MCPS DEM SUSTAINABILITY & COMPLIANCE

School / Facility Radon Testing Report Form

School Year: **24-25**

Facility:	Woodfield Elementary School
Address:	24200 Woodfield Rd.
	Gaithersburg, MD 20882
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	46	Lowest Value (pCi/L)	<0.3
Number of Rooms (≥4.0-pCi/L)	0	Highest Value (pCi/L)	2.0

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

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

- Testing Results – lab/detector Identification, by room number/name (alpha-numeric order) as depicted on facility map/floor plan provided by the facility/school at the time of test device deployment;
- Summary Results – list of rooms by test result ≥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.

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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
Brittany Maas	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):	3/10/2025 3/13/2025
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	0	0	46
Duplicates[2]	5	0	0	0	5
Field Blanks[3]	2	0	0	0	2
				Grand Total	53

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	0	0	46
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:	2	0	0	0	2
Number of missing required test locations[3]:	0	0	0	0	0
Number of failed duplicate control locations:	0	0	0	0	0
Percentage of missing test locations for the facility[4,5]:	0	0	0	0	0

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

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

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

4 – if all valid measurements are <4.0-pCi/L and the total number of test locations are ≥18, there is an allowance of ≤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		
Woodfield Elementary School		
Test Period: 3/10/2025 - 3/13/2025		
Kit Number	Room / Area	Result
11886551	1	1.1
11886543	2	< 0.3
11886540	3	< 0.3
11886516	4	0.8
11886507	5	2.0
11886542	6	< 0.3
11886535	7	1.4
11886536	7	0.6
11886541	7	< 0.3
11886533	8	1.1
11886503	9	0.8
11886534	10	1.2
11886508	11	1.2
11886510	13	2.0
11886506	14	1.4
11886517	15	1.4
11886518	16	0.9
11886501	17	1.0
11886552	18	0.9
11886530	19	0.6
11886523	20	0.8
11886514	21	0.6
11886537	22	0.8
11886529	23	1.0
11886544	24	< 0.3
11886504	30	1.1
11886526	31	1.5
11886527	32	1.6
11886505	12A	1.4
11886512	12B	0.9
11886531	APR	1.1
11886539	APR	0.9
11886502	ASA OFFICE	1.1
11886513	BUILDING SERVICE OFFICE	< 0.3
11886521	BUILDING SERVICE OFFICE	0.5
11886522	BUILDING SERVICE OFFICE	< 0.3
11886524	GYM	1.2

Table 1- Radon Testing Results		
Woodfield Elementary School		
Test Period: 3/10/2025 - 3/13/2025		
Kit Number	Room / Area	Result
11886546	GYM	1.2
11886532	GYM OFFICE	1.1
11886520	MEDIA CENTER WORKROOM	1.7
11886538	MAIN OFFICE	1.0
11886509	MEDIA CENTER	1.5
11886519	MEDIA CENTER	1.5
11886525	MEDIA CENTER	1.5
11886528	MEDIA OFFICE	1.6
11886557	NURSE	1.8
11886558	NURSE	1.4
11886511	OBSERVATION ROOM	1.2
11886515	PEP	0.7
11886559	PRINCIPAL	1.1
11886549	STAFF LOUNGE	1.0
11886550	STAFF LOUNGE	0.6
11886545	WORKROOM	1.0

Table 2 - Summary Testing Results ≥2.0 pCi/L							
Woodfield Elementary School							
Test Period: 3/10/2025 - 3/13/2025							
≥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
5	2.0	N/A	N/A	N/A	N/A	N/A	N/A
13	2.0						

Table 3 - QC Radon Testing Results			
Woodfield Elementary School			
Test Period: 3/10/2025 - 3/13/2025			
Kit Number	**QC Type**	**Room / Area**	**Result**
11886536	D	7	0.6
11886541	FB	7	<0.3
11886521	D	Building Service Office	0.5
11886513	FB	Building Service Office	<0.3
11886525	D	Media Center	1.5
11886557	D	Nurse	1.8
11886550	D	Staff Lounge	0.6
11892446	OB	OFFICE BLANK	< 0.3
11892444	TB	TRAVEL BLANK	< 0.3

Table 3a - Duplicate Worksheet / Data Validation

Woodfield Elementary School

Test Period: 3/10/2025 - 3/13/2025

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
11886536	11886541	7	0.6	0.3	✓	0.6	PASS	0.5	<1-pCi/L	✓
11886521	11886513	Building Service Office	0.5	0.3	✓	0.6	PASS	0.4	<1-pCi/L	✓
11886525	11886509	Media Center	1.5	1.5	✓	3.0	PASS	1.5	<1-pCi/L	✓
11886557	11886558	Nurse	1.8	1.4	✓	2.8	PASS	1.6	<1-pCi/L	✓
11886550	11886549	Staff Lounge	1.0	0.6	✓	1.2	PASS	0.8	<1-pCi/L	✓

NOTES:

QC Check #1 - Data Entry

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

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

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

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

Table 4 - Summary of Invalid Measurement Locations		
Woodfield Elementary School		
Test Period: 3/10/25 - 3/13/25		
Kit Number	**Room/Area**	**Reason**
N/A	N/A	N/A

Attachment 2:

Laboratory Reports

March 17, 2025

** LABORATORY ANALYSIS REPORT **

Radon test result report for:
WOODFIELD ES
MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11886551	1	2025-03-10 @ 11:00 am	2025-03-13 @ 10:00 am	1.1 ± 0.3	2025-03-17
11886534	10	2025-03-10 @ 10:00 am	2025-03-13 @ 10:00 am	1.2 ± 0.4	2025-03-17
11886508	11	2025-03-10 @ 10:00 am	2025-03-13 @ 10:00 am	1.2 ± 0.4	2025-03-17
11886505	12A	2025-03-10 @ 10:00 am	2025-03-13 @ 9:00 am	1.4 ± 0.4	2025-03-17
11886512	12B	2025-03-10 @ 10:00 am	2025-03-13 @ 9:00 am	0.9 ± 0.4	2025-03-17
11886510	13	2025-03-10 @ 10:00 am	2025-03-13 @ 9:00 am	2.0 ± 0.4	2025-03-17
11886506	14	2025-03-10 @ 10:00 am	2025-03-13 @ 9:00 am	1.4 ± 0.4	2025-03-17
11886517	15	2025-03-10 @ 10:00 am	2025-03-13 @ 9:00 am	1.4 ± 0.4	2025-03-17
11886518	16	2025-03-10 @ 10:00 am	2025-03-13 @ 9:00 am	0.9 ± 0.4	2025-03-17
11886501	17	2025-03-10 @ 11:00 am	2025-03-13 @ 9:00 am	1.0 ± 0.4	2025-03-17
11886552	18	2025-03-10 @ 11:00 am	2025-03-13 @ 9:00 am	0.9 ± 0.3	2025-03-17
11886530	19	2025-03-10 @ 11:00 am	2025-03-13 @ 9:00 am	0.6 ± 0.3	2025-03-17
11886543	2	2025-03-10 @ 10:00 am	2025-03-13 @ 10:00 am	< 0.3	2025-03-17
11886523	20	2025-03-10 @ 11:00 am	2025-03-13 @ 9:00 am	0.8 ± 0.4	2025-03-17
11886514	21	2025-03-10 @ 11:00 am	2025-03-13 @ 9:00 am	0.6 ± 0.4	2025-03-17
11886537	22	2025-03-10 @ 11:00 am	2025-03-13 @ 9:00 am	0.8 ± 0.4	2025-03-17
11886529	23	2025-03-10 @ 11:00 am	2025-03-13 @ 9:00 am	1.0 ± 0.4	2025-03-17
11886544	24	2025-03-10 @ 11:00 am	2025-03-13 @ 10:00 am	< 0.3	2025-03-17
11886540	3	2025-03-10 @ 10:00 am	2025-03-13 @ 10:00 am	< 0.3	2025-03-17
11886504	30	2025-03-10 @ 10:00 am	2025-03-13 @ 9:00 am	1.1 ± 0.4	2025-03-17
11886526	31	2025-03-10 @ 10:00 am	2025-03-13 @ 10:00 am	1.5 ± 0.4	2025-03-17
11886527	32	2025-03-10 @ 10:00 am	2025-03-13 @ 9:00 am	1.6 ± 0.4	2025-03-17
11886516	4	2025-03-10 @ 10:00 am	2025-03-13 @ 10:00 am	0.8 ± 0.3	2025-03-17
11886507	5	2025-03-10 @ 10:00 am	2025-03-13 @ 10:00 am	2.0 ± 0.4	2025-03-17
11886542	6	2025-03-10 @ 10:00 am	2025-03-13 @ 10:00 am	< 0.3	2025-03-17
11886535	7	2025-03-10 @ 10:00 am	2025-03-13 @ 10:00 am	1.4 ± 0.4	2025-03-17
11886541	7	2025-03-10 @ 10:00 am	2025-03-13 @ 10:00 am	< 0.3	2025-03-17
11886536	7	2025-03-10 @ 10:00 am	2025-03-13 @ 10:00 am	0.6 ± 0.4	2025-03-17
11886533	8	2025-03-10 @ 10:00 am	2025-03-13 @ 10:00 am	1.1 ± 0.4	2025-03-17
11886503	9	2025-03-10 @ 10:00 am	2025-03-13 @ 10:00 am	0.8 ± 0.3	2025-03-17
11886531	APR	2025-03-10 @ 11:00 am	2025-03-13 @ 10:00 am	1.1 ± 0.4	2025-03-17
11886539	APR	2025-03-10 @ 11:00 am	2025-03-13 @ 10:00 am	0.9 ± 0.4	2025-03-17
11886502	ASA OFFICE	2025-03-10 @ 11:00 am	2025-03-13 @ 9:00 am	1.1 ± 0.4	2025-03-17
11886513	BUILDING SERVICE OFFICE	2025-03-10 @ 11:00 am	2025-03-13 @ 9:00 am	< 0.3	2025-03-17
11886522	BUILDING SERVICE OFFICE	2025-03-10 @ 11:00 am	2025-03-13 @ 9:00 am	< 0.3	2025-03-17
11886521	BUILDING SERVICE OFFICE	2025-03-10 @ 11:00 am	2025-03-13 @ 9:00 am	0.5 ± 0.3	2025-03-17
11886546	GYM	2025-03-10 @ 11:00 am	2025-03-13 @ 9:00 am	1.2 ± 0.4	2025-03-17

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

March 17, 2025

** LABORATORY ANALYSIS REPORT **

Radon test result report for:
WOODFIELD ES
MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11886524	GYM	2025-03-10 @ 11:00 am	2025-03-13 @ 9:00 am	1.2 ± 0.4	2025-03-17
11886532	GYM OFFICE	2025-03-10 @ 11:00 am	2025-03-13 @ 9:00 am	1.1 ± 0.4	2025-03-17
11886520	M3DIA CENTER WORKROOM	2025-03-10 @ 10:00 am	2025-03-13 @ 9:00 am	1.7 ± 0.4	2025-03-17
11886538	MAIN OFFICE	2025-03-10 @ 11:00 am	2025-03-13 @ 9:00 am	1.0 ± 0.4	2025-03-17
11886519	MEDIA CENTER	2025-03-10 @ 10:00 am	2025-03-13 @ 10:00 am	1.5 ± 0.4	2025-03-17
11886525	MEDIA CENTER	2025-03-10 @ 10:00 am	2025-03-13 @ 9:00 am	1.5 ± 0.4	2025-03-17
11886509	MEDIA CENTER	2025-03-10 @ 10:00 am	2025-03-13 @ 9:00 am	1.5 ± 0.4	2025-03-17
11886528	MEDIA OFFICE	2025-03-10 @ 10:00 am	2025-03-13 @ 9:00 am	1.6 ± 0.4	2025-03-17
11886557	NURSE	2025-03-10 @ 11:00 am	2025-03-13 @ 9:00 am	1.8 ± 0.4	2025-03-17
11886558	NURSE	2025-03-10 @ 11:00 am	2025-03-13 @ 9:00 am	1.4 ± 0.4	2025-03-17
11886511	OBSERVATION ROOM	2025-03-10 @ 10:00 am	2025-03-13 @ 9:00 am	1.2 ± 0.4	2025-03-17
11886515	PEP	2025-03-10 @ 11:00 am	2025-03-13 @ 10:00 am	0.7 ± 0.3	2025-03-17
11886559	PRINCIPAL	2025-03-10 @ 11:00 am	2025-03-13 @ 9:00 am	1.1 ± 0.4	2025-03-17
11886550	STAFF LOUNGE	2025-03-10 @ 11:00 am	2025-03-13 @ 10:00 am	0.6 ± 0.3	2025-03-17
11886549	STAFF LOUNGE	2025-03-10 @ 11:00 am	2025-03-13 @ 10:00 am	1.0 ± 0.3	2025-03-17
11886545	WORKROOM	2025-03-10 @ 11:00 am	2025-03-13 @ 9:00 am	1.0 ± 0.4	2025-03-17

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March 17, 2025

** LABORATORY ANALYSIS REPORT **

Radon test result report for:
OFFICE
MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11892446	OB	2025-03-11 @ 11:00 am	2025-03-14 @ 11:00 am	< 0.3	2025-03-17
11886599	OB	2025-03-10 @ 11:00 am	2025-03-13 @ 11:00 am	< 0.3	2025-03-17

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March 17, 2025

** LABORATORY ANALYSIS REPORT **

Radon test result report for:
TRAVEL
MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11892444	TB	2025-03-11 @ 11:00 am	2025-03-14 @ 11:00 am	< 0.3	2025-03-17
11886600	TB	2025-03-10 @ 11:00 am	2025-03-13 @ 11:00 am	< 0.3	2025-03-17

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

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 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

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

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

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 March 4th – March 7th, 2025

Name of Schools:

1. Hallie Wells MS
2. Snowden Farms ES
3. Watkins Mill HS
4. Whestone ES
5. Woodfield ES

	Date	Initials
Radon Test Kits Deployed	3/10/2025	
Radon Test Kits Collected	3/13/2025	
Radon Test Kits Shipped to Lab*	3/13/2025	
Radon Test Kits Received by Lab*	3/15/2025	

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

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MCPS RADON TESTING – EXECUTIVE SUMMARY

Site Name	Woodfield Elementary School
Date of Test Report	2/16/2023
Round of Testing	Initial Follow-up Post Remediation 2 Year Testing 5 Year Testing HVAC Upgrade Window Replacement New Addition New Facility
# Rooms Tested	46
# Rooms ≥ 4.0 pCi/L	0
Lowest Value	<0.3 pCi/L
Highest Value	2.7 pCi/L

Project Status:

1. 5-Year retesting completed.

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February 16, 2023

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

Re: **Radon Testing Services**
KCI Job # 122210551

Location: Woodfield Elementary School
24200 Woodfield Rd.
Gaithersburg, MD 20882

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 Woodfield Elementary School, located at 24200 Woodfield Rd. Gaithersburg, MD 20882 (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 January 10, 2023 and deployed fifty-three (53) 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 January 13, 2023 to retrieve the radon sampling test kits. KCI shipped all radon tests via overnight delivery to Accustar Labs - MA for analysis by gamma-ray spectroscopy.

Accustar Labs - MA is a NRSB certified analytical laboratory for radon analysis (certification #ARL0017) located at 2 Saber Way, Ward Hill, MA 01835.

Evaluation of Testing Conditions:

These tests represent:

- Follow up to initial testing.

These tests were conducted to:

- Evaluate radon concentration levels at the facility.

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

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

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

KCI also compiled weather data for the testing period and conducted observations of relevant field conditions. During the test period, weather records indicate temperatures ranged from the 26°F to the mid 56°F. Maximum sustained winds ranged from 0-21 miles per hour. Average humidity was around 68% with .09 inches of precipitation (rain) was recorded during testing period.

Results:

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

The results of the radon test analysis indicated the following:

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		
Woodfield ES		
Test Period: 01/10/2023 - 01/13/2023		
Kit Number	Room / Area	Result
11285898	1	1.1
11284882	2	1.2
11285897	2	< 0.3
11284845	3	0.7
11284878	3	0.8
11284880	4	1.2
11284873	5	1.2
11284879	6	0.8
11284891	7	0.7
11284892	8	1.2
11284884	9	1.0
11284874	10	1.6
11284887	11	1.0
11285900	13	2.7
11284889	14	1.2
11285896	15	1.8
11285899	16	1.1
11285151	17	1.6
11285161	18	1.3
11285174	19	0.6
11284893	20	1.0
11284877	21	1.4
11284883	21	1.0
11284876	22	0.9
11285136	22	< 0.3
11285145	23	1.2
11284896	30	1.4
11285894	31	1.4
11284888	32	1.5
11284890	32	1.4
11284852	1006	< 0.3
11284897	1014	< 0.3
11284851	1019	1.5
11284886	1019	1.8
11285890	12A	2.0
11284895	12B	1.2
11285895	16 OBSERVATION	1.6
11285143	APR	1.1
11285182	APR	1.5
11284900	ASA	1.6
11285144	BUILDING SERVICES	< 0.3
11285153	GYM	1.7

Table 1- Radon Testing Results		
Woodfield ES		
Test Period: 01/10/2023 - 01/13/2023		
Kit Number	Room / Area	Result
11285159	GYM	1.5
11285152	GYM OFFICE	1.7
11285889	HR	2.0
11284885	IMC	1.5
11284898	IMC	2.1
11285179	KITCHEN OFFICE	1.0
11284875	MAIN OFFICE	1.3
11285180	MAIN OFFICE	1.5
11284894	MEDIA WORKROOM	1.6
11285135	PRINCIPAL	1.6
11284881	SPEECH	0.8

Table 2- Radon Testing Results			
Woodfield ES			
Test Period: 01/10/23 - 01/13/23			
Kit Number	QC Type	Room / Area	Result
11285897	FB	2	< 0.3
11284878	D	3	0.8
11284883	D	21	1.0
11285136	FB	22	< 0.3
11284890	D	32	1.4
11284851	D	1019	1.5
11285180	D	Main Office	1.5
11285162	OB	OFFICE BLANK	< 0.3
11284899	TB	TRAVEL BLANK	< 0.3

Summary of Missed Locations		
Woodfield ES		
Test Period: 01/10/23 - 01/13/23		
Kit Number	Room/Area	Result
	N/A	

Summary of Missing, Compromised and >/= 4 piC/L Tests		
Woofield ES		
Test Period: 01/10/23 - 01/13/23		
Kit Number	Room/Area	Result
	N/A	

Table Note:
* Missing or Compromised Sample

ATTACHMENT C

Laboratory Analytical Results

January 16, 2023 **** LABORATORY ANALYSIS REPORT ****

Radon test result report for:
WOODFIELD ES
1

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11285898	1	2023-01-10 @ 11:00 am	2023-01-13 @ 10:00 am	1.1 ± 0.3	2023-01-16
11284874	10	2023-01-10 @ 11:00 am	2023-01-13 @ 10:00 am	1.6 ± 0.3	2023-01-16
11284852	1006	2023-01-10 @ 11:00 am	2023-01-13 @ 10:00 am	< 0.3	2023-01-16
11284897	1014	2023-01-10 @ 11:00 am	2023-01-13 @ 10:00 am	< 0.3	2023-01-16
11284851	1019	2023-01-10 @ 11:00 am	2023-01-13 @ 10:00 am	1.5 ± 0.3	2023-01-16
11284886	1019	2023-01-10 @ 11:00 am	2023-01-13 @ 10:00 am	1.8 ± 0.3	2023-01-16
11284887	11	2023-01-10 @ 11:00 am	2023-01-13 @ 10:00 am	1.0 ± 0.3	2023-01-16
11285890	12A	2023-01-10 @ 11:00 am	2023-01-13 @ 10:00 am	2.0 ± 0.3	2023-01-16
11284895	12B	2023-01-10 @ 11:00 am	2023-01-13 @ 10:00 am	1.2 ± 0.3	2023-01-16
11285900	13	2023-01-10 @ 11:00 am	2023-01-13 @ 10:00 am	2.7 ± 0.3	2023-01-16
11284889	14	2023-01-10 @ 11:00 am	2023-01-13 @ 10:00 am	1.2 ± 0.3	2023-01-16
11285896	15	2023-01-10 @ 11:00 am	2023-01-13 @ 10:00 am	1.8 ± 0.3	2023-01-16
11285899	16	2023-01-10 @ 11:00 am	2023-01-13 @ 10:00 am	1.1 ± 0.3	2023-01-16
11285895	16 OBSERVATION	2023-01-10 @ 11:00 am	2023-01-13 @ 10:00 am	1.6 ± 0.3	2023-01-16
11285151	17	2023-01-10 @ 11:00 am	2023-01-13 @ 10:00 am	1.6 ± 0.3	2023-01-16
11285161	18	2023-01-10 @ 11:00 am	2023-01-13 @ 10:00 am	1.3 ± 0.3	2023-01-16
11285174	19	2023-01-10 @ 11:00 am	2023-01-13 @ 10:00 am	0.6 ± 0.3	2023-01-16
11284882	2	2023-01-10 @ 11:00 am	2023-01-13 @ 10:00 am	1.2 ± 0.3	2023-01-16
11285897	2	2023-01-10 @ 11:00 am	2023-01-13 @ 10:00 am	< 0.3	2023-01-16
11284893	20	2023-01-10 @ 11:00 am	2023-01-13 @ 10:00 am	1.0 ± 0.3	2023-01-16
11284883	21	2023-01-10 @ 11:00 am	2023-01-13 @ 10:00 am	1.0 ± 0.3	2023-01-16
11284877	21	2023-01-10 @ 11:00 am	2023-01-13 @ 10:00 am	1.4 ± 0.3	2023-01-16
11284876	22	2023-01-10 @ 12:00 pm	2023-01-13 @ 10:00 am	0.9 ± 0.3	2023-01-16
11285136	22	2023-01-10 @ 12:00 pm	2023-01-13 @ 10:00 am	< 0.3	2023-01-16
11285145	23	2023-01-10 @ 12:00 pm	2023-01-13 @ 10:00 am	1.2 ± 0.3	2023-01-16
11284878	3	2023-01-10 @ 11:00 am	2023-01-13 @ 10:00 am	0.8 ± 0.3	2023-01-16
11284845	3	2023-01-10 @ 11:00 am	2023-01-13 @ 10:00 am	0.7 ± 0.3	2023-01-16
11284896	30	2023-01-10 @ 11:00 am	2023-01-13 @ 10:00 am	1.4 ± 0.3	2023-01-16
11285894	31	2023-01-10 @ 11:00 am	2023-01-13 @ 10:00 am	1.4 ± 0.3	2023-01-16
11284890	32	2023-01-10 @ 11:00 am	2023-01-13 @ 10:00 am	1.4 ± 0.3	2023-01-16
11284888	32	2023-01-10 @ 11:00 am	2023-01-13 @ 10:00 am	1.5 ± 0.3	2023-01-16
11284880	4	2023-01-10 @ 11:00 am	2023-01-13 @ 10:00 am	1.2 ± 0.3	2023-01-16
11284873	5	2023-01-10 @ 11:00 am	2023-01-13 @ 10:00 am	1.2 ± 0.3	2023-01-16
11284879	6	2023-01-10 @ 11:00 am	2023-01-13 @ 10:00 am	0.8 ± 0.3	2023-01-16
11284891	7	2023-01-10 @ 11:00 am	2023-01-13 @ 10:00 am	0.7 ± 0.3	2023-01-16
11284892	8	2023-01-10 @ 11:00 am	2023-01-13 @ 10:00 am	1.2 ± 0.3	2023-01-16
11284892	8	2023-01-10 @ 11:00 am	2023-01-13 @ 10:00 am	1.2 ± 0.3	2023-01-16

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

January 16, 2023 **** LABORATORY ANALYSIS REPORT ****

Radon test result report for:
WOODFIELD ES
1

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11284884	9	2023-01-10 @ 11:00 am	2023-01-13 @ 10:00 am	1.0 ± 0.3	2023-01-16
11285182	APR	2023-01-10 @ 12:00 pm	2023-01-13 @ 10:00 am	1.5 ± 0.3	2023-01-16
11285143	APR	2023-01-10 @ 12:00 pm	2023-01-13 @ 10:00 am	1.1 ± 0.3	2023-01-16
11284900	ASA	2023-01-10 @ 12:00 pm	2023-01-13 @ 10:00 am	1.6 ± 0.3	2023-01-16
11285144	BUILDING SERVICES	2023-01-10 @ 12:00 pm	2023-01-13 @ 10:00 am	< 0.3	2023-01-16
11285159	GYM	2023-01-10 @ 11:00 am	2023-01-13 @ 10:00 am	1.5 ± 0.3	2023-01-16
11285153	GYM	2023-01-10 @ 11:00 am	2023-01-13 @ 10:00 am	1.7 ± 0.3	2023-01-16
11285152	GYM OFFICE	2023-01-10 @ 11:00 am	2023-01-13 @ 10:00 am	1.7 ± 0.3	2023-01-16
11285889	HR	2023-01-10 @ 12:00 pm	2023-01-13 @ 10:00 am	2.0 ± 0.3	2023-01-16
11284898	IMC	2023-01-10 @ 11:00 am	2023-01-13 @ 10:00 am	2.1 ± 0.3	2023-01-16
11284885	IMC	2023-01-10 @ 11:00 am	2023-01-13 @ 10:00 am	1.5 ± 0.3	2023-01-16
11285179	KITCHEN OFFICE	2023-01-10 @ 12:00 pm	2023-01-13 @ 10:00 am	1.0 ± 0.3	2023-01-16
11284875	MAIN OFFICE	2023-01-10 @ 12:00 pm	2023-01-13 @ 10:00 am	1.3 ± 0.3	2023-01-16
11285180	MAIN OFFICE	2023-01-10 @ 12:00 pm	2023-01-13 @ 10:00 am	1.5 ± 0.3	2023-01-16
11284894	MEDIA WORKROOM	2023-01-10 @ 11:00 am	2023-01-13 @ 10:00 am	1.6 ± 0.3	2023-01-16
11285135	PRINCIPAL	2023-01-10 @ 12:00 pm	2023-01-13 @ 10:00 am	1.6 ± 0.3	2023-01-16
11284881	SPEECH	2023-01-10 @ 11:00 am	2023-01-13 @ 10:00 am	0.8 ± 0.3	2023-01-16

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 KC I TECHNOLOGIES, INC Job Number 208343

NOMINAL Conditions: Radon Conc 34.7 pCi/L Rel. Hum 49.4 % Temp. 69.6 F

Date Start: 12/24/22 Date Stop: 12/27/22	Date Start: _____ Date Stop: _____
Time Start: 0810 Time Stop: 0810	Time Start: _____ Time Stop: _____
Device No.'s: (5) CHAR BAGS -	Device No.'s: _____
11285109, 11285110, 11285101	_____
THRU 11285103	_____
BY CRF	_____
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 29, 2022 **** LABORATORY ANALYSIS REPORT ****

Radon test result report for:
OFFICE
MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11285110	SK1	2022-12-24 @ 8:00 am	2022-12-27 @ 8:00 am	31.7 ± 2.5	2022-12-29
11285101	SK2	2022-12-24 @ 8:00 am	2022-12-27 @ 8:00 am	30.1 ± 2.4	2022-12-29
11285103	SK3	2022-12-24 @ 8:00 am	2022-12-27 @ 8:00 am	34.0 ± 2.7	2022-12-29
11285102	SK4	2022-12-24 @ 8:00 am	2022-12-27 @ 8:00 am	30.9 ± 2.5	2022-12-29
11285109	SK5	2022-12-24 @ 8:00 am	2022-12-27 @ 8:00 am	32.0 ± 2.6	2022-12-29

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 – Week 1 January Schools

Name of Schools:

1. Woodfield ES
2. Montgomery Village MS
3. Albert Einstein HS
4. Garrett Park Annex
5. Garrett Park ES
6. Kensington-Parkwood ES
7. Silver Creek MS
8. Stephen Knolls School
9. Highland View ES
10. MacDonald Knolls ECC
11. Montgomery Knolls ES
12. Rock Terrace HS

	Date	Initials
Radon Test Kits Deployed	01/10/2023	BMM
Radon Test Kits Collected	01/13/2023	BMM
Radon Test Kits Shipped to Lab*	01/13/2023	BMM
Radon Test Kits Received by Lab*	01/17/2023	BMM

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

MONTGOMERY COUNTY PUBLIC SCHOOLS
RADON TESTING

Executive Summary:
Woodfield Elementary School

24200 Woodfield Road
Gaithersburg, MD 20882

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:	1.5
High Value:	1.5

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: Woodfield Elementary School
24200 Woodfield Road
Gaithersburg, MD 20882

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 Woodfield Elementary School, located at 24200 Woodfield Road, Gaithersburg, MD 20882 (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		
Woodfield Elementary School		
Testing period: 2/26/19 - 3/1/19		
Kit Number	**Room / Area**	**Result (pCi/L)**
3923324	ESOL	1.5

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 Woodfield ES
24200 Woodfield Road
Gaithersburg MD 20882

Log Number	Device Number	Test Exposure Duration:		Area Tested	Result pCi/L
3220813	3923324	02/26/2019 1:15 pm	03/01/2019 11:31 am	Floor Main Level Room ESOL	1.5

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

Distributed by: Intertek-PSI (VA)

Date Received: 03/05/2019 Date Logged: 03/05/2019 Date Analyzed: 03/05/2019 Date Reported: 03/06/2019

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:
Woodfield Elementary School

24200 Woodfield Road
Gaithersburg, MD 20882

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:	46
# of Rooms ≥ 4.0 pCi/L:	0
Low Value:	< 0.4
High Value:	1.6

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: Woodfield Elementary School
24200 Woodfield Road
Gaithersburg, MD 20882

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 Woodfield Elementary School, located at 24200 Woodfield Road, Gaithersburg, MD 20882 (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 December 03, 2018 and deployed fifty-seven (57) 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 December 06, 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		
Woodfield Elementary School		
Testing period: 12/03/18 - 12/06/18		
Kit Number	**Room / Area**	**Result (pCi/L)**
3926159	1	0.4
3926160	2	0.4
3925958	3	< 0.4
3925960	4	0.4
3925941	5	0.6
3925942	6	0.4
3925943	7	0.4
3925944	8	0.7
3925945	9	< 0.4
3925946	10	0.8
3925947	11	< 0.4
3926102	12A	1.2
3925950	12B	< 0.4
3925949	12C	0.5
3926103	13	1.6
3926104	14	0.5
3926105	15	0.9
3926122	15 Quiet Room	1.0
3926123	16	0.4
3926124	17	0.7
3926126	18	0.5
3926127	19	0.6
3926128	20	< 0.4
3926129	21	0.5
3926130	22	0.7
3926141	23	0.8
3926151	1002	0.4
3926157	1006	< 0.4
3926158	1007	2.2
3926107	1011	1.2
3926144	1012	0.5
3926156	1014	0.4
3926145	APR	1.1
3926108	Computer Lab	1.2
3926152	Conference	0.5
3925948	ESOL (TAMPERED)	1.4
3888407	GYM	1.6
3888348	GYM	1.6
3926154	Health Room	< 0.4
3926143	Kitchen	0.7
3926155	Main Office Workroom	0.5
3926109	Media Center	1.3
3926106	Media Office	1.3

Radon Testing Results		
Woodfield Elementary School		
Testing period: 12/03/18 - 12/06/18		
Kit Number	**Room / Area**	**Result (pCi/L)**
3926110	Media Workroom	1.2
3926125	PE Office	1.5
3926153	Principal Office	0.5
3888327	Stage	1.0
3926121	Workroom	1.4
3926146	Workroom 1009	0.5

Radon Testing Results		
Woodfield Elementary School		
Testing period: 12/03/18 - 12/06/18		
Kit Number	**QC Type**	**Result (pCi/L)**
3925959	3 (D)	< 0.4
3926101	12B (D)	< 0.4
3926142	23 (D)	1.0
3926121	Media Workroom (D)	1.4
3926653	Field Blank	< 0.4
3926652	Field Blank	< 0.4
3917352	Office Blank	< 0.4
3926661	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

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 Woodfield ES
24200 Woodfield Road
Gaithersburg MD 20882

Log Number	Device Number	Test Exposure Duration:				Area Tested	Result pCi/L
3201948	3926105	12/03/2018	3:57 pm	12/06/2018	1:51 pm	First Floor Room 15	0.9
3201949	3926121	12/03/2018	4:04 pm	12/06/2018	2:00 pm	First Floor Room Workroom Duplicate	1.4
3201950	3926122	12/03/2018	4:06 pm	12/06/2018	2:02 pm	First Floor Room 15	1.0
3201951	3926129	12/03/2018	4:18 pm	12/06/2018	2:18 pm	First Floor Room 21	0.5
3201952	3926151	12/03/2018	3:26 pm	12/06/2018	1:20 pm	First Floor Room 1002	0.4
3201953	3926160	12/03/2018	3:37 pm	12/06/2018	1:29 pm	First Floor Room 2	0.4
3201954	3925943	12/03/2018	3:43 pm	12/06/2018	1:35 pm	First Floor Room 7	0.4
3201955	3925949	12/03/2018	3:52 pm	12/06/2018	1:44 pm	First Floor Room 12C	0.5
3201958	3926152	12/03/2018	3:27 pm	12/06/2018	1:21 pm	Floor Ground Room Conference	0.5
3201959	3926153	12/03/2018	3:28 pm	12/06/2018	1:22 pm	Floor Ground Room Principal Office	0.5
3201960	3926154	12/03/2018	3:29 pm	12/06/2018	1:23 pm	Floor Ground Room Health	< 0.4

Comment: AMENDED REPORT on 2-5-19 to add several devices listed incorrectly from original datasheet.

Test Performed By: Lian Zadeng

Distributed by: Intertek-PSI (VA)

Date Received: 12/07/2018 Date Logged: 12/07/2018 Date Analyzed: 12/07/2018 Date Reported: 12/19/2018

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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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 Woodfield ES
24200 Woodfield Road
Gaithersburg MD 20882

Log Number	Device Number	Test Exposure Duration:				Area Tested	Result pCi/L
3201961	3926155	12/03/2018	3:31 pm	12/06/2018	1:23 pm	Floor Ground Workroom	0.5
3201962	3926156	12/03/2018	3:32 pm	12/06/2018	1:24 pm	Floor Ground Room 1014	0.4
3201963	3926157	12/03/2018	3:33 pm	12/06/2018	1:25 pm	Floor Ground Room 1006	< 0.4
3201964	3926158	12/03/2018	3:35 pm	12/06/2018	1:26 pm	Floor Ground Room 1007	2.2
3201965	3926159	12/03/2018	3:36 pm	12/06/2018	1:27 pm	Floor Ground Room 1	0.4
3201966	3925958	12/03/2018	3:39 pm	12/06/2018	1:30 pm	Floor Ground Room 3	< 0.4
3201967	3925959	12/03/2018	3:39 pm	12/06/2018	1:30 pm	Floor Ground Room 3 Duplicate	< 0.4
3201968	3925960	12/03/2018	3:40 pm	12/06/2018	1:31 pm	Floor Ground Room 4	0.4
3201969	3925941	12/03/2018	3:41 pm	12/06/2018	1:33 pm	Floor Ground Room 5	0.6
3201970	3925942	12/03/2018	3:42 pm	12/06/2018	1:34 pm	Floor Ground Room 6	0.4
3201971	3925944	12/03/2018	3:44 pm	12/06/2018	1:36 pm	Floor Ground Room 8	0.7

Comment: AMENDED REPORT on 2-5-19 to add several devices listed incorrectly from original datasheet.

Test Performed By: Lian Zadeng

Distributed by: Intertek-PSI (VA)

Date Received: 12/07/2018 Date Logged: 12/07/2018 Date Analyzed: 12/07/2018 Date Reported: 12/19/2018

Report Reviewed By: _____ Report Approved By: _____

Shawn Price, Director of Laboratory Operations, AccuStar Labs

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NRPP 105011 AL
NRSB ARL0007

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

Laboratory Report for:

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

Property Tested: Project # 04481387-1

MCPS Radon Survey Woodfield ES
24200 Woodfield Road
Gaithersburg MD 20882

Log Number	Device Number	Test Exposure Duration:				Area Tested	Result pCi/L
3201972	3925945	12/03/2018	3:45 pm	12/06/2018	1:37 pm	Floor Ground Room 9	< 0.4
3201973	3925946	12/03/2018	3:47 pm	12/06/2018	1:38 pm	Floor Ground Room 10	0.8
3201974	3925947	12/03/2018	3:48 pm	12/06/2018	1:39 pm	Floor Ground Room 11	< 0.4
3201975	3926128	12/03/2018	4:17 pm	12/06/2018	2:16 pm	Floor Ground Room 20	< 0.4
3201976	3926130	12/03/2018	4:19 pm	12/06/2018	2:19 pm	Floor Ground Room 22	0.7
3201977	3926141	12/03/2018	4:20 pm	12/06/2018	2:22 pm	Floor Ground Room 23	0.8
3201978	3926142	12/03/2018	4:20 pm	12/06/2018	2:22 pm	Floor Ground Room 23 Duplicate	1.0
3201979	3926143	12/03/2018	4:23 pm	12/06/2018	2:23 pm	Floor Ground Room Kitchen	0.7
3201980	3926144	12/03/2018	4:25 pm	12/06/2018	2:24 pm	Floor Ground Room 1012	0.5
3201981	3926145	12/03/2018	4:27 pm	12/06/2018	2:26 pm	Floor Ground Room APR	1.1
3201982	3926146	12/03/2018	4:33 pm	12/06/2018	2:29 pm	Floor Ground Room Workroom 1009	0.5

Comment: AMENDED REPORT on 2-5-19 to add several devices listed incorrectly from original datasheet.

Test Performed By: Lian Zadeng

Distributed by: Intertek-PSI (VA)

Date Received: 12/07/2018 Date Logged: 12/07/2018 Date Analyzed: 12/07/2018 Date Reported: 12/19/2018

Report Reviewed By: _____ Report Approved By: _____

Shawn Price, Director of Laboratory Operations, AccuStar Labs

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NRPP 105011 AL
NRSB ARL0007

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

Laboratory Report for:

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

Property Tested: Project # 04481387-1

MCPS Radon Survey Woodfield ES
24200 Woodfield Road
Gaithersburg MD 20882

Log Number	Device Number	Test Exposure Duration:				Area Tested	Result pCi/L
3201983	3926653	12/03/2018	3:26 pm	12/06/2018	2:29 pm	Floor Ground Blank	< 0.4
3201984	3926652	12/03/2018	3:26 pm	12/06/2018	2:29 pm	Floor Ground Blank	< 0.4
3201985	3926661	12/03/2018	6:00 am	12/06/2018	4:45 pm	Floor Ground Blank	< 0.4
3201986	3917532					Not Indicated	
3201987	3925948	12/03/2018	3:49 pm	12/06/2018	1:41 pm	Floor Ground Room ESOL	1.4
3201988	3925950	12/03/2018	3:51 pm	12/06/2018	1:42 pm	Floor Ground Room 12B	< 0.4
3201989	3926101	12/03/2018	3:51 pm	12/06/2018	1:42 pm	Floor Ground Room 12B Duplicate	< 0.4
3201990	3926102	12/03/2018	3:53 pm	12/06/2018	1:47 pm	Floor Ground Room 12A	1.2
3201991	3926103	12/03/2018	3:54 pm	12/06/2018	1:48 pm	Floor Ground Room 13	1.6
3201992	3926104	12/03/2018	3:56 pm	12/06/2018	1:49 pm	Floor Ground Room 14	0.5
3201993	3926106	12/03/2018	3:59 pm	12/06/2018	1:52 pm	Floor Ground Room Media Office	1.3

Comment: AMENDED REPORT on 2-5-19 to add several devices listed incorrectly from original datasheet.

Test Performed By: Lian Zadeng

Distributed by: Intertek-PSI (VA)

Date Received: 12/07/2018 Date Logged: 12/07/2018 Date Analyzed: 12/07/2018 Date Reported: 12/19/2018

Report Reviewed By: _____ Report Approved By: _____

Shawn Price, Director of Laboratory Operations, AccuStar Labs

Disclaimer:

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NRPP 105011 AL
NRSB ARL0007

EPA Method #402-R-92-004
Charcoal Canister
NRPP Device Code 6048
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Laboratory Report for:

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

Property Tested: Project # 04481387-1

MCPS Radon Survey Woodfield ES
24200 Woodfield Road
Gaithersburg MD 20882

Log Number	Device Number	Test Exposure Duration:				Area Tested	Result pCi/L
3201994	3926107	12/03/2018	4:00 pm	12/06/2018	1:53 pm	Floor Ground Room 1011	1.2
3201995	3926108	12/03/2018	4:02 pm	12/06/2018	1:55 pm	Floor Ground Room Computer Lab	1.2
3201996	3926109	12/03/2018	4:03 pm	12/06/2018	1:58 pm	Floor Ground Room Media Center	1.3
3201997	3926110	12/03/2018	4:04 pm	12/06/2018	2:00 pm	Floor Ground Workroom	1.2
3201998	3926123	12/03/2018	4:07 pm	12/06/2018	2:05 pm	Floor Ground Room 16	0.4
3201999	3926124	12/03/2018	4:08 pm	12/06/2018	2:06 pm	Floor Ground Room 17	0.7
3202000	3926125	12/03/2018	4:10 pm	12/06/2018	2:07 pm	Floor Ground Room PE Office	1.5
3202001	3926126	12/03/2018	4:11 pm	12/06/2018	2:09 pm	Floor Ground Room 18	0.5
3202002	3926127	12/03/2018	4:12 pm	12/06/2018	2:10 pm	Floor Ground Room 19	0.6

Comment: AMENDED REPORT on 2-5-19 to add several devices listed incorrectly from original datasheet.

Test Performed By: Lian Zadeng

Distributed by: Intertek-PSI (VA)

Date Received: 12/07/2018 Date Logged: 12/07/2018 Date Analyzed: 12/07/2018 Date Reported: 12/19/2018

Report Reviewed By: _____ Report Approved By: _____

Shawn Price, Director of Laboratory Operations, AccuStar Labs

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AccuStar
Professional Radon Laboratory Services Since 1984

NELAC NY 11769
NRPP 103216 AL
NRSB ARL0017

Laboratory Report for:

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

Property Tested: Project # 04481387-1

MCPS Radon Survey
24200 Woodfield Rd
Gaithersburg MD 20882 USA

Log Number	Device Number	Test Exposure Duration:		Area Tested	Result pCi/L
2405025	3917352	12/03/2018 6:00 am	12/06/2018 4:45 pm	Floor NA Room Blank	< 0.4

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

Distributed by: Intertek-PSI (VA)

Date Received: 12/08/2018 Date Logged: Date Analyzed: 12/10/2018 Date Reported: 01/02/2019

Report Reviewed By: _____ Report Approved By: _____

Shawn Price, Director of Laboratory Operations, AccuStar Labs

Disclaimer:

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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:

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

Property Tested:

MCPS Radon Survey
24200 Woodfield Rd
Gaithersburg MD 20882

Log Number	Device Number	Test Exposure Duration:				Area Tested	Result pCi/L
2391564	3888348	12/03/2018	4:16 pm	12/06/2018	2:15 pm	Floor First Room APR	1.6
2391569	3888407	12/03/2018	4:15 pm	12/06/2018	2:14 pm	Ground Floor Room GYM	1.6
2403700	3888327	12/03/2018	4:29 pm	12/06/2018	2:27 pm	Ground Floor Room Stage	1.0

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

Distributed by: Intertek-PSI (VA)

Date Received: 12/12/2018 Date Logged: 12/12/2018 Date Analyzed: 12/08/2018 Date Reported: 01/02/2019

Report Reviewed By: _____ Report Approved By: _____

Shawn Price, Director of Laboratory Operations, AccuStar Labs

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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

Disclaimer:

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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. Ewing Center
2. Department of Food & Nutrition Services
3. Damascus HS
4. Edison HS
5. Emory Grove Center
6. John Poole MS
7. Lakelands Park MS
8. Laytonsville ES
9. Gaithersburg HS
10. Neelsville MS
11. Sequoyah ES
12. Clarksburg ES Annex
13. Garrett Park ES Annex
14. Goshen ES
15. Kingsley Wilderness Center
16. Kensington Parkwood ES
17. Monocacy ES
18. Lakewood ES
19. Little Bennett ES
20. Lois P. Rockwell ES
21. Olney ES
22. North Chevy Chase ES
23. Woodfield ES
24. Wootton HS

	Date	Initials
Radon Test Kits Deployed	12/03/2018	NL
Radon Test Kits Sampled	12/06/2018	NL
Radon Test Kits Shipped to Lab*	12/06/2018	NL
Radon Test Kits Received by Lab*	12/07/2018; 12/08/2018	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 WOODFIELD ELEMENTARY SCHOOL

24200 Woodfield Road, Gaithersburg, Maryland 20882

EXECUTIVE SUMMARY

Date of Test Report:	4/11/16 Follow-Up
Round of Testing:	Initial Follow-up Post Remediation
# Rooms Tested	2
# Rooms ≥ 4.0 pCi/L:	0
Low Value:	1.0
High Value:	1.5
Confirmed Rooms ≥ 4.0 pCi/L US EPA Action Level	0

Summary of Sampling Events ≥ 4.0 pCi/L

Room	Result (pCi/L) 4/13/16 (Rev 1 Initial)	Result (pCi/L) 4/11/16 Follow-Up	Average Result (pCi/L)
12	4.0	1.0	2.5
13	3.9	1.5	2.7

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: Woodfield Elementary School

Date of Test Report:	4/11/2016
Round of Testing:	Initial Follow-up Post Remediation
# Rooms Tested:	2
# Rooms ≥ 4.0 pCi/L:	0
Low Value:	1.0
High Value:	1.5

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

KCI TECHNOLOGIES

ENGINEERS • PLANNERS • SCIENTISTS • CONSTRUCTION MANAGERS

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

April 11, 2016

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

Re: **Radon Testing Services**
KCI Job # 12146341.32

Location: Woodfield Elementary School
24200 Woodfield Road
Gaithersburg, MD 20882

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 Woodfield Elementary School, located at 24200 Woodfield Road in Gaithersburg, Maryland 20882 (subject site).

Scope of Services:

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

KCI visited the site on March 14, 2016 and deployed three (3) activated charcoal (AC) radon test kits. KCI deployed radon test kits in frequently-occupied ground contact rooms, and other areas, (if applicable) in accordance with AARST guidance. A floor plan map of the building with the test locations is included as Attachment A of this report.

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

KCI returned to the site on March 17, 2016 to retrieve the radon sampling test kits. KCI shipped all radon tests via overnight delivery to AccuStar Labs for analysis by gamma-ray spectroscopy. Accustar Labs is a NRSB certified analytical laboratory for radon analysis (certification # ARL0007) located at 929 Mount

Zion Road, Lebanon, Pennsylvania.

Evaluation of Testing Conditions:

The operating condition that represents the greatest amount of significantly occupied time for this building is; heating active, with outdoor temperature averages ≤ 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 office blanks and lab transit blanks had test results of less than the laboratory detection limit of 0.4 pCi/L. Review of the duplicate sample analysis indicates that adequate laboratory measurement precision was achieved. The Spike sample analysis results indicate the laboratory is operating within statistical control limits.

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

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

Sincerely,

James M. 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

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

Radon Testing Results		
Woodfield ES		
Test Period: 03/14/16-03/17/16		
Kit Number	**Room / Area**	**Result**
3028740	12	1.0
3028910	13	1.5

Table Note:
* Missing or Compromised Sample

Radon Testing Results		
Woodfield ES		
Test Period: 03/14/16-03/17/16		
Kit Number	**QC Type**	**Result**
3028901	D (12)	1.2

Table Note:
* Missing or Compromised Sample

ATTACHMENT C

Laboratory Analytical Results

AccuStar
Professional Radon Laboratory Services Since 1984

Radon in Air

NRPP 10511AL
NRSB ARL0007

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

Laboratory Report for:

KCI Technologies
936 Ridgebrook Rd
Sparks MD 21152

Property Tested: Project # 12146341

Woodfield ES
27200 Woodfield Rd
Gaithersburg MD 20882

Log Number	Device Number	Test Exposure Duration:		Area Tested	Result (pCi/L)
3017560	3028901	03/14/2016 5:13 pm	03/17/2016 12:42 pm	Room 12	1.2
3017561	3028740	03/14/2016 5:13 pm	03/17/2016 12:43 pm	Room 12	1.0
3017562	3028910	03/14/2016 5:16 pm	03/17/2016 12:43 pm	Room 13	1.5

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

Distributed by: KCI Technologies, Inc.

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

Report Reviewed By: Grace E. Heverly Report Approved By: Carolyn D. Koke

Carolyn D. Koke, President, AccuStar Labs

Disclaimer:

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AccuStar
Professional Radon Laboratory Services Since 1984

AccuStar Labs
11 Awl Street
Medway MA 02053
888-480-8812
www.accustarlabs.com

Radon Device Type Open Face Canister

Send Written Report To:

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

Site Tested:

Site Name	Woodfield ES
Address	24200 Woodfield Rd
Address	
City / Town	Gaithersburg
State/Province Postal Code	MD 20882
Test Country	Montgomery County
Project Number	12146341

Contact Information:

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

Lab Use Only	Device Number	Building Number	Unit Number	Floor	Name of Room	Temp	Start Date mm/dd/yyyy	Start Time hh:mm am / pm	Stop Date mm/dd/yyyy	Stop Time hh:mm am / pm	Lab Use Only
	3028901		Room 12		12	72	3/14	5:13 PM	3/17	12:42 pm	
	3028740		Room 12		12	↓	↓	5:13 PM	↓	12:43	
	3028910		Room 13		13	↓	↓	5:16 PM	↓	12:43 ↓	

Rev E1512

Test must start before the expiration date sh on your device or test results will be invalid

AccuStar
Professional Radon Laboratory Services Since 1984

Radon in Air

NRPP 10511AL
NRSB ARL0007

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

Laboratory Report for:

KCI Technologies
936 Ridgebrook Rd
Sparks MD 21152

Property Tested: Project # 12146341

MCPS Radon Phase 12 Office Blank

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

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

Distributed by: KCI Technologies, Inc.

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

Report Reviewed By: Grace E. Heverly Report Approved By: Carolyn D. Koke

Carolyn D. Koke, President, AccuStar Labs

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Professional Radon Laboratory Services Since 1984

AccuStar Labs
11 Awl Street
Medway MA 02053
888-480-8812
www.accustarlabs.com

Radon Device Type Open Face Canister

Send Written Report To:

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

Site Tested:

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

Contact Information:

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

Lab Use Only	Device Number	Building Number	Unit Number	Floor	Name of Room / Temp	Start Date mm/dd/yyyy	Start Time hh:mm am / pm	Stop Date mm/dd/yyyy	Stop Time hh:mm am / pm	Lab Use Only
	3029151		0	1	OFFICE 70°	3/14/16	9:30AM	3/17/16	9:30AM	

Rev E1512

Test must start before the expiration date sh on your device or test results will be invalid

AccuStar
Professional Radon Laboratory Services Since 1984

Radon in Air

NRPP 10511AL
NRSB ARL0007

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

Laboratory Report for:

KCI Technologies
936 Ridgebrook Rd
Sparks MD 21152

Property Tested: Project # 12146341

MCPS Radon Phase 12 Office Blank

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

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

Distributed by: KCI Technologies, Inc.

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

Report Reviewed By: Grace E. Hebner

Report Approved By: Carolyn D. Koke

Carolyn D. Koke, President, AccuStar Labs

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Medway MA 02053
888-480-8812
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Radon Device Type Open Face Canister

Send Written Report To:

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

Site Tested:

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

Contact Information:

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

Lab Use Only	Device Number	Building Number	Unit Number	Floor	Name of Room Temp	Start Date mm/dd/yyyy	Start Time hh:mm am / pm	Stop Date mm/dd/yyyy	Stop Time hh:mm am / pm	Lab Use Only
	302915		01	1	OFFICE 4c°	3/15/16	9:30 AM	3/18/16	9:30AM	

Test must start before the expiration date sh on your device or test results will be invalid

AccuStar
Professional Radon Laboratory Services Since 1984

Radon in Air

NRPP 10511AL
NRSB ARL0007

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

Laboratory Report for:

KCI Technologies
936 Ridgebrook Rd
Sparks MD 21152

Property Tested:

MCPS
Transit Blanks

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

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

Distributed by: KCI Technologies, Inc.

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

Report Reviewed By: Crystal Bates Report Approved By: Carolyn D. Koke

Carolyn D. Koke, President, AccuStar Labs

Disclaimer:

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

RECEIVED JAN 27 2016

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

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

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

Test Site Info

Name of Building/Project or Owner Transit

Site Address: Transit

City: _____ State _____ Zip _____ County _____

Projects Contact Name: Jon Coale Phone: _____ Email: _____

Multi-Page Report Y-N

Detector Serial#	ROOM NAME & NUMBER - LOCATION OF DETECTOR IN ROOM (indicate duplicates and blanks)		Floor	Start Date	Start Time Include AM/PM	Stop Date	Stop Time Include AM/PM	LAB USE ONLY Wgt. Gain	LAB USE ONLY pCi/L
12 3028953	Transit	3010588	1	1/19/16	1:00pm	1/22/16	9:30am		<0.4
1 8955	Transit	3010589	1	1/19/16	↓	↓	↓		<0.4
2 8954	Transit	3010590	1	1/19/16					<0.4
3 8997	Transit	3010591	1	1/19/16					<0.4

KCI Technologies, Inc. 1/27/2016
3010588 **3028953** ACPC275B EXP12/31/2018

Structure Type: (circle one or more) Basement - Crawlspace - Slab on Grade - Other

Test Purpose: (Circle all that apply) Initial Screening - Follow Up Test - Post Mitigation - Real Estate - Other

Building Type: (Circle One) Residential - Non Residential; Private Day Care - Private School; Day Care in Public School - Public School

Both Placed by and Retrieved by signatures are required Certified Tester's Name #

Canisters placed by _____ #_____

Canisters retrieved by _____ #_____

Owner waives confidentiality by signing here _____ Date 1/22/16

Were general operating conditions maintained? Yes - No explain if NO

Were closed building conditions maintained? Yes - No explain if NO

Normal Temp. Yes - No
Normal Humidity Yes - No
Windy Y-N Rainy Y-N

Send Results To:

Company Name: KCI Tech Attention: James Moulsdale

Address: 936 Ridgebrook

City: Sparks State: MD Zip 21152

Phone: 410-584-3826 Fax:

EMAIL Results to: James.Moulsdale@kci.com

Make sure information is complete and correct.

If a recalculation is requested there is a $10.00 recalc fee PER Canister.

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

TCS INDUSTRIES, INC.

(717) 657-7032 RADON GAS DETECTION

www.radondetek.com 4326 Crestview Road, Harrisburg, PA 17112

James Moulsdale
KCI
936 Ridgebrook Rd.
Sparks, MD 21152

April 04, 2016

Dear Mr. Moulsdale:

The spike exposure data were:

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

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

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

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

Sincerely,

Carl H. Distenfeld, CHP

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

AccuStar
Professional Radon Laboratory Services Since 1984

Radon in Air

NRPP 10511AL
NRSB ARL0007

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

Laboratory Report for:

KCI Technologies
936 Ridgebrook Rd
Sparks MD 21152

Property Tested:

MCPS
Radon Spike Sample Laboratory Results

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

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

Distributed by: KCI Technologies, Inc.

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

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

Report Reviewed By: _____ Report Approved By: _____

Carolyn D. Koke, President, AccuStar Labs

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.

AccuStar
Professional Radon Laboratory Services Since 1984

AccuStar Labs
11 Awl Street
Medway MA 02053

888-480-8812
www.accustarlabs.com

Radon Device Type Open Face Canister

Send Written Report To:

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

Site Tested:

Site Name	MCPS
Address	850 Hungerford Dr
Address	
City / Town	Rockville
State/Province Postal Code	MD 20850
Test Country	Montgomery County
Project Number	12146341

Contact Information:

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

Lab Use Only	Device Number	Building Number	Unit Number	Floor	Name of Room Temp	Start Date mm/dd/yyyy	Start Time hh:mm am / pm	Stop Date mm/dd/yyyy	Stop Time hh:mm am / pm	Lab Use Only
	3029166	1		1	1	4/4/16	11:10am	4/6/16	11:13am	
	3029214	1		1	2					
	3029217	1		1	3					
	3029218	1		1	4					
	3029219	1		1	5					
	3029220	1		1	6					

Rev E1512

Test must start before the expiration date shown on your device or test results will be invalid

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: Woodfield Elementary School

Date of Test Report:	4/13/2016 (Rev 1)
Round of Testing:	Initial Follow-up Post Remediation
# Rooms Tested:	44
# Rooms ≥ 4.0 pCi/L:	1
Low Value:	< 0.3
High Value:	4.0

Rooms with results ≥ 4.0 pCi/L:
Room 12 (4.0 pCi/L)

Project Status:
Initial testing completed; re-test needed for results ≥ 4.0 pCi/L.

KCI TECHNOLOGIES

ENGINEERS • PLANNERS • SCIENTISTS • CONSTRUCTION MANAGERS

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

April 13, 2016 (Rev 1)

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

Re: **Radon Testing Services**
KCI Job # 12146341.26

Location: Woodfield Elementary School
24200 Woodfield Road
Gaithersburg, MD 20882

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 Woodfield Elementary School, located at 24200 Woodfield Road in Gaithersburg, Maryland 20882 (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 1, 2016 and deployed fifty-seven (57) activated charcoal (AC) radon test kits. KCI deployed radon test kits in frequently-occupied ground contact rooms, and other areas, (if applicable) in accordance with AARST guidance. A floor plan map of the building with the test locations is included as Attachment A of this report.

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

KCI returned to the site on February 4, 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	12	4.0
<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		
Woodfield Elementary School		
Test Period: 02/01/16-02/04/16		
Kit Number	**Room / Area**	**Result**
7730805	5	0.7
7730806	6	1.4
7730807	7	1.2
7730808	8	3.1
7730809	9	0.9
7730810	10	2.1
7730812	11	1.4
7730816	12	4.0
7730817	13	3.9
7730818	14	1.6
7730819	14	1.6
7730820	15	1.8
7730827	16	1.6
7730833	17	1.4
7730831	18	1.5
7730835	19	1.5
7730836	20	0.9
7730837	21	1.0
7730838	22	1.0
7730839	23	1.0
7730842	APR	2.0
7730843	APR	1.6
7730844	APR STAGE	1.8
7730840	BLDG SVC	0.9
7730825	COMPUTER LAB	2.4
7730850	CON RM	0.9
7730846	COPY RM	1.9
7730811	ESOL	2.1
7730828	GYM	1.7
7730829	GYM	1.8
7730854	HEALTH RM	1.0
7730855	HEALTH RM 2	0.8
7730826	IDA	2.1
7730821	IMC	2.3
7730822	IMC	3.2
7730815	ITINERANT SERVICE	2.6
7730802	K 2	< 0.3
7730803	K 3	0.8
7730804	K 4	< 0.3
7730801	K1	1.2
7730848	MAIN OFFICE	0.9
7730856	MAIN OFFICE	0.7
7730824	MEDIA OFFICE	2.0
7730823	MEDIA WORK RM	2.7
7730830	PE OFFICE	1.8
7730852	PRM	< 0.3

Table Note:
* Missing or Compromised Sample

Radon Testing Results		
Woodfield Elementary School		
Test Period: 02/01/16-02/04/16		
Kit Number	**Room / Area**	**Result**
7730814	RDG SPECIALIST	1.6
7730847	SPEECH	1.4
7730845	STAFF LOUNGE	0.6

Table Note:
* Missing or Compromised Sample

Radon Testing Results		
Woodfield Elementary School		
Test Period: 02/01/16-02/04/16		
Kit Number	**QC Type**	**Result**
7730813	D (11)	0.9
7730832	D (18)	1.6
7730841	D (BLDG SVC)	0.9
7730851	D (CON RM)	0.8
7730849	D (MAIN OFICE)	0.9
7730834	FB (17)	< 0.3
7730853	FB (PRM)	< 0.3
7730697	OB (0)	< 0.3

Table Note:
* Missing or Compromised Sample

ATTACHMENT C

Laboratory Analytical Results

February 23, 2016

** LABORATORY ANALYSIS REPORT **

Radon test result report for:

WOODFIELD ELEMENTARY SCHOOL
MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7730697	0	2016-02-01 @ 3:00 pm	2016-02-04 @ 10:00 am	< 0.3	2016-02-09
7730810	10	2016-02-01 @ 12:00 pm	2016-02-04 @ 9:00 am	2.1 ± 0.4	2016-02-09
7730812	11	2016-02-01 @ 12:00 pm	2016-02-04 @ 9:00 am	1.4 ± 0.4	2016-02-09
7730813	11	2016-02-01 @ 12:00 pm	2016-02-04 @ 9:00 am	0.9 ± 0.4	2016-02-09
7730816	12	2016-02-01 @ 12:00 pm	2016-02-04 @ 9:00 am	4.0 ± 0.6	2016-02-09
7730817	13	2016-02-01 @ 12:00 pm	2016-02-04 @ 9:00 am	3.9 ± 0.6	2016-02-09
7730818	14	2016-02-01 @ 12:00 pm	2016-02-04 @ 9:00 am	1.6 ± 0.4	2016-02-09
7730819	14	2016-02-01 @ 12:00 pm	2016-02-04 @ 9:00 am	1.6 ± 0.4	2016-02-09
7730820	15	2016-02-01 @ 1:00 pm	2016-02-04 @ 9:00 am	1.8 ± 0.5	2016-02-09
7730827	16	2016-02-01 @ 1:00 pm	2016-02-04 @ 9:00 am	1.6 ± 0.4	2016-02-09
7730833	17	2016-02-01 @ 1:00 pm	2016-02-04 @ 9:00 am	1.4 ± 0.4	2016-02-09
7730834	17	2016-02-01 @ 1:00 pm	2016-02-04 @ 9:00 am	< 0.3	2016-02-09
7730831	18	2016-02-01 @ 1:00 pm	2016-02-04 @ 9:00 am	1.5 ± 0.4	2016-02-09
7730832	18	2016-02-01 @ 1:00 pm	2016-02-04 @ 9:00 am	1.6 ± 0.4	2016-02-09
7730835	19	2016-02-01 @ 1:00 pm	2016-02-04 @ 9:00 am	1.5 ± 0.4	2016-02-09
7730836	20	2016-02-01 @ 1:00 pm	2016-02-04 @ 9:00 am	0.9 ± 0.4	2016-02-09
7730837	21	2016-02-01 @ 1:00 pm	2016-02-04 @ 9:00 am	1.0 ± 0.4	2016-02-09
7730838	22	2016-02-01 @ 1:00 pm	2016-02-04 @ 9:00 am	1.0 ± 0.4	2016-02-09
7730839	23	2016-02-01 @ 1:00 pm	2016-02-04 @ 9:00 am	1.0 ± 0.4	2016-02-09
7730805	5	2016-02-01 @ 12:00 pm	2016-02-04 @ 9:00 am	0.7 ± 0.4	2016-02-09
7730806	6	2016-02-01 @ 12:00 pm	2016-02-04 @ 9:00 am	1.4 ± 0.4	2016-02-09
7730807	7	2016-02-01 @ 12:00 pm	2016-02-04 @ 9:00 am	1.2 ± 0.4	2016-02-09
7730808	8	2016-02-01 @ 12:00 pm	2016-02-04 @ 9:00 am	3.1 ± 0.5	2016-02-09
7730809	9	2016-02-01 @ 12:00 pm	2016-02-04 @ 9:00 am	0.9 ± 0.4	2016-02-09
7730842	APR	2016-02-01 @ 1:00 pm	2016-02-04 @ 9:00 am	2.0 ± 0.5	2016-02-09
7730843	APR	2016-02-01 @ 1:00 pm	2016-02-04 @ 9:00 am	1.6 ± 0.4	2016-02-09
7730844	APR STAGE	2016-02-01 @ 1:00 pm	2016-02-04 @ 9:00 am	1.8 ± 0.4	2016-02-09
7730840	BLDG SVC	2016-02-01 @ 1:00 pm	2016-02-04 @ 9:00 am	0.9 ± 0.4	2016-02-09
7730841	BLDG SVC	2016-02-01 @ 1:00 pm	2016-02-04 @ 9:00 am	0.9 ± 0.4	2016-02-09
7730825	COMPUTER LAB	2016-02-01 @ 1:00 pm	2016-02-04 @ 9:00 am	2.4 ± 0.5	2016-02-09
7730850	CON RM	2016-02-01 @ 2:00 pm	2016-02-04 @ 9:00 am	0.9 ± 0.4	2016-02-09
7730851	CON RM	2016-02-01 @ 2:00 pm	2016-02-04 @ 9:00 am	0.8 ± 0.4	2016-02-09
7730846	COPY RM	2016-02-01 @ 1:00 pm	2016-02-04 @ 9:00 am	1.9 ± 0.4	2016-02-09
7730828	GYM	2016-02-01 @ 1:00 pm	2016-02-04 @ 9:00 am	1.7 ± 0.4	2016-02-09
7730829	GYM	2016-02-01 @ 1:00 pm	2016-02-04 @ 9:00 am	1.8 ± 0.5	2016-02-09
7730854	HEALTH RM	2016-02-01 @ 2:00 pm	2016-02-04 @ 9:00 am	1.0 ± 0.4	2016-02-09
7730855	HEALTH RM 2	2016-02-01 @ 2:00 pm	2016-02-04 @ 9:00 am	0.8 ± 0.4	2016-02-09

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

February 23, 2016

** LABORATORY ANALYSIS REPORT **

Radon test result report for:

WOODFIELD ELEMENTARY SCHOOL
MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7730826	IDA	2016-02-01 @ 1:00 pm	2016-02-04 @ 9:00 am	2.1 ± 0.4	2016-02-09
7730821	IMC	2016-02-01 @ 1:00 pm	2016-02-04 @ 9:00 am	2.3 ± 0.5	2016-02-09
7730822	IMC	2016-02-01 @ 1:00 pm	2016-02-04 @ 9:00 am	3.2 ± 0.5	2016-02-09
7730815	ITINERANT SERVIC	2016-02-01 @ 12:00 pm	2016-02-04 @ 9:00 am	2.6 ± 0.5	2016-02-09
7730802	K 2	2016-02-01 @ 12:00 pm	2016-02-04 @ 9:00 am	< 0.3	2016-02-09
7730803	K 3	2016-02-01 @ 12:00 pm	2016-02-04 @ 9:00 am	0.8 ± 0.4	2016-02-09
7730804	K 4	2016-02-01 @ 12:00 pm	2016-02-04 @ 9:00 am	< 0.3	2016-02-09
7730801	K1	2016-02-01 @ 12:00 pm	2016-02-04 @ 9:00 am	1.2 ± 0.4	2016-02-09
7730811	ESOL	2016-02-01 @ 12:00 pm	2016-02-04 @ 9:00 am	2.1 ± 0.5	2016-02-09
7730856	MAIN OFFICE	2016-02-01 @ 2:00 pm	2016-02-04 @ 9:00 am	0.7 ± 0.4	2016-02-09
7730848	MAIN OFFICE	2016-02-01 @ 2:00 pm	2016-02-04 @ 9:00 am	0.9 ± 0.4	2016-02-09
7730849	MAIN OFICE	2016-02-01 @ 2:00 pm	2016-02-04 @ 9:00 am	0.9 ± 0.4	2016-02-09
7730824	MEDIA OFFICE	2016-02-01 @ 1:00 pm	2016-02-04 @ 9:00 am	2.0 ± 0.5	2016-02-09
7730823	MEDIA WORK RM	2016-02-01 @ 1:00 pm	2016-02-04 @ 9:00 am	2.7 ± 0.5	2016-02-09
7730830	PE OFFICE	2016-02-01 @ 1:00 pm	2016-02-04 @ 9:00 am	1.8 ± 0.4	2016-02-09
7730852	PRM	2016-02-01 @ 2:00 pm	2016-02-04 @ 9:00 am	< 0.3	2016-02-09
7730853	PRM	2016-02-01 @ 2:00 pm	2016-02-04 @ 9:00 am	< 0.3	2016-02-09
7730814	RDG SPECIALIST	2016-02-01 @ 12:00 pm	2016-02-04 @ 9:00 am	1.6 ± 0.4	2016-02-08
7730847	SPEECH	2016-02-01 @ 1:00 pm	2016-02-04 @ 9:00 am	1.4 ± 0.4	2016-02-09
7730845	STAFF LOUNGE	2016-02-01 @ 1:00 pm	2016-02-04 @ 9:00 am	0.6 ± 0.3	2016-02-09

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

February 23, 2016

** LABORATORY ANALYSIS REPORT **

Radon test result report for:

TRANSIT- PHASE 7, 8, 9
NONE

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

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

Radon Test Kit Chain of Custody

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

Name of School/Facility:

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

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

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

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Radon Test Kit Chain of Custody

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

Name of School/Facility:

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

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

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