

**Instructions:** Submit one testing report form per-facility per-round of testing. 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.

School Year: **23-24**

Facility:	John T. Baker Middle School
Address:	25400 Oak Drive
	Damascus, MD 20872

Reason for Testing:	<input checked="" type="checkbox"/> Scheduled Re-Testing (2 or 5-year schedule) <input type="checkbox"/> Clearance Testing (Post-Mitigation) <input type="checkbox"/> System(s) Performance Testing (Post-Mitigation) <input type="checkbox"/> New Construction/Facility
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
Round of Testing:	<input type="checkbox"/> Initial Testing <b>-or-</b> <input checked="" type="checkbox"/> Follow-up Testing
Testing Status:	<input checked="" type="checkbox"/> No Further Testing Needed <b>-or-</b> <input type="checkbox"/> Follow-Up Testing Required

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

Mitigation -	Facility Radon Status:
<input type="checkbox"/> Not Required or Considered <input type="checkbox"/> Required ( $>8.0$ -pCi/L) <input type="checkbox"/> Required ( $\geq 4.0$ -pCi/L) <input checked="" type="checkbox"/> Consider ( $\geq 2.0$ & $<4.0$ -pCi/L) Room: 117B	<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)

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

## Testing

<input checked="" type="checkbox"/> Short-Term	Length of Test (days):	3	Date of Deployment and Retrieval (mm/dd/yy):	02/20/24
<input type="checkbox"/> Long-Term				02/23/24
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)

	Detectors Deployed		
	Ground-Contact	Upper-Level(s)	Total
Test Locations <sup>1</sup>	5	3	8
Duplicates <sup>2</sup>	1	0	1
Field Blanks <sup>3</sup>	1	0	1
Grand Total			10

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.

Spike Samples <sup>1</sup>	6	Trip Blank(s) <sup>2</sup>	1	Office Blank(s) <sup>3,4</sup>	1
----------------------------	---	----------------------------	---	--------------------------------	---

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.

Spike Sample Lab Results. Measured values are satisfactory, i.e., within ± 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 QA plan previously submitted?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

## Quality Assurance / Quality Control (QA/QC) (continued)

If “No” to either, please describe any QC measurements that were missing or outside of control tolerances established in the QAP here:

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

	Ground-Contact	Upper-Level(s)	Total
Number of test locations:	5	3	8
Number of locations $\geq 8.0$ -pCi/L:	0	0	0
Number of locations $\geq 4.0$ and $\leq 8$ -pCi/L:	0	0	0
Number of locations $\geq 2.7$ and $\leq 4$ -pCi/L:	1	0	1
Number of locations $\geq 2.0$ and $\leq 4$ -pCi/L:	0	0	0
Number of missing required test locations <sup>3</sup> :	0	0	0
Percentage of missing test locations for the facility <sup>4,5</sup> :	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)**

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
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
<b><i>If Yes to both above – then Testing Status – ‘No Further Testing Needed’ mark ‘NA’ below and complete Conclusions section</i></b>	
<b>If No to either above</b> , were all results obtained under 4.0-pCi/L <b>and</b> were there sufficient valid measurements obtained? <sup>1,2</sup> <i>If Yes – then Testing Status - ‘No Further Testing Needed’ complete Conclusion section</i> <i>If No, then Testing Status - ‘Follow-up Testing Required’ continue below</i>	<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.

- **If ‘No Further Testing Needed’** complete conclusions section on first page.
- **If ‘Follow-up Testing Required’** – complete Follow-up Testing described below and the conclusion section on the first page for only the valid measurements/results obtained

**Follow-Up Testing (if required)**

Required if –

- 1- Not enough valid results were obtained from a facility (table above);
- 2- Any results ≥ 4.0 – pCi/L; and
- 3- At the discretion of MCPS IAQ Staff

Follow-up Testing:

- 1- If an insufficient number of valid measurements obtained during initial round:
  - return to facility to test locations that require valid measurements
- 2- Follow-up Testing for valid measurements ≥ 4.0-pCi/L

Initial Result(s)	Procedure	Follow-up Result	Conclusion
≥ 4.0-pCi/L	1- Short-term follow-up test 2- Average the results of the two tests	≥4.0	Mitigation Required
		<4.0 but >2.0	Consider Mitigation
		<2.0	Not Required or Considered



## School / Facility Radon Testing Report Form

- Complete second School/Facility Radon Testing Report Form for only Follow-up Testing locations.

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

<b>Table 1- Radon Retesting Results</b>		
<b>John T. Baker MS</b>		
<b>Test Period: 02/20/2024 - 02/23/2024</b>		
<b>Kit Number</b>	<b>Room / Area</b>	<b>Result</b>
11477868	117B	3.1
11477870	117B	<0.3
11477875	AUX GYM	< 0.3
11477887	AUX GYM	<0.3
11477871	MEDIA GLASS ROOM	0.5
11477874	MEDIA GLASS ROOM	<0.3
11478199	113	<0.3
11463987	131	<0.3
11478196	207	0.6
11482798	213	<0.3
11478188	229	<0.3



<b>Table 3 - QC Radon Retesting Results</b>			
<b>John T. Baker Middle School</b>			
<b>Test Period: 02/20/2024 - 02/23/2024</b>			
<b>Kit Number</b>	<b>QC Type</b>	<b>Room / Area</b>	<b>Result</b>
11477874	D	MEDIA GLASS ROOM	< 0.3
11477870	FB	117B	<0.3





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

---

March 6, 2024

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

---

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>
11478199	113	2024-02-27 @ 1:00 pm	2024-03-01 @ 1:00 pm	< 0.3	2024-03-05
11463987	131	2024-02-27 @ 1:00 pm	2024-03-01 @ 1:00 pm	< 0.3	2024-03-05
11478196	207	2024-02-27 @ 1:00 pm	2024-03-01 @ 1:00 pm	0.6 ± 0.3	2024-03-05
11482798	213	2024-02-27 @ 1:00 pm	2024-03-01 @ 1:00 pm	< 0.3	2024-03-05
11478188	229	2024-02-27 @ 1:00 pm	2024-03-01 @ 1:00 pm	< 0.3	2024-03-05

---

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

---

February 27, 2024

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

---

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>
11477868	117B	2024-02-20 @ 2:00 pm	2024-02-23 @ 8:00 am	3.1 ± 0.4	2024-02-27
11477870	117B	2024-02-20 @ 2:00 pm	2024-02-23 @ 8:00 am	< 0.3	2024-02-27
11477875	AUX GYM	2024-02-20 @ 2:00 pm	2024-02-23 @ 8:00 am	< 0.3	2024-02-27
11477887	AUX GYM	2024-02-20 @ 2:00 pm	2024-02-23 @ 8:00 am	< 0.3	2024-02-27
11477871	MEDIA GLASS ROOM	2024-02-20 @ 2:00 pm	2024-02-23 @ 8:00 am	0.5 ± 0.3	2024-02-27
11477874	MEDIA GLASS ROOM	2024-02-20 @ 2:00 pm	2024-02-23 @ 8:00 am	< 0.3	2024-02-27

---

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

---

February 27, 2024

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

---

Radon test result report for:

**KCI  
MAIN**

---

<b>Kit #</b>	<b>Room Id</b>	<b>Started</b>	<b>Ended</b>	<b>pCi/L</b>	<b>Analyzed</b>
11477832	OB	2024-02-23 @ 8:00 am	2024-02-26 @ 11:00 am	< 0.3	2024-02-27
11482793	OB	2024-02-23 @ 8:00 am	2024-02-26 @ 11:00 am	< 0.3	2024-02-27
11477841	TB	2024-02-23 @ 8:00 am	2024-02-26 @ 11:00 am	< 0.3	2024-02-27
11482795	TB	2024-02-23 @ 8:00 am	2024-02-26 @ 11:00 am	< 0.3	2024-02-27

---

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

---

January 29, 2024

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

---

Radon test result report for:  
**STORAGE**  
**KCI**

---

<b>Kit #</b>	<b>Room Id</b>	<b>Started</b>	<b>Ended</b>	<b>pCi/L</b>	<b>Analyzed</b>
11635097	Storage	2024-01-07 @ 9:00 am	2024-01-11 @ 9:00 am	< 0.3	2024-01-15

---

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



**EXPOSURE IN BOWSER-MORNER RADON CHAMBER**

CLIENT KCI TECHNOLOGIES, Inc Job Number 213819

NOMINAL Conditions: Radon Conc 50.0 pCi/L Rel. Hum 28.9 % Temp. 69.1 F

Date Start: 2/23/24 Date Stop: 2/26/24 Date Start: \_\_\_\_\_ Date Stop: \_\_\_\_\_

Time Start: 0812 Time Stop: 0812 Time Start: \_\_\_\_\_ Time Stop: \_\_\_\_\_

Device No.'s: (6) CHAR BAGS Device No.'s: \_\_\_\_\_

11478400, 11477842, 11477845, \_\_\_\_\_

11477852, 11477996, 11477999 \_\_\_\_\_

E3 left

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

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

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

\_\_\_\_\_

\_\_\_\_\_

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

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

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

\_\_\_\_\_

\_\_\_\_\_

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

---

March 1, 2024

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

---

Radon test result report for:

**FEB SK**

**MAIN**

---

<b>Kit #</b>	<b>Room Id</b>	<b>Started</b>	<b>Ended</b>	<b>pCi/L</b>	<b>Analyzed</b>
11477842	NA	2024-02-23 @ 8:00 am	2024-02-26 @ 8:00 am	50.3 ± 4.0	2024-03-01
11477845	NA	2024-02-23 @ 8:00 am	2024-02-26 @ 8:00 am	55.3 ± 4.4	2024-03-01
11477852	NA	2024-02-23 @ 8:00 am	2024-02-26 @ 8:00 am	49.4 ± 4.0	2024-03-01
11477996	NA	2024-02-23 @ 8:00 am	2024-02-26 @ 8:00 am	49.8 ± 4.0	2024-03-01
11477999	NA	2024-02-23 @ 8:00 am	2024-02-26 @ 8:00 am	55.4 ± 4.4	2024-03-01
11478400	NA	2024-02-23 @ 8:00 am	2024-02-26 @ 8:00 am	47.0 ± 3.8	2024-03-01

---

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 February 20<sup>th</sup> – February 23<sup>rd</sup>, 2024

Name of Schools:

1. Cabin Branch ES
2. Clarksburg HS
3. Fairland ES
4. Jackson Road ES
5. JFK HS
6. John T. Baker MS
7. White Oak MS

---

	Date	Initials
Radon Test Kits Deployed	02/20/2024	JM
Radon Test Kits Collected	02/23/2024	AM
Radon Test Kits Shipped to Lab*	02/23/2024	AM
Radon Test Kits Received by Lab*	02/27/2024	AM

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

**Attachment 3:**  
**Sampling Location Map**

**School / Facility Radon Testing Report Form**

**Instructions:** Submit one testing report form per-facility per-round of testing. 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.

School Year: **23-24**

Facility:	John T. Baker Middle School
Address:	25400 Oak Drive
	Damascus, MD 20872

Reason for Testing:	<input checked="" type="checkbox"/> Scheduled Re-Testing (2 or 5-year schedule) <input type="checkbox"/> Clearance Testing (Post-Mitigation) <input type="checkbox"/> System(s) Performance Testing (Post-Mitigation) <input type="checkbox"/> New Construction/Facility
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
Round of Testing:	<input checked="" type="checkbox"/> Initial Testing <b>-or-</b> <input type="checkbox"/> Follow-up Testing
Testing Status:	<input type="checkbox"/> No Further Testing Needed <b>-or-</b> <input checked="" type="checkbox"/> Follow-Up Testing Required

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

Mitigation -	Facility Radon Status:
<input type="checkbox"/> Not Required or Considered <input type="checkbox"/> Required ( $>8.0$ -pCi/L) <input type="checkbox"/> Required ( $\geq 4.0$ -pCi/L) <input type="checkbox"/> Consider ( $\geq 2.0$ & $<4.0$ -pCi/L)	<input 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)

**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 Lab			
Person(s) Deploying or Retrieving Test Devices and certification number			Organization/Company	
Shakia Dawkins			KCI Technologies, Inc.	
<i>If noncertified individuals, the qualified measurement professional providing oversight -</i>				
Tyler McCleaf, CSP – Cert. #111004-RMP				

**Testing**

<input checked="" type="checkbox"/> Short-Term	Length of Test (days):	3	Date of Deployment and Retrieval (mm/dd/yy):	01/22/24
<input type="checkbox"/> Long-Term				01/25/24
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)

	Detectors Deployed		
	Ground-Contact	Upper-Level(s)	Total
Test Locations <sup>1</sup>	91	0	91
Duplicates <sup>2</sup>	5	0	5
Field Blanks <sup>3</sup>	4	0	4
Grand Total			100

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.

Spike Samples <sup>1</sup>	6	Trip Blank(s) <sup>2</sup>	1	Office Blank(s) <sup>3,4</sup>	1
----------------------------	---	----------------------------	---	--------------------------------	---

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.

Spike Sample Lab Results. Measured values are satisfactory, i.e., within ± 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 QA plan previously submitted?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

### Quality Assurance / Quality Control (QA/QC) (continued)

If “No” to either, please describe any QC measurements that were missing or outside of control tolerances established in the QAP here:

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

	Ground-Contact	Upper-Level(s)	Total
Number of test locations:	91	0	91
Number of locations $\geq 8.0$ -pCi/L:	0	0	0
Number of locations $\geq 4.0$ and $\leq 8$ -pCi/L:	0	0	0
Number of locations $\geq 2.7$ and $\leq 4$ -pCi/L:	2	0	2
Number of locations $\geq 2.0$ and $\leq 4$ -pCi/L:	3	0	3
Number of missing required test locations <sup>3</sup> :	2	0	2
Percentage of missing test locations for the facility <sup>4,5</sup> :	2.2%	0	2.2%

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

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

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

4 – if all valid measurements are  $< 4.0$ -pCi/L and the total number of test locations are  $\geq 18$ , 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)**

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

- **If ‘No Further Testing Needed’** complete conclusions section on first page.
- **If ‘Follow-up Testing Required’** – complete Follow-up Testing described below and the conclusion section on the first page for only the valid measurements/results obtained

**Follow-Up Testing (if required)**

Required if –

- 1- Not enough valid results were obtained from a facility (table above);
- 2- Any results ≥ 4.0 – pCi/L; and
- 3- At the discretion of MCPS IAQ Staff

Follow-up Testing:

- 1- If an insufficient number of valid measurements obtained during initial round:
  - return to facility to test locations that require valid measurements
- 2- Follow-up Testing for valid measurements ≥ 4.0-pCi/L

Initial Result(s)	Procedure	Follow-up Result	Conclusion
≥ 4.0-pCi/L	1- Short-term follow-up test 2- Average the results of the two tests	≥4.0	Mitigation Required
		<4.0 but >2.0	Consider Mitigation
		<2.0	Not Required or Considered

- **Complete second School/Facility Radon Testing Report Form for only Follow-up Testing locations.**

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

<b>Table 1- Radon Testing Results</b>		
<b>John T. Baker Middle School</b>		
<b>Test Period: 01/22/2024 - 01/25/2024</b>		
Kit Number	Room / Area	Result
11284227	101	0.7
11284212	102	< 0.3
11284221	102	< 0.3
11284233	103	0.8
11284216	105	< 0.3
11284232	107	0.7
11284224	109	0.7
11284231	111	0.9
11284243	113	< 0.3
11284234	115	1.4
11284244	115	1.1
11284235	119	2.0
11284215	121	0.6
11284206	125	0.7
11284203	130	1.1
11284246	131	0.6
11284218	132	0.5
11284241	133	0.7
11284242	134	0.7
11284245	201	0.5
11284251	203	0.8
11284253	205	< 0.3
11284286	206	0.6
11284292	207	0.8
11284267	208	0.7
11284261	209	0.7
11284291	210	0.7
11284270	211	0.9
11284268	212	1.0
11284271	212	0.9
11284210	213	1.0
11284252	214	0.6
11284257	215	0.5
11284287	217	< 0.3
11284269	219	0.8
11284272	225	0.5
11284298	227	< 0.3
11284278	229	0.6

<b>Table 1- Radon Testing Results</b>		
<b>John T. Baker Middle School</b>		
<b>Test Period: 01/22/2024 - 01/25/2024</b>		
11284248	230	< 0.3
11284262	231	< 0.3
11284249	232	0.6
11284254	233	< 0.3
11284250	234	< 0.3
11284223	117A	2.3
11284201	117B	3.4
11284236	117B	3.6
11284209	119 OFFICE	1.6
11284208	121A	0.7
11284213	121B	0.8
11284279	201S	0.7
11284300	223 LOUNGE	0.8
11284273	227A	0.6
11284259	6TH GRADE TEAM ROOM	< 0.3
11284281	6TH GRADE TEAM ROOM OFFICE	0.7
11284276	7TH GRADE COUNSELOR	< 0.3
11284290	ADMIN SECRETARY	< 0.3
11284274	ASSISTANT PRINCIPAL	< 0.3
11284288	ASSISTANT PRINCIPAL DAVID	< 0.3
11284207	AUX GYM	N/A
11284222	BS OFFICE	1.1
11284238	BS OFFICE	0.9
11284229	CAFE OFFICE	< 0.3
11284230	CAFETERIA	0.8
11284237	CAFETERIA	0.7
11284255	COT ROOM	< 0.3
11284256	COT ROOM	< 0.3
11284284	COUNSELING	< 0.3
11284240	DINING ROOM	0.7
11284296	GLASS ROOM	N/A
11284202	GYM	1.0
11284204	GYM	1.3
11284205	GYM OFFICE BOYS	2.6
11284239	GYM OFFICE GIRLS	1.0
11284265	HEALTH EXAMINATION	0.5
11284258	HEALTH OFFICE	0.6
11284266	HEALTH ROOM	0.9
11284217	JSSA OFFICE	0.9
11284289	MAIN OFFICE	0.6

<b>Table 1- Radon Testing Results</b>		
<b>John T. Baker Middle School</b>		
<b>Test Period: 01/22/2024 - 01/25/2024</b>		
11284219	MATH OFFICE	0.8
11284263	MEDIA CENTER	0.5
11284264	MEDIA CENTER	0.6
11284295	MEDIA OFFICE	< 0.3
11284280	MEDIA WORKROOM	0.6
11284293	MEDIA WORKROOM	0.8
11284214	MUSIC OFFICE	0.6
11284285	PRINCIPAL	< 0.3
11284260	RESOURCE	0.7
11284299	RESOURCE	< 0.3
11284283	RESOURCE COUNSELOR	< 0.3
11284275	SCHOOL COUNSELOR	0.5
11284277	SCHOOL COUNSELOR	< 0.3
11284297	SCHOOL COUNSELOR	0.7
11284247	SCIENCE OFFICE	0.9
11284225	SCIENCE PREP	0.7
11284282	SECURITY	< 0.3
11284294	SECURITY	< 0.3
11284211	STAFF DEVELOPMENT	0.8
11284226	STAGE	0.8
11284220	TESTING	0.5
11284228	WEIGHT ROOM 100	0.8



<b>Table 3 - QC Radon Testing Results</b>			
<b>John T. Baker Middle School</b>			
<b>Test Period: 01/22/2024 - 01/25/2024</b>			
<b>Kit Number</b>	<b>QC Type</b>	<b>Room / Area</b>	<b>Result</b>
11284212	D	102	< 0.3
11284234	FB	115	1.4
11284268	D	212	1.0
11284236	D	117B	3.6
11284222	FB	BS Office	1.1
11284255	D	Cot Room	< 0.3
11284293	FB	Media Workroom	0.8
11284299	FB	Resource	< 0.3
11284277	D	School Counselor	< 0.3
11463686	OB	OFFICE BLANK	< 0.3
11463685	TB	TRAVEL BLANK	< 0.3





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

Radon test result report for:

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11284227	101	2024-01-22 @ 9:00 am	2024-01-25 @ 9:00 am	0.7 ± 0.3	2024-01-29
11284212	102	2024-01-22 @ 9:00 am	2024-01-25 @ 9:00 am	< 0.3	2024-01-29
11284221	102	2024-01-22 @ 9:00 am	2024-01-25 @ 9:00 am	< 0.3	2024-01-29
11284233	103	2024-01-22 @ 9:00 am	2024-01-25 @ 9:00 am	0.8 ± 0.3	2024-01-29
11284216	105	2024-01-22 @ 9:00 am	2024-01-25 @ 9:00 am	< 0.3	2024-01-29
11284232	107	2024-01-22 @ 9:00 am	2024-01-25 @ 9:00 am	0.7 ± 0.3	2024-01-29
11284224	109	2024-01-22 @ 9:00 am	2024-01-25 @ 9:00 am	0.7 ± 0.3	2024-01-29
11284231	111	2024-01-22 @ 9:00 am	2024-01-25 @ 9:00 am	0.9 ± 0.3	2024-01-29
11284243	113	2024-01-22 @ 9:00 am	2024-01-25 @ 9:00 am	< 0.3	2024-01-29
11284244	115	2024-01-22 @ 9:00 am	2024-01-25 @ 9:00 am	1.1 ± 0.3	2024-01-29
11284234	115	2024-01-22 @ 9:00 am	2024-01-25 @ 9:00 am	1.4 ± 0.3	2024-01-29
11284223	117A	2024-01-22 @ 10:00 am	2024-01-25 @ 9:00 am	2.3 ± 0.4	2024-01-29
11284236	117B	2024-01-22 @ 10:00 am	2024-01-25 @ 9:00 am	3.6 ± 0.4	2024-01-29
11284201	117B	2024-01-22 @ 10:00 am	2024-01-25 @ 9:00 am	3.4 ± 0.4	2024-01-29
11284235	119	2024-01-22 @ 10:00 am	2024-01-25 @ 9:00 am	2.0 ± 0.4	2024-01-29
11284209	119 OFFICE	2024-01-22 @ 10:00 am	2024-01-25 @ 9:00 am	1.6 ± 0.4	2024-01-29
11284215	121	2024-01-22 @ 9:00 am	2024-01-25 @ 9:00 am	0.6 ± 0.3	2024-01-29
11284208	121A	2024-01-22 @ 9:00 am	2024-01-25 @ 9:00 am	0.7 ± 0.3	2024-01-29
11284213	121B	2024-01-22 @ 9:00 am	2024-01-25 @ 9:00 am	0.8 ± 0.3	2024-01-29
11284206	125	2024-01-22 @ 9:00 am	2024-01-25 @ 9:00 am	0.7 ± 0.3	2024-01-29
11284203	130	2024-01-22 @ 10:00 am	2024-01-25 @ 9:00 am	1.1 ± 0.3	2024-01-29
11284246	131	2024-01-22 @ 10:00 am	2024-01-25 @ 9:00 am	0.6 ± 0.3	2024-01-29
11284218	132	2024-01-22 @ 10:00 am	2024-01-25 @ 9:00 am	0.5 ± 0.3	2024-01-29
11284241	133	2024-01-22 @ 10:00 am	2024-01-25 @ 9:00 am	0.7 ± 0.3	2024-01-29
11284242	134	2024-01-22 @ 10:00 am	2024-01-25 @ 9:00 am	0.7 ± 0.3	2024-01-29
11284245	201	2024-01-22 @ 7:00 am	2024-01-25 @ 9:00 am	0.5 ± 0.3	2024-01-29
11284279	201S	2024-01-22 @ 7:00 am	2024-01-25 @ 9:00 am	0.7 ± 0.3	2024-01-29
11284251	203	2024-01-22 @ 7:00 am	2024-01-25 @ 9:00 am	0.8 ± 0.3	2024-01-29
11284253	205	2024-01-22 @ 7:00 am	2024-01-25 @ 9:00 am	< 0.3	2024-01-29
11284286	206	2024-01-22 @ 7:00 am	2024-01-25 @ 9:00 am	0.6 ± 0.3	2024-01-29
11284292	207	2024-01-22 @ 7:00 am	2024-01-25 @ 9:00 am	0.8 ± 0.3	2024-01-29
11284267	208	2024-01-22 @ 8:00 am	2024-01-25 @ 9:00 am	0.7 ± 0.3	2024-01-29
11284261	209	2024-01-22 @ 8:00 am	2024-01-25 @ 9:00 am	0.7 ± 0.3	2024-01-29
11284291	210	2024-01-22 @ 8:00 am	2024-01-25 @ 9:00 am	0.7 ± 0.3	2024-01-29
11284270	211	2024-01-22 @ 8:00 am	2024-01-25 @ 9:00 am	0.9 ± 0.3	2024-01-29
11284271	212	2024-01-22 @ 8:00 am	2024-01-25 @ 9:00 am	0.9 ± 0.3	2024-01-29
11284268	212	2024-01-22 @ 8:00 am	2024-01-25 @ 9:00 am	1.0 ± 0.3	2024-01-29

Radon test result report for:

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11284210	213	2024-01-22 @ 10:00 am	2024-01-25 @ 9:00 am	1.0 ± 0.4	2024-01-29
11284252	214	2024-01-22 @ 8:00 am	2024-01-25 @ 9:00 am	0.6 ± 0.3	2024-01-29
11284257	215	2024-01-22 @ 8:00 am	2024-01-25 @ 9:00 am	0.5 ± 0.3	2024-01-29
11284287	217	2024-01-22 @ 8:00 am	2024-01-25 @ 9:00 am	< 0.3	2024-01-29
11284269	219	2024-01-22 @ 8:00 am	2024-01-25 @ 9:00 am	0.8 ± 0.3	2024-01-29
11284300	223 LOUNGE	2024-01-22 @ 8:00 am	2024-01-25 @ 9:00 am	0.8 ± 0.3	2024-01-29
11284272	225	2024-01-22 @ 8:00 am	2024-01-25 @ 9:00 am	0.5 ± 0.3	2024-01-29
11284298	227	2024-01-22 @ 8:00 am	2024-01-25 @ 9:00 am	< 0.3	2024-01-29
11284273	227A	2024-01-22 @ 8:00 am	2024-01-25 @ 9:00 am	0.6 ± 0.3	2024-01-29
11284278	229	2024-01-22 @ 8:00 am	2024-01-25 @ 9:00 am	0.6 ± 0.3	2024-01-29
11284248	230	2024-01-22 @ 8:00 am	2024-01-25 @ 9:00 am	< 0.3	2024-01-29
11284262	231	2024-01-22 @ 8:00 am	2024-01-25 @ 9:00 am	< 0.3	2024-01-29
11284249	232	2024-01-22 @ 8:00 am	2024-01-25 @ 9:00 am	0.6 ± 0.3	2024-01-29
11284254	233	2024-01-22 @ 8:00 am	2024-01-25 @ 9:00 am	< 0.3	2024-01-29
11284250	234	2024-01-22 @ 8:00 am	2024-01-25 @ 9:00 am	< 0.3	2024-01-29
11284259	6TH GRADE TEAM ROOM	2024-01-22 @ 7:00 am	2024-01-25 @ 9:00 am	< 0.3	2024-01-29
11284281	6TH GRADE TEAM ROOM OFFICE	2024-01-22 @ 7:00 am	2024-01-25 @ 9:00 am	0.7 ± 0.3	2024-01-29
11284276	7TH GRADE COUNSELOR	2024-01-22 @ 7:00 am	2024-01-25 @ 9:00 am	< 0.3	2024-01-29
11284290	ADMIN SECRETARY	2024-01-22 @ 7:00 am	2024-01-25 @ 9:00 am	< 0.3	2024-01-29
11284274	ASSISTANT PRINCIPAL	2024-01-22 @ 6:00 am	2024-01-25 @ 9:00 am	< 0.3	2024-01-29
11284288	ASSISTANT PRINCIPAL DAVID	2024-01-22 @ 6:00 am	2024-01-25 @ 9:00 am	< 0.3	2024-01-29
11284238	BS OFFICE	2024-01-22 @ 9:00 am	2024-01-25 @ 9:00 am	0.9 ± 0.3	2024-01-29
11284222	BS OFFICE	2024-01-22 @ 9:00 am	2024-01-25 @ 9:00 am	1.1 ± 0.3	2024-01-29
11284229	CAFE OFFICE	2024-01-22 @ 9:00 am	2024-01-25 @ 9:00 am	< 0.3	2024-01-29
11284230	CAFETERIA	2024-01-22 @ 9:00 am	2024-01-25 @ 9:00 am	0.8 ± 0.3	2024-01-29
11284237	CAFETERIA	2024-01-22 @ 9:00 am	2024-01-25 @ 9:00 am	0.7 ± 0.3	2024-01-29
11284255	COT ROOM	2024-01-22 @ 8:00 am	2024-01-25 @ 9:00 am	< 0.3	2024-01-29
11284256	COT ROOM	2024-01-22 @ 8:00 am	2024-01-25 @ 9:00 am	< 0.3	2024-01-29
11284284	COUNSELING	2024-01-22 @ 7:00 am	2024-01-25 @ 9:00 am	< 0.3	2024-01-29
11284240	DINING ROOM	2024-01-22 @ 9:00 am	2024-01-25 @ 9:00 am	0.7 ± 0.3	2024-01-29
11284204	GYM	2024-01-22 @ 9:00 am	2024-01-25 @ 9:00 am	1.3 ± 0.4	2024-01-29
11284202	GYM	2024-01-22 @ 9:00 am	2024-01-25 @ 9:00 am	1.0 ± 0.3	2024-01-29
11284205	GYM OFFICE BOYS	2024-01-22 @ 10:00 am	2024-01-25 @ 9:00 am	2.6 ± 0.4	2024-01-29
11284239	GYM OFFICE GIRLS	2024-01-22 @ 10:00 am	2024-01-25 @ 9:00 am	1.0 ± 0.3	2024-01-29
11284265	HEALTH EXAMINATION	2024-01-22 @ 8:00 am	2024-01-25 @ 9:00 am	0.5 ± 0.3	2024-01-29
11284258	HEALTH OFFICE	2024-01-22 @ 8:00 am	2024-01-25 @ 9:00 am	0.6 ± 0.3	2024-01-29
11284266	HEALTH ROOM	2024-01-22 @ 8:00 am	2024-01-25 @ 9:00 am	0.9 ± 0.3	2024-01-29

Radon test result report for:

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11284217	JSSA OFFICE	2024-01-22 @ 10:00 am	2024-01-25 @ 9:00 am	0.9 ± 0.3	2024-01-29
11284289	MAIN OFFICE	2024-01-22 @ 6:00 am	2024-01-25 @ 9:00 am	0.6 ± 0.3	2024-01-29
11284219	MATH OFFICE	2024-01-22 @ 9:00 am	2024-01-25 @ 9:00 am	0.8 ± 0.3	2024-01-29
11284264	MEDIA CENTER	2024-01-22 @ 7:00 am	2024-01-25 @ 9:00 am	0.6 ± 0.3	2024-01-29
11284263	MEDIA CENTER	2024-01-22 @ 7:00 am	2024-01-25 @ 9:00 am	0.5 ± 0.3	2024-01-29
11284295	MEDIA OFFICE	2024-01-22 @ 7:00 am	2024-01-25 @ 9:00 am	< 0.3	2024-01-29
11284280	MEDIA WORKROOM	2024-01-22 @ 7:00 am	2024-01-25 @ 9:00 am	0.6 ± 0.3	2024-01-29
11284293	MEDIA WORKROOM	2024-01-22 @ 7:00 am	2024-01-25 @ 9:00 am	0.8 ± 0.3	2024-01-29
11284214	MUSIC OFFICE	2024-01-22 @ 9:00 am	2024-01-25 @ 9:00 am	0.6 ± 0.3	2024-01-29
11284285	PRINCIPAL	2024-01-22 @ 6:00 am	2024-01-25 @ 9:00 am	< 0.3	2024-01-29
11284299	RESOURCE	2024-01-22 @ 8:00 am	2024-01-25 @ 9:00 am	< 0.3	2024-01-29
11284260	RESOURCE	2024-01-22 @ 8:00 am	2024-01-25 @ 9:00 am	0.7 ± 0.3	2024-01-29
11284283	RESOURCE COUNSELOR	2024-01-22 @ 7:00 am	2024-01-25 @ 9:00 am	< 0.3	2024-01-29
11284297	SCHOOL COUNSELOR	2024-01-22 @ 7:00 am	2024-01-25 @ 9:00 am	0.7 ± 0.3	2024-01-29
11284277	SCHOOL COUNSELOR	2024-01-22 @ 7:00 am	2024-01-25 @ 9:00 am	< 0.3	2024-01-29
11284275	SCHOOL COUNSELOR	2024-01-22 @ 7:00 am	2024-01-25 @ 9:00 am	0.5 ± 0.3	2024-01-29
11284247	SCIENCE OFFICE	2024-01-22 @ 9:00 am	2024-01-25 @ 9:00 am	0.9 ± 0.3	2024-01-29
11284225	SCIENCE PREP	2024-01-22 @ 9:00 am	2024-01-25 @ 9:00 am	0.7 ± 0.3	2024-01-29
11284294	SECURITY	2024-01-22 @ 7:00 am	2024-01-25 @ 9:00 am	< 0.3	2024-01-29
11284282	SECURITY	2024-01-22 @ 6:00 am	2024-01-25 @ 9:00 am	< 0.3	2024-01-29
11284211	STAFF DEVELOPMENT	2024-01-22 @ 9:00 am	2024-01-25 @ 9:00 am	0.8 ± 0.3	2024-01-29
11284226	STAGE	2024-01-22 @ 10:00 am	2024-01-25 @ 9:00 am	0.8 ± 0.3	2024-01-29
11284220	TESTING	2024-01-22 @ 10:00 am	2024-01-25 @ 9:00 am	0.5 ± 0.3	2024-01-29
11284228	WEIGHT ROOM 100	2024-01-22 @ 9:00 am	2024-01-25 @ 9:00 am	0.8 ± 0.3	2024-01-29

---

January 30, 2024

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

---

Radon test result report for:

**KCI  
MAIN**

---

<b>Kit #</b>	<b>Room Id</b>	<b>Started</b>	<b>Ended</b>	<b>pCi/L</b>	<b>Analyzed</b>
11463691	OB	2024-01-23 @ 8:00 am	2024-01-26 @ 2:00 pm	< 0.3	2024-01-30
11463647	TB	2024-01-23 @ 8:00 am	2024-01-26 @ 2:00 pm	< 0.3	2024-01-30

---

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

---

January 29, 2024

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

---

Radon test result report for:  
**STORAGE**  
**KCI**

---

<b>Kit #</b>	<b>Room Id</b>	<b>Started</b>	<b>Ended</b>	<b>pCi/L</b>	<b>Analyzed</b>
11635097	Storage	2024-01-07 @ 9:00 am	2024-01-11 @ 9:00 am	< 0.3	2024-01-15

---

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

# EXPOSURE IN BOWSER-MORNER RADON CHAMBER

CLIENT KCI TECHNOLOGIES, INC Job Number 213327

NOMINAL Conditions: Radon Conc 49.5 pCi/L Rel. Hum 24.7 % Temp. 69.8 F

Date Start: 1/19/24 Date Stop: 1/22/24 Date Start: \_\_\_\_\_ Date Stop: \_\_\_\_\_

Time Start: 0831 Time Stop: 0831 Time Start: \_\_\_\_\_ Time Stop: \_\_\_\_\_

Device No.'s: (6) CHAR BAGS - Device No.'s: \_\_\_\_\_

11284003, 11284005, 11284006

11284007, 11284008, 11284013

F3 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**

---

January 29, 2024

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

---

Radon test result report for:  
**BOWSER MORNER  
MAIN**

---

<b>Kit #</b>	<b>Room Id</b>	<b>Started</b>	<b>Ended</b>	<b>pCi/L</b>	<b>Analyzed</b>
11284003	SK	2024-01-19 @ 9:00 am	2024-01-22 @ 9:00 am	47.0 ± 3.8	2024-01-29
11284005	SK	2024-01-19 @ 9:00 am	2024-01-22 @ 9:00 am	43.4 ± 3.5	2024-01-29
11284006	SK	2024-01-19 @ 9:00 am	2024-01-22 @ 9:00 am	42.1 ± 3.4	2024-01-29
11284007	SK	2024-01-19 @ 9:00 am	2024-01-22 @ 9:00 am	46.4 ± 3.7	2024-01-29
11284008	SK	2024-01-19 @ 9:00 am	2024-01-22 @ 9:00 am	46.2 ± 3.7	2024-01-29
11284013	SK	2024-01-19 @ 9:00 am	2024-01-22 @ 9:00 am	45.6 ± 3.6	2024-01-29

---

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 22<sup>nd</sup> to January 25<sup>th</sup>

Name of Schools:

1. Fields Road ES
2. Germantown ES
3. Highland View ES
4. Westbrook ES
5. John T. Baker MS
6. Herbert Hoover MS

---

	Date	Initials
Radon Test Kits Deployed	01/22/2024	BMM
Radon Test Kits Collected	01/25/2024	BMM
Radon Test Kits Shipped to Lab*	01/25/2024	BMM
Radon Test Kits Received by Lab*	01/29/2024	BMM

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

**Attachment 3:**  
**Sampling Location Map**



**MCPS RADON TESTING – EXECUTIVE SUMMARY**

Site Name	John T. Baker Middle School
Date of Test Report	4/6/2022
Round of Testing	Initial Follow-up Post Remediation 2 Year Testing 5 Year Testing HVAC Upgrade Window Replacement New Addition New Facility
# Rooms Tested	64
# Rooms $\geq$ 4.0 pCi/L	0
Lowest Value	<0.3 pCi/L
Highest Value	2.4 pCi/L

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



April 6, 2022

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

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

Location: John T. Baker MS  
25400 Oak Dr.  
Damascus, MD 20872

Dear Mr. Croyle:

KCI Technologies, Inc. (KCI) is pleased to submit the following report to Montgomery County Public Schools (MCPS) pursuant to completing a “short-term” 3 day radon test for the John T. Baker MS, located at 25400 Oak Dr. Damascus, MD 20872 (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 February 14, 2022 and deployed seventy four (74) activated charcoal (AC) radon test kits. KCI deployed radon test kits in all frequently-occupied ground contact rooms, and other areas, (if applicable) in accordance with AARST guidance.

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

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

KCI returned to the site on February 17, 2022 to retrieve the radon sampling test kits. KCI shipped all radon tests via overnight delivery to Airchek, Inc. for analysis by gamma-ray spectroscopy. Airchek, Inc.

is a NRSB certified analytical laboratory for radon analysis (certification # ARL1402) located at 1936 Butler Bridge Road, Mills River, North Carolina.

**Evaluation of Testing Conditions:**

These tests represent:

- Follow-up to post-mitigation biennial testing.

These tests were conducted to:

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

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

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

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

KCI also compiled weather data for the testing period and conducted observations of relevant field conditions. During the test period, weather records indicate low temperatures were in the 20s and high temperatures ranged from the high 30s to the high 40s Fahrenheit. Maximum sustained winds ranged from 5-18 miles per hour. Average humidity was around 15% with 1.5 inches of precipitation (rain) was recorded during testing period.

**Results:**

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

The results of the radon test analysis indicated the following:

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

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

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

Sincerely,



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

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

# ATTACHMENT A

## Floor Plan With Test Locations

# ATTACHMENT B

## Radon Test Summary Spreadsheet



**Table Notes:**

AC- Activated Charcoal

ACI- Air Check, Inc.

D- Duplicate

FB- Field Blank

KCI- KCI Technologies, Inc.

OB- Office Blank

PM- Project Manager

OC- Quality Control

Table 1- Radon Testing Results		
John T. Baker MS		
Test Period: 02/14/2022 - 02/17/2022		
Kit Number	Room / Area	Result
11122339	100	< 0.3
11122352	101	< 0.3
11122354	101	< 0.3
11122353	102	0.5
11122351	103	0.5
11122349	105	< 0.3
11122342	107	< 0.3
11122379	109	< 0.3
11122380	109	< 0.3
11122372	111	< 0.3
11122365	113	< 0.3
11122377	115	0.9
11122362	119	1.5
11122350	125	< 0.3
11122340	130	0.8
11122345	131	0.8
11122346	131	< 0.3
11122343	132	< 0.3
11122344	132	< 0.3
11122341	133	1.2
11122347	134	< 0.3
11122320	201	< 0.3
11122324	204	< 0.3
11122304	205	< 0.3
11122327	205	< 0.3
11122328	206	< 0.3
11122323	207	< 0.3
11122326	211	< 0.3
11122329	212	< 0.3
11122332	214	< 0.3
11122325	225	< 0.3
11122331	225	< 0.3
11122330	231	< 0.3
11122348	107 OFFICE	< 0.3
11122358	117A	2.4
11122357	117B	2.1
11122355	121A	< 0.3
11122356	121B	< 0.3
11122321	201S	< 0.3
11122322	201S	< 0.3
11122308	ASSISTANTPRINCIPAL	< 0.3
11122370	AUX GYM	< 0.3

Table 1- Radon Testing Results		
John T. Baker MS		
Test Period: 02/14/2022 - 02/17/2022		
Kit Number	Room / Area	Result
11122360	BOYS LOCKER ROOM	0.9
11122367	BOYS LOCKER ROOM OFFICE	0.8
11122368	BOYS LOCKER ROOM OFFICE	< 0.3
11122359	BOYSLOCKER ROOM	0.8
11122361	BUILDING SERVICES	0.8
11122337	CAFETERIA	< 0.3
11122338	CAFETERIA	< 0.3
11122336	CAFETERIA OFFICE KITCHEN	0.7
11122310	COUNSELOR	< 0.3
11122314	COUNSELOR	0.6
11122315	COUNSELOR	< 0.3
11122316	COUNSELOR	< 0.3
11122317	COUNSELOR	< 0.3
11122318	COUNSELOR	< 0.3
11122363	GIRLS LOCKER ROOM	< 0.3
11122364	GIRLS LOCKER ROOM OFFICE	0.7
11122375	GYM	0.8
11122376	GYM	< 0.3
11122333	HEALTH ROOM	< 0.3
11122334	HEALTH ROOM	< 0.3
11122302	MAIN OFFICE PRINCIPAL	< 0.3
11122306	MAIN OFFICE SECURITY	< 0.3
11122305	MAIN OFFICE ZZZ	< 0.3
11122307	MAIN OFFICE ASSISTANT PRINCIPAL	< 0.3
11122371	MATH OFFICE	< 0.3
11122311	MEDIA CENTER	< 0.3
11122312	MEDIA CENTER	< 0.3
11122309	MEDIA CENTER CLASSROOM	< 0.3
11122313	MEDIA OFFICE	< 0.3
11122319	MEDIA OFFICE	0.6
11122301	SECURITY MAIN OFFICE	< 0.3
11122369	SPEECH OFFICE	< 0.3

Table 2- Radon Testing Results			
John T. Baker MS			
Test Period: 02/14/2022 - 02/17/2022			
Kit Number	QC Type	Room / Area	Result
11122313	D	Media office	< 0.3
11122322	D	201S	< 0.3
11122304	FB	205	< 0.3
11122325	D	225	< 0.3
11122346	FB	131	< 0.3
11122344	D	132	< 0.3
11122354	D	101	< 0.3
11122360	D	Boys locker room	0.9
11122368	FB	Boys locker room office	< 0.3
11122380	D	109	< 0.3
11107385	OB	OFFICE BLANK	< 0.3
11123161	TB	TRAVEL BLANK	< 0.3



# ATTACHMENT C

## Laboratory Analytical Results

Radon test result report for:  
**JOHN T BAKER MS**  
**MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11122339	100	2022-02-14 @ 10:00 am	2022-02-17 @ 11:00 am	< 0.3	2022-02-21
11122354	101	2022-02-14 @ 11:00 am	2022-02-17 @ 11:00 am	< 0.3	2022-02-21
11122352	101	2022-02-14 @ 11:00 am	2022-02-17 @ 11:00 am	< 0.3	2022-02-21
11122353	102	2022-02-14 @ 11:00 am	2022-02-17 @ 11:00 am	0.5 ± 0.3	2022-02-21
11122351	103	2022-02-14 @ 11:00 am	2022-02-17 @ 11:00 am	0.5 ± 0.3	2022-02-21
11122349	105	2022-02-14 @ 11:00 am	2022-02-17 @ 10:00 am	< 0.3	2022-02-21
11122342	107	2022-02-14 @ 11:00 am	2022-02-17 @ 11:00 am	< 0.3	2022-02-21
11122348	107 OFFICE	2022-02-14 @ 11:00 am	2022-02-17 @ 11:00 am	< 0.3	2022-02-21
11122380	109	2022-02-14 @ 11:00 am	2022-02-17 @ 11:00 am	< 0.3	2022-02-21
11122379	109	2022-02-14 @ 11:00 am	2022-02-17 @ 11:00 am	< 0.3	2022-02-21
11122372	111	2022-02-14 @ 11:00 am	2022-02-17 @ 10:00 am	< 0.3	2022-02-21
11122365	113	2022-02-14 @ 12:00 pm	2022-02-17 @ 10:00 am	< 0.3	2022-02-21
11122377	115	2022-02-14 @ 12:00 pm	2022-02-17 @ 10:00 am	0.9 ± 0.3	2022-02-21
11122358	117A	2022-02-14 @ 11:00 am	2022-02-17 @ 10:00 am	2.4 ± 0.4	2022-02-21
11122357	117B	2022-02-14 @ 11:00 am	2022-02-17 @ 10:00 am	2.1 ± 0.4	2022-02-21
11122362	119	2022-02-14 @ 11:00 am	2022-02-17 @ 10:00 am	1.5 ± 0.3	2022-02-21
11122355	121A	2022-02-14 @ 11:00 am	2022-02-17 @ 10:00 am	< 0.3	2022-02-21
11122356	121B	2022-02-14 @ 11:00 am	2022-02-17 @ 10:00 am	< 0.3	2022-02-21
11122350	125	2022-02-14 @ 11:00 am	2022-02-17 @ 10:00 am	< 0.3	2022-02-21
11122340	130	2022-02-14 @ 10:00 am	2022-02-17 @ 11:00 am	0.8 ± 0.3	2022-02-21
11122346	131	2022-02-14 @ 10:00 am	2022-02-17 @ 11:00 am	< 0.3	2022-02-21
11122345	131	2022-02-14 @ 10:00 am	2022-02-17 @ 11:00 am	0.8 ± 0.3	2022-02-21
11122343	132	2022-02-14 @ 10:00 am	2022-02-17 @ 11:00 am	< 0.3	2022-02-21
11122344	132	2022-02-14 @ 10:00 am	2022-02-17 @ 11:00 am	< 0.3	2022-02-21
11122341	133	2022-02-14 @ 11:00 am	2022-02-17 @ 11:00 am	1.2 ± 0.3	2022-02-21
11122347	134	2022-02-14 @ 11:00 am	2022-02-17 @ 11:00 am	< 0.3	2022-02-21
11122320	201	2022-02-14 @ 10:00 am	2022-02-17 @ 11:00 am	< 0.3	2022-02-21
11122322	201S	2022-02-14 @ 10:00 am	2022-02-17 @ 11:00 am	< 0.3	2022-02-21
11122321	201S	2022-02-14 @ 10:00 am	2022-02-17 @ 11:00 am	< 0.3	2022-02-21
11122324	204	2022-02-14 @ 10:00 am	2022-02-17 @ 11:00 am	< 0.3	2022-02-21
11122327	205	2022-02-14 @ 10:00 am	2022-02-17 @ 11:00 am	< 0.3	2022-02-21
11122304	205	2022-02-14 @ 10:00 am	2022-02-17 @ 11:00 am	< 0.3	2022-02-21
11122328	206	2022-02-14 @ 10:00 am	2022-02-17 @ 11:00 am	< 0.3	2022-02-21
11122323	207	2022-02-14 @ 10:00 am	2022-02-17 @ 11:00 am	< 0.3	2022-02-21
11122326	211	2022-02-14 @ 10:00 am	2022-02-17 @ 11:00 am	< 0.3	2022-02-21
11122329	212	2022-02-14 @ 10:00 am	2022-02-17 @ 11:00 am	< 0.3	2022-02-21
11122332	214	2022-02-14 @ 10:00 am	2022-02-17 @ 11:00 am	< 0.3	2022-02-21

Radon test result report for:  
**JOHN T BAKER MS**  
**MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11122325	225	2022-02-14 @ 10:00 am	2022-02-17 @ 11:00 am	< 0.3	2022-02-21
11122331	225	2022-02-14 @ 10:00 am	2022-02-17 @ 11:00 am	< 0.3	2022-02-21
11122330	231	2022-02-14 @ 10:00 am	2022-02-17 @ 11:00 am	< 0.3	2022-02-21
11122308	ASSISTANTPRINCIPAL	2022-02-14 @ 9:00 am	2022-02-17 @ 11:00 am	< 0.3	2022-02-21
11122370	AUX GYM	2022-02-14 @ 11:00 am	2022-02-17 @ 10:00 am	< 0.3	2022-02-21
11122360	BOYS LOCKER ROOM	2022-02-14 @ 11:00 am	2022-02-17 @ 10:00 am	0.9 ± 0.3	2022-02-21
11122368	BOYS LOCKER ROOM OFFICE	2022-02-14 @ 11:00 am	2022-02-17 @ 10:00 am	< 0.3	2022-02-21
11122367	BOYS LOCKER ROOM OFFICE	2022-02-14 @ 11:00 am	2022-02-17 @ 10:00 am	0.8 ± 0.3	2022-02-21
11122359	BOYSLOCKER ROOM	2022-02-14 @ 11:00 am	2022-02-17 @ 10:00 am	0.8 ± 0.3	2022-02-21
11122361	BUILDING SERVICES	2022-02-14 @ 11:00 am	2022-02-17 @ 10:00 am	0.8 ± 0.3	2022-02-21
11122337	CAFETERIA	2022-02-14 @ 10:00 am	2022-02-17 @ 11:00 am	< 0.3	2022-02-21
11122338	CAFETERIA	2022-02-14 @ 10:00 am	2022-02-17 @ 11:00 am	< 0.3	2022-02-21
11122336	CAFETERIA OFFICE KITCHEN	2022-02-14 @ 10:00 am	2022-02-17 @ 11:00 am	0.7 ± 0.3	2022-02-21
11122315	COUNSELOR	2022-02-14 @ 10:00 am	2022-02-17 @ 11:00 am	< 0.3	2022-02-21
11122318	COUNSELOR	2022-02-14 @ 10:00 am	2022-02-17 @ 11:00 am	< 0.3	2022-02-21
11122314	COUNSELOR	2022-02-14 @ 10:00 am	2022-02-17 @ 11:00 am	0.6 ± 0.3	2022-02-21
11122316	COUNSELOR	2022-02-14 @ 10:00 am	2022-02-17 @ 11:00 am	< 0.3	2022-02-21
11122310	COUNSELOR	2022-02-14 @ 10:00 am	2022-02-17 @ 11:00 am	< 0.3	2022-02-21
11122317	COUNSELOR	2022-02-14 @ 10:00 am	2022-02-17 @ 11:00 am	< 0.3	2022-02-21
11122363	GIRLS LOCKER ROOM	2022-02-14 @ 11:00 am	2022-02-17 @ 10:00 am	< 0.3	2022-02-21
11122364	GIRLS LOCKER ROOM OFFICE	2022-02-14 @ 11:00 am	2022-02-17 @ 10:00 am	0.7 ± 0.3	2022-02-21
11122375	GYM	2022-02-14 @ 11:00 am	2022-02-17 @ 10:00 am	0.8 ± 0.3	2022-02-21
11122376	GYM	2022-02-14 @ 11:00 am	2022-02-17 @ 10:00 am	< 0.3	2022-02-21
11122334	HEALTH ROOM	2022-02-14 @ 10:00 am	2022-02-17 @ 11:00 am	< 0.3	2022-02-21
11122333	HEALTH ROOM	2022-02-14 @ 10:00 am	2022-02-17 @ 11:00 am	< 0.3	2022-02-21
11122302	MAIN OFFICE PRINCIPAL	2022-02-14 @ 9:00 am	2022-02-17 @ 11:00 am	< 0.3	2022-02-21
11122306	MAIN OFFICE SECURITY	2022-02-14 @ 9:00 am	2022-02-17 @ 11:00 am	< 0.3	2022-02-21
11122305	MAIN OFFICE ZZZ	2022-02-14 @ 9:00 am	2022-02-17 @ 11:00 am	< 0.3	2022-02-21
11122307	MAIN OFFICE ASSISTANT PRINCIPAL	2022-02-14 @ 9:00 am	2022-02-17 @ 11:00 am	< 0.3	2022-02-21
11122371	MATH OFFICE	2022-02-14 @ 12:00 pm	2022-02-17 @ 10:00 am	< 0.3	2022-02-21
11122311	MEDIA CENTER	2022-02-14 @ 9:00 am	2022-02-17 @ 11:00 am	< 0.3	2022-02-21
11122312	MEDIA CENTER	2022-02-14 @ 9:00 am	2022-02-17 @ 12:00 pm	< 0.3	2022-02-21
11122309	MEDIA CENTER CLASSROOM	2022-02-14 @ 10:00 am	2022-02-17 @ 11:00 am	< 0.3	2022-02-21
11122319	MEDIA OFFICE	2022-02-14 @ 9:00 am	2022-02-17 @ 11:00 am	0.6 ± 0.3	2022-02-21
11122313	MEDIA OFFICE	2022-02-14 @ 9:00 am	2022-02-17 @ 11:00 am	< 0.3	2022-02-21
11122301	SECURITY MAIN OFFICE	2022-02-14 @ 9:00 am	2022-02-17 @ 11:00 am	< 0.3	2022-02-21
11122369	SPEECH OFFICE	2022-02-14 @ 11:00 am	2022-02-17 @ 11:00 am	< 0.3	2022-02-21



**EXPOSURE IN BOWSER-MORNER RADON CHAMBER**

CLIENT KCI Technologies, Inc. Job Number 204186

NOMINAL Conditions: Radon Conc 25.8 pCi/L Rel. Hum 50.1 % Temp. 70.9 F

Date Start: 2/18/22 Date Stop: 2/21/22 Date Start: \_\_\_\_\_ Date Stop: \_\_\_\_\_

Time Start: 0911 Time Stop: 0911 Time Start: \_\_\_\_\_ Time Stop: \_\_\_\_\_

Device No.'s: (3) Char Bags -  
11113484, 1112998, 20107126 Device No.'s: \_\_\_\_\_

23 Right

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

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

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

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

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

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

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

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

---

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

---



## Radon Test Kit Chain of Custody

Project Name: MCPS Radon – February 2022 Schools

Name of Schools:

1. Sherwood HS
2. Paint Branch HS
3. Clarksburg HS
4. Hallie Wells MS
5. Rocky Hill MS
6. Wilson Wims ES
7. John T. Baker MS
8. Clearspring ES
9. Damascus ES

---

	Date	Initials
Radon Test Kits Deployed	02/14/2022	
Radon Test Kits Collected	02/17/2022	
Radon Test Kits Shipped to Lab*	02/17/2022	
Radon Test Kits Received by Lab*	02/19/2022	

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



**MCPS RADON TESTING - EXECUTIVE SUMMARY**

Site Name	John T. Baker Middle School
Date of Report	1/28/2020
Round of Testing	Initial Follow-up <b>Post Remediation</b> 2 year testing 5 year testing HVAC Upgrade Window Replacement New Addition New Facility
# of Rooms Tested	3
# Rooms $\geq$ 4.0 pCi/L	0
Lowest Value	<0.3 pCi/L
Highest Value	0.6 pCi/L

**Project Status**

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



1/28/2020

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: John T. Baker Middle School**

25400 Oak Drive  
Damascus, Maryland 20872

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 John T. Baker Middle School, located at 25400 Oak Drive in Damascus, Maryland 20872 (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/departments/facilities/maintenance/default.aspx?id=458858> or [www.epa.gov/radon](http://www.epa.gov/radon).

KCI visited the site on 12/9/2019 and deployed five (5) 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 12/12/2019 to retrieve the radon sampling test kits. KCI shipped all radon tests via overnight delivery to Aircheck, Inc. for analysis by gamma-ray spectroscopy. Aircheck, Inc. is a NRSB certified analytical laboratory for radon analysis (certification #ARL1402) located at 1936 Butler Bridge Road, Mills River, North Carolina.

### **EVALUATION OF TESTING CONDITIONS**

These tests represent:

- Follow-up to post-mitigation biennial testing.

These tests were conducted to:

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

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

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

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

KCI also compiled weather data for the testing period and conducted observations of relevant field conditions. During the test period, weather records indicate low temperatures were in the upper-30s and high temperatures ranged from the upper-30s to the mid-50s. Maximum sustained winds ranged from 7-21 miles per hour. Average humidity was around 75%. 0.52 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:

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

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

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

Sincerely,

Mr. Tyler P. McCleaf  
Radon Measurement Provider  
111004 RT

KCI Technologies, Inc.

Attachments:

A- Floor Plan with Test Locations

B - Tables 1-3, Radon Test Summary Spreadsheets

C- Laboratory Analytical Results

# ATTACHMENT A

## Floor Plan With Test Locations



# 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		
Baker Middle School		
Test Period: 12/9/2019-12/12/2019		
Kit Number	Room / Area	Result
9335139	100S	0.6
9335140	100 WEIGHT ROOM	< 0.3
9335141	PARA OFFICE	0.6
9335142	PARA OFFICE	< 0.3
9335144	100 WEIGHT ROOM	< 0.3
9334978	OFFICE BLANK	< 0.3

Table 2- Radon Testing Results			
Baker Middle School			
Test Period: 12/9/2019-12/12/2019			
Kit Number	QC Type	Room / Area	Result
9335144	FB	100 WEIGHT ROOM	<0.3
9335141	D	PARA OFFICE	0.6
9334850	TRANSIT BLANK	NA	< 0.3
9334914	TRANSIT BLANK	NA	< 0.3
9334916	TRANSIT BLANK	NA	< 0.3
9334963	TRANSIT BLANK	NA	< 0.3

Summary of Missed Locations		
Baker Middle School		
Test Period: 12/9/2019 - 12/12/2019		
Kit Number	Room/Area	Result
	NA	

Summary of Missing, Compromised and $\geq 4$ piC/L Tests		
Baker Middle School		
Test Period: 12/9/2019-12/12/2019		
Kit Number	Room/Area	Result
	NA	

Table Note:  
 \* Missing or Compromised Sample

# ATTACHMENT C

## Laboratory Analytical Results

---

December 17, 2019

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

---

Radon test result report for:

**MAIN**

**MAIN**

---

<b>Kit #</b>	<b>Room Id</b>	<b>Started</b>	<b>Ended</b>	<b>pCi/L</b>	<b>Analyzed</b>
9335140	100 WEIGHT ROOM	2019-12-09 @ 10:00 am	2019-12-12 @ 10:00 am	< 0.3	2019-12-17
9335144	100 WEIGHT ROOM	2019-12-09 @ 11:00 am	2019-12-12 @ 10:00 am	< 0.3	2019-12-17
9335139	100S	2019-12-09 @ 10:00 am	2019-12-12 @ 10:00 am	0.6 ± 0.4	2019-12-17
9335142	PARA OFFICE	2019-12-09 @ 11:00 am	2019-12-12 @ 10:00 am	< 0.3	2019-12-17
9335141	PARA OFFICE	2019-12-09 @ 11:00 am	2019-12-12 @ 10:00 am	0.6 ± 0.4	2019-12-17

---

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 KEI Technologies Inc. Job Number 193475

NOMINAL Conditions: Radon Conc 25.7 pCi/L Rel. Hum 74.6 % Temp. 69.9 F

Date Start: 12/13/19 Date Stop: 12/16/19 Date Start: \_\_\_\_\_ Date Stop: \_\_\_\_\_  
Time Start: 0806 Time Stop: 0806 Time Start: \_\_\_\_\_ Time Stop: \_\_\_\_\_  
(Group 1)  
Device No.'s: (20) Char. Bags - Device No.'s: \_\_\_\_\_  
9334502 thru 9334510,  
9334514, 9334516, 9334517,  
9334519, 9334519  
9334522 thru 9334528  
B4

Date Start: 12/13/19 Date Stop: 12/16/19 Date Start: \_\_\_\_\_ Date Stop: \_\_\_\_\_  
Time Start: 0811 Time Stop: 0811 Time Start: \_\_\_\_\_ Time Stop: \_\_\_\_\_  
(Group 2)  
Device No.'s: (20) Char. Bags - Device No.'s: \_\_\_\_\_  
9334529 thru 9334538,  
9334540,  
9334542 thru 9334550  
B3

Date Start: 12/13/19 Date Stop: 12/16/19 Date Start: \_\_\_\_\_ Date Stop: \_\_\_\_\_  
Time Start: 0816 Time Stop: 0816 Time Start: \_\_\_\_\_ Time Stop: \_\_\_\_\_  
(Group 3)  
Device No.'s: (20) Char. Bags - Device No.'s: \_\_\_\_\_  
9334551, 9334552, 9334562,  
9334555 thru 9334559,  
9334569, 9334576, 9334579,  
9334580, 9334583, 9334584,  
9334591, 9334593, 9334594,  
9334597, 9334598, 9334599  
B2

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



Radon test result report for:

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

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
9334583	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	23.3 $\pm$ 1.4	2019-12-18
9334529	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	24.3 $\pm$ 1.5	2019-12-18
9334597	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	23.8 $\pm$ 1.4	2019-12-18
9334534	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	23.3 $\pm$ 1.4	2019-12-18
9334540	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	23.9 $\pm$ 1.4	2019-12-18
9334546	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	24.9 $\pm$ 1.5	2019-12-18
9334551	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	23.3 $\pm$ 1.4	2019-12-18
9334558	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	23.6 $\pm$ 1.4	2019-12-18
9334579	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	23.6 $\pm$ 1.4	2019-12-18
9334593	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	23.3 $\pm$ 1.4	2019-12-18
9334532	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	23.6 $\pm$ 1.4	2019-12-18
9334537	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	23.8 $\pm$ 1.4	2019-12-18
9334544	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	23.5 $\pm$ 1.4	2019-12-18
9334549	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	24.4 $\pm$ 1.5	2019-12-18
9334556	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	24.1 $\pm$ 1.4	2019-12-18
9334569	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	23.7 $\pm$ 1.4	2019-12-18
9334584	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	24.4 $\pm$ 1.5	2019-12-18
9334530	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	23.6 $\pm$ 1.4	2019-12-18
9334598	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	23.7 $\pm$ 1.4	2019-12-18
9334535	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	23.0 $\pm$ 1.4	2019-12-18
9334542	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	23.7 $\pm$ 1.4	2019-12-18
9334547	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	25.2 $\pm$ 1.5	2019-12-18
9334552	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	24.2 $\pm$ 1.4	2019-12-18
9334559	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	24.1 $\pm$ 1.4	2019-12-18
9334580	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	24.1 $\pm$ 1.4	2019-12-18
9334594	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	24.1 $\pm$ 1.4	2019-12-18
9334533	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	24.3 $\pm$ 1.5	2019-12-18
9334538	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	24.6 $\pm$ 1.5	2019-12-18
9334545	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	24.0 $\pm$ 1.4	2019-12-18
9334550	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	24.1 $\pm$ 1.4	2019-12-18
9334557	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	24.6 $\pm$ 1.5	2019-12-18
9334576	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	23.3 $\pm$ 1.4	2019-12-18
9334591	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	23.7 $\pm$ 1.4	2019-12-18
9334531	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	24.3 $\pm$ 1.5	2019-12-18
9334599	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	23.8 $\pm$ 1.4	2019-12-18
9334536	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	24.4 $\pm$ 1.5	2019-12-18
9334543	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	24.4 $\pm$ 1.5	2019-12-18

---

December 18, 2019

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

---

Radon test result report for:

**N/A**

---

<b>Kit #</b>	<b>Room Id</b>	<b>Started</b>	<b>Ended</b>	<b>pCi/L</b>	<b>Analyzed</b>
9334548	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	24.0 ± 1.4	2019-12-18
9334555	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	23.4 ± 1.4	2019-12-18
9334562	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	23.5 ± 1.4	2019-12-18

---

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

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

<b>Kit #</b>	<b>Room Id</b>	<b>Started</b>	<b>Ended</b>	<b>pCi/L</b>	<b>Analyzed</b>
9334505	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	24.5 ± 1.5	2019-12-18
9334510	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	24.4 ± 1.5	2019-12-18
9334522	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	23.9 ± 1.4	2019-12-18
9334527	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	22.6 ± 1.4	2019-12-18
9334503	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	23.6 ± 1.4	2019-12-18
9334508	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	24.7 ± 1.5	2019-12-18
9334517	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	23.5 ± 1.4	2019-12-18
9334525	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	23.8 ± 1.4	2019-12-18
9334506	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	24.3 ± 1.5	2019-12-18
9334514	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	24.5 ± 1.5	2019-12-18
9334523	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	23.6 ± 1.4	2019-12-18
9334528	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	23.8 ± 1.4	2019-12-18
9334504	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	23.8 ± 1.4	2019-12-18
9334509	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	23.5 ± 1.4	2019-12-18
9334519	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	24.1 ± 1.4	2019-12-18
9334526	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	23.3 ± 1.4	2019-12-18
9334502	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	23.7 ± 1.4	2019-12-18
9334507	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	24.7 ± 1.5	2019-12-18
9334516	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	22.2 ± 1.3	2019-12-18
9334524	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	24.6 ± 1.5	2019-12-18



### Radon Test Kit Chain of Custody

Project Name: MCPS Radon 2019 Week 1

Name of Schools:

- |                             |                         |
|-----------------------------|-------------------------|
| 1. Baker M.S.               | 13. Jones Lane E.S.     |
| 2. Belmont E.S.             | 14. Lake Seneca E.S.    |
| 3. Clarksburg E.S.          | 15. McAuliffe E.S.      |
| 4. Clarksburg H.S.          | 16. Quince Orchard H.S. |
| 5. Clearspring E.S.         | 17. Rosa Parks M.S.     |
| 6. Damascus E.S.            | 18. Snowden Farm E.S.   |
| 7. Damascus H.S.            | 19. South Lake E.S.     |
| 8. Dufief E.S.              | 20. Stone Mill E.S.     |
| 9. Fields Road E.S.         | 21. Travilah E.S.       |
| 10. Gaithersburg E.S.       | 22. Watkins Mill E.S.   |
| 11. Germantown E.S.         | 23. Watkins Mill H.S.   |
| 12. Great Seneca Creek E.S. | 24. Whitman H.S.        |

---

	Date	Initials
Radon Test Kits Deployed	12/09/19 to 12/10/19	JM
Radon Test Kits Collected	12/12/19 to 12/13/19	JM
Radon Test Kits Shipped to Lab*	12/13/19	JM
Radon Test Kits Received by Lab*	12/16/19	JM

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



**MCPS RADON TESTING - EXECUTIVE SUMMARY**

Site Name	John T. Baker Middle School
Date of Report	March 9, 2018
Round of Testing	Initial <b>Follow-up</b> Post Remediation 2 year testing 5 year testing HVAC Upgrade Window Replacement New Addition New Facility
# of Rooms Tested	29
# Rooms $\geq$ 4.0 pCi/L	0
Lowest Value	< 0.3 pCi/L
Highest Value	2.3 pCi/L

**Project Status**

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



March 9, 2018

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

Re: Radon Testing Services

KCI Job #1214634188

**Location: John T. Baker Middle School**

25400 Oak Dr.,  
Damascus, Maryland 20872

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 John T. Baker Middle School, located at 25400 Oak Dr., in Damascus, Maryland 20872 (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 12, 2018 and deployed thirty-two (32) activated charcoal (AC) radon test kits. KCI deployed radon test kits in frequently-occupied ground contact rooms, and other areas, (if applicable) in accordance with AARST guidance.

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

1. Rooms not successfully tested,
2. Rooms with elevated November 2017 results (i.e.  $\geq 3.5$  pCi/L).

---

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

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

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

### **EVALUATION OF TESTING CONDITIONS**

These tests represent:

- Follow-up to HVAC upgrade testing.

These tests were conducted to:

- Evaluate radon concentrations following the installation of a new HVAC system.

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

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

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

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

---

## **RESULTS**

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

The results of the radon test analysis indicated the following:

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

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

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

Sincerely,



Radon Measurement Specialist  
KCI Technologies, Inc.

Attachments:

B - Radon Test Summary Spreadsheets

C - Laboratory Analytical Results



# ATTACHMENT B

## Radon Test Summary Spreadsheet

**Table Notes:**

AC- Activated Charcoal

ACI- Air Chek, Inc.

D- Duplicate

FB- Field Blank

KCI- KCI Technologies, Inc.

OB- Office Blank

PM- Project Manager

QC- Quality Control

<b>Table 1 - Radon Testing Results</b>		
<b>Baker Middle School</b>		
<b>Test Period: 02/12/18-02/15/18</b>		
<b>Kit Number</b>	<b>Room / Area</b>	<b>Result</b>
7194186	112	0.9
7194188	123	0.7
7194199	201	0.9
7194166	101S	1.5
7194189	112A	0.8
7194185	115A	1.0
7194190	119A	1.2
7194198	201S	0.7
7194177	BOYS LOCKER RM	1.5
7194187	CAFE ROOM	0.8
7194184	COUNSELING	0.7
7194197	FACULTY RM (223)	1.4
7194171	GIRLS LOCKER RM	0.7
7194151	IDA	1.6
7194193	ISO TEAM ROOM	2.0
7194178	KITCHEN	0.8
7194195	KITCHEN OFFICE	0.9
7194181	LUNCH ANNEX	2.3
7194172	LUNCH DETENTION	2.1
7194162	MR OFFICE	< 0.3
7194173	MUSIC OFFICE	< 0.3
7194174	MUSIC	0.9
7194169	OLD SCHOOL STORE	0.9
7194196	SCIENCE OFF(104)	1.4
7194170	SECURITY	0.7
7194168	SECURITY 2	< 0.3
7194183	SERVICE MANAGER	1.2
7194164	SP (100S)	1.1
7194165	STAFF (110)	1.1

Table Note:

\* Missing or Compromised Sample

<b>Table 2 - Radon Testing Results</b>		
<b>Baker Middle School</b>		
<b>Test Period: 02/12/18-02/15/18</b>		
<b>Kit Number</b>	<b>QC Type</b>	<b>Result</b>
7194182	D (CAFE ROOM)	1.0
7194163	D (MR OFFICE)	0.7
7194167	FB (MR OFFICE)	< 0.3

Table Note:

\* Missing or Compromised Sample

# ATTACHMENT C

## Laboratory Analytical Results

Radon test result report for:

**BAKER MIDDLE SCHOOL  
MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7194166	101S	2018-02-12 @ 9:00 am	2018-02-15 @ 8:00 am	1.5 ± 0.4	2018-02-19
7194186	112	2018-02-12 @ 9:00 am	2018-02-15 @ 9:00 am	0.9 ± 0.4	2018-02-19
7194189	112A	2018-02-12 @ 9:00 am	2018-02-15 @ 9:00 am	0.8 ± 0.4	2018-02-19
7194185	115A	2018-02-12 @ 9:00 am	2018-02-15 @ 9:00 am	1.0 ± 0.4	2018-02-19
7194190	119A	2018-02-12 @ 9:00 am	2018-02-15 @ 9:00 am	1.2 ± 0.4	2018-02-19
7194188	123	2018-02-12 @ 9:00 am	2018-02-15 @ 9:00 am	0.7 ± 0.3	2018-02-19
7194199	201	2018-02-12 @ 10:00 am	2018-02-15 @ 8:00 am	0.9 ± 0.4	2018-02-19
7194198	201S	2018-02-12 @ 10:00 am	2018-02-15 @ 8:00 am	0.7 ± 0.3	2018-02-19
7194177	BOYS LOCKER RM	2018-02-12 @ 9:00 am	2018-02-15 @ 9:00 am	1.5 ± 0.4	2018-02-19
7194187	CAFE ROOM	2018-02-12 @ 9:00 am	2018-02-15 @ 8:00 am	0.8 ± 0.3	2018-02-19
7194182	CAFE ROOM	2018-02-12 @ 9:00 am	2018-02-15 @ 8:00 am	1.0 ± 0.3	2018-02-19
7194184	COUNSELING	2018-02-12 @ 10:00 am	2018-02-15 @ 8:00 am	0.7 ± 0.4	2018-02-19
7194197	FACULTY RM (223)	2018-02-12 @ 10:00 am	2018-02-15 @ 8:00 am	1.4 ± 0.4	2018-02-19
7194171	GIRLS LOCKER RM	2018-02-12 @ 9:00 am	2018-02-15 @ 9:00 am	0.7 ± 0.3	2018-02-19
7194151	IDA	2018-02-12 @ 9:00 am	2018-02-15 @ 9:00 am	1.6 ± 0.4	2018-02-19
7194193	ISO TEAM ROOM	2018-02-12 @ 10:00 am	2018-02-15 @ 9:00 am	2.0 ± 0.4	2018-02-19
7194178	KITCHEN	2018-02-12 @ 9:00 am	2018-02-15 @ 8:00 am	0.8 ± 0.4	2018-02-19
7194195	KITCHEN OFFICE	2018-02-12 @ 9:00 am	2018-02-15 @ 8:00 am	0.9 ± 0.4	2018-02-19
7194181	LUNCH ANNEX	2018-02-12 @ 9:00 am	2018-02-15 @ 8:00 am	2.3 ± 0.4	2018-02-19
7194172	LUNCH DETENTION	2018-02-12 @ 9:00 am	2018-02-15 @ 8:00 am	2.1 ± 0.4	2018-02-19
7194167	MR OFFICE	2018-02-12 @ 8:00 am	2018-02-15 @ 8:00 am	< 0.3	2018-02-19
7194162	MR OFFICE	2018-02-12 @ 8:00 am	2018-02-15 @ 8:00 am	< 0.3	2018-02-19
7194173	MUSIC OFFICE	2018-02-12 @ 9:00 am	2018-02-15 @ 8:00 am	< 0.3	2018-02-19
7194163	MR OFFICE	2018-02-12 @ 8:00 am	2018-02-15 @ 8:00 am	0.7 ± 0.3	2018-02-19
7194174	MUSIC	2018-02-12 @ 9:00 am	2018-02-15 @ 8:00 am	0.9 ± 0.4	2018-02-19
7194169	OLD SCHOOL STORE	2018-02-12 @ 9:00 am	2018-02-15 @ 8:00 am	0.9 ± 0.3	2018-02-19
7194196	SCIENCE OFF(104)	2018-02-12 @ 9:00 am	2018-02-15 @ 9:00 am	1.4 ± 0.4	2018-02-19
7194170	SECURITY	2018-02-12 @ 8:00 am	2018-02-15 @ 8:00 am	0.7 ± 0.4	2018-02-19
7194168	SECURITY 2	2018-02-12 @ 8:00 am	2018-02-15 @ 8:00 am	< 0.3	2018-02-19
7194183	SERVICE MANAGER	2018-02-12 @ 9:00 am	2018-02-15 @ 8:00 am	1.2 ± 0.4	2018-02-19
7194164	SP (100S)	2018-02-12 @ 8:00 am	2018-02-15 @ 8:00 am	1.1 ± 0.4	2018-02-19
7194165	STAFF (110)	2018-02-12 @ 9:00 am	2018-02-15 @ 9:00 am	1.1 ± 0.4	2018-02-19



## Radon Test Kit Chain of Custody

Project Name: MCPS Radon

Names of Schools:

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

---

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

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

Radon test result report for:  
**OFFICE BLANKS**

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



Radon test result report for:  
**TRANSIT BLANKS**

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

---

February 28, 2018

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

---

Radon test result report for:

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

---

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

---

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

EXPOSURE IN BOWSER-MORNER RADON CHAMBER

CLIENT KCI Technologies Inc. Job Number 183530

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

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

Date Start: \_\_\_\_\_ Date Stop: \_\_\_\_\_ Date Start: \_\_\_\_\_ Date Stop: \_\_\_\_\_  
 Time Start: \_\_\_\_\_ Time Stop: \_\_\_\_\_ Time Start: \_\_\_\_\_ Time Stop: \_\_\_\_\_  
 Device No.'s: \_\_\_\_\_ Device No.'s: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Date Start: \_\_\_\_\_ Date Stop: \_\_\_\_\_ Date Start: \_\_\_\_\_ Date Stop: \_\_\_\_\_  
 Time Start: \_\_\_\_\_ Time Stop: \_\_\_\_\_ Time Start: \_\_\_\_\_ Time Stop: \_\_\_\_\_  
 Device No.'s: \_\_\_\_\_ Device No.'s: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

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



**MCPS RADON TESTING - EXECUTIVE SUMMARY**

Site Name	John T. Baker Middle School
Date of Report	February 2, 2018
Round of Testing	Initial Follow-up Post Remediation 2 year testing 5 year testing <b>HVAC Upgrade</b> Window Replacement New Addition New Facility
# of Rooms Tested	31
# Rooms $\geq$ 4.0 pCi/L	0
Lowest Value	< 0.3 pCi/L
Highest Value	3.3 pCi/L

Current Project Status at this time: Results satisfactory to date; missed locations to be sampled.



February 2, 2018

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

Re: Radon Testing Services

KCI Job #1214694182

**Location: John T. Baker Middle School**

25400 Oak Dr.,  
Damascus, Maryland 20872

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 John T. Baker Middle School, located at 25400 Oak Dr., in Damascus, Maryland 20872 (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 December 5, 2017 and deployed forty-one (41) activated charcoal (AC) radon test kits. KCI deployed radon test kits in frequently-occupied ground contact rooms, and other areas, (if applicable) in accordance with AARST guidance. A floor plan map of the building with the test locations is included as Appendix A of this report.

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

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

KCI returned to the site on December 8, 2017 to retrieve the radon sampling test kits. KCI shipped all radon tests via overnight delivery to Aircheck, Inc. for analysis by gamma-ray spectroscopy. Aircheck, Inc. is a NRSB certified analytical laboratory for radon analysis (certification #ARL1402) located at 1936 Butler Bridge Road, Mills River, North Carolina.

### **EVALUATION OF TESTING CONDITIONS**

These tests represent:

- HVAC upgrade testing.

These tests were conducted to:

- Evaluate radon concentrations following the installation of a new HVAC system.

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 low-30s to mid-40s and high temperatures ranged from the upper-30s to mid-50s. Maximum sustained winds ranged from 4-17 miles per hour. Average humidity was around 60%. 0.16 Inches of precipitation was recorded during the testing period.

### **RESULTS**

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

The results of the radon test analysis indicated the following:

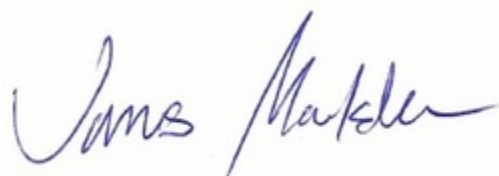
<b>Radon Concentration</b>	<b>Room</b>	<b>Result</b>
$\geq 4.0$ pCi/L	None	N/A
$\leq 4.0$ pCi/L	See Attachment B	See Attachment B

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

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 Moulds, CHMM  
Radon Measurement Specialist  
KCI Technologies, Inc.

Attachments:

B- Table 1-Radon Test Summary Spreadsheet

C- Laboratory Analytical Results

# ATTACHMENT B

## Radon Test Summary Spreadsheet



**Table Notes:**

AC- Activated Charcoal

ACI- Air Chek, Inc.

D- Duplicate

FB- Field Blank

KCI- KCI Technologies, Inc.

OB- Office Blank

PM- Project Manager

QC- Quality Control

<b>Radon Testing Results</b>		
<b>John Baker Middle School</b>		
<b>Test Period: 12/05/17-12/08/17</b>		
<b>Kit Number</b>	<b>Room / Area</b>	<b>Result</b>
7985945	100	0.8
7985944	101	0.9
7985951	102	0.9
7985940	103	0.8
7984024	105	< 0.3
7978742	107	0.6
7985909	107	0.8
7984018	109	< 0.3
7984009	110	0.8
7984013	111	< 0.3
7984004	113	0.8
7984028	114	1.0
7984007	115	1.7
7984006	119	1.1
7984030	119	1.1
7984011	121	1.0
7984034	121	1.1
7984015	125	0.8
7984012	125	1.0
7985950	130	1.1
7985967	131	0.7
7985968	132	< 0.3
7985966	133	0.6
7985942	134	0.7
7985963	208	0.7
7985970	233	< 0.3
7985943	100S	< 0.3
7984005	117A	2.2
7984010	117B	3.3
7984023	AUX GYM	0.6
7984016	BSO OFFICE	1.1
7985964	CAFE	1.2
7985973	CAFE	1.0
7984022	GYM	2.2
7984029	GYM	1.3
7985972	MAIN OFFICE	< 0.3
7984008	WS OFFICE	< 0.3

Table Note:

\* Missing or Compromised Sample

<b>Radon Testing Results</b>		
<b>John Baker Middle School</b>		
<b>Test Period: 12/05/17-12/08/17</b>		
<b>Kit Number</b>	<b>QC Type</b>	<b>Result</b>
7984014	D (109)	< 0.3
7985969	D (233)	< 0.3
7985965	FB (208)	< 0.3
7984046	OB (OFFICE BLANK)	< 0.3

Table Note:

\* Missing or Compromised Sample



# ATTACHMENT C

## Laboratory Analytical Results

Radon test result report for:

**JOHN BAKER MIDDLE SCHOOL  
MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7985945	100	2017-12-05 @ 8:00 am	2017-12-08 @ 9:00 am	0.8 ± 0.2	2017-12-11
7985943	100S	2017-12-05 @ 8:00 am	2017-12-08 @ 9:00 am	< 0.3	2017-12-12
7985944	101	2017-12-05 @ 8:00 am	2017-12-08 @ 9:00 am	0.9 ± 0.3	2017-12-11
7985951	102	2017-12-05 @ 8:00 am	2017-12-08 @ 9:00 am	0.9 ± 0.3	2017-12-12
7985940	103	2017-12-05 @ 8:00 am	2017-12-08 @ 9:00 am	0.8 ± 0.3	2017-12-12
7984024	105	2017-12-05 @ 8:00 am	2017-12-08 @ 9:00 am	< 0.3	2017-12-11
7978742	107	2017-12-05 @ 8:00 am	2017-12-08 @ 9:00 am	0.6 ± 0.3	2017-12-12
7985909	107	2017-12-05 @ 8:00 am	2017-12-08 @ 9:00 am	0.8 ± 0.3	2017-12-12
7984014	109	2017-12-05 @ 8:00 am	2017-12-08 @ 9:00 am	< 0.3	2017-12-11
7984018	109	2017-12-05 @ 8:00 am	2017-12-08 @ 9:00 am	< 0.3	2017-12-11
7984009	110	2017-12-05 @ 8:00 am	2017-12-08 @ 9:00 am	0.8 ± 0.2	2017-12-11
7984013	111	2017-12-05 @ 1:00 pm	2017-12-08 @ 1:00 pm	< 0.3	2017-12-11
7984004	113	2017-12-05 @ 8:00 am	2017-12-08 @ 9:00 am	0.8 ± 0.3	2017-12-12
7984028	114	2017-12-05 @ 8:00 am	2017-12-08 @ 9:00 am	1.0 ± 0.3	2017-12-12
7984007	115	2017-12-05 @ 8:00 am	2017-12-08 @ 9:00 am	1.7 ± 0.3	2017-12-12
7984005	117A	2017-12-05 @ 8:00 am	2017-12-08 @ 9:00 am	2.2 ± 0.3	2017-12-11
7984010	117B	2017-12-05 @ 8:00 am	2017-12-08 @ 9:00 am	3.3 ± 0.3	2017-12-12
7984030	119	2017-12-05 @ 8:00 am	2017-12-08 @ 9:00 am	1.1 ± 0.2	2017-12-11
7984006	119	2017-12-05 @ 8:00 am	2017-12-08 @ 9:00 am	1.1 ± 0.3	2017-12-12
7984034	121	2017-12-05 @ 9:00 am	2017-12-08 @ 9:00 am	1.1 ± 0.2	2017-12-11
7984011	121	2017-12-05 @ 9:00 am	2017-12-08 @ 9:00 am	1.0 ± 0.3	2017-12-11
7984015	125	2017-12-05 @ 9:00 am	2017-12-08 @ 9:00 am	0.8 ± 0.3	2017-12-11
7984012	125	2017-12-05 @ 9:00 am	2017-12-08 @ 9:00 am	1.0 ± 0.3	2017-12-12
7985950	130	2017-12-05 @ 8:00 am	2017-12-08 @ 9:00 am	1.1 ± 0.2	2017-12-11
7985967	131	2017-12-05 @ 8:00 am	2017-12-08 @ 9:00 am	0.7 ± 0.2	2017-12-11
7985968	132	2017-12-05 @ 8:00 am	2017-12-08 @ 9:00 am	< 0.3	2017-12-11
7985966	133	2017-12-05 @ 8:00 am	2017-12-08 @ 9:00 am	0.6 ± 0.2	2017-12-11
7985942	134	2017-12-05 @ 8:00 am	2017-12-08 @ 9:00 am	0.7 ± 0.3	2017-12-12
7985963	208	2017-12-05 @ 8:00 am	2017-12-08 @ 9:00 am	0.7 ± 0.2	2017-12-11
7985965	208	2017-12-05 @ 8:00 am	2017-12-08 @ 9:00 am	< 0.3	2017-12-11
7985969	233	2017-12-05 @ 8:00 am	2017-12-08 @ 9:00 am	< 0.3	2017-12-11
7985970	233	2017-12-05 @ 8:00 am	2017-12-08 @ 9:00 am	< 0.3	2017-12-12
7984023	AUX GYM	2017-12-05 @ 8:00 am	2017-12-08 @ 9:00 am	0.6 ± 0.3	2017-12-12
7984016	BSO OFFICE	2017-12-05 @ 9:00 am	2017-12-08 @ 9:00 am	1.1 ± 0.2	2017-12-11
7985964	CAFE	2017-12-05 @ 8:00 am	2017-12-08 @ 9:00 am	1.2 ± 0.3	2017-12-11
7985973	CAFE	2017-12-05 @ 8:00 am	2017-12-08 @ 9:00 am	1.0 ± 0.2	2017-12-11
7984022	GYM	2017-12-05 @ 8:00 am	2017-12-08 @ 9:00 am	2.2 ± 0.3	2017-12-11

---

December 29, 2017

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

---

Radon test result report for:

**JOHN BAKER MIDDLE SCHOOL  
MAIN**

---

<b>Kit #</b>	<b>Room Id</b>	<b>Started</b>	<b>Ended</b>	<b>pCi/L</b>	<b>Analyzed</b>
7984029	GYM	2017-12-05 @ 8:00 am	2017-12-08 @ 9:00 am	1.3 ± 0.2	2017-12-11
7985972	MAIN OFFICE	2017-12-05 @ 8:00 am	2017-12-08 @ 9:00 am	< 0.3	2017-12-11
7984046	OFFICE BLANK	2017-12-05 @ 12:00 pm	2017-12-08 @ 12:00 pm	< 0.3	2017-12-11
7984008	WS OFFICE	2017-12-05 @ 8:00 am	2017-12-08 @ 9:00 am	< 0.3	2017-12-11

---

Air Chek, Inc. 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 Phase

Names of Schools:

1. John T. Baker Middle School
2. Cedar Grove Elementary School
3. Clarksburg Elementary School
4. Clarksburg Elementary School Annex
5. Clarksburg High School
6. Clearspring Elementary School
7. Damascus Elementary School
8. Damascus High School
9. Dr. Charles R. Drew Elementary School
10. Facilities Maintenance Depot - Shop
11. Lake Seneca Elementary School
12. Laytonsville Elementary School
13. Watkins Mill Elementary School
14. Watkins Mill High School
15. Whetstone Elementary School

---

	Date	Initials
Radon Test Kits Deployed	12/05/17	JM
Radon Test Kits Collected	12/08/17	JM
Radon Test Kits Shipped to Lab*	12/08/17	JM
Radon Test Kits Received by Lab*	12/13/17	JM

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



Radon test result report for:**TRANSIT 2  
MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7193838	TRANSIT 1	2017-12-05 @ 2:00 pm	2017-12-08 @ 2:00 pm	< 0.3	2017-12-13
7979384	TRANSIT 10	2017-12-05 @ 2:00 pm	2017-12-08 @ 2:00 pm	< 0.3	2017-12-13
7979385	TRANSIT 11	2017-12-05 @ 2:00 pm	2017-12-08 @ 2:00 pm	< 0.3	2017-12-13
7984056	TRANSIT 12	2017-12-05 @ 2:00 pm	2017-12-08 @ 2:00 pm	< 0.3	2017-12-13
7983834	TRANSIT 13	2017-12-05 @ 2:00 pm	2017-12-08 @ 2:00 pm	< 0.3	2017-12-13
7194097	TRANSIT 14	2017-12-05 @ 2:00 pm	2017-12-08 @ 2:00 pm	< 0.3	2017-12-13
7194092	TRANSIT 15	2017-12-05 @ 2:00 pm	2017-12-08 @ 2:00 pm	< 0.3	2017-12-13
7193840	TRANSIT 16	2017-12-05 @ 2:00 pm	2017-12-08 @ 2:00 pm	< 0.3	2017-12-13
7979072	TRANSIT 17	2017-12-05 @ 2:00 pm	2017-12-08 @ 2:00 pm	< 0.3	2017-12-13
7979071	TRANSIT 18	2017-12-05 @ 2:00 pm	2017-12-08 @ 2:00 pm	< 0.3	2017-12-13
7979065	TRANSIT 19	2017-12-05 @ 2:00 pm	2017-12-08 @ 2:00 pm	0.6 ± 0.4	2017-12-13
7978194	TRANSIT 2	2017-12-05 @ 2:00 pm	2017-12-08 @ 2:00 pm	< 0.3	2017-12-13
7985660	TRANSIT 20	2017-12-05 @ 2:00 pm	2017-12-08 @ 2:00 pm	< 0.3	2017-12-13
7985661	TRANSIT 21	2017-12-05 @ 2:00 pm	2017-12-08 @ 2:00 pm	0.7 ± 0.4	2017-12-13
7193843	TRANSIT 22	2017-12-05 @ 2:00 pm	2017-12-08 @ 2:00 pm	< 0.3	2017-12-13
7984055	TRANSIT 23	2017-12-05 @ 2:00 pm	2017-12-08 @ 2:00 pm	< 0.3	2017-12-13
7983813	TRANSIT 24	2017-12-05 @ 2:00 pm	2017-12-08 @ 2:00 pm	< 0.3	2017-12-13
7983827	TRANSIT 25	2017-12-05 @ 2:00 pm	2017-12-08 @ 2:00 pm	< 0.3	2017-12-13
7978193	TRANSIT 3	2017-12-05 @ 2:00 pm	2017-12-08 @ 2:00 pm	< 0.3	2017-12-13
7978189	TRANSIT 4	2017-12-05 @ 2:00 pm	2017-12-08 @ 2:00 pm	0.5 ± 0.4	2017-12-13
7986187	TRANSIT 5	2017-12-05 @ 2:00 pm	2017-12-08 @ 2:00 pm	< 0.3	2017-12-13
7986188	TRANSIT 6	2017-12-05 @ 2:00 pm	2017-12-08 @ 2:00 pm	< 0.3	2017-12-13
7986177	TRANSIT 7	2017-12-05 @ 2:00 pm	2017-12-08 @ 2:00 pm	< 0.3	2017-12-13
7979077	TRANSIT 8	2017-12-05 @ 2:00 pm	2017-12-08 @ 2:00 pm	< 0.3	2017-12-13
7979386	TRANSIT 9	2017-12-05 @ 2:00 pm	2017-12-08 @ 2:00 pm	< 0.3	2017-12-13

---

December 19, 2017

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

---

Radon test result report for:

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

---

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

---

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

# EXPOSURE IN BOWSER-MORNER RADON CHAMBER

CLIENT KCI Technologies Inc. Job Number 182393

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

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

Time Start: 1049 Time Stop: 1049 Time Start: \_\_\_\_\_ Time Stop: \_\_\_\_\_

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

7975075, 7975064, 7975063, \_\_\_\_\_

7975065, 7975069, 7975070 \_\_\_\_\_

F4 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





## MCPS RADON TESTING

Executive Summary: John T. Baker Middle School

Date of Test Report:	3/10/2016
Round of Testing:	Initial Follow-up Post Remediation
# Rooms Tested:	4
# Rooms $\geq$ 4.0 pCi/L:	0
Low Value:	0.6
High Value:	1.5

Project Status:

Retesting completed; no further action at this time.



March 10, 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 # 12146341.29

Location: John T. Baker Middle School  
25400 Oak Drive  
Damascus, MD 20872

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 John T. Baker Middle School, located at 25400 Oak Drive in Damascus, Maryland 20872 (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 22, 2016 and deployed seven (7) 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 25, 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. Note that strong storms and heavy rainfall were recorded during the test period. The unusual weather conditions may have resulted in atypical radon test results for this facility.

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

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

**Results:**

The results of the radon test analysis indicated the following:

<b>Radon Concentration</b>	<b>Room</b>	<b>Result</b>
<b><math>\geq 4.0</math> pCi/L</b>	none	n/a
<b><math>&lt; 4.0</math> pCi/L</b>	See Attachment B	

Notes:

D- Duplicate sample

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

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

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

Sincerely,



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

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



# ATTACHMENT A

## Floor Plan With Test Locations

# ATTACHMENT B

## Radon Test Summary Spreadsheet

**Table Notes:**

AC- Activated Charcoal

ACI- Air Chek, Inc.

D- Duplicate

FB- Field Blank

KCI- KCI Technologies, Inc.

OB- Office Blank\*

PM- Project Manager

QC- Quality Control

\*Office blanks were submitted at a rate of 1% for all samples deployed in Phase 9 testing. Office blanks were not submitted under each school individually.

<b>Radon Testing Results</b>		
<b>John T Baker Middle School</b>		
<b>Test Period: 02/22/16-02/25/16</b>		
<b>Kit Number</b>	<b>Room / Area</b>	<b>Result</b>
7731632	121	1.5
7731630	123	0.7
7731634	AUX GYM	0.6
7721422	GYM	0.7
7721429	GYM	1.0
7721430	GYM	0.8

Table Note:

\* Missing or Compromised Sample

<b>Radon Testing Results</b>		
<b>John T Baker Middle School</b>		
<b>Test Period: 02/22/16-02/25/16</b>		
<b>Kit Number</b>	<b>QC Type</b>	<b>Result</b>
7721428	FB (GYM)	< 0.3

Table Note:

\* Missing or Compromised Sample

# ATTACHMENT C

## Laboratory Analytical Results

---

March 8, 2016 **\*\* LABORATORY ANALYSIS REPORT \*\***

---

Radon test result report for:  
**JOHN T BAKER MIDDLE SCHOOL  
MAIN**

---

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7731632	121	2016-02-22 @ 10:00 am	2016-02-25 @ 8:00 am	1.5 ± 0.3	2016-02-29
7731630	123	2016-02-22 @ 10:00 am	2016-02-25 @ 9:00 am	0.7 ± 0.3	2016-02-29
7731634	AUX GYM	2016-02-22 @ 10:00 am	2016-02-25 @ 9:00 am	0.6 ± 0.3	2016-02-29
7721422	GYM	2016-02-22 @ 11:00 am	2016-02-25 @ 9:00 am	0.7 ± 0.3	2016-02-29
7721428	GYM	2016-02-22 @ 11:00 am	2016-02-25 @ 8:00 am	< 0.3	2016-02-29
7721429	GYM	2016-02-22 @ 10:00 am	2016-02-25 @ 8:00 am	1.0 ± 0.3	2016-02-29
7721430	GYM	2016-02-22 @ 10:00 am	2016-02-25 @ 9:00 am	0.8 ± 0.3	2016-02-29

---

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

---

March 9, 2016 **\*\* LABORATORY ANALYSIS REPORT \*\***

---

Radon test result report for:  
**MCPS**  
**Phase 9 Office Blanks**

---

<b>Kit #</b>	<b>Room Id</b>	<b>Started</b>	<b>Ended</b>	<b>pCi/L</b>	<b>Analyzed</b>
7712568	0	2016-02-22 @ 6:00 pm	2016-02-25 @ 3:00 pm	< 0.3	2016-02-29
7712584	0	2016-02-22 @ 6:00 pm	2016-02-25 @ 3:00 pm	< 0.3	2016-02-29
7719460	0	2016-02-22 @ 6:00 pm	2016-02-25 @ 3:00 pm	< 0.3	2016-02-29
7719481	0	2016-02-22 @ 6:00 pm	2016-02-25 @ 3:00 pm	< 0.3	2016-02-29
7719497	0	2016-02-22 @ 6:00 pm	2016-02-25 @ 3:00 pm	< 0.3	2016-02-29
7719498	0	2016-02-22 @ 6:00 pm	2016-02-25 @ 3:00 pm	< 0.3	2016-02-29

---

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



---

March 9, 2016 **\*\* LABORATORY ANALYSIS REPORT \*\***

---

Radon test result report for:  
**MCPS**  
**Phase 9 Office Blanks**

---

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7731626	0	2016-02-23 @ 2:00 pm	2016-02-26 @ 3:00 pm	< 0.3	2016-03-01
7731633	0	2016-02-23 @ 2:00 pm	2016-02-26 @ 3:00 pm	< 0.3	2016-03-01
7735204	0	2016-02-23 @ 2:00 pm	2016-02-26 @ 3:00 pm	< 0.3	2016-03-01

---

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

February 23, 2016  
**LABORATORY ANALYSIS REPORT**

Radon test result report for:  
**TRANSIT- PHASE 7, 8, 9**  
**NONE**

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

February  
15,  
2016

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

Spike Sample Laboratory Results

Radon test result report for:  
**MCPS**

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

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  $\mu$ R/h Elevation = 820 ft



## Radon Test Kit Chain of Custody

Project Name: MCPS Radon Phase 9

Name of Schools:

- |                          |                           |                        |
|--------------------------|---------------------------|------------------------|
| 1. Rocking Horse Road ES | 16. Broad Acres ES        | 31. Rosa Parks MS      |
| 2. Rockwell ES           | 17. Belmont ES            | 32. Rosemary Hills ES  |
| 3. Oakland Terrace ES    | 18. Emory Grove Center    | 33. Sequoyah ES        |
| 4. Rosemont ES           | 19. Forest Knolls ES      | 34. Damascus HS        |
| 5. Beall ES              | 20. Baker MS              | 35. Einstein ES        |
| 6. Cresthaven ES         | 21. MLK MS                | 36. Forest Oak MS      |
| 7. Quince Orchard HS     | 22. Richard Montgomery HS | 37. Hoover MS          |
| 8. Smith Center          | 23. Sherwood HS           | 38. Julius West MS     |
| 9. Ashburton ES          | 24. Walter Johnson HS     | 39. John F. Kennedy HS |
| 10. Bannockburn ES       | 25. Diamond ES            | 40. Travilah ES        |
| 11. Bradley Hills ES     | 26. Newport Mill MS       | 41. Watkins Mill HS    |
| 12. Cannon Road ES       | 27. Drew ES               | 42. Northwood HS       |
| 13. Flora M. Singer ES   | 28. Monocacy ES           | 43. Lincoln Center     |
| 14. Clarksburg HS        | 29. Potomac ES            |                        |
| 15. Briggs Chaney MS     | 30. Rock Terrace School   |                        |

---

	Date	Initials
Radon Test Kits Deployed	2/22/16	JM
Radon Test Kits Collected	2/25/16	JM
Radon Test Kits Shipped to Lab*	2/25/16	JM
Radon Test Kits Received by Lab*	2/29/16	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 9

Name of Schools:

- |                            |                         |
|----------------------------|-------------------------|
| 1. Banneker MS             | 10. Maryvale ES         |
| 2. Bethesda-Chevy Chase HS | 11. Montgomery Blair HS |
| 3. Burtonsville ES         | 12. Poolesville HS      |
| 4. Chevy Chase ES          | 13. Rachel Carson ES    |
| 5. Clopper Mill ES         | 14. Stedwick ES         |
| 6. Edison HS               | 15. Watkins Mill ES     |
| 7. Flower Hill ES          | 16. Laytonsville ES     |
| 8. Flower Valley ES        | 17. Lincoln Center      |
| 9. Greencastle ES          |                         |

---

	Date	Initials
Radon Test Kits Deployed	2/23/16	JM
Radon Test Kits Collected	2/26/16	JM
Radon Test Kits Shipped to Lab*	2/26/16	JM
Radon Test Kits Received by Lab*	3/01/16	JM

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



## MCPS RADON TESTING

Executive Summary: John T. Baker Middle School

Date of Test Report:	3/2/2016 (Rev 1)
Round of Testing:	Initial Follow-up Post Remediation
# Rooms Tested:	41
# Rooms $\geq$ 4.0 pCi/L:	0
Low Value:	< 0.3
High Value:	1.8

### Project Status:

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



March 2, 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 # 12146341.20

Location: John T. Baker Middle School  
25400 Oak Drive  
Damascus, MD 20872

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 John T. Baker Middle School, located at 25400 Oak Drive in Damascus, Maryland 20872 (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 December 21, 2015 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. Prior to sampling, KCI returned 1% of the test batch to the laboratory for analysis as lab transit blanks. 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 December 24, 2015 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

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,



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>John T Baker Middle School</b>		
<b>Test Period: 12/21/15-12/24/15</b>		
<b>Kit Number</b>	<b>Room / Area</b>	<b>Result</b>
7712426	100	0.7
7712453	101	0.7
7712454	102	0.7
7712439	103	0.8
7712433	105	< 0.3
7712440	107	0.6
7712422	109	0.8
7712424	110	< 0.3
7712413	111	< 0.3
7712428	112	0.8
7712438	113	< 0.3
7712414	114	0.6
7712430	115	0.7
7712408	119	0.9
7712401	125	0.7
7712447	130	1.4
7712437	131	1.0
7712459	132	0.6
7712431	133	1.1
7712448	134	< 0.3
7712464	208	< 0.3
7712458	233	< 0.3
7712463	233	< 0.3
7712436	101S	< 0.3
7712429	112A	< 0.3
7712421	115A	0.6
7712410	117A	1.1
7712411	117B	1.8
7712409	119A	1.1
7712405	* 121 (tampered)	0.8
7712403	121 STORAGE	0.8
7712402	* 123 (tampered)	0.7
7712415	* AUX GYM (tampered)	< 0.3
7712416	* AUX GYM (tampered)	< 0.3
7712419	CAFETERIA	0.9
7712446	CAFETERIA	0.6
7712442	CAFETERIA OFFICE	< 0.3
7712449	FACULTY ROOM	0.7
7712406	* GYM (tampered)	< 0.3
7712412	* GYM (tampered)	< 0.3
7712434	LUNCH DETENTION	0.6
7712441	M R OFFICE	< 0.3
7712445	OFFICE	< 0.3
7712407	SERVICE MANAGER	< 0.3
7712418	SP	0.8

Table Note:

\* Missing or Compromised Sample

<b>Radon Testing Results</b>		
<b>John T Baker Middle School</b>		
<b>Test Period: 12/21/15-12/24/15</b>		
<b>Kit Number</b>	<b>QC Type</b>	<b>Result</b>
7712417	D (109)	0.9
7712404	D (CAFETERIA)	0.8
7712423	FB (109)	< 0.3
7712420	FB (208)	< 0.3
7712379	OB (0)	< 0.3

Table Note:

\* Missing or Compromised Sample

# ATTACHMENT C

## Laboratory Analytical Results



January\* **LABORATORY ANALYSIS**  
 12, **REPORT \*\***  
 2016

Radon test result report for:  
**JOHN T BAKER MIDDLE SCHOOL**  
**MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7712379	00	2015-12-21 @ 4:00 pm	2015-12-24 @ 1:00 pm	< 0.3	2015-12-29
7712426	100	2015-12-21 @ 3:00 pm	2015-12-24 @ 11:00 am	0.7 ± 0.3	2015-12-28
7712453	101	2015-12-21 @ 3:00 pm	2015-12-24 @ 11:00 am	0.7 ± 0.3	2015-12-28
7712436	101S	2015-12-21 @ 3:00 pm	2015-12-24 @ 11:00 am	< 0.3	2015-12-28
7712454	102	2015-12-21 @ 3:00 pm	2015-12-24 @ 11:00 am	0.7 ± 0.3	2015-12-28
7712439	103	2015-12-21 @ 3:00 pm	2015-12-24 @ 11:00 am	0.8 ± 0.3	2015-12-28
7712433	105	2015-12-21 @ 3:00 pm	2015-12-24 @ 11:00 am	< 0.3	2015-12-28
7712440	107	2015-12-21 @ 3:00 pm	2015-12-24 @ 11:00 am	0.6 ± 0.3	2015-12-28
7712417	109	2015-12-21 @ 2:00 pm	2015-12-24 @ 11:00 am	0.9 ± 0.3	2015-12-28
7712422	109	2015-12-21 @ 2:00 pm	2015-12-24 @ 11:00 am	0.8 ± 0.3	2015-12-28
7712423	109	2015-12-21 @ 2:00 pm	2015-12-24 @ 11:00 am	< 0.3	2015-12-28
7712424	110	2015-12-21 @ 2:00 pm	2015-12-24 @ 11:00 am	< 0.3	2015-12-28
7712413	111	2015-12-21 @ 2:00 pm	2015-12-24 @ 11:00 am	< 0.3	2015-12-28
7712428	112	2015-12-21 @ 2:00 pm	2015-12-24 @ 11:00 am	0.8 ± 0.3	2015-12-28
7712429	112A	2015-12-21 @ 2:00 pm	2015-12-24 @ 11:00 am	< 0.3	2015-12-28
7712438	113	2015-12-21 @ 2:00 pm	2015-12-24 @ 11:00 am	< 0.3	2015-12-28
7712414	114	2015-12-21 @ 2:00 pm	2015-12-24 @ 11:00 am	0.6 ± 0.3	2015-12-28
7712430	115	2015-12-21 @ 2:00 pm	2015-12-24 @ 11:00 am	0.7 ± 0.3	2015-12-28
7712421	115A	2015-12-21 @ 2:00 pm	2015-12-24 @ 11:00 am	0.6 ± 0.3	2015-12-28
7712410	117A	2015-12-21 @ 2:00 pm	2015-12-24 @ 11:00 am	1.1 ± 0.3	2015-12-28
7712411	117B	2015-12-21 @ 2:00 pm	2015-12-24 @ 11:00 am	1.8 ± 0.3	2015-12-28
7712408	119	2015-12-21 @ 2:00 pm	2015-12-24 @ 11:00 am	0.9 ± 0.3	2015-12-28
7712409	119A	2015-12-21 @ 2:00 pm	2015-12-24 @ 11:00 am	1.1 ± 0.3	2015-12-28
7712405	121	2015-12-21 @ 2:00 pm	2015-12-24 @ 11:00 am	0.8 ± 0.3	2015-12-28
7712403	121 STORAGE	2015-12-21 @ 2:00 pm	2015-12-24 @ 11:00 am	0.8 ± 0.3	2015-12-28
7712402	123	2015-12-21 @ 2:00 pm	2015-12-24 @ 11:00 am	0.7 ± 0.3	2015-12-28
7712401	125	2015-12-21 @ 2:00 pm	2015-12-24 @ 11:00 am	0.7 ± 0.3	2015-12-28
7712447	130	2015-12-21 @ 3:00 pm	2015-12-24 @ 11:00 am	1.4 ± 0.3	2015-12-28
7712437	131	2015-12-21 @ 3:00 pm	2015-12-24 @ 11:00 am	1.0 ± 0.3	2015-12-28
7712459	132	2015-12-21 @ 3:00 pm	2015-12-24 @ 11:00 am	0.6 ± 0.3	2015-12-28
7712431	133	2015-12-21 @ 3:00 pm	2015-12-24 @ 11:00 am	1.1 ± 0.3	2015-12-28
7712448	134	2015-12-21 @ 3:00 pm	2015-12-24 @ 11:00 am	< 0.3	2015-12-28
7712464	208	2015-12-21 @ 3:00 pm	2015-12-24 @ 12:00 pm	< 0.3	2015-12-28
7712420	208	2015-12-21 @ 3:00 pm	2015-12-24 @ 12:00 pm	< 0.3	2015-12-28
7712458	233	2015-12-21 @ 3:00 pm	2015-12-24 @ 12:00 pm	< 0.3	2015-12-28
7712463	233	2015-12-21 @ 3:00 pm	2015-12-24 @ 12:00 pm	< 0.3	2015-12-28
7712415	AUX GYM	2015-12-21 @ 2:00 pm	2015-12-24 @ 11:00 am	< 0.3	2015-12-28

---

January 12, 2016 **LABORATORY ANALYSIS REPORT \*\***

---

Radon test result report for:  
**JOHN T BAKER MIDDLE SCHOOL  
MAIN**

---

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7712446	CAFETERIA	2015-12-21 @ 3:00 pm	2015-12-24 @ 11:00 am	0.6 ± 0.3	2015-12-28
7712404	CAFETERIA	2015-12-21 @ 3:00 pm	2015-12-24 @ 11:00 am	0.8 ± 0.3	2015-12-28
7712419	CAFETERIA	2015-12-21 @ 3:00 pm	2015-12-24 @ 11:00 am	0.9 ± 0.3	2015-12-28
7712442	CAFETERIA OFFICE	2015-12-21 @ 3:00 pm	2015-12-24 @ 11:00 am	< 0.3	2015-12-28
7712449	FACULTY ROOM	2015-12-21 @ 3:00 pm	2015-12-24 @ 11:00 am	0.7 ± 0.3	2015-12-28
7712406	GYM	2015-12-21 @ 2:00 pm	2015-12-24 @ 11:00 am	< 0.3	2015-12-28
7712412	GYM	2015-12-21 @ 2:00 pm	2015-12-24 @ 11:00 am	< 0.3	2015-12-28
7712416	AUX GYM	2015-12-21 @ 2:00 pm	2015-12-24 @ 11:00 am	< 0.3	2015-12-28
7712434	LUNCH DETENTION	2015-12-21 @ 3:00 pm	2015-12-24 @ 11:00 am	0.6 ± 0.3	2015-12-28
7712441	M R OFFICE	2015-12-21 @ 3:00 pm	2015-12-24 @ 11:00 am	< 0.3	2015-12-28
7712445	OFFICEK	2015-12-21 @ 3:00 pm	2015-12-24 @ 12:00 pm	< 0.3	2015-12-28
7712407	SERVICE MANAGER	2015-12-21 @ 2:00 pm	2015-12-24 @ 11:00 am	< 0.3	2015-12-28
7712418	SP	2015-12-21 @ 2:00 pm	2015-12-24 @ 11:00 am	0.8 ± 0.3	2015-12-28

---

December  
29,  
2015

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

Radon test result report for:  
**TRANSIT DEC 14 2015**  
**NONE**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7704395	TRANSIT 1	2015-12-13 @ 10:00 am	2015-12-15 @ 10:00 am	< 0.3	2015-12-16
7706508	TRANSIT 10	2015-12-13 @ 10:00 am	2015-12-15 @ 10:00 am	< 0.3	2015-12-16
7706510	TRANSIT 11	2015-12-13 @ 10:00 am	2015-12-15 @ 10:00 am	< 0.3	2015-12-16
7706511	TRANSIT 12	2015-12-13 @ 10:00 am	2015-12-15 @ 10:00 am	< 0.3	2015-12-16
7706505	TRANSIT 13	2015-12-13 @ 10:00 am	2015-12-15 @ 10:00 am	< 0.3	2015-12-16
7704371	TRANSIT 14	2015-12-13 @ 10:00 am	2015-12-15 @ 10:00 am	< 0.3	2015-12-16
7706506	TRANSIT 15	2015-12-13 @ 10:00 am	2015-12-15 @ 10:00 am	< 0.3	2015-12-16
7704381	TRANSIT 16	2015-12-13 @ 10:00 am	2015-12-15 @ 10:00 am	< 0.3	2015-12-16
7704399	TRANSIT 17	2015-12-13 @ 10:00 am	2015-12-15 @ 10:00 am	< 0.3	2015-12-16
7704390	TRANSIT 18	2015-12-13 @ 10:00 am	2015-12-15 @ 10:00 am	< 0.3	2015-12-16
7704396	TRANSIT 2	2015-12-13 @ 10:00 am	2015-12-15 @ 10:00 am	< 0.3	2015-12-16
7704364	TRANSIT 3	2015-12-13 @ 10:00 am	2015-12-15 @ 10:00 am	< 0.3	2015-12-16
7704370	TRANSIT 4	2015-12-13 @ 10:00 am	2015-12-15 @ 10:00 am	< 0.3	2015-12-16
7704368	TRANSIT 5	2015-12-13 @ 10:00 am	2015-12-15 @ 10:00 am	< 0.3	2015-12-16
7706524	TRANSIT 6	2015-12-13 @ 10:00 am	2015-12-15 @ 10:00 am	< 0.3	2015-12-16
7706526	TRANSIT 7	2015-12-13 @ 10:00 am	2015-12-15 @ 10:00 am	< 0.3	2015-12-16
7706518	TRANSIT 8	2015-12-13 @ 10:00 am	2015-12-15 @ 10:00 am	< 0.3	2015-12-16
7706516	TRANSIT 9	2015-12-13 @ 10:00 am	2015-12-15 @ 10:00 am	< 0.3	2015-12-16

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

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

7706211, 7706366, \_\_\_\_\_

7706380, 7706381 \_\_\_\_\_

F3 Left

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

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

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

\_\_\_\_\_  
\_\_\_\_\_

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

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

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

\_\_\_\_\_  
\_\_\_\_\_

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



## Chain of Custody

Project Name: MCPS Radon Phase II

School Names:

- |                           |                             |                           |
|---------------------------|-----------------------------|---------------------------|
| 1. Bannockburn ES         | 11. Sherwood HS             | 21. Fairland ES           |
| 2. Walt Whitman HS        | 12. Hadley Farms            | 22. Cannon Road ES        |
| 3. Walter Johnson HS      | 13. S. Christa McAuliffe ES | 23. Richard Montgomery HS |
| 4. North Chevy Chase ES   | 14. Ronald A. McNair ES     | 24. Brooke Grove ES       |
| 5. Piney Branch ES        | 15. MLK MS                  | 25. Belmont ES            |
| 6. Forest Knolls ES       | 16. Ashburton ES            | 26. Emory Grove           |
| 7. Newport Mill MS        | 17. Bradley Hills ES        | 27. Clarksburg HS         |
| 8. Broad Acres ES         | 18. Flora M. Singer ES      | 28. Clarksburg ES         |
| 9. Briggs Chaney MS       | 19. Woodlin ES              | 29. John T. Baker MS      |
| 10. Blair G. Ewing Center | 20. Montgomery Knolls ES    |                           |

---

	Date	Initials
Radon Test Kits Deployed	12/21/2015	JM
Radon Test Kits Collected	12/24/2015	JM
Radon Test Kits Shipped to Lab*	12/24/2015	JM
Radon Test Kits Received by Lab*	12/28/2015	JM

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