	2025-03-04
11951395	505	2025-02-25 @ 9:00 am	2025-02-28 @ 8:00 am	< 0.3	2025-03-04
11951384	507	2025-02-25 @ 9:00 am	2025-02-28 @ 8:00 am	< 0.3	2025-03-04
11951393	507	2025-02-25 @ 9:00 am	2025-02-28 @ 8:00 am	0.7 ± 0.4	2025-03-04
11951366	601	2025-02-25 @ 8:00 am	2025-02-28 @ 8:00 am	< 0.3	2025-03-04
11951372	603	2025-02-25 @ 8:00 am	2025-02-28 @ 8:00 am	2.0 ± 0.4	2025-03-04
11951364	603 OFFICE	2025-02-25 @ 8:00 am	2025-02-28 @ 8:00 am	1.2 ± 0.4	2025-03-04
11951313	709	2025-02-25 @ 7:00 am	2025-02-28 @ 8:00 am	< 0.3	2025-03-04
11951314	807	2025-02-25 @ 7:00 am	2025-02-28 @ 8:00 am	< 0.3	2025-03-04
11951321	808	2025-02-25 @ 7:00 am	2025-02-28 @ 8:00 am	< 0.3	2025-03-04
11951382	ADMIN SECRETARY	2025-02-25 @ 9:00 am	2025-02-28 @ 9:00 am	< 0.3	2025-03-04
11951386	AP	2025-02-25 @ 9:00 am	2025-02-28 @ 9:00 am	1.2 ± 0.4	2025-03-04
11951383	AP2	2025-02-25 @ 9:00 am	2025-02-28 @ 9:00 am	1.0 ± 0.3	2025-03-04
11951389	AP2	2025-02-25 @ 9:00 am	2025-02-28 @ 9:00 am	0.8 ± 0.4	2025-03-04
11951387	AP3	2025-02-25 @ 9:00 am	2025-02-28 @ 9:00 am	0.7 ± 0.3	2025-03-04
11951304	APR	2025-02-25 @ 8:00 am	2025-02-28 @ 8:00 am	< 0.3	2025-03-04
11951311	APR	2025-02-25 @ 8:00 am	2025-02-28 @ 8:00 am	< 0.3	2025-03-04

Radon test result report for:

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11951379	BOYS AUX GYM	2025-02-25 @ 8:00 am	2025-02-28 @ 8:00 am	1.6 ± 0.4	2025-03-04
11951365	BOYS LR	2025-02-25 @ 8:00 am	2025-02-28 @ 8:00 am	1.7 ± 0.4	2025-03-04
11951354	BOYS LR OFFICE	2025-02-25 @ 8:00 am	2025-02-28 @ 8:00 am	0.8 ± 0.3	2025-03-04
11951369	CONFERENCE	2025-02-25 @ 9:00 am	2025-02-28 @ 8:00 am	< 0.3	2025-03-04
11920063	COUNSELING	2025-02-25 @ 10:00 am	2025-02-28 @ 8:00 am	0.8 ± 0.4	2025-03-04
11920079	COUNSELING 1	2025-02-25 @ 10:00 am	2025-02-28 @ 8:00 am	1.2 ± 0.4	2025-03-04
11920073	COUNSELING 2	2025-02-25 @ 10:00 am	2025-02-28 @ 8:00 am	1.6 ± 0.4	2025-03-04
11920074	COUNSELING 3	2025-02-25 @ 10:00 am	2025-02-28 @ 8:00 am	1.8 ± 0.4	2025-03-04
11951400	COUNSELING 3	2025-02-25 @ 10:00 am	2025-02-28 @ 8:00 am	2.1 ± 0.4	2025-03-04
11920078	COUNSELING 4	2025-02-25 @ 10:00 am	2025-02-28 @ 8:00 am	2.1 ± 0.4	2025-03-04
11920083	COUNSELING 5	2025-02-25 @ 10:00 am	2025-02-28 @ 8:00 am	3.0 ± 0.4	2025-03-04
11951380	GIRLS AUX GYM	2025-02-25 @ 8:00 am	2025-02-28 @ 8:00 am	< 0.3	2025-03-04
11951362	GIRLS LR	2025-02-25 @ 8:00 am	2025-02-28 @ 8:00 am	< 0.3	2025-03-04
11951373	GIRLS LR OFFICE	2025-02-25 @ 8:00 am	2025-02-28 @ 8:00 am	< 0.3	2025-03-04
11951356	GYM	2025-02-25 @ 8:00 am	2025-02-28 @ 8:00 am	< 0.3	2025-03-04
11951370	GYM	2025-02-25 @ 8:00 am	2025-02-28 @ 8:00 am	< 0.3	2025-03-04
11920064	HEALTH	2025-02-25 @ 10:00 am	2025-02-28 @ 9:00 am	0.6 ± 0.3	2025-03-04
11951399	HEALTH OFFICE	2025-02-25 @ 10:00 am	2025-02-28 @ 9:00 am	< 0.3	2025-03-04
11951306	KITCHEN OFFICE	2025-02-25 @ 8:00 am	2025-02-28 @ 8:00 am	< 0.3	2025-03-04
11951391	MAIN OFFICE	2025-02-25 @ 9:00 am	2025-02-28 @ 9:00 am	< 0.3	2025-03-04
11920076	MEDIA CENTER	2025-02-25 @ 10:00 am	2025-02-28 @ 8:00 am	0.9 ± 0.4	2025-03-04
11920062	MEDIA CENTER	2025-02-25 @ 10:00 am	2025-02-28 @ 8:00 am	0.6 ± 0.4	2025-03-04
11920071	MEDIA OFFICE	2025-02-25 @ 10:00 am	2025-02-28 @ 8:00 am	1.4 ± 0.4	2025-03-04
11920075	MEDIA WORKROOM	2025-02-25 @ 10:00 am	2025-02-28 @ 8:00 am	0.9 ± 0.4	2025-03-04
11951305	MEETING ROOM	2025-02-25 @ 8:00 am	2025-02-28 @ 9:00 am	1.0 ± 0.4	2025-03-04
11951388	PRINCIPAL	2025-02-25 @ 9:00 am	2025-02-28 @ 9:00 am	< 0.3	2025-03-04
11951394	PSYCHOLOGIST	2025-02-25 @ 10:00 am	2025-02-28 @ 8:00 am	1.1 ± 0.4	2025-03-04
11951396	PSYCHOLOGIST	2025-02-25 @ 10:00 am	2025-02-28 @ 8:00 am	< 0.3	2025-03-04
11951390	SECURITY	2025-02-25 @ 9:00 am	2025-02-28 @ 9:00 am	0.8 ± 0.3	2025-03-04
11920072	STAFF LOUNGE	2025-02-25 @ 10:00 am	2025-02-28 @ 8:00 am	< 0.3	2025-03-04
11951325	STAFF WORKROOM	2025-02-25 @ 8:00 am	2025-02-28 @ 8:00 am	0.7 ± 0.3	2025-03-04
11951323	STAFF WORKROOM	2025-02-25 @ 8:00 am	2025-02-28 @ 8:00 am	0.7 ± 0.3	2025-03-04
11951357	STAGE	2025-02-25 @ 8:00 am	2025-02-28 @ 8:00 am	0.5 ± 0.3	2025-03-04
11951398	STUDIO OFFICE	2025-02-25 @ 10:00 am	2025-02-28 @ 8:00 am	0.9 ± 0.4	2025-03-04
11951385	STUDIO OFFICE	2025-02-25 @ 10:00 am	2025-02-28 @ 8:00 am	0.7 ± 0.3	2025-03-04
11920065	TV STUDIO	2025-02-25 @ 10:00 am	2025-02-28 @ 8:00 am	0.7 ± 0.4	2025-03-04
11951392	WELCOME CENTER	2025-02-25 @ 9:00 am	2025-02-28 @ 8:00 am	0.6 ± 0.4	2025-03-04

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March 4, 2025

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

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Radon test result report for:

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<b>Kit #</b>	<b>Room Id</b>	<b>Started</b>	<b>Ended</b>	<b>pCi/L</b>	<b>Analyzed</b>
11951397	WORKROOM	2025-02-25 @ 9:00 am	2025-02-28 @ 9:00 am	0.7 ± 0.3	2025-03-04

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

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March 4, 2025

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

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Radon test result report for:

**OFFICE  
MAIN**

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<b>Kit #</b>	<b>Room Id</b>	<b>Started</b>	<b>Ended</b>	<b>pCi/L</b>	<b>Analyzed</b>
11926885	OB	2025-02-25 @ 11:00 am	2025-02-28 @ 11:00 am	< 0.3	2025-03-04

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March 4, 2025

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

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Radon test result report for:

**TRAVEL  
MAIN**

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<b>Kit #</b>	<b>Room Id</b>	<b>Started</b>	<b>Ended</b>	<b>pCi/L</b>	<b>Analyzed</b>
11926889	TB	2025-02-25 @ 11:00 am	2025-02-28 @ 11:00 am	< 0.3	2025-03-04

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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 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  $\mu$ R/h Elevation = 820 ft**

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December 23, 2024

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

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Radon test result report for:

**SK  
MAIN**

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<b>Kit #</b>	<b>Room Id</b>	<b>Started</b>	<b>Ended</b>	<b>pCi/L</b>	<b>Analyzed</b>
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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# 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  $\mu$ R/h Elevation = 820 ft**

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March 19, 2025

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

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Radon test result report for:

**QC  
MAIN**

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<b>Kit #</b>	<b>Room Id</b>	<b>Started</b>	<b>Ended</b>	<b>pCi/L</b>	<b>Analyzed</b>
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 February 25<sup>th</sup> – February 28<sup>th</sup>, 2025

Name of Schools:

1. Gaithersburg MS
2. Germantown ES
3. William B Gibbs ES
4. Goshen ES
5. Great Seneca Creek ES
6. Jones Lane ES
7. MLK Jr. MS
8. Lake Seneca ES
9. Laytonsville ES

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	Date	Initials
Radon Test Kits Deployed	2/25/2025	
Radon Test Kits Collected	2/28/2025	
Radon Test Kits Shipped to Lab*	2/28/2025	
Radon Test Kits Received by Lab*	3/3/2025	

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



**MCPS RADON TESTING – EXECUTIVE SUMMARY**

Site Name	Gaithersburg Middle School
Date of Test Report	05/31/2022
Round of Testing	Initial Follow-up Post Remediation 2 Year Testing 5 Year Testing HVAC Upgrade Window Replacement New Addition New Facility
# Rooms Tested	2
# Rooms $\geq$ 4.0 pCi/L	0
Lowest Value	<0.3 pCi/L
Highest Value	1.0 pCi/L

**Project Status**

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



May 31, 2022

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

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

Location: Gaithersburg Middle School  
2 Teachers Way  
Gaithersburg, MD 20877

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 Gaithersburg Middle School, located at 2 Teachers Way, Gaithersburg, MD 20877 (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](http://www.epa.gov/radon).

KCI visited the site on April 05, 2022 and deployed five (5) 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.  $\geq 3.5$  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 April 08, 2022 to retrieve the radon sampling test kits. KCI shipped all radon tests via overnight delivery to Airchek, Inc. for analysis by gamma-ray spectroscopy. Airchek, Inc. is a NRSB certified analytical laboratory for radon analysis (certification # ARL1402) located at 1936 Butler Bridge Road, Mills River, North Carolina.

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

These tests represent:

- Follow-up to initial testing.

These tests were conducted to:

- Evaluate radon concentrations at the facility.

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

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

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

KCI also compiled weather data for the testing period and conducted observations of relevant field conditions. During the test period, weather records indicate low temperatures were in the mid 20°Fs and high temperatures ranged from the low 50°Fs to the mid 70°Fs. Maximum sustained winds ranged from 0-33 miles per hour. Average humidity was around 47% with 0.23 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		
Gaithersburg MS RT		
Test Period: 04/05/2022 - 04/08/2022		
Kit Number	Room / Area	Result
11139963	206	< 0.3
11139995	206	1.0
11139998	206	1.0
11139999	GYM	0.8
11140000	GYM	0.7

Table 2- Radon Testing Results			
Gaithersburg MS RT			
Test Period: 04/05/2022 - 04/08/2022			
Kit Number	QC Type	Room / Area	Result
11139998	D	206	1.0
11139963	FB	206	< 0.3
11139882	OB	OFFICE BLANK	< 0.3
11139881	TB	TRAVEL BLANK	< 0.3



# ATTACHMENT C

## Laboratory Analytical Results

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April 12, 2022

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

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Radon test result report for:

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<b>Kit #</b>	<b>Room Id</b>	<b>Started</b>	<b>Ended</b>	<b>pCi/L</b>	<b>Analyzed</b>
11139963	206	2022-04-05 @ 12:00 pm	2022-04-08 @ 11:00 am	< 0.3	2022-04-12
11139995	206	2022-04-05 @ 12:00 pm	2022-04-08 @ 11:00 am	1.0 ± 0.3	2022-04-12
11139998	206	2022-04-05 @ 12:00 pm	2022-04-08 @ 11:00 am	1.0 ± 0.3	2022-04-12
11139999	GYM	2022-04-05 @ 12:00 pm	2022-04-08 @ 11:00 am	0.8 ± 0.3	2022-04-12
11140000	GYM	2022-04-05 @ 12:00 pm	2022-04-08 @ 11:00 am	0.7 ± 0.3	2022-04-12

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

# EXPOSURE IN BOWSER-MORNER RADON CHAMBER

CLIENT KCI Technologies, Inc. Job Number 204620

NOMINAL Conditions: Radon Conc 27.0 pCi/L Rel. Hum 50.1 % Temp. 70.0 F

Date Start: 3/18/22 Date Stop: 3/21/22 Date Start: \_\_\_\_\_ Date Stop: \_\_\_\_\_

Time Start: 0705 Time Stop: 0705 Time Start: \_\_\_\_\_ Time Stop: \_\_\_\_\_

Device No.'s: (5) Char Bags - Device No.'s: \_\_\_\_\_

11139367, 11139368, 11139371, \_\_\_\_\_

11139710, 11139717 \_\_\_\_\_

E3 light

Date Start: \_\_\_\_\_ Date Stop: \_\_\_\_\_ Date Start: \_\_\_\_\_ Date Stop: \_\_\_\_\_

Time Start: \_\_\_\_\_ Time Stop: \_\_\_\_\_ Time Start: \_\_\_\_\_ Time Stop: \_\_\_\_\_

Device No.'s: \_\_\_\_\_ Device No.'s: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Date Start: \_\_\_\_\_ Date Stop: \_\_\_\_\_ Date Start: \_\_\_\_\_ Date Stop: \_\_\_\_\_

Time Start: \_\_\_\_\_ Time Stop: \_\_\_\_\_ Time Start: \_\_\_\_\_ Time Stop: \_\_\_\_\_

Device No.'s: \_\_\_\_\_ Device No.'s: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

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

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March 30, 2022

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

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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).

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<b>Kit #</b>	<b>Room Id</b>	<b>Started</b>	<b>Ended</b>	<b>pCi/L</b>	<b>Analyzed</b>
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

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



### Radon Test Kit Chain of Custody

Project Name: MCPS Radon – April 2022 Schools – Retesting

Name of Schools:

1. Gaithersburg MS
2. Julius West MS
3. Sherwood HS

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	Date	Initials
Radon Test Kits Deployed	04/05/2022	BMM
Radon Test Kits Collected	04/08/2022	BMM
Radon Test Kits Shipped to Lab*	04/08/2022	BMM
Radon Test Kits Received by Lab*	04/11/2022	BMM

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



**MCPS RADON TESTING – EXECUTIVE SUMMARY**

Site Name	Gaithersburg Middle School
Date of Test Report	4/7/2022
Round of Testing	Initial Follow-up Post Remediation 2 Year Testing 5 Year Testing HVAC Upgrade Window Replacement New Addition New Facility
# Rooms Tested	74
# Rooms $\geq$ 4.0 pCi/L	0
Lowest Value	<0.3 pCi/L
Highest Value	3.2 pCi/L

Project Status:

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



April 7, 2022

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

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

Location: Gaithersburg MS  
2 Teacher's Way  
Gaithersburg, MD 20877

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 Gaithersburg MS, located at 2 Teacher's Way Gaithersburg, MD 20877 (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](http://www.epa.gov/radon).

KCI visited the site on February 22, 2022 and deployed eighty six (86) 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 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 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:

<b>Radon Concentration</b>	<b>Room</b>	<b>Result</b>
≥4.0 pCi/L	NA	NA
<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		
Gaithersburg MS		
Test Period: 02/22/2022 - 02/25/2022		
Kit Number	Room / Area	Result
11124182	100	1.5
11124185	101	2.2
11124188	102	NA
11124187	103	1.0
11124191	104	< 0.3
11122877	105	1.2
11122894	105	1.1
11122846	107	< 0.3
11122879	108	1.3
11122856	109	< 0.3
11122863	111	1.6
11122854	112	1.0
11122855	114	< 0.3
11124194	200	2.8
11124197	202	2.5
11124198	203	1.3
11124192	206	3.2
11124195	206	< 0.3
11124196	206	3.1
11122862	300	0.8
11122845	301	1.0
11122878	302	0.9
11122883	303	< 0.3
11122880	304	< 0.3
11122892	304	0.9
11122896	304	< 0.3
11122898	305	< 0.3
11122893	307	< 0.3
11122897	309	< 0.3
11122884	311	1.3
11122859	400	< 0.3
11122874	401	< 0.3
11122881	402	0.8
11122838	403	0.8
11122841	403	1.1
11122872	403	< 0.3
11122866	404	< 0.3
11122882	405	0.7
11122814	407	< 0.3
11122868	500	< 0.3
11122869	501	< 0.3
11122873	502	1.0
11122888	505	0.6
11122849	507	< 0.3
11124165	507	1.0

Table 1- Radon Testing Results		
Gaithersburg MS		
Test Period: 02/22/2022 - 02/25/2022		
Kit Number	Room / Area	Result
11122875	601	1.3
11122889	603	2.0
11124200	709	1.4
11124199	808	< 0.3
11124183	100B	0.9
11124189	101 OFFICE	< 0.3
11122851	407 CENTER	< 0.3
11122876	407 LEFT	< 0.3
11122827	407 RIGHT	< 0.3
11122867	ATTENDANCE	1.0
11124181	CAFETERIA	< 0.3
11122848	COUNSELING	< 0.3
11122853	COUNSELING ALLISON	0.5
11122822	COUNSELING IKPEMGBE	< 0.3
11122857	COUNSELING MOSKOWITZ	0.7
11122860	COUNSELING OBEN	< 0.3
11122850	COUNSELING PINTO	< 0.3
11124173	HEALTH CENTER	1.0
11124186	HEALTH CENTER	< 0.3
11124174	HEALTH CENTER OFFICE	< 0.3
11122861	LOUNGE	1.3
11122829	MAIN OFFICE	< 0.3
11122852	MAIN OFFICE	< 0.3
11122870	MAIN OFFICE	< 0.3
11122899	MAIN OFFICE BEAN	< 0.3
11122887	MAIN OFFICE BLANTON	1.1
11122864	MAIN OFFICE CONFERENCE ROOM	0.9
11122885	MAIN OFFICE COPY ROOM	< 0.3
11122900	MAIN OFFICE MAIL ROOM	< 0.3
11122891	MAIN OFFICE PRINCIPAL	< 0.3
11122886	MAIN OFFICE TYLEEN	< 0.3
11122895	MAN OFFICE JOHNSON	0.7
11122865	MEDIA CENTER	1.0
11124164	MEDIA CENTER	0.9
11124172	MEDIA CENTER CLASSROOM	1.3
11124190	MEDIA CENTER FILM ROOM	< 0.3
11124163	MEDIA CENTER MDDLE	1.7
11122858	MEDIA CENTER OFFICE	1.9
11124171	MEDIA CENTER THOMAS	1.1
11124179	STAFF WORKROOM	1.6
11124180	TRIAGE	1.3

Table 2- Radon Testing Results			
Gaithersburg MS			
Test Period: 02/22/2022 - 02/25/2022			
Kit Number	QC Type	Room / Area	Result
11122852	D	Main Office	< 0.3
11122870	FB	Main Office	< 0.3
11122844	D	Gym	NA
11122880	D	304	< 0.3
11122896	FB	304	< 0.3
11122894	D	105	1.1
11122841	D	403	1.1
11122872	FB	403	< 0.3
11124165	D	507	1.0
11122865	D	Media Center	1.0
11124186	FB	Health center	< 0.3
11124196	D	206	3.1
11124195	FB	206	< 0.3
11139384	OB	OFFICE BLANK	< 0.3
11131222	TB	TRAVEL BLANK	< 0.3



# ATTACHMENT C

## Laboratory Analytical Results

Radon test result report for:

**GAITHERSBURG MIDDLE SCHOOL**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11124182	100	2022-02-22 @ 4:00 pm	2022-02-25 @ 11:00 am	1.5 ± 0.5	2022-03-03
11124183	100B	2022-02-22 @ 4:00 pm	2022-02-25 @ 11:00 am	0.9 ± 0.5	2022-03-03
11124185	101	2022-02-22 @ 4:00 pm	2022-02-25 @ 11:00 am	2.2 ± 0.6	2022-03-03
11124189	101 OFFICE	2022-02-22 @ 4:00 pm	2022-02-25 @ 11:00 am	< 0.3	2022-03-03
11124188	102	2022-02-22 @ 4:00 pm	2022-02-25 @ 11:00 am	???? IF1	2022-03-03
11124187	103	2022-02-22 @ 4:00 pm	2022-02-25 @ 11:00 am	1.0 ± 0.5	2022-03-03
11124191	104	2022-02-22 @ 4:00 pm	2022-02-25 @ 11:00 am	< 0.3	2022-03-03
11122894	105	2022-02-22 @ 1:00 pm	2022-02-25 @ 11:00 am	1.1 ± 0.5	2022-03-03
11122877	105	2022-02-22 @ 1:00 pm	2022-02-25 @ 11:00 am	1.2 ± 0.5	2022-03-03
11122846	107	2022-02-22 @ 1:00 pm	2022-02-25 @ 11:00 am	< 0.3	2022-03-03
11122879	108	2022-02-22 @ 1:00 pm	2022-02-25 @ 11:00 am	1.3 ± 0.5	2022-03-03
11122856	109	2022-02-22 @ 1:00 pm	2022-02-25 @ 11:00 am	< 0.3	2022-03-03
11122863	111	2022-02-22 @ 1:00 pm	2022-02-25 @ 11:00 am	1.6 ± 0.5	2022-03-03
11122854	112	2022-02-22 @ 1:00 pm	2022-02-25 @ 11:00 am	1.0 ± 0.5	2022-03-03
11122855	114	2022-02-22 @ 1:00 pm	2022-02-25 @ 11:00 am	< 0.3	2022-03-03
11124194	200	2022-02-22 @ 4:00 pm	2022-02-25 @ 12:00 pm	2.8 ± 0.6	2022-03-03
11124197	202	2022-02-22 @ 4:00 pm	2022-02-25 @ 12:00 pm	2.5 ± 0.6	2022-03-03
11124198	203	2022-02-22 @ 4:00 pm	2022-02-25 @ 12:00 pm	1.3 ± 0.5	2022-03-03
11124196	206	2022-02-22 @ 4:00 pm	2022-02-25 @ 12:00 pm	3.1 ± 0.6	2022-03-03
11124192	206	2022-02-22 @ 4:00 pm	2022-02-25 @ 12:00 pm	3.2 ± 0.6	2022-03-03
11124195	206	2022-02-22 @ 4:00 pm	2022-02-25 @ 12:00 pm	< 0.3	2022-03-03
11122862	300	2022-02-22 @ 1:00 pm	2022-02-25 @ 12:00 pm	0.8 ± 0.5	2022-03-03
11122845	301	2022-02-22 @ 1:00 pm	2022-02-25 @ 12:00 pm	1.0 ± 0.5	2022-03-03
11122878	302	2022-02-22 @ 1:00 pm	2022-02-25 @ 12:00 pm	0.9 ± 0.5	2022-03-03
11122883	303	2022-02-22 @ 1:00 pm	2022-02-25 @ 12:00 pm	< 0.3	2022-03-03
11122896	304	2022-02-22 @ 1:00 pm	2022-02-25 @ 12:00 pm	< 0.3	2022-03-03
11122880	304	2022-02-22 @ 1:00 pm	2022-02-25 @ 12:00 pm	< 0.3	2022-03-03
11122892	304	2022-02-22 @ 1:00 pm	2022-02-25 @ 12:00 pm	0.9 ± 0.4	2022-03-03
11122898	305	2022-02-22 @ 1:00 pm	2022-02-25 @ 12:00 pm	< 0.3	2022-03-03
11122893	307	2022-02-22 @ 1:00 pm	2022-02-25 @ 12:00 pm	< 0.3	2022-03-03
11122897	309	2022-02-22 @ 1:00 pm	2022-02-25 @ 12:00 pm	< 0.3	2022-03-03
11122884	311	2022-02-22 @ 1:00 pm	2022-02-25 @ 12:00 pm	1.3 ± 0.5	2022-03-03
11122859	400	2022-02-22 @ 1:00 pm	2022-02-25 @ 11:00 am	< 0.3	2022-03-03
11122874	401	2022-02-22 @ 1:00 pm	2022-02-25 @ 11:00 am	< 0.3	2022-03-03
11122881	402	2022-02-22 @ 1:00 pm	2022-02-25 @ 11:00 am	0.8 ± 0.5	2022-03-03
11122872	403	2022-02-22 @ 1:00 pm	2022-02-25 @ 11:00 am	< 0.3	2022-03-03
11122841	403	2022-02-22 @ 1:00 pm	2022-02-25 @ 11:00 am	1.1 ± 0.5	2022-03-03

Radon test result report for:**GAITHERSBURG MIDDLE SCHOOL**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11122838	403	2022-02-22 @ 1:00 pm	2022-02-25 @ 11:00 am	0.8 ± 0.5	2022-03-03
11122866	404	2022-02-22 @ 2:00 pm	2022-02-25 @ 11:00 am	< 0.3	2022-03-03
11122882	405	2022-02-22 @ 1:00 pm	2022-02-25 @ 11:00 am	0.7 ± 0.4	2022-03-03
11122814	407	2022-02-22 @ 2:00 pm	2022-02-25 @ 11:00 am	< 0.3	2022-03-03
11122851	407 CENTER	2022-02-22 @ 2:00 pm	2022-02-25 @ 11:00 am	< 0.3	2022-03-03
11122876	407 LEFT	2022-02-22 @ 2:00 pm	2022-02-25 @ 11:00 am	< 0.3	2022-03-03
11122827	407 RIGHT	2022-02-22 @ 2:00 pm	2022-02-25 @ 11:00 am	< 0.3	2022-03-03
11122868	500	2022-02-22 @ 12:00 pm	2022-02-25 @ 11:00 am	< 0.3	2022-03-03
11122869	501	2022-02-22 @ 2:00 pm	2022-02-25 @ 11:00 am	< 0.3	2022-03-03
11122873	502	2022-02-22 @ 12:00 pm	2022-02-25 @ 11:00 am	1.0 ± 0.5	2022-03-03
11122888	505	2022-02-22 @ 2:00 pm	2022-02-25 @ 11:00 am	0.6 ± 0.5	2022-03-03
11122849	507	2022-02-22 @ 2:00 pm	2022-02-25 @ 11:00 am	< 0.3	2022-03-03
11124165	507	2022-02-22 @ 2:00 pm	2022-02-25 @ 11:00 am	1.0 ± 0.5	2022-03-03
11122875	601	2022-02-22 @ 12:00 pm	2022-02-25 @ 12:00 pm	1.3 ± 0.5	2022-03-03
11122889	603	2022-02-22 @ 12:00 pm	2022-02-25 @ 12:00 pm	2.0 ± 0.5	2022-03-03
11124200	709	2022-02-22 @ 4:00 pm	2022-02-25 @ 1:00 pm	1.4 ± 0.5	2022-03-03
11124199	808	2022-02-22 @ 4:00 pm	2022-02-25 @ 1:00 pm	< 0.3	2022-03-03
11124181	CAFETERIA	2022-02-22 @ 3:00 pm	2022-02-25 @ 10:00 am	< 0.3	2022-03-03
11122848	COUNSELING	2022-02-22 @ 3:00 pm	2022-02-25 @ 12:00 pm	< 0.3	2022-03-03
11122853	COUNSELING ALLISON	2022-02-22 @ 3:00 pm	2022-02-25 @ 12:00 pm	0.5 ± 0.4	2022-03-03
11122822	COUNSELING IKPEMGBE	2022-02-22 @ 3:00 pm	2022-02-25 @ 12:00 pm	< 0.3	2022-03-03
11122857	COUNSELING MOSKOWITZ	2022-02-22 @ 3:00 pm	2022-02-25 @ 12:00 pm	0.7 ± 0.4	2022-03-03
11122860	COUNSELING OBEN	2022-02-22 @ 3:00 pm	2022-02-25 @ 1:00 pm	< 0.3	2022-03-03
11122850	COUNSELING PINTO	2022-02-22 @ 3:00 pm	2022-02-25 @ 12:00 pm	< 0.3	2022-03-03
11124173	HEALTH CENTER	2022-02-22 @ 3:00 pm	2022-02-25 @ 10:00 am	1.0 ± 0.5	2022-03-03
11124186	HEALTH CENTER	2022-02-22 @ 3:00 pm	2022-02-25 @ 10:00 am	< 0.3	2022-03-03
11124174	HEALTH CENTER OFFICE	2022-02-22 @ 3:00 pm	2022-02-25 @ 10:00 am	< 0.3	2022-03-03
11122861	LOUNGE	2022-02-22 @ 1:00 pm	2022-02-25 @ 1:00 pm	1.3 ± 0.5	2022-03-03
11122852	MAIN OFFICE	2022-02-22 @ 12:00 pm	2022-02-25 @ 10:00 am	< 0.3	2022-03-03
11122870	MAIN OFFICE	2022-02-22 @ 12:00 pm	2022-02-25 @ 10:00 am	< 0.3	2022-03-03
11122829	MAIN OFFICE	2022-02-22 @ 12:00 pm	2022-02-25 @ 10:00 am	< 0.3	2022-03-03
11122899	MAIN OFFICE BEAN	2022-02-22 @ 12:00 pm	2022-02-25 @ 10:00 am	< 0.3	2022-03-03
11122864	MAIN OFFICE CONFERENCE ROOM	2022-02-22 @ 12:00 pm	2022-02-25 @ 10:00 am	0.9 ± 0.5	2022-03-03
11122885	MAIN OFFICE COPY ROOM	2022-02-22 @ 12:00 pm	2022-02-25 @ 10:00 am	< 0.3	2022-03-03
11122900	MAIN OFFICE MAIL ROOM	2022-02-22 @ 12:00 pm	2022-02-25 @ 10:00 am	< 0.3	2022-03-03
11122886	MAIN OFFICE TYLEEN	2022-02-22 @ 12:00 pm	2022-02-25 @ 10:00 am	< 0.3	2022-03-03
11122895	MAN OFFICE JOHNSON	2022-02-22 @ 12:00 pm	2022-02-25 @ 10:00 am	0.7 ± 0.4	2022-03-03

March 3, 2022

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

Radon test result report for:

**GAITHERSBURG MIDDLE SCHOOL**

<b>Kit #</b>	<b>Room Id</b>	<b>Started</b>	<b>Ended</b>	<b>pCi/L</b>	<b>Analyzed</b>
11122865	MEDIA CENTER	2022-02-22 @ 3:00 pm	2022-02-25 @ 12:00 pm	1.0 ± 0.5	2022-03-03
11124164	MEDIA CENTER	2022-02-22 @ 3:00 pm	2022-02-25 @ 12:00 pm	0.9 ± 0.5	2022-03-03
11124172	MEDIA CENTER CLASSROOM	2022-02-22 @ 3:00 pm	2022-02-25 @ 12:00 pm	1.3 ± 0.5	2022-03-03
11124190	MEDIA CENTER FILM ROOM	2022-02-22 @ 3:00 pm	2022-02-25 @ 12:00 pm	< 0.3	2022-03-03
11124163	MEDIA CENTER MIDDLE	2022-02-22 @ 3:00 pm	2022-02-25 @ 12:00 pm	1.7 ± 0.5	2022-03-03
11122858	MEDIA CENTER OFFICE	2022-02-22 @ 3:00 pm	2022-02-25 @ 12:00 pm	1.9 ± 0.5	2022-03-03
11124171	MEDIA CENTER THOMAS	2022-02-22 @ 3:00 pm	2022-02-25 @ 12:00 pm	1.1 ± 0.5	2022-03-03
11124179	STAFF WORKROOM	2022-02-22 @ 3:00 pm	2022-02-25 @ 10:00 am	1.6 ± 0.6	2022-03-03
11124180	TRIAGE	2022-02-22 @ 3:00 pm	2022-02-25 @ 11:00 am	1.3 ± 0.5	2022-03-03

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

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March 3, 2022

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

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Radon test result report for:

**GAITHERSBURG MIDDLE SCHOOLQ**

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<b>Kit #</b>	<b>Room Id</b>	<b>Started</b>	<b>Ended</b>	<b>pCi/L</b>	<b>Analyzed</b>
11122867	ATTENDANCE	2022-02-22 @ 12:00 pm	2022-02-25 @ 1:00 pm	1.0 ± 0.4	2022-03-03
11122887	MAIN OFFICE BLANTON	2022-02-22 @ 12:00 pm	2022-02-25 @ 10:00 am	1.1 ± 0.5	2022-03-03
11122891	MAIN OFFICE PRINCIPAL	2022-02-22 @ 12:00 pm	2022-02-25 @ 10:00 am	< 0.3	2022-03-03

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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 -  
11113484, 1112998, 20107126 Device No.'s: \_\_\_\_\_

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  $\mu$ R/h Elevation = 820 ft**

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

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

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## Radon Test Kit Chain of Custody

Project Name: MCPS Radon – February 2022 Schools

Name of Schools:

1. Dufief ES
2. Emory Grove Center
3. Fields Road ES
4. Forest Oak MS
5. Gaithersburg ES
6. Gaithersburg MS
7. Jones Lane ES
8. Rachel Carson ES
9. Rosemont ES
10. Shady Grove MS
11. Summit Hall ES
12. Washington Grove ES

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	Date	Initials
Radon Test Kits Deployed	02/22/2022	PM
Radon Test Kits Collected	02/25/2022	PM
Radon Test Kits Shipped to Lab*	02/25/2022	JM
Radon Test Kits Received by Lab*	02/28/2022	PM

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



## MONTGOMERY COUNTY PUBLIC SCHOOLS RADON TESTING

**Executive Summary:**  
**Gaithersburg Middle School**  
2 Teachers Way,  
Gaithersburg, MD 20877

Date of Test Report:	2/2/2019
Round of Testing:	Initial Follow-up Post Remediation 2 Year Testing <b>5 Year Testing</b> HVAC Upgrade Window Replacement New Addition New Facility
# of Rooms Tested:	104
# of Rooms $\geq$ 4.0 pCi/L:	0
Low Value:	< 0.4
High Value:	3.1

### Project Status

**Initial testing complete:** No further action at this time.



February 2, 2019

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

Re: Radon Testing Services

Location: Gaithersburg Middle School  
2 Teachers Way,  
Gaithersburg, MD 20877

Dear Mr. Cox:

Intertek-PSI (PSI) is pleased to submit the following report to the Montgomery County Public Schools (MCPS) for completion of a "short-term" 3-day radon test for Gaithersburg Middle School, located at 2 Teachers Way, Gaithersburg, MD 20877 (subject site).

**Scope of Services:**

PSI 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. PSI 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 #14SS007) supervised the testing. Additional information on radon management and the health effects of radon exposure is available from [www.montgomerycountymd.gov/dep/air/radon](http://www.montgomerycountymd.gov/dep/air/radon) or [www.epa.gov/radon](http://www.epa.gov/radon).

PSI visited the site on November 27, 2018 and deployed one-hundred twenty-two (122) activated charcoal (AC) radon test kits. PSI deployed radon test kits in frequently-occupied ground contact rooms, and other areas, (if applicable) in accordance with AARST guidance. PSI returned to the site on November 30, 2018 to retrieve the radon sampling test kits. A floor plan map of the building with the test locations is included as Attachment A of this report.

As a quality control measure, PSI included duplicate samples, field blanks, lab transit blanks, and office blanks in accordance with AARST recommendations. In addition, PSI submitted ten (10) 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.

PSI 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 located at 929 Mount Zion Road, Lebanon, Pennsylvania (certification # ARL0007) and 2 Saber Way, Haverhill, Massachusetts (certification # ARL0017).



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

PSI 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.

PSI also conducted observations of field conditions which could affect the results of the test and compiled weather data for the testing period. PSI 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:

<b>Radon Concentration</b>	<b>Room</b>	<b>Result</b>
$\geq 4.0$ pCi/L	None	NA
$\leq 4.0$ 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 (703) 698-9300.



Respectfully Submitted,

**INTERTEK-PSI**

A handwritten signature in black ink that reads "Nand Kaushik". The signature is written in a cursive style.

Nand Kaushik, P.E.  
Department Manager, Environmental Services  
[Nand.Kaushik@intertek.com](mailto:Nand.Kaushik@intertek.com)

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

# **ATTACHMENT B**

Radon Test Summary Spreadsheet

<b>Radon Testing Results</b>		
<b>Gaithersburg Middle School</b>		
<b>Testing period: 11/27/18 - 11/30/18</b>		
<b>Kit Number</b>	<b>Room / Area</b>	<b>Result (pCi/L)</b>
3918296	100	<0.4
3918298	101	0.4
3918252	102	0.5
3918251	103	0.5
3918253	104	0.5
3918244	107	<0.4
3918245	108	2.6
3918246	109	<0.4
3919321	111	0.8
3888476	112	0.9
3919322	114	0.6
3918257	200	2.4
3918256	202	0.7
3919351	203	<0.4
3919359	204	1.7
3919358	204	3.1
3919352	205	2.3
3918254	206	1.3
3918249	300	0.5
3918247	301	0.7
3918250	302	0.4
3918290	303	0.6
3919327	304	1.0
3918289	305	0.8
3918287	307	<0.4
3919390	309	0.7
3919389	311	1.8
3919285	400	<0.4
3918286	401	<0.4
3918190	402	<0.4
3918188	403	<0.4
3919386	404	<0.4
3918189	405	<0.4
3919381	407	0.4
3918274	500	<0.4
3888475	501	0.5
3916026	502	0.5
3919388	505	0.7
3919387	507	0.4
3916022	601	<0.4
3916023	603	2.9
3919330	701	<0.4
3919329	707	1.4

<b>Radon Testing Results</b>		
<b>Gaithersburg Middle School</b>		
<b>Testing period: 11/27/18 - 11/30/18</b>		
<b>Kit Number</b>	<b>Room / Area</b>	<b>Result (pCi/L)</b>
3919328	806	<0.4
3918297	100B	<0.4
3918299	101B	0.4
3918259	200 Conference	1.1
3918258	200 Office	2.1
3919354	205 Office 2	1.8
3919356	205 Office 4	1.3
3919357	205 Office 5	0.8
3919355	205Office 3	2.7
3918255	206 Office	1.2
3918248	301B	0.5
3919326	400 Office 1	0.9
3918283	400 Office 2	0.5
3919382	407 Office 1	<0.4
3919385	407 Office 2	<0.4
3919384	407Office 3	<0.4
3916024	603 Storage 1	2.2
3916025	603 Storage 2	1.9
3918243	BMS Office	2.7
3888474	Boy's Aux Gym	2.0
3918271	Boy's Locker Room	<0.4
3918272	Boy's Locker Room Office 1	0.7
3918273	Boy's Locker Room Office 2	1.8
3919323	Bridge Team Room 1	0.4
3919376	BSM2	1.7
3919324	Building Services	<0.4
3919378	Cafeteria	0.7
3919377	Cafeteria	1.1
3918262	Conference Room	0.9
3919431	Counseling	<0.4
3919434	Counseling Conference Room	0.6
3919373	Counseling Office 2	0.4
3919372	Counseling Office 4	0.4
3919374	Counseling Office 5	<0.4
3918263	Data Room	0.7
3888473	Girl's Aux Gym	0.9
3916030	Girl's Locker Room	0.6
3916028	Girl's Locker Room Office 1	<0.4
3916029	Girl's Locker Room Office 2	<0.4
3888472	Gym	1.5
3888471	Gym	1.6
3918294	Health	<0.4
3918295	Health Office	<0.4

<b>Radon Testing Results</b>		
<b>Gaithersburg Middle School</b>		
<b>Testing period: 11/27/18 - 11/30/18</b>		
<b>Kit Number</b>	<b>Room / Area</b>	<b>Result (pCi/L)</b>
3918293	Kitchen	0.4
3918291	Kitchen Locker	2.5
3919379	Kitchen Office	0.7
3918261	Main Office	0.5
3919433	Media Center	0.5
3919432	Media Center	0.7
3919435	Media Center Office 1	3.0
3919438	Media Center Office 2	0.8
3919436	Media Center Work Prep	0.9
3919437	Media Center Work Room	1.8
3918265	Office 1	0.6
3918266	Office 2	0.5
3918267	Office 3	0.4
3918268	Office 4	<0.4
3918269	Office 5	0.8
3918292	Security	<0.4
3918264	Staff Lounge	<0.4
3919375	Staff Workroom	0.8
3919439	TV Studio	1.0
3919371	TV Studio Office	1.0

<b>Radon Testing Results</b>		
<b>Gaithersburg Middle School</b>		
<b>Testing period: 11/27/18 - 11/30/18</b>		
<b>Kit Number</b>	<b>QC Type</b>	<b>Result (pCi/L)</b>
3919360	105 (D)	<0.4
3918260	203 (D)	<0.4
3918288	307 (D)	0.8
3919325	400 (D)	1.6
3918275	500 (D)	0.4
3916021	601 (D)	0.6
3918300	101B (D)	0.5
3919383	407 Office 2 (D)	<0.4
3916027	Girl's Locker Room Office 1 (D)	<0.4
3919380	Kitchen Office (D)	0.9
3918270	Office 5 (D)	0.6
3919440	TV Studio (D)	1.0
3918017	Field Blank	<0.4
3918015	Field Blank	<0.4
3919427	Office Blank	<0.4
3919426	Transit Blank	<0.4

**Table Notes:**

D – Duplicate

FB – Field Blank

OB – Office Blank

TB – Transit Blank

QC – Quality Control

# **ATTACHMENT C**

Laboratory Analytical Results

NELAC NY 11769  
NRPP 103216 AL  
NRSB ARL0017

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

Laboratory Report for:

Property Tested: Project # 04481387-1

Intertek-PSI (VA)  
2930 Eskridge Road  
Fairfax VA 22031

MCPS Radon Survey  
Gaithersburg Middle School  
Gaithersburg MD 20877

Log Number	Device Number	Test Exposure Duration:	Area Tested	Result pCi/L
2401419	3918285	11/27/2018 1:38 pm 11/30/2018 10:00 am	400	< 0.4
2401420	3918262	11/27/2018 6:21 am 11/30/2018 6:00 am	Gaithersburg Middle School Flr 1 Conference Rm	0.9
2401421	3918263	11/27/2018 6:22 am 11/30/2018 6:11 am	Gaithersburg Middle School Flr 1 Data Rm	0.7
2401422	3918264	11/27/2018 6:23 am 11/30/2018 6:11 am	Gaithersburg Middle School Flr 1 Rm Staff lounge	< 0.4
2401423	3918265	11/27/2018 6:24 am 11/30/2018 6:02 am	Gaithersburg Middle School Flr 1 Rm Office 1	0.6
2401424	3918266	11/27/2018 6:25 am 11/30/2018 6:12 am	Gaithersburg Middle School Flr 1 Rm Office 2	0.5
2401425	3918267	11/27/2018 6:25 am 11/30/2018 6:13 am	Gaithersburg Middle School Flr 1 Rm Office 3	0.4
2401426	3918268	11/27/2018 6:25 am 11/30/2018 6:14 am	Gaithersburg Middle School Flr 1 Rm Office 4	< 0.4
2401427	3918269	11/27/2018 6:26 am 11/30/2018 6:14 am	Gaithersburg Middle School Flr 1 Rm Office 5	0.8
2401428	3918270	11/27/2018 6:26 am 11/30/2018 6:05 am	Gaithersburg Middle School Flr 1 Rm Office 5 Du	0.6
2401429	3919431	11/27/2018 6:31 am 11/30/2018 6:15 am	Gaithersburg Middle School Flr 1 Rm Counseling	< 0.4

**Comment:** AMENDED REPORT for 3918285 on 02/01/2019 to add the start and end dates and times and area tested. Per ANSI/AARST MAH 2014, requirements for test locations within a room were not met for device 3919379, 3919380, 3918291, 3918293 (Kitchen)

Distributed by: Intertek-PSI (VA)

Date Received: 12/04/2018 Date Logged: 12/04/2018 Date Analyzed: 12/05/2018 Date Reported: 01/29/2019

Report Reviewed By: 

Report Approved By: 

**Disclaimer:**

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.

Shawn Price, Director of Laboratory Operations, AccuStar Labs

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NELAC NY 11769  
NRPP 103216 AL  
NRSB ARL0017

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

Laboratory Report for:

Property Tested: Project # 04481387-1

Intertek-PSI (VA)  
2930 Eskridge Road  
Fairfax VA 22031

MCPS Radon Survey  
Gaithersburg Middle School  
Gaithersburg MD 20877

Log Number	Device Number	Test Exposure Duration:	Area Tested	Result pCi/L
2401430	3919432	11/27/2018 6:33 am - 11/30/2018 6:08 am	Gaithersburg Middle School Flr 1 Rm Media Cent	0.7
2401431	3919433	11/27/2018 6:33 am - 11/30/2018 6:09 am	Gaithersburg Middle School Flr 1 Rm Media Cent	0.5
2401432	3919434	11/27/2018 6:35 am - 11/30/2018 6:17 am	Gaithersburg Middle Flr 1 Counseling Conf. Rm	0.6
2401433	3918261	11/27/2018 6:18 am - 11/30/2018 6:09 am	Gaithersburg Middle School Flr 1 Rm Main Office	0.5
2401434	3919435	11/27/2018 6:40 am - 11/30/2018 6:20 am	Gaithersburg Middle School Flr 1 Media Center Off	3.0
2401435	3919436	11/27/2018 6:37 am - 11/30/2018 6:23 am	Gaithersburg Middle Flr 1 Media Center Work Prep	0.9
2401436	3919437	11/27/2018 6:39 am - 11/30/2018 6:21 am	Gaithersburg Middle Flr 1 Media Center Work Rm	1.8
2401437	3919438	11/27/2018 6:39 am - 11/30/2018 6:22 am	Gaithersburg Middle Flr 1 Media Center Office 2	0.8
2401438	3919439	11/27/2018 6:41 am - 11/30/2018 6:22 am	Gaithersburg Middle School Flr 1 Rm TV Studio	1.0
2401439	3919440	11/27/2018 6:41 am - 11/30/2018 6:21 am	Gaithersburg Middle School Flr 1 Rm TV Studio D	1.0
2401440	3919371	11/27/2018 6:43 am - 11/30/2018 6:20 am	Gaithersburg Middle School Flr 1 TV Studio Office	1.0

**Comment:** AMENDED REPORT for 3918285 on 02/01/2019 to add the start and end dates and times and area tested. Per ANSI/AARST MAH 2014, requirements for test locations within a room were not met for device 3919379, 3919380, 3918291, 3918293 (Kitchen)

Distributed by: Intertek-PSI (VA)

Date Received: 12/04/2018 Date Logged: 12/04/2018 Date Analyzed: 12/05/2018 Date Reported: 01/29/2019

Report Reviewed By: 

Report Approved By: 

Shawn Price, Director of Laboratory Operations, AccuStar Labs

**Disclaimer:**

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NELAC NY 11769  
NRPP 103216 AL  
NRSB ARL0017

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

Laboratory Report for:

Property Tested: Project # 04481387-1

Intertek-PSI (VA)  
2930 Eskridge Road  
Fairfax VA 22031

MCPS Radon Survey  
Gaithersburg Middle School  
Gaithersburg MD 20877

Log Number	Device Number	Test Exposure Duration:		Area Tested	Result pCi/L
2401441	3919372	11/27/2018 6:44 am	11/30/2018 6:19 am	Gaithersburg Middle School Flr 1 Counseling Offic	0.4
2401442	3919373	11/27/2018 6:45 am	11/30/2018 6:17 am	Gaithersburg Middle School Flr 1 Counseling Offic	0.4
2401443	3919374	11/27/2018 6:46 am	11/30/2018 6:07 am	Gaithersburg Middle School Flr 1 Counseling Offic	< 0.4
2401444	3919375	11/27/2018 6:49 am	11/30/2018 6:25 am	Gaithersburg Middle School Flr 1 Staff Workroom	0.8
2401445	3919376	11/27/2018 6:50 am	11/30/2018 6:05 am	Gaithersburg Middle School Floor 1 Room BSM2	1.7
2401446	3919377	11/27/2018 6:51 am	11/30/2018 6:26 am	Gaithersburg Middle School Floor 1 Room Café	1.1
2401447	3919378	11/27/2018 6:51 am	11/30/2018 6:26 am	Gaithersburg Middle School Flr 1 Rm Café	0.7
2401448	3919379	11/27/2018 6:55 am	11/30/2018 6:28 am	Gaithersburg Middle School Flr 1 Kitchen Office	0.7
2401449	3919380	11/27/2018 6:55 am	11/30/2018 6:28 am	Gaithersburg Middle School Flr 1 Kitchen Office D	0.9
2401450	3918291	11/27/2018 7:01 am	11/30/2018 6:28 am	Gaithersburg Middle School Flr 1 Kitchen Locker	2.5
2401451	3918292	11/27/2018 7:01 am	11/30/2018 6:27 am	Gaithersburg Middle School Flr 1 Rm Security	< 0.4

**Comment:** AMENDED REPORT for 3918285 on 02/01/2019 to add the start and end dates and times and area tested. Per ANSI/AARST MAH 2014, requirements for test locations within a room were not met for device 3919379, 3919380, 3918291, 3918293 (Kitchen)

Distributed by: Intertek-PSI (VA)

Date Received: 12/04/2018 Date Logged: 12/04/2018 Date Analyzed: 12/05/2018 Date Reported: 01/29/2019

Report Reviewed By: 

Report Approved By: 

Shawn Price, Director of Laboratory Operations, AccuStar Labs

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NELAC NY 11769  
NRPP 103216 AL  
NRSB ARL0017

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

Laboratory Report for:

Property Tested: Project # 04481387-1

Intertek-PSI (VA)  
2930 Eskridge Road  
Fairfax VA 22031

MCPS Radon Survey  
Gaithersburg Middle School  
Gaithersburg MD 20877

Log Number	Device Number	Test Exposure	Duration:	Area Tested	Result pCi/L
2401452	3918293	11/27/2018 7:01 am	11/30/2018 6:25 am	Gaithersburg Middle School Flr 1 Rm Kitchen	0.4
2401453	3918294	11/27/2018 7:07 am	11/30/2018 6:10 am	Gaithersburg Middle School Flr 1 Rm Health	< 0.4
2401454	3918295	11/27/2018 7:08 am	11/30/2018 6:10 am	Gaithersburg Middle School Flr 1 Rm Health Offic	< 0.4
2401455	3918296	11/27/2018 7:12 am	11/30/2018 6:30 am	Gaithersburg Middle School Flr 1 Rm 100	< 0.4
2401456	3918297	11/27/2018 7:13 am	11/30/2018 6:31 am	Gaithersburg Middle School Flr 1 Rm 100B	< 0.4
2401457	3918298	11/27/2018 7:15 am	11/30/2018 6:31 am	Gaithersburg Middle School Flr 1 Rm 101	0.4
2401458	3918299	11/27/2018 7:15 am	11/30/2018 6:32 am	Gaithersburg Middle School Flr 1 Rm 101B	0.4
2401459	3918300	11/27/2018 7:15 am	11/30/2018 6:32 am	Gaithersburg Middle School Flr 1 Rm 101B Duplic	0.5
2401460	3918251	11/27/2018 7:18 am	11/30/2018 6:33 am	Gaithersburg Middle School Flr 1 Rm 103	0.5
2401461	3918252	11/27/2018 7:20 am	11/30/2018 6:33 am	Gaithersburg Middle School Flr 1 Rm 102	0.5
2401462	3918253	11/27/2018 7:21 am	11/30/2018 6:34 am	Gaithersburg Middle School Flr 1 Rm 104	0.5

**Comment:** AMENDED REPORT for 3918285 on 02/01/2019 to add the start and end dates and times and area tested. Per ANSI/AARST MAH 2014, requirements for test locations within a room were not met for device 3919379, 3919380, 3918291, 3918293 (Kitchen)

Distributed by: Intertek-PSI (VA)

Date Received: 12/04/2018 Date Logged: 12/04/2018 Date Analyzed: 12/05/2018 Date Reported: 01/29/2019

Report Reviewed By: 

Report Approved By: 

Shawn Price, Director of Laboratory Operations, AccuStar Labs

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NELAC NY 11769  
NRPP 103216 AL  
NRSB ARL0017

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

Laboratory Report for:

Property Tested: Project # 04481387-1

Intertek-PSI (VA)  
2930 Eskridge Road  
Fairfax VA 22031

MCPS Radon Survey  
Gaithersburg Middle School  
Gaithersburg MD 20877

Log Number	Device Number	Test Exposure Duration:		Area Tested	Result pCi/L
2401463	3918254	11/27/2018 7:23 am	11/30/2018 6:35 am	Gaithersburg Middle School Flr 1 Rm 206	1.3
2401464	3918255	11/27/2018 7:24 am	11/30/2018 6:35 am	Gaithersburg Middle School Flr 1 Rm 206 Office	1.2
2401465	3918256	11/27/2018 7:26 am	11/30/2018 6:37 am	Gaithersburg Middle School Flr 1 Rm 202	0.7
2401466	3918257	11/27/2018 7:27 am	11/30/2018 6:36 am	Gaithersburg Middle School Flr 1 Rm 200 *	2.4
2401467	3918258	11/27/2018 7:30 am	11/30/2018 6:40 am	Gaithersburg Middle School Flr 1 Rm 200 Office	2.1
2401468	3918259	11/27/2018 7:34 am	11/30/2018 6:00 am	Gaithersburg Middle School Flr 1 Rm 200 Confer	1.1
2401469	3918260	11/27/2018 7:36 am	11/30/2018 6:38 am	Gaithersburg Middle School Flr 1 Rm 203 Duplica	< 0.4
2401470	3919351	11/27/2018 7:36 am	11/30/2018 6:38 am	Gaithersburg Middle School Flr 1 Rm 203	< 0.4
2401471	3919352	11/27/2018 7:40 am	11/30/2018 6:41 am	Gaithersburg Middle School Flr 1 Rm 205	2.3
2401472	3919354	11/27/2018 7:40 am	11/30/2018 6:42 am	Gaithersburg Middle School Flr 1 Rm 205 Office 2	1.8
2401473	3919355	11/27/2018 7:41 am	11/30/2018 6:42 am	Gaithersburg Middle School Flr 1 Rm 205Office 3	2.7

**Comment:** AMENDED REPORT for 3918285 on 02/01/2019 to add the start and end dates and times and area tested. Per ANSI/AARST MAH 2014, requirements for test locations within a room were not met for device 3919379, 3919380, 3918291, 3918293 (Kitchen)

Distributed by: Intertek-PSI (VA)

Date Received: 12/04/2018    Date Logged: 12/04/2018    Date Analyzed: 12/05/2018    Date Reported: 01/29/2019

Report Reviewed By: 

Report Approved By: 

Shawn Price, Director of Laboratory Operations, AccuStar Labs

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NELAC NY 11769  
NRPP 103216 AL  
NRSB ARL0017

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

Laboratory Report for:

Property Tested: Project # 04481387-1

Intertek-PSI (VA)  
2930 Eskridge Road  
Fairfax VA 22031

MCPS Radon Survey  
Gaithersburg Middle School  
Gaithersburg MD 20877

Log Number	Device Number	Test Exposure	Duration:	Area Tested	Result pCi/L
2401474	3919356	11/27/2018 7:41 am	11/30/2018 6:02 am	Gaithersburg Middle School Flr 1 Rm 205 Office 4	1.3
2401475	3919357	11/27/2018 7:42 am	11/30/2018 6:43 am	Gaithersburg Middle School Flr 1 Rm 205 Office 5	0.8
2401476	3919358	11/27/2018 7:42 am	11/30/2018 6:43 am	Gaithersburg Middle School Flr 1 Rm 204	3.1
2401477	3919359	11/27/2018 7:42 am	11/30/2018 6:44 am	Gaithersburg Middle School Flr 1 Rm 204	1.7
2401478	3919360	11/27/2018 7:45 am	11/30/2018 6:45 am	Gaithersburg Middle School Flr 1 Rm 105 Duplica	< 0.4
2401479	3918243	11/27/2018 7:48 am	11/30/2018 6:46 am	Gaithersburg Middle School Flr 1 Rm BMS Office	2.7
2401480	3918244	11/27/2018 7:48 am	11/30/2018 6:47 am	Gaithersburg Middle School Flr 1 Rm 107	< 0.4
2401481	3918245	11/27/2018 7:49 am	11/30/2018 6:47 am	Gaithersburg Middle School Flr 1 Rm 108	2.6
2401482	3918246	11/27/2018 7:50 am	11/30/2018 6:48 am	Gaithersburg Middle School Flr 1 Rm 109	< 0.4
2401483	3919321	11/27/2018 7:50 am	11/30/2018 6:49 am	Gaithersburg Middle School Flr 1 Rm 111	0.8
2401484	3919322	11/27/2018 7:50 am	11/30/2018 6:49 am	Gaithersburg Middle School Flr 1 Rm 114	0.6

**Comment:** AMENDED REPORT for 3918285 on 02/01/2019 to add the start and end dates and times and area tested. Per ANSI/AARST MAH 2014, requirements for test locations within a room were not met for device 3919379, 3919380, 3918291, 3918293 (Kitchen)

Distributed by: Intertek-PSI (VA)

Date Received: 12/04/2018 Date Logged: 12/04/2018 Date Analyzed: 12/05/2018 Date Reported: 01/29/2019

Report Reviewed By: 

Report Approved By: 

Shawn Price, Director of Laboratory Operations, AccuStar Labs

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NELAC NY 11769  
NRPP 103216 AL  
NRSB ARL0017

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

Laboratory Report for:

Property Tested: Project # 04481387-1

Intertek-PSI (VA)  
2930 Eskridge Road  
Fairfax VA 22031

MCPS Radon Survey  
Gaithersburg Middle School  
Gaithersburg MD 20877

Log Number	Device Number	Test Exposure Duration:			Area Tested	Result pCi/L
2401485	3919323	11/27/2018	7:54 am	11/30/2018 6:51 am	Gaithersburg Middle School Flr 1 Bridge Team Rm	0.4
2401486	3919324	11/27/2018	7:55 am	11/30/2018 6:51 am	Gaithersburg Middle School Flr 1 Building Service	< 0.4
2401487	3919325	11/27/2018	7:56 am	11/30/2018 6:54 am	Gaithersburg Middle School Flr 1 Rm 400 Duplica	1.6
2401488	3919326	11/27/2018	7:57 am	11/30/2018 7:00 am	Gaithersburg Middle School Flr 1 Rm 400 Office 1	0.9
2401489	3918283	11/27/2018	7:58 am	11/30/2018 7:00 am	Gaithersburg Middle School Flr 1 Rm 400 Office 2	0.5
2401490	3918286	11/27/2018	7:58 am	11/30/2018 6:53 am	Gaithersburg Middle School Flr 1 Rm 401	< 0.4
2401491	3918188	11/27/2018	7:59 am	11/30/2018 6:54 am	Gaithersburg Middle School Flr 1 Rm 403	< 0.4
2401492	3918189	11/27/2018	8:00 am	11/30/2018 6:54 am	Gaithersburg Middle School Flr 1 Rm 405	< 0.4
2401493	3918190	11/27/2018	8:00 am	11/30/2018 6:56 am	Gaithersburg Middle School Flr 1 Rm 402	< 0.4
2401494	3919381	11/27/2018	8:03 am	11/30/2018 6:59 am	Gaithersburg Middle School Flr 1 Rm 407	0.4
2401495	3919382	11/27/2018	8:03 am	11/30/2018 6:59 am	Gaithersburg Middle School Flr 1 Rm 407 Office 1	< 0.4

**Comment:** AMENDED REPORT for 3918285 on 02/01/2019 to add the start and end dates and times and area tested. Per ANSI/AARST MAH 2014, requirements for test locations within a room were not met for device 3919379, 3919380, 3918291, 3918293 (Kitchen)

Distributed by: Intertek-PSI (VA)

Date Received: 12/04/2018    Date Logged: 12/04/2018    Date Analyzed: 12/05/2018    Date Reported: 01/29/2019

Report Reviewed By: 

Report Approved By: 

Shawn Price, Director of Laboratory Operations, AccuStar Labs

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NELAC NY 11769  
NRPP 103216 AL  
NRSB ARL0017

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

Laboratory Report for:

Property Tested: Project # 04481387-1

Intertek-PSI (VA)  
2930 Eskridge Road  
Fairfax VA 22031

MCPS Radon Survey  
Gaithersburg Middle School  
Gaithersburg MD 20877

Log Number	Device Number	Test Exposure Duration:		Area Tested	Result pCi/L
2401496	3919383	11/27/2018 8:03 am	11/30/2018 7:00 am	Gaithersburg Middle Flr 1 Rm 407 Office 2 Duplica	< 0.4
2401497	3919384	11/27/2018 8:03 am	11/30/2018 7:00 am	Gaithersburg Middle School Flr 1 Rm 407 Office 3	< 0.4
2401498	3919385	11/27/2018 8:05 am	11/30/2018 7:01 am	Gaithersburg Middle School Flr 1 Rm 407 Office 2	< 0.4
2401499	3919386	11/27/2018 8:07 am	11/30/2018 6:56 am	Gaithersburg Middle School Flr 1 Rm 404	< 0.4
2401500	3919387	11/27/2018 8:08 am	11/30/2018 6:57 am	Gaithersburg Middle School Flr 1 Rm 507	0.4
2401501	3919388	11/27/2018 8:11 am	11/30/2018 6:08 am	Gaithersburg Middle School Flr 1 Rm 505	0.7
2401502	3919389	11/27/2018 8:11 am	11/30/2018 7:02 am	Gaithersburg Middle School Flr 1 Rm 311	1.8
2401503	3919390	11/27/2018 8:10 am	11/30/2018 7:03 am	Gaithersburg Middle School Flr 1 Rm 309	0.7
2401504	3918287	11/27/2018 8:12 am	11/30/2018 7:05 am	Gaithersburg Middle School Flr 1 Rm 307	< 0.4
2401505	3918288	11/27/2018 8:12 am	11/30/2018 7:06 am	Gaithersburg Middle School Flr 1 Rm 307 Duplica	0.8
2401506	3918289	11/27/2018 8:14 am	11/30/2018 7:06 am	Gaithersburg Middle School Flr 1 Rm 305	0.8

**Comment:** AMENDED REPORT for 3918285 on 02/01/2019 to add the start and end dates and times and area tested. Per ANSI/AARST MAH 2014, requirements for test locations within a room were not met for device 3919379, 3919380, 3918291, 3918293 (Kitchen)

Distributed by: Intertek-PSI (VA)

Date Received: 12/04/2018    Date Logged: 12/04/2018    Date Analyzed: 12/05/2018    Date Reported: 01/29/2019

Report Reviewed By: 

Report Approved By: 

Shawn Price, Director of Laboratory Operations, AccuStar Labs

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NELAC NY 11769  
NRPP 103216 AL  
NRSB ARL0017

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

Laboratory Report for:

Property Tested: Project # 04481387-1

Intertek-PSI (VA)  
2930 Eskridge Road  
Fairfax VA 22031

MCPS Radon Survey  
Gaithersburg Middle School  
Gaithersburg MD 20877

Log Number	Device Number	Test Exposure Duration:			Area Tested	Result pCi/L
2401507	3918290	11/27/2018	8:15 am	11/30/2018 7:07 am	Gaithersburg Middle School Flr 1 Rm 303	0.6
2401508	3918247	11/27/2018	8:16 am	11/30/2018 7:08 am	Gaithersburg Middle School Flr 1 Rm 301	0.7
2401509	3918248	11/27/2018	8:16 am	11/30/2018 7:09 am	Gaithersburg Middle School Flr 1 Rm 301B	0.5
2401510	3918249	11/27/2018	8:17 am	11/30/2018 7:09 am	Gaithersburg Middle School Flr 1 Rm 300	0.5
2401511	3918250	11/27/2018	8:18 am	11/30/2018 7:08 am	Gaithersburg Middle School Flr 1 Rm 302	0.4
2401512	3919327	11/27/2018	8:19 am	11/30/2018 7:07 am	Gaithersburg Middle School Flr 1 Rm 304	1.0
2401513	3919328	11/27/2018	8:21 am	11/30/2018 7:13 am	Gaithersburg Middle School Flr 2 Rm 806	< 0.4
2401514	3919329	11/27/2018	8:22 am	11/30/2018 7:13 am	Gaithersburg Middle School Flr 2 Rm 707	1.4
2401515	3919330	11/27/2018	8:23 am	11/30/2018 7:14 am	Gaithersburg Middle School Flr 2 Rm 701	< 0.4
2401516	3916021	11/27/2018	8:22 am	11/30/2018 7:13 am	Gaithersburg Middle School Flr 1 Rm 601 Duplica	0.6
2401517	3916022	11/27/2018	8:22 am	11/30/2018 7:14 am	Gaithersburg Middle School Flr 1 Rm 601	< 0.4

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Distributed by: Intertek-PSI (VA)

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Report Reviewed By: 

Report Approved By: 

Shawn Price, Director of Laboratory Operations, AccuStar Labs

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NELAC NY 11769  
NRPP 103216 AL  
NRSB ARL0017

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

Laboratory Report for:

Property Tested: Project # 04481387-1

Intertek-PSI (VA)  
2930 Eskridge Road  
Fairfax VA 22031

MCPS Radon Survey  
Gaithersburg Middle School  
Gaithersburg MD 20877

Log Number	Device Number	Test Exposure Duration:	Area Tested	Result pCi/L
2401518	3916023	11/27/2018 8:23 am 11/30/2018 7:15 am	Gaithersburg Middle School Flr 1 Rm 603	2.9
2401519	3916024	11/27/2018 8:24 am 11/30/2018 7:16 am	Gaithersburg Middle School Flr 1 Rm 603 Storage	2.2
2401520	3916025	11/27/2018 8:24 am 11/30/2018 7:07 am	Gaithersburg Middle School Flr 1 Rm 603 Storage	1.9
2401521	3916026	11/27/2018 8:32 am 11/30/2018 7:12 am	Gaithersburg Middle School Flr 1 Rm 502	0.5
2401522	3916027	11/27/2018 8:39 am 11/30/2018 7:28 am	Gaithersburg Middle Flr 1 Girl's Locker Rm Office 1	< 0.4
2401523	3916028	11/27/2018 8:39 am 11/30/2018 7:28 am	Gaithersburg Middle Flr 1 Girl's Locker Rm Office 1	< 0.4
2401524	3916029	11/27/2018 8:39 am 11/30/2018 7:28 am	Gaithersburg Middle Flr 1 Girl's Locker Rm Office 2	< 0.4
2401525	3916030	11/27/2018 8:39 am 11/30/2018 7:25 am	Gaithersburg Middle School Flr 1 Girl's Locker Ro	0.6
2401526	3918271	11/27/2018 8:47 am 11/30/2018 7:35 am	Gaithersburg Middle School Flr 1 Boy's Locker Ro	< 0.4
2401527	3918272	11/27/2018 8:47 am 11/30/2018 7:21 am	Gaithersburg Middle Flr 1 Boy's Locker Rm Office	0.7
2401528	3918273	11/27/2018 8:47 am 11/30/2018 7:21 am	Gaithersburg Middle Flr 1 Boy's Locker Rm Office	1.8

**Comment:** AMENDED REPORT for 3918285 on 02/01/2019 to add the start and end dates and times and area tested. Per ANSI/AARST MAH 2014, requirements for test locations within a room were not met for device 3919379, 3919380, 3918291, 3918293 (Kitchen)

Distributed by: Intertek-PSI (VA)

Date Received: 12/04/2018 Date Logged: 12/04/2018 Date Analyzed: 12/05/2018 Date Reported: 01/29/2019

Report Reviewed By: 

Report Approved By: 

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NELAC NY 11769  
NRPP 103216 AL  
NRSB ARL0017

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

Laboratory Report for:

Property Tested: Project # 04481387-1

Intertek-PSI (VA)  
2930 Eskridge Road  
Fairfax VA 22031

MCPS Radon Survey  
Gaithersburg Middle School  
Gaithersburg MD 20877

Log Number	Device Number	Test Exposure	Duration:	Area Tested	Result pCi/L
2401529	3918274	11/27/2018 8:52 am	11/30/2018 7:14 am	Gaithersburg Middle School Flr 1 Rm 500	< 0.4
2401530	3918275	11/27/2018 8:52 am	11/30/2018 7:14 am	Gaithersburg Middle School Flr 1 Rm 500	0.4
2401531	3918017	11/27/2018 6:18 am	11/30/2018 7:35 am	Gaithersburg Middle School Flr x Rm x Blank	< 0.4
2401532	3918015	11/27/2018 6:18 am	11/30/2018 7:35 am	Gaithersburg Middle School Flr x Rm x Blank	< 0.4
2401533	3919427	11/27/2018 6:00 am	11/30/2018 7:35 am	Gaithersburg Middle School Flr x Rm x Blank	< 0.4
2401534	3919426	11/27/2018 6:00 am	11/30/2018 7:35 am	Gaithersburg Middle School Flr x Rm x Blank	< 0.4

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Distributed by: Intertek-PSI (VA)

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Report Reviewed By: 

Report Approved By: 

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NELAC NY 11769  
NRPP 103216 AL  
NRSB ARL0017

EPA Method #402-R-92-004  
Liquid Scintillation  
NRPP Device Code 8088  
NRSB Device Code 12193

Laboratory Report for:

Property Tested: Project # 04481387-1

Intertek-PSI (VA)  
2930 Eskridge Road  
Fairfax VA 22031

MCPS Radon Survey  
Gaithersburg Middle School  
MD 20877

Log Number	Device Number	Test Exposure Duration:	Area Tested	Result pCi/L
2401413	3888476	11/27/2018 7:53 am 11/30/2018 6:09 am	Bldg Gaithersburg Middle School Flr 1 Rm 112	0.9
2401414	3888475	11/27/2018 8:12 am 11/30/2018 6:59 am	Bldg Gaithersburg Middle School Flr 1 Rm 501	0.5
2401415	3888473	11/27/2018 8:35 am 11/30/2018 7:25 am	Bldg Gaithersburg Middle School Flr 1 Rm Girl's	0.9
2401416	3888474	11/27/2018 8:36 am 11/30/2018 7:25 am	Bldg Gaithersburg Middle School Flr 1 Rm Boy's	2.0
2401417	3888472	11/27/2018 8:45 am 11/30/2018 7:23 am	Bldg Gaithersburg Middle School Flr 1 Rm Gym	1.5
2401418	3888471	11/27/2018 8:45 am 11/30/2018 7:22 am	Bldg Gaithersburg Middle School Flr 1 Rm Gym	1.6

**Comment:** A copy of this report was emailed to Intertek-PSI (VA).

Distributed by: Intertek-PSI (VA)

Date Received: 12/03/2018 Date Logged: 12/03/2018 Date Analyzed: 12/04/2018 Date Reported: 12/04/2018

Report Reviewed By: 

Report Approved By: 

Shawn Price, Director of Laboratory Operations, AccuStar Labs

**Disclaimer:**

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.

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 105011 AL  
NRSB ARL0007  
Ohio RL41

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

Laboratory Report for:

Property Tested:

Intertek-PSI (VA)  
2930 Eskridge Road  
Fairfax VA 22031

MCPS Radon Survey  
4514 Taylorsville Road  
Dayton OH 45424

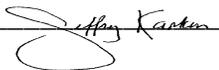
Log Number	Device Number	Test Exposure Duration:	Area Tested	Result pCi/L
3204125	3926831	12/07/2018 9:47 am - 12/10/2018 9:47 am	Spike	36.1
3204126	3926832	12/07/2018 9:47 am - 12/10/2018 9:47 am	Spike	34.8
3204127	3926833	12/07/2018 9:47 am - 12/10/2018 9:47 am	Spike	33.7
3204128	3926834	12/07/2018 9:47 am - 12/10/2018 9:47 am	Spike	35.8
3204129	3926835	12/07/2018 9:47 am - 12/10/2018 9:47 am	Spike	35.0
3204130	3926836	12/07/2018 9:47 am - 12/10/2018 9:47 am	Spike	34.5
3204131	3926837	12/07/2018 9:47 am - 12/10/2018 9:47 am	Spike	34.6
3204132	3926838	12/07/2018 9:47 am - 12/10/2018 9:47 am	Spike	34.3
3204133	3926839	12/07/2018 9:47 am - 12/10/2018 9:47 am	Spike	33.2
3204134	3926840	12/07/2018 9:47 am - 12/10/2018 9:47 am	Spike	34.0

**Comment:** A copy of this report was e-mailed to Intertek-PSI (VA)

Test Performed By: Unknown

Distributed by: Intertek-PSI (VA)

Date Received: 12/12/2018    Date Logged: 12/12/2018    Date Analyzed: 12/12/2018    Date Reported: 12/13/2018

Report Reviewed By: 

Report Approved By: 

**Disclaimer:**

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.

Shawn Price, Director of Laboratory Operations, AccuStar Labs

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.

# EXPOSURE IN BOWSER-MORNER RADON CHAMBER

CLIENT Intertek - PSI

Job Number 187732

NOMINAL Conditions: Radon Conc 32.6 pCi/L Rel. Hum 49.1 % Temp. 70.1 F

Date Start: 12/7/18 Date Stop: 12/10/18

Date Start: \_\_\_\_\_ Date Stop: \_\_\_\_\_

Time Start: 0947 Time Stop: 0947

Time Start: \_\_\_\_\_ Time Stop: \_\_\_\_\_

Device No.'s: (10) Char. Cans-

Device No.'s: \_\_\_\_\_

3926831 thru 3926840

G2 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  $\mu$ R/h Elevation = 820 ft



## Chain of Custody

Project Name: MCPS Radon Survey 2018

Name of Schools:

1. Ashburton ES
2. Carderock Springs ES
3. Diamond ES
4. Fox Chapel ES
5. Baker MS
6. Damascus ES
7. Clemente MS
8. Clopper Mill ES
9. Broad Acres ES
10. Greencastle ES
11. Harmony Hills ES
12. Silver Spring International MS
13. Gaithersburg MS
14. Garrett Park ES
15. New Hampshire Estates ES
16. Georgian Forest ES

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	Date	Initials
Radon Test Kits Deployed	11/27/2018	NL
Radon Test Kits Sampled	11/30/2018	NL
Radon Test Kits Shipped to Lab*	11/30/2018	NL
Radon Test Kits Received by Lab*	12/01/2018; 12/02/2018; 12/03/2018	NL

\*All samples sent to AccuStar Laboratories, 929 Mount Zion Road, Lebanon, PA 17046 and 2 Saber Way, Haverhill, MA 01835

RADON SCREENING SURVEY – FOLLOW-UP GAITHERSBURG MIDDLE SCHOOL

2 Teachers' Way., Gaithersburg, Maryland 20877

EXECUTIVE SUMMARY

Date of Test Report:	4/24/18
Round of Testing:	Initial Follow-up Post Remediation
# Rooms Tested	2
# Rooms $\geq$ 4.0 pCi/L:	0
Low Value:	1.8
High Value:	3.9
Confirmed Rooms $\geq$ 4.0 pCi/L US EPA Action Level	2

Summary of Sampling Events  $\geq$  4.0 pCi/L

Room	Result (pCi/L) 2/2/18	Result (pCi/L) 3/9/18	Result (pCi/L) 4/24/18	Average Result (pCi/L)
SEC OFF	4.8	3.3	Not tested	4.1
603C	Not tested	7.6	3.9	5.8
603B	Not tested	3.3	1.8	2.7

**MCPS RADON TESTING - EXECUTIVE SUMMARY**

Site Name	Gaithersburg Middle School
Date of Report	April 24, 2018
Round of Testing	Initial <b>Follow-up</b> Post Remediation 2 year testing 5 year testing HVAC Upgrade Window Replacement New Addition New Facility
# of Rooms Tested	2
# Rooms $\geq$ 4.0 pCi/L	0
Lowest Value	1.8 pCi/L
Highest Value	3.9 pCi/L

**Project Status**

Current Project Status at this time: Retesting completed; use the average of the initial and re-test results in a room to determine if remediation is necessary.



April 24, 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: Gaithersburg Middle School**

2 Teachers Way  
Gaithersburg, Maryland 20877

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 Gaithersburg Middle School, located at 2 Teachers Way in Gaithersburg, Maryland 20877 (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](http://www.montgomerycountymd.gov/dep/air/radon) or [www.epa.gov/radon](http://www.epa.gov/radon).

KCI visited the site on April 17, 2018 and deployed five (5) 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 elevated February 2018 results.

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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 two (2) 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 April 20, 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 were in the 30s and high temperatures ranged from the mid-40s to the low-60s. Maximum sustained winds ranged from 16-23 miles per hour. Average humidity was around 54%. No precipitation was recorded during the testing period. The weather conditions during the testing period may have resulted in atypical radon test results for this facility.

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## **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:

<b>Radon Concentration</b>	<b>Room</b>	<b>Result</b>
$\geq 4.0$ pCi/L	None	N/A
$\leq 4.0$ pCi/L	See Attachment B	See Attachment B

<b>Quality Control Samples</b>	
Results of Blank Canisters:	The field blank, office blank, 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 - Tables 1-3, 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

<b>Table 1 - Radon Testing Results</b>		
<b>Gaithersburg Middle School</b>		
<b>Test Period: 04/17/18-04/20/18</b>		
<b>Kit Number</b>	<b>Room / Area</b>	<b>Result</b>
7986596	603B	1.8
7984199	603C	3.1

Table Note:

\* Missing or Compromised Sample

<b>Table 2 - Radon Testing Results</b>		
<b>Gaithersburg Middle School</b>		
<b>Test Period: 04/17/18-04/20/18</b>		
<b>Kit Number</b>	<b>QC Type</b>	<b>Result</b>
7986536	D (603C)	3.9
7984197	FB (603B)	< 0.3
7984195	OB (OB)	< 0.3

Table Note:

\* Missing or Compromised Sample

# ATTACHMENT C

## Laboratory Analytical Results

Radon test result report for:

**RADON -FOLLOWUP 2018  
GAITHERSBURG MIDDLE SCHOOL  
MAIN**

<b>Kit #</b>	<b>Room Id</b>	<b>Started</b>	<b>Ended</b>	<b>pCi/L</b>	<b>Analyzed</b>
7986596	603B	2018-04-17 @ 12:00 pm	2018-04-20 @ 12:00 pm	1.8	2018-04-23
7984197	603B	2018-04-17 @ 12:00 pm	2018-04-20 @ 12:00 pm	< 0.3	2018-04-23
7984199	603C	2018-04-17 @ 11:00 am	2018-04-20 @ 12:00 pm	3.1	2018-04-23
7986536	603C	2018-04-17 @ 11:00 am	2018-04-20 @ 12:00 pm	3.9	2018-04-23
7984195	OB	2018-04-17 @ 12:00 pm	2018-04-20 @ 12:00 pm	< 0.3	2018-04-23



## Radon Test Kit Chain of Custody

Project Name: MCPS Radon Phase

Names of Schools:

1. Gaithersburg Middle School

---

	Date	Initials
Radon Test Kits Deployed	4/17/18	JM
Radon Test Kits Collected	4/20/18	JM
Radon Test Kits Shipped to Lab*	4/20/18	JM
Radon Test Kits Received by Lab*	4/23/18	JM

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

Radon test result report for:  
**TRANSIT BLANKS**

<b>Kit #</b>	<b>Room Id</b>	<b>Started</b>	<b>Ended</b>	<b>pCi/L</b>	<b>Analyzed</b>
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

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 (26.5 pCi/L).**

---

<b>Kit #</b>	<b>Room Id</b>	<b>Started</b>	<b>Ended</b>	<b>pCi/L</b>	<b>Analyzed</b>
7974801	1	2018-03-23 @ 11:00 am	2018-03-26 @ 11:00 am	28.6	2018-03-28
7974804	2	2018-03-23 @ 11:00 am	2018-03-26 @ 11:00 am	27.9	2018-03-28

---

# EXPOSURE IN BOWSER-MORNER RADON CHAMBER

CLIENT KCF Technologies Inc. Job Number 184100

NOMINAL Conditions: Radon Conc 26.5 pCi/L Rel. Hum 49.1 % Temp. 70.0 F

Date Start: 3/23/18 Date Stop: 3/26/18 Date Start: \_\_\_\_\_ Date Stop: \_\_\_\_\_

Time Start: 1032 Time Stop: 1932 Time Start: \_\_\_\_\_ Time Stop: \_\_\_\_\_

Device No.'s: (2) Char. Bags. Device No.'s: \_\_\_\_\_

7974801, 7974804

FS 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  $\mu$ R/h Elevation = 820 ft**



**MCPS RADON TESTING - EXECUTIVE SUMMARY**

Site Name	Gaithersburg Middle School
Date of Report	March 9, 2018
Round of Testing	Initial <b>Follow-up</b> Post Remediation 2 year testing 5 year testing HVAC Upgrade Window Replacement New Addition New Facility
# of Rooms Tested	22
# Rooms $\geq$ 4.0 pCi/L	1
Lowest Value	0.6 pCi/L
Highest Value	7.6 pCi/L

**Project Status**

Current Project Status at this time: Retesting completed; use the average of the initial and re-test results in a room to determine if remediation is necessary.

Room 603C requires re-test.



March 9, 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: Gaithersburg Middle School**

2 Teachers Way  
Gaithersburg, Maryland 20877

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 Gaithersburg Middle School, located at 2 Teachers Way in Gaithersburg, Maryland 20877 (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](http://www.montgomerycountymd.gov/dep/air/radon) or [www.epa.gov/radon](http://www.epa.gov/radon).

KCI visited the site on February 12, 2018 and deployed twenty-five (25) 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.  $\geq 3.5$  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 15, 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 10-15 miles per hour. Average humidity was around 69%. 0.05 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:

<b>Radon Concentration</b>	<b>Room</b>	<b>Result</b>
≥4.0 pCi/L	603C	7.6
≤4.0 pCi/L	See Attachment B	See Attachment B

<b>Quality Control Samples</b>	
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,



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

<b>Table 1- Radon Testing Results</b>		
<b>Gaithersburg Middle School</b>		
<b>Test Period: 02/12/18-02/15/18</b>		
<b>Kit Number</b>	<b>Room / Area</b>	<b>Result</b>
7985864	104	0.9
7986180	205	2.4
7984048	501	0.6
7985952	811	0.9
7985654	6 TEAM	1.4
7986178	603 B	3.3
7986185	603 C	7.6
7985655	BLR	1.7
7985649	FACILITY DINING	1.1
7985646	GIRLS GYM OFFICE	1.1
7985645	* GLR (Missing)	-
7986193	GUIDANCE 1	0.8
7986183	GYM OFFICE BOYS	1.2
7985652	ILT A	1.4
7985643	ILT B	1.5
7984039	KITCHEN	1.0
7985650	LIBRARY OFFICE A	2.7
7985644	LIBRARY OFFICE B	1.5
7985647	LIBRARY OFFICE C	1.4
7986175	PA	1.5
7984037	SEC OFF	3.3
7984043	TEACHERS LOUNGE	2.0

Table Note:

\* Missing or Compromised Sample

<b>Table 2- Radon Testing Results</b>		
<b>Gaithersburg Middle School</b>		
<b>Test Period: 02/12/18-02/15/18</b>		
<b>Kit Number</b>	<b>QC Type</b>	<b>Result</b>
7984062	D (811)	1.0
7984042	D (ILT B)	2.4
7985648	FB (PA)	1.9

Table Note:

\* Missing or Compromised Sample

# ATTACHMENT C

## Laboratory Analytical Results

Radon test result report for:

**GAITHERSBURG MIDDLE SCHOOL  
MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7985864	104	2018-02-12 @ 10:00 am	2018-02-15 @ 9:00 am	0.9 ± 0.3	2018-02-19
7986180	205	2018-02-12 @ 10:00 am	2018-02-15 @ 9:00 am	2.4 ± 0.4	2018-02-19
7984048	501	2018-02-12 @ 10:00 am	2018-02-15 @ 9:00 am	0.6 ± 0.3	2018-02-19
7985654	6 TEAM	2018-02-12 @ 10:00 am	2018-02-15 @ 9:00 am	1.4 ± 0.3	2018-02-19
7986178	603 B	2018-02-12 @ 10:00 am	2018-02-15 @ 9:00 am	3.3 ± 0.4	2018-02-19
7986185	603 C	2018-02-12 @ 10:00 am	2018-02-15 @ 9:00 am	7.6 ± 0.6	2018-02-19
7985952	811	2018-02-12 @ 10:00 am	2018-02-15 @ 9:00 am	0.9 ± 0.3	2018-02-19
7984062	811	2018-02-12 @ 10:00 am	2018-02-15 @ 9:00 am	1.0 ± 0.4	2018-02-19
7985655	BLR	2018-02-12 @ 10:00 am	2018-02-15 @ 9:00 am	1.7 ± 0.3	2018-02-19
7985649	FACILITY DINING	2018-02-12 @ 10:00 am	2018-02-15 @ 9:00 am	1.1 ± 0.4	2018-02-19
7985646	GIRLS GYM OFFICE	2018-02-12 @ 10:00 am	2018-02-15 @ 9:00 am	1.1 ± 0.3	2018-02-19
7985645	GLR	@	@		
7986193	GUIDANCE 1	2018-02-12 @ 11:00 am	2018-02-15 @ 9:00 am	0.8 ± 0.4	2018-02-19
7986183	GYM OFFICE BOYS	2018-02-12 @ 10:00 am	2018-02-15 @ 9:00 am	1.2 ± 0.3	2018-02-19
7985652	ILT A	2018-02-12 @ 11:00 am	2018-02-15 @ 9:00 am	1.4 ± 0.3	2018-02-19
7984042	ILT B	2018-02-12 @ 11:00 am	2018-02-15 @ 9:00 am	2.4 ± 0.4	2018-02-19
7985643	ILT B	2018-02-12 @ 11:00 am	2018-02-15 @ 9:00 am	1.5 ± 0.4	2018-02-19
7984039	KITCHEN	2018-02-12 @ 10:00 am	2018-02-15 @ 9:00 am	1.0 ± 0.3	2018-02-19
7985650	LIBRARY OFFICE A	2018-02-12 @ 11:00 am	2018-02-15 @ 9:00 am	2.7 ± 0.4	2018-02-19
7985644	LIBRARY OFFICE B	2018-02-12 @ 11:00 am	2018-02-15 @ 9:00 am	1.5 ± 0.4	2018-02-19
7985647	LIBRARY OFFICE C	2018-02-12 @ 11:00 am	2018-02-15 @ 9:00 am	1.4 ± 0.3	2018-02-19
7986175	PA	2018-02-12 @ 11:00 am	2018-02-15 @ 9:00 am	1.5 ± 0.4	2018-02-19
7985648	PA	2018-02-12 @ 11:00 am	2018-02-15 @ 9:00 am	1.9 ± 0.4	2018-02-19
7984037	SEC OFF	2018-02-12 @ 10:00 am	2018-02-15 @ 9:00 am	3.3 ± 0.4	2018-02-19
7984043	TEACHERS LOUNGE	2018-02-12 @ 11:00 am	2018-02-15 @ 9:00 am	2.0 ± 0.4	2018-02-19



## Radon Test Kit Chain of Custody

Project Name: MCPS Radon

Names of Schools:

1. Highland Elementary School
2. Stephen Knolls Elementary School
3. Silver Creek Middle School
4. Woodlin Elementary School
5. Sligo Creek Elementary School
6. Francis Scott Key Middle School
7. John T. Baker Middle School
8. Cedar Grove Elementary School
9. Clarksburg Elementary School
10. Clarksburg Elementary School Annex
11. Fields Road Elementary School
12. Dufief Elementary School
13. Brown Station Elementary School
14. Diamond Elementary School
15. Fallsmeade Elementary School
16. Thomas Whootton High School
17. Lake Seneca Elementary School
18. Redland Middle School
19. Newport Mill Middle School
20. Bethesda Trans. and Maint. Depot
21. Sequoyah Elementary School
22. Gaithersburg Middle School
23. Wayside Elementary School
24. Travilah Elementary School
25. Damascus High School
26. Jones Lane Elementary School
27. Greencastle Elementary School
28. Spring Brook High School
29. Montgomery Blair High School
30. Watkins Mill High School

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	Date	Initials
Radon Test Kits Deployed	2/12/18	JM
Radon Test Kits Collected	2/15/18	JM
Radon Test Kits Shipped to Lab*	2/15/18	JM
Radon Test Kits Received by Lab*	2/19/15	JM

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

Radon test result report for:  
**OFFICE BLANKS**

<b>Kit #</b>	<b>Room Id</b>	<b>Started</b>	<b>Ended</b>	<b>pCi/L</b>	<b>Analyzed</b>
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

Radon test result report for:  
**TRANSIT BLANKS**

<b>Kit #</b>	<b>Room Id</b>	<b>Started</b>	<b>Ended</b>	<b>pCi/L</b>	<b>Analyzed</b>
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

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February 28, 2018

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

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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).**

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

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

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  $\mu$ R/h Elevation = 820 ft



**MCPS RADON TESTING - EXECUTIVE SUMMARY**

Site Name	Gaithersburg Middle School
Date of Report	February 2, 2018
Round of Testing	Initial Follow-up Post Remediation <b>2 year testing</b> 5 year testing HVAC Upgrade Window Replacement New Addition New Facility
# of Rooms Tested	91
# Rooms $\geq 4.0$ pCi/L	1
Lowest Value	0.7 pCi/L
Highest Value	4.8 pCi/L

Rooms with results  $\geq 4.0$  pCi/L:

SEC OFF (4.8 pCi/L)

Current Project Status at this time: Testing Completed; retesting needed for results  $\geq 4.0$  pCi/L.

Missing or compromised samples need re-test.



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: Gaithersburg Middle School**

2 Teachers Way.  
Gaithersburg, Maryland 20877

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 Gaithersburg Middle School, located at 2 Teachers Way. in Gaithersburg, Maryland 20877 (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](http://www.montgomerycountymd.gov/dep/air/radon) or [www.epa.gov/radon](http://www.epa.gov/radon).

KCI visited the site on December 4, 2017 and deployed one-hundred-ten (110) 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 7, 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 high-20s to mid-40s and high temperatures ranged from the low-40s to mid-50s. Maximum sustained winds ranged from 12-17 miles per hour. Average humidity was around 65%. 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 (Attachment B). The quality control sample locations and analytical results are listed on Table 2 (Attachment B). Missing/compromised tests, missed rooms, and locked rooms 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:

<b>Radon Concentration</b>	<b>Room</b>	<b>Result</b>
$\geq 4.0$ pCi/L	SEC OFF	4.8
$\leq 4.0$ pCi/L	See Attachment B	See Attachment B

<b>Quality Control Samples</b>	
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.

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 Mouldale, CHMM  
Radon Measurement Specialist  
KCI Technologies, Inc.

Attachments:

B- Tables 1-3, 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

<b>Radon Testing Results</b>		
<b>Gaithersburg Middle School</b>		
<b>Test Period: 12/04/17-12/07/17</b>		
<b>Kit Number</b>	<b>Room / Area</b>	<b>Result</b>
7193713	100	1.7
7193714	101	2.1
7975067	102	1.0
7975068	103	1.7
7975081	104	1.3
7975066	105	1.3
7975062	107	0.9
7975100	108	1.3
7193727	109	0.9
7193726	111	1.4
7193731	114	1.4
7193781	204	1.8
7193746	300	1.1
7193747	301	0.7
7193760	302	1.2
7193754	303	1.0
7193709	304	1.4
7193763	305	1.1
7193743	307	0.7
7193742	309	1.1
7193744	311	1.7
7193730	400	1.5
7193732	401	1.6
7193717	402	1.4
7193711	403	1.2
7193715	404	1.3
7193716	405	1.2
7193749	500	1.4
7193741	502	1.4
7193728	507	1.3
7193740	601	2.9
7193724	603	3.3
7193753	804	1.1
7193791	806	1.7
7193792	807	1.8
7193785	808	1.1
7193786	809	1.2
7193780	810	0.8
7193772	812	1.0
7193778	813	0.9
7193734	200-1	2.7
7193735	200-2	2.5
7193755	200-3	2.2
7193756	200-4	2.1
7193762	200-5	3.0
7193774	201-10	1.4

Table Note:

\* Missing or Compromised Sample

<b>Radon Testing Results</b>		
<b>Gaithersburg Middle School</b>		
<b>Test Period: 12/04/17-12/07/17</b>		
<b>Kit Number</b>	<b>Room / Area</b>	<b>Result</b>
7193750	201-11	1.2
7193775	201-2	2.3
7193773	201-3	1.9
7193787	201-4	1.9
7193769	201-5	1.8
7193759	201-6	1.8
7193745	201-7	1.8
7193758	201-8	1.7
7193751	201-9	1.5
7193702	407-1	1.5
7193703	407-2	1.2
7193721	407-3	1.4
7193733	* 501 (Tampered)	1.1
7193723	603 OFF	2.6
7193770	807A	1.2
7193779	* 811 (Tampered)	0.8
7975083	ADMIN SEC	1.9
7975085	ASST PRINCIPAL-1	2.2
7975086	ASST PRINCIPAL-2	1.5
7193706	BLDG SERV	1.5
7193738	BOYS GYM	3.1
7193712	CAFE OFFICE	0.7
7193707	CAFETERIA	1.8
7193708	CAFETERIA	1.5
7975084	CONFERENCE ROOM	1.8
7975087	FINIANCIAL	1.6
7193739	GIRLS GYM	1.5
7975089	GMS	1.7
7975092	* GUIDANCE-1 (Missing)	-
7975094	GUIDANCE-2	1.5
7975071	GUIDANCE-3	1.4
7975093	GUIDANCE-4	1.3
7975095	GUIDANCE-5	1.3
7975091	GUIDANCE-6	1.2
7975097	HEALTH	2.2
7975098	HEALTH OFFICE	1.5
7193736	MAIN GYM	3.4
7193737	MAIN GYM	2.9
7975082	MAIN OFFICE	1.4
7975079	MEDIA CENTER	1.6
7975080	MEDIA CENTER	1.6
7975074	MEDIA OFFICE	1.4
7975088	PRINCIPAL	1.7
7193720	SEC OFF	4.8
7975099	SPECIAL ED	1.9
7193757	TEAM ROOM	1.3
7975090	TV STUDIO	1.9
7975072	WORK ROOM	2.0

Table Note:

\* Missing or Compromised Sample

<b>Radon Testing Results</b>		
<b>Gaithersburg Middle School</b>		
<b>Test Period: 12/04/17-12/07/17</b>		
<b>Kit Number</b>	<b>QC Type</b>	<b>Result</b>
7193718	D (101)	1.5
7193725	D (109)	1.4
7193761	D (200-1)	3.0
7193767	D (201-1)	1.8
7193705	D (304)	1.5
7193704	D (407-3)	1.3
7193729	D (500)	1.1
7193766	D (810)	0.8
7975096	D (GUIDANCE-5)	1.3
7975073	D (MEDIA OFFICE)	1.1
7193719	FB (101)	< 0.3
7193768	FB (201-1)	< 0.3
7193748	FB (500)	< 0.3
7193701	FB (812)	< 0.3
7194076	OB (OFFICE BLANK 1)	< 0.3
7194086	OB (OFFICE BLANK 2)	< 0.3

Table Note:

\* Missing or Compromised Sample



# ATTACHMENT C

## Laboratory Analytical Results

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December 29, 2017

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

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Radon test result report for:

**GAITHERSBURG MIDDLE SCHOOL  
MAIN**

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<b>Kit #</b>	<b>Room Id</b>	<b>Started</b>	<b>Ended</b>	<b>pCi/L</b>	<b>Analyzed</b>
7193781	204	2017-12-04 @ 9:00 am	2017-12-07 @ 9:00 am	1.8 ± 0.4	2017-12-12
7194076	OFFICE BLANK 1	2017-12-04 @ 12:00 pm	2017-12-07 @ 12:00 pm	< 0.3	2017-12-12
7194086	OFFICE BLANK 2	2017-12-04 @ 12:00 pm	2017-12-07 @ 12:00 pm	< 0.3	2017-12-12

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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:

**GAITHERSBURG MIDDLE SCHOOL  
MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7193728	507	2017-12-04 @ 9:00 am	2017-12-07 @ 9:00 am	1.3 ± 0.4	2017-12-12
7193762	200-5	2017-12-04 @ 10:00 am	2017-12-07 @ 9:00 am	3.0 ± 0.5	2017-12-12
7193713	100	2017-12-04 @ 8:00 am	2017-12-07 @ 8:00 am	1.7 ± 0.4	2017-12-12
7193718	101	2017-12-04 @ 8:00 am	2017-12-07 @ 8:00 am	1.5 ± 0.4	2017-12-12
7193719	101	2017-12-04 @ 8:00 am	2017-12-07 @ 8:00 am	< 0.3	2017-12-12
7193714	101	2017-12-04 @ 8:00 am	2017-12-07 @ 8:00 am	2.1 ± 0.4	2017-12-12
7975067	102	2017-12-04 @ 9:00 am	2017-12-07 @ 8:00 am	1.0 ± 0.4	2017-12-12
7975068	103	2017-12-04 @ 9:00 am	2017-12-07 @ 8:00 am	1.7 ± 0.4	2017-12-12
7975081	104	2017-12-04 @ 9:00 am	2017-12-07 @ 8:00 am	1.3 ± 0.4	2017-12-12
7975066	105	2017-12-04 @ 9:00 am	2017-12-07 @ 8:00 am	1.3 ± 0.4	2017-12-12
7975062	107	2017-12-04 @ 9:00 am	2017-12-07 @ 8:00 am	0.9 ± 0.4	2017-12-12
7975100	108	2017-12-04 @ 9:00 am	2017-12-07 @ 8:00 am	1.3 ± 0.4	2017-12-12
7193727	109	2017-12-04 @ 9:00 am	2017-12-07 @ 8:00 am	0.9 ± 0.4	2017-12-12
7193725	109	2017-12-04 @ 9:00 am	2017-12-07 @ 8:00 am	1.4 ± 0.4	2017-12-12
7193726	111	2017-12-04 @ 9:00 am	2017-12-07 @ 8:00 am	1.4 ± 0.4	2017-12-12
7193731	114	2017-12-04 @ 9:00 am	2017-12-07 @ 8:00 am	1.4 ± 0.4	2017-12-12
7193755	200-3	2017-12-04 @ 10:00 am	2017-12-07 @ 9:00 am	2.2 ± 0.5	2017-12-12
7193761	200-1	2017-12-04 @ 10:00 am	2017-12-07 @ 9:00 am	3.0 ± 0.4	2017-12-12
7193756	200-4	2017-12-04 @ 10:00 am	2017-12-07 @ 9:00 am	2.1 ± 0.4	2017-12-12
7193734	200-1	2017-12-04 @ 10:00 am	2017-12-07 @ 9:00 am	2.7 ± 0.4	2017-12-12
7193735	200-2	2017-12-04 @ 10:00 am	2017-12-07 @ 9:00 am	2.5 ± 0.4	2017-12-12
7193759	201-6	2017-12-04 @ 10:00 am	2017-12-07 @ 9:00 am	1.8 ± 0.4	2017-12-12
7193773	201-3	2017-12-04 @ 10:00 am	2017-12-07 @ 9:00 am	1.9 ± 0.5	2017-12-12
7193767	201-1	2017-12-04 @ 10:00 am	2017-12-07 @ 9:00 am	1.8 ± 0.4	2017-12-12
7193774	201-10	2017-12-04 @ 10:00 am	2017-12-07 @ 9:00 am	1.4 ± 0.4	2017-12-12
7193768	201-1	2017-12-04 @ 10:00 am	2017-12-07 @ 9:00 am	< 0.3	2017-12-12
7193775	201-2	2017-12-04 @ 10:00 am	2017-12-07 @ 9:00 am	2.3 ± 0.4	2017-12-12
7193769	201-5	2017-12-04 @ 10:00 am	2017-12-07 @ 9:00 am	1.8 ± 0.4	2017-12-12
7193750	201-11	2017-12-04 @ 10:00 am	2017-12-07 @ 9:00 am	1.2 ± 0.4	2017-12-12
7193745	201-7	2017-12-04 @ 10:00 am	2017-12-07 @ 9:00 am	1.8 ± 0.4	2017-12-12
7193751	201-9	2017-12-04 @ 10:00 am	2017-12-07 @ 9:00 am	1.5 ± 0.4	2017-12-12
7193787	201-4	2017-12-04 @ 10:00 am	2017-12-07 @ 9:00 am	1.9 ± 0.4	2017-12-12
7193758	201-8	2017-12-04 @ 10:00 am	2017-12-07 @ 9:00 am	1.7 ± 0.4	2017-12-12
7193746	300	2017-12-04 @ 10:00 am	2017-12-07 @ 9:00 am	1.1 ± 0.4	2017-12-12
7193747	301	2017-12-04 @ 10:00 am	2017-12-07 @ 9:00 am	0.7 ± 0.4	2017-12-12
7193760	302	2017-12-04 @ 10:00 am	2017-12-07 @ 9:00 am	1.2 ± 0.4	2017-12-12
7193754	303	2017-12-04 @ 10:00 am	2017-12-07 @ 9:00 am	1.0 ± 0.4	2017-12-12

Radon test result report for:

**GAITHERSBURG MIDDLE SCHOOL  
MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7193709	304	2017-12-04 @ 10:00 am	2017-12-07 @ 9:00 am	1.4 ± 0.4	2017-12-12
7193705	304	2017-12-04 @ 10:00 am	2017-12-07 @ 9:00 am	1.5 ± 0.4	2017-12-12
7193763	305	2017-12-04 @ 10:00 am	2017-12-07 @ 9:00 am	1.1 ± 0.4	2017-12-12
7193743	307	2017-12-04 @ 10:00 am	2017-12-07 @ 9:00 am	0.7 ± 0.4	2017-12-12
7193742	309	2017-12-04 @ 10:00 am	2017-12-07 @ 9:00 am	1.1 ± 0.4	2017-12-12
7193744	311	2017-12-04 @ 10:00 am	2017-12-07 @ 9:00 am	1.7 ± 0.4	2017-12-12
7193730	400	2017-12-04 @ 9:00 am	2017-12-07 @ 8:00 am	1.5 ± 0.4	2017-12-12
7193732	401	2017-12-04 @ 9:00 am	2017-12-07 @ 8:00 am	1.6 ± 0.4	2017-12-12
7193717	402	2017-12-04 @ 9:00 am	2017-12-07 @ 8:00 am	1.4 ± 0.4	2017-12-12
7193711	403	2017-12-04 @ 9:00 am	2017-12-07 @ 8:00 am	1.2 ± 0.4	2017-12-12
7193715	404	2017-12-04 @ 9:00 am	2017-12-07 @ 9:00 am	1.3 ± 0.4	2017-12-12
7193716	405	2017-12-04 @ 9:00 am	2017-12-07 @ 8:00 am	1.2 ± 0.4	2017-12-12
7193703	407-2	2017-12-04 @ 9:00 am	2017-12-07 @ 8:00 am	1.2 ± 0.4	2017-12-12
7193721	407-3	2017-12-04 @ 9:00 am	2017-12-07 @ 8:00 am	1.4 ± 0.4	2017-12-12
7193704	407-3	2017-12-04 @ 9:00 am	2017-12-07 @ 8:00 am	1.3 ± 0.4	2017-12-12
7193702	407-1	2017-12-04 @ 9:00 am	2017-12-07 @ 9:00 am	1.5 ± 0.4	2017-12-12
7193748	500	2017-12-04 @ 9:00 am	2017-12-07 @ 9:00 am	< 0.3	2017-12-12
7193749	500	2017-12-04 @ 9:00 am	2017-12-07 @ 9:00 am	1.4 ± 0.4	2017-12-12
7193729	500	2017-12-04 @ 9:00 am	2017-12-07 @ 9:00 am	1.1 ± 0.4	2017-12-12
7193733	501	2017-12-04 @ 9:00 am	2017-12-07 @ 9:00 am	1.1 ± 0.4	2017-12-12
7193741	502	2017-12-04 @ 9:00 am	2017-12-07 @ 9:00 am	1.4 ± 0.4	2017-12-12
7193740	601	2017-12-04 @ 9:00 am	2017-12-07 @ 9:00 am	2.9 ± 0.4	2017-12-12
7193724	603	2017-12-04 @ 9:00 am	2017-12-07 @ 9:00 am	3.3 ± 0.5	2017-12-12
7193723	603 OFF	2017-12-04 @ 9:00 am	2017-12-07 @ 9:00 am	2.6 ± 0.4	2017-12-12
7193753	804	2017-12-04 @ 11:00 am	2017-12-07 @ 9:00 am	1.1 ± 0.4	2017-12-12
7193791	806	2017-12-04 @ 11:00 am	2017-12-07 @ 9:00 am	1.7 ± 0.5	2017-12-12
7193792	807	2017-12-04 @ 11:00 am	2017-12-07 @ 9:00 am	1.8 ± 0.4	2017-12-12
7193770	807A	2017-12-04 @ 11:00 am	2017-12-07 @ 9:00 am	1.2 ± 0.4	2017-12-12
7193785	808	2017-12-04 @ 10:00 am	2017-12-07 @ 9:00 am	1.1 ± 0.4	2017-12-12
7193786	809	2017-12-04 @ 11:00 am	2017-12-07 @ 9:00 am	1.2 ± 0.4	2017-12-12
7193780	810	2017-12-04 @ 10:00 am	2017-12-07 @ 9:00 am	0.8 ± 0.4	2017-12-12
7193766	810	2017-12-04 @ 10:00 am	2017-12-07 @ 9:00 am	0.8 ± 0.4	2017-12-12
7193779	811	2017-12-04 @ 10:00 am	2017-12-07 @ 9:00 am	0.8 ± 0.4	2017-12-12
7193701	812	2017-12-04 @ 10:00 am	2017-12-07 @ 9:00 am	< 0.3	2017-12-12
7193772	812	2017-12-04 @ 10:00 am	2017-12-07 @ 9:00 am	1.0 ± 0.4	2017-12-12
7193778	813	2017-12-04 @ 10:00 am	2017-12-07 @ 9:00 am	0.9 ± 0.4	2017-12-12
7975083	ADMIN SEC	2017-12-04 @ 8:00 am	2017-12-07 @ 8:00 am	1.9 ± 0.4	2017-12-12

Radon test result report for:

**GAITHERSBURG MIDDLE SCHOOL  
MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7975085	ASST PRINCIPAL-1	2017-12-04 @ 8:00 am	2017-12-07 @ 8:00 am	2.2 ± 0.5	2017-12-12
7975086	ASST PRINCIPAL-2	2017-12-04 @ 8:00 am	2017-12-07 @ 8:00 am	1.5 ± 0.4	2017-12-12
7193706	BLDG SERV	2017-12-04 @ 8:00 am	2017-12-07 @ 8:00 am	1.5 ± 0.4	2017-12-12
7193738	BOYS GYM	2017-12-04 @ 9:00 am	2017-12-07 @ 9:00 am	3.1 ± 0.5	2017-12-12
7193708	CAFETERIA	2017-12-04 @ 8:00 am	2017-12-07 @ 8:00 am	1.5 ± 0.4	2017-12-12
7193707	CAFETERIA	2017-12-04 @ 8:00 am	2017-12-07 @ 8:00 am	1.8 ± 0.4	2017-12-12
7193712	CAFE OFFICE	2017-12-04 @ 8:00 am	2017-12-07 @ 8:00 am	0.7 ± 0.3	2017-12-12
7975084	CONFERENCE ROOM	2017-12-04 @ 8:00 am	2017-12-07 @ 8:00 am	1.8 ± 0.4	2017-12-12
7975087	FINIANCIAL	2017-12-04 @ 8:00 am	2017-12-07 @ 8:00 am	1.6 ± 0.4	2017-12-12
7193739	GIRLS GYM	2017-12-04 @ 9:00 am	2017-12-07 @ 9:00 am	1.5 ± 0.4	2017-12-12
7975089	GMS	2017-12-04 @ 8:00 am	2017-12-07 @ 8:00 am	1.7 ± 0.4	2017-12-12
7975092	GUIDANCE-1	@	@		
7975094	GUIDANCE-2	2017-12-04 @ 8:00 am	2017-12-07 @ 8:00 am	1.5 ± 0.4	2017-12-12
7975095	GUIDANCE-5	2017-12-04 @ 8:00 am	2017-12-07 @ 8:00 am	1.3 ± 0.4	2017-12-12
7975096	GUIDANCE-5	2017-12-04 @ 8:00 am	2017-12-07 @ 8:00 am	1.3 ± 0.4	2017-12-12
7975071	GUIDANCE-3	2017-12-04 @ 8:00 am	2017-12-07 @ 8:00 am	1.4 ± 0.4	2017-12-12
7975091	GUIDANCE-6	2017-12-04 @ 8:00 am	2017-12-07 @ 8:00 am	1.2 ± 0.4	2017-12-12
7975093	GUIDANCE-4	2017-12-04 @ 8:00 am	2017-12-07 @ 8:00 am	1.3 ± 0.4	2017-12-12
7975097	HEALTH	2017-12-04 @ 8:00 am	2017-12-07 @ 8:00 am	2.2 ± 0.4	2017-12-12
7975098	HEALTH OFFICE	2017-12-04 @ 8:00 am	2017-12-07 @ 8:00 am	1.5 ± 0.4	2017-12-12
7193737	MAIN GYM	2017-12-04 @ 9:00 am	2017-12-07 @ 9:00 am	2.9 ± 0.5	2017-12-12
7193736	MAIN GYM	2017-12-04 @ 9:00 am	2017-12-07 @ 9:00 am	3.4 ± 0.5	2017-12-12
7975082	MAIN OFFICE	2017-12-04 @ 8:00 am	2017-12-07 @ 8:00 am	1.4 ± 0.4	2017-12-12
7975079	MEDIA CENTER	2017-12-04 @ 8:00 am	2017-12-07 @ 8:00 am	1.6 ± 0.4	2017-12-12
7975080	MEDIA CENTER	2017-12-04 @ 8:00 am	2017-12-07 @ 8:00 am	1.6 ± 0.4	2017-12-12
7975074	MEDIA OFFICE	2017-12-04 @ 8:00 am	2017-12-07 @ 8:00 am	1.4 ± 0.4	2017-12-12
7975073	MEDIA OFFICE	2017-12-04 @ 8:00 am	2017-12-07 @ 8:00 am	1.1 ± 0.4	2017-12-12
7975088	PRINCIPAL	2017-12-04 @ 8:00 am	2017-12-07 @ 8:00 am	1.7 ± 0.4	2017-12-12
7193720	SEC OFF	2017-12-04 @ 9:00 am	2017-12-07 @ 8:00 am	4.8 ± 0.5	2017-12-12
7975099	SPECIAL ED	2017-12-04 @ 8:00 am	2017-12-07 @ 8:00 am	1.9 ± 0.4	2017-12-12
7193757	TEAM ROOM	2017-12-04 @ 10:00 am	2017-12-07 @ 9:00 am	1.3 ± 0.4	2017-12-12
7975090	TV STUDIO	2017-12-04 @ 8:00 am	2017-12-07 @ 8:00 am	1.9 ± 0.5	2017-12-12
7975072	WORK ROOM	2017-12-04 @ 8:00 am	2017-12-07 @ 8:00 am	2.0 ± 0.4	2017-12-12



## Radon Test Kit Chain of Custody

Project Name: MCPS Radon Phase

Names of Schools:

- |                                       |                                  |
|---------------------------------------|----------------------------------|
| 1. Brooke Grove Elementary School     | 14. Newport Mill Middle School   |
| 2. Brown Station Elementary School    | 15. Oakview Elementary School    |
| 3. Diamond Elementary School Addition | 16. Quince Orchard High School   |
| 4. Dufief Elementary School           | 17. Robert Frost Middle School   |
| 5. Emory Grove Center                 | 18. Rosa Parks Middle School     |
| 6. Fields Road Elementary School      | 19. South Lake Elementary School |
| 7. Facilities Maintenance Depot       |                                  |
| 8. Forest Oak Middle School           |                                  |
| 9. Francis Scott Key Middle School    |                                  |
| 10. Gaithersburg Elementary School    |                                  |
| 11. Gaithersburg Middle School        |                                  |
| 12. Germantown Elementary School      |                                  |
| 13. Greenwood Elementary School       |                                  |
| 14. Jones Lane Elementary School      |                                  |

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	Date	Initials
Radon Test Kits Deployed	12/04/17	JM
Radon Test Kits Collected	12/07/17	JM
Radon Test Kits Shipped to Lab*	12/07/17	JM
Radon Test Kits Received by Lab*	12/11/17	JM

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

Radon test result report for:**TRANSIT 1****NONE**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7978062	TRANSIT 1	2017-11-27 @ 4:00 pm	2017-11-30 @ 4:00 pm	< 0.3	2017-12-04
7975804	TRANSIT 10	2017-11-27 @ 4:00 pm	2017-11-30 @ 4:00 pm	< 0.3	2017-12-04
7977990	TRANSIT 11	2017-11-27 @ 4:00 pm	2017-11-30 @ 4:00 pm	< 0.3	2017-12-04
7978201	TRANSIT 12	2017-11-27 @ 4:00 pm	2017-11-30 @ 4:00 pm	< 0.3	2017-12-04
7978203	TRANSIT 13	2017-11-27 @ 4:00 pm	2017-11-30 @ 4:00 pm	< 0.3	2017-12-04
7978206	TRANSIT 14	2017-11-27 @ 4:00 pm	2017-11-30 @ 4:00 pm	< 0.3	2017-12-05
7978246	TRANSIT 15	2017-11-27 @ 4:00 pm	2017-11-30 @ 4:00 pm	< 0.3	2017-12-05
7978239	TRANSIT 16	2017-11-27 @ 4:00 pm	2017-11-30 @ 4:00 pm	< 0.3	2017-12-05
7978226	TRANSIT 17	2017-11-27 @ 4:00 pm	2017-11-30 @ 4:00 pm	< 0.3	2017-12-05
7975078	TRANSIT 18	2017-11-27 @ 4:00 pm	2017-11-30 @ 4:00 pm	< 0.3	2017-12-05
7975077	TRANSIT 19	2017-11-27 @ 4:00 pm	2017-11-30 @ 4:00 pm	< 0.3	2017-12-05
7978074	TRANSIT 2	2017-11-27 @ 4:00 pm	2017-11-30 @ 4:00 pm	< 0.3	2017-12-04
7975076	TRANSIT 20	2017-11-27 @ 4:00 pm	2017-11-30 @ 4:00 pm	< 0.3	2017-12-04
7975684	TRANSIT 21	2017-11-27 @ 4:00 pm	2017-11-30 @ 4:00 pm	< 0.3	2017-12-04
7975683	TRANSIT 22	2017-11-27 @ 4:00 pm	2017-11-30 @ 4:00 pm	< 0.3	2017-12-04
7975601	TRANSIT 23	2017-11-27 @ 4:00 pm	2017-11-30 @ 4:00 pm	< 0.3	2017-12-04
7978011	TRANSIT 24	2017-11-27 @ 4:00 pm	2017-11-30 @ 4:00 pm	< 0.3	2017-12-04
7978012	TRANSIT 25	2017-11-27 @ 4:00 pm	2017-11-30 @ 4:00 pm	< 0.3	2017-12-04
7978094	TRANSIT 26	2017-11-27 @ 4:00 pm	2017-11-30 @ 4:00 pm	< 0.3	2017-12-05
7975624	TRANSIT 27	2017-11-27 @ 4:00 pm	2017-11-30 @ 4:00 pm	< 0.3	2017-12-05
7834562	TRANSIT 28	2017-11-27 @ 4:00 pm	2017-11-30 @ 4:00 pm	< 0.3	2017-12-05
7977995	TRANSIT 29	2017-11-27 @ 4:00 pm	2017-11-30 @ 4:00 pm	< 0.3	2017-12-05
7978098	TRANSIT 3	2017-11-27 @ 4:00 pm	2017-11-30 @ 4:00 pm	< 0.3	2017-12-04
7977992	TRANSIT 30	2017-11-27 @ 4:00 pm	2017-11-30 @ 4:00 pm	< 0.3	2017-12-04
7978719	TRANSIT 4	2017-11-27 @ 4:00 pm	2017-11-30 @ 4:00 pm	< 0.3	2017-12-05
7978732	TRANSIT 5	2017-11-27 @ 4:00 pm	2017-11-30 @ 4:00 pm	< 0.3	2017-12-04
7978731	TRANSIT 6	2017-11-27 @ 4:00 pm	2017-11-30 @ 4:00 pm	< 0.3	2017-12-04
7975806	TRANSIT 7	2017-11-27 @ 4:00 pm	2017-11-30 @ 4:00 pm	< 0.3	2017-12-04
7975815	TRANSIT 8	2017-11-27 @ 4:00 pm	2017-11-30 @ 4:00 pm	< 0.3	2017-12-04
7975805	TRANSIT 9	2017-11-27 @ 4:00 pm	2017-11-30 @ 4:00 pm	< 0.3	2017-12-04

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December 19, 2017

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

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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).**

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<b>Kit #</b>	<b>Room Id</b>	<b>Started</b>	<b>Ended</b>	<b>pCi/L</b>	<b>Analyzed</b>
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

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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) Char. 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  $\mu$ R/h Elevation = 820 ft



## MCPS RADON TESTING

### Executive Summary: Gaithersburg Middle School

Date of Test Report:	10/19/2016
Round of Testing:	Initial Follow-up Post Remediation
# Rooms Tested:	29
# Rooms $\geq$ 4.0 pCi/L:	0
Low Value:	< 0.3
High Value:	1.7

#### Project Status:

Post remediation testing completed; no further action at this time.



October 19, 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: Gaithersburg Middle School  
2 Teachers Way  
Gaithersburg, MD 20877

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 Gaithersburg Middle School, located at 2 Teachers Way in Gaithersburg, Maryland 20877 (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](http://www.montgomerycountymd.gov/dep/air/radon) or [www.epa.gov/radon](http://www.epa.gov/radon).

KCI visited the site on September 27, 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 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:

<b>Radon Concentration</b>	<b>Room</b>	<b>Result</b>
<b>≥4.0 pCi/L</b>	none	n/a
<b>&lt;4.0 pCi/L</b>	See Attachment B	

Notes:

D- Duplicate sample

The 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 A

## Floor Plan With Test Locations

# ATTACHMENT B

## Radon Test Summary Spreadsheet

<b>Radon Testing Results</b>		
<b>Gaithersburg Middle School</b>		
<b>Test Period: 09/27/16-09/30/16</b>		
<b>Kit Number</b>	<b>Room / Area</b>	<b>Result</b>
7802682	100	< 0.3
7802641	102	0.6
7802226	104	0.5
7802221	105	1.0
7802217	108	0.8
7802214	202	0.8
7802219	301	< 0.3
7802633	303	< 0.3
7802654	601	1.1
7802679	200 CONF	0.7
7802223	200A	1.0
7802210	202A	0.6
7802637	202B	0.5
7802968	603 A	1.4
7802977	603 B	1.7
7802966	603 C	1.6
7802674	GUIDANCE 1	< 0.3
7802673	GUIDANCE 2	0.6
7802681	GUIDANCE 3	< 0.3
7802678	GUIDANCE 4	0.8
7802672	GUIDANCE 5	0.6
7802692	GUIDANCE MAIN	0.5
7802680	ILTA	0.9
7802687	LIBRARY	0.7
7802686	LIBRARY	0.7
7802689	* LIBRARY (Tampered)	< 0.3
7802688	LIBRARY OFFICE A	< 0.3
7802693	LIBRARY OFFICE B	0.5
7802685	LIBRARY OFFICE C	1.0
7802957	SEC/STAFF	0.6
7802642	TEAM 6	< 0.3

Table Note:

\* Missing or Compromised Sample

<b>Radon Testing Results</b>		
<b>Gaithersburg Middle School</b>		
<b>Test Period: 09/27/16-09/30/16</b>		
<b>Kit Number</b>	<b>QC Type</b>	<b>Result</b>
7802216	D (301)	< 0.3
7802683	D (GUIDANCE 2)	0.7
7802691	D (LIBRARY OFFICE A)	< 0.3

Table Note:

\* Missing or Compromised Sample

# ATTACHMENT C

## Laboratory Analytical Results

Radon test result report for:

**GAITHERSBURG MIDDLE SCHOOL  
MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7802682	100	2016-09-27 @ 2:00 pm	2016-09-30 @ 11:00 am	< 0.3	2016-10-03
7802641	102	2016-09-27 @ 2:00 pm	2016-09-30 @ 11:00 am	0.6 ± 0.3	2016-10-03
7802226	104	2016-09-27 @ 2:00 pm	2016-09-30 @ 11:00 am	0.5 ± 0.3	2016-10-03
7802221	105	2016-09-27 @ 2:00 pm	2016-09-30 @ 11:00 am	1.0 ± 0.3	2016-10-03
7802217	108	2016-09-27 @ 2:00 pm	2016-09-30 @ 11:00 am	0.8 ± 0.3	2016-10-03
7802679	200 CONF	2016-09-27 @ 2:00 pm	2016-09-30 @ 11:00 am	0.7 ± 0.3	2016-10-03
7802223	200A	2016-09-27 @ 3:00 pm	2016-09-30 @ 11:00 am	1.0 ± 0.3	2016-10-03
7802214	202	2016-09-27 @ 3:00 pm	2016-09-30 @ 11:00 am	0.8 ± 0.2	2016-10-03
7802210	202A	2016-09-27 @ 3:00 pm	2016-09-30 @ 11:00 am	0.6 ± 0.3	2016-10-03
7802637	202B	2016-09-27 @ 3:00 pm	2016-09-30 @ 11:00 am	0.5 ± 0.3	2016-10-03
7802216	301	2016-09-27 @ 3:00 pm	2016-09-30 @ 11:00 am	< 0.3	2016-10-03
7802219	301	2016-09-27 @ 3:00 pm	2016-09-30 @ 11:00 am	< 0.3	2016-10-03
7802633	303	2016-09-27 @ 3:00 pm	2016-09-30 @ 11:00 am	< 0.3	2016-10-03
7802654	601	2016-09-27 @ 3:00 pm	2016-09-30 @ 11:00 am	1.1 ± 0.3	2016-10-03
7802968	603 A	2016-09-27 @ 3:00 pm	2016-09-30 @ 11:00 am	1.4 ± 0.3	2016-10-03
7802977	603 B	2016-09-27 @ 3:00 pm	2016-09-30 @ 11:00 am	1.7 ± 0.3	2016-10-03
7802966	603 C	2016-09-27 @ 3:00 pm	2016-09-30 @ 11:00 am	1.6 ± 0.3	2016-10-03
7802674	GUIDANCE 1	2016-09-27 @ 2:00 pm	2016-09-30 @ 11:00 am	< 0.3	2016-10-03
7802673	GUIDANCE 2	2016-09-27 @ 2:00 pm	2016-09-30 @ 11:00 am	0.6 ± 0.3	2016-10-03
7802683	GUIDANCE 2	2016-09-27 @ 2:00 pm	2016-09-30 @ 11:00 am	0.7 ± 0.3	2016-10-03
7802681	GUIDANCE 3	2016-09-27 @ 2:00 pm	2016-09-30 @ 11:00 am	< 0.3	2016-10-03
7802678	GUIDANCE 4	2016-09-27 @ 2:00 pm	2016-09-30 @ 11:00 am	0.8 ± 0.3	2016-10-03
7802672	GUIDANCE 5	2016-09-27 @ 2:00 pm	2016-09-30 @ 11:00 am	0.6 ± 0.3	2016-10-03
7802692	GUIDANCE MAIN	2016-09-27 @ 2:00 pm	2016-09-30 @ 11:00 am	0.5 ± 0.2	2016-10-03
7802680	ILTA	2016-09-27 @ 2:00 pm	2016-09-30 @ 11:00 am	0.9 ± 0.3	2016-10-03
7802685	LIB OFF C	2016-09-27 @ 2:00 pm	2016-09-30 @ 11:00 am	1.0 ± 0.3	2016-10-03
7802688	LIB OFF A	2016-09-27 @ 2:00 pm	2016-09-30 @ 11:00 am	< 0.3	2016-10-03
7802691	LIB OFF A	2016-09-27 @ 2:00 pm	2016-09-30 @ 11:00 am	< 0.3	2016-10-03
7802693	LIB OFF B	2016-09-27 @ 2:00 pm	2016-09-30 @ 11:00 am	0.5 ± 0.2	2016-10-03
7802686	LIBRARY	2016-09-27 @ 2:00 pm	2016-09-30 @ 12:00 pm	0.7 ± 0.3	2016-10-03
7802687	LIBRARY	2016-09-27 @ 2:00 pm	2016-09-30 @ 11:00 am	0.7 ± 0.3	2016-10-03
7802689	LIBRARY	2016-09-27 @ 2:00 pm	2016-09-30 @ 12:00 pm	< 0.3	2016-10-03
7802957	SEC/STAFF	2016-09-27 @ 3:00 pm	2016-09-30 @ 11:00 am	0.6 ± 0.2	2016-10-03
7802642	TEAM 6	2016-09-27 @ 2:00 pm	2016-09-30 @ 11:00 am	< 0.3	2016-10-03

October 7, 2016

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

Radon test result report for:

**MCPS Radon**

**Phase 18 Office Blanks**

<b>Kit #</b>	<b>Room Id</b>	<b>Started</b>	<b>Ended</b>	<b>pCi/L</b>	<b>Analyzed</b>
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

Radon test result report for:**MCPS Radon****Phase 18 Transit Blanks**

<b>Kit #</b>	<b>Room Id</b>	<b>Started</b>	<b>Ended</b>	<b>pCi/L</b>	<b>Analyzed</b>
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

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October 12, 2016

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

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Radon test result report for:  
**MCPS Radon  
Spike Sample Results**

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<b>Kit #</b>	<b>Room Id</b>	<b>Started</b>	<b>Ended</b>	<b>pCi/L</b>	<b>Analyzed</b>
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

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

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	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



## Radon Test Kit Chain of Custody

Project Name: MCPS Radon Phase 18

Name of Schools:

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

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	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 GAITHERSBURG MIDDLE SCHOOL

2 Teachers Way, Gaithersburg, Maryland 20877

## EXECUTIVE SUMMARY

Date of Test Report:	4/11/16 Follow-Up
Round of Testing:	Initial <span style="border: 1px solid red; border-radius: 50%; padding: 2px;">Follow-up</span> Post Remediation
# Rooms Tested	17
# Rooms $\geq$ 4.0 pCi/L:	4
Low Value:	0.8
High Value:	5.3
Confirmed Rooms $\geq$ 4.0 pCi/L US EPA Action Level	9

### Summary of Sampling Events $\geq$ 4.0 pCi/L

Room	Result (pCi/L) 2/26/16 Initial	Result (pCi/L) 4/11/16 Follow-Up	Average Result (pCi/L)
Library Office A	11.0	3.6	7.3
ILT B	8.2	2.0 Tampered	5.1
Security	6.6	5.2	5.9
Library Office B	6.3	3.8 Tampered	5.1
ILT A	6.0	2.3 Tampered	4.2
Library	5.2	3.3	4.3
Library	4.3	--- missing	4.3
Library	4.1	Not sampled	4.1
Library Office C	4.9	4.5	4.7
603C	4.3	4.4	4.4
102	4.2	1.1 Open Window	2.7*
603B	4.2	5.3	4.8
Cafeteria	--- Missing	0.8	0.8
Gym	--- Missing	2.6	2.6
Health Rm	--- Missing	0.8	0.8
200	3.7	2.9	3.3
301	3.5	3.0	3.3
601	3.5	3.1	3.3
603A	3.5	3.5	3.5

\* room 102 will be evaluated at the time of mitigation evaluation



### MCPS RADON TESTING

#### Executive Summary: Gaithersburg Middle School

Date of Test Report:	4/11/2016
Round of Testing:	Initial Follow-up Post Remediation
# Rooms Tested:	17
# Rooms $\geq$ 4.0 pCi/L:	4
Low Value:	0.8
High Value:	5.3

Rooms with results  $\geq$  4.0 pCi/L:  
603B (5.3 pCi/L), Security (5.2 pCi/L), Library Office C (4.5 pCi/L), 603C (4.4 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.  
Room 102 needs re-test (open window).



April 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 # 12146341.32

Location: Gaithersburg Middle School  
2 Teachers Way  
Gaithersburg, MD 20877

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 Gaithersburg Middle School, located at 2 Teachers Way in Gaithersburg, Maryland 20877 (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](http://www.montgomerycountymd.gov/dep/air/radon) or [www.epa.gov/radon](http://www.epa.gov/radon).

KCI visited the site on March 15, 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 March 18, 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  $\leq 65^{\circ}$  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:

<b>Radon Concentration</b>	<b>Room</b>	<b>Result</b>
<b><math>\geq 4.0</math> pCi/L</b>	603B	5.3
	Security	5.2
	Library Office C	4.5
	603C	4.4
<b><math>&lt; 4.0</math> pCi/L</b>	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 0.4 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. 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 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 12 testing. Office blanks were not submitted under each school individually.

<b>Radon Testing Results</b>		
<b>Gaithersburg MS</b>		
<b>Test Period: 03/15/16-03/18/16</b>		
<b>Kit Number</b>	<b>Room / Area</b>	<b>Result</b>
3029088	200	2.0
3029098	200	1.6
3029085	200	2.9
3029090	301	3.0
3029097	601	3.1
3029092	* 102 (open window)	1.1
3029099	603A	3.5
3029096	603B	5.3
3029100	603C	4.4
3029094	Cafeteria	0.8
3029073	Gym	1.6
3029089	Gym	2.6
3029093	Health Room	0.8
3029081	* ILT-A (tampered)	2.3
3029071	* ILT-b (tampered)	2.0
3029084	Library	3.3
3029095	* Library (missing)	-
3029080	Library Office A	3.6
3029082	* Library Office B (tampered)	3.8
3029091	Library Office C	4.5
3029087	Security	5.2

Table Note:

\* Missing or Compromised Sample

<b>Radon Testing Results</b>		
<b>Gaithersburg MS</b>		
<b>Test Period: 03/15/16-03/18/16</b>		
<b>Kit Number</b>	<b>QC Type</b>	<b>Result</b>
3029072	D (Cafeteria)	0.9
3029171	FB (301)	<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

Gaithersburg MS  
2 Teachers Way  
Gaithersburg MD 20877

Log Number	Device Number	Test Exposure Duration:	Area Tested	Result (pCi/L)
3017582	3029080	03/15/2016 11:05 am 03/18/2016 7:16 am	Library Office A First Floor	3.6
3017583	3029082	03/15/2016 11:07 am 03/18/2016 7:14 am	Library Office B First Floor	3.8
3017584	3029091	03/15/2016 11:09 am 03/18/2016 7:15 am	Library Office C First Floor	4.5
3017585	3029084	03/15/2016 10:36 am 03/18/2016 7:18 am	Library First Floor	3.3
3017586	3029071	03/15/2016 11:11 am 03/18/2016 7:16 am	ILT-B First Floor	2.0
3017587	3029081	03/15/2016 11:12 am 03/18/2016 7:17 am	ILT-A First Floor	2.3
3017588	3029087	03/15/2016 10:20 am 03/18/2016 6:44 am	Security First Floor	5.2
3017589	3029100	03/15/2016 9:36 am 03/18/2016 6:54 am	603C First Floor	4.4
3017590	3029099	03/15/2016 9:31 am 03/18/2016 6:53 am	603A First Floor	3.5
3017591	3029096	03/15/2016 9:33 am 03/18/2016 6:52 am	603B First Floor	5.3

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

Distributed by: KCI Technologies, Inc.

Date Received: 03/21/2016 Date Logged: 03/21/2016 Date Analyzed: 03/22/2016 Date Reported: 03/23/2016

Report Reviewed By: Christie Bates

Report Approved By: Carolyn D. Koke

Carolyn D. Koke, President, AccuStar Labs

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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

Gaithersburg MS  
2 Teachers Way  
Gaithersburg MD 20877

Log Number	Device Number	Test Exposure Duration:	Area Tested	Result (pCi/L)
3017592	3029094	03/15/2016 10:23 am 03/18/2016 7:06 am	Cafeteria First Floor	0.8
3017593	3029093	03/15/2016 10:28 am 03/18/2016 7:03 am	Health Room First Floor	0.8
3017594	3029092	03/15/2016 9:53 am 03/18/2016 6:35 am	102 First Floor	1.1
3017595	3029098	03/15/2016 10:10 am 03/18/2016 6:41 am	200 First Floor	1.6
3017596	3029088	03/15/2016 10:09 am 03/18/2016 6:43 am	200 First Floor	2.0
3017597	3029090	03/15/2016 10:17 am 03/18/2016 6:47 am	301 First Floor	3.0
3017598	3029171	03/15/2016 10:18 am 03/18/2016 6:47 am	301 First Floor	<0.4
3017599	3029097	03/15/2016 9:22 am 03/18/2016 6:51 am	601 First Floor	3.1
3017600	3029073	03/15/2016 9:38 am 03/18/2016 6:59 am	Gym First Floor	1.6
3017601	3029089	03/15/2016 9:40 am 03/18/2016 6:58 am	Gym First Floor	2.6

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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

Gaithersburg MS  
2 Teachers Way  
Gaithersburg MD 20877

Log Number	Device Number	Test Exposure Duration:	Area Tested	Result (pCi/L)
3017602	3029072	03/15/2016 10:25 am 03/18/2016 7:06 am	Cafeteria First Floor	0.9
3017603	3029085	03/15/2016 10:11 am 03/18/2016 6:39 am	200 First Floor	2.9

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

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Date Received: 03/21/2016 Date Logged: 03/21/2016 Date Analyzed: 03/22/2016 Date Reported: 03/23/2016

Report Reviewed By: Christie Bates

Report Approved By: Carolyn D. Koke

Carolyn D. Koke, President, AccuStar Labs

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**Radon Device Type Open Face Canister**

**Send Written Report To:**

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

**Site Tested:**

Site Name Cruthersburg MS  
 Address 2 Teachers Way  
 City / Town  
 State/Province Postal Code MD 26877  
 Test Country Montgomery County  
 Project Number 12146341

**Contact Information:**

Contact Telephone Tehsin Aurangabadwala  
 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
	9095			1	Library	60°	3/15/16	10:38	3/18/16	Missing	
	9094			1	Cafeteria			10:23		07:06	
	9093			1	Health room			10:28		07:03	
	9092		102	1				09:53		06:35	
	9098		200	1				10:10		06:41	
	9088		200	1				10:09		06:43	
	9090		301	1				10:17		06:47	
	9171		301	1				10:18		06:47	
	9097		601	1				09:22		06:51	
	9073			1	Gym			09:38		06:59	

**Radon Device Type Open Face Canister**

**Send Written Report To:**

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

**Site Tested:**

Site Name: Gaithersburg MS  
 Address: 2 Teachers' Way  
 Address: [Blank]  
 City / Town: Gaithersburg  
 State/Province Postal Code: MD 20877  
 Test Country: Montgomery County  
 Project Number: 12146341

**Contact Information:**

Contact: Tehsin Aurangabadwala  
 Telephone: 410-891-1726  
 Technician: [Blank]  
 Cert. Number: [Blank]  
 Signature: [Blank]

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
	9089			1	Gym	60°	3/15/16	09:40	3/18/16	06:58	
	9072			1	Cafeteria			10:35		07:06	
	9085		250	1				10:11		06:39	

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 Radon Phase 12 Office Blank

Log Number	Device Number	Test Exposure Duration:	Area Tested	Result (pCi/L)
3017546	3029151	03/14/2016 9:30 am 03/17/2016 9:30 am	Unit # 0 Office First Floor	<0.4

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

Distributed by: KCI Technologies, Inc.

Date Received: 03/21/2016 Date Logged: 03/21/2016 Date Analyzed: 03/21/2016 Date Reported: 03/22/2016

Report Reviewed By: Grace Heubling

Report Approved By: Carolyn D. Koke

Carolyn D. Koke, President, AccuStar Labs

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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

MCPS Radon Phase 12 Office Blank

Log Number	Device Number	Test Exposure Duration:	Area Tested	Result (pCi/L)
3017545	3029152	03/15/2016 9:30 am 03/18/2016 9:30 am	Unit # 0 Office First Floor	<0.4

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

Distributed by: KCI Technologies, Inc.

Date Received: 03/21/2016 Date Logged: 03/21/2016 Date Analyzed: 03/21/2016 Date Reported: 03/22/2016

Report Reviewed By: Grace Heubling

Report Approved By: Carolyn D. Koke

Carolyn D. Koke, President, AccuStar Labs

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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:

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

Carolyn D. Koke, President, AccuStar Labs

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**Return canisters for analysis to:**  
**AccuStar Labs**  
**929 Mt. Zion Rd., Lebanon, PA 17046**  
**800-523-4964**

**AccuStar Labs - Lebanon, PA**  
**INFORMATION FORM - Large Buildings -**  
**Projects - Apartments**

**Instructions on back of form**  
**Read instructions carefully**  
**Discrepancies will invalidate tests**

**Test Site Info**

Name of Building/Project or Owner: Transit County: \_\_\_\_\_  
 Site Address: Transit State: \_\_\_\_\_ Zip: \_\_\_\_\_  
 City: \_\_\_\_\_ Email: \_\_\_\_\_

Projects Contact Name: Don Coale Phone: \_\_\_\_\_

Detector Serial#	ROOM NAME & NUMBER - LOCATION OF DETECTOR IN ROOM (indicate duplicates and blanks)	Floor	Start Date	Start Time Include AM/PM	Stop Date	Stop Time Include AM/PM
3028953	Transit	1	1/19/16	approx: 09pm	1/22/16	9:30am
8955	Transit	1	1/19/16	↓	↓	↓
8954	Transit	1	1/19/16	↓	↓	↓
8997	Transit	1	1/19/16	↓	↓	↓

Do not use this form in New Jersey or Florida Call for correct forms.

LAB USE ONLY	
Wgt. Gain	pCi/L
	<0.4
	<0.4
	<0.4
	<0.4

Multi-Page Report Y-N

1/27/2016

KCI Technologies, Inc.  
 3010588 3028953 ACPC275B EXP12/31/2018

Both Placed by and Retrieved by signatures are required  
 Canisters placed by \_\_\_\_\_ # \_\_\_\_\_

Canisters retrieved by \_\_\_\_\_ # \_\_\_\_\_  
 Owner waives confidentiality by signing here \_\_\_\_\_ Date 1/22/16

Were general operating conditions maintained?	Yes - No	explain if NO
Were closed building conditions maintained?	Yes - No	explain if NO
Normal Temp.	Yes - No	
Normal Humidity	Yes - No	
Windy Y-N	Rainy Y-N	

Send Results To: \_\_\_\_\_  
 Company Name: KCI Tech  
 Address: 936 Ridgebrook  
 City: Sparks State: MD Zip: 21152  
 Phone: 410-599-3826  
 EMAIL Results to: James.Mouldale@kci.com

Make sure information is complete and correct.  
 If a recalculation is requested there is a \$10.00 recalc fee PER Canister.

Mailing: PO Box 990 Jonestown, PA 17038  
 Shipping: 929 Mt Zion Road, Lebanon, PA 17046  
 800-523-4964 fax 717-274-5662  
 NEHA 10511AL NRSB ARL 0007

# TCS INDUSTRIES, INC.

(717) 657-7032

RADON GAS DETECTION

www.radondetek.com

4326 Crestview Road, Harrisburg, PA 17112

James Mouldale  
KCI  
936 Ridgebrook Rd.  
Sparks, MD 21152

April 04, 2016

Dear Mr. Mouldale:

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

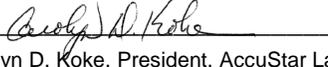
**Comment:** A copy of this report was emailed to james.moulsdale@kci.com.

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

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### MCPS RADON TESTING

#### Executive Summary: Gaithersburg Middle School

Date of Test Report:	2/26/2016
Round of Testing:	Initial Follow-up Post Remediation
# Rooms Tested:	98
# Rooms $\geq$ 4.0 pCi/L:	10
Low Value:	< 0.3
High Value:	11

#### Rooms with results $\geq$ 4.0 pCi/L:

Library Office A (11.0 pCi/L), ILT B (8.2 pCi/L), Security (6.6 pCi/L), Library Office B (6.3 pCi/L), ILT A (6.0 pCi/L), Library (5.2 pCi/L, 4.3 pCi/L, 4.1 pCi/L), Library Office C (4.9 pCi/L), Room 603C (4.3 pCi/L), Room 102 (4.2 pCi/L), Room 603B (4.2 pCi/L),

#### Project Status:

Initial testing completed; re-test needed for results  $\geq$  4.0 pCi/L.  
Initial testing completed; missing or compromised samples need re-test.



February 26, 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 # 12146341.25

Location: Gaithersburg Middle School  
2 Teachers Way  
Gaithersburg, MD 20877

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 Gaithersburg Middle School, located at 2 Teachers Way in Gaithersburg, Maryland 20877 (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](http://www.montgomerycountymd.gov/dep/air/radon) or [www.epa.gov/radon](http://www.epa.gov/radon).

KCI visited the site on January 19, 2016 and deployed one hundred twenty-two (122) activated charcoal (AC) radon test kits. KCI deployed radon test kits in frequently-occupied ground contact rooms, and other areas, (if applicable) in accordance with AARST guidance. A floor plan map of the building with the test locations is included as Attachment A of this report.

As a quality control measure, KCI included duplicate samples, field blanks, lab transit blanks, and office blanks in accordance with AARST recommendations. In addition, KCI submitted six (6) test kits to Bowser-Morner, Inc. as spike samples. The spiked tests were exposed to a known radon concentration by Bowser-Morner prior to being returned to the laboratory for analysis.

KCI returned to the site on January 22, 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:

<b>Radon Concentration</b>	<b>Room</b>	<b>Result</b>
<b><math>\geq 4.0</math> pCi/L</b>	Library Office A	11.0
	ILT B	8.2
	Security	6.6
	Library Office C	6.3
	ILT A	6.0, 4.3 (D)
	Library	5.2, 4.3, 4.1
	Library Office C	4.9
	603C	4.3
	102	4.2
603B	4.2	
<b><math>&lt; 4.0</math> pCi/L</b>	<b>See Attachment B</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 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

<b>Radon Testing Results</b>		
<b>Gaithersburg Middle School</b>		
<b>Test Period: 01/19/16-01/22/16</b>		
<b>Kit Number</b>	<b>Room / Area</b>	<b>Result</b>
7721891	100	2.0
7721894	101	2.0
7718180	102	4.2
7721885	103	2.2
7718162	105	1.8
7718175	107	1.3
7718176	108	2.3
7718174	109	0.9
7718165	111	0.6
7718185	114	1.4
7718043	200	3.7
7718167	200	2.2
7718168	200	2.9
7718045	202	2.5
7718112	202	1.9
7718111	203	0.6
7718101	204	0.6
7718113	205	1.8
7718160	205	2.5
7718104	205	1.8
7718103	205	2.1
7718102	205	2.1
7718105	205	2.1
7718177	205	1.9
7718178	205	2.4
7718181	205	2.5
7718072	300	1.4
7718110	301	3.5
7718044	302	2.7
7718054	303	2.0
7718042	304	2.1
7718052	305	1.9
7718051	307	1.6
7718055	309	1.6
7718048	311	2.4
7718166	400	1.1
7718173	401	1.2
7718083	402	1.4
7718068	403	1.2
7718047	404	1.1
7718084	405	1.4
7718109	501	1.3
7718050	505	1.3
7718172	507	1.8
7718182	601	3.5
7718189	603	3.5

Table Note:

\* Missing or Compromised Sample

<b>Radon Testing Results</b>		
<b>Gaithersburg Middle School</b>		
<b>Test Period: 01/19/16-01/22/16</b>		
<b>Kit Number</b>	<b>Room / Area</b>	<b>Result</b>
7721883	700	2.2
7721897	701	0.7
7721886	702	2.3
7721888	703	3.2
7721889	704	2.1
7717629	800	1.9
7721887	801	1.8
7716627	802	1.5
7717632	803	1.7
7716624	805	1.5
7718046	6 TEAM RM	2.4
7718041	603 - B	4.2
7718197	603 - C	4.3
7721876	ASST PRINCIPAL	2.7
7721879	ASST PRINCIPAL	1.9
7721893	BLDG SERV	1.9
7718108	BRIDGE	1.3
7718049	BRIDGE OFF	1.2
7718082	BRIDGE OFF	< 0.3
7718094	BRIDGE OFF	1.0
7718171	BRIDGE OFF	1.0
7718164	BUILD SERV	1.5
7721882	CAFATERIA	1.4
7721895	CAFATERIA	1.2
7721875	* CAFATERIA (missing)	-
7721877	CONFERENCE RM	1.8
7721890	FACULTY DINING	0.8
7721857	GUIDANCE	2.1
7721862	GUIDANCE	2.5
7721865	GUIDANCE	1.5
7721867	GUIDANCE	2.3
7721869	GUIDANCE	1.9
7718183	GYM	2.1
7718184	GYM	2.3
7718195	GYM	2.2
7718194	* GYM (missing)	-
7718193	GYM OFF 2	0.9
7718188	GYM OFFICE 1	0.6
7721898	HEALTH RM	1.8
7718069	* HEALTH RM (missing)	0.0
7721874	ILT - A	6.0
7721892	ILT- B	8.2
7721872	LIBRARY	4.1
7721880	LIBRARY	5.2
7721884	LIBRARY	4.3
7721881	LIBRARY OFF - A	11.0
7721896	LIBRARY OFF -B	6.3
7718272	LIBRARY OFF -C	4.9
7718097	LOWER GYM	2.3
7718187	LOWER GYM	2.1

Table Note:

\* Missing or Compromised Sample

<b>Radon Testing Results</b>		
<b>Gaithersburg Middle School</b>		
<b>Test Period: 01/19/16-01/22/16</b>		
<b>Kit Number</b>	<b>Room / Area</b>	<b>Result</b>
7721871	MAIN OFF	1.8
7721878	PA RM	1.7
7721866	PRINCIPAL	2.0
7718179	RESOURCE RM	2.5
7721858	SEC OFF	1.2
7721861	SEC OFF	2.3
7718161	SECURITY	6.6
7721870	TEACHERS LG	2.7
7718088	TEACHERS LOUNGE	1.3
7718169	UPPER GYM	1.1
7718191	UPPER GYM	1.1

Table Note:

\* Missing or Compromised Sample

<b>Radon Testing Results</b>		
<b>Gaithersburg Middle School</b>		
<b>Test Period: 01/19/16-01/22/16</b>		
<b>Kit Number</b>	<b>QC Type</b>	<b>Result</b>
7718107	D (202)	1.9
7718106	D (205)	2.3
7718003	D (302)	2.6
7718163	D (403)	1.2
7718056	D (501)	1.3
7718190	D (601)	2.9
7721899	D (CAFATERIA)	1.4
7721868	D (GUIDANCE)	1.5
7718186	D (GYM)	2.2
7721873	D (ILT -A)	4.3
7718076	FB (100)	< 0.3
7718087	FB (403)	< 0.3
7718199	FB (GYM)	< 0.3
7727125	OB (0)	< 0.3
7727127	OB (0)	< 0.3

Table Note:

\* Missing or Compromised Sample

# ATTACHMENT C

## Laboratory Analytical Results

February 11, 2016  
**LABORATORY ANALYSIS REPORT \*\***

Radon test result report for:  
**GAITHERSBURG MIDDLE SCHOOL  
MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7727125	0	2016-01-19 @ 4:00 pm	2016-01-22 @ 12:00 pm	< 0.3	2016-01-26
7727127	0	2016-01-19 @ 4:00 pm	2016-01-22 @ 12:00 pm	< 0.3	2016-01-26
7718076	100	2016-01-19 @ 9:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7721891	100	2016-01-19 @ 9:00 am	2016-01-22 @ 7:00 am	2.0 ± 0.3	2016-01-26
7721894	101	2016-01-19 @ 9:00 am	2016-01-22 @ 7:00 am	2.0 ± 0.3	2016-01-26
7718180	102	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	4.2 ± 0.6	2016-01-27
7721885	103	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	2.2 ± 0.4	2016-01-26
7718162	105	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	1.8 ± 0.4	2016-01-27
7718175	107	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	1.3 ± 0.4	2016-01-26
7718176	108	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	2.3 ± 0.5	2016-01-27
7718174	109	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	0.9 ± 0.3	2016-01-27
7718165	111	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	0.6 ± 0.3	2016-01-26
7718185	114	2016-01-19 @ 11:00 am	2016-01-22 @ 9:00 am	1.4 ± 0.4	2016-01-27
7718168	200	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	2.9 ± 0.5	2016-01-26
7718043	200	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	3.7 ± 0.5	2016-01-27
7718167	200	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	2.2 ± 0.5	2016-01-27
7718107	202	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	1.9 ± 0.3	2016-01-26
7718112	202	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	1.9 ± 0.4	2016-01-26
7718045	202	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	2.5 ± 0.5	2016-01-26
7718111	203	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	0.6 ± 0.3	2016-01-26
7718101	204	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	0.6 ± 0.3	2016-01-26
7718105	205	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	2.1 ± 0.4	2016-01-27
7718106	205	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	2.3 ± 0.5	2016-01-27
7718113	205	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	1.8 ± 0.4	2016-01-27
7718160	205	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	2.5 ± 0.5	2016-01-27
7718177	205	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	1.9 ± 0.4	2016-01-27
7718178	205	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	2.4 ± 0.4	2016-01-27
7718181	205	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	2.5 ± 0.5	2016-01-27
7718102	205	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	2.1 ± 0.4	2016-01-27
7718103	205	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	2.1 ± 0.4	2016-01-27
7718104	205	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	1.8 ± 0.4	2016-01-27
7718072	300	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	1.4 ± 0.4	2016-01-27
7718110	301	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	3.5 ± 0.5	2016-01-27
7718003	302	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	2.6 ± 0.5	2016-01-27
7718044	302	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	2.7 ± 0.5	2016-01-27
7718054	303	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	2.0 ± 0.4	2016-01-27
7718042	304	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	2.1 ± 0.4	2016-01-27

February 11, 2016  
**LABORATORY ANALYSIS REPORT \*\***

Radon test result report for:  
**GAITHERSBURG MIDDLE SCHOOL  
 MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7718052	305	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	1.9 ± 0.4	2016-01-27
7718051	307	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	1.6 ± 0.4	2016-01-27
7718055	309	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	1.6 ± 0.4	2016-01-27
7718048	311	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	2.4 ± 0.4	2016-01-26
7718166	400	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	1.1 ± 0.3	2016-01-26
7718173	401	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	1.2 ± 0.4	2016-01-27
7718083	402	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	1.4 ± 0.4	2016-01-27
7718068	403	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	1.2 ± 0.3	2016-01-26
7718087	403	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7718163	403	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	1.2 ± 0.4	2016-01-27
7718047	404	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	1.1 ± 0.4	2016-01-27
7718084	405	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	1.4 ± 0.4	2016-01-27
7718109	501	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	1.3 ± 0.3	2016-01-26
7718056	501	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	1.3 ± 0.4	2016-01-27
7718050	505	2016-01-19 @ 10:00 am	2016-01-22 @ 9:00 am	1.3 ± 0.4	2016-01-27
7718172	507	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	1.8 ± 0.4	2016-01-27
7718046	6 TEAM RM	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	2.4 ± 0.4	2016-01-26
7718190	601	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	2.9 ± 0.4	2016-01-26
7718182	601	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	3.5 ± 0.5	2016-01-27
7718197	603 C	2016-01-19 @ 11:00 am	2016-01-22 @ 8:00 am	4.3 ± 0.6	2016-01-27
7718041	603 B	2016-01-19 @ 11:00 am	2016-01-22 @ 8:00 am	4.2 ± 0.6	2016-01-27
7718189	603 A	2016-01-19 @ 11:00 am	2016-01-22 @ 8:00 am	3.5 ± 0.5	2016-01-27
7721883	700	2016-01-19 @ 11:00 am	2016-01-22 @ 8:00 am	2.2 ± 0.4	2016-01-27
7721897	701	2016-01-19 @ 11:00 am	2016-01-22 @ 9:00 am	0.7 ± 0.3	2016-01-26
7721886	702	2016-01-19 @ 11:00 am	2016-01-22 @ 8:00 am	2.3 ± 0.5	2016-01-27
7721888	703	2016-01-19 @ 11:00 am	2016-01-22 @ 8:00 am	3.2 ± 0.5	2016-01-27
7721889	704	2016-01-19 @ 11:00 am	2016-01-22 @ 8:00 am	2.1 ± 0.4	2016-01-27
7717629	800	2016-01-19 @ 11:00 am	2016-01-22 @ 8:00 am	1.9 ± 0.4	2016-01-27
7721887	801	2016-01-19 @ 11:00 am	2016-01-22 @ 9:00 am	1.8 ± 0.4	2016-01-27
7716627	802	2016-01-19 @ 11:00 am	2016-01-22 @ 8:00 am	1.5 ± 0.4	2016-01-27
7717632	803	2016-01-19 @ 11:00 am	2016-01-22 @ 8:00 am	1.7 ± 0.4	2016-01-27
7716624	805	2016-01-19 @ 11:00 am	2016-01-22 @ 8:00 am	1.5 ± 0.3	2016-01-26
7721876	ASST PRINCIPAL	2016-01-19 @ 9:00 am	2016-01-22 @ 7:00 am	2.7 ± 0.5	2016-01-27
7721879	ASST PRINCIPAL	2016-01-19 @ 9:00 am	2016-01-22 @ 7:00 am	1.9 ± 0.4	2016-01-27
7721893	BLDG SERV	2016-01-19 @ 9:00 am	2016-01-22 @ 7:00 am	1.9 ± 0.4	2016-01-26
7718108	BRIDGE	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	1.3 ± 0.4	2016-01-27
7718171	BRIDGE OFF	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	1.0 ± 0.3	2016-01-26

February 11, 2016  
**LABORATORY ANALYSIS REPORT \*\***

Radon test result report for:  
**GAITHERSBURG MIDDLE SCHOOL  
 MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7718082	BRIDGE OFF	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7718049	BRIDGE OFF	2016-01-19 @ 10:00 am	2016-01-22 @ 9:00 am	1.2 ± 0.4	2016-01-27
7718094	BRIDGE OFF	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	1.0 ± 0.3	2016-01-27
7718164	BUILD SERV	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	1.5 ± 0.4	2016-01-27
7721875	CAFATERIA	@	@		
7721895	CAFATERIA	2016-01-19 @ 9:00 am	2016-01-22 @ 7:00 am	1.2 ± 0.3	2016-01-26
7721899	CAFATERIA	2016-01-19 @ 9:00 am	2016-01-22 @ 7:00 am	1.4 ± 0.4	2016-01-27
7721882	CAFATERIA	2016-01-19 @ 9:00 am	2016-01-22 @ 7:00 am	1.4 ± 0.4	2016-01-27
7721877	CONFERENCE RM	2016-01-19 @ 9:00 am	2016-01-22 @ 7:00 am	1.8 ± 0.3	2016-01-26
7721890	FACULTY DINING	2016-01-19 @ 9:00 am	2016-01-22 @ 7:00 am	0.8 ± 0.3	2016-01-26
7721857	GUIDANCE	2016-01-19 @ 9:00 am	2016-01-22 @ 7:00 am	2.1 ± 0.4	2016-01-26
7721862	GUIDANCE	2016-01-19 @ 9:00 am	2016-01-22 @ 7:00 am	2.5 ± 0.5	2016-01-27
7721865	GUIDANCE	2016-01-19 @ 9:00 am	2016-01-22 @ 9:00 am	1.5 ± 0.4	2016-01-27
7721867	GUIDANCE	2016-01-19 @ 9:00 am	2016-01-22 @ 7:00 am	2.3 ± 0.4	2016-01-27
7721868	GUIDANCE	2016-01-19 @ 9:00 am	2016-01-22 @ 9:00 am	1.5 ± 0.4	2016-01-27
7721869	GUIDEANCE	2016-01-19 @ 9:00 am	2016-01-22 @ 7:00 am	1.9 ± 0.4	2016-01-27
7718194	GYM	@	@		
7718195	GYM	2016-01-19 @ 11:00 am	2016-01-22 @ 8:00 am	2.2 ± 0.3	2016-01-26
7718184	GYM	2016-01-19 @ 11:00 am	2016-01-22 @ 8:00 am	2.3 ± 0.4	2016-01-26
7718199	GYM	2016-01-19 @ 11:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7718183	GYM	2016-01-19 @ 11:00 am	2016-01-22 @ 8:00 am	2.1 ± 0.4	2016-01-27
7718186	GYM	2016-01-19 @ 11:00 am	2016-01-22 @ 8:00 am	2.2 ± 0.4	2016-01-27
7718193	GYM OFF 2	2016-01-19 @ 11:00 am	2016-01-22 @ 8:00 am	0.9 ± 0.3	2016-01-27
7718188	GYM OFFICE 1	2016-01-19 @ 11:00 am	2016-01-22 @ 8:00 am	0.6 ± 0.3	2016-01-26
7718069	HEALTH RM	@	@		
7721898	HEALTH RM	2016-01-19 @ 9:00 am	2016-01-22 @ 7:00 am	1.8 ± 0.4	2016-01-26
7721874	ILT A	2016-01-19 @ 9:00 am	2016-01-22 @ 7:00 am	6.0 ± 0.6	2016-01-26
7721892	ILT B	2016-01-19 @ 9:00 am	2016-01-22 @ 7:00 am	8.2 ± 0.7	2016-01-26
7721873	ILT A	2016-01-19 @ 9:00 am	2016-01-22 @ 7:00 am	4.3 ± 0.6	2016-01-27
7721872	LIBRARY	2016-01-19 @ 9:00 am	2016-01-22 @ 7:00 am	4.1 ± 0.5	2016-01-26
7721880	LIBRARY	2016-01-19 @ 9:00 am	2016-01-22 @ 7:00 am	5.2 ± 0.6	2016-01-26
7721884	LIBRARY	2016-01-19 @ 9:00 am	2016-01-22 @ 7:00 am	4.3 ± 0.5	2016-01-26
7721881	LIBRARY OFF A	2016-01-19 @ 9:00 am	2016-01-22 @ 7:00 am	11.0 ± 0.9	2016-01-26
7721896	LIBRARY OFF B	2016-01-19 @ 9:00 am	2016-01-22 @ 7:00 am	6.3 ± 0.6	2016-01-26
7718272	LIBRAY OFF C	2016-01-19 @ 9:00 am	2016-01-22 @ 7:00 am	4.9 ± 0.6	2016-01-26
7718187	LOWER GYM	2016-01-19 @ 11:00 am	2016-01-22 @ 8:00 am	2.1 ± 0.4	2016-01-26
7718097	LOWER GYM	2016-01-19 @ 11:00 am	2016-01-22 @ 8:00 am	2.3 ± 0.4	2016-01-26

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February 11, 2016  
**\*\*LABORATORY ANALYSIS REPORT\*\***

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Radon test result report for:  
**GAITHERSBURG MIDDLE SCHOOL  
MAIN**

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<b>Kit #</b>	<b>Room Id</b>	<b>Started</b>	<b>Ended</b>	<b>pCi/L</b>	<b>Analyzed</b>
7721871	MAIN OFF	2016-01-19 @ 9:00 am	2016-01-22 @ 7:00 am	1.8 ± 0.4	2016-01-26
7721878	PA RM	2016-01-19 @ 9:00 am	2016-01-22 @ 7:00 am	1.7 ± 0.4	2016-01-27
7721866	PRINCIPAL	2016-01-19 @ 9:00 am	2016-01-22 @ 7:00 am	2.0 ± 0.4	2016-01-27
7718179	RESOURCE RM	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	2.5 ± 0.5	2016-01-27
7721858	SEC OFF	2016-01-19 @ 9:00 am	2016-01-22 @ 7:00 am	1.2 ± 0.4	2016-01-27
7721861	SEC OFF	2016-01-19 @ 9:00 am	2016-01-22 @ 7:00 am	2.3 ± 0.4	2016-01-27
7718161	SECURITY	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	6.6 ± 0.7	2016-01-27
7721870	TEACHERS LG	2016-01-19 @ 9:00 am	2016-01-22 @ 7:00 am	2.7 ± 0.4	2016-01-27
7718088	TEACHERS LOUNGE	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	1.3 ± 0.4	2016-01-27
7718169	UPPER GYM	2016-01-19 @ 11:00 am	2016-01-22 @ 8:00 am	1.1 ± 0.4	2016-01-27
7718191	UPPER GYM	2016-01-19 @ 11:00 am	2016-01-22 @ 8:00 am	1.1 ± 0.4	2016-01-27

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February 2, 2016  
**LABORATORY ANALYSIS REPORT**

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

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

February  
15,  
2016

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

Spike Sample Laboratory Results

Radon test result report for:  
**MCPS**

<b>Kit #</b>	<b>Room Id</b>	<b>Started</b>	<b>Ended</b>	<b>pCi/L</b>	<b>Analyzed</b>
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 \_\_\_\_\_

ε3 Left

Date Start: \_\_\_\_\_ Date Stop: \_\_\_\_\_ Date Start: \_\_\_\_\_ Date Stop: \_\_\_\_\_

Time Start: \_\_\_\_\_ Time Stop: \_\_\_\_\_ Time Start: \_\_\_\_\_ Time Stop: \_\_\_\_\_

Device No.'s: \_\_\_\_\_ Device No.'s: \_\_\_\_\_

Date Start: \_\_\_\_\_ Date Stop: \_\_\_\_\_ Date Start: \_\_\_\_\_ Date Stop: \_\_\_\_\_

Time Start: \_\_\_\_\_ Time Stop: \_\_\_\_\_ Time Start: \_\_\_\_\_ Time Stop: \_\_\_\_\_

Device No.'s: \_\_\_\_\_ Device No.'s: \_\_\_\_\_

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



### Chain of Custody

Project Name: MCPS Radon Phase VI

Name of Schools:

- |                          |                              |                           |
|--------------------------|------------------------------|---------------------------|
| 1. Francis Scott Key MS  | 12. Little Bennett ES        | 23. Rolling Terrace ES    |
| 2. Gaithersburg ES       | 13. Loiderman MS             | 24. Roscoe Nix ES         |
| 3. Gaithersburg MS       | 14. Longview ES              | 25. Sally K. Ride ES      |
| 4. Galway ES             | 15. Meadow Hall ES           | 26. Spark Matsunaga ES    |
| 5. Great Seneca Creek ES | 16. Neelsville MS            | 27. Tacoma Park ES        |
| 6. Harmony Hills ES      | 17. New Hampshire Estates ES | 28. Thomas Pyle MS        |
| 7. John Poole MS         | 18. North Bethesda MS        | 29. Wayside ES            |
| 8. Judith A. Resnik ES   | 19. Northwest HS             | 30. Westbrook ES (retest) |
| 9. Kemp Mill ES          | 20. Pine Crest ES            | 31. Westland MS (retest)  |
| 10. Kingsview MS         | 21. Radnor Center            | 32. William B. Gibbs ES   |
| 11. Lakelands Park MS    | 22. Ritchie Park ES          | 33. William Tyler Page ES |

	Date	Initials
Radon Test Kits Deployed	1/19/16	JM
Radon Test Kits Sampled	1/22/16	JM
Radon Test Kits Shipped to Lab*	1/22/16	JM
Radon Test Kits Received by Lab*	1/26/16	JM

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