

School Year: **24-25**

Facility:	Wheaton High School		
Address:	12401 Dalewood Drive		
	Silver Spring, MD 20906		
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 type="checkbox"/> Initial Testing -or- <input checked="" type="checkbox"/> Follow-up Testing		
Testing Status:	<input checked="" type="checkbox"/> No Further Testing Needed -or- <input type="checkbox"/> Follow-Up Testing Required		

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

Mitigation -	Facility Radon Status:		
<input 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	101	Lowest Value (pCi/L)	< 0.3
Number of Rooms ( $\geq 4.0$ -pCi/L)	0	Highest Value (pCi/L)	1.1

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

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

- Testing Results – lab/detector Identification, by room number/name (alpha-numeric order) as depicted on facility map/floor plan provided by the facility/school at the time of test device deployment;
- Summary Results – list of rooms by test result  $\geq 2.0$ -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 checked="" type="checkbox"/> Charcoal Absorption (CAD) <input type="checkbox"/> Alpha Track (ATD) <input type="checkbox"/> Other
	<input type="checkbox"/> Continuous	<input type="checkbox"/> Electret ion Chamber (EIC) <input type="checkbox"/> Electronic Integration (EID)
Other—Specify here:		
Detector/Device Name:	Air Chek – Radon Test Kits	
Manufacturer:	Radon Lab	
Person(s) Deploying or Retrieving Test Devices and certification number		Organization/Company
Shannon King		KCI Technologies, Inc.
Brittany Maas		KCI Technologies, Inc.
<i>If noncertified individuals, the qualified measurement professional providing oversight -</i>		
Tyler McCleaf, CSP – Cert. # 111004-RMP		KCI Technologies, Inc.

**Testing**

<input checked="" type="checkbox"/> Short-Term	Length of Test (days):	3	Date of Deployment and Retrieval (mm/dd/yy):	02/10/25	03/25/25
<input type="checkbox"/> Long-Term				02/13/25	03/28/25
Does the test period include weekends, school breaks or holidays?				<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
<i>If “Yes” please explain/detail in the space below:</i>					
Was HVAC operating under occupied conditions?				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
<i>If “No” please explain/detail in the space below:</i>					

**Testing** (continued)

Round of Testing	Detectors Deployed				
	Ground-Contact		Upper-Level(s)		Total
	Initial	Follow-Up	Initial	Follow-Up	
Test Locations <sup>1</sup>	88	2	12	0	102
Duplicates <sup>2</sup>	10	1	2	0	13
Field Blanks <sup>3</sup>	5	1	1	0	7
Grand Total					122

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	1	1
Office Blanks <sup>3, 4</sup>	1	1	1
			14

1 - 3% of EIC detectors; and 3% from each LOT of CAD and ATD detectors; a maximum of 6-spiked measurements per month for both EIC detectors and each LOT of CAD and ATD detectors.

2 – One per shipping container from start of detector deployment

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

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

**Quality Assurance / Quality Control** (continued)

Spike Sample Lab Results. Measured values are satisfactory, i.e., within $\pm 25\%$ of the chamber's reference value?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Quality Control measurements comply with QA/QC requirements in the submitted testing organization's/company's QA plan?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<b>Round of Testing</b>	<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"/> No <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
For all Duplicate Samples <sup>1</sup> , the higher value is $\leq 2x$ the lower value?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
For all Duplicate Samples <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"/> No <input checked="" type="checkbox"/> Yes <input 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"/> No <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

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

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

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

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

Average concentration of the two duplicate test results	Warning Level	Control Level
< 2.0-pCi/L	1-pCi/L	Not applicable
Between 2.0 and 3.9-pCi/L	50% RPD	67% RPD
$\geq 4.0$ -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:	88	1	12	0	101
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:	0	0	0	0	0
Number of locations $\geq 2.0$ and $< 2.7$ -pCi/L:	0	0	0	0	0
Number of missing required test locations <sup>3</sup> :	2	0	1	0	3
Number of failed duplicate control locations:	1	0	0	0	1
Percentage of missing test locations for the facility <sup>4,5</sup> :	2.27%	0	8.30%	0	2.97%

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 checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Were valid measurements obtained in all occupied and intended to be occupied rooms in contact with the ground, and, if applicable, 10% of upper floor rooms?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<i>If Yes to both above – then Testing Status – ‘No Further Testing Needed’ mark ‘NA’ below and complete Conclusions section</i>		
<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> <b><i>If Yes, then - ‘No Further Testing Needed’ complete Conclusion section on first page.</i></b> <b><i>If No, then - ‘Follow-up Testing Required’ continue below.</i></b>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA

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

## Follow-Up Testing

### Required –

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

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

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

# **Attachment 1:**

## **Summary Data Tables**

Table 1- Radon Testing Results		
Wheaton High School		
Test Period: 2/10/2025 - 2/13/2025		
Kit Number	Room / Area	Result
11951139	1001	< 0.3
11931576	1002	< 0.3
11931571	1003	< 0.3
11931580	1003	< 0.3
11931581	1005	< 0.3
11931566	1007	< 0.3
11931567	1007	< 0.3
11931574	1008	< 0.3
11931582	1009	< 0.3
11951119	1104	< 0.3
11951133	1107	< 0.3
11951129	1115	< 0.3
11951117	1201	< 0.3
11951110	1204	< 0.3
11951104	1205	< 0.3
11951102	1206	< 0.3
11951103	1209	< 0.3
11951107	1210	< 0.3
11951116	1211	< 0.3
11951114	1215	< 0.3
11951115	1215	< 0.3
11951108	1219	< 0.3
11951109	1219	< 0.3
11931585	1301	< 0.3
11931578	1305	< 0.3
11951101	1307	< 0.3
11951106	1313	< 0.3
11951105	1315	< 0.3
11931594	1400	< 0.3
11931595	1400	< 0.3
11931570	1413	< 0.3
11931593	1413	< 0.3
11931579	1600	< 0.3
11931587	1701	< 0.3
11931588	1702	< 0.3
11931589	1706	< 0.3
11931590	1707	< 0.3

Table 1- Radon Testing Results		
Wheaton High School		
Test Period: 2/10/2025 - 2/13/2025		
Kit Number	Room / Area	Result
11931591	1709	0.7
11931597	1709	< 0.3
11931596	1710	< 0.3
11931598	1710	< 0.3
11931599	1712	< 0.3
11931600	1715	0.9
11931584	1716	< 0.3
11931592	1718	< 0.3
11931577	1720	0.8
11951154	2002	< 0.3
11951153	2017	< 0.3
11951155	2113	< 0.3
11951156	2113	< 0.3
11951157	2122	0.5
11951158	2307	< 0.3
11951150	2407	< 0.3
11951152	2701	< 0.3
11951164	3014	< 0.3
11951165	3014	< 0.3
11951159	3115	0.5
11951162	3120	< 0.3
11951161	3208	< 0.3
11951163	3311	< 0.3
11951160	3704	< 0.3
11951166	3704	< 0.3
11931547	1000A	< 0.3
11931556	1000C	< 0.3
11931551	1000F	0.6
11931548	1000G	< 0.3
11931552	1000H	< 0.3
11931560	1000I	< 0.3
11931553	1000J	< 0.3
11931554	1000K	< 0.3
11931561	1000L	< 0.3
11931562	1000N	< 0.3
11931568	1000N	< 0.3
11931549	1000P	0.6

Table 1- Radon Testing Results		
Wheaton High School		
Test Period: 2/10/2025 - 2/13/2025		
Kit Number	Room / Area	Result
11931550	1000R	< 0.3
11931558	1000S	< 0.3
11931559	1000T	< 0.3
11931557	1000Y	< 0.3
11951140	1001A	< 0.3
11951141	1001B	< 0.3
11951142	1001B	< 0.3
11951137	1001C	< 0.3
11951138	1001D	< 0.3
11951145	1001E	< 0.3
11951146	1001F	< 0.3
11951147	1001G	< 0.3
11951148	1001H	< 0.3
11951127	1001I	< 0.3
11951149	1001J	< 0.3
11951128	1001N	< 0.3
11951135	1001N	< 0.3
11951136	1001O	< 0.3
11951143	1001O	< 0.3
11951144	1001P	0.5
11931565	1006C	< 0.3
11931555	1006D	< 0.3
11931563	1006E	0.6
11931564	1006E	0.6
11931569	1006F	< 0.3
11931575	1006G	< 0.3
11931573	1007A	< 0.3
11931572	1007B	1.1
11951134	1107A	< 0.3
11951120	1107C	0.6
11951130	1115C	< 0.3
11951118	1117C	< 0.3
11951123	1117C	< 0.3
11951124	1117E	0.5
11951125	1117F	0.6
11951126	1117G	< 0.3
11951113	1117H	0.5

Table 1- Radon Testing Results		
Wheaton High School		
Test Period: 2/10/2025 - 2/13/2025		
Kit Number	Room / Area	Result
11951121	1117J	0.8
11951122	1117K	< 0.3
11951111	1117L	< 0.3
11951131	1117L	< 0.3
11951112	1117P	< 0.3
11951132	1117P	1.0
11931586	1716B	< 0.3

[illegible]

Table 3 - QC Radon Testing Results			
Wheaton High School			
Test Period: 2/10/2025 - 2/13/2025			
Kit Number	QC Type	Room / Area	Result
11931571	D	1003	< 0.3
11931566	FB	1007	< 0.3
11951115	FB	1215	< 0.3
11951109	D	1219	< 0.3
11931593	D	1413	< 0.3
11931597	D	1709	< 0.3
11931598	FB	1710	< 0.3
11951156	D	2113	< 0.3
11951165	D	3014	< 0.3
11951166	FB	3704	< 0.3
11931568	D	1000N	< 0.3
11951142	D	1001B	< 0.3
11951135	D	1001N	< 0.3
11951136	FB	1001O	< 0.3
11931564	D	1006E	0.6
11951123	D	1117C	< 0.3
11951131	D	1117L	< 0.3
11951112	FB	1117P	< 0.3
11931685	OB	OFFICE BLANK	< 0.3
11919901	TB	TRAVEL BLANK	< 0.3

Table 3a - Duplicate Worksheet / Data Validation										
Wheaton High School										
Test Period: 2/10/2025 - 2/13/2025										
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
11931571	11931580	1003	0.3	0.3	✓	0.6	PASS	0.3	<1-pCi/L	✓
11951109	11951108	1219	0.3	0.3	✓	0.6	PASS	0.3	<1-pCi/L	✓
11931593	11931570	1413	0.3	0.3	✓	0.6	PASS	0.3	<1-pCi/L	✓
11931597	11931591	1709	0.7	0.3	✓	0.6	FAIL	0.5	<1-pCi/L	✗
11951156	11951155	2113	0.3	0.3	✓	0.6	PASS	0.3	<1-pCi/L	✓
11951165	11951164	3014	0.3	0.3	✓	0.6	PASS	0.3	<1-pCi/L	✓
11931568	11931562	1000N	0.3	0.3	✓	0.6	PASS	0.3	<1-pCi/L	✓
11951142	11951141	1001B	0.3	0.3	✓	0.6	PASS	0.3	<1-pCi/L	✓
11951135	11951128	1001N	0.3	0.3	✓	0.6	PASS	0.3	<1-pCi/L	✓
11931564	11931563	1006E	0.6	0.6	✓	1.2	PASS	0.6	<1-pCi/L	✓
11951123	11951118	1117C	0.3	0.3	✓	0.6	PASS	0.3	<1-pCi/L	✓
11951131	11951111	1117L	0.3	0.3	✓	0.6	PASS	0.3	<1-pCi/L	✓
<b>NOTES:</b> QC Check #1 - Data Entry QC Check #2 - Higher duplicate concentration is < or = to 2x the Lower QC Check #3 - Meets RPD Limits, by average duplicate concentration - enter 2 if RPD is BELOW warning and control levels, AND passes QC Check 1 and 2 - enter 1 if RPD is ABOVE warning and BELOW control levels, AND passes QC Check 1 and 2 - enter 0 if RPD is ABOVE control level, or 'FAILS' QC Check 1 or 2							Average (pCi/L)		Warning Level	Control Level
							< 2.0		1-pCi/L	NA
							Between 2.0 and 3.9		50% RPD	67% RPD
							≥ 4.0		28% RPD	36% RPD

[illegible]

Table 1- Radon Testing Results		
Wheaton High School RT		
Test Period: 3/25/2025 - 3/28/2025		
Kit Number	Room / Area	Result
11886561	1709	< 0.3
11886669	1709	< 0.3
11886670	1709	< 0.3
11886965	1709	< 0.3

[illegible]

Table 3 - QC Radon Testing Results			
Wheaton High School RT			
Test Period: 3/24/2025 - 3/27/2025			
Kit Number	QC Type	Room / Area	Result
11886561	D	1709	< 0.3
11886965	FB	1709	< 0.3
11886664	OB	OFFICE BLANK	< 0.3
11886691	TB	TRAVEL BLANK	< 0.3

Table 3a - Duplicate Worksheet / Data Validation										
Wheaton High School RT										
Test Period: 3/24/2025 - 3/27/2025										
Sample ID			Duplicate Concentrations (pCi/L) and QC Checks							
Kit Numbers		Room / Area	Higher	Lower	Check #1 (Pass/Fail)	2x the Lower	Check #2 (Pass/Fail)	Average	Relative Percent Difference (RPD)	Check #3
11886561	11886669 11886670	1709	0.3	0.3	✓	0.6	PASS	0.3	<1-pCi/L	✓
<b>NOTES:</b> QC Check #1 - Data Entry QC Check #2 - Higher duplicate concentration is < or = to 2x the Lower QC Check #3 - Meets RPD Limits, by average duplicate concentration - enter 2 if RPD is BELOW warning and control levels, AND passes QC Check 1 and 2 - enter 1 if RPD is ABOVE warning and BELOW control levels, AND passes QC Check 1 and 2 - enter 0 if RPD is ABOVE control level, or 'FAILS' QC Check 1 or 2							Average (pCi/L)		Warning Level	Control Level
							< 2.0		1-pCi/L	NA
							Between 2.0 and 3.9		50% RPD	67% RPD
							≥ 4.0		28% RPD	36% RPD

[illegible]

# **Attachment 2:**

## **Laboratory Reports**

Radon test result report for:

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11931547	1000A	2025-02-10 @ 9:00 am	2025-02-13 @ 9:00 am	< 0.3	2025-02-17
11931556	1000C	2025-02-10 @ 9:00 am	2025-02-13 @ 9:00 am	< 0.3	2025-02-17
11931551	1000F	2025-02-10 @ 9:00 am	2025-02-13 @ 9:00 am	0.6 ± 0.3	2025-02-17
11931548	1000G	2025-02-10 @ 9:00 am	2025-02-13 @ 9:00 am	< 0.3	2025-02-17
11931552	1000H	2025-02-10 @ 9:00 am	2025-02-13 @ 9:00 am	< 0.3	2025-02-17
11931560	1000I	2025-02-10 @ 9:00 am	2025-02-13 @ 9:00 am	< 0.3	2025-02-17
11931553	1000J	2025-02-10 @ 9:00 am	2025-02-13 @ 9:00 am	< 0.3	2025-02-17
11931554	1000K	2025-02-10 @ 9:00 am	2025-02-13 @ 9:00 am	< 0.3	2025-02-17
11931561	1000L	2025-02-10 @ 9:00 am	2025-02-13 @ 9:00 am	< 0.3	2025-02-17
11931568	1000N	2025-02-10 @ 9:00 am	2025-02-13 @ 9:00 am	< 0.3	2025-02-17
11931562	1000N	2025-02-10 @ 9:00 am	2025-02-13 @ 9:00 am	< 0.3	2025-02-17
11931549	1000P	2025-02-10 @ 9:00 am	2025-02-13 @ 9:00 am	0.6 ± 0.3	2025-02-17
11931550	1000R	2025-02-10 @ 9:00 am	2025-02-13 @ 9:00 am	< 0.3	2025-02-17
11931558	1000S	2025-02-10 @ 9:00 am	2025-02-13 @ 9:00 am	< 0.3	2025-02-17
11931559	1000T	2025-02-10 @ 9:00 am	2025-02-13 @ 9:00 am	< 0.3	2025-02-17
11931557	1000Y	2025-02-10 @ 9:00 am	2025-02-13 @ 9:00 am	< 0.3	2025-02-17
11951139	1001	2025-02-10 @ 11:00 am	2025-02-13 @ 9:00 am	< 0.3	2025-02-17
11951140	1001A	2025-02-10 @ 11:00 am	2025-02-13 @ 9:00 am	< 0.3	2025-02-17
11951142	1001B	2025-02-10 @ 11:00 am	2025-02-13 @ 9:00 am	< 0.3	2025-02-17
11951141	1001B	2025-02-10 @ 11:00 am	2025-02-13 @ 9:00 am	< 0.3	2025-02-17
11951137	1001C	2025-02-10 @ 11:00 am	2025-02-13 @ 9:00 am	< 0.3	2025-02-17
11951138	1001D	2025-02-10 @ 11:00 am	2025-02-13 @ 9:00 am	< 0.3	2025-02-17
11951145	1001E	2025-02-10 @ 11:00 am	2025-02-13 @ 9:00 am	< 0.3	2025-02-17
11951146	1001F	2025-02-10 @ 11:00 am	2025-02-13 @ 9:00 am	< 0.3	2025-02-17
11951147	1001G	2025-02-10 @ 11:00 am	2025-02-13 @ 10:00 am	< 0.3	2025-02-17
11951148	1001H	2025-02-10 @ 11:00 am	2025-02-13 @ 9:00 am	< 0.3	2025-02-17
11951127	1001I	2025-02-10 @ 11:00 am	2025-02-13 @ 9:00 am	< 0.3	2025-02-17
11951149	1001J	2025-02-10 @ 11:00 am	2025-02-13 @ 9:00 am	< 0.3	2025-02-17
11951135	1001N	2025-02-10 @ 11:00 am	2025-02-13 @ 9:00 am	< 0.3	2025-02-17
11951128	1001N	2025-02-10 @ 11:00 am	2025-02-13 @ 9:00 am	< 0.3	2025-02-17
11951136	1001O	2025-02-10 @ 11:00 am	2025-02-13 @ 9:00 am	< 0.3	2025-02-17
11951143	1001O	2025-02-10 @ 11:00 am	2025-02-13 @ 9:00 am	< 0.3	2025-02-17
11951144	1001P	2025-02-10 @ 11:00 am	2025-02-13 @ 9:00 am	0.5 ± 0.3	2025-02-17
11931576	1002	2025-02-10 @ 9:00 am	2025-02-13 @ 9:00 am	< 0.3	2025-02-17
11931571	1003	2025-02-10 @ 9:00 am	2025-02-13 @ 9:00 am	< 0.3	2025-02-17
11931580	1003	2025-02-10 @ 9:00 am	2025-02-13 @ 9:00 am	< 0.3	2025-02-17
11931581	1005	2025-02-10 @ 9:00 am	2025-02-13 @ 9:00 am	< 0.3	2025-02-17

Radon test result report for:

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11931565	1006C	2025-02-10 @ 9:00 am	2025-02-13 @ 9:00 am	< 0.3	2025-02-17
11931555	1006D	2025-02-10 @ 9:00 am	2025-02-13 @ 9:00 am	< 0.3	2025-02-17
11931564	1006E	2025-02-10 @ 9:00 am	2025-02-13 @ 9:00 am	0.6 ± 0.3	2025-02-17
11931563	1006E	2025-02-10 @ 9:00 am	2025-02-13 @ 9:00 am	0.6 ± 0.3	2025-02-17
11931569	1006F	2025-02-10 @ 9:00 am	2025-02-13 @ 9:00 am	< 0.3	2025-02-17
11931575	1006G	2025-02-10 @ 9:00 am	2025-02-13 @ 9:00 am	< 0.3	2025-02-17
11931566	1007	2025-02-10 @ 9:00 am	2025-02-13 @ 9:00 am	< 0.3	2025-02-17
11931567	1007	2025-02-10 @ 9:00 am	2025-02-13 @ 9:00 am	< 0.3	2025-02-17
11931573	1007A	2025-02-10 @ 9:00 am	2025-02-13 @ 9:00 am	< 0.3	2025-02-17
11931572	1007B	2025-02-10 @ 9:00 am	2025-02-13 @ 9:00 am	1.1 ± 0.3	2025-02-17
11931574	1008	2025-02-10 @ 9:00 am	2025-02-13 @ 9:00 am	< 0.3	2025-02-17
11931582	1009	2025-02-10 @ 9:00 am	2025-02-13 @ 9:00 am	< 0.3	2025-02-17
11951119	1104	2025-02-10 @ 11:00 am	2025-02-13 @ 9:00 am	< 0.3	2025-02-17
11951133	1107	2025-02-10 @ 11:00 am	2025-02-13 @ 9:00 am	< 0.3	2025-02-17
11951134	1107A	2025-02-10 @ 11:00 am	2025-02-13 @ 9:00 am	< 0.3	2025-02-17
11951120	1107C	2025-02-10 @ 11:00 am	2025-02-13 @ 9:00 am	0.6 ± 0.3	2025-02-17
11951129	1115	2025-02-10 @ 11:00 am	2025-02-13 @ 9:00 am	< 0.3	2025-02-17
11951130	1115C	2025-02-10 @ 11:00 am	2025-02-13 @ 9:00 am	< 0.3	2025-02-17
11951123	1117C	2025-02-10 @ 11:00 am	2025-02-13 @ 9:00 am	< 0.3	2025-02-17
11951118	1117C	2025-02-10 @ 11:00 am	2025-02-13 @ 9:00 am	< 0.3	2025-02-17
11951124	1117E	2025-02-10 @ 11:00 am	2025-02-13 @ 9:00 am	0.5 ± 0.3	2025-02-17
11951125	1117F	2025-02-10 @ 11:00 am	2025-02-13 @ 9:00 am	0.6 ± 0.3	2025-02-17
11951126	1117G	2025-02-10 @ 11:00 am	2025-02-13 @ 10:00 am	< 0.3	2025-02-17
11951113	1117H	2025-02-10 @ 11:00 am	2025-02-13 @ 9:00 am	0.5 ± 0.3	2025-02-17
11951121	1117J	2025-02-10 @ 11:00 am	2025-02-13 @ 9:00 am	0.8 ± 0.3	2025-02-17
11951122	1117K	2025-02-10 @ 11:00 am	2025-02-13 @ 9:00 am	< 0.3	2025-02-17
11951131	1117L	2025-02-10 @ 11:00 am	2025-02-13 @ 9:00 am	< 0.3	2025-02-17
11951111	1117L	2025-02-10 @ 11:00 am	2025-02-13 @ 9:00 am	< 0.3	2025-02-17
11951132	1117P	2025-02-10 @ 11:00 am	2025-02-13 @ 10:00 am	1.0 ± 0.3	2025-02-17
11951112	1117P	2025-02-10 @ 11:00 am	2025-02-13 @ 10:00 am	< 0.3	2025-02-17
11951117	1201	2025-02-10 @ 11:00 am	2025-02-13 @ 10:00 am	< 0.3	2025-02-17
11951110	1204	2025-02-10 @ 10:00 am	2025-02-13 @ 10:00 am	< 0.3	2025-02-17
11951104	1205	2025-02-10 @ 11:00 am	2025-02-13 @ 10:00 am	< 0.3	2025-02-17
11951102	1206	2025-02-10 @ 10:00 am	2025-02-13 @ 10:00 am	< 0.3	2025-02-17
11951103	1209	2025-02-10 @ 10:00 am	2025-02-13 @ 10:00 am	< 0.3	2025-02-17
11951107	1210	2025-02-10 @ 10:00 am	2025-02-13 @ 10:00 am	< 0.3	2025-02-17
11951116	1211	2025-02-10 @ 10:00 am	2025-02-13 @ 10:00 am	< 0.3	2025-02-17

Radon test result report for:

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11951115	1215	2025-02-10 @ 10:00 am	2025-02-13 @ 10:00 am	< 0.3	2025-02-17
11951114	1215	2025-02-10 @ 10:00 am	2025-02-13 @ 10:00 am	< 0.3	2025-02-17
11951108	1219	2025-02-10 @ 10:00 am	2025-02-13 @ 10:00 am	< 0.3	2025-02-17
11951109	1219	2025-02-10 @ 10:00 am	2025-02-13 @ 10:00 am	< 0.3	2025-02-17
11931585	1301	2025-02-10 @ 10:00 am	2025-02-13 @ 10:00 am	< 0.3	2025-02-17
11931578	1305	2025-02-10 @ 10:00 am	2025-02-13 @ 10:00 am	< 0.3	2025-02-17
11951101	1307	2025-02-10 @ 10:00 am	2025-02-13 @ 10:00 am	< 0.3	2025-02-17
11951106	1313	2025-02-10 @ 10:00 am	2025-02-13 @ 10:00 am	< 0.3	2025-02-17
11951105	1315	2025-02-10 @ 10:00 am	2025-02-13 @ 10:00 am	< 0.3	2025-02-17
11931594	1400	2025-02-10 @ 10:00 am	2025-02-13 @ 10:00 am	< 0.3	2025-02-17
11931595	1400	2025-02-10 @ 10:00 am	2025-02-13 @ 10:00 am	< 0.3	2025-02-17
11931570	1413	2025-02-10 @ 10:00 am	2025-02-13 @ 10:00 am	< 0.3	2025-02-17
11931593	1413	2025-02-10 @ 10:00 am	2025-02-13 @ 10:00 am	< 0.3	2025-02-17
11931579	1600	2025-02-10 @ 10:00 am	2025-02-13 @ 9:00 am	< 0.3	2025-02-17
11931587	1701	2025-02-10 @ 10:00 am	2025-02-13 @ 9:00 am	< 0.3	2025-02-17
11931588	1702	2025-02-10 @ 10:00 am	2025-02-13 @ 9:00 am	< 0.3	2025-02-17
11931589	1706	2025-02-10 @ 10:00 am	2025-02-13 @ 9:00 am	< 0.3	2025-02-17
11931590	1707	2025-02-10 @ 10:00 am	2025-02-13 @ 9:00 am	< 0.3	2025-02-17
11931591	1709	2025-02-10 @ 10:00 am	2025-02-13 @ 9:00 am	0.7 ± 0.3	2025-02-17
11931597	1709	2025-02-10 @ 10:00 am	2025-02-13 @ 9:00 am	< 0.3	2025-02-17
11931598	1710	2025-02-10 @ 10:00 am	2025-02-13 @ 9:00 am	< 0.3	2025-02-17
11931596	1710	2025-02-10 @ 10:00 am	2025-02-13 @ 9:00 am	< 0.3	2025-02-17
11931599	1712	2025-02-10 @ 10:00 am	2025-02-13 @ 9:00 am	< 0.3	2025-02-17
11931600	1715	2025-02-10 @ 10:00 am	2025-02-13 @ 9:00 am	0.9 ± 0.3	2025-02-17
11931584	1716	2025-02-10 @ 10:00 am	2025-02-13 @ 9:00 am	< 0.3	2025-02-17
11931586	1716B	2025-02-10 @ 10:00 am	2025-02-13 @ 9:00 am	< 0.3	2025-02-17
11931592	1718	2025-02-10 @ 10:00 am	2025-02-13 @ 9:00 am	< 0.3	2025-02-17
11931577	1720	2025-02-10 @ 10:00 am	2025-02-13 @ 9:00 am	0.8 ± 0.3	2025-02-17
11951154	2002	2025-02-10 @ 11:00 am	2025-02-13 @ 10:00 am	< 0.3	2025-02-17
11951153	2017	2025-02-10 @ 11:00 am	2025-02-13 @ 10:00 am	< 0.3	2025-02-17
11951156	2113	2025-02-10 @ 12:00 pm	2025-02-13 @ 10:00 am	< 0.3	2025-02-17
11951155	2113	2025-02-10 @ 12:00 pm	2025-02-13 @ 10:00 am	< 0.3	2025-02-17
11951157	2122	2025-02-10 @ 12:00 pm	2025-02-13 @ 10:00 am	0.5 ± 0.3	2025-02-17
11951158	2307	2025-02-10 @ 12:00 pm	2025-02-13 @ 10:00 am	< 0.3	2025-02-17
11951150	2407	2025-02-10 @ 11:00 am	2025-02-13 @ 10:00 am	< 0.3	2025-02-17
11951152	2701	2025-02-10 @ 11:00 am	2025-02-13 @ 10:00 am	< 0.3	2025-02-17
11951165	3014	2025-02-10 @ 12:00 pm	2025-02-13 @ 10:00 am	< 0.3	2025-02-17

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February 17, 2025

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

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Radon test result report for:

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Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11951164	3014	2025-02-10 @ 12:00 pm	2025-02-13 @ 10:00 am	< 0.3	2025-02-17
11951159	3115	2025-02-10 @ 12:00 pm	2025-02-13 @ 10:00 am	0.5 ± 0.3	2025-02-17
11951162	3120	2025-02-10 @ 12:00 pm	2025-02-13 @ 10:00 am	< 0.3	2025-02-17
11951161	3208	2025-02-10 @ 12:00 pm	2025-02-13 @ 10:00 am	< 0.3	2025-02-17
11951163	3311	2025-02-10 @ 12:00 pm	2025-02-13 @ 10:00 am	< 0.3	2025-02-17
11951160	3704	2025-02-10 @ 12:00 pm	2025-02-13 @ 10:00 am	< 0.3	2025-02-17
11951166	3704	2025-02-10 @ 12:00 pm	2025-02-13 @ 10:00 am	< 0.3	2025-02-17

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February 19, 2025

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

Radon test result report for:

**OFFICE  
MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11931685	OB	2025-02-10 @ 11:00 am	2025-02-13 @ 11:00 am	< 0.3	2025-02-17

February 19, 2025

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

Radon test result report for:

**TRAVEL  
MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11919901	TB	2025-02-10 @ 11:00 am	2025-02-13 @ 11:00 am	< 0.3	2025-02-17

# 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

December 23, 2024

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

Radon test result report for:

**SK  
MAIN**

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



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## Radon Test Kit Chain of Custody

Project Name: MCPS Radon – Testing February 10<sup>th</sup> – February 14<sup>th</sup>, 2025

Name of Schools:

1. Charles W. Woodward HS
2. Walt Whitman HS
3. Wheaton HS

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	Date	Initials
Radon Test Kits Deployed	2/10/2025	BW/ML
Radon Test Kits Collected	2/14/2025	BW/ML
Radon Test Kits Shipped to Lab*	2/14/2025	BW/ML
Radon Test Kits Received by Lab*	2/18/2025	BW/ML

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

April 2, 2025

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

Radon test result report for:  
**WHEATON HS**  
**MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11886561	1709	2025-03-25 @ 8:00 am	2025-03-28 @ 7:00 am	< 0.3	2025-04-02
11886669	1709	2025-03-25 @ 8:00 am	2025-03-28 @ 7:00 am	< 0.3	2025-04-02
11886670	1709	2025-03-25 @ 8:00 am	2025-03-28 @ 7:00 am	< 0.3	2025-04-02
11886965	1709	2025-03-25 @ 8:00 am	2025-03-28 @ 7:00 am	< 0.3	2025-04-02

April 3, 2025

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

Radon test result report for:

**OFFICE  
MAIN**

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

April 3, 2025

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

Radon test result report for:

**TRAVEL  
MAIN**

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

# EXPOSURE IN BOWSER-MORNER RADON CHAMBER

CLIENT KCI TECHNOLOGIES, INC Job Number 20002919

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

Date Start: 3/7/25 Date Stop: 3/10/25 Date Start: \_\_\_\_\_ Date Stop: \_\_\_\_\_

Time Start: 0832 Time Stop: 0832 Time Start: \_\_\_\_\_ Time Stop: \_\_\_\_\_

Device No.'s: (7) CHAR BAGS Device No.'s: \_\_\_\_\_

11886401 thru 11886406,

11886410

G3 Right

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

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

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

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

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

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

Note: All times are in 24-hour (military) notation, Eastern Standard Time (EST)  
Background = 7  $\mu$ 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 March 25<sup>th</sup> – March 28<sup>th</sup>, 2025

Name of Schools:

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

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

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



### **MCPS RADON TESTING – EXECUTIVE SUMMARY**

Site Name	Wheaton High School
Date of Test Report	05/27/2022
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	<0.3 pCi/L

### **Project Status**

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



May 27, 2022

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

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

Location: Wheaton High School  
12401 Dalewood Dr.  
Silver Spring, MD 20906

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 Wheaton High School, located at 12401 Dalewood Dr. Silver Spring, MD 20906 (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 March 29, 2022 and deployed six (6) 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 01, 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		
Wheaton HS RT		
Test Period: 03/29/2022 - 04/01/2022		
Kit Number	Room / Area	Result
11139984	1600 GYM	< 0.3
11139988	1600 GYM	< 0.3
11139985	1712 GYM	< 0.3
11139986	1712 GYM	< 0.3
11139987	1712 GYM	< 0.3
11139990	1712 GYM	< 0.3

Table 2- Radon Testing Results			
Wheaton HS RT			
Test Period: 03/29/2022 - 04/01/2022			
Kit Number	QC Type	Room / Area	Result
11139987	D	1712 Gym	< 0.3
11139986	FB	1712 Gym	< 0.3
11139883	OB	OFFICE BLANK	< 0.3
11139841	TB	TRAVEL BLANK	< 0.3



## ATTACHMENT C

### Laboratory Analytical Results

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April 21, 2022

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

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Radon test result report for:

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Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11139984	1600 GYM	2022-03-29 @ 2:00 pm	2022-04-01 @ 12:00 pm	< 0.3	2022-04-04
11139988	1600 GYM	2022-03-29 @ 2:00 pm	2022-04-01 @ 12:00 pm	< 0.3	2022-04-04
11139985	1712 GYM	2022-03-29 @ 2:00 pm	2022-04-01 @ 12:00 pm	< 0.3	2022-04-04
11139986	1712 GYM	2022-03-29 @ 2:00 pm	2022-04-01 @ 12:00 pm	< 0.3	2022-04-04
11139987	1712 GYM	2022-03-29 @ 2:00 pm	2022-04-01 @ 12:00 pm	< 0.3	2022-04-04
11139990	1712 GYM	2022-03-29 @ 2:00 pm	2022-04-01 @ 12:00 pm	< 0.3	2022-04-04

---

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 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 30, 2022

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

---

Radon test result report for:

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

---

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

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

---

## Radon Test Kit Chain of Custody

Project Name: MCPS Radon – March 2022 Schools – Retesting

Name of Schools:

1. Watkins Mill HS
2. Cresthaven ES
3. East Silver Spring ES
4. Fairland Center
5. Francis Scott Key MS
6. Greencastle ES
7. Roscoe Nix ES
8. West Farm Transportation Depot
9. Wheaton HS
10. White Oak MS
11. William Tyler Page ES
12. Bel Pre ES
13. Fairland ES
14. Highland ES
15. Rolling Terrace ES
16. Takoma Park MS
17. Viers Mill ES
18. Poolesville ES

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	Date	Initials
Radon Test Kits Deployed	03/29/2022	BMM
Radon Test Kits Collected	04/01/2022	BMM
Radon Test Kits Shipped to Lab*	04/01/2022	BMM
Radon Test Kits Received by Lab*	04/04/2022	BMM

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

### MCPS RADON TESTING – EXECUTIVE SUMMARY

Site Name	Wheaton High School
Date of Test Report	4/29/2022
Round of Testing	Initial Follow-up Post Remediation 2 Year Testing 5 Year Testing HVAC Upgrade Window Replacement New Addition New Facility
# Rooms Tested	111
# Rooms $\geq$ 4.0 pCi/L	0
Lowest Value	<0.3 pCi/L
Highest Value	2.8 pCi/L

**Project Status:**

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



April 29, 2022

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

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

Location: Wheaton High School  
12401 Dalewood Dr.  
Silver Spring, MD 20906

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 Wheaton High School, located at 12401 Dalewood Dr. Silver Spring, MD 20906 (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 March 8, 2022 and deployed one hundred thirty (130) activated charcoal (AC) radon test kits. KCI deployed radon test kits in all frequently-occupied ground contact rooms, and other areas, (if applicable) in accordance with AARST guidance.

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

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

KCI returned to the site on March 10, 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 mid 20s and high temperatures ranged from the high 70s to the low 50s Fahrenheit. Maximum sustained winds ranged from 0-32 miles per hour. Average humidity was around 65% with 1.09 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>
<b>≥4.0 pCi/L</b>	None	N/A
<b>&lt;4.0 pCi/L</b>	See Attachment B	

Quality Control Samples	
Results of Blank Canisters:	The office blanks, and lab transit blanks had test results of less than the laboratory detection limit of 0.3 pCi/L.
Adequate Laboratory Precision?	Review of the duplicate sample analysis indicates that adequate laboratory measurement precision was achieved.
Spike Sample Analysis:	The Spike Sample analysis results indicate the laboratory is operating within statistical control limits.

Our professional services have been performed in accordance with customary principles and practices in the field of industrial hygiene and engineering. If you have any questions or comments regarding this report, please feel free to contact me at (410) 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		
Wheaton HS		
Test Period: 03/08/2022 - 03/11/2022		
Kit Number	Room / Area	Result
11130862	1000	< 0.3
11130806	1001	< 0.3
11130873	1002	< 0.3
11130879	1003	< 0.3
11130872	1005	< 0.3
11130855	1007	< 0.3
11130892	1008	< 0.3
11130813	1009	< 0.3
11130814	1009	< 0.3
11131603	1104	< 0.3
11130894	1107	< 0.3
11130900	1107	< 0.3
11131604	1115	< 0.3
11131641	1201	< 0.3
11131620	1204	< 0.3
11131619	1205	< 0.3
11131640	1205	< 0.3
11131642	1205	< 0.3
11131627	1206	< 0.3
11131625	1209	< 0.3
11131614	1210	< 0.3
11131626	1211	< 0.3
11131628	1215	< 0.3
11131631	1219	< 0.3
11131649	1301	< 0.3
11131650	1301	< 0.3
11131651	1305	< 0.3
11131644	1307	< 0.3
11131602	1310	< 0.3
11131613	1310	< 0.3
11131643	1310	< 0.3
11131658	1313	< 0.3
11131657	1315	< 0.3
11131652	1400	< 0.3
11131655	1400	0.9
11131632	1401	< 0.3
11131646	1413	< 0.3
11131622	1500	0.7
11131637	1500	0.7
11131653	1500	< 0.3
11131645	1600	< 0.3
11131692	1607	1.0

Table 1- Radon Testing Results		
Wheaton HS		
Test Period: 03/08/2022 - 03/11/2022		
Kit Number	Room / Area	Result
11131693	1702	0.6
11131694	1702	< 0.3
11131689	1707	< 0.3
11131674	1708	< 0.3
11131690	1709	< 0.3
11131654	1712	< 0.3
11131684	1715	0.6
11131667	1716	0.6
11131668	1716	< 0.3
11131683	1716	< 0.3
11131675	1718	0.7
11131676	1720	< 0.3
11131682	1721	0.6
11131624	2101	< 0.3
11131638	2111	< 0.3
11131656	2112	< 0.3
11131629	2122	< 0.3
11131630	2129	< 0.3
11131623	2131	< 0.3
11131647	3121	< 0.3
11130810	10006E	< 0.3
11131892	1000A	< 0.3
11131874	1000C	< 0.3
11131891	1000F	< 0.3
11131875	1000G	< 0.3
11130812	1000H	< 0.3
11130805	1000I	< 0.3
11131876	1000J	< 0.3
11131887	1000K	< 0.3
11131881	1000L	< 0.3
11131882	1000L	< 0.3
11131883	1000N	< 0.3
11131866	1000P	< 0.3
11130809	1000R	< 0.3
11130867	1000S	< 0.3
11130868	1000T	< 0.3
11131873	1000W	< 0.3
11131884	1000Y	< 0.3
11130881	1000Z	< 0.3
11130880	1001A	< 0.3
11130871	1001B	< 0.3
11130887	1001C	< 0.3

Table 1- Radon Testing Results		
Wheaton HS		
Test Period: 03/08/2022 - 03/11/2022		
Kit Number	Room / Area	Result
11130883	1001D	< 0.3
11130888	1001D	< 0.3
11130891	1001D	< 0.3
11130886	1001E	< 0.3
11130885	1001F	< 0.3
11130874	1001G	< 0.3
11130882	1001H	< 0.3
11130875	1001I	< 0.3
11130876	1001J	< 0.3
11130897	1001K	< 0.3
11130898	1001N	< 0.3
11130815	1001O	0.5
11130889	1001O	< 0.3
11130890	1001P	< 0.3
11130863	1006C	< 0.3
11130864	1006C	< 0.3
11130866	1006C	< 0.3
11130856	1006D	< 0.3
11131890	1006F	< 0.3
11131889	1006G	< 0.3
11130808	1007A	< 0.3
11130807	1007B	< 0.3
11130893	1107A	< 0.3
11130896	1107A1	< 0.3
11130899	1107C	< 0.3
11131616	1107D	< 0.3
11131617	1107D	< 0.3
11131618	1107D	0.6
11130895	1107G	0.6
11131610	1115C	< 0.3
11131607	1115E	< 0.3
11131636	1117C	< 0.3
11131639	1117E	< 0.3
11131635	1117F	< 0.3
11131634	1117G	< 0.3
11131633	1117H	< 0.3
11131615	1117J	< 0.3
11131605	1117K	< 0.3
11131606	1117L	< 0.3
11131612	1117L	< 0.3
11131611	1117M	< 0.3
11131608	1117N	< 0.3

Table 1- Radon Testing Results		
Wheaton HS		
Test Period: 03/08/2022 - 03/11/2022		
Kit Number	Room / Area	Result
11131609	1117P	2.8
11131601	1315A	< 0.3
11131648	1504A	1.0
11131681	1716B	0.5

Table 2- Radon Testing Results			
Wheaton HS			
Test Period: 03/08/2022 - 03/11/2022			
Kit Number	QC Type	Room / Area	Result
11131881	D	1000L	< 0.3
11130864	D	1006c	< 0.3
11130863	FB	1006c	< 0.3
11130813	D	1009	< 0.3
11130891	D	1001d	< 0.3
11130883	FB	1001d	< 0.3
11130815	D	1001o	0.5
11131616	D	1107d	< 0.3
11131617	FB	1107d	< 0.3
11131606	D	1117L	< 0.3
11131642	D	1205	< 0.3
11131619	FB	1205	< 0.3
11131649	D	1301	< 0.3
11131602	D	1310	< 0.3
11131613	FB	1310	< 0.3
11131637	D	1500	0.7
11131683	D	1716	< 0.3
11131668	FB	1716	< 0.3
11131693	D	1702	0.6
11131663	OB	OFFICE BLANK	< 0.3
11131669	TB	TRAVEL BLANK	< 0.3



## ATTACHMENT C

### Laboratory Analytical Results

Radon test result report for:**WHEATON HS  
MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11130862	1000	2022-03-08 @ 8:00 am	2022-03-11 @ 7:00 am	< 0.3	2022-03-14
11130810	10006E	2022-03-08 @ 8:00 am	2022-03-11 @ 9:00 am	< 0.3	2022-03-14
11131892	1000A	2022-03-08 @ 8:00 am	2022-03-11 @ 9:00 am	< 0.3	2022-03-14
11131874	1000C	2022-03-08 @ 8:00 am	2022-03-11 @ 7:00 am	< 0.3	2022-03-14
11131891	1000F	2022-03-08 @ 8:00 am	2022-03-11 @ 9:00 am	< 0.3	2022-03-14
11131875	1000G	2022-03-08 @ 8:00 am	2022-03-11 @ 7:00 am	< 0.3	2022-03-14
11130812	1000H	2022-03-08 @ 8:00 am	2022-03-11 @ 9:00 am	< 0.3	2022-03-14
11130805	1000I	2022-03-08 @ 8:00 am	2022-03-11 @ 9:00 am	< 0.3	2022-03-14
11131876	1000J	2022-03-08 @ 8:00 am	2022-03-11 @ 9:00 am	< 0.3	2022-03-14
11131887	1000K	2022-03-08 @ 8:00 am	2022-03-11 @ 9:00 am	< 0.3	2022-03-14
11131882	1000L	2022-03-08 @ 8:00 am	2022-03-11 @ 9:00 am	< 0.3	2022-03-14
11131881	1000L	2022-03-08 @ 8:00 am	2022-03-11 @ 9:00 am	< 0.3	2022-03-14
11131883	1000N	2022-03-08 @ 8:00 am	2022-03-11 @ 9:00 am	< 0.3	2022-03-14
11131866	1000P	2022-03-08 @ 8:00 am	2022-03-11 @ 9:00 am	< 0.3	2022-03-14
11130809	1000R	2022-03-08 @ 8:00 am	2022-03-11 @ 9:00 am	< 0.3	2022-03-14
11130867	1000S	2022-03-08 @ 8:00 am	2022-03-11 @ 9:00 am	< 0.3	2022-03-14
11130868	1000T	2022-03-08 @ 8:00 am	2022-03-11 @ 9:00 am	< 0.3	2022-03-14
11131873	1000W	2022-03-08 @ 8:00 am	2022-03-11 @ 9:00 am	< 0.3	2022-03-14
11131884	1000Y	2022-03-08 @ 8:00 am	2022-03-11 @ 9:00 am	< 0.3	2022-03-14
11130881	1000Z	2022-03-08 @ 8:00 am	2022-03-11 @ 9:00 am	< 0.3	2022-03-14
11130806	1001	2022-03-08 @ 9:00 am	2022-03-11 @ 9:00 am	< 0.3	2022-03-14
11130880	1001A	2022-03-08 @ 9:00 am	2022-03-11 @ 9:00 am	< 0.3	2022-03-14
11130871	1001B	2022-03-08 @ 9:00 am	2022-03-11 @ 9:00 am	< 0.3	2022-03-14
11130887	1001C	2022-03-08 @ 9:00 am	2022-03-11 @ 9:00 am	< 0.3	2022-03-14
11130883	1001D	2022-03-08 @ 9:00 am	2022-03-11 @ 9:00 am	< 0.3	2022-03-14
11130891	1001D	2022-03-08 @ 9:00 am	2022-03-11 @ 9:00 am	< 0.3	2022-03-14
11130888	1001D	2022-03-08 @ 9:00 am	2022-03-11 @ 9:00 am	< 0.3	2022-03-14
11130886	1001E	2022-03-08 @ 9:00 am	2022-03-11 @ 9:00 am	< 0.3	2022-03-14
11130885	1001F	2022-03-08 @ 9:00 am	2022-03-11 @ 9:00 am	< 0.3	2022-03-14
11130874	1001G	2022-03-08 @ 9:00 am	2022-03-11 @ 9:00 am	< 0.3	2022-03-14
11130882	1001H	2022-03-08 @ 9:00 am	2022-03-11 @ 9:00 am	< 0.3	2022-03-14
11130875	1001I	2022-03-08 @ 9:00 am	2022-03-11 @ 9:00 am	< 0.3	2022-03-14
11130876	1001J	2022-03-08 @ 9:00 am	2022-03-11 @ 9:00 am	< 0.3	2022-03-14
11130897	1001K	2022-03-08 @ 9:00 am	2022-03-11 @ 9:00 am	< 0.3	2022-03-14
11130898	1001N	2022-03-08 @ 9:00 am	2022-03-11 @ 9:00 am	< 0.3	2022-03-14
11130889	1001O	2022-03-08 @ 9:00 am	2022-03-11 @ 9:00 am	< 0.3	2022-03-14
11130815	1001O	2022-03-08 @ 9:00 am	2022-03-11 @ 9:00 am	0.5 ± 0.3	2022-03-14

Radon test result report for:**WHEATON HS  
MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11130890	1001P	2022-03-08 @ 9:00 am	2022-03-11 @ 9:00 am	< 0.3	2022-03-14
11130873	1002	2022-03-08 @ 9:00 am	2022-03-11 @ 9:00 am	< 0.3	2022-03-14
11130879	1003	2022-03-08 @ 9:00 am	2022-03-11 @ 9:00 am	< 0.3	2022-03-14
11130872	1005	2022-03-08 @ 9:00 am	2022-03-11 @ 9:00 am	< 0.3	2022-03-14
11130866	1006C	2022-03-08 @ 8:00 am	2022-03-11 @ 9:00 am	< 0.3	2022-03-14
11130863	1006C	2022-03-08 @ 8:00 am	2022-03-11 @ 9:00 am	< 0.3	2022-03-14
11130864	1006C	2022-03-08 @ 8:00 am	2022-03-11 @ 9:00 am	< 0.3	2022-03-14
11130856	1006D	2022-03-08 @ 8:00 am	2022-03-11 @ 9:00 am	< 0.3	2022-03-14
11131890	1006F	2022-03-08 @ 8:00 am	2022-03-11 @ 9:00 am	< 0.3	2022-03-14
11131889	1006G	2022-03-08 @ 8:00 am	2022-03-11 @ 9:00 am	< 0.3	2022-03-14
11130855	1007	2022-03-08 @ 8:00 am	2022-03-11 @ 9:00 am	< 0.3	2022-03-14
11130808	1007A	2022-03-08 @ 8:00 am	2022-03-11 @ 9:00 am	< 0.3	2022-03-14
11130807	1007B	2022-03-08 @ 8:00 am	2022-03-11 @ 9:00 am	< 0.3	2022-03-14
11130892	1008	2022-03-08 @ 9:00 am	2022-03-11 @ 9:00 am	< 0.3	2022-03-14
11130813	1009	2022-03-08 @ 8:00 am	2022-03-11 @ 9:00 am	< 0.3	2022-03-14
11130814	1009	2022-03-08 @ 8:00 am	2022-03-11 @ 9:00 am	< 0.3	2022-03-14
11131603	1104	2022-03-08 @ 10:00 am	2022-03-11 @ 8:00 am	< 0.3	2022-03-14
11130894	1107	2022-03-08 @ 9:00 am	2022-03-11 @ 7:00 am	< 0.3	2022-03-14
11130900	1107	2022-03-08 @ 9:00 am	2022-03-11 @ 7:00 am	< 0.3	2022-03-14
11130893	1107A	2022-03-08 @ 9:00 am	2022-03-11 @ 7:00 am	< 0.3	2022-03-14
11130896	1107A1	2022-03-08 @ 9:00 am	2022-03-11 @ 7:00 am	< 0.3	2022-03-14
11130899	1107C	2022-03-08 @ 9:00 am	2022-03-11 @ 7:00 am	< 0.3	2022-03-14
11131616	1107D	2022-03-08 @ 9:00 am	2022-03-11 @ 7:00 am	< 0.3	2022-03-14
11131617	1107D	2022-03-08 @ 9:00 am	2022-03-11 @ 7:00 am	< 0.3	2022-03-14
11131618	1107D	2022-03-08 @ 9:00 am	2022-03-11 @ 7:00 am	0.6 ± 0.3	2022-03-14
11130895	1107G	2022-03-08 @ 9:00 am	2022-03-11 @ 7:00 am	0.6 ± 0.3	2022-03-14
11131604	1115	2022-03-08 @ 10:00 am	2022-03-11 @ 8:00 am	< 0.3	2022-03-14
11131610	1115C	2022-03-08 @ 10:00 am	2022-03-11 @ 8:00 am	< 0.3	2022-03-14
11131607	1115E	2022-03-08 @ 10:00 am	2022-03-11 @ 8:00 am	< 0.3	2022-03-14
11131636	1117C	2022-03-08 @ 10:00 am	2022-03-11 @ 8:00 am	< 0.3	2022-03-14
11131639	1117E	2022-03-08 @ 10:00 am	2022-03-11 @ 8:00 am	< 0.3	2022-03-14
11131635	1117F	2022-03-08 @ 10:00 am	2022-03-11 @ 8:00 am	< 0.3	2022-03-14
11131634	1117G	2022-03-08 @ 10:00 am	2022-03-11 @ 8:00 am	< 0.3	2022-03-14
11131633	1117H	2022-03-08 @ 10:00 am	2022-03-11 @ 8:00 am	< 0.3	2022-03-14
11131615	1117J	2022-03-08 @ 10:00 am	2022-03-11 @ 8:00 am	< 0.3	2022-03-14
11131605	1117K	2022-03-08 @ 10:00 am	2022-03-11 @ 8:00 am	< 0.3	2022-03-14
11131606	1117L	2022-03-08 @ 10:00 am	2022-03-11 @ 8:00 am	< 0.3	2022-03-14

Radon test result report for:**WHEATON HS  
MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11131612	1117L	2022-03-08 @ 10:00 am	2022-03-11 @ 8:00 am	< 0.3	2022-03-14
11131611	1117M	2022-03-08 @ 10:00 am	2022-03-11 @ 8:00 am	< 0.3	2022-03-14
11131608	1117N	2022-03-08 @ 10:00 am	2022-03-11 @ 8:00 am	< 0.3	2022-03-14
11131609	1117P	2022-03-08 @ 10:00 am	2022-03-11 @ 8:00 am	2.8 ± 0.3	2022-03-14
11131641	1201	2022-03-08 @ 10:00 am	2022-03-11 @ 8:00 am	< 0.3	2022-03-14
11131620	1204	2022-03-08 @ 10:00 am	2022-03-11 @ 8:00 am	< 0.3	2022-03-14
11131640	1205	2022-03-08 @ 10:00 am	2022-03-11 @ 8:00 am	< 0.3	2022-03-14
11131619	1205	2022-03-08 @ 10:00 am	2022-03-11 @ 8:00 am	< 0.3	2022-03-14
11131642	1205	2022-03-08 @ 10:00 am	2022-03-11 @ 8:00 am	< 0.3	2022-03-14
11131627	1206	2022-03-08 @ 10:00 am	2022-03-11 @ 8:00 am	< 0.3	2022-03-14
11131625	1209	2022-03-08 @ 10:00 am	2022-03-11 @ 8:00 am	< 0.3	2022-03-14
11131614	1210	2022-03-08 @ 10:00 am	2022-03-11 @ 8:00 am	< 0.3	2022-03-14
11131626	1211	2022-03-08 @ 10:00 am	2022-03-11 @ 8:00 am	< 0.3	2022-03-14
11131628	1215	2022-03-08 @ 10:00 am	2022-03-11 @ 8:00 am	< 0.3	2022-03-14
11131631	1219	2022-03-08 @ 10:00 am	2022-03-11 @ 8:00 am	< 0.3	2022-03-14
11131650	1301	2022-03-08 @ 10:00 am	2022-03-11 @ 8:00 am	< 0.3	2022-03-14
11131649	1301	2022-03-08 @ 10:00 am	2022-03-11 @ 8:00 am	< 0.3	2022-03-14
11131651	1305	2022-03-08 @ 10:00 am	2022-03-11 @ 8:00 am	< 0.3	2022-03-14
11131644	1307	2022-03-08 @ 10:00 am	2022-03-11 @ 8:00 am	< 0.3	2022-03-14
11131643	1310	2022-03-08 @ 11:00 am	2022-03-11 @ 8:00 am	< 0.3	2022-03-14
11131613	1310	2022-03-08 @ 11:00 am	2022-03-11 @ 9:00 am	< 0.3	2022-03-14
11131602	1310	2022-03-08 @ 11:00 am	2022-03-11 @ 8:00 am	< 0.3	2022-03-14
11131658	1313	2022-03-08 @ 11:00 am	2022-03-11 @ 8:00 am	< 0.3	2022-03-14
11131657	1315	2022-03-08 @ 11:00 am	2022-03-11 @ 8:00 am	< 0.3	2022-03-14
11131601	1315A	2022-03-08 @ 11:00 am	2022-03-11 @ 8:00 am	< 0.3	2022-03-14
11131652	1400	2022-03-08 @ 10:00 am	2022-03-11 @ 8:00 am	< 0.3	2022-03-14
11131655	1400	2022-03-08 @ 10:00 am	2022-03-11 @ 8:00 am	0.9 ± 0.3	2022-03-14
11131632	1401	2022-03-08 @ 10:00 am	2022-03-11 @ 8:00 am	< 0.3	2022-03-14
11131646	1413	2022-03-08 @ 11:00 am	2022-03-11 @ 8:00 am	< 0.3	2022-03-14
11131637	1500	2022-03-08 @ 11:00 am	2022-03-11 @ 8:00 am	0.7 ± 0.3	2022-03-14
11131622	1500	2022-03-08 @ 11:00 am	2022-03-11 @ 8:00 am	0.7 ± 0.3	2022-03-14
11131653	1500	2022-03-08 @ 11:00 am	2022-03-11 @ 8:00 am	< 0.3	2022-03-14
11131648	1504A	2022-03-08 @ 11:00 am	2022-03-11 @ 8:00 am	1.0 ± 0.3	2022-03-14
11131645	1600	2022-03-08 @ 11:00 am	2022-03-11 @ 8:00 am	< 0.3	2022-03-14
11131692	1607	2022-03-08 @ 12:00 pm	2022-03-11 @ 9:00 am	1.0 ± 0.3	2022-03-14
11131694	1702	2022-03-08 @ 12:00 pm	2022-03-11 @ 9:00 am	< 0.3	2022-03-14
11131693	1702	2022-03-08 @ 12:00 pm	2022-03-11 @ 9:00 am	0.6 ± 0.3	2022-03-14

March 15, 2022

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

Radon test result report for:

**WHEATON HS  
MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11131689	1707	2022-03-08 @ 12:00 pm	2022-03-11 @ 9:00 am	< 0.3	2022-03-14
11131674	1708	2022-03-08 @ 12:00 pm	2022-03-11 @ 9:00 am	< 0.3	2022-03-14
11131690	1709	2022-03-08 @ 12:00 pm	2022-03-11 @ 9:00 am	< 0.3	2022-03-14
11131654	1712	2022-03-08 @ 11:00 am	2022-03-11 @ 9:00 am	< 0.3	2022-03-14
11131684	1715	2022-03-08 @ 12:00 pm	2022-03-11 @ 9:00 am	0.6 ± 0.3	2022-03-14
11131667	1716	2022-03-08 @ 11:00 am	2022-03-11 @ 9:00 am	0.6 ± 0.3	2022-03-14
11131683	1716	2022-03-08 @ 11:00 am	2022-03-11 @ 9:00 am	< 0.3	2022-03-14
11131668	1716	2022-03-08 @ 11:00 am	2022-03-11 @ 9:00 am	< 0.3	2022-03-14
11131681	1716B	2022-03-08 @ 12:00 pm	2022-03-11 @ 9:00 am	0.5 ± 0.3	2022-03-14
11131675	1718	2022-03-08 @ 11:00 am	2022-03-11 @ 9:00 am	0.7 ± 0.3	2022-03-14
11131676	1720	2022-03-08 @ 11:00 am	2022-03-11 @ 9:00 am	< 0.3	2022-03-14
11131682	1721	2022-03-08 @ 12:00 pm	2022-03-11 @ 10:00 am	0.6 ± 0.3	2022-03-14
11131624	2101	2022-03-08 @ 11:00 am	2022-03-11 @ 8:00 am	< 0.3	2022-03-14
11131638	2111	2022-03-08 @ 11:00 am	2022-03-11 @ 8:00 am	< 0.3	2022-03-14
11131656	2112	2022-03-08 @ 11:00 am	2022-03-11 @ 8:00 am	< 0.3	2022-03-14
11131629	2122	2022-03-08 @ 11:00 am	2022-03-11 @ 8:00 am	< 0.3	2022-03-14
11131630	2129	2022-03-08 @ 11:00 am	2022-03-11 @ 8:00 am	< 0.3	2022-03-14
11131623	2131	2022-03-08 @ 11:00 am	2022-03-11 @ 8:00 am	< 0.3	2022-03-14
11131647	3121	2022-03-08 @ 11:00 am	2022-03-11 @ 8:00 am	< 0.3	2022-03-14

# EXPOSURE IN BOWSER-MORNER RADON CHAMBER

CLIENT KCI Technologies, Inc. Job Number 204620

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

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

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

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

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

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

E3 Right

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

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

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

\_\_\_\_\_

\_\_\_\_\_

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

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

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

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Note: All times are in 24-hour (military) notation, Eastern Standard Time (EST)  
Background = 7  $\mu$ 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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Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11139367	SK1	2022-03-18 @ 7:00 am	2022-03-21 @ 7:00 am	25.9 $\pm$ 2.1	2022-03-30
11139368	SK2	2022-03-18 @ 7:00 am	2022-03-21 @ 7:00 am	23.9 $\pm$ 2.0	2022-03-30
11139371	SK3	2022-03-18 @ 7:00 am	2022-03-21 @ 7:00 am	25.7 $\pm$ 2.1	2022-03-30
11139710	SK4	2022-03-18 @ 7:00 am	2022-03-21 @ 7:00 am	26.4 $\pm$ 2.1	2022-03-30
11139717	SK5	2022-03-18 @ 7:00 am	2022-03-21 @ 7:00 am	24.6 $\pm$ 2.0	2022-03-30

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

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## Radon Test Kit Chain of Custody

Project Name: MCPS Radon – March 2022 Schools

Name of Schools:

1. Fairland Center
2. Cloverly ES
3. Drew, Dr. Charles ES
4. Weller Road ES
5. Wheaton HS
6. East Silver Spring ES
7. Rosemary Hills ES

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	Date	Initials
Radon Test Kits Deployed	03/08/2022	BMM
Radon Test Kits Collected	03/11/2022	BMM
Radon Test Kits Shipped to Lab*	03/11/2022	BMM
Radon Test Kits Received by Lab*	03/13/2022	BMM

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

### **MCPS RADON TESTING - EXECUTIVE SUMMARY**

Site Name	Wheaton High School
Date of Report	2/28/2020
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	1
# Rooms $\geq 4.0$ pCi/L	0
Lowest Value	<0.3 pCi/L
Highest Value	<0.3 pCi/L

### **Project Status**

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



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2/28/2020

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

Re: Radon Testing Services

KCI Job #12146341.126

**Location: Wheaton High School**

12401 Dalewood Drive  
Silver Spring, Maryland 20906

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 Wheaton High School, located at 12401 Dalewood Drive in Silver Spring, Maryland 20906 (subject site).

**SCOPE OF SERVICES**

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

KCI visited the site on 2/11/2020 and deployed 2 activated charcoal (AC) radon test kits. KCI deployed radon test kits in frequently-occupied ground contact rooms, and other areas, (if applicable) in accordance with AARST guidance.

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

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

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

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

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

KCI returned to the site on 2/14/2020 to retrieve the radon sampling test kits. KCI shipped all radon tests via overnight delivery to Aircheck, Inc. for analysis by gamma-ray spectroscopy. Aircheck, Inc. is a NRSB certified analytical laboratory for radon analysis (certification #ARL1402) located at 1936 Butler Bridge Road, Mills River, North Carolina.

#### **EVALUATION OF TESTING CONDITIONS**

These tests represent:

- Follow-up to initial testing.

These tests were conducted to:

- Evaluate radon concentrations at the facility.

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

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

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

KCI also compiled weather data for the testing period and conducted observations of relevant field conditions. During the test period, weather records indicate low temperatures were in the mid-20s to the upper-40s; and high temperatures ranged from the lower-40s to the upper-50s. Maximum sustained winds ranged from 14-24 miles per hour. Average humidity was approximately 74%. A total of 1.32 inches of rain were recorded during the testing period. The weather conditions during the testing period may have resulted in atypical radon test results for this facility.

## **RESULTS**

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

The results of the radon test analysis indicated the following:

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

Quality Control Samples	
Results of Blank Canisters:	The office blanks, and lab transit blanks had test results of less than the laboratory detection limit of 0.3 pCi/L.
Adequate Laboratory Precision?	Review of the duplicate sample analysis indicates that adequate laboratory measurement precision was achieved.
Spike Sample Analysis:	The Spike sample analysis results indicate the laboratory is operating within statistical control limits.

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

Sincerely,

Mr. Tyler P. McCleaf  
Radon Measurement Provider  
KCI Technologies, Inc.

Attachments:

A- Floor Plan with Test Locations

B - Tables 1-3, Radon Test Summary Spreadsheets

C- Laboratory Analytical Results

# ATTACHMENT A

## Floor Plan With Test Locations

### Floor Plan Legend

X-Sample Location (in red)

X- Previous Sample Location

1- Not Samled; No Ground Contact

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

3- Not Samled; High Humidity/Moisture

4- Not Samled; Bathroom/Hallway

## ATTACHMENT B

### Radon Test Summary Spreadsheet

**Table Notes:**

AC- Activated Charcoal

ACI- Air Chek, Inc.

D- Duplicate

FB- Field Blank

KCI- KCI Technologies, Inc.

OB- Office Blank

PM- Project Manager

QC- Quality Control

Table 1- Radon Testing Results		
Wheaton High School		
Test Period: 02/11/20-02/14/20		
Kit Number	Room / Area	Result
9348556	1001I	< 0.3
9348502	OFFICE BLANK	< 0.3

Table 2- Radon Testing Results			
Wheaton High School			
Test Period: 02/11/20-02/14/20			
Kit Number	QC Type	Room / Area	Result
9348522	TRANSIT BLANK	NA	0.7
9341735	TRANSIT BLANK	NA	<0.3

# ATTACHMENT C

## Laboratory Analytical Results

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February 25, 2020

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

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Radon test result report for:

**WHEATON HS RT**

**782**

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Kit #	Room Id	Started	Ended	pCi/L	Analyzed
9348556	1001I	2020-02-11 @ 10:00 am	2020-02-14 @ 10:00 am	< 0.3	2020-02-18

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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 194523

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

Date Start: 2/21/20 Date Stop: 2/24/20 Date Start: \_\_\_\_\_ Date Stop: \_\_\_\_\_

Time Start: 0745 Time Stop: 0745 Time Start: \_\_\_\_\_ Time Stop: \_\_\_\_\_

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

9341725 thru 9341733 \_\_\_\_\_

52 Left

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

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

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

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

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

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

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

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February 28, 2020

**\*\* 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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Kit #	Room Id	Started	Ended	pCi/L	Analyzed
9341725	N/A	2020-02-21 @ 8:00 am	2020-02-24 @ 8:00 am	26.9 $\pm$ 1.6	2020-02-26
9341730	N/A	2020-02-21 @ 8:00 am	2020-02-24 @ 8:00 am	26.1 $\pm$ 1.6	2020-02-26
9341728	N/A	2020-02-21 @ 8:00 am	2020-02-24 @ 8:00 am	26.9 $\pm$ 1.6	2020-02-26
9341726	N/A	2020-02-21 @ 8:00 am	2020-02-24 @ 8:00 am	25.8 $\pm$ 1.5	2020-02-26
9341731	N/A	2020-02-21 @ 8:00 am	2020-02-24 @ 8:00 am	25.1 $\pm$ 1.5	2020-02-26
9341729	N/A	2020-02-21 @ 8:00 am	2020-02-24 @ 8:00 am	26.2 $\pm$ 1.6	2020-02-26
9341727	N/A	2020-02-21 @ 8:00 am	2020-02-24 @ 8:00 am	27.2 $\pm$ 1.6	2020-02-26
9341732	N/A	2020-02-21 @ 8:00 am	2020-02-24 @ 8:00 am	27.3 $\pm$ 1.6	2020-02-26

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

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## Radon Test Kit Chain of Custody

Project Name: MCPS Radon 2019 Week 2

Name of Schools:

- |                       |                   |
|-----------------------|-------------------|
| 1. Argyle M.S.        | 6. Fallsmead E.S. |
| 2. Banneker M.S.      | 7. Farquhar M.S.  |
| 3. Bel Pre E.S.       | 8. Kennedy H.S.   |
| 4. Blake H.S.         | 9. Magruder H.S.  |
| 5. Briggs Chaney M.S. | 10. Wheaton H.S.  |

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	Date	Initials
Radon Test Kits Deployed	2/11/20	JM
Radon Test Kits Collected	2/14/20	JM
Radon Test Kits Shipped to Lab*	2/14/20	JM
Radon Test Kits Received by Lab*	2/17/20	JM

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

### **MCPS RADON TESTING - EXECUTIVE SUMMARY**

Site Name	Wheaton High School
Date of Report	2/3/2020
Round of Testing	Initial Follow-up <b>Post Remediation</b> 2 year testing 5 year testing HVAC Upgrade Window Replacement New Addition New Facility
# of Rooms Tested	23
# Rooms $\geq 4.0$ pCi/L	0
Lowest Value	<0.3 pCi/L
Highest Value	1.1 pCi/L

### **Project Status**

Current Project Status at this time: Testing Complete; missing/compromised tests to be sampled.



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2/3/2020

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

Re: Radon Testing Services

KCI Job #12146341126

**Location: Wheaton High School**

12401 Dalewood Drive  
Silver Spring, Maryland 20906

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 Wheaton High School, located at 12401 Dalewood Drive in Silver Spring, Maryland 20906 (subject site).

**SCOPE OF SERVICES**

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

KCI visited the site on 12/17/2019 and deployed twenty-eight (28) 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.

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As a quality control measure, KCI included duplicate samples, field blanks, lab transit blanks, and office blanks in accordance with AARST recommendations. In addition, KCI submitted sixty (60) test kits to Bowser-Morner, Inc. as spike samples. The spiked tests were exposed to a known radon concentration by Bowser-Morner, Inc. prior to being returned to the laboratory for analysis.

KCI returned to the site on 12/20/2020 to retrieve the radon sampling test kits. KCI shipped all radon tests via overnight delivery to Aircheck, Inc. for analysis by gamma-ray spectroscopy. Aircheck, Inc. is a National Radon Safety Board (NRSB) radon measurement provider and is a certified analytical laboratory for radon analysis (certification #ARL1402) located at 1936 Butler Bridge Road, Mills River, North Carolina.

### **EVALUATION OF TESTING CONDITIONS**

These tests represent:

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

## **RESULTS**

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

The results of the radon test analysis indicated the following:

<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 office blanks, and lab transit blanks had test results of less than the laboratory detection limit of 0.3 pCi/L.
Adequate Laboratory Precision?	Review of the duplicate sample analysis indicates that adequate laboratory measurement precision was achieved.
Spike Sample Analysis:	The Spike sample analysis results indicate the laboratory is operating within statistical control limits.

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

Sincerely,

Mr. Tyler P. McCleaf  
Radon Measurement Provider  
111004 RT

KCI Technologies, Inc.

Attachments:

A- Floor Plan with Test Locations

B - Tables 1-3, Radon Test Summary Spreadsheets

C- Laboratory Analytical Results

# ATTACHMENT A

## Floor Plan With Test Locations

DRAFT

## ATTACHMENT B

### Radon Test Summary Spreadsheet

DRAFT

**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

DRAFT

Table 1- Radon Testing Results		
Wheaton High School		
Test Period: 12/17/2019-12/20/2019		
Kit Number	Room / Area	Result
9339301	1107C	0.6
9339302	1104	< 0.3
9339303	1001E	< 0.3
9339304	1001D	0.5
9339305	1001G	< 0.3
9339306	1001H	0.5
9339307	1107	< 0.3
9341356	1104	< 0.3
9341359	1001J	< 0.3
9341360	1003	0.5
9341361	1107	0.7
9341362	MEDIA OFFICE	0.6
9341363	1001A	< 0.3
9341364	1001A	< 0.3
9341365	1107D	0.7
9341366	1001I	MISSING
9341367	1107G	< 0.3
9341368	1107E	< 0.3
9341369	1001F	0.6
9341491	1001P	1.1
9341493	1001O	< 0.3
9341494	1001O	< 0.3
9341495	1001B	< 0.3
9341496	1001	< 0.3
9341497	1001K	< 0.3
9341499	1001A.1	< 0.3
9341500	1001N	< 0.3
9341388	OFFICE BLANK	< 0.3

Table 2- Radon Testing Results			
Wheaton High School			
Test Period: 12/16/2019-12/19/2019			
Kit Number	QC Type	Room / Area	Result
9341494	D	1001O	<0.3
9341356	D	1104	<0.3
9341363	FB	1001A	<0.3
9341377	TRANSIT BLANK	NA	0.5
9341379	TRANSIT BLANK	NA	< 0.3
9341380	TRANSIT BLANK	NA	< 0.3
9341398	TRANSIT BLANK	NA	< 0.3

DRAFT

[illegible][illegible]

Table Note:

\* Missing or Compromised Sample

# ATTACHMENT C

## Laboratory Analytical Results

DRAFT

Radon test result report for:**WHEATON HS  
MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
9341496	1001	2019-12-17 @ 2:00 pm	2019-12-20 @ 12:00 pm	< 0.3	2019-12-24
9341363	1001A	2019-12-17 @ 2:00 pm	2019-12-20 @ 12:00 pm	< 0.3	2019-12-24
9341364	1001A	2019-12-17 @ 2:00 pm	2019-12-20 @ 12:00 pm	< 0.3	2019-12-24
9341499	1001A.1	2019-12-17 @ 2:00 pm	2019-12-20 @ 12:00 pm	< 0.3	2019-12-24
9341495	1001B	2019-12-17 @ 2:00 pm	2019-12-20 @ 12:00 pm	< 0.3	2019-12-24
9339304	1001D	2019-12-17 @ 2:00 pm	2019-12-20 @ 12:00 pm	0.5 ± 0.4	2019-12-24
9339303	1001E	2019-12-17 @ 1:00 pm	2019-12-20 @ 12:00 pm	< 0.3	2019-12-24
9341369	1001F	2019-12-17 @ 2:00 pm	2019-12-20 @ 12:00 pm	0.6 ± 0.4	2019-12-24
9339305	1001G	2019-12-17 @ 1:00 pm	2019-12-20 @ 12:00 pm	< 0.3	2019-12-24
9339306	1001H	2019-12-17 @ 1:00 pm	2019-12-20 @ 12:00 pm	0.5 ± 0.4	2019-12-24
9341359	1001J	2019-12-17 @ 1:00 pm	2019-12-20 @ 12:00 pm	< 0.3	2019-12-24
9341497	1001K	2019-12-17 @ 1:00 pm	2019-12-20 @ 12:00 pm	< 0.3	2019-12-24
9341500	1001N	2019-12-17 @ 1:00 pm	2019-12-20 @ 12:00 pm	< 0.3	2019-12-24
9341493	1001O	2019-12-17 @ 1:00 pm	2019-12-20 @ 12:00 pm	< 0.3	2019-12-24
9341494	1001O	2019-12-17 @ 1:00 pm	2019-12-20 @ 12:00 pm	< 0.3	2019-12-24
9341491	1001P	2019-12-17 @ 2:00 pm	2019-12-20 @ 12:00 pm	1.1 ± 0.4	2019-12-24
9341360	1003	2019-12-17 @ 2:00 pm	2019-12-20 @ 12:00 pm	0.5 ± 0.4	2019-12-24
9341356	1104	2019-12-17 @ 2:00 pm	2019-12-20 @ 12:00 pm	< 0.3	2019-12-24
9339302	1104	2019-12-17 @ 2:00 pm	2019-12-20 @ 12:00 pm	< 0.3	2019-12-24
9341361	1107	2019-12-17 @ 2:00 pm	2019-12-20 @ 12:00 pm	0.7 ± 0.4	2019-12-24
9339307	1107	2019-12-17 @ 2:00 pm	2019-12-20 @ 12:00 pm	< 0.3	2019-12-24
9339301	1107C	2019-12-17 @ 2:00 pm	2019-12-20 @ 12:00 pm	0.6 ± 0.4	2019-12-24
9341365	1107D	2019-12-17 @ 2:00 pm	2019-12-20 @ 12:00 pm	0.7 ± 0.4	2019-12-24
9341368	1107E	2019-12-17 @ 2:00 pm	2019-12-20 @ 12:00 pm	< 0.3	2019-12-24
9341367	1107G	2019-12-17 @ 2:00 pm	2019-12-20 @ 12:00 pm	< 0.3	2019-12-24
9341362	MEDIA OFFICE	2019-12-17 @ 2:00 pm	2019-12-20 @ 12:00 pm	0.6 ± 0.3	2019-12-24

# EXPOSURE IN BOWSER-MORNER RADON CHAMBER

CLIENT KCI Technologies Inc. Job Number 193598

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

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

Time Start: 0815 Time Stop: 0815

(Group 1)

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

9340001 thru 9340020

55

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

Time Start: 0829 Time Stop: 0820

(Group 2)

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

9340021 thru 9340040

54

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

Time Start: 0825 Time Stop: 0825

(Group 3)

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

9340041 thru 9340060

53

Note: All times are in 24-hour (military) notation, Eastern Standard Time (EST)

Background = 7  $\mu$ R/h Elevation = 820 ft

Radon test result report for:

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

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

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

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

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

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

January 3, 2020

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

Radon test result report for:

**S**

**N/A**

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

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



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## Radon Test Kit Chain of Custody

Project Name: MCPS Radon 2019 Week 2

Name of Schools:

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

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

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

## RADON SCREENING SURVEY – FOLLOW-UP WHEATON HIGH SCHOOL

12401 Dalewood Drive., Silver Spring, Maryland 20906

### EXECUTIVE SUMMARY

Date of Test Report:	3/28/19
Round of Testing:	Initial Follow-up Post Remediation
# Rooms Tested	3
# Rooms $\geq$ 4.0 pCi/L:	2
Low Value:	3.3
High Value:	5.0
Confirmed Rooms $\geq$ 4.0 pCi/L US EPA Action Level	3

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

Room	Result (pCi/L) 2/21/19	Result (pCi/L) 3/28/19	Average Result (pCi/L)
1001K	8.8	3.3	6.1
1001L	11.0	Not tested	>4.0
1001P	5.6	5.0	5.3
1001P (D)	5.5	5.0	5.3



## MONTGOMERY COUNTY PUBLIC SCHOOLS RADON TESTING

**Executive Summary:**  
**Wheaton High School**  
12401 Dalewood Drive,  
Silver Spring, MD 20906

Date of Test Report:	3/28/2019
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:	3
# of Rooms $\geq 4.0$ pCi/L:	2
Low Value:	3.3
High Value:	5.0

### Project Status

**Rooms with results  $\geq 4.0$  pCi/L:** 1001P (5.0 pCi/L), 1001N (5.0 pCi/L)

**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.



March 28, 2019

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

Re: Radon Testing Services

Location: Wheaton High School  
12401 Dalewood Drive,  
Silver Spring, MD 20906

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 Wheaton High School, located at 12401 Dalewood Drive, Silver Spring, MD 20906 (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 February 26, 2019 and deployed four (4) activated charcoal (AC) radon test kit. 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 March 1, 2019 to retrieve the radon sampling test kit. A floor plan map of the building with the test location is included as Attachment A of this report.

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).

#### **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:

Radon Concentration	Room	Result
≥ 4.0 pCi/L	1001N	5.0 pCi/L
	1001P	5.0 pCi/L
	1001P (D)	5.0 pCi/L
≤ 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, appearing to read "Nand Kaushik". The signature is fluid and cursive, with the first name "Nand" and last name "Kaushik" clearly distinguishable.

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

Radon Testing Results		
Wheaton High School		
Testing period: 02/26/19 - 03/01/19		
Kit Number	Room / Area	Result (pCi/L)
3923546	1001K	3.3
3923510	1001N	5.0
3923549	1001P	5.0
3923550	1001P (D)	5.0

**Table Notes:**

D – Duplicate

FB – Field Blank

OB – Office Blank

TB – Transit Blank

QC – Quality Control

# **ATTACHMENT C**

Laboratory Analytical Results

NRPP 105011 AL  
NRSB ARL0007

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 Wheaton High School  
12401 Dalewood Dr  
Silver Spring MD 20906

Log Number	Device Number	Test Exposure Duration:				Area Tested	Result pCi/L
3220654	3923546	02/26/2019	8:24 am	03/01/2019	7:56 am	First Floor Room 1001K	3.3
3220655	3923549	02/26/2019	8:26 am	03/01/2019	7:58 am	First Floor Room 1001P	5.0
3220656	3923550	02/26/2019	8:26 am	03/01/2019	7:58 am	First Floor Room 1001P Duplicate	5.0
3220657	3923510	02/26/2019	8:30 am	03/01/2019	7:57 am	First Floor Room 1001N	5.0

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

Distributed by: Intertek-PSI (VA)

Date Received: 03/04/2019    Date Logged: 03/04/2019    Date Analyzed: 03/05/2019    Date Reported: 03/05/2019

Report Reviewed By: 

Report Approved By: 

**Disclaimer:**

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

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.



## MONTGOMERY COUNTY PUBLIC SCHOOLS RADON TESTING

**Executive Summary:**  
**Wheaton High School**  
12401 Dalewood Drive,  
Silver Spring, MD 20906

Date of Test Report:	2/21/2019
Round of Testing:	Initial Follow-up Post Remediation 2 Year Testing 5 Year Testing HVAC Upgrade Window Replacement <b>New Addition</b> New Facility
# of Rooms Tested:	107
# of Rooms $\geq 4.0$ pCi/L:	4
Low Value:	< 0.4
High Value:	11.0
Rooms with Results $\geq 4.0$ pCi/L:	1001K
	1001L
	1001P
	1001P (D)

### Project Status

**Initial testing complete:** Re-test needed for results  $\geq 4.0$  pCi/L



February 21, 2019

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

Re: Radon Testing Services

Location: Wheaton High School  
12401 Dalewood Drive,  
Silver Spring, MD 20906

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 Wheaton High School, located at 12401 Dalewood Drive, Silver Spring, MD 20906 (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 13, 2018 and deployed one hundred ten (110) 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 16, 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	1001K	8.8
$\geq 4.0$ pCi/L	1001L	11.0
$\geq 4.0$ pCi/L	1001P	5.6
$\geq 4.0$ pCi/L	1001P (D)	5.5
$\leq 4.0$ 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**

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

Radon Testing Results		
Wheaton High School		
Testing period: 11/13/18 - 11/16/18		
Kit Number	Room / Area	Result (pCi/L)
3915405	1000	0.5
3915406	1000A	0.7
3915404	1000C	0.5
3915650	1000F	1.4
3915403	1000G	0.7
3915648	1000H	0.5
3915647	1000I	< 0.4
3915645	1000J	< 0.4
3915646	1000K	0.7
3915641	1000L	0.5
3915642	1000N	< 0.4
3915643	1000P	< 0.4
3915644	1000R	< 0.4
3915447	1000S	0.4
3915448	1000T	< 0.4
3915856	1001	1.7
3915787	1001A	1.9
3915771	1001B	0.9
3915832	1001C	0.8
3915734	1001D	1.1
3915718	1001E	1.3
3915783	1001F	2.7
3915744	1001G	0.9
3915779	1001H	2.6
3915402	1001I	2.4
3915401	1001J	0.5
3915765	1001K	8.8
3915773	1001L	11.0
3915796	1001O	3.1
3915706	1001P	5.6
3915409	1002	1.6
3915410	1002A	1.8
3915747	1003	1.3
3915408	1005	1.3
3915449	1006C	< 0.4
3915450	1006D	0.5
3915443	1006E	0.7
3915445	1006F	< 0.4
3915991	1006G	< 0.4
3915432	1007	0.9
3915411	1007A	0.6
3915431	1007B	0.8
3915422	1008	< 0.4

Radon Testing Results		
Wheaton High School		
Testing period: 11/13/18 - 11/16/18		
Kit Number	Room / Area	Result (pCi/L)
3915421	1009	< 0.4
3915749	1104	< 0.4
3915737	1107	< 0.4
3915740	1107	< 0.4
3915739	1107A	< 0.4
3915732	1107C	< 0.4
3915768	1107E	< 0.4
3915780	1107G	< 0.4
3915735	1107H	< 0.4
3915788	1115	< 0.4
3915789	1115C	0.8
3915790	1117C	0.5
3915746	1117E	0.5
3915738	1117F	< 0.4
3915774	1117G	1.0
3915430	1117H	< 0.4
3915434	1117J	0.7
3915429	1117K	0.5
3915436	1117L	0.7
3915438	1117N	2.6
3915439	1117P	1.1
3915440	1117R	0.4
3915426	1200	0.6
3915427	1201	0.4
3915417	1204	< 0.4
3915428	1205	< 0.4
3915418	1206	< 0.4
3915420	1210	< 0.4
3915414	1211	< 0.4
3915416	1215	< 0.4
3915424	1219	< 0.4
3915983	1301	< 0.4
3915985	1305	< 0.4
3915921	1307	< 0.4
3915990	1310	< 0.4
3915879	1312	< 0.4
3915923	1313	< 0.4
3915989	1315	< 0.4
3915878	1403	0.4
3915880	1406	< 0.4
3915981	1413	< 0.4
3915988	1504	< 0.4
3915987	1504A	< 0.4

Radon Testing Results		
Wheaton High School		
Testing period: 11/13/18 - 11/16/18		
Kit Number	Room / Area	Result (pCi/L)
3915442	1607	< 0.4
3915446	1707	< 0.4
3915444	1709	< 0.4
3915922	1712	< 0.4
3915926	1712	0.4
3915928	1712	< 0.4
3915929	1712	< 0.4
3915927	1716B	< 0.4
3915925	1718	< 0.4
3915930	1719	< 0.4
3915924	1721	< 0.4
3915872	2100	< 0.4
3915871	2124	< 0.4
3915873	2213	< 0.4
3915419	2307	< 0.4
3915874	2312	< 0.4
3915875	3500	< 0.4
3915982	3703	< 0.4
3915876	3708	< 0.4
3881226	Cafeteria	0.5
3881235	Cafeteria	< 0.4

Radon Testing Results		
Wheaton High School		
Testing period: 11/13/18 - 11/16/18		
Kit Number	QC Type	Result (pCi/L)
3915433	1117E (D)	0.4
3915435	1117J (D)	0.8
3915412	1001O (D)	1.1
3915413	1001P (D)	5.5
3915437	1117L (D)	< 0.4
3915415	1211 (D)	< 0.4
3915425	1210 (D)	< 0.4
3915423	1009 (D)	< 0.4
3915407	1000A (D)	< 0.4
3915649	1000I (D)	< 0.4
3915984	1301 (D)	< 0.4
3915986	1406 (D)	< 0.4
3917299	Field Blank	< 0.4
3917300	Field Blank	< 0.4
3917372	Field Blank	< 0.4
3917219	Transit Blank	< 0.4
3917371	Office Blank	< 0.4

**Table Notes:**

D – Duplicate

FB – Field Blank

OB – Office Blank

TB – Transit Blank

QC – Quality Control

# **ATTACHMENT C**

Laboratory Analytical Results

NRPP 105011 AL  
NRSB ARL0007

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 Wheaton High School  
12401 Dalewood Drive  
Silver Spring MD 20906

Log Number	Device Number	Test Exposure Duration:				Area Tested	Result pCi/L
3197053	3915732	11/13/2018	7:15 am	11/16/2018	7:39 am	Floor First Room 1107C	< 0.4
3197054	3915737	11/13/2018	6:57 am	11/16/2018	7:33 am	Floor First Room 1107	< 0.4
3197055	3915740	11/13/2018	7:00 am	11/16/2018	7:35 am	Floor First Room 1107	< 0.4
3197056	3915739	11/13/2018	7:04 am	11/16/2018	7:36 am	Floor First Room 1107A	< 0.4
3197057	3915735	11/13/2018	7:07 am	11/16/2018	7:37 am	Floor First Room 1107H	< 0.4
3197058	3915780	11/13/2018	7:09 am	11/16/2018	7:37 am	Floor First Room 1107G	< 0.4
3197059	3915768	11/13/2018	7:10 am	11/16/2018	7:38 am	Floor First Room 1107E	< 0.4
3197060	3915749	11/13/2018	7:17 am	11/16/2018	7:39 am	Floor First Room 1104	< 0.4
3197061	3915856	11/13/2018	7:21 am	11/16/2018	7:40 am	Floor First Room 1001	1.7
3197062	3915747	11/13/2018	7:22 am	11/16/2018	7:41 am	Floor First Room 1003	1.3
3197063	3915787	11/13/2018	7:24 am	11/16/2018	7:23 am	Floor First Room 1001A	1.9

**Comment:** AMENDED REPORT on 1-8-19 to add completed datasheet information.

Test Performed By: Not Indicated

Distributed by: Intertek-PSI (VA)

Date Received: 11/20/2018 Date Logged: 11/20/2018 Date Analyzed: 11/20/2018 Date Reported: 11/29/2018

Report Reviewed By: 

Report Approved By: 

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NRPP 105011 AL  
NRSB ARL0007

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 Wheaton High School  
12401 Dalewood Drive  
Silver Spring MD 20906

Log Number	Device Number	Test Exposure Duration:				Area Tested	Result pCi/L
3197064	3915771	11/13/2018	7:25 am	11/16/2018	7:23 am	Floor First Room 1001B	0.9
3197065	3915832	11/13/2018	7:26 am	11/16/2018	7:24 am	Floor First Room 1001C	0.8
3197066	3915734	11/13/2018	7:26 am	11/16/2018	7:25 am	Floor First Room 1001D	1.1
3197067	3915718	11/13/2018	7:28 am	11/16/2018	7:25 am	Floor First Room 1001E	1.3
3197068	3915783	11/13/2018	7:29 am	11/16/2018	7:26 am	Floor First Room 1001F	2.7
3197069	3915744	11/13/2018	7:31 am	11/16/2018	7:26 am	Floor First Room 1001G	0.9
3197070	3915779	11/13/2018	7:33 am	11/16/2018	7:27 am	Floor First Room 1001H	2.6
3197071	3915402	11/13/2018	7:35 am	11/16/2018	7:27 am	Floor First Room 1001I	2.4
3197072	3915401	11/13/2018	7:35 am	11/16/2018	7:29 am	Floor First Room 1001J	0.5
3197073	3915765	11/13/2018	7:36 am	11/16/2018	7:30 am	Floor First Room 1001K	8.8
3197074	3915773	11/13/2018	7:37 am	11/16/2018	7:32 am	Floor First Room 1001L	11.0

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Test Performed By: Not Indicated

Distributed by: Intertek-PSI (VA)

Date Received: 11/20/2018 Date Logged: 11/20/2018 Date Analyzed: 11/20/2018 Date Reported: 11/29/2018

Report Reviewed By: 

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NRPP 105011 AL  
NRSB ARL0007

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 Wheaton High School  
12401 Dalewood Drive  
Silver Spring MD 20906

Log Number	Device Number	Test Exposure Duration:				Area Tested	Result pCi/L
3197075	3915796	11/13/2018	7:39 am	11/16/2018	7:32 am	Floor First Room 1001O	3.1
3197076	3915706	11/13/2018	7:40 am	11/16/2018	7:32 am	Floor First Room 1001P	5.6
3197077	3915788	11/13/2018	7:45 am	11/16/2018	7:35 am	Floor First Room 1115	< 0.4
3197078	3915789	11/13/2018	7:47 am	11/16/2018	7:36 am	Floor First Room 1115C	0.8
3197079	3915790	11/13/2018	7:51 am	11/16/2018	7:37 am	Floor First Room 1117C	0.5
3197080	3915746	11/13/2018	7:52 am	11/16/2018	7:38 am	Floor First Room 1117E	0.5
3197081	3915433	11/13/2018	7:52 am	11/16/2018	7:39 am	Floor First Room 1117E Duplicate	0.4
3197082	3915738	11/13/2018	7:53 am	11/16/2018	7:40 am	Floor First Room 1117F	< 0.4
3197083	3915774	11/13/2018	7:55 am	11/16/2018	7:41 am	Floor First Room 1117G	1.0
3197084	3915430	11/13/2018	7:56 am	11/16/2018	7:42 am	Floor First Room 1117H	< 0.4
3197085	3915434	11/13/2018	7:57 am	11/16/2018	7:43 am	Floor First Room 1117J	0.7

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Test Performed By: Not Indicated

Distributed by: Intertek-PSI (VA)

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Report Reviewed By: 

Report Approved By: 

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NRPP 105011 AL  
NRSB ARL0007

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 Wheaton High School  
12401 Dalewood Drive  
Silver Spring MD 20906

Log Number	Device Number	Test Exposure Duration:				Area Tested	Result pCi/L
3197086	3915429	11/13/2018	7:59 am	11/16/2018	7:44 am	Floor First Room 1117K	0.5
3197087	3915436	11/13/2018	8:00 am	11/16/2018	7:45 am	Floor First Room 1117L	0.7
3197088	3915437	11/13/2018	8:03 am	11/16/2018	7:46 am	Floor First Room 1117L Duplicate	< 0.4
3197089	3915435	11/13/2018	8:04 am	11/16/2018	7:48 am	Floor First Room 1117J	0.8
3197090	3915438	11/13/2018	8:04 am	11/16/2018	7:49 am	Floor First Room 1117N	2.6
3197091	3915439	11/13/2018	8:05 am	11/16/2018	7:51 am	Floor First Room 1117P	1.1
3197092	3915440	11/13/2018	8:07 am	11/16/2018	7:54 am	Floor First Room 1117R	0.4
3197093	3915412	11/13/2018	8:10 am	11/16/2018	7:55 am	Floor First Room 1101O	1.1
3197094	3915413	11/13/2018	8:11 am	11/16/2018	7:56 am	Floor First Room 1101P	5.5
3197095	3915427	11/13/2018	8:12 am	11/16/2018	7:57 am	Floor First Room 1201	0.4
3197096	3915428	11/13/2018	8:12 am	11/16/2018	7:58 am	Floor First Room 1205	< 0.4

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Test Performed By: Not Indicated

Distributed by: Intertek-PSI (VA)

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Report Reviewed By: 

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NRPP 105011 AL  
NRSB ARL0007

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 Wheaton High School  
12401 Dalewood Drive  
Silver Spring MD 20906

Log Number	Device Number	Test Exposure Duration:				Area Tested	Result pCi/L
3197097	3915426	11/13/2018	8:15 am	11/16/2018	7:59 am	Floor First Room 1200	0.6
3197098	3915414	11/13/2018	8:16 am	11/16/2018	8:00 am	Floor First Room 1211	< 0.4
3197099	3915415	11/13/2018	8:18 am	11/16/2018	8:00 am	Floor First Room 1211 Duplicate	< 0.4
3197100	3915416	11/13/2018	8:21 am	11/16/2018	8:03 am	Floor First Room 1215	< 0.4
3197101	3915417	11/13/2018	8:21 am	11/16/2018	8:04 am	Floor First Room 1204	< 0.4
3197102	3915418	11/13/2018	8:22 am	11/16/2018	8:05 am	Floor First Room 1206	< 0.4
3197103	3915420	11/13/2018	8:24 am	11/16/2018	8:06 am	Floor First Room 1210	< 0.4
3197104	3915425	11/13/2018	8:24 am	11/16/2018	8:06 am	Floor First Room 1210 Duplicate	< 0.4
3197105	3915424	11/13/2018	8:27 am	11/16/2018	8:07 am	Floor First Room 1219	< 0.4
3197106	3915421	11/13/2018	8:37 am	11/16/2018	8:15 am	Floor First Room 1009	< 0.4
3197107	3915423	11/13/2018	8:37 am	11/16/2018	8:16 am	Floor First Room 1009 Duplicate	< 0.4

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Test Performed By: Not Indicated

Distributed by: Intertek-PSI (VA)

Date Received: 11/20/2018 Date Logged: 11/20/2018 Date Analyzed: 11/20/2018 Date Reported: 11/29/2018

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NRPP 105011 AL  
NRSB ARL0007

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 Wheaton High School  
12401 Dalewood Drive  
Silver Spring MD 20906

Log Number	Device Number	Test Exposure Duration:				Area Tested	Result pCi/L
3197108	3915422	11/13/2018	8:38 am	11/16/2018	8:17 am	Floor First Room 1008	< 0.4
3197109	3915432	11/13/2018	8:39 am	11/16/2018	8:18 am	Floor First Room 1007	0.9
3197110	3915446	11/13/2018	9:23 am	11/16/2018	8:45 am	Floor First Room 1707	< 0.4
3197111	3915444	11/13/2018	9:25 am	11/16/2018	8:46 am	Floor First Room 1709	< 0.4
3197112	3915927	11/13/2018	9:27 am	11/16/2018	8:48 am	Floor First Room 1716B	< 0.4
3197113	3915930	11/13/2018	9:33 am	11/16/2018	8:49 am	Floor First Room 1719	< 0.4
3197114	3915925	11/13/2018	9:34 am	11/16/2018	8:52 am	Floor First Room 1718	< 0.4
3197115	3915926	11/13/2018	9:40 am	11/16/2018	8:55 am	Floor First Room 1712	0.4
3197116	3915928	11/13/2018	9:40 am	11/16/2018	8:56 am	Floor First Room 1712	< 0.4
3197117	3915929	11/13/2018	9:41 am	11/16/2018	8:57 am	Floor First Room 1712	< 0.4
3197118	3915922	11/13/2018	9:41 am	11/16/2018	8:58 am	Floor First Room 1712	< 0.4

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Test Performed By: Not Indicated

Distributed by: Intertek-PSI (VA)

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NRPP 105011 AL  
NRSB ARL0007

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 Wheaton High School  
12401 Dalewood Drive  
Silver Spring MD 20906

Log Number	Device Number	Test Exposure Duration:				Area Tested	Result pCi/L
3197119	3915924	11/13/2018	9:46 am	11/16/2018	8:59 am	Floor First Room 1721	< 0.4
3197120	3915981	11/13/2018	9:57 am	11/16/2018	9:04 am	Floor First Room 1413	< 0.4
3197121	3915983	11/13/2018	10:06 am	11/16/2018	9:08 am	Floor First Room 1301	< 0.4
3197122	3915984	11/13/2018	10:06 am	11/16/2018	9:08 am	Floor First Room 1301 Duplicate	< 0.4
3197123	3915985	11/13/2018	10:08 am	11/16/2018	9:12 am	Floor First Room 1305	< 0.4
3197124	3915921	11/13/2018	10:10 am	11/16/2018	9:14 am	Floor First Room 1307	< 0.4
3197125	3915923	11/13/2018	10:13 am	11/16/2018	9:15 am	Floor First Room 1313	< 0.4
3197126	3915990	11/13/2018	10:17 am	11/16/2018	9:18 am	Floor First Room 1310	< 0.4
3197127	3915989	11/13/2018	10:18 am	11/16/2018	9:19 am	Floor First Room 1315	< 0.4
3197128	3915879	11/13/2018	10:19 am	11/16/2018	9:20 am	Floor First Room 1312	< 0.4
3197129	3915878	11/13/2018	10:22 am	11/16/2018	9:21 am	Floor First Room 1403	0.4

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Test Performed By: Not Indicated

Distributed by: Intertek-PSI (VA)

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Laboratory Report for:

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12401 Dalewood Drive  
Silver Spring MD 20906

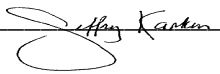
Log Number	Device Number	Test Exposure Duration:				Area Tested	Result pCi/L
3197130	3915880	11/13/2018	10:33 am	11/16/2018	9:22 am	Floor First Room 1406	< 0.4
3197131	3915986	11/13/2018	10:33 am	11/16/2018	9:23 am	Floor First Room 1406 Duplicate	< 0.4
3197132	3915988	11/13/2018	10:42 am	11/16/2018	9:23 am	Floor First Room 1504	< 0.4
3197133	3915987	11/13/2018	10:42 am	11/16/2018	9:24 am	Floor First Room 1504A	< 0.4
3197134	3915419	11/13/2018	10:50 am	11/16/2018	9:28 am	Floor Second Room 2307	< 0.4
3197135	3915874	11/13/2018	10:55 am	11/16/2018	9:30 am	Floor Second Room 2312	< 0.4
3197136	3915873	11/13/2018	10:58 am	11/16/2018	9:32 am	Floor Second Room 2213	< 0.4
3197137	3915871	11/13/2018	10:59 am	11/16/2018	9:34 am	Floor Second Room 2124	< 0.4
3197138	3915872	11/13/2018	11:00 am	11/16/2018	9:36 am	Floor Second Room 2100	< 0.4
3197139	3915982	11/13/2018	11:03 am	11/16/2018	9:42 am	Floor Third Room 3703	< 0.4
3197140	3915876	11/13/2018	11:04 am	11/16/2018	9:46 am	Floor Third Room 3708	< 0.4

**Comment:** AMENDED REPORT on 1-8-19 to add completed datasheet information.

Test Performed By: Not Indicated

Distributed by: Intertek-PSI (VA)

Date Received: 11/20/2018 Date Logged: 11/20/2018 Date Analyzed: 11/20/2018 Date Reported: 11/29/2018

Report Reviewed By: 

Report Approved By: 

**Disclaimer:**

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Shawn Price, Director of Laboratory Operations, AccuStar Labs

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NRPP 105011 AL  
NRSB ARL0007

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 Wheaton High School  
12401 Dalewood Drive  
Silver Spring MD 20906

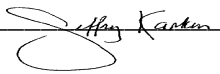
Log Number	Device Number	Test Exposure Duration:				Area Tested	Result pCi/L
3197141	3915875	11/13/2018	11:06 am	11/16/2018	9:50 am	Floor Third Room 3500	< 0.4
3197142	3917299	11/13/2018	6:27 pm	11/16/2018	7:32 am	Blank	< 0.4
3197143	3917300	11/13/2018	6:27 pm	11/16/2018	7:32 am	Blank	< 0.4
3197144	3917372	11/13/2018	6:27 pm	11/16/2018	7:32 am	Blank	< 0.4
3197145	3917219	11/13/2018	6:27 pm	11/16/2018	7:32 am	Blank	< 0.4
3197146	3917371	11/13/2018	6:00 am	11/16/2018	6:00 pm	Blank	< 0.4
3197147	3915411	11/13/2018	8:42 am	11/16/2018	8:19 am	Floor First Room 1007A	0.6
3197148	3915431	11/13/2018	8:42 am	11/16/2018	8:20 am	Floor First Room 1007B	0.8
3197149	3915408	11/13/2018	8:45 am	11/16/2018	8:21 am	Floor First Room 1005	1.3
3197150	3915409	11/13/2018	8:47 am	11/16/2018	7:13 am	Floor First Room 1002	1.6
3197151	3915410	11/13/2018	8:49 am	11/16/2018	7:14 am	Floor First Room 1002A	1.8

**Comment:** AMENDED REPORT on 1-8-19 to add completed datasheet information.

Test Performed By: Not Indicated

Distributed by: Intertek-PSI (VA)

Date Received: 11/20/2018 Date Logged: 11/20/2018 Date Analyzed: 11/20/2018 Date Reported: 11/29/2018

Report Reviewed By: 

Report Approved By: 

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NRPP 105011 AL  
NRSB ARL0007

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 Wheaton High School  
12401 Dalewood Drive  
Silver Spring MD 20906

Log Number	Device Number	Test Exposure Duration:				Area Tested		Result pCi/L
3197152	3915405	11/13/2018	8:51 am	11/16/2018	7:14 am	Floor First	Room 1000	0.5
3197153	3915406	11/13/2018	8:53 am	11/16/2018	7:15 am	Floor First	Room 1000A	0.7
3197154	3915407	11/13/2018	8:53 am	11/16/2018	7:15 am	Floor First	Room 1000A Duplicate	< 0.4
3197155	3915404	11/13/2018	8:54 am	11/16/2018	7:16 am	Floor First	Room 1000C	0.5
3197156	3915403	11/13/2018	8:55 am	11/16/2018	7:17 am	Floor First	Room 1000G	0.7
3197157	3915650	11/13/2018	8:56 am	11/16/2018	7:18 am	Floor First	Room 1000F	1.4
3197158	3915648	11/13/2018	8:57 am	11/16/2018	7:19 am	Floor First	Room 1000H	0.5
3197159	3915647	11/13/2018	8:58 am	11/16/2018	7:20 am	Floor First	Room 1000I	< 0.4
3197160	3915649	11/13/2018	8:58 am	11/16/2018	7:20 am	Floor First	Room 1000I Duplicate	< 0.4
3197161	3915645	11/13/2018	9:01 am	11/16/2018	7:22 am	Floor First	Room 1000J	< 0.4
3197162	3915646	11/13/2018	9:02 am	11/16/2018	7:23 am	Floor First	Room 1000K	0.7

**Comment:** AMENDED REPORT on 1-8-19 to add completed datasheet information.

Test Performed By: Not Indicated

Distributed by: Intertek-PSI (VA)

Date Received: 11/20/2018 Date Logged: 11/20/2018 Date Analyzed: 11/20/2018 Date Reported: 11/29/2018

Report Reviewed By: 

Report Approved By: 

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NRPP 105011 AL  
NRSB ARL0007

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 Wheaton High School  
12401 Dalewood Drive  
Silver Spring MD 20906

Log Number	Device Number	Test Exposure Duration:				Area Tested	Result pCi/L
3197163	3915641	11/13/2018	9:04 am	11/16/2018	7:23 am	Floor First Room 1000L	0.5
3197164	3915642	11/13/2018	9:04 am	11/16/2018	7:24 am	Floor First Room 1000N	< 0.4
3197165	3915643	11/13/2018	9:06 am	11/16/2018	7:25 am	Floor First Room 1000P	< 0.4
3197166	3915644	11/13/2018	9:07 am	11/16/2018	7:26 am	Floor First Room 1000R	< 0.4
3197167	3915447	11/13/2018	9:08 am	11/16/2018	7:27 am	Floor First Room 1000S	0.4
3197168	3915448	11/13/2018	9:08 am	11/16/2018	7:28 am	Floor First Room 1000T	< 0.4
3197169	3915449	11/13/2018	9:10 am	11/16/2018	7:29 am	Floor First Room 1006C	< 0.4
3197170	3915450	11/13/2018	9:11 am	11/16/2018	7:29 am	Floor First Room 1006D	0.5
3197171	3915443	11/13/2018	9:14 am	11/16/2018	7:30 am	Floor First Room 1006E	0.7
3197172	3915445	11/13/2018	9:15 am	11/16/2018	7:31 am	Floor First Room 1006F	< 0.4
3197173	3915991	11/13/2018	9:16 am	11/16/2018	7:32 am	Floor First Room 1006G	< 0.4

**Comment:** AMENDED REPORT on 1-8-19 to add completed datasheet information.

Test Performed By: Not Indicated

Distributed by: Intertek-PSI (VA)

Date Received: 11/20/2018 Date Logged: 11/20/2018 Date Analyzed: 11/20/2018 Date Reported: 11/29/2018

Report Reviewed By: 

Report Approved By: 

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NRPP 105011 AL  
NRSB ARL0007

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 Wheaton High School  
12401 Dalewood Drive  
Silver Spring MD 20906

Log Number	Device Number	Test Exposure Duration:	Area Tested	Result pCi/L
3197174	3915442	11/13/2018 9:19 am 11/16/2018 8:43 am	Floor First Room 1607	< 0.4

**Comment:** AMENDED REPORT on 1-8-19 to add completed datasheet information.

Test Performed By: Not Indicated

Distributed by: Intertek-PSI (VA)

Date Received: 11/20/2018 Date Logged: 11/20/2018 Date Analyzed: 11/20/2018 Date Reported: 11/29/2018

Report Reviewed By: 

Report Approved By: 

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NELAC NY 11769  
NRPP 101193 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

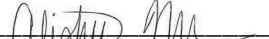
MCPS Radon Survey  
Wheaton High School  
Silver Spring MD 20906

Log Number	Device Number	Test Exposure Duration:			Area Tested	Result pCi/L
2393065	3881236	11/13/2018	10:16 am	11/16/2018 9:17 am	Bldg. Wheaton High School Floor First Room Café	0.5
2393132	3881235	11/13/2018	10:16 am	11/16/2018 9:17 am	Bldg. Wheaton High School Floor First Room Café	< 0.4

**Comment:** AMENDED REPORT for 3881235 on 01/15/2019 to add the date and time the test began and ended. A copy of this report was emailed to Intertek-PSI (VA).

Distributed by: Intertek-PSI (VA)

Date Received: 11/19/2018    Date Logged: 11/19/2018    Date Analyzed: 11/20/2018    Date Reported: 12/13/2018

Report Reviewed By: 

Report Approved By: 

**Disclaimer:**

Shawn Price, Director of Laboratory Operations, AccuStar Labs

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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: 

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# 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. Highland View ES | 6. EB Lee MS         | 11. Cannon Rd ES   |
| 2. Kemp Mill ES     | 7. Forest Knolls ES  | 12. Cloverly ES    |
| 3. Sligo Creek ES   | 8. Galway ES         | 13. Springbrook HS |
| 4. Highland ES      | 9. Wheaton HS        |                    |
| 5. Kennedy HS       | 10. Briggs Chaney MS |                    |

---

	Date	Initials
Radon Test Kits Deployed	11/13/2018	NL
Radon Test Kits Sampled	11/16/2018	NL
Radon Test Kits Shipped to Lab*	11/16/2018	NL
Radon Test Kits Received by Lab*	11/17/2018; 11/18/2018; 11/20/2018	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 WHEATON HIGH SCHOOL

12401 Dalewood Drive, Silver Spring, Maryland 20906

## EXECUTIVE SUMMARY

Date of Test Report:	4/15/16 Follow-Up
Round of Testing:	Initial Follow-up Post Remediation
# Rooms Tested	1
# Rooms $\geq$ 4.0 pCi/L:	0
Low Value:	<0.4
High Value:	0.4
Confirmed Rooms $\geq$ 4.0 pCi/L US EPA Action Level	0

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

Room	Result (pCi/L) 3/2/16 Initial	Result (pCi/L) 4/15/16 Follow-Up	Average Result (pCi/L)
1006D	--- Missing	0.4	0.4



## MCPS RADON TESTING

### Executive Summary: Wheaton High School

Date of Test Report:	4/15/2016
Round of Testing:	Initial Follow-up Post Remediation
# Rooms Tested:	1
# Rooms $\geq$ 4.0 pCi/L:	0
Low Value:	< 0.4
High Value:	0.4

### Project Status:

Retesting completed; no further action at this time.



ENGINEERS • PLANNERS • SCIENTISTS • CONSTRUCTION MANAGERS

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

April 15, 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: Wheaton High School  
12401 Dalewood Drive  
Silver Spring, MD 20906

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 Wheaton High School, located at 12401 Dalewood Drive in Silver Spring, Maryland 20906 (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 14, 2016 and deployed two (2) 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 17, 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>	none	n/a
<b><math>&lt; 4.0</math> 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 0.4 pCi/L. Review of the duplicate sample analysis indicates that adequate laboratory measurement precision was achieved. The Spike sample analysis results indicate the laboratory is operating within statistical control limits.

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

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

Sincerely,



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

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

# ATTACHMENT A

## Floor Plan With Test Locations

## ATTACHMENT B

### Radon Test Summary Spreadsheet

**Table Notes:**

AC- Activated Charcoal

ACI- Air Chek, Inc.

D- Duplicate

FB- Field Blank

KCI- KCI Technologies, Inc.

OB- Office Blank\*

PM- Project Manager

QC- Quality Control

\*Office blanks were submitted at a rate of 1% for all samples deployed in Phase 12 testing. Office blanks were not submitted under each school individually.

Radon Testing Results		
Wheaton HS		
Test Period: 03/14/16-03/17/16		
Kit Number	Room / Area	Result
3028722	1006D	<0.4

Table Note:

\* Missing or Compromised Sample

Radon Testing Results		
Wheaton HS		
Test Period: 03/14/16-03/17/16		
Kit Number	QC Type	Result
3028721	D (1006D)	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

Wheaton HS  
12601 Dalewood Drive  
Silver Spring MD 20906

Log Number	Device Number	Test Exposure Duration:	Area Tested	Result (pCi/L)
3017556	3028721	03/14/2016 12:28 pm 03/17/2016 9:53 am	1006D	0.4
3017557	3028722	03/14/2016 12:28 pm 03/17/2016 9:53 am	1006D	<0.4

**Comment:** Ending time assumed as AM. Accurate results are dependent on the correct time. Contact the lab if this is incorrect. 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 Lebuech

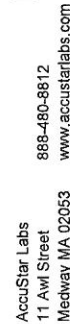
Report Approved By: Carolyn D. Koke

**Disclaimer:**

Carolyn D. Koke, President, AccuStar Labs

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

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AccuStar Labs  
11 Awl Street  
Medway MA 02053  
888-480-8812  
[www.accustarlabs.com](http://www.accustarlabs.com)

**Site Tested:**

Site Name	Wheaton HS
Address	12601 Dolewood Dr
Address	
City / Town	Silver Spring
State/Province	MD
Test Country	20906
Project Number	Montgomery County
	12146341

**Site Tested:**

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

[illegible]

NRPP 10511AL  
NRSB ARL0007

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

Laboratory Report for:

Property Tested: 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

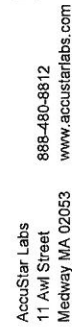
Report Approved By: Carolyn D. Koke

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AccuStar Labs  
11 Awl Street  
Medway MA 02053  
888-480-8812  
[www.accustarlabs.com](http://www.accustarlabs.com)

**Site Tested:**

Site Name	KCI OFFICE
Address	936 RIDGEBROOK RD
Address	
City / Town	SPARKS
State/Province	MD
Postal Code	21152
Test Country	Montgomery County
Project Number	12146341

**Site Tested:**

Site Name	KCI OFFICE
Address	936 RIDGEBROOK RD
Address	
City / Town	SPARKS
State/Province	MD
Postal Code	21152
Test Country	Montgomery County
Project Number	12146341

[illegible]

NRPP 10511AL  
NRSB ARL0007

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

Laboratory Report for:

Property Tested: 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

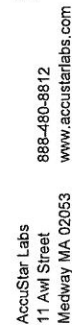
Report Approved By: Carolyn D. Koke

**Disclaimer:**

Carolyn D. Koke, President, AccuStar Labs

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AccuStar Labs  
11 Awl Street  
Medway MA 02053  
888-480-8812  
[www.accustarlabs.com](http://www.accustarlabs.com)

**Contact Information:**

KCI OFFICE			
936 RIDGEBROOK RD			
SPARKS			
Postal Code	MD	21152	
Montgomery County			
12146341			

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

[illegible]

NRPP 10511AL  
NRSB ARL0007

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

Laboratory Report for:

KCI Technologies  
936 Ridgebrook Rd  
Sparks MD 21152

Property Tested:

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.moulds@kci.com.

Distributed by: KCI Technologies, Inc.

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

Report Reviewed By: Christie Bates

Report Approved By: Carolyn D. Koke

**Disclaimer:**

Carolyn D. Koke, President, AccuStar Labs

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

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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  
Site Address: Transit  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_ County: \_\_\_\_\_

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

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

Multi-Page Report Y-N

LAB USE ONLY			
Detector Serial#	ROOM NAME & NUMBER - LOCATION OF DETECTOR IN ROOM (indicate duplicates and blanks)	Floor	Wgt. Gain pCi/L
3028953	Transit	1	204
8955	Transit	1	204
8954	Transit	1	204
8997	Transit	1	204

Start Time Include AM/PM	Stop Time Include AM/PM	Start Date	Stop Date
9:30am	9:30am	1/19/16	1/22/16
		1/19/16	
		1/19/16	
		1/19/16	

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

Attention: James Mouldale

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

Send Results To:

Company Name:

Address:

City:

Phone:

EMAIL Results to:

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

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

Revision 5  
4/2015

# TCS INDUSTRIES, INC.

(717) 657-7032

RADON GAS DETECTION

www.radondetek.com

4326 Crestview Road, Harrisburg, PA 17112

James Mouldsdale  
KCI  
936 Ridgebrook Rd.  
Sparks, MD 21152

April 04, 2016

Dear Mr. Mouldsdale:

The spike exposure data were:

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

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

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

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

Sincerely,



Carl H. Distenfeld, CHP

\*\*\*\*\*  
TCS Radon Chamber NRSB CHM 0002  
\*\*\*\*\*

NRPP 10511AL  
NRSB ARL0007

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

Laboratory Report for:

Property Tested:

KCI Technologies  
936 Ridgebrook Rd  
Sparks MD 21152

MCPS  
Radon Spike Sample Laboratory Results

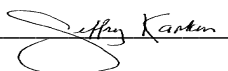
Log Number	Device Number	Test Exposure Duration:		Area Tested	Result (pCi/L)
3020102	3029166	04/04/2016 11:10 am	04/06/2016 11:13 am	Not Indicated	11.9
3020103	3029214	04/04/2016 11:10 am	04/06/2016 11:13 am	Not Indicated	11.5
3020104	3029217	04/04/2016 11:10 am	04/06/2016 11:13 am	Not Indicated	10.7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

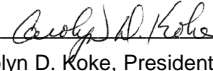
**Comment:** A copy of this report was emailed to james.mouldsdale@kci.com.

Distributed by: KCI Technologies, Inc.

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

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

Report Reviewed By: 

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

**Disclaimer:**

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## MCPS RADON TESTING

### Executive Summary: Wheaton High School

Date of Test Report:	3/2/2016
Round of Testing:	Initial Follow-up Post Remediation
# Rooms Tested:	88
# Rooms $\geq$ 4.0 pCi/L:	0
Low Value:	< 0.3
High Value:	1.2

### Project Status:

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



ENGINEERS • PLANNERS • SCIENTISTS • CONSTRUCTION MANAGERS

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

March 2, 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 # 12146341.26

Location: Wheaton High School  
12401 Dalewood Drive  
Silver Spring, MD 20906

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 Wheaton High School, located at 12401 Dalewood Drive in Silver Spring, Maryland 20906 (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 2, 2016 and deployed on hundred seven (107) activated charcoal (AC) radon test kits. KCI deployed radon test kits in frequently-occupied ground contact rooms, and other areas, (if applicable) in accordance with AARST guidance. A floor plan map of the building with the test locations is included as Attachment A of this report.

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

KCI returned to the site on February 5, 2016 to retrieve the radon sampling test kits. KCI shipped all radon tests via overnight delivery to Airchek, Inc. for analysis by gamma-ray spectroscopy. Airchek, Inc. is a NRSB certified analytical laboratory for radon analysis (certification # ARL1402) located at 1936

Butler Bridge Road, Mills River, North Carolina.

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

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

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

KCI also conducted observations of field conditions which could affect the results of the test and compiled weather data for the testing period. 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>	none	n/a
<b><math>&lt; 4.0</math> pCi/L</b>	See Attachment B	

Notes:

D- Duplicate sample

The 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. Moulds  
Radon Measurement Specialist  
KCI Technologies, Inc.

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

# ATTACHMENT A

## Floor Plan With Test Locations

## ATTACHMENT B

### Radon Test Summary Spreadsheet

**Table Notes:**

AC- Activated Charcoal

ACI- Air Chek, Inc.

D- Duplicate

FB- Field Blank

KCI- KCI Technologies, Inc.

OB- Office Blank

PM- Project Manager

QC- Quality Control

Radon Testing Results		
Wheaton High School		
Test Period: 02/02/16-02/05/16		
Kit Number	Room / Area	Result
7718393	1001	< 0.3
7718375	1002	< 0.3
7718372	1003	< 0.3
7721688	1007	< 0.3
7719542	1008	< 0.3
7721683	1009	< 0.3
7718362	1104	< 0.3
7717631	1107	1.0
7718310	1107	0.9
7716665	1115	< 0.3
7716660	1204	< 0.3
7718316	1205	0.6
7716664	1209	< 0.3
7718285	1210	0.6
7716666	1211	< 0.3
7716626	1215	< 0.3
7718366	1219	< 0.3
7718304	1301	0.6
7718196	1305	0.7
7718306	1307	< 0.3
7718308	1315	< 0.3
7721624	1600	0.9
7719567	1607	< 0.3
7718301	1707	0.6
7719568	1712	1.2
7716636	1715	< 0.3
7718284	1715	< 0.3
7716629	1716	< 0.3
7716635	1718	< 0.3
7718309	1720	0.7
7719541	1721	< 0.3
7721601	2100	< 0.3
7721607	2101	0.8
7721602	2105	0.7
7718329	2107	0.6
7721611	2108	< 0.3
7721608	2111	0.9
7721631	2112	< 0.3
7721613	2113	0.6
7719540	2114	< 0.3
7721609	2117	< 0.3
7718313	3101	< 0.3
7718302	3104	< 0.3
7718307	3105	0.5
7719480	3105	< 0.3
7721606	3107	< 0.3

Table Note:

\* Missing or Compromised Sample

Radon Testing Results		
Wheaton High School		
Test Period: 02/02/16-02/05/16		
Kit Number	Room / Area	Result
7721605	3109	< 0.3
7721610	3112	< 0.3
7721603	3115	< 0.3
7718385	3117	< 0.3
7721604	3120	0.6
7718398	1000A	0.6
7718400	1000C	0.6
7718386	1000F	0.6
7718396	1000G	< 0.3
7718394	1000H	< 0.3
7718395	1000I	< 0.3
7718392	1000J	< 0.3
7718390	1000K	0.7
7718388	1000L	< 0.3
7718367	1000N	< 0.3
7718387	1000P	< 0.3
7718365	1000R	< 0.3
7718397	1000S	< 0.3
7716644	1000T	< 0.3
7718368	1000W	< 0.3
7718373	1000Y	0.7
7718374	1000Z	< 0.3
7718379	1001A	< 0.3
7718376	1001B	< 0.3
7718377	1001C	0.6
7718380	1001E	< 0.3
7716640	1001F	0.7
7718382	1001G	0.5
7718381	1001H	< 0.3
7718358	1001I	< 0.3
7718383	1001J	< 0.3
7718357	1001N	0.6
7718312	1001O	< 0.3
7718359	1001P	0.6
7718389	1006C	< 0.3
7718370	* 1006D (Missing)	-
7721615	1006E	< 0.3
7719566	1006F	< 0.3
7721628	1007A	< 0.3
7721900	1107A	0.8
7718364	1107A1	0.9
7718360	1115C	< 0.3
7718391	1117E	0.7
7718361	CAFE	< 0.3
7718371	CAFE	< 0.3
7718399	OFFICE	< 0.3

Table Note:

\* Missing or Compromised Sample

Radon Testing Results		
Wheaton High School		
Test Period: 02/02/16-02/05/16		
Kit Number	QC Type	Result
7718369	D (1000N)	< 0.3
7718384	D (1001J)	< 0.3
7716628	D (1001K)	0.7
7718378	D (1002)	< 0.3
7722591	D (1007A)	< 0.3
7716658	D (1104)	0.5
7719652	D (1210)	< 0.3
7718305	D (1720)	< 0.3
7721612	D (2113)	< 0.3
7718315	D (3107)	< 0.3
7718314	FB (1001J)	< 0.3
7719545	FB (1720)	< 0.3
7718363	FB (3107)	< 0.3
7731175	OB (0)	< 0.3
7731196	OB (0)	< 0.3

Table Note:

\* Missing or Compromised Sample

## ATTACHMENT C

### Laboratory Analytical Results

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

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7718398	1000A	2016-02-02 @ 8:00 am	2016-02-05 @ 8:00 am	0.6 ± 0.3	2016-02-09
7718400	1000C	2016-02-02 @ 9:00 am	2016-02-05 @ 9:00 am	0.6 ± 0.3	2016-02-09
7718386	1000F	2016-02-02 @ 8:00 am	2016-02-05 @ 9:00 am	0.6 ± 0.3	2016-02-09
7718396	1000G	2016-02-02 @ 8:00 am	2016-02-05 @ 9:00 am	< 0.3	2016-02-09
7718394	1000H	2016-02-02 @ 8:00 am	2016-02-05 @ 9:00 am	< 0.3	2016-02-09
7718395	1000I	2016-02-02 @ 8:00 am	2016-02-05 @ 8:00 am	< 0.3	2016-02-09
7718392	1000J	2016-02-02 @ 8:00 am	2016-02-05 @ 9:00 am	< 0.3	2016-02-09
7718390	1000K	2016-02-02 @ 9:00 am	2016-02-05 @ 9:00 am	0.7 ± 0.3	2016-02-09
7718388	1000L	2016-02-02 @ 9:00 am	2016-02-05 @ 9:00 am	< 0.3	2016-02-09
7718367	1000N	2016-02-02 @ 9:00 am	2016-02-05 @ 9:00 am	< 0.3	2016-02-09
7718369	1000N	2016-02-02 @ 9:00 am	2016-02-05 @ 9:00 am	< 0.3	2016-02-09
7718387	1000P	2016-02-02 @ 9:00 am	2016-02-05 @ 9:00 am	< 0.3	2016-02-09
7718365	1000R	2016-02-02 @ 9:00 am	2016-02-05 @ 9:00 am	< 0.3	2016-02-09
7718397	1000S	2016-02-02 @ 9:00 am	2016-02-05 @ 9:00 am	< 0.3	2016-02-09
7716644	1000T	2016-02-02 @ 9:00 am	2016-02-05 @ 9:00 am	< 0.3	2016-02-09
7718368	1000W	2016-02-02 @ 9:00 am	2016-02-05 @ 11:00 am	< 0.3	2016-02-09
7718373	1000Y	2016-02-02 @ 9:00 am	2016-02-05 @ 9:00 am	0.7 ± 0.3	2016-02-09
7718374	1000Z	2016-02-02 @ 9:00 am	2016-02-05 @ 9:00 am	< 0.3	2016-02-09
7718393	1001	2016-02-02 @ 9:00 am	2016-02-05 @ 9:00 am	< 0.3	2016-02-09
7718379	1001A	2016-02-02 @ 9:00 am	2016-02-05 @ 9:00 am	< 0.3	2016-02-09
7718376	1001B	2016-02-02 @ 9:00 am	2016-02-05 @ 9:00 am	< 0.3	2016-02-09
7718377	1001C	2016-02-02 @ 9:00 am	2016-02-05 @ 9:00 am	0.6 ± 0.3	2016-02-09
7718380	1001E	2016-02-02 @ 9:00 am	2016-02-05 @ 9:00 am	< 0.3	2016-02-09
7716640	1001F	2016-02-02 @ 9:00 am	2016-02-05 @ 9:00 am	0.7 ± 0.3	2016-02-09
7718382	1001G	2016-02-02 @ 9:00 am	2016-02-05 @ 9:00 am	0.5 ± 0.3	2016-02-09
7718381	1001H	2016-02-02 @ 9:00 am	2016-02-05 @ 9:00 am	< 0.3	2016-02-09
7718358	1001I	2016-02-02 @ 9:00 am	2016-02-05 @ 9:00 am	< 0.3	2016-02-09
7718314	1001J	2016-02-02 @ 9:00 am	2016-02-05 @ 9:00 am	< 0.3	2016-02-09
7718383	1001J	2016-02-02 @ 9:00 am	2016-02-05 @ 9:00 am	< 0.3	2016-02-09
7718384	1001J	2016-02-02 @ 9:00 am	2016-02-05 @ 9:00 am	< 0.3	2016-02-09
7716628	1001K	2016-02-02 @ 9:00 am	2016-02-05 @ 9:00 am	0.7 ± 0.3	2016-02-09
7718357	1001N	2016-02-02 @ 9:00 am	2016-02-05 @ 9:00 am	0.6 ± 0.3	2016-02-09
7718312	1001O	2016-02-02 @ 9:00 am	2016-02-05 @ 9:00 am	< 0.3	2016-02-09
7718359	1001P	2016-02-02 @ 9:00 am	2016-02-05 @ 9:00 am	0.6 ± 0.3	2016-02-09
7718375	1002	2016-02-02 @ 9:00 am	2016-02-05 @ 10:00 am	< 0.3	2016-02-09
7718378	1002	2016-02-02 @ 9:00 am	2016-02-05 @ 10:00 am	< 0.3	2016-02-09
7718372	1003	2016-02-02 @ 9:00 am	2016-02-05 @ 9:00 am	< 0.3	2016-02-09

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

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7718389	1006C	2016-02-02 @ 9:00 am	2016-02-05 @ 9:00 am	< 0.3	2016-02-09
7718370	1006D	@	@		
7721615	1006E	2016-02-02 @ 11:00 am	2016-02-05 @ 10:00 am	< 0.3	2016-02-09
7719566	1006F	2016-02-02 @ 11:00 am	2016-02-05 @ 10:00 am	< 0.3	2016-02-09
7721688	1007	2016-02-02 @ 11:00 am	2016-02-05 @ 10:00 am	< 0.3	2016-02-09
7722591	1007A	2016-02-02 @ 11:00 am	2016-02-05 @ 10:00 am	< 0.3	2016-02-09
7721628	1007A	2016-02-02 @ 11:00 am	2016-02-05 @ 10:00 am	< 0.3	2016-02-09
7719542	1008	2016-02-02 @ 11:00 am	2016-02-05 @ 10:00 am	< 0.3	2016-02-09
7721683	1009	2016-02-02 @ 10:00 am	2016-02-05 @ 10:00 am	< 0.3	2016-02-09
7718362	1104	2016-02-02 @ 9:00 am	2016-02-05 @ 10:00 am	< 0.3	2016-02-09
7716658	1104	2016-02-02 @ 9:00 am	2016-02-05 @ 10:00 am	0.5 ± 0.3	2016-02-09
7718310	1107	2016-02-02 @ 9:00 am	2016-02-05 @ 9:00 am	0.9 ± 0.3	2016-02-09
7717631	1107	2016-02-02 @ 9:00 am	2016-02-05 @ 9:00 am	1.0 ± 0.3	2016-02-09
7718364	1107A1	2016-02-02 @ 9:00 am	2016-02-05 @ 9:00 am	0.9 ± 0.3	2016-02-09
7721900	1107A	2016-02-02 @ 9:00 am	2016-02-05 @ 9:00 am	0.8 ± 0.3	2016-02-09
7716665	1115	2016-02-02 @ 9:00 am	2016-02-05 @ 9:00 am	< 0.3	2016-02-09
7718360	1115C	2016-02-02 @ 10:00 am	2016-02-05 @ 9:00 am	< 0.3	2016-02-09
7718391	1117E	2016-02-02 @ 10:00 am	2016-02-05 @ 9:00 am	0.7 ± 0.3	2016-02-09
7716660	1204	2016-02-02 @ 10:00 am	2016-02-05 @ 9:00 am	< 0.3	2016-02-09
7718316	1205	2016-02-02 @ 10:00 am	2016-02-05 @ 9:00 am	0.6 ± 0.3	2016-02-09
7716664	1209	2016-02-02 @ 10:00 am	2016-02-05 @ 9:00 am	< 0.3	2016-02-09
7718285	1210	2016-02-02 @ 10:00 am	2016-02-05 @ 9:00 am	0.6 ± 0.3	2016-02-09
7719652	1210	2016-02-02 @ 10:00 am	2016-02-05 @ 9:00 am	< 0.3	2016-02-09
7716666	1211	2016-02-02 @ 10:00 am	2016-02-05 @ 9:00 am	< 0.3	2016-02-09
7716626	1215	2016-02-02 @ 10:00 am	2016-02-05 @ 9:00 am	< 0.3	2016-02-09
7718366	1219	2016-02-02 @ 10:00 am	2016-02-05 @ 9:00 am	< 0.3	2016-02-09
7718304	1301	2016-02-02 @ 10:00 am	2016-02-05 @ 9:00 am	0.6 ± 0.3	2016-02-09
7718196	1305	2016-02-02 @ 10:00 am	2016-02-05 @ 9:00 am	0.7 ± 0.3	2016-02-09
7718306	1307	2016-02-02 @ 10:00 am	2016-02-05 @ 9:00 am	< 0.3	2016-02-09
7718308	1315	2016-02-02 @ 10:00 am	2016-02-05 @ 9:00 am	< 0.3	2016-02-09
7721624	1600	2016-02-02 @ 10:00 am	2016-02-05 @ 10:00 am	0.9 ± 0.3	2016-02-09
7719567	1607	2016-02-02 @ 10:00 am	2016-02-05 @ 10:00 am	< 0.3	2016-02-09
7718301	1707	2016-02-02 @ 10:00 am	2016-02-05 @ 10:00 am	0.6 ± 0.3	2016-02-09
7719568	1712	2016-02-02 @ 10:00 am	2016-02-05 @ 10:00 am	1.2 ± 0.3	2016-02-09
7716636	1715	2016-02-02 @ 10:00 am	2016-02-05 @ 10:00 am	< 0.3	2016-02-09
7718284	1715	2016-02-02 @ 10:00 am	2016-02-05 @ 10:00 am	< 0.3	2016-02-09
7716629	1716	2016-02-02 @ 10:00 am	2016-02-05 @ 10:00 am	< 0.3	2016-02-09

February 23, 2016  
**\*\* LABORATORY ANALYSIS REPORT \*\***

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

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7716635	1718	2016-02-02 @ 10:00 am	2016-02-05 @ 10:00 am	< 0.3	2016-02-09
7718305	1720	2016-02-02 @ 10:00 am	2016-02-05 @ 10:00 am	< 0.3	2016-02-09
7718309	1720	2016-02-02 @ 10:00 am	2016-02-05 @ 10:00 am	0.7 ± 0.3	2016-02-09
7719545	1720	2016-02-02 @ 10:00 am	2016-02-05 @ 10:00 am	< 0.3	2016-02-09
7719541	1721	2016-02-02 @ 10:00 am	2016-02-05 @ 10:00 am	< 0.3	2016-02-09
7721601	2100	2016-02-02 @ 11:00 am	2016-02-05 @ 10:00 am	< 0.3	2016-02-09
7721607	2101	2016-02-02 @ 11:00 am	2016-02-05 @ 10:00 am	0.8 ± 0.3	2016-02-09
7721602	2105	2016-02-02 @ 11:00 am	2016-02-05 @ 10:00 am	0.7 ± 0.3	2016-02-09
7718329	2107	2016-02-02 @ 11:00 am	2016-02-05 @ 10:00 am	0.6 ± 0.3	2016-02-09
7721611	2108	2016-02-02 @ 11:00 am	2016-02-05 @ 10:00 am	< 0.3	2016-02-09
7721608	2111	2016-02-02 @ 11:00 am	2016-02-05 @ 10:00 am	0.9 ± 0.3	2016-02-09
7721631	2112	2016-02-02 @ 11:00 am	2016-02-05 @ 10:00 am	< 0.3	2016-02-09
7721612	2113	2016-02-02 @ 11:00 am	2016-02-05 @ 10:00 am	< 0.3	2016-02-09
7721613	2113	2016-02-02 @ 11:00 am	2016-02-05 @ 10:00 am	0.6 ± 0.3	2016-02-09
7719540	2114	2016-02-02 @ 11:00 am	2016-02-05 @ 10:00 am	< 0.3	2016-02-09
7721609	2117	2016-02-02 @ 11:00 am	2016-02-05 @ 10:00 am	< 0.3	2016-02-09
7718313	3101	2016-02-02 @ 11:00 am	2016-02-05 @ 11:00 am	< 0.3	2016-02-09
7718302	3104	2016-02-02 @ 11:00 am	2016-02-05 @ 11:00 am	< 0.3	2016-02-09
7718307	3105	2016-02-02 @ 11:00 am	2016-02-05 @ 11:00 am	0.5 ± 0.3	2016-02-09
7719480	3105	2016-02-02 @ 11:00 am	2016-02-05 @ 11:00 am	< 0.3	2016-02-09
7718315	3107	2016-02-02 @ 11:00 am	2016-02-05 @ 11:00 am	< 0.3	2016-02-09
7718363	3107	2016-02-02 @ 11:00 am	2016-02-05 @ 11:00 am	< 0.3	2016-02-09
7721606	3107	2016-02-02 @ 11:00 am	2016-02-05 @ 11:00 am	< 0.3	2016-02-09
7721605	3109	2016-02-02 @ 11:00 am	2016-02-05 @ 11:00 am	< 0.3	2016-02-09
7721610	3112	2016-02-02 @ 11:00 am	2016-02-05 @ 11:00 am	< 0.3	2016-02-09
7721603	3115	2016-02-02 @ 11:00 am	2016-02-05 @ 10:00 am	< 0.3	2016-02-09
7718385	3117	2016-02-02 @ 11:00 am	2016-02-05 @ 10:00 am	< 0.3	2016-02-09
7721604	3120	2016-02-02 @ 11:00 am	2016-02-05 @ 10:00 am	0.6 ± 0.3	2016-02-09
7718361	CAFE	2016-02-02 @ 10:00 am	2016-02-05 @ 9:00 am	< 0.3	2016-02-09
7718371	CAFE	2016-02-02 @ 10:00 am	2016-02-05 @ 9:00 am	< 0.3	2016-02-09
7718399	OFFICE	2016-02-02 @ 8:00 am	2016-02-05 @ 8:00 am	< 0.3	2016-02-09

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February 23, 2016

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

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Radon test result report for:  
**WHEATON HIGH SCHOOL**  
**OFFICE BLANK**

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Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7731196	0	2016-02-02 @ 4:00 pm	2016-02-05 @ 3:00 pm	< 0.3	2016-02-09
7731175	OO	2016-02-02 @ 4:00 pm	2016-02-05 @ 3:00 pm	< 0.3	2016-02-09

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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:  
**TRANSIT- PHASE 7, 8, 9**  
**NONE**

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

February  
15,  
2016

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

Spike Sample Laboratory Results

Radon test result report for:  
**MCPS**

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

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

# EXPOSURE IN BOWSER-MORNER RADON CHAMBER

CLIENT KCF Technologies Inc. Job Number 173704

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

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

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

Time Start: 0926 Time Stop: 0926

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

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

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

7718281, 7718282, 7718291,

7718288, 7718289, 7718273

3 Left

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

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

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

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

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

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

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

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

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

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

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

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

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



## Radon Test Kit Chain of Custody

Project Name: MCPS Radon Phase 7 (2-1-2016)

Name of School/Facility:

- |                            |                             |                            |
|----------------------------|-----------------------------|----------------------------|
| 1. Wyngate E.S.            | 10. Bethesda Depot          | 18. Stone Mill E.S.        |
| 2. Seven Locks E.S.        | 11. Bethesda Trans Depot    | 19. Strawberry Knoll E.S.  |
| 3. Takoma Park M.S.        | 12. Sligo M.S.              | 20. Shady Grove M.S.       |
| 4. Somerset E.S.           | 13. Stonegate E.S.          | 21. Washington Grove E.S.  |
| 5. Silver Spring Int. M.S. | 14. Randolph Transportation | 22. Sherwood E.S.          |
| 6. Sligo Creek E.S.        | 15. Earl B. Wood M.S.       | 23. Woodfield E.S.         |
| 7. Tilden M.S.             | 16. Sargent Shriver E.S.    | 24. Taylor Learning Center |
| 8. Tilden Center           | 17. Thomas Wooten H.S.      | 25. Kingsley Wilderness    |
| 9. Bethesda Annex          |                             |                            |

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	Date	Initials
Radon Test Kits Deployed	2/1/16	JM
Radon Test Kits Collected	2/4/16	JM
Radon Test Kits Shipped to Lab*	2/4/16	JM
Radon Test Kits Received by Lab*	2/8/16	JM

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



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ENGINEERS • PLANNERS • SCIENTISTS • CONSTRUCTION MANAGERS

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

## Radon Test Kit Chain of Custody

Project Name: MCPS Radon Phase 7 (2-2-2016)

Name of School/Facility:

- |                                |                                |
|--------------------------------|--------------------------------|
| 1. Concord Center              | 8. Food & Nutritional Services |
| 2. Lynnbrook Center            | 9. Fairland Center             |
| 3. Carver (CESC)               | 10. Redland M.S. (retest)      |
| 4. Spring Mill (area 1 Office) | 11. Clarksburg Trans Depot     |
| 5. Wheaton H.S                 | 12. Clarksburg Main Depot      |
| 6. Montrose Center             | 13. Clarksburg E.S.            |
| 7. West Farm Trans Depot       |                                |

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	Date	Initials
Radon Test Kits Deployed	2/2/16	JM
Radon Test Kits Collected	2/5/16	JM
Radon Test Kits Shipped to Lab*	2/5/16	JM
Radon Test Kits Received by Lab*	2/9/16	JM

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