School / Facility Radon Testing Report Form

School Year: **24-25**

Facility:	Bethesda Elementary School
Address:	7600 Arlington Rd.
	Bethesda, MD 20814
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	44	Lowest Value (pCi/L)	<0.3
Number of Rooms (≥4.0-pCi/L)	0	Highest Value (pCi/L)	1.6

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

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

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

Attachment 2 – Laboratory Report(s)

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

MCPS DEM SUSTAINABILITY & COMPLIANCE

School / Facility Radon Testing Report Form

Detector and Deployment

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

Person(s) Deploying or Retrieving Test Devices and certification number	Organization/Company
Shakia Dawkins	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):	1/14/2025 1/17/2025
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]	43	0	1	0	44
Duplicates[2]	4	0	1	0	5
Field Blanks[3]	2	0	0	0	2
				Grand Total	51

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:	43	0	1	0	44
Number of locations ≥8.0-pCi/L:	0	0	0	0	0
Number of locations ≥4.0 and ≤8-pCi/L:	0	0	0	0	0
Number of locations ≥2.7 and <4-pCi/L:	0	0	0	0	0
Number of locations ≥2.0 and <2.7-pCi/L:	0	0	0	0	0
Number of missing required test locations[3]:	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		
Bethesda Elementary School		
Test Period: 1/12/2025 - 1/16/2025		
Kit Number	Room / Area	Result
11907083	100	< 0.3
11907071	101	< 0.3
11907082	101	< 0.3
11907076	102	< 0.3
11907084	105	< 0.3
11907077	106	< 0.3
11907080	111	< 0.3
11907093	112	0.8
11907087	113	< 0.3
11907078	114	< 0.3
11907074	118	< 0.3
11907072	119	< 0.3
11906789	130	0.5
11906782	133	< 0.3
11906772	135	< 0.3
11906779	136	< 0.3
11906780	136	< 0.3
11906771	137	< 0.3
11906775	141	< 0.3
11906769	143	< 0.3
11906778	144	0.6
11906770	145	< 0.3
11906776	146	< 0.3
11906760	148	< 0.3
11907086	148	< 0.3
11906773	151	1.4
11906777	151	< 0.3
11907089	153	0.7
11907097	159	0.7
11907085	161	0.9
11907098	162	1.6
11906781	163	0.9
11906715	200	0.6
11906788	209	< 0.3
11907081	100A	< 0.3
11907095	100B	< 0.3
11907088	100D	< 0.3

Table 1- Radon Testing Results		
Bethesda Elementary School		
Test Period: 1/12/2025 - 1/16/2025		
Kit Number	Room / Area	Result
11906741	101 OFFICE	< 0.3
11907100	101 OFFICE	< 0.3
11907073	101 WORKROOM	< 0.3
11907090	102 OFFICE	0.5
11907092	110 BS	< 0.3
11907079	116 APR	< 0.3
11907096	116 APR	< 0.3
11907091	125 GYM	< 0.3
11907094	125 GYM	< 0.3
11907070	125A	< 0.3
11907099	125A	< 0.3
11906787	205A	< 0.3
11906790	205A	< 0.3
11907075	STAGE	< 0.3

Table 2 - Summary Testing Results ≥2.0 pCi/L							
Bethesda Elementary School							
Test Period: 1/12/2025 - 1/16/2025							
≥2.0 and <2.7 pCi/L		≥2.7 and <4.0 pCi/L		≥4.0 and <8.0 pCi/l		≥8.0 pCi/L	
Room / Area	**Result**	**Room / Area**	**Result**	**Room / Area**	**Result**	**Room / Area**	**Result**
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Table 3 - QC Radon Testing Results			
Bethesda Elementary School			
Test Period: 1/12/2025 - 1/16/2025			
Kit Number	**QC Type**	**Room / Area**	**Result**
11906779	D	136	< 0.3
11906760	D	148	< 0.3
11906777	FB	151	< 0.3
11906741	D	101 Office	< 0.3
11907094	D	125 Gym	< 0.3
11907099	FB	125A	< 0.3
11906787	D	205A	< 0.3
11906877	OB	OFFICE BLANK	< 0.3
11903993	TB	TRAVEL BLANK	< 0.3

Table 3a - Duplicate Worksheet / Data Validation

Bethesda Elementary School

Test Period: 1/12/2025 - 1/16/2025

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
11907100	11906741	101 Office	0.3	0.3	✓	0.6	PASS	0.3	<1-pCi/L	✓
11907091	11907094	125 Gym	0.3	0.3	✓	0.6	PASS	0.3	<1-pCi/L	✓
11906779	11906780	136	0.3	0.3	✓	0.6	PASS	0.3	<1-pCi/L	✓
11907086	11906760	148	0.3	0.3	✓	0.6	PASS	0.3	<1-pCi/L	✓
11906787	11906790	205A	0.3	0.3	✓	0.6	PASS	0.3	<1-pCi/L	✓

NOTES:

QC Check #1 - Data Entry

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

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

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

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

Table 4 - Summary of Invalid Measurement Locations		
Bethesda Elementary School		
Test Period: 1/12/25 - 1/16/25		
Kit Number	**Room/Area**	**Reason**
N/A	N/A	N/A

Attachment 2:

Laboratory Reports

January 20, 2025

** LABORATORY ANALYSIS REPORT **

Radon test result report for:

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11907083	100	2025-01-13 @ 10:00 am	2025-01-16 @ 10:00 am	< 0.3	2025-01-20
11907081	100A	2025-01-13 @ 10:00 am	2025-01-16 @ 10:00 am	< 0.3	2025-01-20
11907095	100B	2025-01-13 @ 10:00 am	2025-01-16 @ 10:00 am	< 0.3	2025-01-20
11907088	100D	2025-01-13 @ 10:00 am	2025-01-16 @ 10:00 am	< 0.3	2025-01-20
11907082	101	2025-01-13 @ 10:00 am	2025-01-16 @ 10:00 am	< 0.3	2025-01-20
11907071	101	2025-01-13 @ 10:00 am	2025-01-16 @ 10:00 am	< 0.3	2025-01-20
11906741	101 OFFICE	2025-01-13 @ 10:00 am	2025-01-16 @ 10:00 am	< 0.3	2025-01-20
11907100	101 OFFICE	2025-01-13 @ 10:00 am	2025-01-16 @ 10:00 am	< 0.3	2025-01-20
11907073	101 WORKROOM	2025-01-13 @ 10:00 am	2025-01-16 @ 10:00 am	< 0.3	2025-01-20
11907076	102	2025-01-13 @ 10:00 am	2025-01-16 @ 10:00 am	< 0.3	2025-01-20
11907090	102 OFFICE	2025-01-13 @ 10:00 am	2025-01-16 @ 10:00 am	0.5 ± 0.3	2025-01-20
11907084	105	2025-01-13 @ 10:00 am	2025-01-16 @ 10:00 am	< 0.3	2025-01-20
11907077	106	2025-01-13 @ 10:00 am	2025-01-16 @ 10:00 am	< 0.3	2025-01-20
11907092	110 BS	2025-01-13 @ 10:00 am	2025-01-16 @ 10:00 am	< 0.3	2025-01-20
11907080	111	2025-01-13 @ 10:00 am	2025-01-16 @ 10:00 am	< 0.3	2025-01-20
11907093	112	2025-01-13 @ 10:00 am	2025-01-16 @ 10:00 am	0.8 ± 0.3	2025-01-20
11907087	113	2025-01-13 @ 10:00 am	2025-01-16 @ 10:00 am	< 0.3	2025-01-20
11907078	114	2025-01-13 @ 10:00 am	2025-01-16 @ 10:00 am	< 0.3	2025-01-20
11907079	116 APR	2025-01-13 @ 10:00 am	2025-01-16 @ 10:00 am	< 0.3	2025-01-20
11907096	116 APR	2025-01-13 @ 10:00 am	2025-01-16 @ 10:00 am	< 0.3	2025-01-20
11907074	118	2025-01-13 @ 10:00 am	2025-01-16 @ 10:00 am	< 0.3	2025-01-20
11907072	119	2025-01-13 @ 10:00 am	2025-01-16 @ 10:00 am	< 0.3	2025-01-20
11907091	125 GYM	2025-01-13 @ 10:00 am	2025-01-16 @ 10:00 am	< 0.3	2025-01-20
11907094	125 GYM	2025-01-13 @ 10:00 am	2025-01-16 @ 10:00 am	< 0.3	2025-01-20
11907099	125A	2025-01-13 @ 10:00 am	2025-01-16 @ 10:00 am	< 0.3	2025-01-20
11907070	125A	2025-01-13 @ 10:00 am	2025-01-16 @ 10:00 am	< 0.3	2025-01-20
11906789	130	2025-01-13 @ 10:00 am	2025-01-16 @ 10:00 am	0.5 ± 0.4	2025-01-20
11906782	133	2025-01-13 @ 10:00 am	2025-01-16 @ 10:00 am	< 0.3	2025-01-20
11906772	135	2025-01-13 @ 11:00 am	2025-01-16 @ 10:00 am	< 0.3	2025-01-20
11906779	136	2025-01-13 @ 11:00 am	2025-01-16 @ 10:00 am	< 0.3	2025-01-20
11906780	136	2025-01-13 @ 11:00 am	2025-01-16 @ 10:00 am	< 0.3	2025-01-20
11906771	137	2025-01-13 @ 11:00 am	2025-01-16 @ 10:00 am	< 0.3	2025-01-20
11906775	141	2025-01-13 @ 11:00 am	2025-01-16 @ 10:00 am	< 0.3	2025-01-20
11906769	143	2025-01-13 @ 11:00 am	2025-01-16 @ 10:00 am	< 0.3	2025-01-20
11906778	144	2025-01-13 @ 11:00 am	2025-01-16 @ 10:00 am	0.6 ± 0.3	2025-01-20
11906770	145	2025-01-13 @ 11:00 am	2025-01-16 @ 10:00 am	< 0.3	2025-01-20
11906776	146	2025-01-13 @ 11:00 am	2025-01-16 @ 10:00 am	< 0.3	2025-01-20

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

January 20, 2025

** LABORATORY ANALYSIS REPORT **

Radon test result report for:

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11907086	148	2025-01-13 @ 11:00 am	2025-01-16 @ 10:00 am	< 0.3	2025-01-20
11906760	148	2025-01-13 @ 11:00 am	2025-01-16 @ 10:00 am	< 0.3	2025-01-20
11906773	151	2025-01-13 @ 11:00 am	2025-01-16 @ 10:00 am	1.4 ± 0.4	2025-01-20
11906777	151	2025-01-13 @ 11:00 am	2025-01-16 @ 10:00 am	< 0.3	2025-01-20
11907089	153	2025-01-13 @ 11:00 am	2025-01-16 @ 10:00 am	0.7 ± 0.3	2025-01-20
11907097	159	2025-01-13 @ 11:00 am	2025-01-16 @ 10:00 am	0.7 ± 0.4	2025-01-20
11907085	161	2025-01-13 @ 11:00 am	2025-01-16 @ 10:00 am	0.9 ± 0.4	2025-01-20
11907098	162	2025-01-13 @ 11:00 am	2025-01-16 @ 10:00 am	1.6 ± 0.4	2025-01-20
11906781	163	2025-01-13 @ 11:00 am	2025-01-16 @ 10:00 am	0.9 ± 0.4	2025-01-20
11906715	200	2025-01-13 @ 11:00 am	2025-01-16 @ 10:00 am	0.6 ± 0.3	2025-01-20
11906787	205A	2025-01-13 @ 11:00 am	2025-01-16 @ 10:00 am	< 0.3	2025-01-20
11906790	205A	2025-01-13 @ 11:00 am	2025-01-16 @ 10:00 am	< 0.3	2025-01-20
11906788	209	2025-01-13 @ 11:00 am	2025-01-16 @ 10:00 am	< 0.3	2025-01-20
11907075	STAGE	2025-01-13 @ 10:00 am	2025-01-16 @ 10:00 am	< 0.3	2025-01-20

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January 20, 2025 **** LABORATORY ANALYSIS REPORT ****

Radon test result report for:
OFFICE
MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11906876	O	2025-01-14 @ 11:00 am	2025-01-17 @ 11:00 am	< 0.3	2025-01-20
11906877	O	2025-01-13 @ 11:00 am	2025-01-16 @ 11:00 am	< 0.3	2025-01-20

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January 20, 2025 **** LABORATORY ANALYSIS REPORT ****

Radon test result report for:
TRAVEL
MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11903993	T	2025-01-13 @ 11:00 am	2025-01-16 @ 11:00 am	< 0.3	2025-01-20
11906878	T	2025-01-14 @ 11:00 am	2025-01-17 @ 11:00 am	< 0.3	2025-01-20

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

EXPOSURE IN BOWSER-MORNER RADON CHAMBER

CLIENT KCI TECHNOLOGIES, INC Job Number 20001560

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

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

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

December 23, 2024 **** LABORATORY ANALYSIS REPORT ****

Radon test result report for:
SK
MAIN

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

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

EXPOSURE IN BOWSER-MORNER RADON CHAMBER

CLIENT KCI TECHNOLOGIES, INC Job Number 20002919

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

Date Start: 3/7/25 Date Stop: 3/10/25	Date Start: _____ Date Stop: _____
Time Start: 0832 Time Stop: 0832	Time Start: _____ Time Stop: _____
Device No.'s: (7) CHAR BAGS	Device No.'s: _____
11886401 thru 11886406,	
11886410	
G3 Right	
Date Start: _____ Date Stop: _____	Date Start: _____ Date Stop: _____
Time Start: _____ Time Stop: _____	Time Start: _____ Time Stop: _____
Device No.'s: _____	Device No.'s: _____
Date Start: _____ Date Stop: _____	Date Start: _____ Date Stop: _____
Time Start: _____ Time Stop: _____	Time Start: _____ Time Stop: _____
Device No.'s: _____	Device No.'s: _____

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

March 19, 2025

** LABORATORY ANALYSIS REPORT **

Radon test result report for:
QC
MAIN

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

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KCI TECHNOLOGIES

ENGINEERS • PLANNERS • SCIENTISTS • CONSTRUCTION MANAGERS

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

Radon Test Kit Chain of Custody

Project Name: MCPS Radon – Testing January 13th – January 16th, 2024

Name of Schools:

1. Springbrook HS
2. Woodlin ES
3. Parkside Center
4. Bannockburn ES
5. Beall ES
6. Bells Mill ES
7. Bethesda ES

	Date	Initials
Radon Test Kits Deployed	01/13/2025	BMM
Radon Test Kits Collected	01/16/2025	BMM
Radon Test Kits Shipped to Lab*	01/17/2025	BMM
Radon Test Kits Received by Lab*	01/21/2025	BMM

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

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

MCPS RADON TESTING - EXECUTIVE SUMMARY

Site Name	Bethesda Elementary School
Date of Report	2/21/2020
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	42
# Rooms ≥4.0 pCi/L	0
Lowest Value	<0.3 pCi/L
Highest Value	0.3 pCi/L

Project Status

Current Project Status at this time: Testing Complete; no further action.

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2/21/2020

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

Re: Radon Testing Services

KCI Job #12146341126

Location: Bethesda Elementary School
7600 Arlington Road
Bethesda, Maryland 20814

Dear Mr. Cox:

KCI Technologies, Inc. (KCI) is pleased to submit the following report to Montgomery County Public Schools pursuant to completing a "short-term" 3-day radon test for the Bethesda Elementary School, located at 7600 Arlington Road in Bethesda, Maryland 20814 (subject site).

SCOPE OF SERVICES

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

KCI visited the site on 1/6/2020 and deployed fifty-three (53) activated charcoal (AC) radon test kits. KCI deployed radon test kits in frequently-occupied ground contact rooms, and other areas, (if applicable) in accordance with AARST guidance.

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

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

KCI returned to the site on 1/9/2020 to retrieve the radon sampling test kits. KCI shipped all radon tests via overnight delivery to Aircheck, Inc. for analysis by gamma-ray spectroscopy. Aircheck, Inc. is a National Radon Safety Board (NRSB) radon measurement provider and is a certified analytical laboratory for radon analysis (certification #ARL1402) located at 1936 Butler Bridge Road, Mills River, North Carolina.

EVALUATION OF TESTING CONDITIONS

These tests represent:

- Follow-up to initial testing.

These tests were conducted to:

- Evaluate radon concentrations at the facility.

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

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

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

KCI also compiled weather data for the testing period and conducted observations of relevant field conditions. During the test period, weather records indicate low temperatures were in the upper-20s and high temperatures were in the mid-50s. Maximum sustained winds ranged from 10-23 miles per hour. Average humidity was around 64%. 0.32 inches of precipitation (rain) was recorded during the testing period.

RESULTS

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

The results of the radon test analysis indicated the following:

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

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

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

Sincerely,

Mr. Tyler P. McCleaf
Radon Measurement Provider
111004 RT

KCI Technologies, Inc.

Attachments:

A- Floor Plan with Test Locations

B - Tables 1-3, Radon Test Summary Spreadsheets

C- Laboratory Analytical Results

ATTACHMENT A

Floor Plan With Test Locations

ATTACHMENT B

Radon Test Summary Spreadsheet

Table Notes:

AC- Activated Charcoal

ACI- Air Chek, Inc.

D- Duplicate

FB- Field Blank

KCI- KCI Technologies, Inc.

OB- Office Blank

PM- Project Manager

QC- Quality Control

Table 1- Radon Testing Results		
Bethesda Elementary School		
Test Period: 1/6/2020-1/9/2020		
Kit Number	Room / Area	Result
9339784	OFFICE BLANK	< 0.3
9347304	100	< 0.3
9347481	100	< 0.3
9347306	100	< 0.3
9347463	100A	< 0.3
9347480	100B	< 0.3
9347474	101	< 0.3
9347482	101	< 0.3
9347471	101 OFFICE	< 0.3
9347473	101 TV STUDIO	< 0.3
9347479	102	< 0.3
9347458	103	< 0.3
9347464	105	< 0.3
9347457	106	< 0.3
9347462	107	< 0.3
9347461	111	< 0.3
9347478	112	< 0.3
9347475	113	< 0.3
9347302	114	< 0.3
9347477	114	< 0.3
9347459	116	< 0.3
9347483	116	< 0.3
9347496	118	< 0.3
9347460	120	< 0.3
9347466	125	< 0.3
9347467	125	< 0.3
9347465	125A	< 0.3
9347469	127	< 0.3
9347472	130	< 0.3
9347485	133	< 0.3
9347489	135	< 0.3
9347456	136	< 0.3
9347499	137	< 0.3
9347497	137	< 0.3
9347500	141	< 0.3
9347476	143	< 0.3
9347455	144	< 0.3
9347470	145	< 0.3
9347468	146	< 0.3
9347484	148	< 0.3
9347305	148	< 0.3
9347301	148	< 0.3

9347486	151	< 0.3
9347494	151	< 0.3
9347303	151	< 0.3
9347495	153	< 0.3
9347498	159	< 0.3
9347491	161	< 0.3
9347487	162	< 0.3
9347488	163	< 0.3
9347490	205B	< 0.3
9347493	207	< 0.3
9347492	232	< 0.3

Table 2- Radon Testing Results			
Bethesda Elementary School			
Test Period: 1/6/2020-1/9/2020			
Kit Number	QC Type	Room / Area	Result
9347304	FB	100	<0.3
9347306	D	100	<0.3
9347302	D	114	<0.3
9347303	FB	151	<0.3
9347486	D	151	<0.3
9347497	D	137	<0.3
9347305	FB	148	<0.3
9347301	D	148	<0.3
9348319	TRANSIT BLANK	NA	<0.3
9348320	TRANSIT BLANK	NA	<0.3
9348313	TRANSIT BLANK	NA	<0.3

Summary of Missed Locations		
Bethesda Elementary School		
Test Period: 01/06/2020 - 01/09/2020		
Kit Number	Room/Area	Result
-	N/A	-

Summary of Missing, Compromised and >/= 4 piC/L Tests		
Bethesda Elementary School		
Test Period: 01/06/2020 - 01/09/2020		
Kit Number	Room/Area	Result
-	N/A	-

Table Note:
* Missing or Compromised Sample

ATTACHMENT C

Laboratory Analytical Results

January 3, 2020

** LABORATORY ANALYSIS REPORT **

Radon test result report for:

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

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

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January 3, 2020

** LABORATORY ANALYSIS REPORT **

Radon test result report for:

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

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

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

January 3, 2020

** LABORATORY ANALYSIS REPORT **

Radon test result report for:

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

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

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

January 3, 2020

** LABORATORY ANALYSIS REPORT **

Radon test result report for:

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

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

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

EXPOSURE IN BOWSER-MORNER RADON CHAMBER

CLIENT KCI Technologies Inc Job Number 193598

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

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

Time Start: 0830 Time Stop: 0830

(Group 4)
Device No.'s: (20) Char. Bags -

9340061 thru 9340080

52

Avg pCi/L 35.5 RH % 50.1 Temp °F 70.0

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

Time Start: 0835 Time Stop: 0835

(Group 5)
Device No.'s: (20) Char. Bags -

9340081 thru 9340100

Q5

Avg pCi/L 35.5 RH % 50.1 Temp °F 70.0

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

Time Start: 0840 Time Stop: 0840

(Group 6)
Device No.'s: (20) Char. Bags -

9341701 thru 9341720

R5

Avg pCi/L 35.5 RH % 50.1 Temp °F 70.0

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

January 15, 2020 **** LABORATORY ANALYSIS REPORT ****

Radon test result report for:
BETHESDA ES

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
9347304	100	2020-01-06 @ 2:00 am	2020-01-13 @ 1:00 am	< 0.3	2020-01-14
9347481	100	2020-01-06 @ 1:00 pm	2020-01-13 @ 12:00 pm	< 0.3	2020-01-14
9347306	100	2020-01-06 @ 2:00 am	2020-01-13 @ 1:00 am	< 0.3	2020-01-14
9347463	100A	2020-01-06 @ 1:00 pm	2020-01-13 @ 12:00 pm	< 0.3	2020-01-14
9347480	100B	2020-01-06 @ 1:00 pm	2020-01-13 @ 12:00 pm	< 0.3	2020-01-14
9347474	101	2020-01-06 @ 1:00 am	2020-01-13 @ 12:00 pm	< 0.3 L	2020-01-14
9347482	101	2020-01-06 @ 1:00 am	2020-01-13 @ 12:00 pm	< 0.3 L	2020-01-14
9347471	101 OFFICE	2020-01-06 @ 1:00 am	2020-01-13 @ 12:00 pm	< 0.3 L	2020-01-14
9347473	101 TV STUDIO	2020-01-06 @ 1:00 am	2020-01-13 @ 12:00 pm	< 0.3 L	2020-01-14
9347479	102	2020-01-06 @ 1:00 pm	2020-01-13 @ 12:00 pm	< 0.3	2020-01-14
9347458	103	2020-01-06 @ 1:00 am	2020-01-13 @ 12:00 pm	< 0.3 L	2020-01-14
9347464	105	2020-01-06 @ 1:00 am	2020-01-13 @ 12:00 pm	< 0.3 L	2020-01-14
9347457	106	2020-01-06 @ 1:00 pm	2020-01-13 @ 12:00 pm	< 0.3	2020-01-14
9347462	107	2020-01-06 @ 1:00 am	2020-01-13 @ 12:00 pm	< 0.3 L	2020-01-14
9347461	111	2020-01-06 @ 1:00 am	2020-01-13 @ 12:00 pm	< 0.3 L	2020-01-14
9347478	112	2020-01-06 @ 1:00 pm	2020-01-13 @ 12:00 pm	< 0.3	2020-01-14
9347475	113	2020-01-06 @ 1:00 pm	2020-01-13 @ 12:00 pm	< 0.3	2020-01-14
9347302	114	2020-01-06 @ 2:00 am	2020-01-13 @ 1:00 am	< 0.3	2020-01-14
9347477	114	2020-01-06 @ 1:00 pm	2020-01-13 @ 12:00 pm	< 0.3	2020-01-14
9347459	116	2020-01-06 @ 1:00 pm	2020-01-13 @ 12:00 pm	< 0.3	2020-01-14
9347483	116	2020-01-06 @ 1:00 pm	2020-01-13 @ 12:00 pm	< 0.3	2020-01-14
9347496	118	2020-01-06 @ 2:00 am	2020-01-13 @ 1:00 pm	< 0.3 L	2020-01-14
9347460	120	2020-01-06 @ 1:00 pm	2020-01-13 @ 12:00 pm	< 0.3	2020-01-14
9347466	125	2020-01-06 @ 1:00 pm	2020-01-13 @ 12:00 pm	< 0.3	2020-01-14
9347467	125	2020-01-06 @ 1:00 pm	2020-01-13 @ 12:00 pm	< 0.3	2020-01-14
9347465	125A	2020-01-06 @ 1:00 pm	2020-01-13 @ 12:00 pm	< 0.3	2020-01-14
9347469	127	2020-01-06 @ 1:00 pm	2020-01-13 @ 12:00 pm	< 0.3	2020-01-14
9347472	130	2020-01-06 @ 1:00 am	2020-01-13 @ 12:00 pm	< 0.3 L	2020-01-14
9347485	133	2020-01-06 @ 2:00 am	2020-01-13 @ 1:00 pm	< 0.3 L	2020-01-14
9347489	135	2020-01-06 @ 2:00 am	2020-01-13 @ 1:00 pm	< 0.3 L	2020-01-14
9347456	136	2020-01-06 @ 1:00 am	2020-01-13 @ 12:00 pm	< 0.3 L	2020-01-14
9347499	137	2020-01-06 @ 2:00 am	2020-01-13 @ 1:00 pm	< 0.3 L	2020-01-14
9347497	137	2020-01-06 @ 3:00 am	2020-01-13 @ 1:00 am	< 0.3	2020-01-14
9347500	141	2020-01-06 @ 2:00 am	2020-01-13 @ 1:00 pm	< 0.3 L	2020-01-14
9347476	143	2020-01-06 @ 1:00 am	2020-01-13 @ 1:00 pm	< 0.3 L	2020-01-14
9347455	144	2020-01-06 @ 1:00 am	2020-01-13 @ 12:00 pm	< 0.3 L	2020-01-14
9347470	145	2020-01-06 @ 1:00 am	2020-01-13 @ 1:00 pm	< 0.3 L	2020-01-14

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

January 15, 2020 **** LABORATORY ANALYSIS REPORT ****

Radon test result report for:
BETHESDA ES

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
9347468	146	2020-01-06 @ 1:00 am	2020-01-13 @ 12:00 pm	< 0.3 L	2020-01-14
9347484	148	2020-01-06 @ 1:00 am	2020-01-13 @ 1:00 pm	< 0.3 L	2020-01-14
9347305	148	2020-01-06 @ 3:00 am	2020-01-13 @ 1:00 am	< 0.3	2020-01-14
9347301	148	2020-01-06 @ 3:00 am	2020-01-13 @ 1:00 am	< 0.3	2020-01-14
9347486	151	2020-01-06 @ 3:00 am	2020-01-13 @ 1:00 am	< 0.3	2020-01-14
9347494	151	2020-01-06 @ 2:00 am	2020-01-13 @ 1:00 pm	< 0.3 L	2020-01-14
9347303	151	2020-01-06 @ 2:00 am	2020-01-13 @ 1:00 am	< 0.3	2020-01-14
9347495	153	2020-01-06 @ 2:00 am	2020-01-13 @ 1:00 pm	< 0.3 L	2020-01-14
9347498	159	2020-01-06 @ 2:00 am	2020-01-13 @ 1:00 pm	< 0.3 L	2020-01-14
9347491	161	2020-01-06 @ 2:00 am	2020-01-13 @ 1:00 pm	< 0.3 L	2020-01-14
9347487	162	2020-01-06 @ 2:00 am	2020-01-13 @ 1:00 pm	< 0.3 L	2020-01-14
9347488	163	2020-01-06 @ 2:00 am	2020-01-13 @ 1:00 pm	< 0.3 L	2020-01-14
9347490	205B	2020-01-06 @ 2:00 am	2020-01-13 @ 1:00 am	< 0.3	2020-01-14
9347493	207	2020-01-06 @ 2:00 am	2020-01-13 @ 1:00 am	< 0.3	2020-01-14
9347492	232	2020-01-06 @ 2:00 am	2020-01-13 @ 1:00 pm	< 0.3 L	2020-01-14

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 2019 Week 3

Name of Schools:

1. Bannockburn E.S.
2. Bethesda E.S.
3. Bethesda-Chevy Chase H.S.
4. Bradley Hill E.S.
5. Burning Tree E.S.
6. Burnt Mills E.S.
7. East Silver Springs E.S.
8. Einstein H.S.
9. Flora Singer E.S.
10. Key M.S.
11. Montgomery Blair H.S.
12. Montgomery Knolls E.S.
13. Newport Mills M.S.
14. Oak View E.S.
15. Rock View E.S.
16. Roscoe Nix E.S.
17. Sligo M.S.
18. Spring Mill Center
19. Springbrook H.S.
20. Westland M.S.
21. Woodlin M.S.

	Date	Initials
Radon Test Kits Deployed	1/6/20 to 1/7/20	JM
Radon Test Kits Collected	1/9/20 to 1/10/20	JM
Radon Test Kits Shipped to Lab*	1/10/20	JM
Radon Test Kits Received by Lab*	1/13/202	JM

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

RADON SCREENING SURVEY – FOLLOW-UP BETHESDA ELEMENTARY SCHOOL

7600 Arlington Road, Bethesda, Maryland 20814

EXECUTIVE SUMMARY

Date of Test Report:	3/29/16 Follow-Up
Round of Testing:	Initial Follow-up Post Remediation
# Rooms Tested	1
# Rooms ≥ 4.0 pCi/L:	0
Low Value:	<0.4
High Value:	<0.4
Confirmed Rooms ≥ 4.0 pCi/L US EPA Action Level	0

Summary of Sampling Events ≥ 4.0 pCi/L

Room	Result (pCi/L) 2/3/16 (Rev 1 Initial)	Result (pCi/L) 3/29/16 Follow-Up	Average Result (pCi/L)
106 Work Rm	<0.3 Tampered	<0.4	<0.4

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: Bethesda Elementary School

Date of Test Report:	3/29/2016
Round of Testing:	Initial Follow-up Post Remediation
# Rooms Tested:	1
# Rooms ≥ 4.0 pCi/L:	0
Low Value:	< 0.4
High Value:	< 0.4

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

KCI TECHNOLOGIES

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

March 29, 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 # 12146341.30

Location: Bethesda Elementary School
7600 Arlington Road
Bethesda, MD 20814

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 Bethesda Elementary School, located at 7600 Arlington Road in Bethesda, Maryland 20814 (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 29, 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 Bowser-Morner, Inc. as spike samples. The spiked tests were exposed to a known radon concentration by Bowser-Morner prior to being returned to the laboratory for analysis.

KCI returned to the site on March 3, 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 field blank, 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 (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 10 testing. Office blanks were not submitted under each school individually.

Radon Testing Results		
Bethesda Elementary School		
Test Period: 02/29/16-03/03/16		
Kit Number	**Room / Area**	**Result**
3028900	106	<0.4

Table Note:
* Missing or Compromised Sample

Radon Testing Results		
Bethesda Elementary School		
Test Period: 02/29/16-03/03/16		
Kit Number	**QC Type**	**Result**
3028776	D (106)	<0.4
3028775	FB (106)	<0.4

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

Bethesda Elementary School
7600 Arlington Road
Bethesda MD 20814

Log Number	Device Number	Test Exposure Duration:		Area Tested	Result (pCi/L)
3015286	3028775	02/29/2016 9:47 am	03/03/2016 7:07 am	Unit 106	<0.4
3015287	3028776	02/29/2016 9:47 am	03/03/2016 7:07 am	Unit 106	<0.4
3015288	3028900	02/29/2016 9:47 am	03/03/2016 7:07 am	Unit 106	<0.4

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

Distributed by: KCI Technologies, Inc.

Date Received: 03/07/2016 Date Logged: 03/07/2016 Date Analyzed: 03/08/2016 Date Reported: 03/08/2016

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	Bethesda Elementary School
Address	7600 Arlington Rd.
Address	
City / Town	Bethesda
State/Province Postal Code	MD 20814
Test Country	Montgomery County
Project Number	12146341

Contact Information:

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

Lab Use Only	Device Number	Building Number	Unit Number	Floor	Temp Name of Room	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
	3028775		106		70°	02/29/2016	9,47 AM	03/03/2016	7.07 AM	
	3028776		106		↓	02/29/2016	↓	03/03/2016	7,07AM	
	3028900		106		↓	02/29/2016	↓	03/03/2016	7.07 AM	
						02/29/2016		03/03/2016		
						02/29/2016		03/03/2016		
						02/29/2016		03/03/2016		
						02/29/2016		03/03/2016		
						02/29/2016		03/03/2016		
						02/29/2016		03/03/2016		
						02/29/2016		03/03/2016		

Test must start before the expiration date shown 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 10 Office Blank

Log Number	Device Number	Test Exposure Duration:		Area Tested	Result (pCi/L)
3015360	3028828	02/29/2016 9:30 am	03/03/2016 9:30 am	Office Blank	<0.4

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

Distributed by: KCI Technologies, Inc.

Date Received: 03/07/2016 Date Logged: 03/07/2016 Date Analyzed: 03/08/2016 Date Reported: 03/08/2016

Report Reviewed By: Jeffrey Karten Report Approved By: Carolyn D. Koke

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.

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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	KCI OFFICE
Address	936 Ridgebrook Road
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	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
	3028828		0	1	OFFICE (TEMP - 70F)	02/29/2016	9:30 am	03/03/2016	9:30 am	

Rev E1512

Test must start before the expiration date shown 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: _____ 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.

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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

1/27/2016
KCI Technologies, Inc.
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

EXPOSURE IN BOWSER-MORNER RADON CHAMBER

CLIENT KCI Technologies Inc. Job Number 173618

NOMINAL Conditions: Radon Conc 25.2 pCi/L Rel. Hum 49.1 % Temp. 70.0 F

Date Start: 1/23/16 Date Stop: 1/25/16	Date Start: _____ Date Stop: _____
Time Start: 0821 Time Stop: 0821	Time Start: _____ Time Stop: _____
Device No.'s: (6) Char. Cans -	Device No.'s: _____
3028985 thru 3028990	_____
_____	_____
E2 LOT	_____
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

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)
3010551	3028985	01/23/2016 8:20 am	01/25/2016 8:20 am	1 First Floor	24.2
3010552	3028986	01/23/2016 8:20 am	01/25/2016 8:20 am	2 First Floor	25.7
3010553	3028987	01/23/2016 8:20 am	01/25/2016 8:20 am	3 First Floor	23.8
3010554	3028988	01/23/2016 8:20 am	01/25/2016 8:20 am	4 First Floor	23.3
3010555	3028989	01/23/2016 8:20 am	01/25/2016 8:20 am	5 First Floor	24.0
3010556	3028990	01/23/2016 8:20 am	01/25/2016 8:20 am	6 First Floor	24.4

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.

Comment: 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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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: MCPS
Site Address: 850 Hungerford dr
City: Rockville MD State: MD Zip: 20850 County: Montgomery
Projects Contact Name: James Moulsdale Phone: 410-891-1842 Email: James.moulsdale@kci.com

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
3028985	1	3010551	1	1/23/16	08:20	1/25/16	08:20		N/A
3028986	2	3010552	1	↓	↓	↓	↓		↓
3028987	3	3010553	1						
3028988	4	3010554	1						
3028989	5	3010555	1						
3028990	6	3010556	1						

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 Testers Provide #

Canisters placed by _____ #_____

Canisters retrieved by _____ #_____

Owner waives confidentiality by signing here _____ Date _____

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 Technologies Inc
Attention: James Moulsdale
Address: 936 Ridgebrook Rd
City: Sparks MD 21152 State: Zip
Phone: 410-891-1842 Fax:
EMAIL Results to: James.moulsdale@kci.com

1/27/2016

KCI Technologies, Inc.

3010551 **3028985** ACPC275B EXP12/31/2018

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 Jonest
Shipping: 929 Mt Zion Road, Le
800-523-4964 fax 717-2

NEHA 10511AL NRSB ARL 0007

Revision 5
4/2015

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: Bethesda Elementary School

Date of Test Report:	2/03/2016 (Rev.1)
Round of Testing:	Initial Follow-up Post Remediation
# Rooms Tested:	38
# Rooms ≥ 4.0 pCi/L:	0
Low Value:	< 0.3
High Value:	1.1

Project Status:
Initial testing completed; compromised samples need re-test.

KCI TECHNOLOGIES

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

February 3, 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 # 12146341.24

Location: Bethesda Elementary School
7600 Arlington Road
Bethesda, MD 20814

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 Bethesda Elementary School, located at 7600 Arlington Road in Bethesda, Maryland 20814 (subject site).

Scope of Services:

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

KCI visited the site on January 11, 2016 and deployed fifty (50) activated charcoal (AC) radon test kits. KCI deployed radon test kits in frequently-occupied ground contact rooms, and other areas, (if applicable) in accordance with AARST guidance. A floor plan map of the building with the test locations is included as Attachment A of this report.

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

KCI returned to the site on January 14, 2016 to retrieve the radon sampling test kits. KCI shipped all radon tests via overnight delivery to Airchek, Inc. for analysis by gamma-ray spectroscopy. Airchek, Inc. is a NRSB certified analytical laboratory for radon analysis (certification # ARL1402) located at 1936

Butler Bridge Road, Mills River, North Carolina.

Evaluation of Testing Conditions:

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

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

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

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

Results:

The results of the radon test analysis indicated the following:

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

Notes:
D- Duplicate sample

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

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

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

Sincerely,

H. Allen Bennett
Certified Industrial Hygienist
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		
Bethesda Elementary School		
Test Period: 01/11/16-01/14/16		
Kit Number	**Room / Area**	**Result**
7716524	101	< 0.3
7716523	101	0.6
7716522	103	< 0.3
7716521	105	< 0.3
7716510	111	< 0.3
7716508	112	< 0.3
7716509	113	< 0.3
7716513	114	< 0.3
7716514	118	< 0.3
7716518	125	< 0.3
7716517	125	< 0.3
7716526	130	0.9
7716527	133	0.6
7716535	135	< 0.3
7716534	136	< 0.3
7716537	137	< 0.3
7716543	141	0.6
7716544	143	< 0.3
7716545	145	< 0.3
7716541	144	< 0.3
7716542	146	< 0.3
7716547	148	0.5
7716546	148	0.7
7716528	151	< 0.3
7716529	153	< 0.3
7716530	159	< 0.3
7716533	161	< 0.3
7716532	162	< 0.3
7716531	163	< 0.3
7716551	201	< 0.3
7716548	228	< 0.3
7716550	230	< 0.3
7716506	100 B	< 0.3
7716501	100 MAIN OFFICE	< 0.3
7716504	100A PRINCIPALS	< 0.3
7716502	102 HEALTH RM	< 0.3
7716507	* 106 WORK RM (tampered)	< 0.3
7716519	125A	< 0.3
7716515	CAFE	< 0.3
7716516	CAFE	< 0.3
7716503	HEALTH RM OFFICE	< 0.3
7716520	STO 110	< 0.3

Table Note:
* Missing or Compromised Sample

Radon Testing Results		
Bethesda Elementary School		
Test Period: 01/11/16-01/14/16		
Kit Number	**QC Type**	**Result**
7716512	D (111)	< 0.3
7716525	D (130)	1.1
7716536	D (135)	< 0.3
7716552	D (201)	< 0.3
7716505	FB (100 A)	< 0.3
7716511	FB (111)	< 0.3
7716549	FB (228)	< 0.3
7716539	OB (0)	< 0.3

Table Note:
* Missing or Compromised Sample

ATTACHMENT C

Laboratory Analytical Results

February 1, 2016

** LABORATORY ANALYSIS REPORT **

Radon test result report for:

BETHESDA ELEMENTARY SCHOOL
MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7716539	0	2016-01-11 @ 1:00 pm	2016-01-14 @ 3:00 pm	< 0.3	2016-01-19
7716505	100 A	2016-01-11 @ 9:00 am	2016-01-14 @ 9:00 am	< 0.3	2016-01-19
7716506	100 B	2016-01-11 @ 9:00 am	2016-01-14 @ 9:00 am	< 0.3	2016-01-19
7716501	100 MAIN OFFICE	2016-01-11 @ 9:00 am	2016-01-14 @ 9:00 am	< 0.3	2016-01-19
7716504	100A PRINCIPALS	2016-01-11 @ 9:00 am	2016-01-14 @ 9:00 am	< 0.3	2016-01-19
7716523	101	2016-01-11 @ 10:00 am	2016-01-14 @ 10:00 am	0.6 ± 0.4	2016-01-19
7716524	101	2016-01-11 @ 10:00 am	2016-01-14 @ 10:00 am	< 0.3	2016-01-19
7716502	102 HEALTH RM	2016-01-11 @ 9:00 am	2016-01-14 @ 9:00 am	< 0.3	2016-01-19
7716522	103	2016-01-11 @ 10:00 am	2016-01-14 @ 10:00 am	< 0.3	2016-01-19
7716521	105	2016-01-11 @ 10:00 am	2016-01-14 @ 10:00 am	< 0.3	2016-01-19
7716507	106 WORK RM	2016-01-11 @ 9:00 am	2016-01-14 @ 9:00 am	< 0.3	2016-01-19
7716510	111	2016-01-11 @ 9:00 am	2016-01-14 @ 9:00 am	< 0.3	2016-01-19
7716511	111	2016-01-11 @ 9:00 am	2016-01-14 @ 9:00 am	< 0.3	2016-01-19
7716512	111	2016-01-11 @ 9:00 am	2016-01-14 @ 9:00 am	< 0.3	2016-01-19
7716508	112	2016-01-11 @ 9:00 am	2016-01-14 @ 9:00 am	< 0.3	2016-01-19
7716509	113	2016-01-11 @ 9:00 am	2016-01-14 @ 9:00 am	< 0.3	2016-01-19
7716513	114	2016-01-11 @ 9:00 am	2016-01-14 @ 9:00 am	< 0.3	2016-01-19
7716514	118	2016-01-11 @ 10:00 am	2016-01-14 @ 9:00 am	< 0.3	2016-01-19
7716517	125	2016-01-11 @ 10:00 am	2016-01-14 @ 10:00 am	< 0.3	2016-01-19
7716518	125	2016-01-11 @ 10:00 am	2016-01-14 @ 10:00 am	< 0.3	2016-01-19
7716519	125A	2016-01-11 @ 10:00 am	2016-01-14 @ 10:00 am	< 0.3	2016-01-19
7716525	130	2016-01-11 @ 10:00 am	2016-01-14 @ 10:00 am	1.1 ± 0.4	2016-01-19
7716526	130	2016-01-11 @ 10:00 am	2016-01-14 @ 10:00 am	0.9 ± 0.4	2016-01-19
7716527	133	2016-01-11 @ 10:00 am	2016-01-14 @ 10:00 am	0.6 ± 0.4	2016-01-19
7716535	135	2016-01-11 @ 10:00 am	2016-01-14 @ 10:00 am	< 0.3	2016-01-19
7716536	135	2016-01-11 @ 10:00 am	2016-01-14 @ 10:00 am	< 0.3	2016-01-19
7716534	136	2016-01-11 @ 10:00 am	2016-01-14 @ 10:00 am	< 0.3	2016-01-19
7716537	137	2016-01-11 @ 10:00 am	2016-01-14 @ 10:00 am	< 0.3	2016-01-19
7716543	141	2016-01-11 @ 10:00 am	2016-01-14 @ 10:00 am	0.6 ± 0.4	2016-01-19
7716544	143	2016-01-11 @ 10:00 am	2016-01-14 @ 10:00 am	< 0.3	2016-01-19
7716545	145	2016-01-11 @ 10:00 am	2016-01-14 @ 11:00 am	< 0.3	2016-01-19
7716541	144	2016-01-11 @ 10:00 am	2016-01-14 @ 10:00 am	< 0.3	2016-01-19
7716542	146	2016-01-11 @ 10:00 am	2016-01-14 @ 10:00 am	< 0.3	2016-01-19
7716546	148	2016-01-11 @ 10:00 am	2016-01-14 @ 10:00 am	0.7 ± 0.4	2016-01-19
7716547	148	2016-01-11 @ 10:00 am	2016-01-14 @ 10:00 am	0.5 ± 0.4	2016-01-19
7716528	151	2016-01-11 @ 10:00 am	2016-01-14 @ 10:00 am	< 0.3	2016-01-19
7716529	153	2016-01-11 @ 10:00 am	2016-01-14 @ 10:00 am	< 0.3	2016-01-19

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

February 1, 2016

** LABORATORY ANALYSIS REPORT **

Radon test result report for:

BETHESDA ELEMENTARY SCHOOL
MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7716530	159	2016-01-11 @ 10:00 am	2016-01-14 @ 10:00 am	< 0.3	2016-01-19
7716533	161	2016-01-11 @ 10:00 am	2016-01-14 @ 10:00 am	< 0.3	2016-01-19
7716532	162	2016-01-11 @ 10:00 am	2016-01-14 @ 10:00 am	< 0.3	2016-01-19
7716531	163	2016-01-11 @ 10:00 am	2016-01-14 @ 10:00 am	< 0.3	2016-01-19
7716551	201	2016-01-11 @ 11:00 am	2016-01-14 @ 10:00 am	< 0.3	2016-01-19
7716552	201	2016-01-11 @ 11:00 am	2016-01-14 @ 10:00 am	< 0.3	2016-01-19
7716548	228	2016-01-11 @ 10:00 am	2016-01-14 @ 10:00 am	< 0.3	2016-01-19
7716549	228	2016-01-11 @ 10:00 am	2016-01-14 @ 11:00 am	< 0.3	2016-01-19
7716550	230	2016-01-11 @ 10:00 am	2016-01-14 @ 10:00 am	< 0.3	2016-01-19
7716515	CAFE	2016-01-11 @ 10:00 am	2016-01-14 @ 9:00 am	< 0.3	2016-01-19
7716516	CAFE	2016-01-11 @ 10:00 am	2016-01-14 @ 9:00 am	< 0.3	2016-01-19
7716503	HEALTH RM OFFICE	2016-01-11 @ 9:00 am	2016-01-14 @ 9:00 am	< 0.3	2016-01-19
7716520	STO 110	2016-01-11 @ 10:00 am	2016-01-14 @ 10:00 am	< 0.3	2016-01-19

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

February 2, 2016

** LABORATORY ANALYSIS REPORT **

Radon test result report for:

MCPS PHASE 5 & 6
TRANSIT BLANKS

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

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

December 23, 2015

** LABORATORY ANALYSIS REPORT **

Spike Sample Laboratory Results

Radon test result report for:

MCPS

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7706380	101	2015-12-18 @ 9:00 am	2015-12-21 @ 9:00 am	25.2	2015-12-23
7706381	102	2015-12-18 @ 9:00 am	2015-12-21 @ 9:00 am	26.5	2015-12-23
7706208	103	2015-12-18 @ 9:00 am	2015-12-21 @ 9:00 am	27.7	2015-12-23
7705132	104	2015-12-18 @ 9:00 am	2015-12-21 @ 9:00 am	28.6	2015-12-23
7706366	105	2015-12-18 @ 9:00 am	2015-12-21 @ 9:00 am	26.5	2015-12-23
7706211	106	2015-12-18 @ 9:00 am	2015-12-21 @ 9:00 am	26.1	2015-12-23

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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 KCI Technologies Inc. Job Number 173224

NOMINAL Conditions: Radon Conc 26.9 pCi/L Rel. Hum 49.6 % Temp. 69.9 F

Date Start: 12/18/15 Date Stop: 12/21/15	Date Start: _____ Date Stop: _____
Time Start: 0929 Time Stop: 0929	Time Start: _____ Time Stop: _____
Device No.'s: 7705132, 7706208, 7706211, 7706366, 7706380, 7706381 F3 Left	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: _____
Date Start: _____ Date Stop: _____	Date Start: _____ Date Stop: _____
Time Start: _____ Time Stop: _____	Time Start: _____ Time Stop: _____
Device No.'s: _____	Device No.'s: _____

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

KCI TECHNOLOGIES

ENGINEERS • PLANNERS • SCIENTISTS • CONSTRUCTION MANAGERS

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

Chain of Custody

Project Name: MCPS Radon Phase V

Name of Schools:

1. Arcola ES
2. Argyle ES
3. Bells Mill ES
4. Bethesda ES
5. Brookhaven ES
6. Burning Tree ES
7. Capt. James Daly ES
8. Carderock Springs ES
9. Cashell ES
10. Clearspring ES
11. Clopper Mill ES
12. College Gardens ES
13. Eastern MS
14. Fallsmead ES
15. Fields Road ES
16. Flower Hill ES
17. Flower Valley ES
18. Fox Chapel ES
19. Glen Haven ES
20. James Hubert Blake HS
21. Parkland Magnet MS
22. Rachel Carson ES
23. Roberto Clemente MS
24. Rock Creek ES
25. Rockview ES
26. Rockville HS
27. Rocky Hill MS
28. Seneca Valley HS
29. Westover ES
30. William Farquar MS

	Date	Initials
Radon Test Kits Deployed	1/11/16	JM
Radon Test Kits Sampled	1/14/16	JM
Radon Test Kits Shipped to Lab*	1/15/16	JM
Radon Test Kits Received by Lab*	1/18/16	JM

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