

School Year: **24-25**

Facility:	Concord Center		
Address:	7200 Hidden Creek Rd.		
	Bethesda, MD 20817		
Reason for Testing:	Scheduled Re-Testing - <input checked="" type="checkbox"/> 2-year or <input type="checkbox"/> 5-year schedule <input type="checkbox"/> Clearance Testing (Post-Mitigation) <input type="checkbox"/> Building Envelope or HVAC Upgrades <input type="checkbox"/> New Construction – Addition or Facility		
Current Radon Status:	<input checked="" type="checkbox"/> Active Mitigation (2-year regular schedule) <input type="checkbox"/> No Active Mitigation (5-year regular schedule) <input type="checkbox"/> Not Previously Tested (New Facility)		
Round of Testing:	<input checked="" type="checkbox"/> Initial Testing -or- <input type="checkbox"/> Follow-up Testing		
Testing Status:	<input checked="" type="checkbox"/> No Further Testing Needed -or- <input type="checkbox"/> Follow-Up Testing Required		

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

Mitigation -	Facility Radon Status:		
<input checked="" type="checkbox"/> Not Required <input type="checkbox"/> Required ( $\geq 4.0$ -pCi/L) Rooms:	<input checked="" type="checkbox"/> No Change in Status <input type="checkbox"/> Active Mitigation (2-year regular schedule) <input type="checkbox"/> No Active Mitigation (5-year regular schedule)		
Number of Rooms Tested	18	Lowest Value (pCi/L)	<0.3
Number of Rooms ( $\geq 4.0$ -pCi/L)	0	Highest Value (pCi/L)	2.6

**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  $\geq 2.0$ -pCi/L;  $\geq 2.7$ -pCi/L;  $\geq 4.0$ -pCi/L; and  $\geq 8.0$ -pCi/L;
- QA/QC Results - (field blanks and duplicates) indicating location collected; trip and office blanks; and spike sample results;
- Invalid Measurement Locations – missed locations, missing and or damaged/compromised testing devices.

Attachment 2 – Laboratory Report(s)

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

**Detector and Deployment**

Detector/Device Type:	<input checked="" type="checkbox"/> Passive	<input checked="" type="checkbox"/> Charcoal Absorption (CAD) <input type="checkbox"/> Alpha Track (ATD) <input type="checkbox"/> Other
	<input type="checkbox"/> Continuous	<input type="checkbox"/> Electret ion Chamber (EIC) <input type="checkbox"/> Electronic Integration (EID)
<i>Other—Specify here:</i>		
Detector/Device Name:	Air Chek – Radon Test Kits	
Manufacturer:	Radon Labs	
Person(s) Deploying or Retrieving Test Devices and certification number		Organization/Company
Shannon King		KCI Technologies, Inc.
<i>If noncertified individuals, the qualified measurement professional providing oversight -</i>		
Tyler McCleaf, CSP Cert. # 111004-RMP		KCI Technologies, Inc.

**Testing**

<input checked="" type="checkbox"/> Short-Term	Length of Test (days):	3	Date of Deployment and Retrieval (mm/dd/yy):	1/28/2025
<input type="checkbox"/> Long-Term				1/31/2025
Does the test period include weekends, school breaks or holidays?				<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<i>If "Yes" please explain/detail in the space below:</i>				
Was HVAC operating under occupied conditions?				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<i>If "No" please explain/detail in the space below:</i>				

Testing (continued)

Round of Testing	Detectors Deployed				Total
	Ground-Contact		Upper-Level(s)		
	Initial	Follow-Up	Initial	Follow-Up	
Test Locations <sup>1</sup>	18	0	0	0	18
Duplicates <sup>2</sup>	2	0	0	0	2
Field Blanks <sup>3</sup>	1	0	0	0	1
Grand Total					21

1 – include all detectors deployed (duplicates, field blanks); 1 detector per occupied (or intended to be occupied) ground-contact space ≤ 2,000-square feet; large spaces ≥ 2,000-square feet - 1 detector per 2,000-square feet or part thereof); and upper floors - 10% of all occupied or intended to be occupied rooms per floor (these are in addition to ground contact locations)

2 - 10% of all locations tested, per floor

3 – 5% of all locations tested, per floor

Quality Assurance / Quality Control (QA/QC)

A Quality Assurance plan that is consistent with ANSI/AARST MS-QA (Radon Measurement Systems Quality Assurance) was submitted under separate cover, and is available to review at the MCPS Radon Testing and Mitigation Program website. The following number of QA/QC samples are associated this facility.

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

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

2 – One per shipping container from start of detector deployment

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

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

Quality Assurance / Quality Control (continued)

Spike Sample Lab Results. Measured values are satisfactory, i.e., within $\pm 25\%$ of the chamber's reference value?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Quality Control measurements comply with QA/QC requirements in the submitted testing organization's/company's QA plan?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
	<b>Initial</b>	<b>Follow-Up</b>
All Field, Trip and Office Blanks are $\leq$ (less than or equal to) to the Method Detection Limit?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
For all Duplicate Samples <sup>1</sup> , the higher value is $\leq 2x$ the lower value?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
For all Duplicate Samples <sup>1</sup> , Relative Percent Difference(s) (RPD) <sup>2</sup> are less than the Warning Level <sup>3</sup> ?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
For all Duplicate Samples <sup>1</sup> , Relative Percent Difference(s) (RPD) <sup>2</sup> are less than the Control Level <sup>3</sup> ?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

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

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

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

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

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

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

Round of Testing	Ground-Contact		Upper-Level(s)		Total
	Initial	Follow-Up	Initial	Follow-Up	
Number of test locations:	18	0	0	0	18
Number of locations $\geq 8.0$ -pCi/L:	0	0	0	0	0
Number of locations $\geq 4.0$ and $\leq 8$ -pCi/L:	0	0	0	0	0
Number of locations $\geq 2.7$ and $< 4$ -pCi/L:	0	0	0	0	0
Number of locations $\geq 2.0$ and $< 2.7$ -pCi/L:	5	0	0	0	5
Number of missing required test locations <sup>3</sup> :	0	0	0	0	0
Number of failed duplicate control locations:	0	0	0	0	0
Percentage of missing test locations for the facility <sup>4,5</sup> :	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  $\geq 18$ , there is an allowance of  $\leq 33\%$ . If less than 18 test locations please review section 6.2 of the ANSI/AARST MA-MFLB 2023;

5 – if any valid measurements are  $\geq 4.0$ -pCi/L and the total number of test locations are  $\geq 20$ , there is an allowance of  $\leq 25\%$  of the total locations tested. If less than 20 test locations please review section 6.2 of the ANSI/AARST MA-MFLB 2023.

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

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

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

Follow-Up Testing

Required –

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

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

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

**Attachment 1:**  
**Summary Data Tables**

<b>Table 1- Radon Testing Results</b>		
<b>Concord Center</b>		
<b>Test Period: 1/28/2025 - 1/31/2025</b>		
<b>Kit Number</b>	<b>Room / Area</b>	<b>Result</b>
11950903	1	1.5
11950902	3	2.2
11919900	4	1.5
11919898	6	1.2
11919897	7	0.9
11919896	8	1.0
11919894	9	0.9
11919895	9	1.4
11919891	10	1.5
11919890	11	1.7
11919889	ADMIN	1.9
11919892	BUILDING SERVICES	1.2
11919887	CONFERENCE ROOM	2.4
11919899	DIRECTOR	2.3
11919885	MAIN OFFICE	2.6
11919888	MAIN OFFICE OFFICE	1.8
11919886	MAIN OFFICE WORK ROOM	2.0
11919893	SUMMER ROOM	1.5
11950904	TEACHERS	1.5
11950901	TEACHERS	1.6
11950905	TEACHERS	< 0.3



<b>Table 3 - QC Radon Testing Results</b>			
<b>Concord Center</b>			
<b>Test Period: 1/28/2025 - 1/31/2025</b>			
<b>Kit Number</b>	<b>QC Type</b>	<b>Room / Area</b>	<b>Result</b>
11919895	D	9	1.4
11950901	D	Teacher's	1.6
11950905	FB	Teacher's	< 0.3
11906899	OB	OFFICE BLANK	< 0.3
11926699	TB	TRAVEL BLANK	< 0.3

Table 3a - Duplicate Worksheet / Data Validation										
Concord Center										
Test Period: 01/28/2025 - 01/31/2025										
Sample ID			Duplicate Concentrations (pCi/L) and OC Checks							
Kit Numbers		Room / Area	Higher	Lower	Check #1 (Pass/Fail)	2x the Lower	Check #2 (Pass/Fail)	Average	Relative Percent Difference (RPD)	Check #3
11919894	11919895	9	1.4	0.9	✓	1.8	PASS	1.2	<1-pCi/L	✓
11950904	11950901	Teacher's	1.6	1.5	✓	3.0	PASS	1.6	<1-pCi/L	✓

**NOTES:**

QC Check #1 - Data Entry

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

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

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

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



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

Radon test result report for:

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11950903	1	2025-01-28 @ 1:00 pm	2025-01-31 @ 12:00 pm	1.5 ± 0.4	2025-02-04
11919891	10	2025-01-28 @ 1:00 pm	2025-01-31 @ 12:00 pm	1.5 ± 0.4	2025-02-04
11919890	11	2025-01-28 @ 1:00 pm	2025-01-31 @ 12:00 pm	1.7 ± 0.4	2025-02-04
11950902	3	2025-01-28 @ 1:00 pm	2025-01-31 @ 12:00 pm	2.2 ± 0.4	2025-02-04
11919900	4	2025-01-28 @ 1:00 pm	2025-01-31 @ 12:00 pm	1.5 ± 0.4	2025-02-04
11919898	6	2025-01-28 @ 1:00 pm	2025-01-31 @ 12:00 pm	1.2 ± 0.4	2025-02-04
11919897	7	2025-01-28 @ 1:00 pm	2025-01-31 @ 12:00 pm	0.9 ± 0.3	2025-02-04
11919896	8	2025-01-28 @ 1:00 pm	2025-01-31 @ 12:00 pm	1.0 ± 0.4	2025-02-04
11919894	9	2025-01-28 @ 1:00 pm	2025-01-31 @ 12:00 pm	0.9 ± 0.3	2025-02-04
11919895	9	2025-01-28 @ 1:00 pm	2025-01-31 @ 12:00 pm	1.4 ± 0.4	2025-02-04
11919889	ADMIN	2025-01-28 @ 1:00 pm	2025-01-31 @ 12:00 pm	1.9 ± 0.4	2025-02-04
11919892	BUILDING SERVICES	2025-01-28 @ 1:00 pm	2025-01-31 @ 12:00 pm	1.2 ± 0.3	2025-02-04
11919887	CONFERENCE ROOM	2025-01-28 @ 12:00 pm	2025-01-31 @ 12:00 pm	2.4 ± 0.4	2025-02-04
11919899	DIRECTOR	2025-01-28 @ 1:00 pm	2025-01-31 @ 12:00 pm	2.3 ± 0.4	2025-02-04
11919885	MAIN OFFICE	2025-01-28 @ 12:00 pm	2025-01-31 @ 12:00 pm	2.6 ± 0.4	2025-02-04
11919888	MAIN OFFICE OFFICE	2025-01-28 @ 12:00 pm	2025-01-31 @ 12:00 pm	1.8 ± 0.4	2025-02-04
11919886	MAIN OFFICE WORK ROOM	2025-01-28 @ 12:00 pm	2025-01-31 @ 12:00 pm	2.0 ± 0.4	2025-02-04
11919893	SUMMER ROOM	2025-01-28 @ 1:00 pm	2025-01-31 @ 12:00 pm	1.5 ± 0.4	2025-02-04
11950901	TEACHERS	2025-01-28 @ 1:00 pm	2025-01-31 @ 12:00 pm	1.6 ± 0.4	2025-02-04
11950904	TEACHERS	2025-01-28 @ 1:00 pm	2025-01-31 @ 12:00 pm	1.5 ± 0.4	2025-02-04
11950905	TEACHERS	2025-01-28 @ 1:00 pm	2025-01-31 @ 12:00 pm	< 0.3	2025-02-04

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February 4, 2025

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

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Radon test result report for:

**OFFICE  
MAIN**

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<b>Kit #</b>	<b>Room Id</b>	<b>Started</b>	<b>Ended</b>	<b>pCi/L</b>	<b>Analyzed</b>
11906885	O	2025-01-27 @ 11:00 am	2025-01-30 @ 11:00 am	< 0.3	2025-02-04
11906899	O	2025-01-28 @ 11:00 am	2025-01-31 @ 11:00 am	< 0.3	2025-02-04

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

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February 4, 2025

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

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Radon test result report for:

**TRAVEL  
MAIN**

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<b>Kit #</b>	<b>Room Id</b>	<b>Started</b>	<b>Ended</b>	<b>pCi/L</b>	<b>Analyzed</b>
11906900	T	2025-01-27 @ 11:00 am	2025-01-30 @ 11:00 am	< 0.3	2025-02-04
11926699	T	2025-01-28 @ 11:00 am	2025-01-31 @ 11:00 am	< 0.3	2025-02-04

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

# EXPOSURE IN BOWSER-MORNER RADON CHAMBER

CLIENT KCI TECHNOLOGIES, INC Job Number 20001560

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

Date Start: 12/14/24 Date Stop: 12/17/24 Date Start: \_\_\_\_\_ Date Stop: \_\_\_\_\_

Time Start: 0815 Time Stop: 0815 Time Start: \_\_\_\_\_ Time Stop: \_\_\_\_\_

Device No.'s: (3) CHAR BAGS Device No.'s: \_\_\_\_\_

11477880, 11477883, 11477896

B4 Right

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

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

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

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

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

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

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

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December 23, 2024

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

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Radon test result report for:

**SK  
MAIN**

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

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

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March 19, 2025

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

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Radon test result report for:

**QC  
MAIN**

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

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



### Radon Test Kit Chain of Custody

Project Name: MCPS Radon – Testing January 28<sup>th</sup> – January 31<sup>st</sup>, 2024

Name of Schools:

1. Carderock Springs ES
2. Cold Springs ES
3. Concord Center
4. DuFief ES
5. Thomas Edison HS
6. Fallsmead ES
7. Farmland ES

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	Date	Initials
Radon Test Kits Deployed	01/28/2025	DM
Radon Test Kits Collected	01/31/2025	DM
Radon Test Kits Shipped to Lab*	01/31/2025	DM
Radon Test Kits Received by Lab*	02/03/2025	DM

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



**MCPS RADON TESTING – EXECUTIVE SUMMARY**

Site Name	Concord Center
Date of Test Report	02/23/2022
Round of Testing	Initial <u>Follow-up</u> Post Remediation 2 Year Testing 5 Year Testing HVAC Upgrade Window Replacement New Addition New Facility
# Rooms Tested	1
# Rooms $\geq$ 4.0 pCi/L	0
Lowest Value	<0.3 pCi/L
Highest Value	1.2 pCi/L

**Project Status**

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



February 23, 2022

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

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

Location: Concord Center  
7210 Hidden Creek Rd.  
Bethesda, MD 20817

Dear Mr. Cox:

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 Concord Center, located at 7210 Hidden Creed Rd. Bethesda, MD 20817 (subject site).

**Scope of Services:**

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

KCI visited the site on January 25, 2022 and three (3) activated charcoal (AC) radon test kits. KCI deployed radon test kits in all frequently-occupied ground contact rooms, and other areas, (if applicable) in accordance with AARST guidance.

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

1. Rooms with missing test kits from the December 2021 testing period (i.e. test kit was deployed but not recovered),
2. Rooms with invalidated test kits from the December 2021 testing period (e.g. an open window in the room or disturbed test kit),
3. Rooms which were locked/inaccessible during the December 2021 testing period,
4. Rooms with elevated December 2021 results (i.e.  $\geq 3.5$  pCi/L),
5. Rooms previously tested for radon but not tested in December 2021, and
6. Additional rooms that require testing (if applicable.)

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

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

KCI returned to the site on January 28, 2022 to retrieve the radon sampling test kits. KCI shipped all radon tests via overnight delivery to Airchek, Inc. for analysis by gamma-ray spectroscopy. Airchek, Inc. is a NRSB certified analytical laboratory for radon analysis (certification # ARL1402) located at 1936 Butler Bridge Road, Mills River, North Carolina.

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

These tests represent:

- Follow-up to initial testing.

These tests were conducted to:

- Confirm the success of the mitigation system(s).

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

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

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

KCI also compiled weather data for the testing period and conducted observations of relevant field conditions. During the test period, weather records indicate low temperatures were in the low 30°Fs and high temperatures ranged from the mid 50°Fs to the high 60°Fs. Maximum sustained winds ranged from 3-12 miles per hour. Average humidity was around 50% with 0.0 inches of precipitation (rain) was recorded during testing period.

### **Results:**

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

The results of the radon test analysis indicated the following:

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

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

Our professional services have been performed in accordance with customary principles and practices in the field of industrial hygiene and engineering. If you have any questions or comments regarding this report, please feel free to contact me at (410) 891-1769.

Sincerely,



Tyler P. McCleaf  
Radon Measurement Provider  
#111004 RT  
KCI Technologies, Inc.

Attachments:   A- Floor Plan with Test Locations  
                  B- Table 1-3, Radon Test Summary Spreadsheets  
                  C- Laboratory Analytical Results

# ATTACHMENT A

## Floor Plan With Test Locations

# ATTACHMENT B

## Radon Test Summary Spreadsheets

**Table Notes:**

AC- Activated Charcoal

ACI- Air Check, Inc.

D- Duplicate

FB- Field Blank

KCI- KCI Technologies, Inc.

OB- Office Blank

PM- Project Manager

OC- Quality Control

Table 1- Radon Testing Results		
Maryvale ES		
Test Period: 01/25/2022-01/28/2022		
Kit Number	Room / Area	Result
11106216	ROOM 13 BUILDING SERVICES	1.2
11106217	ROOM 13 BUILDING SERVICES	< 0.3
11106218	ROOM 13 BUILDING SERVICES	1.0

Table 2- Radon Testing Results			
Concord Center RT			
Test Period: 01/18/22-01/21/22			
Kit Number	QC Type	Room / Area	Result
11106218	D	Room 13 Building Services	1.0
11106217	FB	Room 13 Building Services	< 0.3



# ATTACHMENT C

## Laboratory Analytical Results

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February 1, 2022

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

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Radon test result report for:

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<b>Kit #</b>	<b>Room Id</b>	<b>Started</b>	<b>Ended</b>	<b>pCi/L</b>	<b>Analyzed</b>
11106216	ROOM 13 BUILDING SERVICES	2022-01-25 @ 2:00 pm	2022-01-28 @ 11:00 am	1.2 ± 0.3	2022-01-31
11106217	ROOM 13 BUILDING SERVICES	2022-01-25 @ 2:00 pm	2022-01-28 @ 11:00 am	< 0.3	2022-01-31
11106218	ROOM 13 BUILDING SERVICES	2022-01-25 @ 2:00 pm	2022-01-28 @ 11:00 am	1.0 ± 0.3	2022-01-31

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

**EXPOSURE IN BOWSER-MORNER RADON CHAMBER**

CLIENT KCI Technologies, Inc. Job Number 203404

NOMINAL Conditions: Radon Conc 16.2 pCi/L Rel. Hum 28.8 % Temp. 59.9 F

Date Start: 12/24/21 Date Stop: 12/27/21 Date Start: \_\_\_\_\_ Date Stop: \_\_\_\_\_

Time Start: 0809 Time Stop: 0809 Time Start: \_\_\_\_\_ Time Stop: \_\_\_\_\_

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

9341721, 9341722

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

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

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

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

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

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

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

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December 31, 2021

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

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Radon test result report for:

**SK**  
**MA** MCPS - Spike Sample Lab Results. Measured values are satisfactory, i.e., within  $\pm 25\%$  of the chamber's reference value (16.2 pCi/L).

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<b>Kit #</b>	<b>Room Id</b>	<b>Started</b>	<b>Ended</b>	<b>pCi/L</b>	<b>Analyzed</b>
9341721	1	2021-12-24 @ 8:00 am	2021-12-27 @ 8:00 am	11.6 $\pm$ 0.9	2021-12-31
9341722	1	2021-12-24 @ 8:00 am	2021-12-27 @ 8:00 am	15.4 $\pm$ 1.2	2021-12-31

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



### Radon Test Kit Chain of Custody

**Project Name:** MCPS Radon – December 2021 Schools Retesting

**Name of Schools:**

1. Concord Center

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	Date	Initials
Radon Test Kits Deployed	01/25/2022	JM
Radon Test Kits Collected	01/28/2022	JM
Radon Test Kits Shipped to Lab*	01/28/2022	JR
Radon Test Kits Received by Lab*	01/31/2022	JR

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



**MCPS RADON TESTING – EXECUTIVE SUMMARY**

Site Name	Concord Center
Date of Test Report	01/20/2022
Round of Testing	Initial Follow-up Post Remediation <u>2 Year Testing</u> 5 Year Testing HVAC Upgrade Window Replacement New Addition New Facility
# Rooms Tested	15
# Rooms $\geq$ 4.0 pCi/L	1
Lowest Value	<0.3 pCi/L
Highest Value	4.1 pCi/L

**Project Status**

Current Project Status at this time: Testing Complete; elevated tests to be resampled.



January 20, 2022

Mr. Richard Cox  
Indoor Air Quality Team Leader  
Montgomery County Public Schools  
Gaithersburg, MD 20879

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

Location: Concord Center  
7210 Hidden Creek Rd.  
Bethesda, MD 20817

Dear Mr. Cox:

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 Concord Center, located at 7210 Hidden Creed Rd. Bethesda, MD 20817 (subject site).

**Scope of Services:**

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

KCI visited the site on December 13, 2021 and deployed seventeen (17) 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 December 16, 2021 to retrieve the radon sampling test kits. KCI shipped all radon tests via overnight delivery to Airchek, Inc. for analysis by gamma-ray spectroscopy. Airchek, Inc. is a NRSB certified analytical laboratory for radon analysis (certification # ARL1402) located at 1936 Butler Bridge Road, Mills River, North Carolina.

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

These tests represent:

- Follow-up to post-mitigation biennial testing.

These tests were conducted to:

- Confirm the success of the mitigation system(s).

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

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

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

KCI also compiled weather data for the testing period and conducted observations of relevant field conditions. During the test period, weather records indicate low temperatures were in the low 30°Fs and high temperatures ranged from the mid 50°Fs to the high 60°Fs. Maximum sustained winds ranged from 3-12 miles per hour. Average humidity was around 50% with 0.0 inches of precipitation (rain) was recorded during testing period.

### **Results:**

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

The results of the radon test analysis indicated the following:

<b>Radon Concentration</b>	<b>Room</b>	<b>Result</b>
≥4.0 pCi/L	Room 13	4.1
<4.0 pCi/L	See Attachment B	

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

Our professional services have been performed in accordance with customary principles and practices in the field of industrial hygiene and engineering. If you have any questions or comments regarding this report, please feel free to contact me at (410) 891-1769.

Sincerely,



Tyler P. McCleaf  
Radon Measurement Provider  
#111004 RT  
KCI Technologies, Inc.

Attachments:     A- Floor Plan with Test Locations  
                      B- Table 1-3, Radon Test Summary Spreadsheets  
                      C- Laboratory Analytical Results

# ATTACHMENT A

## Floor Plan With Test Locations

# ATTACHMENT B

## Radon Test Summary Spreadsheets

**Table Notes:**

AC- Activated Charcoal

ACI- Air Check, Inc.

D- Duplicate

FB- Field Blank

KCI- KCI Technologies, Inc.

OB- Office Blank

PM- Project Manager

OC- Quality Control

Table 1- Radon Testing Results		
Concord Center		
Test Period: 12/13/2021-12/16/2021		
Kit Number	Room / Area	Result
9347918	RECORD OFFICE LOUNGE	0.9
9347919	MCPS RECORDS OFFICE	0.8
9347920	ADMISSIONS	0.7
9347921	DIRECTOR	0.8
9347922	ROOM 4	1.7
9347923	ROOM 6	1.8
9347924	MEETING ROOM	1.1
9347925	ROOM 3	3.2
9347926	ROOM 9	0.9
9347927	ROOM 1	1.9
9347928	ROOM 9	1
9347931	ROOM 11	0.9
9347932	ROOM 10	1.5
9347933	ROOM 8	0.9
9347934	ROOM 13 BUILDING SERVICES	2.1
9347935	ROOM 7	1.9
9347936	ROOM 13 BUILDING SERVICES	4.1

Table 2- Radon Testing Results			
Concord Center			
Test Period: 12/13/2021-12/16/2021			
Kit Number	QC Type	Room / Area	Result
9347928	D	Room 9	1
9347936	FB	Room 13 Building Services	4.1
9347000	OB	OFFICE BLANK	< 0.3
9347992	TB	TRAVEL BLANK	< 0.3



# ATTACHMENT C

## Laboratory Analytical Results

Radon test result report for:

<b>Kit #</b>	<b>Room Id</b>	<b>Started</b>	<b>Ended</b>	<b>pCi/L</b>	<b>Analyzed</b>
9347920	ADMISSIONS	2021-12-13 @ 11:00 am	2021-12-16 @ 9:00 am	0.7 ± 0.3	2021-12-17
9347921	DIRECTOR	2021-12-13 @ 11:00 am	2021-12-16 @ 9:00 am	0.8 ± 0.3	2021-12-17
9347919	MCPS RECORDS OFFICE	2021-12-13 @ 11:00 am	2021-12-16 @ 9:00 am	0.8 ± 0.3	2021-12-17
9347924	MEETING ROOM	2021-12-13 @ 12:00 pm	2021-12-16 @ 9:00 am	1.1 ± 0.3	2021-12-17
9347918	RECORD OFFICE LOUNGE	2021-12-13 @ 11:00 am	2021-12-16 @ 9:00 am	0.9 ± 0.3	2021-12-17
9347927	ROOM 1	2021-12-13 @ 12:00 pm	2021-12-16 @ 9:00 am	1.9 ± 0.3	2021-12-17
9347932	ROOM 10	2021-12-13 @ 12:00 pm	2021-12-16 @ 10:00 am	1.5 ± 0.3	2021-12-17
9347931	ROOM 11	2021-12-13 @ 12:00 pm	2021-12-16 @ 10:00 am	0.9 ± 0.3	2021-12-17
9347936	ROOM 13 BUILDING SERVICES	2021-12-13 @ 12:00 pm	2021-12-16 @ 10:00 am	4.1 ± 0.3	2021-12-17
9347934	ROOM 13 BUILDING SERVICES	2021-12-13 @ 12:00 pm	2021-12-16 @ 10:00 am	2.1 ± 0.3	2021-12-17
9347925	ROOM 3	2021-12-13 @ 11:00 am	2021-12-16 @ 9:00 am	3.2 ± 0.3	2021-12-17
9347922	ROOM 4	2021-12-13 @ 11:00 am	2021-12-16 @ 9:00 am	1.7 ± 0.3	2021-12-17
9347923	ROOM 6	2021-12-13 @ 12:00 pm	2021-12-16 @ 9:00 am	1.8 ± 0.3	2021-12-17
9347935	ROOM 7	2021-12-13 @ 12:00 pm	2021-12-16 @ 10:00 am	1.9 ± 0.3	2021-12-17
9347933	ROOM 8	2021-12-13 @ 12:00 pm	2021-12-16 @ 10:00 am	0.9 ± 0.3	2021-12-17
9347928	ROOM 9	2021-12-13 @ 12:00 pm	2021-12-16 @ 10:00 am	1.0 ± 0.3	2021-12-17
9347926	ROOM 9	2021-12-13 @ 12:00 pm	2021-12-16 @ 10:00 am	0.9 ± 0.3	2021-12-17

**EXPOSURE IN BOWSER-MORNER RADON CHAMBER**

CLIENT KCI Technologies, Inc. Job Number 203404

NOMINAL Conditions: Radon Conc 16.2 pCi/L Rel. Hum 28.8 % Temp. 59.9 F

Date Start: 12/24/21 Date Stop: 12/27/21 Date Start: \_\_\_\_\_ Date Stop: \_\_\_\_\_

Time Start: 0809 Time Stop: 0809 Time Start: \_\_\_\_\_ Time Stop: \_\_\_\_\_

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

9341721, 9341722

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

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

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

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

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

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

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

---

December 31, 2021

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

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Radon test result report for:

**SK**  
**MA** MCPS - Spike Sample Lab Results. Measured values are satisfactory, i.e., within  $\pm 25\%$  of the chamber's reference value (16.2 pCi/L).

---

<b>Kit #</b>	<b>Room Id</b>	<b>Started</b>	<b>Ended</b>	<b>pCi/L</b>	<b>Analyzed</b>
9341721	1	2021-12-24 @ 8:00 am	2021-12-27 @ 8:00 am	11.6 $\pm$ 0.9	2021-12-31
9341722	1	2021-12-24 @ 8:00 am	2021-12-27 @ 8:00 am	15.4 $\pm$ 1.2	2021-12-31

---

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



### Radon Test Kit Chain of Custody

Project Name: MCPS Radon - December 2021 Schools

Name of Schools:

1. 45 Gude
2. Concord Center
3. English Manor
4. Smith Education Center
5. Randolph Main. & Tran.
6. Rollingwood Center
7. Ewing at Plum Orchard

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	Date	Initials
Radon Test Kits Deployed	12/13/2021	JM
Radon Test Kits Collected	12/16/2021	JM
Radon Test Kits Shipped to Lab*	12/16/2021	JM
Radon Test Kits Received by Lab*	12/17/2021	JM

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



**MCPS RADON TESTING – EXECUTIVE SUMMARY**

Site Name	Concord Center
Date of Test Report	02/23/2022
Round of Testing	Initial <u>Follow-up</u> Post Remediation 2 Year Testing 5 Year Testing HVAC Upgrade Window Replacement New Addition New Facility
# Rooms Tested	1
# Rooms $\geq$ 4.0 pCi/L	0
Lowest Value	<0.3 pCi/L
Highest Value	1.2 pCi/L

**Project Status**

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



February 23, 2022

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

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

Location: Concord Center  
7210 Hidden Creek Rd.  
Bethesda, MD 20817

Dear Mr. Cox:

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 Concord Center, located at 7210 Hidden Creed Rd. Bethesda, MD 20817 (subject site).

**Scope of Services:**

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

KCI visited the site on January 25, 2022 and three (3) activated charcoal (AC) radon test kits. KCI deployed radon test kits in all frequently-occupied ground contact rooms, and other areas, (if applicable) in accordance with AARST guidance.

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

1. Rooms with missing test kits from the December 2021 testing period (i.e. test kit was deployed but not recovered),
2. Rooms with invalidated test kits from the December 2021 testing period (e.g. an open window in the room or disturbed test kit),
3. Rooms which were locked/inaccessible during the December 2021 testing period,
4. Rooms with elevated December 2021 results (i.e.  $\geq 3.5$  pCi/L),
5. Rooms previously tested for radon but not tested in December 2021, and
6. Additional rooms that require testing (if applicable.)

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

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

KCI returned to the site on January 28, 2022 to retrieve the radon sampling test kits. KCI shipped all radon tests via overnight delivery to Airchek, Inc. for analysis by gamma-ray spectroscopy. Airchek, Inc. is a NRSB certified analytical laboratory for radon analysis (certification # ARL1402) located at 1936 Butler Bridge Road, Mills River, North Carolina.

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

These tests represent:

- Follow-up to initial testing.

These tests were conducted to:

- Confirm the success of the mitigation system(s).

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

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

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

KCI also compiled weather data for the testing period and conducted observations of relevant field conditions. During the test period, weather records indicate low temperatures were in the low 30°Fs and high temperatures ranged from the mid 50°Fs to the high 60°Fs. Maximum sustained winds ranged from 3-12 miles per hour. Average humidity was around 50% with 0.0 inches of precipitation (rain) was recorded during testing period.

### **Results:**

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

The results of the radon test analysis indicated the following:

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

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

Our professional services have been performed in accordance with customary principles and practices in the field of industrial hygiene and engineering. If you have any questions or comments regarding this report, please feel free to contact me at (410) 891-1769.

Sincerely,



Tyler P. McCleaf  
Radon Measurement Provider  
#111004 RT  
KCI Technologies, Inc.

Attachments:   A- Floor Plan with Test Locations  
                  B- Table 1-3, Radon Test Summary Spreadsheets  
                  C- Laboratory Analytical Results

# ATTACHMENT A

## Floor Plan With Test Locations

# ATTACHMENT B

## Radon Test Summary Spreadsheets

**Table Notes:**

AC- Activated Charcoal

ACI- Air Check, Inc.

D- Duplicate

FB- Field Blank

KCI- KCI Technologies, Inc.

OB- Office Blank

PM- Project Manager

OC- Quality Control

Table 1- Radon Testing Results		
Maryvale ES		
Test Period: 01/25/2022-01/28/2022		
Kit Number	Room / Area	Result
11106216	ROOM 13 BUILDING SERVICES	1.2
11106217	ROOM 13 BUILDING SERVICES	< 0.3
11106218	ROOM 13 BUILDING SERVICES	1.0

Table 2- Radon Testing Results			
Concord Center RT			
Test Period: 01/18/22-01/21/22			
Kit Number	QC Type	Room / Area	Result
11106218	D	Room 13 Building Services	1.0
11106217	FB	Room 13 Building Services	< 0.3



# ATTACHMENT C

## Laboratory Analytical Results

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February 1, 2022

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

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Radon test result report for:

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<b>Kit #</b>	<b>Room Id</b>	<b>Started</b>	<b>Ended</b>	<b>pCi/L</b>	<b>Analyzed</b>
11106216	ROOM 13 BUILDING SERVICES	2022-01-25 @ 2:00 pm	2022-01-28 @ 11:00 am	1.2 ± 0.3	2022-01-31
11106217	ROOM 13 BUILDING SERVICES	2022-01-25 @ 2:00 pm	2022-01-28 @ 11:00 am	< 0.3	2022-01-31
11106218	ROOM 13 BUILDING SERVICES	2022-01-25 @ 2:00 pm	2022-01-28 @ 11:00 am	1.0 ± 0.3	2022-01-31

---

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 203404

NOMINAL Conditions: Radon Conc 16.2 pCi/L Rel. Hum 28.8 % Temp. 59.9 F

Date Start: 12/24/21 Date Stop: 12/27/21 Date Start: \_\_\_\_\_ Date Stop: \_\_\_\_\_

Time Start: 0809 Time Stop: 0809 Time Start: \_\_\_\_\_ Time Stop: \_\_\_\_\_

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

9341721, 9341722

G4 left

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

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

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

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

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

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

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

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December 31, 2021

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

---

Radon test result report for:

**SK**  
**MA** MCPS - Spike Sample Lab Results. Measured values are satisfactory, i.e., within  $\pm 25\%$  of the chamber's reference value (16.2 pCi/L).

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<b>Kit #</b>	<b>Room Id</b>	<b>Started</b>	<b>Ended</b>	<b>pCi/L</b>	<b>Analyzed</b>
9341721	1	2021-12-24 @ 8:00 am	2021-12-27 @ 8:00 am	11.6 $\pm$ 0.9	2021-12-31
9341722	1	2021-12-24 @ 8:00 am	2021-12-27 @ 8:00 am	15.4 $\pm$ 1.2	2021-12-31

---

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



### Radon Test Kit Chain of Custody

Project Name: MCPS Radon – December 2021 Schools Retesting

Name of Schools:

1. Concord Center

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	Date	Initials
Radon Test Kits Deployed	01/25/2022	JM
Radon Test Kits Collected	01/28/2022	JM
Radon Test Kits Shipped to Lab*	01/28/2022	JR
Radon Test Kits Received by Lab*	01/31/2022	JR

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



**MCPS RADON TESTING – EXECUTIVE SUMMARY**

Site Name	Concord Center
Date of Test Report	01/20/2022
Round of Testing	Initial Follow-up Post Remediation <u>2 Year Testing</u> 5 Year Testing HVAC Upgrade Window Replacement New Addition New Facility
# Rooms Tested	15
# Rooms $\geq$ 4.0 pCi/L	1
Lowest Value	<0.3 pCi/L
Highest Value	4.1 pCi/L

**Project Status**

Current Project Status at this time: Testing Complete; elevated tests to be resampled.



January 20, 2022

Mr. Richard Cox  
Indoor Air Quality Team Leader  
Montgomery County Public Schools  
Gaithersburg, MD 20879

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

Location: Concord Center  
7210 Hidden Creek Rd.  
Bethesda, MD 20817

Dear Mr. Cox:

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 Concord Center, located at 7210 Hidden Creed Rd. Bethesda, MD 20817 (subject site).

**Scope of Services:**

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

KCI visited the site on December 13, 2021 and deployed seventeen (17) 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 December 16, 2021 to retrieve the radon sampling test kits. KCI shipped all radon tests via overnight delivery to Airchek, Inc. for analysis by gamma-ray spectroscopy. Airchek, Inc. is a NRSB certified analytical laboratory for radon analysis (certification # ARL1402) located at 1936 Butler Bridge Road, Mills River, North Carolina.

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

These tests represent:

- Follow-up to post-mitigation biennial testing.

These tests were conducted to:

- Confirm the success of the mitigation system(s).

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

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

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

KCI also compiled weather data for the testing period and conducted observations of relevant field conditions. During the test period, weather records indicate low temperatures were in the low 30°Fs and high temperatures ranged from the mid 50°Fs to the high 60°Fs. Maximum sustained winds ranged from 3-12 miles per hour. Average humidity was around 50% with 0.0 inches of precipitation (rain) was recorded during testing period.

### **Results:**

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

The results of the radon test analysis indicated the following:

<b>Radon Concentration</b>	<b>Room</b>	<b>Result</b>
<b>≥4.0 pCi/L</b>	Room 13	4.1
<b>&lt;4.0 pCi/L</b>	See Attachment B	

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

Our professional services have been performed in accordance with customary principles and practices in the field of industrial hygiene and engineering. If you have any questions or comments regarding this report, please feel free to contact me at (410) 891-1769.

Sincerely,



Tyler P. McCleaf  
Radon Measurement Provider  
#111004 RT  
KCI Technologies, Inc.

Attachments:     A- Floor Plan with Test Locations  
                      B- Table 1-3, Radon Test Summary Spreadsheets  
                      C- Laboratory Analytical Results

# ATTACHMENT A

## Floor Plan With Test Locations

# ATTACHMENT B

## Radon Test Summary Spreadsheets

**Table Notes:**

AC- Activated Charcoal

ACI- Air Check, Inc.

D- Duplicate

FB- Field Blank

KCI- KCI Technologies, Inc.

OB- Office Blank

PM- Project Manager

OC- Quality Control

Table 1- Radon Testing Results		
Concord Center		
Test Period: 12/13/2021-12/16/2021		
Kit Number	Room / Area	Result
9347918	RECORD OFFICE LOUNGE	0.9
9347919	MCPS RECORDS OFFICE	0.8
9347920	ADMISSIONS	0.7
9347921	DIRECTOR	0.8
9347922	ROOM 4	1.7
9347923	ROOM 6	1.8
9347924	MEETING ROOM	1.1
9347925	ROOM 3	3.2
9347926	ROOM 9	0.9
9347927	ROOM 1	1.9
9347928	ROOM 9	1
9347931	ROOM 11	0.9
9347932	ROOM 10	1.5
9347933	ROOM 8	0.9
9347934	ROOM 13 BUILDING SERVICES	2.1
9347935	ROOM 7	1.9
9347936	ROOM 13 BUILDING SERVICES	4.1

Table 2- Radon Testing Results			
Concord Center			
Test Period: 12/13/2021-12/16/2021			
Kit Number	QC Type	Room / Area	Result
9347928	D	Room 9	1
9347936	FB	Room 13 Building Services	4.1
9347000	OB	OFFICE BLANK	< 0.3
9347992	TB	TRAVEL BLANK	< 0.3



# ATTACHMENT C

## Laboratory Analytical Results

Radon test result report for:

<b>Kit #</b>	<b>Room Id</b>	<b>Started</b>	<b>Ended</b>	<b>pCi/L</b>	<b>Analyzed</b>
9347920	ADMISSIONS	2021-12-13 @ 11:00 am	2021-12-16 @ 9:00 am	0.7 ± 0.3	2021-12-17
9347921	DIRECTOR	2021-12-13 @ 11:00 am	2021-12-16 @ 9:00 am	0.8 ± 0.3	2021-12-17
9347919	MCPS RECORDS OFFICE	2021-12-13 @ 11:00 am	2021-12-16 @ 9:00 am	0.8 ± 0.3	2021-12-17
9347924	MEETING ROOM	2021-12-13 @ 12:00 pm	2021-12-16 @ 9:00 am	1.1 ± 0.3	2021-12-17
9347918	RECORD OFFICE LOUNGE	2021-12-13 @ 11:00 am	2021-12-16 @ 9:00 am	0.9 ± 0.3	2021-12-17
9347927	ROOM 1	2021-12-13 @ 12:00 pm	2021-12-16 @ 9:00 am	1.9 ± 0.3	2021-12-17
9347932	ROOM 10	2021-12-13 @ 12:00 pm	2021-12-16 @ 10:00 am	1.5 ± 0.3	2021-12-17
9347931	ROOM 11	2021-12-13 @ 12:00 pm	2021-12-16 @ 10:00 am	0.9 ± 0.3	2021-12-17
9347936	ROOM 13 BUILDING SERVICES	2021-12-13 @ 12:00 pm	2021-12-16 @ 10:00 am	4.1 ± 0.3	2021-12-17
9347934	ROOM 13 BUILDING SERVICES	2021-12-13 @ 12:00 pm	2021-12-16 @ 10:00 am	2.1 ± 0.3	2021-12-17
9347925	ROOM 3	2021-12-13 @ 11:00 am	2021-12-16 @ 9:00 am	3.2 ± 0.3	2021-12-17
9347922	ROOM 4	2021-12-13 @ 11:00 am	2021-12-16 @ 9:00 am	1.7 ± 0.3	2021-12-17
9347923	ROOM 6	2021-12-13 @ 12:00 pm	2021-12-16 @ 9:00 am	1.8 ± 0.3	2021-12-17
9347935	ROOM 7	2021-12-13 @ 12:00 pm	2021-12-16 @ 10:00 am	1.9 ± 0.3	2021-12-17
9347933	ROOM 8	2021-12-13 @ 12:00 pm	2021-12-16 @ 10:00 am	0.9 ± 0.3	2021-12-17
9347928	ROOM 9	2021-12-13 @ 12:00 pm	2021-12-16 @ 10:00 am	1.0 ± 0.3	2021-12-17
9347926	ROOM 9	2021-12-13 @ 12:00 pm	2021-12-16 @ 10:00 am	0.9 ± 0.3	2021-12-17

**EXPOSURE IN BOWSER-MORNER RADON CHAMBER**

CLIENT KCI Technologies, Inc. Job Number 203404

NOMINAL Conditions: Radon Conc 16.2 pCi/L Rel. Hum 28.8 % Temp. 59.9 F

Date Start: 12/24/21 Date Stop: 12/27/21 Date Start: \_\_\_\_\_ Date Stop: \_\_\_\_\_

Time Start: 0809 Time Stop: 0809 Time Start: \_\_\_\_\_ Time Stop: \_\_\_\_\_

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

9341721, 9341722

G4 left

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

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

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

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

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

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

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

---

December 31, 2021

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

---

Radon test result report for:

**SK**  
**MA** MCPS - Spike Sample Lab Results. Measured values are satisfactory, i.e., within  $\pm 25\%$  of the chamber's reference value (16.2 pCi/L).

---

<b>Kit #</b>	<b>Room Id</b>	<b>Started</b>	<b>Ended</b>	<b>pCi/L</b>	<b>Analyzed</b>
9341721	1	2021-12-24 @ 8:00 am	2021-12-27 @ 8:00 am	11.6 $\pm$ 0.9	2021-12-31
9341722	1	2021-12-24 @ 8:00 am	2021-12-27 @ 8:00 am	15.4 $\pm$ 1.2	2021-12-31

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



### Radon Test Kit Chain of Custody

Project Name: MCPS Radon - December 2021 Schools

Name of Schools:

1. 45 Gude
2. Concord Center
3. English Manor
4. Smith Education Center
5. Randolph Main. & Tran.
6. Rollingwood Center
7. Ewing at Plum Orchard

---

	Date	Initials
Radon Test Kits Deployed	12/13/2021	JM
Radon Test Kits Collected	12/16/2021	JM
Radon Test Kits Shipped to Lab*	12/16/2021	JM
Radon Test Kits Received by Lab*	12/17/2021	JM

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

**RADON SCREENING SURVEY – FOLLOW-UP CONCORD CENTER**

7210 Hidden Creek Rd, Bethesda, Maryland 20817

**EXECUTIVE SUMMARY**

Date of Test Report:	3/31/16 Follow-Up
Round of Testing:	Initial <span style="border: 1px solid red; border-radius: 50%; padding: 2px;">Follow-up</span> Post Remediation
# Rooms Tested	2
# Rooms $\geq$ 4.0 pCi/L:	0
Low Value:	2.2
High Value:	2.4
Confirmed Rooms $\geq$ 4.0 pCi/L US EPA Action Level	0

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

Room	Result (pCi/L) 2/25/16 Initial	Result (pCi/L) 3/31/16 Follow-Up	Average Result (pCi/L)
Admin 1	4.8	2.2	3.5
Admin 2	4.0	2.4	3.2



## MCPS RADON TESTING

### Executive Summary: Concord Center

Date of Test Report:	3/31/2016
Round of Testing:	Initial Follow-up Post Remediation
# Rooms Tested:	2
# Rooms $\geq$ 4.0 pCi/L:	0
Low Value:	2.2
High Value:	2.4

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



March 31, 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 # 12146341.31

Location: Concord Center  
7210 Hidden Creek Road  
Bethesda, MD 20817

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 Concord Center, located at 7210 Hidden Creek Road in Bethesda, Maryland 20817 (subject site).

**Scope of Services:**

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

KCI visited the site on March 7, 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 10, 2016 to retrieve the radon sampling test kits. KCI shipped all radon tests via overnight delivery to Airchek, Inc. for analysis by gamma-ray spectroscopy. Airchek, Inc. is a NRSB certified analytical laboratory for radon analysis (certification # ARL1402) located at 1936 Butler

Bridge Road, Mills River, North Carolina.

**Evaluation of Testing Conditions:**

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

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

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

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

**Results:**

The results of the radon test analysis indicated the following:

<b>Radon Concentration</b>	<b>Room</b>	<b>Result</b>
$\geq 4.0$ pCi/L	none	n/a
$< 4.0$ 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 0.3 pCi/L. Review of the duplicate sample analysis indicates that adequate laboratory measurement precision was achieved. The Spike sample analysis results indicate the laboratory is operating within statistical control limits.

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

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

Sincerely,



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

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

# ATTACHMENT A

## Floor Plan With Test Locations

# ATTACHMENT B

## Radon Test Summary Spreadsheet

**Table Notes:**

AC- Activated Charcoal

ACI- Air Chek, Inc.

D- Duplicate

FB- Field Blank

KCI- KCI Technologies, Inc.

OB- Office Blank\*

PM- Project Manager

QC- Quality Control

\*Office blanks were submitted at a rate of 1% for all samples deployed in Phase 11 testing. Office blanks were not submitted under each school individually.

<b>Radon Testing Results</b>		
<b>Concord Center</b>		
<b>Test Period: 03/07/16-03/10/16</b>		
<b>Kit Number</b>	<b>Room / Area</b>	<b>Result</b>
7735261	ADMIN 1	2.2
7735257	ADMIN 2	2.4

Table Note:

\* Missing or Compromised Sample

<b>Radon Testing Results</b>		
<b>Concord Center</b>		
<b>Test Period: 03/07/16-03/10/16</b>		
<b>Kit Number</b>	<b>QC Type</b>	<b>Result</b>
7735264	D (ADMIN 1)	2.2

Table Note:

\* Missing or Compromised Sample

# ATTACHMENT C

## Laboratory Analytical Results

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March 29, 2016 **\*\* LABORATORY ANALYSIS REPORT \*\***

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Radon test result report for:  
**CONCORD CENTER  
MAIN**

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<b>Kit #</b>	<b>Room Id</b>	<b>Started</b>	<b>Ended</b>	<b>pCi/L</b>	<b>Analyzed</b>
7735261	ADMIN 1	2016-03-07 @ 2:00 pm	2016-03-10 @ 9:00 am	2.2 ± 0.4	2016-03-14
7735264	ADMIN 1	2016-03-07 @ 2:00 pm	2016-03-10 @ 9:00 am	2.2 ± 0.4	2016-03-14
7735257	ADMIN 2	2016-03-07 @ 2:00 pm	2016-03-10 @ 9:00 am	2.4 ± 0.4	2016-03-14

---

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

---

March 29, 2016 **\*\* LABORATORY ANALYSIS REPORT \*\***

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Radon test result report for:  
**MCPS RADON**  
**Phase 11 Office Blank**

---

<b>Kit #</b>	<b>Room Id</b>	<b>Started</b>	<b>Ended</b>	<b>pCi/L</b>	<b>Analyzed</b>
7730694	0	2016-03-07 @ 2:00 pm	2016-03-10 @ 2:00 pm	< 0.3	2016-03-14

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

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March 22, 2016 **\*\* LABORATORY ANALYSIS REPORT \*\***

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Radon test result report for:  
**TRANSIT - PHASE 10 & 11**  
**MAIN**

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<b>Kit #</b>	<b>Room Id</b>	<b>Started</b>	<b>Ended</b>	<b>pCi/L</b>	<b>Analyzed</b>
7735300	1	2016-03-18 @ 4:00 pm	2016-03-21 @ 4:00 pm	< 0.3	2016-03-22
7735296	2	2016-03-18 @ 4:00 pm	2016-03-21 @ 4:00 pm	< 0.3	2016-03-22
7735294	3	2016-03-18 @ 4:00 pm	2016-03-21 @ 4:00 pm	< 0.3	2016-03-22

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

---

March 24, 2016 **\*\* LABORATORY ANALYSIS REPORT \*\***

---

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

---

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7735295	1	2016-03-18 @ 1:00 pm	2016-03-21 @ 1:00 pm	30.0 ± 2.0	2016-03-24
7735289	2	2016-03-18 @ 1:00 pm	2016-03-21 @ 1:00 pm	29.9 ± 2.0	2016-03-24
7735274	3	2016-03-18 @ 1:00 pm	2016-03-21 @ 1:00 pm	25.6 ± 1.7	2016-03-24
7735278	4	2016-03-18 @ 1:00 pm	2016-03-21 @ 1:00 pm	26.2 ± 1.8	2016-03-24
7735299	5	2016-03-18 @ 1:00 pm	2016-03-21 @ 1:00 pm	28.3 ± 1.9	2016-03-24
7735293	6	2016-03-18 @ 1:00 pm	2016-03-21 @ 1:00 pm	31.0 ± 2.0	2016-03-24

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

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

EXPOSURE IN BOWSER-MORNER RADON CHAMBER

CLIENT KCI Technologies Inc. Job Number 174430

NOMINAL Conditions: Radon Conc 26.1 pCi/L Rel. Hum 48.8 % Temp. 79.1 F

Date Start: 3/18/16 Date Stop: 3/21/16 Date Start: \_\_\_\_\_ Date Stop: \_\_\_\_\_

Time Start: 1250 Time Stop: 1250 Time Start: \_\_\_\_\_ Time Stop: \_\_\_\_\_

Device No.'s: (6) Char. Cans Device No.'s: \_\_\_\_\_

3029154 thru 3029157, \_\_\_\_\_

3029083, 3029086 \_\_\_\_\_

FS Right

Date Start: 3/18/16 Date Stop: 3/21/16 Date Start: \_\_\_\_\_ Date Stop: \_\_\_\_\_

Time Start: 1250 Time Stop: 1250 Time Start: \_\_\_\_\_ Time Stop: \_\_\_\_\_

Device No.'s: (6) Char. Bags Device No.'s: \_\_\_\_\_

7735299, 7735293, 7735295, \_\_\_\_\_

7735274, 7735278, 7735289 \_\_\_\_\_

FS Right

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



## Radon Test Kit Chain of Custody

Project Name: MCPS Radon Phase 10

Name of Schools:

1. S. Christa McAuliffe ES
2. Northwest HS
3. Concord Center
4. 45 Gude

---

	Date	Initials
Radon Test Kits Deployed	3/7/16	JM
Radon Test Kits Collected	3/10/16	JM
Radon Test Kits Shipped to Lab*	3/10/16	JM
Radon Test Kits Received by Lab*	3/14/16	JM

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



### MCPS RADON TESTING

#### Executive Summary: Concord Center

Date of Test Report:	2/25/2016
Round of Testing:	Initial Follow-up Post Remediation
# Rooms Tested:	22
# Rooms $\geq$ 4.0 pCi/L:	2
Low Value:	0.7
High Value:	4.8

Rooms with results  $\geq$  4.0 pCi/L:  
Admin 1 (4.8 pCi/L), Admin 2 (4.0 pCi/L)

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



February 25, 2016

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

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

Location: Concord Center  
7210 Hidden Creek Road  
Bethesda, MD 20817

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 Concord Center, located at 7210 Hidden Creek Road in Bethesda, Maryland 20817 (subject site).

**Scope of Services:**

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

KCI visited the site on February 2, 2016 and deployed twenty-eight (28) activated charcoal (AC) radon test kits. KCI deployed radon test kits in frequently-occupied ground contact rooms, and other areas, (if applicable) in accordance with AARST guidance. A floor plan map of the building with the test locations is included as Attachment A of this report.

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

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

Butler Bridge Road, Mills River, North Carolina.

**Evaluation of Testing Conditions:**

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

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

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

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

**Results:**

The results of the radon test analysis indicated the following:

<b>Radon Concentration</b>	<b>Room</b>	<b>Result</b>
<b><math>\geq 4.0</math> pCi/L</b>	Admin 1	4.8
	Admin 2	4.0
<b><math>&lt; 4.0</math> pCi/L</b>	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. Mouldale  
Radon Measurement Specialist  
KCI Technologies, Inc.

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

# ATTACHMENT A

## Floor Plan With Test Locations

# ATTACHMENT B

## Radon Test Summary Spreadsheet

**Table Notes:**

AC- Activated Charcoal

ACI- Air Chek, Inc.

D- Duplicate

FB- Field Blank

KCI- KCI Technologies, Inc.

OB- Office Blank

PM- Project Manager

QC- Quality Control

<b>Radon Testing Results</b>		
<b>Concord Center</b>		
<b>Test Period: 02/02/16-02/05/16</b>		
<b>Kit Number</b>	<b>Room / Area</b>	<b>Result</b>
7732422	1	1.1
7732421	3	2.3
7732420	4	3.7
7732423	5	2.4
7732424	6	1.3
7732425	7	1.3
7732426	8	1.3
7732427	9	0.7
7732405	10	1.7
7732404	11	1.4
7732401	13	2.7
7732418	ADM1	4.8
7732419	ADM2	4.0
7732415	CONF	2.7
7732407	GBT	1.8
7732417	OFFICE1	3.6
7732413	OFFICE2	2.4
7732416	OFFICE3	2.7
7732410	RECEIVING	2.4
7732411	STR1	2.4
7732412	STR2	2.6
7732406	SUMMER	2.7

Table Note:

\* Missing or Compromised Sample

<b>Radon Testing Results</b>		
<b>Concord Center</b>		
<b>Test Period: 02/02/16-02/05/16</b>		
<b>Kit Number</b>	<b>QC Type</b>	<b>Result</b>
7732402	D (13)	2.0
7732408	D (GBT)	2.2
7732414	D (OFFICE2)	2.9
7732403	FB (13)	< 0.3
7732409	FB (GBT)	< 0.3
7730073	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:  
**CONCORD CENTER  
MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7730073	0	2016-02-02 @ 5:00 pm	2016-02-05 @ 12:00 pm	< 0.3	2016-02-09
7732422	1	2016-02-02 @ 9:00 am	2016-02-05 @ 7:00 am	1.1 ± 0.4	2016-02-09
7732405	10	2016-02-02 @ 9:00 am	2016-02-05 @ 7:00 am	1.7 ± 0.4	2016-02-09
7732404	11	2016-02-02 @ 9:00 am	2016-02-05 @ 7:00 am	1.4 ± 0.4	2016-02-09
7732402	13	2016-02-02 @ 9:00 am	2016-02-05 @ 7:00 am	2.0 ± 0.4	2016-02-09
7732403	13	2016-02-02 @ 9:00 am	2016-02-05 @ 7:00 am	< 0.3	2016-02-09
7732401	13	2016-02-02 @ 9:00 am	2016-02-05 @ 7:00 am	2.7 ± 0.4	2016-02-09
7732421	3	2016-02-02 @ 9:00 am	2016-02-05 @ 7:00 am	2.3 ± 0.4	2016-02-09
7732420	4	2016-02-02 @ 9:00 am	2016-02-05 @ 7:00 am	3.7 ± 0.5	2016-02-09
7732423	5	2016-02-02 @ 9:00 am	2016-02-05 @ 7:00 am	2.4 ± 0.4	2016-02-09
7732424	6	2016-02-02 @ 9:00 am	2016-02-05 @ 7:00 am	1.3 ± 0.4	2016-02-09
7732425	7	2016-02-02 @ 9:00 am	2016-02-05 @ 7:00 am	1.3 ± 0.4	2016-02-09
7732426	8	2016-02-02 @ 9:00 am	2016-02-05 @ 7:00 am	1.3 ± 0.4	2016-02-09
7732427	9	2016-02-02 @ 9:00 am	2016-02-05 @ 7:00 am	0.7 ± 0.3	2016-02-09
7732418	ADM1	2016-02-02 @ 9:00 am	2016-02-05 @ 7:00 am	4.8 ± 0.5	2016-02-09
7732419	ADM2	2016-02-02 @ 9:00 am	2016-02-05 @ 7:00 am	4.0 ± 0.5	2016-02-09
7732415	CONF	2016-02-02 @ 9:00 am	2016-02-05 @ 7:00 am	2.7 ± 0.4	2016-02-09
7732407	GBT	2016-02-02 @ 9:00 am	2016-02-05 @ 7:00 am	1.8 ± 0.4	2016-02-09
7732408	GBT	2016-02-02 @ 9:00 am	2016-02-05 @ 7:00 am	2.2 ± 0.4	2016-02-09
7732409	GBT	2016-02-02 @ 9:00 am	2016-02-05 @ 7:00 am	< 0.3	2016-02-09
7732417	OFFICE1	2016-02-02 @ 9:00 am	2016-02-05 @ 7:00 am	3.6 ± 0.5	2016-02-09
7732413	OFFICE2	2016-02-02 @ 9:00 am	2016-02-05 @ 7:00 am	2.4 ± 0.4	2016-02-09
7732414	OFFICE2	2016-02-02 @ 9:00 am	2016-02-05 @ 7:00 am	2.9 ± 0.5	2016-02-09
7732416	OFFICE3	2016-02-02 @ 9:00 am	2016-02-05 @ 7:00 am	2.7 ± 0.4	2016-02-09
7732410	RECEIVING	2016-02-02 @ 9:00 am	2016-02-05 @ 7:00 am	2.4 ± 0.4	2016-02-09
7732411	STR1	2016-02-02 @ 9:00 am	2016-02-05 @ 7:00 am	2.4 ± 0.4	2016-02-09
7732412	STR2	2016-02-02 @ 9:00 am	2016-02-05 @ 7:00 am	2.6 ± 0.4	2016-02-09
7732406	SUMMER	2016-02-02 @ 9:00 am	2016-02-05 @ 7:00 am	2.7 ± 0.4	2016-02-09

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

February  
15,  
2016

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

Spike Sample Laboratory Results

Radon test result report for:  
**MCPS**

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

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

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

**EXPOSURE IN BOWSER-MORNER RADON CHAMBER**

CLIENT KCF Technologies Inc. Job Number 173704

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

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

Time Start: 0926 Time Stop: 0926 Time Start: \_\_\_\_\_ Time Stop: \_\_\_\_\_

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

7718281, 7718282, 7718291, \_\_\_\_\_

7718288, 7718289, 7718273 \_\_\_\_\_

ε3 Left

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

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

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

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

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

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

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



### Radon Test Kit Chain of Custody

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

Name of School/Facility:

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

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

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



## Radon Test Kit Chain of Custody

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

Name of School/Facility:

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

---

	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