School / Facility Radon Testing Report Form

School Year: **24-25**

Facility:	Wayside Elementary School
Address:	10011 Glen Rd.
	Potomac, MD 20854
Reason for Testing:	Scheduled Re-Testing - ☒ 2-year or ☐ 5-year schedule ☐ Clearance Testing (Post-Mitigation) ☒ Building Envelope or HVAC Upgrades ☐ New Construction – Addition or Facility
Current Radon Status:	☒ Active Mitigation (2-year regular schedule) ☐ No Active Mitigation (5-year regular schedule) ☐ Not Previously Tested (New Facility)
Round of Testing:	☒ Initial Testing **-or-** ☐ Follow-up Testing
Testing Status:	☒ No Further Testing Needed **-or-** ☐ Follow-Up Testing Required

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

Mitigation -	**Facility Radon Status:**		
☒ Not Required ☐ Required (≥4.0-pCi/L) Rooms:	☒ No Change in Status ☐ Active Mitigation (2-year regular schedule) ☐ No Active Mitigation (5-year regular schedule)		
Number of Rooms Tested	49	Lowest Value (pCi/L)	<0.3
Number of Rooms (≥4.0-pCi/L)	0	Highest Value (pCi/L)	0.7

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

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

- Testing Results – lab/detector Identification, by room number/name (alpha-numeric order) as depicted on facility map/floor plan provided by the facility/school at the time of test device deployment;
- Summary Results – list of rooms by test result ≥2.0-pCi/L; ≥2.7-pCi/L; ≥4.0-pCi/L; and ≥8.0-pCi/L;
- QA/QC Results - (field blanks and duplicates) indicating location collected; trip and office blanks; and spike sample results;
- Invalid Measurement Locations – missed locations, missing and or damaged/compromised testing devices.

Attachment 2 – Laboratory Report(s)

Attachment 3 – Sampling Location Map(s) – indicating approximate location of samples, duplicates and blanks.

MCPS DEM SUSTAINABILITY & COMPLIANCE

School / Facility Radon Testing Report Form

Detector and Deployment

Detector/Device Type:	☒ Passive ☐ Continuous	☒ Charcoal Absorption (CAD) ☐ Alpha Track (ATD) ☐ Other ☐ Electret ion Chamber (EIC) ☐ Electronic Integration (EID)
	Other–Specify here:	
Detector/Device Name:	Air Chek – Radon Test Kits	
Manufacturer:	Radon Labs	

Person(s) Deploying or Retrieving Test Devices and certification number	Organization/Company
Shannon King	KCI Technologies, Inc.
If noncertified individuals, the qualified measurement professional providing oversight -	
Tyler McCleaf, CSP Cert. # 111004-RMP	KCI Technologies, Inc.

Testing

☒ Short-Term ☐ Long-Term	Length of Test (days):	3	Date of Deployment and Retrieval (mm/dd/yy):	2/4/2025 2/7/2025
Does the test period include weekends, school breaks or holidays?				☐ Yes ☒ No
*If "**Yes**" please explain/detail in the space below:*				
Was HVAC operating under occupied conditions?				☒ Yes ☐ No
*If "**No**" please explain/detail in the space below:*				

Testing (continued)

	Detectors Deployed				
	Ground-Contact		Upper-Level(s)		Total
Round of Testing	Initial	Follow-Up	Initial	Follow-Up	
Test Locations[1]	46	0	3	0	49
Duplicates[2]	5	0	1	0	6
Field Blanks[3]	2	0	1	0	3
				Grand Total	58

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.

	QA/QC Samples		Total
Round of Testing	Initial	Follow-Up	
Spikes[1]	Not applicable		10
Trip Blanks[2]	1	0	1
Office Blanks[3, 4]	1	0	1
			12

1 - 3% of EIC detectors; and 3% from each LOT of CAD and ATD detectors; a maximum of 6-spiked measurements per month for both EIC detectors and each LOT of CAD and ATD detectors.
2 – One per shipping container from start of detector deployment
3 – One per facility tested as devices are removed/allocated from the storage location for deployment;
4 - One additional blank, analyzed prior to deployment, for storage locations that have not been evaluated or monitored, for detectors that have been stored for more than 30-day durations.

Quality Assurance / Quality Control (continued)

Spike Sample Lab Results. Measured values are satisfactory, i.e., within ± 25% of the chamber's reference value?	☒ Yes ☐ No	
Quality Control measurements comply with QA/QC requirements in the submitted testing organization's/company's QA plan?	☒ Yes ☐ No	
Round of Testing	**Initial**	**Follow-Up**
All Field, Trip and Office Blanks are **≤** (less than or equal to) to the Method Detection Limit?	☒ Yes ☐ No	☐ Yes ☒ No
For all Duplicate Samples[1], the higher value is **≤ 2x** the lower value?	☒ Yes ☐ No	☐ Yes ☒ No
For all Duplicate Samples[1], Relative Percent Difference(s) (RPD)[2] are less than the Warning Level[3]?	☒ Yes ☐ No	☐ Yes ☒ No
For all Duplicate Samples[1], Relative Percent Difference(s) (RPD)[2] are less than the Control Level[3]?	☒ Yes ☐ No	☐ Yes ☒ No

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

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

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

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

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

MCPS DEM SUSTAINABILITY & COMPLIANCE

School / Facility Radon Testing Report Form

Summary of Test Results[1] and Determination of Valid Measurements[2]

	Ground-Contact		Upper-Level(s)		Total
Round of Testing	**Initial**	**Follow-Up**	**Initial**	**Follow-Up**	
Number of test locations:	46	0	3	0	49
Number of locations ≥8.0-pCi/L:	0	0	0	0	0
Number of locations ≥4.0 and ≤8-pCi/L:	0	0	0	0	0
Number of locations ≥2.7 and <4-pCi/L:	0	0	0	0	0
Number of locations ≥2.0 and <2.7-pCi/L:	0	0	0	0	0
Number of missing required test locations[3]:	1	0	0	0	1
Number of failed duplicate control locations:	0	0	0	0	0
Percentage of missing test locations for the facility[4,5]:	2.2%	0	0	0	2.2%

1 – for locations with multiple test results, report consistent with Section 7.2(When Two Test Results Disagree) and 8.1.2 (Averaging) of ANSI/AARST MA-MFLB 2023 – Conducting Measurements of Radon in Multifamily, School, Commercial and Mix-Use Buildings;

2 - the allowance is to be calculated individually for Ground-Contact and Upper-Level(s) Test Locations;

3 – includes missed or inaccessible locations upon deployment or retrieval, damaged (not able to analyze) and missing detectors upon retrieval;

4 – if all valid measurements are <4.0-pCi/L and the total number of test locations are ≥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;

5 – 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.

Summary of Test Results[1] and Determination of Valid Measurements[2] (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?	☒ Yes ☐ No	☐ Yes ☒ 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?	☐ Yes ☒ No	☐ Yes ☒ No
***If Yes to both above** – then Testing Status – **'No Further Testing Needed'** mark 'NA' below and complete Conclusions section*		
If No to either above, were all results obtained under 4.0-pCi/L **and** were sufficient valid measurements obtained?[1,2] ***If Yes,** then - '**No Further Testing Needed**' complete Conclusion section on first page.* ***If No**, then - '**Follow-up Testing Required**' continue below.*	☒ Yes ☐ No ☐ NA	☐ Yes ☐ No ☒ 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		
Wayside Elementary School		
Test Period: 2/4/2025 - 2/7/2025		
Kit Number	Room / Area	Result
11931486	102	< 0.3
11931495	103	< 0.3
11931492	103	< 0.3
11931493	104	< 0.3
11931496	105	< 0.3
11931497	107	< 0.3
11931500	112	< 0.3
11931499	115	< 0.3
11931503	119	0.6
11931501	120	< 0.3
11931508	124	< 0.3
11931507	124	< 0.3
11931511	127	< 0.3
11931509	128	0.7
11931510	128	< 0.3
11931505	129	< 0.3
11931512	131	< 0.3
11931517	133	< 0.3
11931518	133	0.5
11931506	134	< 0.3
11931502	135	< 0.3
11931513	136	< 0.3
11931515	137	< 0.3
11931516	139	< 0.3
11931519	140	< 0.3
11931514	141	< 0.3
11931520	146	< 0.3
11931521	150	< 0.3
11931523	152	< 0.3
11931524	156	< 0.3
11931525	156	< 0.3
11931527	161	< 0.3
11931526	161	< 0.3
11931533	163	< 0.3
11931528	164	< 0.3
11931532	166	< 0.3
11931535	167	< 0.3

Table 1- Radon Testing Results		
Wayside Elementary School		
Test Period: 2/4/2025 - 2/7/2025		
Kit Number	Room / Area	Result
11931536	169	< 0.3
11931534	170	< 0.3
11931529	172	< 0.3
11931530	172	< 0.3
11931539	178	< 0.3
11931537	180	< 0.3
11931542	219	< 0.3
11931545	219	< 0.3
11931538	234	< 0.3
11931541	234	< 0.3
11931540	243	< 0.3
11931488	100A	< 0.3
11931489	100B	< 0.3
11931490	100C	< 0.3
11931491	100E	0.6
11931487	102A	0.7
11931494	104D	< 0.3
11931504	122D	< 0.3
11931531	164A	< 0.3
11931485	MAIN OFFICE	< 0.3
11931498	STAGE	< 0.3

Table 2 - Summary Testing Results ≥2.0 pCi/L							
Wayside Elementary School							
Test Period: 2/4/2025 - 2/7/2025							
≥2.0 and <2.7 pCi/L		≥2.7 and <4.0 pCi/L		≥4.0 and <8.0 pCi/l		≥8.0 pCi/L	
Room / Area	Result	Room / Area	Result	Room / Area	Result	Room / Area	Result
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Table 3 - QC Radon Testing Results			
Wayside Elementary School			
Test Period: 2/4/2025 - 2/7/2025			
Kit Number	**QC Type**	**Room / Area**	**Result**
11931492	D	103	< 0.3
11931507	D	124	< 0.3
11931510	FB	128	< 0.3
11931518	D	133	0.5
11931525	D	156	< 0.3
11931526	FB	161	< 0.3
11931530	D	172	< 0.3
11931545	FB	219	< 0.3
11931541	D	234	< 0.3
11931544	OB	OFFICE BLANK	< 0.3
11931543	TB	TRAVEL BLANK	< 0.3

Table 3a - Duplicate Worksheet / Data Validation										
Wayside Elementary School										
Test Period: 2/4/2025 - 2/7/2025										
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
11931495	11931492	103	0.3	0.3	✓	0.6	PASS	0.3	<1-pCi/L	✓
11931508	11931507	124	0.3	0.3	✓	0.6	PASS	0.3	<1-pCi/L	✓
11931517	11931518	133	0.5	0.3	✓	0.6	PASS	0.4	<1-pCi/L	✓
11931524	11931525	156	0.3	0.3	✓	0.6	PASS	0.3	<1-pCi/L	✓
11931529	11931530	172	0.3	0.3	✓	0.6	PASS	0.3	<1-pCi/L	✓
11931538	11931541	234	0.3	0.3	✓	0.6	PASS	0.3	<1-pCi/L	✓

NOTES:

QC Check #1 - Data Entry

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

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

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

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

Table 4 - Summary of Invalid Measurement Locations		
Wayside Elementary School		
Test Period: 2/4/25 - 2/7/25		
Kit Number	**Room/Area**	**Reason**
11931522	155	Missing Kit

Attachment 2:

Laboratory Reports

February 11, 2025

** LABORATORY ANALYSIS REPORT **

Radon test result report for:

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11931488	100A	2025-02-04 @ 11:00 am	2025-02-07 @ 10:00 am	< 0.3	2025-02-11
11931489	100B	2025-02-04 @ 11:00 am	2025-02-07 @ 10:00 am	< 0.3	2025-02-11
11931490	100C	2025-02-04 @ 11:00 am	2025-02-07 @ 10:00 am	< 0.3	2025-02-11
11931491	100E	2025-02-04 @ 11:00 am	2025-02-07 @ 10:00 am	0.6 ± 0.3	2025-02-11
11931486	102	2025-02-04 @ 11:00 am	2025-02-07 @ 10:00 am	< 0.3	2025-02-11
11931487	102A	2025-02-04 @ 11:00 am	2025-02-07 @ 10:00 am	0.7 ± 0.3	2025-02-11
11931492	103	2025-02-04 @ 11:00 am	2025-02-07 @ 10:00 am	< 0.3	2025-02-11
11931495	103	2025-02-04 @ 11:00 am	2025-02-07 @ 10:00 am	< 0.3	2025-02-11
11931493	104	2025-02-04 @ 11:00 am	2025-02-07 @ 10:00 am	< 0.3	2025-02-11
11931494	104D	2025-02-04 @ 11:00 am	2025-02-07 @ 10:00 am	< 0.3	2025-02-11
11931496	105	2025-02-04 @ 11:00 am	2025-02-07 @ 10:00 am	< 0.3	2025-02-11
11931497	107	2025-02-04 @ 12:00 pm	2025-02-07 @ 10:00 am	< 0.3	2025-02-11
11931500	112	2025-02-04 @ 12:00 pm	2025-02-07 @ 10:00 am	< 0.3	2025-02-11
11931499	115	2025-02-04 @ 12:00 pm	2025-02-07 @ 10:00 am	< 0.3	2025-02-11
11931503	119	2025-02-04 @ 12:00 pm	2025-02-07 @ 10:00 am	0.6 ± 0.3	2025-02-11
11931501	120	2025-02-04 @ 12:00 pm	2025-02-07 @ 10:00 am	< 0.3	2025-02-11
11931504	122D	2025-02-04 @ 12:00 pm	2025-02-07 @ 10:00 am	< 0.3	2025-02-11
11931507	124	2025-02-04 @ 12:00 pm	2025-02-07 @ 10:00 am	< 0.3	2025-02-11
11931508	124	2025-02-04 @ 12:00 pm	2025-02-07 @ 10:00 am	< 0.3	2025-02-11
11931511	127	2025-02-04 @ 12:00 pm	2025-02-07 @ 11:00 am	< 0.3	2025-02-11
11931510	128	2025-02-04 @ 12:00 pm	2025-02-07 @ 11:00 am	< 0.3	2025-02-11
11931509	128	2025-02-04 @ 12:00 pm	2025-02-07 @ 11:00 am	0.7 ± 0.3	2025-02-11
11931505	129	2025-02-04 @ 12:00 pm	2025-02-07 @ 11:00 am	< 0.3	2025-02-11
11931512	131	2025-02-04 @ 12:00 pm	2025-02-07 @ 11:00 am	< 0.3	2025-02-11
11931517	133	2025-02-04 @ 12:00 pm	2025-02-07 @ 11:00 am	< 0.3	2025-02-11
11931518	133	2025-02-04 @ 12:00 pm	2025-02-07 @ 11:00 am	0.5 ± 0.3	2025-02-11
11931506	134	2025-02-04 @ 12:00 pm	2025-02-07 @ 11:00 am	< 0.3	2025-02-11
11931502	135	2025-02-04 @ 12:00 pm	2025-02-07 @ 11:00 am	< 0.3	2025-02-11
11931513	136	2025-02-04 @ 12:00 pm	2025-02-07 @ 11:00 am	< 0.3	2025-02-11
11931515	137	2025-02-04 @ 12:00 pm	2025-02-07 @ 11:00 am	< 0.3	2025-02-11
11931516	139	2025-02-04 @ 12:00 pm	2025-02-07 @ 11:00 am	< 0.3	2025-02-11
11931519	140	2025-02-04 @ 12:00 pm	2025-02-07 @ 11:00 am	< 0.3	2025-02-11
11931514	141	2025-02-04 @ 12:00 pm	2025-02-07 @ 11:00 am	< 0.3	2025-02-11
11931520	146	2025-02-04 @ 12:00 pm	2025-02-07 @ 11:00 am	< 0.3	2025-02-11
11931521	150	2025-02-04 @ 12:00 pm	2025-02-07 @ 11:00 am	< 0.3	2025-02-11
11931523	152	2025-02-04 @ 12:00 pm	2025-02-07 @ 11:00 am	< 0.3	2025-02-11
11931524	156	2025-02-04 @ 12:00 pm	2025-02-07 @ 11:00 am	< 0.3	2025-02-11

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

February 11, 2025

** LABORATORY ANALYSIS REPORT **

Radon test result report for:

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11931525	156	2025-02-04 @ 12:00 pm	2025-02-07 @ 11:00 am	< 0.3	2025-02-11
11931526	161	2025-02-04 @ 12:00 pm	2025-02-07 @ 11:00 am	< 0.3	2025-02-11
11931527	161	2025-02-04 @ 12:00 pm	2025-02-07 @ 11:00 am	< 0.3	2025-02-11
11931533	163	2025-02-04 @ 12:00 pm	2025-02-07 @ 11:00 am	< 0.3	2025-02-11
11931528	164	2025-02-04 @ 12:00 pm	2025-02-07 @ 10:00 am	< 0.3	2025-02-11
11931531	164A	2025-02-04 @ 12:00 pm	2025-02-07 @ 11:00 am	< 0.3	2025-02-11
11931532	166	2025-02-04 @ 12:00 pm	2025-02-07 @ 11:00 am	< 0.3	2025-02-11
11931535	167	2025-02-04 @ 12:00 pm	2025-02-07 @ 11:00 am	< 0.3	2025-02-11
11931536	169	2025-02-04 @ 12:00 pm	2025-02-07 @ 11:00 am	< 0.3	2025-02-11
11931534	170	2025-02-04 @ 12:00 pm	2025-02-07 @ 11:00 am	< 0.3	2025-02-11
11931529	172	2025-02-04 @ 12:00 pm	2025-02-07 @ 11:00 am	< 0.3	2025-02-11
11931530	172	2025-02-04 @ 12:00 pm	2025-02-07 @ 11:00 am	< 0.3	2025-02-11
11931539	178	2025-02-04 @ 12:00 pm	2025-02-07 @ 11:00 am	< 0.3	2025-02-11
11931537	180	2025-02-04 @ 12:00 pm	2025-02-07 @ 11:00 am	< 0.3	2025-02-11
11931545	219	2025-02-04 @ 1:00 pm	2025-02-07 @ 11:00 am	< 0.3	2025-02-11
11931542	219	2025-02-04 @ 1:00 pm	2025-02-07 @ 11:00 am	< 0.3	2025-02-11
11931538	234	2025-02-04 @ 1:00 pm	2025-02-07 @ 11:00 am	< 0.3	2025-02-11
11931541	234	2025-02-04 @ 1:00 pm	2025-02-07 @ 11:00 am	< 0.3	2025-02-11
11931540	243	2025-02-04 @ 12:00 pm	2025-02-07 @ 11:00 am	< 0.3	2025-02-11
11931485	MAIN OFFICE	2025-02-04 @ 11:00 am	2025-02-07 @ 10:00 am	< 0.3	2025-02-11
11931498	STAGE	2025-02-04 @ 12:00 pm	2025-02-07 @ 10:00 am	< 0.3	2025-02-11

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

February 11, 2025 **** LABORATORY ANALYSIS REPORT ****

Radon test result report for:
OFFICE
MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11931544	O	2025-02-04 @ 11:00 am	2025-02-07 @ 11:00 am	< 0.3	2025-02-11

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

February 11, 2025 **** LABORATORY ANALYSIS REPORT ****

Radon test result report for:
TRAVEL
MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11931543	T	2025-02-04 @ 11:00 am	2025-02-07 @ 11:00 am	< 0.3	2025-02-11

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

EXPOSURE IN BOWSER-MORNER RADON CHAMBER

CLIENT KCI TECHNOLOGIES, INC Job Number 20001560

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

Date Start: 12/14/24 Date Stop: 12/17/24	Date Start: _____ Date Stop: _____
Time Start: 0815 Time Stop: 0815	Time Start: _____ Time Stop: _____
Device No.'s: (3) CHAR BAGS	Device No.'s: _____
11477880, 11477883, 11477896	_____
_____	_____
B4 Right	
Date Start: _____ Date Stop: _____	Date Start: _____ Date Stop: _____
Time Start: _____ Time Stop: _____	Time Start: _____ Time Stop: _____
Device No.'s: _____	Device No.'s: _____
_____	_____
_____	_____
_____	_____
Date Start: _____ Date Stop: _____	Date Start: _____ Date Stop: _____
Time Start: _____ Time Stop: _____	Time Start: _____ Time Stop: _____
Device No.'s: _____	Device No.'s: _____
_____	_____
_____	_____
_____	_____

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

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 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 µR/h Elevation = 820 ft

March 19, 2025 **** LABORATORY ANALYSIS REPORT ****

Radon test result report for:
QC
MAIN

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

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KCI TECHNOLOGIES

ENGINEERS • PLANNERS • SCIENTISTS • CONSTRUCTION MANAGERS

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

Radon Test Kit Chain of Custody

Project Name: MCPS Radon – Testing February 4th – February 7th, 2025

Name of Schools:

1. Candlewood ES
2. Viers Mill ES
3. Wayside ES
4. Julius West MS
5. Westland MS

	Date	Initials
Radon Test Kits Deployed	2/4/2025	
Radon Test Kits Collected	2/7/2025	
Radon Test Kits Shipped to Lab*	2/7/2025	
Radon Test Kits Received by Lab*	2/10/2025	

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

KCI TECHNOLOGIES

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

MCPS RADON TESTING – EXECUTIVE SUMMARY

Site Name	Wayside Elementary School
Date of Test Report	4/6/2022
Round of Testing	Initial Follow-up Post Remediation 2 Year Testing 5 Year Testing HVAC Upgrade Window Replacement New Addition New Facility
# Rooms Tested	60
# Rooms ≥ 4.0 pCi/L	0
Lowest Value	<0.3 pCi/L
Highest Value	1.7 pCi/L

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

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April 6, 2022

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

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

Location: Wayside ES
10011 Glen Rd.
Potomac, MD 20854

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 Wayside ES, located at 10011 Glen Rd. Potomac, MD 20854 (subject site).

Scope of Services:

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

KCI visited the site on February 8, 2022 and deployed sixty nine (69) activated charcoal (AC) radon test kits. KCI deployed radon test kits in all frequently-occupied ground contact rooms, and other areas, (if applicable) in accordance with AARST guidance.

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

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

KCI returned to the site on February 11, 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 30s and high temperatures ranged from the mid 30s to the mid 50s Fahrenheit. Maximum sustained winds ranged from 3-12 miles per hour. Average humidity was around 23% with 0.1 inches of precipitation (rain) was recorded during testing period.

Results:

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

The results of the radon test analysis indicated the following:

Radon Concentration	Room	Result
≥4.0 piC/L	None	N/A
<4.0 piC/L	See Attachment B	

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

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
QC- Quality Control

Table 1- Radon Testing Results		
Wayside ES		
Test Period: 02/8/2022 - 02/11/2022		
Kit Number	Room / Area	Result
11107018	100	< 0.3
11107041	102	< 0.3
11113472	103	< 0.3
11107067	104	< 0.3
11107078	104	< 0.3
11113471	105	< 0.3
11107040	106	< 0.3
11107045	106	0.6
11107077	106	< 0.3
11113470	107	0.5
11107051	112	< 0.3
11107052	112	0.6
11107075	115	0.5
11107072	119	< 0.3
11107055	120	< 0.3
11107038	124	0.5
11107097	127	< 0.3
11107098	127	< 0.3
11107099	127	< 0.3
11107071	128	< 0.3
11107074	128	< 0.3
11107096	129	< 0.3
11107095	131	< 0.3
11107094	133	< 0.3
11107023	134	0.6
11107029	135	0.6
11107024	136	< 0.3
11107093	137	< 0.3
11107092	139	< 0.3
11107076	140	< 0.3
11107088	141	< 0.3
11107081	146	0.5
11107037	150	0.5
11107082	150	< 0.3
11107084	150	< 0.3
11107030	152	< 0.3
11107091	155	0.5
11107050	156	0.7
11107090	161	1.7
11107087	163	< 0.3
11107089	163	< 0.3
11107026	164	< 0.3

Table 1- Radon Testing Results		
Wayside ES		
Test Period: 02/8/2022 - 02/11/2022		
Kit Number	Room / Area	Result
11107044	164	1.0
11107054	166	< 0.3
11107086	167	< 0.3
11107056	170	< 0.3
11107062	172	< 0.3
11107061	178	0.6
11107063	178	0.5
11107083	180	1.5
11113473	209	< 0.3
11113474	222	< 0.3
11113475	230	< 0.3
11113476	239	< 0.3
11107058	100A	0.5
11107025	100B	0.7
11107049	100C	0.5
11107015	100E	< 0.3
11107059	102B	< 0.3
11107057	102C	< 0.3
11107079	104B	< 0.3
11107046	104D	< 0.3
11107069	122B	0.6
11107070	122D	< 0.3
11107043	164A	< 0.3
11107100	169A	< 0.3
11107080	169B	< 0.3
11107085	169C	0.6
11107068	STAGE	< 0.3

Table 2- Radon Testing Results			
Wayside ES			
Test Period: 02/8/2022 - 02/11/2022			
Kit Number	QC Type	Room / Area	Result
11107061	D	178	0.6
11107084	D	150	< 0.3
11107082	FB	150	< 0.3
11107074	D	128	< 0.3
11107040	D	106	< 0.3
11107077	FB	106	< 0.3
11107089	D	163	< 0.3
11107098	D	127	< 0.3
11107099	FB	127	< 0.3
11113481	OB	OFFICE BLANK	< 0.3
11113483	TB	TRAVEL BLANK	< 0.3

Summary of Missed Locations		
Wayside ES		
Test Period: 02/8/22 - 02/11/22		
Kit Number	Room/Area	Result
	NA	

Summary of Missing, Compromised and >/= 4 piC/L Tests		
Wayside ES		
Test Period: 02/8/22 - 02/11/22		
Kit Number	Room/Area	Result
	NA	

Table Note:

* Missing or Compromised Sample

ATTACHMENT C

Laboratory Analytical Results

February 15, 2022 **** LABORATORY ANALYSIS REPORT ****

Radon test result report for:
WAYSIDE ES
MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11107018	100	2022-02-08 @ 10:00 am	2022-02-11 @ 2:00 pm	< 0.3	2022-02-14
11107058	100A	2022-02-08 @ 10:00 am	2022-02-11 @ 2:00 pm	0.5 ± 0.3	2022-02-14
11107025	100B	2022-02-08 @ 10:00 am	2022-02-11 @ 2:00 pm	0.7 ± 0.3	2022-02-14
11107049	100C	2022-02-08 @ 10:00 am	2022-02-11 @ 2:00 pm	0.5 ± 0.3	2022-02-15
11107015	100E	2022-02-08 @ 10:00 am	2022-02-11 @ 2:00 pm	< 0.3	2022-02-15
11107041	102	2022-02-08 @ 10:00 am	2022-02-11 @ 2:00 pm	< 0.3	2022-02-14
11107059	102B	2022-02-08 @ 10:00 am	2022-02-11 @ 2:00 pm	< 0.3	2022-02-14
11107057	102C	2022-02-08 @ 10:00 am	2022-02-11 @ 2:00 pm	< 0.3	2022-02-14
11113472	103	2022-02-08 @ 11:00 am	2022-02-11 @ 2:00 pm	< 0.3	2022-02-14
11107067	104	2022-02-08 @ 11:00 am	2022-02-11 @ 2:00 pm	< 0.3	2022-02-14
11107078	104	2022-02-08 @ 11:00 am	2022-02-11 @ 2:00 pm	< 0.3	2022-02-14
11107079	104B	2022-02-08 @ 11:00 am	2022-02-11 @ 2:00 pm	< 0.3	2022-02-14
11107046	104D	2022-02-08 @ 11:00 am	2022-02-11 @ 2:00 pm	< 0.3	2022-02-14
11113471	105	2022-02-08 @ 11:00 am	2022-02-11 @ 2:00 pm	< 0.3	2022-02-14
11107045	106	2022-02-08 @ 11:00 am	2022-02-11 @ 2:00 pm	0.6 ± 0.3	2022-02-14
11107040	106	2022-02-08 @ 11:00 am	2022-02-11 @ 2:00 pm	< 0.3	2022-02-14
11107077	106	2022-02-08 @ 11:00 am	2022-02-11 @ 2:00 pm	< 0.3	2022-02-15
11113470	107	2022-02-08 @ 11:00 am	2022-02-11 @ 2:00 pm	0.5 ± 0.3	2022-02-14
11107051	112	2022-02-08 @ 11:00 am	2022-02-11 @ 2:00 pm	< 0.3	2022-02-14
11107052	112	2022-02-08 @ 11:00 am	2022-02-11 @ 2:00 pm	0.6 ± 0.3	2022-02-15
11107075	115	2022-02-08 @ 10:00 am	2022-02-11 @ 2:00 pm	0.5 ± 0.3	2022-02-14
11107072	119	2022-02-08 @ 10:00 am	2022-02-11 @ 2:00 pm	< 0.3	2022-02-15
11107055	120	2022-02-08 @ 10:00 am	2022-02-11 @ 2:00 pm	< 0.3	2022-02-14
11107069	122B	2022-02-08 @ 10:00 am	2022-02-11 @ 2:00 pm	0.6 ± 0.3	2022-02-14
11107070	122D	2022-02-08 @ 10:00 am	2022-02-11 @ 2:00 pm	< 0.3	2022-02-15
11107038	124	2022-02-08 @ 10:00 am	2022-02-11 @ 2:00 pm	0.5 ± 0.3	2022-02-15
11107097	127	2022-02-08 @ 11:00 am	2022-02-11 @ 2:00 pm	< 0.3	2022-02-14
11107098	127	2022-02-08 @ 11:00 am	2022-02-11 @ 2:00 pm	< 0.3	2022-02-14
11107099	127	2022-02-08 @ 11:00 am	2022-02-11 @ 2:00 pm	< 0.3	2022-02-15
11107071	128	2022-02-08 @ 10:00 am	2022-02-11 @ 2:00 pm	< 0.3	2022-02-15
11107074	128	2022-02-08 @ 10:00 am	2022-02-11 @ 2:00 pm	< 0.3	2022-02-15
11107096	129	2022-02-08 @ 11:00 am	2022-02-11 @ 2:00 pm	< 0.3	2022-02-14
11107095	131	2022-02-08 @ 11:00 am	2022-02-11 @ 2:00 pm	< 0.3	2022-02-14
11107094	133	2022-02-08 @ 11:00 am	2022-02-11 @ 2:00 pm	< 0.3	2022-02-14
11107023	134	2022-02-08 @ 10:00 am	2022-02-11 @ 2:00 pm	0.6 ± 0.3	2022-02-14
11107029	135	2022-02-08 @ 10:00 am	2022-02-11 @ 2:00 pm	0.6 ± 0.3	2022-02-15
11107024	136	2022-02-08 @ 10:00 am	2022-02-11 @ 2:00 pm	< 0.3	2022-02-14

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

February 15, 2022 **** LABORATORY ANALYSIS REPORT ****

Radon test result report for:
WAYSIDE ES
MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11107093	137	2022-02-08 @ 11:00 am	2022-02-11 @ 2:00 pm	< 0.3	2022-02-15
11107092	139	2022-02-08 @ 11:00 am	2022-02-11 @ 2:00 pm	< 0.3	2022-02-14
11107076	140	2022-02-08 @ 10:00 am	2022-02-11 @ 2:00 pm	< 0.3	2022-02-14
11107088	141	2022-02-08 @ 11:00 am	2022-02-11 @ 2:00 pm	< 0.3	2022-02-14
11107081	146	2022-02-08 @ 10:00 am	2022-02-11 @ 2:00 pm	0.5 ± 0.3	2022-02-14
11107037	150	2022-02-08 @ 10:00 am	2022-02-11 @ 2:00 pm	0.5 ± 0.3	2022-02-14
11107084	150	2022-02-08 @ 10:00 am	2022-02-11 @ 2:00 pm	< 0.3	2022-02-15
11107082	150	2022-02-08 @ 10:00 am	2022-02-11 @ 2:00 pm	< 0.3	2022-02-15
11107030	152	2022-02-08 @ 10:00 am	2022-02-11 @ 2:00 pm	< 0.3	2022-02-14
11107091	155	2022-02-08 @ 11:00 am	2022-02-11 @ 2:00 pm	0.5 ± 0.3	2022-02-14
11107050	156	2022-02-08 @ 10:00 am	2022-02-11 @ 2:00 pm	0.7 ± 0.3	2022-02-14
11107090	161	2022-02-08 @ 11:00 am	2022-02-11 @ 2:00 pm	1.7 ± 0.3	2022-02-14
11107089	163	2022-02-08 @ 11:00 am	2022-02-11 @ 2:00 pm	< 0.3	2022-02-14
11107087	163	2022-02-08 @ 11:00 am	2022-02-11 @ 2:00 pm	< 0.3	2022-02-15
11107026	164	2022-02-08 @ 10:00 am	2022-02-11 @ 2:00 pm	< 0.3	2022-02-14
11107044	164	2022-02-08 @ 10:00 am	2022-02-11 @ 2:00 pm	1.0 ± 0.3	2022-02-15
11107043	164A	2022-02-08 @ 10:00 am	2022-02-11 @ 2:00 pm	< 0.3	2022-02-14
11107054	166	2022-02-08 @ 10:00 am	2022-02-11 @ 2:00 pm	< 0.3	2022-02-14
11107086	167	2022-02-08 @ 11:00 am	2022-02-11 @ 2:00 pm	< 0.3	2022-02-14
11107100	169A	2022-02-08 @ 11:00 am	2022-02-11 @ 2:00 pm	< 0.3	2022-02-14
11107080	169B	2022-02-08 @ 11:00 am	2022-02-11 @ 2:00 pm	< 0.3	2022-02-14
11107085	169C	2022-02-08 @ 11:00 am	2022-02-11 @ 2:00 pm	0.6 ± 0.3	2022-02-14
11107056	170	2022-02-08 @ 10:00 am	2022-02-11 @ 2:00 pm	< 0.3	2022-02-15
11107062	172	2022-02-08 @ 10:00 am	2022-02-11 @ 2:00 pm	< 0.3	2022-02-15
11107061	178	2022-02-08 @ 10:00 am	2022-02-11 @ 2:00 pm	0.6 ± 0.3	2022-02-14
11107063	178	2022-02-08 @ 10:00 am	2022-02-11 @ 2:00 pm	0.5 ± 0.3	2022-02-15
11107083	180	2022-02-08 @ 10:00 am	2022-02-11 @ 2:00 pm	1.5 ± 0.3	2022-02-15
11113473	209	2022-02-08 @ 12:00 pm	2022-02-11 @ 2:00 pm	< 0.3	2022-02-15
11113474	222	2022-02-08 @ 12:00 pm	2022-02-11 @ 2:00 pm	< 0.3	2022-02-15
11113475	230	2022-02-08 @ 12:00 pm	2022-02-11 @ 2:00 pm	< 0.3	2022-02-14
11113476	239	2022-02-08 @ 12:00 pm	2022-02-11 @ 2:00 pm	< 0.3	2022-02-15
11107068	STAGE	2022-02-08 @ 11:00 am	2022-02-11 @ 2:00 pm	< 0.3	2022-02-15

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

EXPOSURE IN BOWSER-MORNER RADON CHAMBER

CLIENT KCI Technologies, Inc. Job Number 204186

NOMINAL Conditions: Radon Conc 25.8 pCi/L Rel. Hum 59.1 % Temp. 70.9 F

Date Start: 2/18/22 Date Stop: 2/21/22	Date Start: _____ Date Stop: _____
Time Start: 0911 Time Stop: 0911	Time Start: _____ Time Stop: _____
Device No.'s: (3) Char Bags - 11113484, 11192998, 20107126	Device No.'s: _____
23 Right	
Date Start: _____ Date Stop: _____	Date Start: _____ Date Stop: _____
Time Start: _____ Time Stop: _____	Time Start: _____ Time Stop: _____
Device No.'s: _____	Device No.'s: _____
Date Start: _____ Date Stop: _____	Date Start: _____ Date Stop: _____
Time Start: _____ Time Stop: _____	Time Start: _____ Time Stop: _____
Device No.'s: _____	Device No.'s: _____

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

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

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

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

KCI TECHNOLOGIES

ENGINEERS • PLANNERS • SCIENTISTS • CONSTRUCTION MANAGERS

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

Radon Test Kit Chain of Custody

Project Name: MCPS Radon – February 2022 Schools

Name of Schools:

1. Earle. B Wood MS
2. Flower Valley ES
3. Parkland MS
4. Herbert Hoover MS
5. Ritchie Park ES
6. Wayside ES
7. Potomac ES
8. Redland MS
9. Sequoyah ES
10. Sherwood ES
11. Rock Terrace School

	Date	Initials
Radon Test Kits Deployed	02/08/2022	
Radon Test Kits Collected	02/11/2022	
Radon Test Kits Shipped to Lab*	02/11/2022	
Radon Test Kits Received by Lab*	02/15/2022	

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

MONTGOMERY COUNTY PUBLIC SCHOOLS
RADON TESTING

Executive Summary:
Wayside Elementary School

10011 Glen Road,
Potomac, MD 20854

Date of Test Report:	3/15/2019
Round of Testing:	Initial **Follow-up** Post Remediation 2 Year Testing 5 Year Testing HVAC Upgrade Window Replacement New Addition New Facility
# of Rooms Tested:	1
# of Rooms ≥ 4.0 pCi/L:	0
Low Value:	<0.4
High Value:	<0.4

Project Status

Retesting completed: No further action at this time.

March 15, 2019

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

Re: Radon Testing Services

Location: Wayside Elementary School
10011 Glen Road,
Potomac, MD 20854

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 Wayside Elementary School, located at 10011 Glen Road, Potomac, MD 20854 (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 or www.epa.gov/radon.

PSI visited the site on February 26, 2019 and deployed one (1) 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 ≤ 65°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	None	NA
≤ 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

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		
Wayside Elementary School		
Testing period: 2/26/19 - 3/1/19		
Kit Number	**Room / Area**	**Result (pCi/L)**
3923503	Room 169B	<0.4

Table Notes:

D – Duplicate

FB – Field Blank

OB – Office Blank

TB – Transit Blank

QC – Quality Control

ATTACHMENT C

Laboratory Analytical Results

AccuStar
Professional Radon Laboratory Services Since 1984

Radon in Air

NRPP 105011 AL
NRSB ARL0007

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

Laboratory Report for:

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

Property Tested: Project # 04481387-1

MCPS Radon Survey Wayside Elementary School
10011 Glen Rd
Potomac MD 20854

Log Number	Device Number	Test Exposure Duration:		Area Tested	Result pCi/L
3220660	3923503	02/26/2019 11:11 am	03/01/2019 9:35 am	First Floor Room 169B	< 0.4

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: _____

Shawn Price, Director of Laboratory Operations, AccuStar Labs

Disclaimer:

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

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

MONTGOMERY COUNTY PUBLIC SCHOOLS
RADON TESTING

Executive Summary:
Wayside Elementary School

10011 Glen Road,
Potomac, MD 20854

Date of Test Report:	02/05/2019
Round of Testing:	Initial Follow-up **Post Remediation** 2 Year Testing 5 Year Testing HVAC Upgrade Window Replacement New Addition New Facility
# of Rooms Tested:	54
# of Rooms ≥ 4.0 pCi/L:	0
Low Value:	< 0.4
High Value:	1.2

Project Status

Initial testing complete: Missing or compromised samples need re-test.

February 5, 2019

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

Re: Radon Testing Services

Location: Wayside Elementary School
10011 Glen Road,
Potomac, MD 20854

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 Wayside Elementary School, located at 10011 Glen Road, Potomac, MD 20854 (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 or www.epa.gov/radon.

PSI visited the site on November 12, 2018 and deployed sixty-eight (68) 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 15, 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 ≤ 65°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	None	NA
≤ 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

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		
Wayside Elementary School		
Testing period: 11/12/18 - 11/15/18		
Kit Number	**Room / Area**	**Result (pCi/L)**
3916094	100	0.4
3916108	100A	<0.4
3916106	100B	<0.4
3916107	100C	<0.4
3916109	100E	<0.4
3916654	102	<0.4
3916830	102B	<0.4
3916645	102C	<0.4
3916093	103	<0.4
3916104	104	<0.4
3916110	104	<0.4
3916101	104D	<0.4
3916883	105	<0.4
3916102	106	<0.4
3916041	107	<0.4
3916103	112	<0.4
3881279	112	<0.4
3916881	115	<0.4
3916882	119	<0.4
3916096	120	<0.4
3916095	121	<0.4
3916100	121B	<0.4
3916099	122D	<0.4
3881300	122D	<0.4
3916091	124	<0.4
3916780	127	<0.4
3916098	128	<0.4
3916779	129	<0.4
3916884	131	<0.4
3916042	133	<0.4
3916640	134	<0.4
3916778	135	<0.4
3916824	136	<0.4
3916657	137	<0.4
3916659	139	<0.4
3916658	140	<0.4
3916052	141	<0.4
3916058	146	<0.4
3916057	150	<0.4
3916055	152	<0.4
3916054	155	<0.4
3916051	156	<0.4
3916056	161	1.2

Radon Testing Results		
Wayside Elementary School		
Testing period: 11/12/18 - 11/15/18		
Kit Number	**Room / Area**	**Result (pCi/L)**
3916059	163	<0.4
3881291	164	<0.4
3881281	164	<0.4
3916097	164A	<0.4
3916072	166	<0.4
3916077	167	<0.4
3916078	169A	<0.4
--	169B (INACCESSIBLE)	--
3916079	169C	<0.4
3906071	170	<0.4
3916080	172	<0.4
3916075	178	<0.4
3916821	180	<0.4
3916823	201	<0.4
3916076	215	<0.4
3916073	239	<0.4

Radon Testing Results		
Wayside Elementary School		
Testing period: 11/12/18 - 11/15/18		
Kit Number	**QC Type**	**Result (pCi/L)**
3916105	104 (D)	<0.4
3916095	124 (D)	<0.4
3916660	134 (D)	<0.4
3916043	140 (D)	<0.4
3916053	164A (D)	<0.4
3916074	178 (D)	<0.4
3918230	Field Blank	<0.4
3918034	Field Blank	<0.4
3918035	Office Blank	<0.4
3918223	Transit Blank	<0.4

Table Notes:

D – Duplicate

FB – Field Blank

OB – Office Blank

TB – Transit Blank

QC – Quality Control

ATTACHMENT C

Laboratory Analytical Results

AccuStar
Professional Radon Laboratory Services Since 1984

Radon in Air

NELAC NY 11769
NRPP 103216 AL
NRSB ARL0017

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

Laboratory Report for:

PSI - Fairfax
2930 Eskridge Road
Fairfax VA 22031

Property Tested:

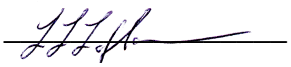
MCPS Radon Survey
Wayside Elementary School
Potomac MD 20854

Log Number	Device Number	Test Exposure Duration:		Area Tested	Result pCi/L
2392987	3881279	11/12/2018 2:40 pm	11/15/2018 11:21 am	Bldg. Wayside Elementary School Floor 1 Room 1	< 0.4
2392988	3881281	11/12/2018 3:59 pm	11/15/2018 11:43 am	Bldg. Wayside Elementary School Floor 1 Room 1	< 0.4
2392989	3881291	11/12/2018 3:59 pm	11/15/2018 11:43 am	Bldg. Wayside Elementary School Floor 1 Room 1	< 0.4
2392990	3881300	11/12/2018 2:53 pm	11/15/2018 11:24 am	Bldg. Wayside Elementary School Floor 1 Room 1	< 0.4
2393181	3916094	11/12/2018 2:13 pm	11/15/2018 11:06 am	Flr 1 Rm 100	0.4
2393182	3916098	11/12/2018 2:58 pm	11/15/2018 11:08 am	128	<0.4
2393183	3916660	11/12/2018 3:17 pm	11/15/2018 11:31 am	134	<0.4
2393184	3916654	11/12/2018 2:16 pm	11/15/2018 11:12 am	Flr 1 Rm 102	< 0.4
2393185	3916830	11/12/2018 2:19 pm	11/15/2018 11:12 am	Flr 1 Rm 102B	< 0.4
2393186	3916071	11/12/2018 4:09 pm	11/15/2018 11:07 am	170	< 0.4
2393187	3916645	11/12/2018 2:19 pm	11/15/2018 11:12 am	Flr 1 Rm 102C	< 0.4

Comment: AMENDED REPORT for 3916098, 3916660 and 3916071 on 02/01/2019 to add the start and end dates and times and area tested.

Distributed by: Intertek-PSI (VA)

Date Received: 11/16/2018 Date Logged: 11/16/2018 Date Analyzed: 11/17/2018 Date Reported: 11/19/2018

Report Reviewed By: 

Report Approved By: 

Shawn Price, Director of Laboratory Operations, AccuStar Labs

Disclaimer:

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

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NELAC NY 11769
NRPP 103216 AL
NRSB ARL0017

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

Laboratory Report for:

PSI - Fairfax
2930 Eskridge Road
Fairfax VA 22031

Property Tested:

MCPS Radon Survey
Wayside Elementary School
Potomac MD 20854

Log Number	Device Number	Test Exposure Duration:		Area Tested	Result pCi/L
2393188	3916108	11/12/2018 2:22 pm	11/15/2018 11:08 am	Flr 1 Rm 100A	< 0.4
2393189	3916106	11/12/2018 2:24 pm	11/15/2018 11:09 am	Flr 1 Rm 100B	< 0.4
2393190	3916107	11/12/2018 2:26 pm	11/15/2018 11:09 am	Flr 1 Rm 100C	< 0.4
2393191	3916109	11/12/2018 2:27 pm	11/15/2018 11:09 am	Flr 1 Rm 100E	< 0.4
2393192	3916104	11/12/2018 2:30 pm	11/15/2018 11:10 am	Flr 1 Rm 104	< 0.4
2393193	3916105	11/12/2018 2:30 pm	11/15/2018 11:11 am	Flr 1 Rm 104	< 0.4
2393194	3916110	11/12/2018 2:30 pm	11/15/2018 11:12 am	Flr 1 Rm 104	< 0.4
2393195	3916102	11/12/2018 2:35 pm	11/15/2018 11:09 am	Flr 1 Rm 106	< 0.4
2393196	3916101	11/12/2018 2:37 pm	11/15/2018 11:22 am	Flr 1 Rm 104D	< 0.4
2393197	3916103	11/12/2018 2:40 pm	11/15/2018 11:22 am	Flr 1 Rm 112	< 0.4
2393198	3916100	11/12/2018 2:48 pm	11/15/2018 11:28 am	Flr 1 Rm 121B	< 0.4

Comment: AMENDED REPORT for 3916098, 3916660 and 3916071 on 02/01/2019 to add the start and end dates and times and area tested.

Distributed by: Intertek-PSI (VA)

Date Received: 11/16/2018 Date Logged: 11/16/2018 Date Analyzed: 11/17/2018 Date Reported: 11/19/2018

Report Reviewed By: _____ Report Approved By: _____

Shawn Price, Director of Laboratory Operations, AccuStar Labs

Disclaimer:

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

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NELAC NY 11769
NRPP 103216 AL
NRSB ARL0017

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

Laboratory Report for:

PSI - Fairfax
2930 Eskridge Road
Fairfax VA 22031

Property Tested:

MCPS Radon Survey
Wayside Elementary School
Potomac MD 20854

Log Number	Device Number	Test Exposure Duration:		Area Tested	Result pCi/L
2393199	3916099	11/12/2018 2:52 pm	11/15/2018 11:08 am	Flr 1 Rm 122D	< 0.4
2393200	3916091	11/12/2018 2:56 pm	11/15/2018 11:27 am	Flr 1 Rm 124	< 0.4
2393201	3916095	11/12/2018 2:56 pm	11/15/2018 11:27 am	Flr 1 Rm 124	< 0.4
2393202	3916882	11/12/2018 2:59 pm	11/15/2018 11:29 am	Flr 1 Rm 119	< 0.4
2393203	3916096	11/12/2018 3:00 pm	11/15/2018 11:29 am	Flr 1 Rm 120	< 0.4
2393204	3916881	11/12/2018 3:01 pm	11/15/2018 11:29 am	Flr 1 Rm 115	< 0.4
2393205	3916093	11/12/2018 3:05 pm	11/15/2018 11:17 am	Flr 1 Rm 103	< 0.4
2393206	3916041	11/12/2018 4:27 pm	11/15/2018 11:15 am	Flr 1 Rm 107	0.4
2393207	3916883	11/12/2018 3:07 pm	11/15/2018 11:19 am	Flr 1 Rm 105	< 0.4
2393208	3916640	11/12/2018 3:17 pm	11/15/2018 11:31 am	Flr 1 Rm 134	< 0.4
2393209	3916780	11/12/2018 3:21 pm	11/15/2018 11:31 am	Flr 1 Rm 127	< 0.4

Comment: AMENDED REPORT for 3916098, 3916660 and 3916071 on 02/01/2019 to add the start and end dates and times and area tested.

Distributed by: Intertek-PSI (VA)

Date Received: 11/16/2018 Date Logged: 11/16/2018 Date Analyzed: 11/17/2018 Date Reported: 11/19/2018

Report Reviewed By: _____ Report Approved By: _____

Shawn Price, Director of Laboratory Operations, AccuStar Labs

Disclaimer:

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

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NELAC NY 11769
NRPP 103216 AL
NRSB ARL0017

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

Laboratory Report for:

PSI - Fairfax
2930 Eskridge Road
Fairfax VA 22031

Property Tested:

MCPS Radon Survey
Wayside Elementary School
Potomac MD 20854

Log Number	Device Number	Test Exposure Duration:		Area Tested	Result pCi/L
2393210	3916778	11/12/2018 3:22 pm	11/15/2018 11:32 am	Flr 1 Rm 135	< 0.4
2393211	3916779	11/12/2018 3:23 pm	11/15/2018 11:32 am	Flr 1 Rm 129	< 0.4
2393212	3916884	11/12/2018 3:26 pm	11/15/2018 11:32 am	Flr 1 Rm 131	< 0.4
2393213	3916042	11/12/2018 3:29 pm	11/15/2018 11:33 am	Flr 1 Rm 133	< 0.4
2393214	3916824	11/12/2018 3:30 pm	11/15/2018 11:33 am	Flr 1 Rm 136	< 0.4
2393215	3916657	11/12/2018 3:31 pm	11/15/2018 11:34 am	Flr 1 Rm 137	< 0.4
2393216	3916659	11/12/2018 3:33 pm	11/15/2018 11:34 am	Flr 1 Rm 139	< 0.4
2393217	3916658	11/12/2018 3:32 pm	11/15/2018 11:36 am	Flr 1 Rm 140	< 0.4
2393218	3916043	11/12/2018 3:32 pm	11/15/2018 11:36 am	Flr 1 Rm 140	< 0.4
2393219	3916057	11/12/2018 3:37 pm	11/15/2018 11:39 am	Flr 1 Rm 150	< 0.4
2393220	3916054	11/12/2018 3:38 pm	11/15/2018 11:40 am	Flr 1 Rm 155	< 0.4

Comment: AMENDED REPORT for 3916098, 3916660 and 3916071 on 02/01/2019 to add the start and end dates and times and area tested.

Distributed by: Intertek-PSI (VA)

Date Received: 11/16/2018 Date Logged: 11/16/2018 Date Analyzed: 11/17/2018 Date Reported: 11/19/2018

Report Reviewed By: _____ Report Approved By: _____

Shawn Price, Director of Laboratory Operations, AccuStar Labs

Disclaimer:

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

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NELAC NY 11769
NRPP 103216 AL
NRSB ARL0017

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

Laboratory Report for:

PSI - Fairfax
2930 Eskridge Road
Fairfax VA 22031

Property Tested:

MCPS Radon Survey
Wayside Elementary School
Potomac MD 20854

Log Number	Device Number	Test Exposure Duration:		Area Tested	Result pCi/L
2393221	3916052	11/12/2018 3:53 pm	11/15/2018 11:35 am	Flr 1 Rm 141	< 0.4
2393222	3916055	11/12/2018 3:53 pm	11/15/2018 11:41 am	Flr 1 Rm 152	< 0.4
2393223	3916056	11/12/2018 3:54 pm	11/15/2018 11:42 am	Flr 1 Rm 161	1.2
2393224	3916058	11/12/2018 3:56 pm	11/15/2018 11:38 am	Flr 1 Rm 146	< 0.4
2393225	3916051	11/12/2018 4:05 pm	11/15/2018 11:42 am	Flr 1 Rm 156	< 0.4
2393226	3916097	11/12/2018 4:02 pm	11/15/2018 11:44 am	Flr 1 Rm 164A	< 0.4
2393227	3916053	11/12/2018 4:02 pm	11/15/2018 11:44 am	Flr 1 Rm 164A	< 0.4
2393228	3916059	11/12/2018 4:06 pm	11/15/2018 11:46 am	Flr 1 Rm 163	< 0.4
2393229	3916072	11/12/2018 4:08 pm	11/15/2018 11:07 am	Flr 1 Rm 166	< 0.4
2393230	3916077	11/12/2018 4:11 pm	11/15/2018 11:48 am	Flr 1 Rm 167	< 0.4
2393231	3916079	11/12/2018 4:12 pm	11/15/2018 11:49 am	Flr 1 Rm 169C	< 0.4

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NELAC NY 11769
NRPP 103216 AL
NRSB ARL0017

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

Laboratory Report for:

PSI - Fairfax
2930 Eskridge Road
Fairfax VA 22031

Property Tested:

MCPS Radon Survey
Wayside Elementary School
Potomac MD 20854

Log Number	Device Number	Test Exposure Duration:		Area Tested	Result pCi/L
2393232	3916080	11/12/2018 4:13 pm	11/15/2018 11:49 am	Flr 1 Rm 172	< 0.4
2393233	3916078	11/12/2018 4:13 pm	11/15/2018 11:50 am	Flr 1 Rm 169A	< 0.4
2393234	3916075	11/12/2018 4:18 pm	11/15/2018 11:50 am	Flr 1 Rm 178	< 0.4
2393235	3916074	11/12/2018 4:18 pm	11/15/2018 11:43 am	Flr 1 Rm 178	< 0.4
2393236	3916073	11/12/2018 4:40 pm	11/15/2018 11:43 am	Flr 2 Rm 239	< 0.4
2393237	3916076	11/12/2018 4:41 pm	11/15/2018 11:44 am	Flr 2 Rm 215	< 0.4
2393238	3916823	11/12/2018 4:42 pm	11/15/2018 11:50 am	Flr 2 Rm 201	< 0.4
2393239	3916821	11/12/2018 4:27 pm	11/15/2018 11:50 am	Flr 1 Rm 180	< 0.4
2393240	3918230	11/12/2018 2:13 pm	11/15/2018 11:50 am	Floor 1	< 0.4
2393241	3918034	11/12/2018 2:13 pm	11/15/2018 11:50 am	Floor 1	< 0.4
2393242	3918035	11/12/2018 6:00 am	11/15/2018 11:50 am	Floor 1	< 0.4

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Date Received: 11/16/2018 Date Logged: 11/16/2018 Date Analyzed: 11/17/2018 Date Reported: 11/19/2018

Report Reviewed By: _____ Report Approved By: _____

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NELAC NY 11769
NRPP 103216 AL
NRSB ARL0017

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

Laboratory Report for:

PSI - Fairfax
2930 Eskridge Road
Fairfax VA 22031

Property Tested:

MCPS Radon Survey
Wayside Elementary School
Potomac MD 20854

Log Number	Device Number	Test Exposure Duration:		Area Tested	Result pCi/L
2393243	3918223	11/12/2018 6:00 am	11/15/2018 11:50 am	Floor 1	< 0.4

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AccuStar
Professional Radon Laboratory Services Since 1984

Radon in Air

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:

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

Property Tested:

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: _____

Shawn Price, Director of Laboratory Operations, AccuStar Labs

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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	_____
_____	_____
Gx Left	_____
Date Start: _____ Date Stop: _____	Date Start: _____ Date Stop: _____
Time Start: _____ Time Stop: _____	Time Start: _____ Time Stop: _____
Device No.'s: _____	Device No.'s: _____
_____	_____
_____	_____
_____	_____
Date Start: _____ Date Stop: _____	Date Start: _____ Date Stop: _____
Time Start: _____ Time Stop: _____	Time Start: _____ Time Stop: _____
Device No.'s: _____	Device No.'s: _____
_____	_____
_____	_____
_____	_____

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

intertek
psi

Chain of Custody

Project Name: MCPS Radon Survey 2018

Name of Schools:

1. Arcola ES
2. Glen Haven ES
3. Jackson Road
4. Cashell ES
5. Frost MS
6. Meadow Hall ES
7. North Lake Center
8. Barnsley ES
9. Bayard Rustin ES
10. Julius West MS
11. Rock Terrace HS
12. Churchill HS
13. Cold Spring ES
14. Hoover MS
15. Wayside ES
16. English Manor

	Date	Initials
Radon Test Kits Deployed	11/12/2018	NL
Radon Test Kits Sampled	11/15/2018	NL
Radon Test Kits Shipped to Lab*	11/15/2018	NL
Radon Test Kits Received by Lab*	11/17/2018; 11/18/2018	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 WAYSIDE ELEMENTARY SCHOOL

10011 Glen Rd., Potomac, Maryland 20854

EXECUTIVE SUMMARY

Date of Test Report:	3/14/18
Round of Testing:	Initial Follow-up Post Remediation
# Rooms Tested	11
# Rooms ≥ 4.0 pCi/L:	2
Low Value:	0.7
High Value:	6.8
Confirmed Rooms ≥ 4.0 pCi/L US EPA Action Level	2 (plus 1 location to be evaluated by mitigation contractor)

Summary of Sampling Events ≥ 4.0 pCi/L

Room	Result (pCi/L) 1/31/18	Result (pCi/L) 3/14/18	Average Result (pCi/L)
133	5.8	6.8	6.3
120	4.5	3.7	4.1
123	Not tested	5.4	---*

* -- To be evaluated by mitigation contractor

KCI TECHNOLOGIES
ENGINEERS • PLANNERS • SCIENTISTS • CONSTRUCTION MANAGERS
936 RIDGEBROOK ROAD • SPARKS, MD 21152 • 410-316-7800 • (FAX) 410-316-7935

MCPS RADON TESTING - EXECUTIVE SUMMARY

Site Name	Wayside Elementary School
Date of Report	March 14, 2018
Round of Testing	Initial **Follow-up** Post Remediation 2 year testing 5 year testing HVAC Upgrade Window Replacement New Addition New Facility
# of Rooms Tested	11
# Rooms ≥4.0 pCi/L	2
Lowest Value	0.7 pCi/L
Highest Value	6.8 pCi/L

Project Status

Rooms with results ≥ 4.0 pCi/L: 133 (6.1, 6.8 pCi/L), 123 (5.4 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.

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March 14, 2018

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

Re: Radon Testing Services

KCI Job #1214634188

Location: Wayside Elementary School
10011 Glen Rd.
Potomac, Maryland 20854

Dear Mr. Cox:

KCI Technologies, Inc. (KCI) is pleased to submit the following report to Montgomery County Public Schools pursuant to completing a "short-term" 3-day radon test for the Wayside Elementary School, located at 10011 Glen Rd. in Potomac, Maryland 20854 (subject site).

SCOPE OF SERVICES

KCI conducted radon testing at the subject site to evaluate indoor radon levels relative to the USEPA's recommended action level of 4.0 picocuries per Liter (pCi/L) - the level at which EPA recommends that schools take action to reduce the level. KCI conducted the radon testing in accordance with American Association of Radon Scientists and Technologists (AARST) *Protocol for Conducting Measurements of Radon and Radon Decay Products in Schools and Large Buildings*. A National Radon Safety Board (NRSB) Radon Measurement Specialist (certification #14SS056) supervised the testing. Additional information on radon management and the health effects of radon exposure is available from www.montgomerycountymd.gov/dep/air/radon or www.epa.gov/radon.

KCI visited the site on February 12, 2018 and deployed sixteen (16) activated charcoal (AC) radon test kits. KCI deployed radon test kits in frequently-occupied ground contact rooms, and other areas, (if applicable) in accordance with AARST guidance.

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

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

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

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

KCI returned to the site on February 15, 2018 to retrieve the radon sampling test kits. KCI shipped all radon tests via overnight delivery to Aircheck, Inc. for analysis by gamma-ray spectroscopy. Aircheck, Inc. is a NRSB certified analytical laboratory for radon analysis (certification #ARL1402) located at 1936 Butler Bridge Road, Mills River, North Carolina.

EVALUATION OF TESTING CONDITIONS

These tests represent:

- Follow-up to initial testing.

These tests were conducted to:

- Evaluate radon concentrations at the facility.

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

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

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

KCI also compiled weather data for the testing period and conducted observations of relevant field conditions. During the test period, weather records indicate low temperatures ranged from the mid-20s to upper 40s and high temperatures ranged from the high-30s to the high-60s. Maximum sustained winds ranged from 10-15 miles per hour. Average humidity was around 69%. 0.05 Inches of precipitation was recorded during the testing period.

RESULTS

The sampling locations and analytical results are listed on Table 1 (Attachment B). The quality control sample locations and analytical results are listed on Table 2 (Attachment B). The laboratory analytical results are included in Attachment C. Laboratory results and exposure data for the spike samples are also included in Attachment C.

The results of the radon test analysis indicated the following:

Radon Concentration	Room	Result
≥4.0 piC/L	133	6.1, 6.8(D)
≥4.0 piC/L	123	5.4
≤4.0 piC/L	See Attachment B	See Attachment B

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

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

Sincerely,

Radon Measurement Specialist
KCI Technologies, Inc.

Attachments:

B - Radon Test Summary Spreadsheets

C- Laboratory Analytical Results

ATTACHMENT B

Radon Test Summary Spreadsheet

Table Notes:

AC- Activated Charcoal

ACI- Air Chek, Inc.

D- Duplicate

FB- Field Blank

KCI- KCI Technologies, Inc.

OB- Office Blank

PM- Project Manager

QC- Quality Control

Table 1 - Radon Testing Results		
Wayside Elementary School		
Test Period: 02/12/18-02/15/18		
Kit Number	**Room / Area**	**Result**
7984041	121	1.5
7985666	120	3.7
7985657	131	2.4
7985665	133	6.1
7985656	139	1.3
7986173	104A	0.9
7986186	* 104B (Tampered)	0.7
7986184	121B	2.0
7985871	122 D	1.2
7984017	* 122A (Tampered)	1.7
7985874	* 123 (Tampered)	5.4
7986182	APR	2.3
7986181	APR	2.4

Table Note:
* Missing or Compromised Sample

Table 2 - Radon Testing Results		
Wayside Elementary School		
Test Period: 02/12/18-02/15/18		
Kit Number	**QC Type**	**Result**
7984040	* D (122 D:Missing)	-
7985659	D (133)	6.8
7985658	FB (131)	1.8

Table Note:
* Missing or Compromised Sample

ATTACHMENT C

Laboratory Analytical Results

February 28, 2018 **** LABORATORY ANALYSIS REPORT ****

Radon test result report for:
WAYSIDE ELEMENTARY SCHOOL
MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7986173	104A	2018-02-12 @ 12:00 pm	2018-02-15 @ 10:00 am	0.9 ± 0.3	2018-02-19
7986186	104B	2018-02-12 @ 12:00 pm	2018-02-15 @ 10:00 am	0.7 ± 0.3	2018-02-19
7984041	121	2018-02-12 @ 12:00 pm	2018-02-15 @ 10:00 am	1.5 ± 0.3	2018-02-19
7985666	120	2018-02-12 @ 12:00 pm	2018-02-15 @ 10:00 am	3.7 ± 0.5	2018-02-19
7986184	121B	2018-02-12 @ 12:00 pm	2018-02-15 @ 10:00 am	2.0 ± 0.4	2018-02-19
7984040	122 D	@	@		
7985871	122 D	2018-02-12 @ 12:00 pm	2018-02-15 @ 10:00 am	1.2 ± 0.3	2018-02-19
7984017	122A	2018-02-12 @ 12:00 pm	2018-02-15 @ 10:00 am	1.7 ± 0.4	2018-02-19
7985874	123	2018-02-12 @ 12:00 pm	2018-02-15 @ 10:00 am	5.4 ± 0.5	2018-02-19
7985658	131	2018-02-12 @ 12:00 pm	2018-02-15 @ 10:00 am	1.8 ± 0.4	2018-02-19
7985657	131	2018-02-12 @ 12:00 pm	2018-02-15 @ 10:00 am	2.4 ± 0.4	2018-02-19
7985659	133	2018-02-12 @ 12:00 pm	2018-02-15 @ 10:00 am	6.8 ± 0.6	2018-02-19
7985665	133	2018-02-12 @ 12:00 pm	2018-02-15 @ 10:00 am	6.1 ± 0.6	2018-02-19
7985656	139	2018-02-12 @ 12:00 pm	2018-02-15 @ 10:00 am	1.3 ± 0.3	2018-02-19
7986181	APR	2018-02-12 @ 12:00 pm	2018-02-15 @ 10:00 am	2.4 ± 0.4	2018-02-19
7986182	APR	2018-02-12 @ 12:00 pm	2018-02-15 @ 10:00 am	2.3 ± 0.4	2018-02-19

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

KCI TECHNOLOGIES

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

Names of Schools:

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

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

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

February 27, 2018 **** LABORATORY ANALYSIS REPORT ****

Radon test result report for:
OFFICE BLANKS

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

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February 27, 2018 **** LABORATORY ANALYSIS REPORT ****

Radon test result report for:
TRANSIT BLANKS

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

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February 28, 2018 **** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

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

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

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EXPOSURE IN BOWSER-MORNER RADON CHAMBER

CLIENT KCI Technologies Inc. Job Number 183530

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

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

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

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MCPS RADON TESTING - EXECUTIVE SUMMARY

Site Name	Wayside Elementary School
Date of Report	January 31, 2018
Round of Testing	**Initial Testing** Follow-up Post Remediation 2 year testing 5 year testing HVAC Upgrade Window Replacement New Addition New Facility
# of Rooms Tested	50
# Rooms ≥4.0 pCi/L	2
Lowest Value	< 0.3 pCi/L
Highest Value	5.8 pCi/L

Rooms with results ≥ 4.0 pCi/L:

133, (5.8 pCi/L), 120 (4.5 pCi/L)

Current Project Status at this time: Initial Testing Completed; retesting needed for results ≥ 4.0 pCi/L.

Missing or compromised samples need re-test.

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January 31, 2018

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

Re: Radon Testing Services

KCI Job #1214694182

Location: Wayside Elementary School
10011 Glen Rd.
Potomac, Maryland 20854

Dear Mr. Cox:

KCI Technologies, Inc. (KCI) is pleased to submit the following report to Montgomery County Public Schools pursuant to completing a "short-term" 3-day radon test for the Wayside Elementary School, located at 10011 Glen Rd. in Potomac, Maryland 20854 (subject site).

SCOPE OF SERVICES

KCI conducted radon testing at the subject site to evaluate indoor radon levels relative to the USEPA's recommended action level of 4.0 picocuries per Liter (pCi/L) - the level at which EPA recommends that schools take action to reduce the level. KCI conducted the radon testing in accordance with American Association of Radon Scientists and Technologists (AARST) *Protocol for Conducting Measurements of Radon and Radon Decay Products in Schools and Large Buildings*. A National Radon Safety Board (NRSB) Radon Measurement Specialist (certification #14SS056) supervised the testing. Additional information on radon management and the health effects of radon exposure is available from www.montgomerycountymd.gov/dep/air/radon or www.epa.gov/radon.

KCI visited the site on November 28, 2017 and deployed sixty-four (64) activated charcoal (AC) radon test kits. KCI deployed radon test kits in frequently-occupied ground contact rooms, and other areas, (if applicable) in accordance with AARST guidance. A floor plan map of the building with the test locations is included as Appendix A of this report.

As a quality control measure, KCI included duplicate samples, field blanks, lab transit blanks, and office blanks in accordance with AARST recommendations. In addition, KCI submitted six (6) test kits to

Bowser-Morner, Inc. as spike samples. The spiked tests were exposed to a known radon concentration by Bowser-Morner, Inc. prior to being returned to the laboratory for analysis.

KCI returned to the site on December 1, 2017 to retrieve the radon sampling test kits. KCI shipped all radon tests via overnight delivery to Aircheck, Inc. for analysis by gamma-ray spectroscopy. Aircheck, Inc. is a NRSB certified analytical laboratory for radon analysis (certification #ARL1402) located at 1936 Butler Bridge Road, Mills River, North Carolina.

EVALUATION OF TESTING CONDITIONS

These tests represent:

- 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 30s and high temperatures ranged from the low-50s to mid-60s. Maximum sustained winds ranged from 8-15 miles per hour. Average humidity was around 65%. 0.02 Inches of precipitation was recorded during the testing period.

A magnitude 4.1 earthquake was reported on Thursday, November 30 near Dover, Delaware approximately 95 miles east of Gaithersburg, Maryland. The earthquake occurred during or just after the radon testing period for this facility. In general, enhanced radon emissions have been observed prior to earthquakes and this has been recorded all over the world, according to the research article entitled *Radon-222: A Potential Short-Term Earthquake Precursor,* published June 30, 2015 in the Journal of Earth Science and Climate

Change. The nearby earthquake, which occurred during or prior to the testing period, may have resulted in higher-than-normal radon test results for this facility.

RESULTS

The sampling locations, field observations, and analytical results are listed on Table 1 (Attachment B). The quality control sample locations and analytical results are listed on Table 2 (Attachment B). Missing/ compromised tests, missed rooms, and locked rooms are listed on Table 3 (Attachment B). The laboratory analytical results are included in Attachment C. Laboratory results and exposure data for the spike samples are also included in Attachment C.

The results of the radon test analysis indicated the following:

Radon Concentration	Room	Result
≥4.0 piC/L	133	5.8
≥4.0 piC/L	120	4.5
≤4.0 piC/L	See Attachment B	See Attachment B

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

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

Sincerely,

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

Attachments:

B - Tables 1-3, Radon Test Summary Spreadsheets

C- Laboratory Analytical Results

ATTACHMENT B

Radon Test Summary Spreadsheet

Table Notes:

AC- Activated Charcoal

ACI- Air Chek, Inc.

D- Duplicate

FB- Field Blank

KCI- KCI Technologies, Inc.

OB- Office Blank

PM- Project Manager

QC- Quality Control

Radon Testing Results		
Wayside Elementary School		
Test Period: 11/28/17-12/01/17		
Kit Number	**Room / Area**	**Result**
7977903	100	0.7
7977904	102	0.8
7977916	103	0.9
7977909	104	0.7
7977910	104	1.1
7977918	106	1.5
7977917	107	0.7
7977924	115	0.7
7977761	119	1.2
7977921	120	4.5
7977925	124	0.9
7977901	127	1.5
7977908	128	0.9
7977767	129	1.4
7977771	133	5.8
7977920	134	1.3
7977766	135	1.4
7977913	136	1.5
7977776	137	1.1
7977773	140	2.2
7977778	141	1.0
7977914	141	1.2
7977926	146	0.5
7977777	150	0.6
7977782	152	0.6
7977774	155	< 0.3
7977769	156	0.6
7977783	161	1.2
7977785	163	0.6
7977788	166	0.8
7977789	167	0.6
7977795	170	< 0.3
7977786	172	< 0.3
7977791	178	< 0.3
7977793	233	0.8
7977927	237	0.6
7977798	238	1.0
7977792	239	0.5
7977787	242	0.5
7977781	243	0.6
7977907	100 E	0.7
7977902	100A	0.7
7977906	100B	< 0.3
7977911	100C	0.6
7977905	102C	< 0.3
7977912	104D	0.6

Table Note:
* Missing or Compromised Sample

Radon Testing Results		
Wayside Elementary School		
Test Period: 11/28/17-12/01/17		
Kit Number	**Room / Area**	**Result**
7977923	121B	3.4
7977796	169C	0.7
7977919	* APR (Open Door)	2.3
7977922	* APR (Open Door)	2.1
7977765	BLDG SERV	1.3
7977775	GYM	0.8
7977780	GYM	< 0.3
7977784	GYM OFFICE	0.9

Table Note:
* Missing or Compromised Sample

Radon Testing Results		
Wayside Elementary School		
Test Period: 11/28/17-12/01/17		
Kit Number	**QC Type**	**Result**
7977915	D (104 D)	0.9
7977772	D (136)	1.4
7977779	D (155)	< 0.3
7977790	D (167)	0.5
7977797	D (238)	0.9
7977799	D (238)	0.7
7977760	D (Q15)	0.6
7977770	FB (136)	< 0.3
7977794	FB (238)	< 0.3
7977997	OB (OB)	< 0.3

Table Note:
* Missing or Compromised Sample

Summary of Missed Locations		
Wayside Elementary School		
Test Period: 11/28/17-12/02/17		
Kit Number	**Room / Area**	**Result**
-	121B (Missed location)	-
-	APR (Missed location)	-
-	123 (Missed location)	-
-	122A (Missed location)	-
-	122D (Missed location)	-
-	122E (Missed location)	-
-	122F (Missed location)	-
-	121 (Missed location)	-
-	104A (Missed location)	-
-	104B (Missed location)	-

Summary of Missing, Compromised and ≥4 piC/L Tests			
Wayside Elementary School			
Test Period: 11/28/17-12/01/17			
Kit Number		**Room / Area**	**Result**
7977921		120	4.5
7977771		133	5.8
7977919	*	APR (Open Door)	2.3
7977922	*	APR (Open Door)	2.1

Table Note:
* Missing or Compromised Sample

ATTACHMENT C

Laboratory Analytical Results

December 19, 2017 **** LABORATORY ANALYSIS REPORT ****

Radon test result report for:
WAYSIDE ES
MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7977903	100	2017-11-28 @ 1:00 pm	2017-12-01 @ 9:00 am	0.7 ± 0.3	2017-12-04
7977907	100 E	2017-11-28 @ 1:00 pm	2017-12-01 @ 9:00 am	0.7 ± 0.3	2017-12-04
7977902	100A	2017-11-28 @ 1:00 pm	2017-12-01 @ 9:00 am	0.7 ± 0.3	2017-12-05
7977906	100B	2017-11-28 @ 1:00 pm	2017-12-01 @ 9:00 am	< 0.3	2017-12-04
7977911	100C	2017-11-28 @ 1:00 pm	2017-12-01 @ 9:00 am	0.6 ± 0.3	2017-12-05
7977904	102	2017-11-28 @ 1:00 pm	2017-12-01 @ 9:00 am	0.8 ± 0.3	2017-12-05
7977905	102C	2017-11-28 @ 1:00 pm	2017-12-01 @ 9:00 am	< 0.3	2017-12-04
7977916	103	2017-11-28 @ 1:00 pm	2017-12-01 @ 9:00 am	0.9 ± 0.3	2017-12-04
7977909	104	2017-11-28 @ 1:00 pm	2017-12-01 @ 9:00 am	0.7 ± 0.3	2017-12-04
7977910	104	2017-11-28 @ 1:00 pm	2017-12-01 @ 9:00 am	1.1 ± 0.3	2017-12-05
7977915	104 D	2017-11-28 @ 1:00 pm	2017-12-01 @ 9:00 am	0.9 ± 0.3	2017-12-05
7977912	104D	2017-11-28 @ 1:00 pm	2017-12-01 @ 9:00 am	0.6 ± 0.3	2017-12-05
7977918	106	2017-11-28 @ 1:00 pm	2017-12-01 @ 9:00 am	1.5 ± 0.3	2017-12-05
7977917	107	2017-11-28 @ 1:00 pm	2017-12-01 @ 9:00 am	0.7 ± 0.3	2017-12-05
7977924	115	2017-11-28 @ 1:00 pm	2017-12-01 @ 9:00 am	0.7 ± 0.3	2017-12-04
7977761	119	2017-11-28 @ 2:00 pm	2017-12-01 @ 9:00 am	1.2 ± 0.3	2017-12-05
7977921	120	2017-11-28 @ 1:00 pm	2017-12-01 @ 9:00 am	4.5 ± 0.4	2017-12-04
7977923	121B	2017-11-28 @ 1:00 pm	2017-12-01 @ 9:00 am	3.4 ± 0.4	2017-12-05
7977925	124	2017-11-28 @ 2:00 pm	2017-12-01 @ 9:00 am	0.9 ± 0.3	2017-12-05
7977901	127	2017-11-28 @ 2:00 pm	2017-12-01 @ 9:00 am	1.5 ± 0.3	2017-12-05
7977908	128	2017-11-28 @ 2:00 pm	2017-12-01 @ 9:00 am	0.9 ± 0.3	2017-12-04
7977767	129	2017-11-28 @ 2:00 pm	2017-12-01 @ 9:00 am	1.4 ± 0.3	2017-12-04
7977771	133	2017-11-28 @ 2:00 pm	2017-12-01 @ 9:00 am	5.8 ± 0.4	2017-12-04
7977920	134	2017-11-28 @ 2:00 pm	2017-12-01 @ 9:00 am	1.3 ± 0.3	2017-12-04
7977766	135	2017-11-28 @ 2:00 pm	2017-12-01 @ 9:00 am	1.4 ± 0.3	2017-12-04
7977770	136	2017-11-28 @ 2:00 pm	2017-12-01 @ 9:00 am	< 0.3	2017-12-04
7977913	136	2017-11-28 @ 2:00 pm	2017-12-01 @ 9:00 am	1.5 ± 0.3	2017-12-05
7977772	136	2017-11-28 @ 2:00 pm	2017-12-01 @ 9:00 am	1.4 ± 0.3	2017-12-05
7977776	137	2017-11-28 @ 2:00 pm	2017-12-01 @ 9:00 am	1.1 ± 0.3	2017-12-05
7977773	140	2017-11-28 @ 2:00 pm	2017-12-01 @ 9:00 am	2.2 ± 0.3	2017-12-04
7977778	141	2017-11-28 @ 2:00 pm	2017-12-01 @ 9:00 am	1.0 ± 0.3	2017-12-04
7977914	141	2017-11-28 @ 2:00 pm	2017-12-01 @ 9:00 am	1.2 ± 0.3	2017-12-05
7977926	146	2017-11-28 @ 2:00 pm	2017-12-01 @ 9:00 am	0.5 ± 0.3	2017-12-05
7977777	150	2017-11-28 @ 2:00 pm	2017-12-01 @ 9:00 am	0.6 ± 0.3	2017-12-04
7977782	152	2017-11-28 @ 2:00 pm	2017-12-01 @ 9:00 am	0.6 ± 0.3	2017-12-05
7977779	155	2017-11-28 @ 2:00 pm	2017-12-01 @ 9:00 am	< 0.3	2017-12-04
7977774	155	2017-11-28 @ 2:00 pm	2017-12-01 @ 9:00 am	< 0.3	2017-12-05

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

December 19, 2017 **** LABORATORY ANALYSIS REPORT ****

Radon test result report for:
WAYSIDE ES
MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7977769	156	2017-11-28 @ 2:00 pm	2017-12-01 @ 9:00 am	0.6 ± 0.3	2017-12-04
7977783	161	2017-11-28 @ 2:00 pm	2017-12-01 @ 9:00 am	1.2 ± 0.3	2017-12-05
7977785	163	2017-11-28 @ 3:00 pm	2017-12-01 @ 10:00 am	0.6 ± 0.3	2017-12-04
7977788	166	2017-11-28 @ 2:00 pm	2017-12-01 @ 9:00 am	0.8 ± 0.3	2017-12-05
7977789	167	2017-11-28 @ 3:00 pm	2017-12-01 @ 9:00 am	0.6 ± 0.3	2017-12-05
7977790	167	2017-11-28 @ 3:00 pm	2017-12-01 @ 9:00 am	0.5 ± 0.3	2017-12-05
7977796	169C	2017-11-28 @ 3:00 pm	2017-12-01 @ 10:00 am	0.7 ± 0.3	2017-12-04
7977795	170	2017-11-28 @ 3:00 pm	2017-12-01 @ 9:00 am	< 0.3	2017-12-05
7977786	172	2017-11-28 @ 3:00 pm	2017-12-01 @ 9:00 am	< 0.3	2017-12-04
7977791	178	2017-11-28 @ 3:00 pm	2017-12-01 @ 10:00 am	< 0.3	2017-12-04
7977793	233	2017-11-28 @ 3:00 pm	2017-12-01 @ 10:00 am	0.8 ± 0.3	2017-12-04
7977927	237	2017-11-28 @ 3:00 pm	2017-12-01 @ 10:00 am	0.6 ± 0.3	2017-12-04
7977799	238	2017-11-28 @ 3:00 pm	2017-12-01 @ 10:00 am	0.7 ± 0.3	2017-12-05
7977794	238	2017-11-28 @ 3:00 pm	2017-12-01 @ 10:00 am	< 0.3	2017-12-05
7977797	238	2017-11-28 @ 3:00 pm	2017-12-01 @ 10:00 am	0.9 ± 0.3	2017-12-05
7977798	238	2017-11-28 @ 3:00 pm	2017-12-01 @ 10:00 am	1.0 ± 0.3	2017-12-05
7977792	239	2017-11-28 @ 3:00 pm	2017-12-01 @ 10:00 am	0.5 ± 0.3	2017-12-05
7977787	242	2017-11-28 @ 3:00 pm	2017-12-01 @ 10:00 am	0.5 ± 0.3	2017-12-05
7977781	243	2017-11-28 @ 3:00 pm	2017-12-01 @ 10:00 am	0.6 ± 0.3	2017-12-05
7977922	APR	2017-11-28 @ 1:00 pm	2017-12-01 @ 9:00 am	2.1 ± 0.3	2017-12-04
7977919	APR	2017-11-28 @ 1:00 pm	2017-12-01 @ 9:00 am	2.3 ± 0.3	2017-12-05
7977765	BLDG SERV	2017-11-28 @ 2:00 pm	2017-12-01 @ 9:00 am	1.3 ± 0.3	2017-12-05
7977780	GYM	2017-11-28 @ 2:00 pm	2017-12-01 @ 9:00 am	< 0.3	2017-12-04
7977775	GYM	2017-11-28 @ 2:00 pm	2017-12-01 @ 9:00 am	0.8 ± 0.3	2017-12-05
7977784	GYM OFFICE	2017-11-28 @ 2:00 pm	2017-12-01 @ 9:00 am	0.9 ± 0.3	2017-12-05
7977997	OB	2017-11-28 @ 1:00 pm	2017-12-01 @ 1:00 pm	< 0.3	2017-12-04
7977760	Q15	2017-11-28 @ 1:00 pm	2017-12-01 @ 9:00 am	0.6 ± 0.3	2017-12-05

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

KCI TECHNOLOGIES

ENGINEERS • PLANNERS • SCIENTISTS • CONSTRUCTION MANAGERS

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

Radon Test Kit Chain of Custody

Project Name: MCPS Radon Phase

Names of Schools:

1. Chevy Chase Elementary School
2. Greencastle Elementary School
3. English Manor
4. Rock View Elementary School
5. Wheaton Woods Elementary School
6. Sequoyah Elementary School
7. Fallsmead Elementary School
8. Beall Elementary School
9. Stephen Knolls School
10. Maryvale Elementary School
11. Redland Middle School
12. Walt Whitman High School
13. Springbrook High School
14. Blair G. Ewing Center
15. Viers Mill Elementary School
16. Albert Einstein High School
17. Wayside Elementary School
18. Thomas S. Wootton High School
19. Highland Elementary School
20. Bethesda Transportation Depot
21. Bethesda Maintenance Depot
22. Travilah Elementary School
23. Lathrop E. Smith Center

	Date	Initials
Radon Test Kits Deployed	11/28/17	JM
Radon Test Kits Collected	12/01/17	JM
Radon Test Kits Shipped to Lab*	12/01/17	JM
Radon Test Kits Received by Lab*	12/05/17	JM

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

December 19, 2017 **** LABORATORY ANALYSIS REPORT ****

Radon test result report for:
TRANSIT 1
NONE

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

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

December 19, 2017 **** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

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

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

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

EXPOSURE IN BOWSER-MORNER RADON CHAMBER

CLIENT KCI Technologies Inc. Job Number 182393

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

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

Time Start: 1049 Time Stop: 1049

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

7975075, 7975064, 7975063,

7975065, 7975069, 7975070

F4 Right

Date Start: _____ Date Stop: _____

Time Start: _____ Time Stop: _____

Device No.'s: _____

Date Start: _____ Date Stop: _____

Time Start: _____ Time Stop: _____

Device No.'s: _____

Date Start: _____ Date Stop: _____

Time Start: _____ Time Stop: _____

Device No.'s: _____

Date Start: _____ Date Stop: _____

Time Start: _____ Time Stop: _____

Device No.'s: _____

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

KCI TECHNOLOGIES

ENGINEERS • PLANNERS • SCIENTISTS • CONSTRUCTION MANAGERS

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

MCPS RADON TESTING

Executive Summary: Wayside Elementary School

Date of Test Report:	2/19/2016
Round of Testing:	Initial Follow-up Post Remediation
# Rooms Tested:	49
# Rooms ≥ 4.0 pCi/L:	0
Low Value:	< 0.3
High Value:	2.1

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

KCI TECHNOLOGIES

ENGINEERS • PLANNERS • SCIENTISTS • CONSTRUCTION MANAGERS

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

February 19, 2016

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

Re: **Radon Testing Services**
KCI Job # 12146341.25

Location: Wayside Elementary School
10011 Glen Road
Potomac, MD 20854

Dear Mr. Cox:

KCI Technologies, Inc. (KCI) is pleased to submit the following report to the Montgomery County Public Schools (MCPS) pursuant to completing a "short-term" 3 day radon test for the Wayside Elementary School, located at 10011 Glen Road in Potomac, Maryland 20854 (subject site).

Scope of Services:

KCI conducted radon testing at the subject site to evaluate indoor radon levels relative to the USEPA's recommended action level of 4.0 picocuries per Liter (pCi/L) - the level at which EPA recommends that schools take action to reduce the level. KCI conducted the radon testing in accordance with American Association of Radon Scientists and Technologists (AARST) *Protocol for Conducting Measurements of Radon and Radon Decay Products in Schools and Large Buildings*. A National Radon Safety Board (NRSB) Radon Measurement Specialist (certification #14SS056) supervised the testing. Additional information on radon management and the health effects of radon exposure is available from www.montgomerycountymd.gov/dep/air/radon or www.epa.gov/radon.

KCI visited the site on January 19, 2016 and deployed sixty-one (61) activated charcoal (AC) radon test kits. KCI deployed radon test kits in frequently-occupied ground contact rooms, and other areas, (if applicable) in accordance with AARST guidance. A floor plan map of the building with the test locations is included as Attachment A of this report.

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

KCI returned to the site on January 22, 2016 to retrieve the radon sampling test kits. KCI shipped all radon tests via overnight delivery to Airchek, Inc. for analysis by gamma-ray spectroscopy. Airchek, Inc. is a NRSB certified analytical laboratory for radon analysis (certification # ARL1402) located at 1936

Butler Bridge Road, Mills River, North Carolina.

Evaluation of Testing Conditions:

The operating condition that represents the greatest amount of significantly occupied time for this building is; heating active, with outdoor temperature averages ≤ 65° F.

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

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

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

Results:

The results of the radon test analysis indicated the following:

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

Notes:
D- Duplicate sample

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

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

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

Sincerely,

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

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

ATTACHMENT A

Floor Plan With Test Locations

ATTACHMENT B

Radon Test Summary Spreadsheet

Table Notes:

AC- Activated Charcoal

ACI- Air Chek, Inc.

D- Duplicate

FB- Field Blank

KCI- KCI Technologies, Inc.

OB- Office Blank

PM- Project Manager

QC- Quality Control

Radon Testing Results		
Wayside Elementary School		
Test Period: 01/19/16-01/22/16		
Kit Number	**Room / Area**	**Result**
7727162	1	0.8
7727164	2	< 0.3
7727159	3	< 0.3
7727154	5	< 0.3
7727152	6.5	2.1
7727145	7	1.4
7727141	8	1
7727200	9	< 0.3
7727137	10	< 0.3
7727199	11	0.7
7727187	12	< 0.3
7727143	13	< 0.3
7727191	14	< 0.3
7727130	15	< 0.3
7727155	16	< 0.3
7727138	17	1
7727161	17	1.1
7727133	18	< 0.3
7727195	20	0.8
7727136	127	0.6
7727198	133	0.7
7727194	134	1.1
7727139	148	1.1
7727149	150	0.9
7727168	4Q	0.6
7727140	APR	0.7
7727144	APR	< 0.3
7727148	CONFERENCE	< 0.3
7727146	HEALTH	< 0.3
7727134	IMC	1.2
7727151	MAIN OFFICE	0.5
7727184	P1	< 0.3
7727175	P10	< 0.3
7727172	P11	< 0.3
7727171	P12	< 0.3
7727167	P13	< 0.3
7727170	P14	< 0.3
7727177	P15	< 0.3
7727173	P16	< 0.3
7727176	P17	< 0.3
7727186	P2	< 0.3
7727180	P3	< 0.3
7727178	P4	< 0.3
7727182	P5	< 0.3
7727183	P6	< 0.3
7727190	P7	< 0.3

Table Note:
* Missing or Compromised Sample

Radon Testing Results		
Wayside Elementary School		
Test Period: 01/19/16-01/22/16		
Kit Number	**Room / Area**	**Result**
7727197	P8	< 0.3
7727193	P9	< 0.3
7727150	PRINCIPLE	< 0.3
7727156	STAFFLOUNGEA	0.8
7727147	WORKROOM	0.6

Table Note:
* Missing or Compromised Sample

Radon Testing Results		
Wayside Elementary School		
Test Period: 01/19/16-01/22/16		
Kit Number	**QC Type**	**Result**
7727163	D (1)	0.7
7727192	D (12)	< 0.3
7727153	D (5)	< 0.3
7727142	D (7)	1.6
7727196	D (9)	0.6
7727135	D (IMC)	1.4
7727129	FB (10)	< 0.3
7727158	FB (3)	< 0.3
7727157	FB (STAFF LOUNGE)	< 0.3
7726703	OB (0)	< 0.3

Table Note:
* Missing or Compromised Sample

ATTACHMENT C

Laboratory Analytical Results

February 11, 2016

** LABORATORY ANALYSIS REPORT **

Radon test result report for:

WAYSIDE ELEMENTARY SCHOOL
MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7726703	0	2016-01-19 @ 3:00 pm	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7727162	1	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	0.8 ± 0.3	2016-01-27
7727163	1	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	0.7 ± 0.3	2016-01-27
7727129	10	2016-01-19 @ 11:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7727137	10	2016-01-19 @ 11:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7727199	11	2016-01-19 @ 11:00 am	2016-01-22 @ 8:00 am	0.7 ± 0.3	2016-01-27
7727187	12	2016-01-19 @ 11:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7727192	12	2016-01-19 @ 11:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7727136	127	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	0.6 ± 0.3	2016-01-27
7727143	13	2016-01-19 @ 11:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7727198	133	2016-01-19 @ 11:00 am	2016-01-22 @ 8:00 am	0.7 ± 0.3	2016-01-27
7727194	134	2016-01-19 @ 11:00 am	2016-01-22 @ 8:00 am	1.1 ± 0.4	2016-01-27
7727191	14	2016-01-19 @ 11:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7727139	148	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	1.1 ± 0.4	2016-01-27
7727130	15	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7727149	150	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	0.9 ± 0.3	2016-01-27
7727155	16	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7727138	17	2016-01-19 @ 11:00 am	2016-01-22 @ 8:00 am	1.0 ± 0.3	2016-01-27
7727161	17	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	1.1 ± 0.3	2016-01-27
7727133	18	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7727164	2	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7727195	20	2016-01-19 @ 11:00 am	2016-01-22 @ 8:00 am	0.8 ± 0.3	2016-01-27
7727158	3	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7727159	3	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7727168	4Q	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	0.6 ± 0.3	2016-01-27
7727153	5	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7727154	5	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7727152	6.5	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	2.1 ± 0.4	2016-01-27
7727142	7	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	1.6 ± 0.4	2016-01-27
7727145	7	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	1.4 ± 0.4	2016-01-27
7727141	8	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	1.0 ± 0.3	2016-01-27
7727196	9	2016-01-19 @ 11:00 am	2016-01-22 @ 8:00 am	0.6 ± 0.3	2016-01-27
7727200	9	2016-01-19 @ 11:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7727140	APR	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	0.7 ± 0.3	2016-01-27
7727144	APR	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7727148	CONFERENCE	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7727146	HEALTH	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-27

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

February 11, 2016

** LABORATORY ANALYSIS REPORT **

Radon test result report for:

WAYSIDE ELEMENTARY SCHOOL
MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7727134	IMC	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	1.2 ± 0.3	2016-01-27
7727135	IMC	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	1.4 ± 0.4	2016-01-27
7727151	MAIN OFFICE	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	0.5 ± 0.3	2016-01-27
7727184	P1	2016-01-19 @ 11:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7727175	P10	2016-01-19 @ 11:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7727172	P11	2016-01-19 @ 11:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7727171	P12	2016-01-19 @ 11:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7727167	P13	2016-01-19 @ 11:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7727170	P14	2016-01-19 @ 11:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7727177	P15	2016-01-19 @ 11:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7727173	P16	2016-01-19 @ 11:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7727176	P17	2016-01-19 @ 11:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7727186	P2	2016-01-19 @ 11:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7727180	P3	2016-01-19 @ 11:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7727178	P4	2016-01-19 @ 11:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7727182	P5	2016-01-19 @ 11:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7727183	P6	2016-01-19 @ 11:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7727190	P7	2016-01-19 @ 11:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7727197	P8	2016-01-19 @ 11:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7727193	P9	2016-01-19 @ 11:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7727150	PRINCIPLE	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7727157	STAFF LOUNGE	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7727156	STAFFLOUNGEA	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	0.8 ± 0.3	2016-01-27
7727147	WORKROOM	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	0.6 ± 0.3	2016-01-27

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

February 2, 2016

** LABORATORY ANALYSIS REPORT **

Radon test result report for:

MCPS PHASE 5 & 6
TRANSIT BLANKS

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

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

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: 1/30/16 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	_____
E3 Left	_____
Date Start: _____ Date Stop: _____	Date Start: _____ Date Stop: _____
Time Start: _____ Time Stop: _____	Time Start: _____ Time Stop: _____
Device No.'s: _____	Device No.'s: _____
_____	_____
_____	_____
_____	_____
Date Start: _____ Date Stop: _____	Date Start: _____ Date Stop: _____
Time Start: _____ Time Stop: _____	Time Start: _____ Time Stop: _____
Device No.'s: _____	Device No.'s: _____
_____	_____
_____	_____
_____	_____

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

KCI TECHNOLOGIES

ENGINEERS • PLANNERS • SCIENTISTS • CONSTRUCTION MANAGERS

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

Chain of Custody

Project Name: MCPS Radon Phase VI

Name of Schools:

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

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

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