

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

Site Name	Briggs Chaney Middle School
Date of Report	2/28/2020
Round of Testing	Initial
(	Follow-up
	Post Remediation
	2 year testing
	5 year testing
	HVAC Upgrade
	Window Replacement
	New Addition
	New Facility
# of Rooms Tested	1
# Rooms ≥4.0 pCi/L	0
Lowest Value	<0.3 pCi/L
Highest Value	<0.3 pCi/L

### MCPS RADON TESTING - EXECUTIVE SUMMARY

### **Project Status**

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



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2/28/2020

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

Re: Radon Testing Services

KCI Job #12146341.126

**Location: Briggs Chaney Middle School** 1901 Rainbow Drive Silver Spring, Maryland 20905

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 Briggs Chaney Middle School, located at 1901 Rainbow Drive in Silver Spring, Maryland 20905 (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 #111004 RT) supervised the testing. Additional information on radon management and the health effects of radon exposure is available from www.montgomerycountymd.gov/dep/air/radon or www.epa.gov/radon.

KCI visited the site on 2/11/2020 and deployed 1 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 with missing test kits from the December 2019 testing period (i.e. test kit was deployed but not recovered),

- 2. Rooms with invalidated test kits from the December 2019 testing period (e.g. an open window in the room or disturbed test kit),
- 3. Rooms which were locked/inaccessible during the December 2019 testing period,
- 4. Rooms with elevated December 2019 results (i.e.  $\geq$ 3.5 piC/L),
- 5. Rooms previously tested for radon but not tested in December 2019, and
- 6. Additional rooms that require testing (if applicable.)

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 2/14/2020 to retrieve the radon sampling test kits. KCI shipped all radon tests via overnight delivery to Aircheck, Inc. for analysis by gamma-ray spectroscopy. Aircheck, Inc. is a NRSB certified analytical laboratory for radon analysis (certification #ARL1402) located at 1936 Butler Bridge Road, Mills River, North Carolina.

### **EVALUATION OF TESTING CONDITIONS**

These tests represent:

• Follow-up to initial testing.

These tests were conducted to:

• Evaluate radon concentrations at the facility.

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

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

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

KCI also compiled weather data for the testing period and conducted observations of relevant field conditions. During the test period, weather records indicate low temperatures were in the mid-20s to the upper-40s; and high temperatures ranged from the lower-40s to the upper-50s. Maximum sustained winds ranged from 14-24 miles per hour. Average humidity was approximately 74%. A total of 1.32 inches of rain were recorded during the testing period. The weather conditions during the testing period may have resulted in atypical radon test results for this facility.

### **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). Follow-up sampling locations and associated test kit identification numbers and relevant field observations are listed on Table 3 (Attachment B). The laboratory analytical results are included in Attachment C. Laboratory results and exposure data for the spike samples are also included in Attachment C.

The results of the radon test analysis indicated the following:

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

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

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

Sincerely,

Mr. Tyler P. McCleaf Radon Measurement Provider 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

<u>Floor Plan Legend</u> X-Sample Location (in red) X- Previous Sample Location 1- Not Samled; No Ground Contact 2- Not Samled: Uncorpusied (or g. Store

2- Not Samled; Unoccupied (e.g. Storage, Mechanical)

3- Not Samled; High Humidity/Moisture

4- Not Samled; Bathroom/Hallway

# 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			
Bri	Briggs Chaney Middle School		
Tes	Test Period: 02/11/20-02/14/20		
Kit Number Room / Area Result			
9346963 17A < 0.3			
9348502 OFFICE BLANK < 0.3			

Table 2- Radon Testing Results			
Briggs Chaney Middle School			
Test Period: 02/11/20-02/14/20			
Kit Number	QC Type	Room / Area	Result
9348522 TRANSIT BLANK NA 0.7			0.7
9341735	TRANSIT BLANK	NA	<0.3

# ATTACHMENT C

Laboratory Analytical Results

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

### Radon test result report for: BRIGGS CHANEY MS MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
9346963	17A	2020-02-11 @ 9:00 am	2020-02-14 @ 12:00 pm	< 0.3	2020-02-19
2210202	1,11	2020 02 11 C 9100 um	2020 02 11 C 12:00 pm	C 0.2	2020 02 17

<b>EXPOSURE IN BOWSER-</b>	MORNER RADON CHAMBER
CLIENT KCI Technolog	gies, Inc. Job Number 194523
-	_pCi/L Rel. Hum <u>49.8</u> % Temp. <u>70.2</u> F
Date Start: 2/21/20 Date Stop: 2/24/2	20 Date Start: Date Stop:
Time Start: 0745 Time Stop: 0745	Time Start: Time Stop:
	Device No.'s:
9341725 thru 9341733	
52 Left	
Date Start: Date Stop:	Date Start: Date Stop:
Time Start: Time Stop:	Time Start: Time Stop:
Device No.'s:	Device No.'s:
е	
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

February 28, 2020

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

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
9341725	N/A	2020-02-21 @ 8:00 am	2020-02-24 @ 8:00 am	$26.9 \pm 1.6$	2020-02-26
9341730	N/A	2020-02-21 @ 8:00 am	2020-02-24 @ 8:00 am	$26.1 \pm 1.6$	2020-02-26
9341728	N/A	2020-02-21 @ 8:00 am	2020-02-24 @ 8:00 am	$26.9 \pm 1.6$	2020-02-26
9341726	N/A	2020-02-21 @ 8:00 am	2020-02-24 @ 8:00 am	$25.8 \pm 1.5$	2020-02-26
9341731	N/A	2020-02-21 @ 8:00 am	2020-02-24 @ 8:00 am	$25.1 \pm 1.5$	2020-02-26
9341729	N/A	2020-02-21 @ 8:00 am	2020-02-24 @ 8:00 am	$26.2 \pm 1.6$	2020-02-26
9341727	N/A	2020-02-21 @ 8:00 am	2020-02-24 @ 8:00 am	$27.2 \pm 1.6$	2020-02-26
9341732	N/A	2020-02-21 @ 8:00 am	2020-02-24 @ 8:00 am	$27.3 \pm 1.6$	2020-02-26



ENGINEERS • PLANNERS • SCIENTISTS • CONSTRUCTION MANAGERS Corporate Office: 936 Ridgebrook road • Sparks, Maryland 21152 • 410-316-7800 • (Fax) 410-316-7935

# **Radon Test Kit Chain of Custody**

Project Name: MCPS Radon 2019 Week 2

Name of Schools:

- 1. Argyle M.S.
- 2. Banneker M.S.
- 3. Bel Pre E.S.
- 4. Blake H.S.
- 5. Briggs Chaney M.S.

- 6. Fallsmead E.S.
- 7. Farquhar M.S.
- 8. Kennedy H.S.
- 9. Magruder H.S.
- 10. Wheaton H.S.

	Date	Initials
Radon Test Kits Deployed	2/11/20	JM
Radon Test Kits Collected	2/14/20	m
Radon Test Kits Shipped to Lab*	2/14/20	TUM
Radon Test Kits Received by Lab*	2/17/20	- TUA

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



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Site Name	Briggs Chaney Middle School
Date of Report	2/3/2020
Round of Testing	Initial
	Follow-up
	Post Remediation
	2 year testing
	5 year testing
•	HVAC Upgrade
	Window Replacement
	New Addition
	New Facility
# of Rooms Tested	65
# Rooms ≥4.0 pCi/L	0
Lowest Value	<0.3 pCi/L
Highest Value	3.2 pCi/L

### MCPS RADON TESTING - EXECUTIVE SUMMARY

### **Project Status**

Current Project Status at this time: Testing Complete; missing/compromised tests to be sampled.



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2/3/2020

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: Briggs Chaney Middle School** 1901 Rainbow Drive Silver Spring, Maryland 20905

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 Briggs Chaney Middle School, located at 1901 Rainbow Drive in Silver Spring, Maryland 20905 (subject site).

### SCOPE OF SERVICES

KCI conducted radon testing at the subject site to evaluate indoor radon levels relative to the USEPA's recommended action level of 4.0 picocuries per Liter (pCi/L) - the level at which EPA recommends that schools take action to reduce the level. KCI conducted the radon testing in accordance with American Association of Radon Scientists and Technologists (AARST) *Protocol for Conducting Measurements of Radon and Radon Decay Products in Schools and Large Buildings*. A National Radon Proficiency Program (NRPP) Radon Measurement Provider (certification #111004 RT) supervised the testing. Additional information on radon management and the health effects of radon exposure is available from https://www.montgomeryschoolsmd.org/departments/facilities/maintenance/default.aspx?id=458858 or www.epa.gov/radon.

KCI visited the site on 12/16/2019 and deployed seventy-six (76) 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 12/19/2019 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 National Radon Safety Board (NRSB) radon measurement provider and is a certified analytical laboratory for radon analysis (certification #ARL1402) located at 1936 Butler Bridge Road, Mills River, North Carolina.

### **EVALUATION OF TESTING CONDITIONS**

These tests represent:

• 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 lower-20s and high temperatures were in the lower-40s. Maximum sustained winds ranged from 12-26 miles per hour. Average humidity was around 67%. 0.54 inches of precipitation (rain and snow) was recorded during the testing period.

#### RESULTS

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

The results of the radon test analysis indicated the following:

Radon Concentration	Room	Result
≥4.0 piC/L	None	N/A
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Quality Control Samples		
Results of Blank Canisters:       The office blanks, and lab transit blanks had test results of less than the laboratory detection limit of 0.3 pCi/L.		
Adequate Laboratory Precision?	Review of the duplicate sample analysis indicates that adequate laboratory measurement precision was achieved.	
Spike Sample Analysis:	The Spike sample analysis results indicate the laboratory is operating within statistical control limits.	

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

Sincerely,

Mr. Tyler P. McCleaf Radon Measurement Provider 111004 RT

KCI Technologies, Inc.

Attachments:

A- Floor Plan with Test Locations

B - Tables 1-3, Radon Test Summary Spreadsheets

C- Laboratory Analytical Results

# ATTACHMENT A

Floor Plan With Test Locations

# ATTACHMENT B

Radon Test Summary Spreadsheet

### Table Notes:

- AC- Activated Charcoal
- ACI- Air Chek, Inc.
- D- Duplicate
- FB- Field Blank
- KCI- KCI Technologies, Inc.
- **OB- Office Blank**
- PM- Project Manager
- QC- Quality Control

Table 1- Radon Testing Results						
	Briggs Chaney Middle School Test Period: 12/16/2019-12/19/2019					
lest	Period: 12/16/2019-12/19	/2019				
Kit Number	Room / Area	Result				
9339323	BLDG SERVICES	0.7				
9339326	30	0.6				
9339327	20	0.8				
9339328	35	< 0.3				
9339329	IMC WORK RM	< 0.3				
9339330	40	< 0.3				
9339331	IMC WORK ROOM	0.5				
9339332	IMC	< 0.3				
9339333	IMC	< 0.3				
9339334	APR	< 0.3				
9339335	COMM. LAB	< 0.3				
9339336	STUDENT SERVICES	1				
9339337	APR	0.6				
9339338	BACK GYM	< 0.3				
9339339	AUX GYM	< 0.3				
9339340	AUX GYM	< 0.3				
9339341	AUX GYM	< 0.3				
9339342	PE OFFICE 2	0.6				
9339343	PE OFFICE 1	< 0.3				
9339344	GYM	0.6				
9339345	GYM	0.6				
9339346	LAB 6	< 0.3				
9339347	11B	< 0.3				
9339348	3A	1				
9339349	4	< 0.3				
9339350	3	< 0.3				
9339351	4	0.9				
9339352	5	0.6				
9339353	6	0.5				
9339354	7	1.6				
9339355	TEAM RM A	0.6				
9339356	MAIN ROOM 6B	0.5				
9339357	44	0.0				
9339358	9	< 0.3				
9339359	42	0.6				
9339360	10	< 0.3				
9339361	10	< 0.3				
9339362	10	< 0.3				
9339363	12	< 0.3				
9339364	13	0.6				
9339365	13 14B	1.2				
9339366	BACK OFFICE	< 0.3				
9339367	14A	3.2				
9339368	BACK OFFICE C	< 0.3				
9339369	BACK OFFICE B	0.7				
9339369	ACTIVITY ROOM	< 0.3				
9339370	ACTIVITY ROOM	0.7				
9339371	15B	< 0.3				
9339372	15B 15A	< 0.3 1.3				
9339373	16	0.9				
9009014	10	0.9				

9339375	17B	0.7
9339376	17A	MISSING
9339377	RM 17	0.8
9339378	RM 18	0.7
9339379	RM 18	< 0.3
9339380	RM 18	0.7
9339381	RM 19	< 0.3
9339382	MAIN K	< 0.3
9339383	MAIN SSS	0.8
9339384	MAIN WORK ROOM	< 0.3
9339385	MAIN O	0.7
9339386	MAIN H	0.5
9339387	MAIN I	< 0.3
9339388	MAIN G	0.9
9339389	MAIN F	< 0.3
9339390	MAIN F	0.6
9339391	MAIN E	1
9339392	MAIN IDA	0.8
9339393	MAIN D CONFERENCE	0.7
9339394	MAIN C	0.6
9339395	MAIN B	0.7
9339396	MAIN D	0.7
9339397	MAIN A	0.9
9339398	RM 2	1.3
9339399	RM 1 OFFICE	0.9
9339400	1	0.6
9341370	OFFICE BLANK	0.9

Table 2- Radon Testing Results						
	Briggs Chaney Middle School					
	Test Period: 12/16	/2019-12/19/2019				
Kit Number	QC Type	Room / Area	Result			
9339390	D	MAIN F	0.6			
9339380	D	RM 18	0.7			
9339379	FB	RM 18	<0.3			
9339371	D	ACTIVITY ROOM	0.7			
9339361	D	10	<0.3			
9339360	FB	10	<0.3			
9339351	D	4	0.9			
9339339	D	AUX GYM	<0.3			
9339341	FB	AUX GYM	<0.3			
9339331	D	IMC WORK ROOM	0.5			
9341377	TRANSIT BLANK	NA	0.5			
9341379	TRANSIT BLANK	NA	< 0.3			
9341380	TRANSIT BLANK	NA	< 0.3			
9341398	TRANSIT BLANK	NA	< 0.3			

Sum	mary of Missed Locations				
	gs Chaney Middle School				
Test Per	iod: 12/16/2019 - 12/19/201	9			
Kit Number	Room/Area	Result			
	NA				

Summary of	Missing, Compromised and >/= 4 pi	C/L Tests
	Briggs Chaney Middle School	
Tes	st Period: 12/16/2019-12/19/2019	
Kit Number	Room/Area	Result
9339376	*17A	MISSING

Table Note:

\* Missing or Compromised Sample

# ATTACHMENT C

Laboratory Analytical Results

### Radon test result report for: BRIGGS CHANEY MS MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
9339341		2019-12-16 @ 3:00 pm	2019-12-19 @ 12:00 pm	< 0.3	2019-12-23
9339400	1	2019-12-16 @ 12:00 pm	2019-12-19 @ 1:00 pm	$0.6 \pm 0.3$	2019-12-23
9339360	10	2019-12-16 @ 2:00 pm	2019-12-19 @ 12:00 pm	< 0.3	2019-12-23
9339361	10	2019-12-16 @ 2:00 pm	2019-12-19 @ 12:00 pm	< 0.3	2019-12-23
9339362	11	2019-12-16 @ 2:00 pm	2019-12-19 @ 12:00 pm	< 0.3	2019-12-23
9339347	11B	2019-12-16 @ 3:00 pm	2019-12-19 @ 12:00 pm	< 0.3	2019-12-23
9339363	12	2019-12-16 @ 2:00 pm	2019-12-19 @ 12:00 pm	< 0.3	2019-12-23
9339364	13	2019-12-16 @ 2:00 pm	2019-12-19 @ 1:00 pm	$0.6 \pm 0.3$	2019-12-23
9339367	14A	2019-12-16 @ 2:00 pm	2019-12-19 @ 12:00 pm	$3.2 \pm 0.4$	2019-12-23
9339365	14B	2019-12-16 @ 2:00 pm	2019-12-19 @ 12:00 pm	$1.2 \pm 0.3$	2019-12-23
9339373	15A	2019-12-16 @ 2:00 pm	2019-12-19 @ 12:00 pm	$1.3 \pm 0.3$	2019-12-23
9339372	15B	2019-12-16 @ 2:00 pm	2019-12-19 @ 12:00 pm	< 0.3	2019-12-23
9339374	16	2019-12-16 @ 2:00 pm	2019-12-19 @ 12:00 pm	$0.9 \pm 0.4$	2019-12-23
9339375	17B	2019-12-16 @ 2:00 pm	2019-12-19 @ 12:00 pm	$0.7 \pm 0.3$	2019-12-23
9339327	20	2019-12-16 @ 4:00 pm	2019-12-19 @ 1:00 pm	$0.8 \pm 0.4$	2019-12-23
9339350	3	2019-12-16 @ 3:00 pm	2019-12-19 @ 1:00 pm	< 0.3	2019-12-23
9339326	30	2019-12-16 @ 4:00 pm	2019-12-19 @ 1:00 pm	$0.6 \pm 0.3$	2019-12-23
9339328	35	2019-12-16 @ 4:00 pm	2019-12-19 @ 1:00 pm	< 0.3	2019-12-23
9339348	3A	2019-12-16 @ 3:00 pm	2019-12-19 @ 1:00 pm	$1.0 \pm 0.4$	2019-12-23
9339351	4	2019-12-16 @ 3:00 pm	2019-12-19 @ 12:00 pm	$0.9 \pm 0.4$	2019-12-23
9339349	4	2019-12-16 @ 3:00 pm	2019-12-19 @ 12:00 pm	< 0.3	2019-12-23
9339330	40	2019-12-16 @ 4:00 pm	2019-12-19 @ 1:00 pm	< 0.3	2019-12-23
9339359	42	2019-12-16 @ 2:00 pm	2019-12-19 @ 12:00 pm	$0.6 \pm 0.3$	2019-12-23
9339357	44	2019-12-16 @ 2:00 pm	2019-12-19 @ 12:00 pm	$0.7 \pm 0.3$	2019-12-23
9339352	5	2019-12-16 @ 3:00 pm	2019-12-19 @ 12:00 pm	$0.6 \pm 0.3$	2019-12-23
9339353	6	2019-12-16 @ 3:00 pm	2019-12-19 @ 12:00 pm	$0.5 \pm 0.4$	2019-12-23
9339354	7	2019-12-16 @ 3:00 pm	2019-12-19 @ 12:00 pm	$1.6 \pm 0.4$	2019-12-23
9339358	9	2019-12-16 @ 2:00 pm	2019-12-19 @ 12:00 pm	< 0.3	2019-12-23
9339370	ACTIVITY ROOM	2019-12-16 @ 2:00 pm	2019-12-19 @ 12:00 pm	< 0.3	2019-12-23
9339371	ACTIVITY ROOM	2019-12-16 @ 2:00 pm	2019-12-19 @ 12:00 pm	$0.7 \pm 0.4$	2019-12-23
9339337	APR	2019-12-16 @ 3:00 pm	2019-12-19 @ 12:00 pm	$0.6 \pm 0.4$	2019-12-23
9339334	APR	2019-12-16 @ 3:00 pm	2019-12-19 @ 12:00 pm	< 0.3	2019-12-23
9339340	AUX GYM	2019-12-16 @ 3:00 pm	2019-12-19 @ 12:00 pm	< 0.3	2019-12-23
9339339	AUX GYM	2019-12-16 @ 3:00 pm	2019-12-19 @ 12:00 pm	< 0.3	2019-12-23
9339338	BACK GYM	2019-12-16 @ 3:00 pm	2019-12-19 @ 12:00 pm	< 0.3	2019-12-23
9339366	BACK OFFICE	2019-12-16 @ 2:00 pm	2019-12-19 @ 12:00 pm	< 0.3	2019-12-23
9339369	BACK OFFICE B	2019-12-16 @ 2:00 pm	2019-12-19 @ 12:00 pm	$0.7 \pm 0.4$	2019-12-23

### Radon test result report for: BRIGGS CHANEY MS MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
339368	BACK OFFICE C	2019-12-16 @ 2:00 pm	2019-12-19 @ 12:00 pm	< 0.3	2019-12-23
9339323	BLDG SERVICES	2019-12-16 @ 4:00 pm	2019-12-19 @ 12:00 pm	$0.7 \pm 0.3$	2019-12-23
9339335	COMM. LAB	2019-12-16 @ 4:00 pm	2019-12-19 @ 1:00 pm	< 0.3	2019-12-23
9339345	GYM	2019-12-16 @ 3:00 pm	2019-12-19 @ 12:00 pm	$0.6 \pm 0.3$	2019-12-23
9339344	GYM	2019-12-16 @ 3:00 pm	2019-12-19 @ 12:00 pm	$0.6 \pm 0.4$	2019-12-23
9339333	IMC	2019-12-16 @ 4:00 pm	2019-12-19 @ 1:00 pm	< 0.3	2019-12-23
9339332	IMC	2019-12-16 @ 4:00 pm	2019-12-19 @ 1:00 pm	< 0.3	2019-12-23
9339329	IMC WORK RM	2019-12-16 @ 4:00 pm	2019-12-19 @ 1:00 pm	< 0.3	2019-12-23
9339331	IMC WORK ROOM	2019-12-16 @ 4:00 pm	2019-12-19 @ 1:00 pm	$0.5 \pm 0.3$	2019-12-23
9339346	LAB 6	2019-12-16 @ 3:00 pm	2019-12-19 @ 12:00 pm	< 0.3	2019-12-23
9339397	MAIN A	2019-12-16 @ 1:00 pm	2019-12-19 @ 11:00 am	$0.9 \pm 0.4$	2019-12-23
9339395	MAIN B	2019-12-16 @ 1:00 pm	2019-12-19 @ 11:00 am	$0.7 \pm 0.3$	2019-12-23
9339394	MAIN C	2019-12-16 @ 1:00 pm	2019-12-19 @ 11:00 am	$0.6 \pm 0.3$	2019-12-23
9339396	MAIN D	2019-12-16 @ 1:00 pm	2019-12-19 @ 11:00 am	$0.7 \pm 0.4$	2019-12-23
9339393	MAIN D CONFERENCE	2019-12-16 @ 1:00 pm	2019-12-19 @ 11:00 am	$0.7 \pm 0.4$	2019-12-23
9339391	MAIN E	2019-12-16 @ 1:00 pm	2019-12-19 @ 11:00 am	$1.0 \pm 0.4$	2019-12-23
9339390	MAIN F	2019-12-16 @ 1:00 pm	2019-12-19 @ 11:00 am	$0.6 \pm 0.3$	2019-12-23
9339389	MAIN F	2019-12-16 @ 1:00 pm	2019-12-19 @ 11:00 am	< 0.3	2019-12-23
9339388	MAIN G	2019-12-16 @ 1:00 pm	2019-12-19 @ 11:00 am	$0.9 \pm 0.4$	2019-12-23
9339386	MAIN H	2019-12-16 @ 1:00 pm	2019-12-19 @ 11:00 am	$0.5 \pm 0.4$	2019-12-23
9339387	MAIN I	2019-12-16 @ 1:00 pm	2019-12-19 @ 11:00 am	< 0.3	2019-12-23
9339392	MAIN IDA	2019-12-16 @ 1:00 pm	2019-12-19 @ 11:00 am	$0.8 \pm 0.3$	2019-12-23
9339382	MAIN K	2019-12-16 @ 1:00 pm	2019-12-19 @ 12:00 pm	< 0.3	2019-12-23
9339385	MAIN O	2019-12-16 @ 1:00 pm	2019-12-19 @ 11:00 am	$0.7 \pm 0.4$	2019-12-23
9339356	MAIN ROOM 6B	2019-12-16 @ 2:00 pm	2019-12-19 @ 12:00 pm	$0.5 \pm 0.3$	2019-12-23
9339383	MAIN SSS	2019-12-16 @ 1:00 pm	2019-12-19 @ 12:00 pm	$0.8 \pm 0.4$	2019-12-23
9339384	MAIN WORK ROOM	2019-12-16 @ 1:00 pm	2019-12-19 @ 11:00 am	< 0.3	2019-12-23
9339343	PE OFFICE 1	2019-12-16 @ 3:00 pm	2019-12-19 @ 12:00 pm	< 0.3	2019-12-23
9339342	PE OFFICE 2	2019-12-16 @ 3:00 pm	2019-12-19 @ 12:00 pm	$0.6 \pm 0.4$	2019-12-23
9339399	<b>RM 1 OFFICE</b>	2019-12-16 @ 12:00 pm	2019-12-19 @ 12:00 pm	$0.9 \pm 0.3$	2019-12-23
9339377	RM 17	2019-12-16 @ 2:00 pm	2019-12-19 @ 12:00 pm	$0.8 \pm 0.3$	2019-12-23
9339380	RM 18	2019-12-16 @ 1:00 pm	2019-12-19 @ 12:00 pm	$0.7 \pm 0.4$	2019-12-23
9339378	RM 18	2019-12-16 @ 1:00 pm	2019-12-19 @ 12:00 pm	$0.7 \pm 0.3$	2019-12-23
9339379	RM 18	2019-12-16 @ 1:00 pm	2019-12-19 @ 12:00 pm	< 0.3	2019-12-23
9339381	RM 19	2019-12-16 @ 1:00 pm	2019-12-19 @ 1:00 pm	< 0.3	2019-12-23
9339398	RM 2	2019-12-16 @ 1:00 pm	2019-12-19 @ 1:00 pm	$1.3 \pm 0.3$	2019-12-23
9339336	STUDENT SERVICES	2019-12-16 @ 4:00 pm	2019-12-19 @ 12:00 pm	$1.0 \pm 0.3$	2019-12-23

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

### Radon test result report for: BRIGGS CHANEY MS MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
9339355	TEAM RM A	2019-12-16 @ 2:00 pm	2019-12-19 @ 12:00 pm	$0.6 \pm 0.3$	2019-12-23

EXPOSURE IN BOWSER-MORNER RADON CHAMBER KCI Technologies Ine Job Number 193598 CLIENT NOMINAL Conditions: Radon Conc\_ \_\_\_pCi/L Rel. Hum \_\_\_\_\_ % Temp. F Date Start: 12/22/19 Date Stop: 12/23/19 Time Start: <u>Q815</u> Time Stop: <u>Q815</u> (Graup 1) Device No.'s: (20) Chan. Bags-C 0 N N S R 9340020 9340001 thru femp °F Avg pCi/l RH % SS Date Start: 12/21/19 Date Stop: 12/23/19 Time Start: 0829 Time Stop: 0820 (Gray 2) Device No.'s: (20) Char. Bags-70, 70, 30. 9340040 9340021 thro femp °F Avg pCi/l RH % 54 Date Start: 12/21/19 Date Stop: 12/23/19 Time Start: 0825 Time Stop: 0823 (Group 3) Device No.'s: (20) Char. 3 , O L 5 0 S 9340041 9340060 thno emp °F Avg pCi/L RH % 93

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

January 3, 2020

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

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

Radon test result report for: **S** 

N/A

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
9340048	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	$25.5 \pm 2.4 \text{ D}$	2020-01-03
9340021	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	26.7 ± 2.6 D	2020-01-03
9341707	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	$25.8 \pm 2.4 \text{ D}$	2020-01-03
9340053	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	25.8 ± 2.5 D	2020-01-03
9340058	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	28.5 ± 2.7 D	2020-01-03
9340026	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	25.9 ± 2.4 D	2020-01-03
9341712	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	$24.3 \pm 2.4 \text{ D}$	2020-01-03
9340080	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	25.1 ± 2.4 D	2020-01-03
9340063	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	25.8 ± 2.5 D	2020-01-03
9340031	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	$24.9 \pm 2.4 \text{ D}$	2020-01-03
9341717	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	25.7 ± 2.4 D	2020-01-03
9340085	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	26.9 ± 2.5 D	2020-01-03
9340068	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	26.2 ± 2.5 D	2020-01-03
9340036	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	23.6 ± 2.3 D	2020-01-03
9340004	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	$26.9 \pm 2.6 \text{ D}$	2020-01-03
9340090	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	26.3 ± 2.5 D	2020-01-03
9340073	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	26.8 ± 2.5 D	2020-01-03
9340041	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	25.6 ± 2.4 D	2020-01-03
9340009	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	24.1 ± 2.4 D	2020-01-03
9340095	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	25.2 ± 2.5 D	2020-01-03
9340100	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	$24.5 \pm 2.4 \text{ D}$	2020-01-03
9340078	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	$25.0 \pm 2.4 \text{ D}$	2020-01-03
9340046	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	$28.0 \pm 2.6 \text{ D}$	2020-01-03
9340014	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	21.8 ± 2.8 D	2020-01-03
9340019	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	$26.0 \pm 2.5 \text{ D}$	2020-01-03
9341705	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	$27.8 \pm 2.6 \text{ D}$	2020-01-03
9340051	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	$25.5 \pm 2.4 \text{ D}$	2020-01-03
9340056	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	27.7 ± 2.6 D	2020-01-03
9340024	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	28.3 ± 2.5 D	2020-01-03
9341710	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	24.2 ± 2.3 D	2020-01-03
9340061	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	$28.9\pm2.6~\mathrm{D}$	2020-01-03
9340029	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	$23.0 \pm 2.3 \text{ D}$	2020-01-03
9341715	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	$27.0 \pm 2.5 \text{ D}$	2020-01-03
9340083	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	$24.9 \pm 2.4 \text{ D}$	2020-01-03
9340066	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	25.1 ± 2.4 D	2020-01-03
9340034	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	26.4 ± 2.5 D	2020-01-03
9341720	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	25.3 ± 2.5 D	2020-01-03

Radon test result report for: **S** 

N/A

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

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

 $\frac{\text{Radon test result report for:}}{S}$ 

## N/A

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



ENGINEERS • PLANNERS • SCIENTISTS • CONSTRUCTION MANAGERS Corporate Office: 936 Ridgebrook road • Sparks, Maryland 21152 • 410-316-7800 • (Fax) 410-316-7935

# Radon Test Kit Chain of Custody

Project Name: MCPS Radon 2019 Week 2

Name of Schools:

- 1. Argyle M.S.
- 2. Banneker M.S.
- 3. Bel Pre E.S.
- 4. Bells Mill E.S.
- 5. Bethesda Maintenance Depot
- 6. Beverly Farms E.S.
- 7. Blake H.S.
- 8. Dufief E.S.
- 9. Briggs Chaney M.S.
- 10. Brookhaven E.S.
- 11. Burtonsville E.S.
- 12. Cabin John M.S.

- 13. Candelwood E.S.
- 14. Drew E.S.
- 15. Fallsmead E.S.
- 16. Farquhar M.S.
- 17. Kennedy H.S.
- 18. Luxmanor E.S.
- 19. Magruder H.S.
- 20. Redland M.S.
- 21. Shriver E.S.
- 22. Smith Center
- 23. Viers Mill E.S.
- 24. Wheaton H.S.

	Date	Initials
Radon Test Kits Deployed	12/16/19 to 12/17/19	M
Radon Test Kits Collected	12/19/19 to 12/20/19	m
Radon Test Kits Shipped to Lab*	12/20/19	Th
Radon Test Kits Received by Lab*	12/23/19	TW

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

# RADON SCREENING SURVEY – FOLLOW-UP BRIGGS CHANEY MIDDLE SCHOOL

### 1901 Rainbow Drive,

# Silver Spring, Maryland 20905

## EXECUTIVE SUMMARY

Date of Test Report:	3/20/19	
Round of Testing:	Initial	
	Follow-up	
	Post Remediation	
# Rooms Tested	2	
# Rooms <u>≥</u> 4.0 pCi/L:	0	
Low Value:	<0.4	
High Value:	1.4	
Confirmed Rooms ≥ 4.0 pCi/L US EPA	0	
Action Level		

## Summary of Sampling Events ≥ 4.0 pCi/L

Room	Result (pCi/L) 2/21/19	Result (pCi/L) 3/20/19	Average Result (pCi/L)
14A	4.7	1.4	3.1
Special Service 42		<0.4	<0.4

# (in)



# MONTGOMERY COUNTY PUBLIC SCHOOLS RADON TESTING

# Executive Summary:

**Briggs Chaney Middle School** 

1901 Rainbow Drive, Silver Spring, MD 20905

Date of Test Report:	3/20/2019
Round of Testing:	Initial
	Follow-up
	Post Remediation
	2 Year Testing
	5 Year Testing
	HVAC Upgrade
	Window Replacement
	New Addition
	New Facility
# of Rooms Tested:	2
# of Rooms ≥ 4.0 pCi/L:	0
Low Value:	<0.4
High Value:	1.4

# Project Status

Retesting completed: No further action at this time.



March 20, 2019

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

**Re: Radon Testing Services** 

Location: Briggs Chaney Middle School 1901 Rainbow Drive, Silver Spring, MD 20905

Dear Mr. Cox:

Intertek-PSI (PSI) is pleased to submit the following report to the Montgomery County Public Schools (MCPS) for completion of a "short-term" 3-day radon test for Briggs Chaney Middle School, located 1901 Rainbow Drive, Silver Spring, MD 20905 (subject site).

#### **Scope of Services:**

PSI conducted radon testing at the subject site to evaluate indoor radon levels relative to the USEPA's recommended action level of 4.0 picocuries per Liter (pCi/L) - the level at which EPA recommends that schools take action to reduce the level. PSI conducted the radon testing in accordance with American Association of Radon Scientists and Technologists (AARST) Protocol for Conducting Measurements of Radon and Radon Decay Products in Schools and Large Buildings. A National Radon Safety Board (NRSB) Radon Measurement Specialist (certification #14SS007) supervised the testing. Additional information on radon management and the health effects of radon exposure is available from www.montgomerycountymd.gov/dep/air/radon or www.epa.gov/radon.

PSI visited the site on February 25, 2019 and deployed two (2) activated charcoal (AC) radon test kit. PSI deployed radon test kits in frequently-occupied ground contact rooms, and other areas, (if applicable) in accordance with AARST guidance. PSI returned to the site on February 28, 2019 to retrieve the radon sampling test kit. A floor plan map of the building with the test location is included as Attachment A of this report.

PSI shipped all radon tests via overnight delivery to AccuStar Labs for analysis by gamma-ray spectroscopy. Accustar Labs is a NRSB certified analytical laboratory for radon analysis located at 929 Mount Zion Road, Lebanon, Pennsylvania (certification # ARL0007).

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

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

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



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

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

#### **Results:**

The results of the radon test analysis indicated the following:

Radon Concentration	Room	Result
≥ 4.0 pCi/L	None	NA
≤ 4.0 pCi/L	See Attack	nment B

Notes:

D -Duplicate Sample

The office blank and lab transit blanks had test results of less than the laboratory detection limit of 0.4 pCi/L. Review of the duplicate sample analysis indicates that adequate laboratory measurement precision was achieved. The Spike sample analysis results indicate the laboratory is operating within statistical control limits.

The sampling locations, field observations, and analytical results are listed on Table 1 (Attachment B). The laboratory analytical results are also attached (Attachment C).

Laboratory results and exposure data for the spike samples are also included in Attachment C. Our professional services have been performed in accordance with customary principles and practices in the field of industrial hygiene and engineering. If you have any questions or comments regarding this report, please feel free to contact me at (703) 698-9300.

Respectfully Submitted,

**INTERTEK-PSI** 

Non-April Jourth

Nand Kaushik, P.E. Department Manager, Environmental Services Nand.Kaushik@intertek.com

Attachments:

A – Floor Plan with Test Locations

B – Table 1 – Radon Test Summary Spreadsheet

C – Laboratory Analytical Results

# ATTACHMENT B

Radon Test Summary Spreadsheet

Radon Testing Results		
Briggs Chaney Middle School		
Testing period: 2/25/19 - 2/28/19		
Kit Number Room / Area Result (pCi/L)		
3923458 Room 14A 1.4		
3923454	Special Services (42)	<0.4

# Table Notes:

- D Duplicate
- FB Field Blank
- OB Office Blank
- TB Transit Blank
- QC Quality Control

# ATTACHMENT C

Laboratory Analytical Results



NRPP 105011 AL

NRSB ARL0007

## Radon in Air

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

Laboratory Report for:

Property Tested: Project # 04481387-1

Intertek-PSI (VA)	MCPS Radon Survey Briggs Chaney
2930 Eskridge Road	1901 Rainbow Drive
Fairfax VA 22031	Silver Spring MD 20905

Log Number	Device Number	Test Exposure [	Duration:	Area Tested	Result pCi/L
3220608	3923458 02/25/2019	) 11:50 am 02/28	3/2019 11:41 am	Floor Main Room 14A	1.4
3220609	3923454 02/25/2019	9 11:50 am 02/28	3/2019 11:41 am	Floor Main Room Special Services (42)	< 0.4

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

Distributed by: Intertek-PSI (VA)
Date Received: 03/04/2019 Date Logged: 03/04/2019 Date Analyzed: 03/04/2019 Date Reported: 03/05/2019

 Report Reviewed By:
 Mark
 Report Approved By:
 Mark
 Stawn Price, Director of Laboratory Operations, AccuStar Labs

 Disclaimer:
 Shawn Price, Director of Laboratory Operations, AccuStar Labs

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

 This report may only be transferred to a third party in its entirety. Analytical results relate to the samples AS RECEIVED BY THE LABORATORY. Results shown on this report may only be transferred to a third party in its entirety. Analytical results relate to the samples AS RECEIVED BY THE LABORATORY. Results shown on this report may only be transferred to a third party in its entirety. Analytical results relate to the samples AS RECEIVED BY THE LABORATORY. Results shown on this report may only be transferred to a third party in its entirety erg supportive of measurements conducted in any area of this structure at any other time.

written interpretation of the results.

AccuStar Labs, its employees and agents are not responsible for the consequences of any action taken or not taken based upon the results reported or any verbal or



# MONTGOMERY COUNTY PUBLIC SCHOOLS RADON TESTING

# Executive Summary: Briggs Chaney Middle School

1901 Rainbow Drive, Silver Spring, MD 20905

Date of Test Report:	02/21/2019
Round of Testing:	Initial
include of resting.	Follow-up
	Post Remediation
	2 Year Testing
	5 Year Testing
	HVAC Upgrade
	Window Replacement
	New Addition
	New Facility
# of Rooms Tested:	79
# of Rooms ≥ 4.0 pCi/L:	1
Low Value:	< 0.4
High Value:	4.7
Rooms with Results ≥ 4.0 pCi/L:	14A

#### **Project Status**

Initial testing complete: Re-test needed for results ≥ 4.0 pCi/L. Missing or compromised samples need re-test. (in)

February 21, 2019

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

**Re: Radon Testing Services** 

Location: Briggs Chaney Middle School 1901 Rainbow Drive, Silver Spring, MD 20905

Dear Mr. Cox:

Intertek-PSI (PSI) is pleased to submit the following report to the Montgomery County Public Schools (MCPS) for completion of a "short-term" 3-day radon test for Briggs Chaney Middle School, located 1901 Rainbow Drive, Silver Spring, MD 20905 (subject site).

#### **Scope of Services:**

PSI conducted radon testing at the subject site to evaluate indoor radon levels relative to the USEPA's recommended action level of 4.0 picocuries per Liter (pCi/L) - the level at which EPA recommends that schools take action to reduce the level. PSI conducted the radon testing in accordance with American Association of Radon Scientists and Technologists (AARST) Protocol for Conducting Measurements of Radon and Radon Decay Products in Schools and Large Buildings. A National Radon Safety Board (NRSB) Radon Measurement Specialist (certification #14SS007) supervised the testing. Additional information on radon management and the health effects of radon exposure is available from www.montgomerycountymd.gov/dep/air/radon or www.epa.gov/radon.

PSI visited the site on November 13, 2018 and deployed ninety-nine (99) activated charcoal (AC) radon test kits. PSI deployed radon test kits in frequently-occupied ground contact rooms, and other areas, (if applicable) in accordance with AARST guidance. PSI returned to the site on November 16, 2018 to retrieve the radon sampling test kits. A floor plan map of the building with the test locations is included as Attachment A of this report.

As a quality control measure, PSI included duplicate samples, field blanks, lab transit blanks, and office blanks in accordance with AARST recommendations. In addition, PSI submitted ten (10) test kits to Bowser-Morner Inc. as spike samples. The spiked tests were exposed to a known radon concentration by Bowser-Morner Inc. prior to being returned to the laboratory for analysis.

PSI shipped all radon tests via overnight delivery to AccuStar Labs for analysis by gamma-ray spectroscopy. Accustar Labs is a NRSB certified analytical laboratory for radon analysis located at 929 Mount Zion Road, Lebanon, Pennsylvania (certification # ARL0007) and 2 Saber Way, Haverhill, Massachusetts (certification # ARL0017).



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.

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

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

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

#### **Results:**

The results of the radon test analysis indicated the following:

Radon Concentration	Room	Result
≥ 4.0 pCi/L	14A	4.7
≤ 4.0 pCi/L	See Attack	nment B
Notes:		

D -Duplicate Sample

The office blank and lab transit blanks had test results of less than the laboratory detection limit of 0.4 pCi/L. Review of the duplicate sample analysis indicates that adequate laboratory measurement precision was achieved. The Spike sample analysis results indicate the laboratory is operating within statistical control limits.

The sampling locations, field observations, and analytical results are listed on Table 1 (Attachment B). The laboratory analytical results are also attached (Attachment C).

Laboratory results and exposure data for the spike samples are also included in Attachment C. Our professional services have been performed in accordance with customary principles and practices in the field of industrial hygiene and engineering. If you have any questions or comments regarding this report, please feel free to contact me at (703) 698-9300.



Respectfully Submitted,

#### **INTERTEK-PSI**

Non-Ame Jewlih

Nand Kaushik, P.E. Department Manager, Environmental Services Nand.Kaushik@intertek.com

Attachments:

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

# ATTACHMENT B

Radon Test Summary Spreadsheet

	Radon Testing Results Briggs Chaney Middle School	
	Testing period: 11/13/18 - 11/16/18	)
Kit Number	Room / Area	
	•	Result (pCi/L
3916272	1	<0.4
3918105	2	1.7
3918063	3	<0.4
3918067	3A	<0.4
3918062	4	<0.4
3918061	5	<0.4
3918100	6	<0.4
3918098	7	0.4
3918095	8	0.5
3918094	9	<0.4
3918092	10	<0.4
3918109	11	<0.4
3918108	12	<0.4
3918102	13	<0.4
3918129	16	<0.4
3918128	17	0.5
3918127	18	0.4
3918126	19	<0.4
3918087	20	0.9
3918088	39	<0.4
3916274	1 Office	2.3
3918091	11B	0.4
3918150	14A	4.7
3918110	14A Calm Room	<0.4
3918080	14B	0.6
3918106	14B Calm Room	1.8
3918078	14B Office 1	1.8
3918073	14B Office 2	2.1
3918072	15A	0.6
3918076	15A Office 1	0.8
3918077	15A Office 2	1.9
3918149	15B	0.7
3918075	15B Office 1	1.2
3918147	15B Office 2	0.8
3918074	16 Office	0.4
3918130	17 Office	1.1
3918085	Boy's Locker Room	1.5
3918082	Boy's Locker Room	<0.4
3881212	Bridge Gym	0.4
3918104	Bridge Office 1	0.4
3918079	Bridge Office 2	1.9
3918146	Bridge Office 3	3.0
3918071	Building Services	0.6

	Radon Testing Results		
	Briggs Chaney Middle School		
	Testing period: 11/13/18 - 11/16/18		
Kit Number	Room / Area	Result (pCi/L)	
3918151	Building Services	1.8	
3918144	Building Services	<0.4	
3916273	Cafeteria/APR	1.0	
3918086	Cafeteria/APR	1.2	
3918093	Computer Lab 6	<0.4	
3918081	Computer Lab 7	<0.4	
3918002	Conference D	<0.4	
3918064	Dance Studio	<0.4	
3918069	Exercise Room	0.5	
3918090	Girl's Locker Room	1.6	
3918083	Girl's Locker Room	<0.4	
3918065	Gym	<0.4	
3918066	Gym	<0.4	
3918143	Health Office	<0.4	
3918134	IDA	1.5	
3918152	Kitchen	<0.4	
	Media Studio (MISSED)		
3918124	Media Center	<0.4	
3918125	Media Center	<0.4	
3918122	Media Center Work Room	<0.4	
3918123	Media Center Work Room Office	0.9	
3918003	Office A	0.6	
3918103	Office B	<0.4	
3918145	Office C	0.6	
3918131	Office D	0.4	
3918132	Office E	<0.4	
3916202	Office F	1.2	
3918001	Office G	0.9	
3918157	Office H	0.4	
3918158	Office I	0.5	
3918155	Office J	1.2	
3918155	Office K	0.7	
3916198	Office M	1.1	
3916198	Office N	1.1	
3918159	Office O		
		0.9	
3918084	PE Men's Office PE Women's office	1.1 <0.4	
3918070			
3918154	Security Office	0.8	
	Special Services (MISSED)		
3918141	SSS	0.5	
3918101	Student Services	1.3	
3918097	TM 6A	1.5	
3918099	TM 6B	<0.4	

Radon Testing Results		
Briggs Chaney Middle School		
Testing period: 11/13/18 - 11/16/18		
Kit Number	Kit Number Room / Area Result (pCi/L)	
3918153 TV Studio <0.4		
3918135	Work Room	0.4

Radon Testing Results			
Briggs Chaney Middle School			
Те	sting period: 11/13/18 - 11/16/	/18	
Kit Number	QC Type	Result (pCi/L)	
3916271	1 (D)	1.7	
3918096	8 (D)	<0.4	
3918148	14B Office 2 (D)	1.0	
3918121	18 (D)	0.5	
3918107	Bridge Office 3 (D)	0.6	
3916276	Cafeteria/APR (D)	0.4	
3918068	Gym (D)	0.8	
3918156	Office K (D)	<0.4	
3918142	SSS (D)	<0.4	
3916034	Field Blank	<0.4	
3918187	Field Blank	<0.4	
3918021	Office Blank	<0.4	
3916031	Trip Blank	0.6	

# Table Notes:

- D Duplicate
- FB Field Blank
- OB Office Blank
- TB Transit Blank
- QC Quality Control

# ATTACHMENT C

Laboratory Analytical Results



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

Property Tested: Project # 04481387-1

Intertek-PSI (VA)	MCPS Radon Survey
2930 Eskridge Road	Briggs Chaney Middle School
Fairfax VA 22031	Silver Spring MD 20905

Log Device Number Number	Test Exposure Duration:	Area Tested	Result pCi/L
2395261 3918086 11/13/2	018 1:59 pm 11/16/2018 10:42	am Briggs Chaney Middle School Flr 1 Rm Café/APR	1.2
2395262 3918071 11/13/2	018 2:00 pm 11/16/2018 10:31	am Briggs Chaney Middle School Flr 1 Rm Bldg Srvs.	0.6
2395263 3918152 11/13/2	018 2:10 pm 11/16/2018 10:41	am Briggs Chaney Middle School Flr 1 Rm Kitchen	< 0.4
2395264 3918101 11/13/2	018 2:11 pm 11/16/2018 10:42	am Briggs Chaney Middle School Flr 1 Rm Student S	1.3
2395265 3918144 11/13/2	018 2:15 pm 11/16/2018 10:42	am Briggs Chaney Middle School Flr 1 Rm Building S	< 0.4
2395266 3918151 11/13/2	018 2:19 pm 11/16/2018 10:44	am Briggs Chaney Middle School Flr 1 Rm Building S	1.8
2395267 3918105 11/13/2	018 2:19 pm 11/16/2018 10:45	am Briggs Chaney Middle School Floor 1 Room 2	1.7
2395268 3916272 11/13/2	018 2:19 pm 11/16/2018 10:45	am Briggs Chaney Middle School Floor 1 Room 1	< 0.4
2395269 3916271 11/13/2	018 2:19 pm 11/16/2018 10:45	am Briggs Chaney Middle School Floor 1 Room 1	1.7
2395270 3918081 11/13/2	018 2:16 pm 11/16/2018 10:45	am Briggs Chaney Middle School Flr 2 Rm Comp 7	< 0.4
2395271 3918087 11/13/2	018 2:17 pm 11/16/2018 10:45	am Briggs Chaney Middle School Flr 2 Rm 20	0.9

**Comment:** AMENDED REPORT for 3918146, 47 and 3918003 on 2/5/2019 to include the dates and times the tests began and ended and the areas tested. To complete 3918135 please supply missing dates, times and test locations.

Distributed by: Intertek-PSI (VA)

Date Received: 11/19/2018 Date Logged:

11/19/2019

Date Analyzed: 11/20/2018 Date Reported: 01/30/2019

#### **Disclaimer:**

Report Reviewed By: \_\_\_\_\_\_

Report Approved By: Shawn Price, Director of Laboratory Operations, AccuStar Labs

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



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

Laboratory Report for:

Property Tested: Project # 04481387-1

Intertek-PSI (VA)	MCPS Radon Survey
2930 Eskridge Road	Briggs Chaney Middle School
Fairfax VA 22031	Silver Spring MD 20905

Log Number	Device Number		Test Expo	sure Duratio	on:	Area Tested		Result pCi/L
2395272	3918088	11/13/2018	2:18 pm	11/16/2018	10:45 am	Briggs Chaney Middle School I	Flr 2 Rm 39	< 0.4
2395273	3916274	11/13/2018	2:25 pm	11/16/2018	10:45 am	Briggs Chaney Middle School I	Flr 1 Rm 1 Office	2.3
2395274	3916034	11/13/2018	12:09 pm	11/16/2018	10:45 am	Briggs Chaney Middle School		< 0.4
2395275	3918187	11/13/2018	12:09 pm	11/16/2018	10:45 am	Briggs Chaney Middle School		< 0.4
2395276	3918021	11/13/2018	6:00 am	11/16/2018	10:45 am	Briggs Chaney Middle School		< 0.4
2395277	3916031	11/13/2018	6:00 am	11/16/2018	10:45 am	Briggs Chaney Middle School		0.6
2395278	3916196	11/13/2018	12:10 pm	11/16/2018	9:39 am	Briggs Chaney Middle School I	Flr 1 Rm Office N	1.5
2395279	3916198	11/13/2018	12:11 pm	11/16/2018	9:39 am	Briggs Chaney Middle School I	Flr 1 Rm Office M	1.1
2395280	3918103	11/13/2018	12:12 pm	11/16/2018	9:40 am	Briggs Chaney Middle School I	Flr 1 Rm Office B	< 0.4
2395281	3918143	11/13/2018	12:14 pm	11/16/2018	9:42 am	Briggs Chaney Middle School I	Flr 1 Rm Health Off	< 0.4
2395282	3918145	11/13/2018	12:05 pm	11/16/2018	9:42 am	Briggs Chaney Middle School I	Flr 1 Rm Office C	0.6

**Comment:** AMENDED REPORT for 3918146, 47 and 3918003 on 2/5/2019 to include the dates and times the tests began and ended and the areas tested. To complete 3918135 please supply missing dates, times and test locations.

Distributed by: Intertek-PSI (VA)

Date Received: 11/19/2018 Date Logged:

: 11/19/2019

Date Analyzed: 11/20/2018 Date Reported: 01/30/2019

#### **Disclaimer:**

Report Reviewed By: \_\_\_\_\_\_

Report Approved By: Shawn Price, Director of Laboratory Operations, AccuStar Labs

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



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

Property Tested: Project # 04481387-1

Intertek-PSI (VA)	MCPS Radon Survey				
2930 Eskridge Road	Briggs Chaney Middle School				
Fairfax VA 22031	Silver Spring MD 20905				

Log Number	Device Number		Test Expo	sure Duratio	on:	Area Tested			Result pCi/L
2395283	3918131	11/13/2018	12:16 pm	11/16/2018	9:41 am	Briggs Chaney Middle School	Flr 1	Rm Office D	0.4
2395284	3918141	11/13/2018	12:18 pm	11/16/2018	9:42 am	Briggs Chaney Middle School	Flr 1	Rm SSS	0.5
2395285	3918142	11/13/2018	12:18 pm	11/16/2018	9:42 am	Briggs Chaney Middle School	Flr 1	Rm SSS	< 0.4
2395286	3918002	11/13/2018	12:21 pm	11/16/2018	9:43 am	Briggs Chaney Middle School	Flr 1	Rm Conf. D	< 0.4
2395287	3918134	11/13/2018	12:22 pm	11/16/2018	9:44 am	Briggs Chaney Middle School	Flr 1	Rm IDA	1.5
2395288	3918132	11/13/2018	12:23 pm	11/16/2018	9:45 am	Briggs Chaney Middle School	Flr 1	Rm Office E	< 0.4
2395289	3916202	11/13/2018	12:30 pm	11/16/2018	9:45 am	Briggs Chaney Middle School	Flr 1	Rm Office F	1.2
2395290	3918001	11/13/2018	12:24 pm	11/16/2018	9:45 am	Briggs Chaney Middle School	Flr 1	Rm Office G	0.9
2395291	3918157	11/13/2018	12:25 pm	11/16/2018	9:46 am	Briggs Chaney Middle School	Flr 1	Rm Office H	0.4
2395292	3918158	11/13/2018	12:26 pm	11/16/2018	9:46 am	Briggs Chaney Middle School	Flr 1	Rm Office I	0.5
2395293	3918159	11/13/2018	12:27 pm	11/16/2018	10:46 am	Briggs Chaney Middle School	Flr 1	Rm Office O	0.9

**Comment:** AMENDED REPORT for 3918146, 47 and 3918003 on 2/5/2019 to include the dates and times the tests began and ended and the areas tested. To complete 3918135 please supply missing dates, times and test locations.

Distributed by: Intertek-PSI (VA)

Date Received: 11/19/2018 Date Logged:

11/19/2019

Date Analyzed: 11/20/2018 Date Reported: 01/30/2019

**Disclaimer:** 

Report Reviewed By: \_\_\_\_\_\_

Report Approved By:

Shawn Price, Director of Laboratory Operations, AccuStar Labs

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



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

Property Tested: Project # 04481387-1

Intertek-PSI (VA)	MCPS Radon Survey
2930 Eskridge Road	Briggs Chaney Middle School
Fairfax VA 22031	Silver Spring MD 20905

Log Number	Device Number		Test Expo	sure Duratio	on:	Area Tested			Result pCi/L
2395294	3918155	11/13/2018	12:28 pm	11/16/2018	9:46 am	Briggs Chaney Middle School	Flr 1	Rm Office J	1.2
2395295	3918156	11/13/2018	12:29 pm	11/16/2018	9:50 am	Briggs Chaney Middle School	Flr 1	Rm Office K	< 0.4
2395296	3918160	11/13/2018	12:29 pm	11/16/2018	9:51 am	Briggs Chaney Middle School	Flr 1	Rm Office K	0.7
2395297	3918153	11/13/2018	12:30 pm	11/16/2018	9:51 am	Briggs Chaney Middle School	Flr 1	Rm Comm TV	< 0.4
2395298	3918154	11/13/2018	12:33 pm	11/16/2018	9:56 am	Briggs Chaney Middle School	Flr 1	Rm Q Security	0.8
2395299	3918124	11/13/2018	12:34 pm	11/16/2018	9:55 am	Briggs Chaney Middle School	Flr 1	Media Center	< 0.4
2395300	3918125	11/13/2018	12:34 pm	11/16/2018	9:55 am	Briggs Chaney Middle School	Flr 1	Media Center	< 0.4
2395301	3918123	11/13/2018	12:35 pm	11/16/2018	9:57 am	Briggs Chaney Middle School	Flr 1	Media Center	0.9
2395302	3918122	11/13/2018	12:37 pm	11/16/2018	9:58 am	Briggs Chaney Middle School	Flr 1	Media MW	< 0.4
2395303	3918126	11/13/2018	12:44 pm	11/16/2018	9:59 am	Briggs Chaney Middle School	Flr 1	Rm 19	< 0.4
2395304	3918127	11/13/2018	12:45 pm	11/16/2018	10:00 am	Briggs Chaney Middle School	Flr 1	Rm 18	0.4

**Comment:** AMENDED REPORT for 3918146, 47 and 3918003 on 2/5/2019 to include the dates and times the tests began and ended and the areas tested. To complete 3918135 please supply missing dates, times and test locations.

Distributed by: Intertek-PSI (VA)

Date Received: 11/19/2018 Date Logged:

: 11/19/2019

Date Analyzed: 11/20/2018 Date Reported: 01/30/2019

#### **Disclaimer:**

Report Reviewed By: \_\_\_\_\_\_

Report Approved By: Shawn Price, Director of Laboratory Operations, AccuStar Labs

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



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

Laboratory Report for:

Property Tested: Project # 04481387-1

Intertek-PSI (VA)	MCPS Radon Survey
2930 Eskridge Road	Briggs Chaney Middle School
Fairfax VA 22031	Silver Spring MD 20905

Log Number	Device Number		Test Expo	sure Duratic	on:	Area Tested			Result pCi/L
2395305	3918121	11/13/2018	12:46 pm	11/16/2018	10:00 am	Briggs Chaney Middle School	Flr 1	Rm 18	0.5
2395306	3918128	11/13/2018	12:46 pm	11/16/2018	10:04 am	Briggs Chaney Middle School	Flr 1	Rm 17	< 0.4
2395307	3918129	11/13/2018	12:47 pm	11/16/2018	10:04 am	Briggs Chaney Middle School	Flr 1	Rm 16	< 0.4
2395308	3918130	11/13/2018	12:08 pm	11/16/2018	10:05 am	Briggs Chaney Middle School	Flr 1	Rm 17 Office	1.1
2395309	3918074	11/13/2018	12:09 pm	11/16/2018	10:05 am	Briggs Chaney Middle School	Flr 1	Rm 16 Office	0.4
2395310	3918072	11/13/2018	12:52 pm	11/16/2018	10:06 am	Briggs Chaney Middle School	Flr 1	Rm 15A	0.6
2395311	3918149	11/13/2018	12:53 pm	11/16/2018	10:06 am	Briggs Chaney Middle School	Flr 1	Rm 15B	0.7
2395312	3918150	11/13/2018	12:53 pm	11/16/2018	10:09 am	Briggs Chaney Middle School	Flr 1	Rm 14A	4.7
2395313	3918080	11/13/2018	12:54 pm	11/16/2018	10:09 am	Briggs Chaney Middle School	Flr 1	Rm 14B	0.6
2395314	3918076	11/13/2018	12:55 pm	11/16/2018	10:05 am	Briggs Chaney Middle School	Flr 1	Rm 15A Office	0.8
2395315	3918077	11/13/2018	12:55 pm	11/16/2018	10:05 am	Briggs Chaney Middle School	Flr 1	Rm 15A Office	1.9

**Comment:** AMENDED REPORT for 3918146, 47 and 3918003 on 2/5/2019 to include the dates and times the tests began and ended and the areas tested. To complete 3918135 please supply missing dates, times and test locations.

Distributed by: Intertek-PSI (VA)

Date Received: 11/19/2018 Date Logged:

: 11/19/2019

Date Analyzed: 11/20/2018 Date Reported: 01/30/2019

#### **Disclaimer:**

Report Reviewed By: \_\_\_\_\_\_

Report Approved By: Shawn Price, Director of Laboratory Operations, AccuStar Labs

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



Laboratory Report for:

Radon in Air

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

Property Tested: Project # 04481387-1

Intertek-PSI (VA)MCPS Radon Survey2930 Eskridge RoadBriggs Chaney Middle SchoolFairfax VA 22031Silver Spring MD 20905

Log Number	Device Number		Test Expo	sure Duratic	on:	Area Tested	Result pCi/L
2395316	3918075	11/13/2018	12:56 pm	11/16/2018	10:06 am	Briggs Chaney Middle School Flr 1 Rm 15B Office	1.2
2395317	3918078	11/13/2018	12:58 pm	11/16/2018	10:11 am	Briggs Chaney Middle School Flr 1 Rm 14B Office	1.8
2395318	3918073	11/13/2018	12:58 pm	11/16/2018	10:11 am	Briggs Chaney Middle School Flr 1 Rm 14B Office	2.1
2395319	3918148	11/13/2018	12:58 pm	11/16/2018	10:05 am	Briggs Chaney Middle School Flr 1 Rm 14B Office	1.0
2395320	3918104	11/13/2018	1:05 pm	11/16/2018	10:04 am	Briggs Chaney Middle School Flr 1 Rm Bridge Off	0.4
2395321	3918110	11/13/2018	1:06 pm	11/16/2018	10:13 am	Briggs Chaney Middle School Flr 1 Rm 14A Calm	< 0.4
2395322	3918106	11/13/2018	1:07 pm	11/16/2018	10:13 am	Briggs Chaney Middle School Flr 1 Rm 14B Calm	1.8
2395323	3918079	11/13/2018	1:08 pm	11/16/2018	10:04 am	Briggs Chaney Middle School Flr 1 Bridge Office 2	1.9
2395324	3918107	11/13/2018	1:09 pm	11/16/2018	10:05 am	Briggs Chaney Middle School Flr 1 Bridge Office 3	0.6
2395325	3918146	11/13/2018	1:09 pm	11/16/2018	10:00 am	Briggs Chaney Middle School Flr 1 Bridge Office 3	3.0
2395326	3918102	11/13/2018	1:14 pm	11/16/2018	9:59 am	Briggs Chaney Middle School Flr 1 Rm 13	< 0.4

**Comment:** AMENDED REPORT for 3918146, 47 and 3918003 on 2/5/2019 to include the dates and times the tests began and ended and the areas tested. To complete 3918135 please supply missing dates, times and test locations.

Distributed by: Intertek-PSI (VA)

Date Received: 11/19/2018 Date Logged:

: 11/19/2019

Date Analyzed: 11/20/2018 Date Reported: 01/30/2019

#### **Disclaimer:**

Report Reviewed By: \_\_\_\_\_\_

Report Approved By: Shawn Price, Director of Laboratory Operations, AccuStar Labs

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



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

Property Tested: Project # 04481387-1

Intertek-PSI (VA)	MCPS Radon Survey
2930 Eskridge Road	Briggs Chaney Middle School
Fairfax VA 22031	Silver Spring MD 20905

Log Number	Device Number		Test Expo	sure Duratio	on:	Area Tested		Result pCi/L
2395327	3918108	11/13/2018	1:19 pm	11/16/2018	10:15 am	Briggs Chaney Middle School	Flr 1 Rm 12	< 0.4
2395328	3918109	11/13/2018	1:20 pm	11/16/2018	10:17 am	Briggs Chaney Middle School	Flr 1 Rm 11	< 0.4
2395329	3918091	11/13/2018	1:20 pm	11/16/2018	10:15 am	Briggs Chaney Middle School	Flr 1 Rm 11B	0.4
2395330	3918092	11/13/2018	1:21 pm	11/16/2018	10:18 am	Briggs Chaney Middle School	Flr 1 Rm 10	< 0.4
2395331	3918093	11/13/2018	1:22 pm	11/16/2018	10:19 am	Briggs Chaney Middle School	Flr 1 Rm Comp 6	< 0.4
2395332	3918094	11/13/2018	1:23 pm	11/16/2018	10:20 am	Briggs Chaney Middle School	Floor 1 Room 9	< 0.4
2395333	3918095	11/13/2018	1:24 pm	11/16/2018	10:21 am	Briggs Chaney Middle School	Floor 1 Room 8	0.5
2395334	3918096	11/13/2018	1:24 pm	11/16/2018	10:22 am	Briggs Chaney Middle School	Floor 1 Room 8	< 0.4
2395335	3918099	11/13/2018	1:25 pm	11/16/2018	10:22 am	Briggs Chaney Middle School	Flr 1 Rm 6B	< 0.4
2395336	3918097	11/13/2018	1:28 pm	11/16/2018	10:22 am	Briggs Chaney Middle School	Flr 1 Rm 6A	1.5
2395337	3918098	11/13/2018	1:29 pm	11/16/2018	10:22 am	Briggs Chaney Middle School	Floor 1 Room 7	0.4

**Comment:** AMENDED REPORT for 3918146, 47 and 3918003 on 2/5/2019 to include the dates and times the tests began and ended and the areas tested. To complete 3918135 please supply missing dates, times and test locations.

Distributed by: Intertek-PSI (VA)

Date Received: 11/19/2018 Date Logged:

11/19/2019

Date Analyzed: 11/20/2018 Date Reported: 01/30/2019

#### **Disclaimer:**

Report Reviewed By: \_\_\_\_\_\_

Report Approved By: Shawn Price, Director of Laboratory Operations, AccuStar Labs

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



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

Property Tested: Project # 04481387-1

Intertek-PSI (VA)	MCPS Radon Survey		
2930 Eskridge Road	Briggs Chaney Middle School		
Fairfax VA 22031	Silver Spring MD 20905		

Log Number	Device Number		Test Expo	sure Duratio	on:	Area Tested		Result pCi/L
2395338	3918100	11/13/2018	1:30 pm	11/16/2018	10:22 am	Briggs Chaney Middle School	Floor 1 Room 6	< 0.4
2395339	3918061	11/13/2018	1:33 pm	11/16/2018	10:24 am	Briggs Chaney Middle School	Floor 1 Room 5	< 0.4
2395340	3918062	11/13/2018	1:34 pm	11/16/2018	10:24 am	Briggs Chaney Middle School	Floor 1 Room 4	< 0.4
2395341	3918063	11/13/2018	1:35 pm	11/16/2018	10:25 am	Briggs Chaney Middle School	Floor 1 Room 3	< 0.4
2395342	3918067	11/13/2018	1:37 pm	11/16/2018	10:27 am	Briggs Chaney Middle School	Flr 1 Rm 3A	< 0.4
2395343	3918065	11/13/2018	1:42 pm	11/16/2018	10:32 am	Briggs Chaney Middle School	Flr 1 Rm Gym	< 0.4
2395344	3918066	11/13/2018	1:42 pm	11/16/2018	10:35 am	Briggs Chaney Middle School	Flr 1 Rm Gym	< 0.4
2395345	3918068	11/13/2018	1:43 pm	11/16/2018	10:32 am	Briggs Chaney Middle School	Flr 1 Rm Gym	0.8
2395346	3918064	11/13/2018	1:44 pm	11/16/2018	10:36 am	Briggs Chaney Middle School	Flr 1 Rm Aux Gym	< 0.4
2395347	3918069	11/13/2018	1:48 pm	11/16/2018	10:36 am	Briggs Chaney Middle School	Flr 1 Rm Aux Gym	0.5
2395348	3918070	11/13/2018	1:50 pm	11/16/2018	10:33 am	Briggs Chaney Middle School	Flr 1 Rm PE Wome	< 0.4

**Comment:** AMENDED REPORT for 3918146, 47 and 3918003 on 2/5/2019 to include the dates and times the tests began and ended and the areas tested. To complete 3918135 please supply missing dates, times and test locations.

Distributed by: Intertek-PSI (VA)

Date Received: 11/19/2018 Date Logged:

: 11/19/2019

Date Analyzed: 11/20/2018 Date Reported: 01/30/2019

#### **Disclaimer:**

Report Reviewed By: \_\_\_\_\_\_

Report Approved By: Shawn Price, Director of Laboratory Operations, AccuStar Labs

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



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

Laboratory Report for:

Property Tested: Project # 04481387-1

Intertek-PSI (VA)	MCPS Radon Survey		
2930 Eskridge Road	Briggs Chaney Middle School		
Fairfax VA 22031	Silver Spring MD 20905		

Log Number	Device Number		Test Expos	sure Duratio	n:	Area Tested		Result pCi/L
2395349	3918084 11/1	13/2018	1:51 pm	11/16/2018	10:33 am	Briggs Chaney Middle School	FIr 1 PE Men's Offic	1.1
2395350	3918083 11/1	13/2018	1:51 pm	11/16/2018	10:07 am	Briggs Chaney Middle School	Flr 1 Girl's Locker R	< 0.4
2395351	3918090 11/1	13/2018	1:51 pm	11/16/2018	10:37 am	Briggs Chaney Middle School	Flr 1 Girl's Locker R	1.6
2395352	3918082 11/1	13/2018	1:52 pm	11/16/2018	10:35 am	Briggs Chaney Middle School	Flr 1 Boy's Locker R	< 0.4
2395353	3918085 11/1	13/2018	1:52 pm	11/16/2018	10:30 am	Briggs Chaney Middle School	Flr 1 Boy's Locker R	1.5
2395354	3916273 11/1	13/2018	1:59 pm	11/16/2018	10:30 am	Briggs Chaney Middle School	Flr 1 Café/APR	1.0
2395355	3916276 11/1	13/2018	1:59 pm	11/16/2018	10:31 am	Briggs Chaney Middle School	Flr 1 Café/APR	0.4
2395356	3918135 11/1	13/2018	12:13 pm	11/16/2018	9:41 am	Not Indicated		0.4
2395357	3918147 11/1	13/2018	1:09 pm	11/16/2018	10:00 am	Briggs Chaney Middle School 1	15B Office 2	0.8
2395358	3918003 11/1	13/2018	12:09 pm	11/16/2018	9:38 am	Briggs Chaney Middle School O	Office A	0.6

**Comment:** AMENDED REPORT for 3918146, 47 and 3918003 on 2/5/2019 to include the dates and times the tests began and ended and the areas tested. To complete 3918135 please supply missing dates, times and test locations.

Distributed by: Intertek-PSI (VA)

Date Received: 11/19/2018 Date Logged:

11/19/2019

Date Analyzed: 11/20/2018 Date Reported: 01/30/2019

**Disclaimer:** 

Report Reviewed By: \_\_\_\_\_\_

Report Approved By: Shawn Price, Director of Laboratory Operations, AccuStar Labs

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



**NELAC NY 11769** 

NRPP 103216 AL

NRSB ARL0017

## Radon in Air

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

Laboratory Report for:

Property Tested: Project # 04481387-1

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

MCPS Radon Survey **Briggs Chaney Middle School** MD 20905

Log Number	Device Number	Test Expo	sure Duration:	:	Area Tested	Result pCi/L
2393082	3881212 11/13/2018	2:15 pm	11/16/2018 10	0:08 am	Bldg. Briggs Chaney Middle School Flr 1 Rm Bridg	0.4

Comment: To complete your test for device 3918135, please provide in writing, the date and time the test began and ended. A copy of this report was emailed to Intertek-PSI (VA).

Distributed by: Intertek-PSI (VA)

Date Received: 11/18/2018 Date Logged:

11/18/2018

Date Analyzed: 11/19/2018 Date Reported: 01/02/2019

**Disclaimer:** 

Report Reviewed By: \_\_\_\_\_\_

concentrations, sample collection techniques and operation of the dwelling. Interference with test conditions may influence the test results.

Report Approved By: Shawn Price, Director of Laboratory Operations, AccuStar Labs

written interpretation of the results.

Rev 1802

The uncertainty of this radon measurement is ~+/- 10 %. Factors contributing to uncertainty include statistical variations, daily and seasonal variations in radon



## Radon in Air

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

NRPP 105011 AL NRSB ARL0007 Ohio RL41

Laboratory Report for:

Property Tested:

Intertek-PSI (VA)	MCPS Radon Survey
2930 Eskridge Road	4514 Taylorsville Road
Fairfax VA 22031	Dayton OH 45424

Log Device Number Number	Test Exposure Duration:	Area Tested	Result pCi/L
3204125 3926831 12/07/2018	3 9:47 am 12/10/2018 9:47 am	Spike	36.1
3204126 3926832 12/07/2018	3 9:47 am 12/10/2018 9:47 am	Spike	34.8
3204127 3926833 12/07/2018	3 9:47 am 12/10/2018 9:47 am	Spike	33.7
3204128 3926834 12/07/2018	3 9:47 am 12/10/2018 9:47 am	Spike	35.8
3204129 3926835 12/07/2018	3 9:47 am 12/10/2018 9:47 am	Spike	35.0
3204130 3926836 12/07/2018	3 9:47 am 12/10/2018 9:47 am	Spike	34.5
3204131 3926837 12/07/2018	3 9:47 am 12/10/2018 9:47 am	Spike	34.6
3204132 3926838 12/07/2018	3 9:47 am 12/10/2018 9:47 am	Spike	34.3
3204133 3926839 12/07/2018	3 9:47 am 12/10/2018 9:47 am	Spike	33.2
3204134 3926840 12/07/2018	3 9:47 am 12/10/2018 9:47 am	Spike	34.0

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

Test Performed By: Unknow	n				
Distributed by: Intertek-PSI (	VA)				
Date Received: 12/12/2018	Date Logged:	12/12/2018	Date Analyzed: 12/12/2018	Date Reported:	12/13/2018
				$\sim$	
Report Review	ed By:	they Kartin	Report Approved By:	XX2	
Disclaimer:	$\subset$	$\sum$	Shawn Price, Dire	ctor of Laboratory Oper	ations, AccuStar Labs
		•	uncertainty include statistical variations, d erence with test conditions may influence		ions in radon
This report may only be transforred to	a third party in its optir	oty Applytical regulte	relate to the samples AS RECEIVED B		Posulte shown on

# **EXPOSURE IN BOWSER-MORNER RADON CHAMBER**

CLIENT Intertal - PS	I	Job Number 187732	
NOMINAL Conditions: Radon Conc 33.6	pCi/L Rel. Hum	49.1 % Temp. 20.1	F
Date Start: 12/7/18 Date Stop: 12/10/18	P Date Start:	Date Stop:	
Time Start: <u>0947</u> Time Stop: <u>0947</u>	_ Time Start:	Time Stop:	
Device No.'s: (10) Char. Cans-	Device No.'s:_		
3926831 thro 3926840			
		6	
G2 Laft			
Date Start: Date Stop:		Date Stop:	
Time Start: Time Stop:	Time Start:	Time Stop:	
Device No.'s:	Device No.'s:_	24	
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



# **Chain of Custody**

#### Project Name: MCPS Radon Survey 2018

Name of Schools:

- 1. Highland View ES
- 2. Kemp Mill ES
- 3. Sligo Creek ES
- 4. Highland ES
- 5. Kennedy HS

- 6. EB Lee MS
- 7. Forest Knolls ES
- 8. Galway ES
- 9. Wheaton HS
- 10. Briggs Chaney MS

- 11. Cannon Rd ES
- 12. Cloverly ES
- 13. Springbrook HS

	Date	Initials
Radon Test Kits Deployed	11/13/2018	NL
Radon Test Kits Sampled	11/16/2018	NL
Radon Test Kits Shipped to Lab*	11/16/2018	NL
	11/17/2018;	
Radon Test Kits Received by Lab*	11/18/2018;	NC
	11/20/2018	

\*All samples sent to AccuStar Laboratories, 929 Mount Zion Road, Lebanon, PA 17046 and 2 Saber Way, Haverhill, MA 01835

## RADON SCREENING SURVEY – FOLLOW-UP BRIGGS CHANEY MS SCHOOL

## 1901 Rainbow Drive, Silver Spring, Maryland 20905

Date of Test Report:	3/10/16 (Follow-Up)
Round of Testing:	Initial
<	Follow-up
	Post Remediation
# Rooms Tested	5
# Rooms <u>&gt;</u> 4.0 pCi/L:	0
Low Value:	<0.3
High Value:	1.0
Confirmed Rooms ≥ 4.0 pCi/L US EPA	0
Action Level	

### EXECUTIVE SUMMARY

## Summary of Sampling Events ≥ 4.0 pCi/L

Room	Result (pCi/L) 1/11/16 (Initial)	Result (pCi/L) 3/10/16 (Follow-Up)	Average Result (pCi/L)
13	Missing	<0.3	<0.3
13	Missing	<0.3	<0.3
Financial Office	Missing	0.9	0.9
Gym	Missing	<0.3	<0.3
Special Services	Missing	0.9	0.9
Staff Lounge	Missing	0.7	0.7



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

#### MCPS RADON TESTING

#### Executive Summary: Briggs Chaney Middle School

Date of Test Report:	3/10/2016
Round of Testing:	Initial
(	Follow-up
	Post Remediation
# Rooms Tested:	5
# Rooms $\geq$ 4.0 pCi/L:	0
Low Value:	< 0.3
High Value:	1.0

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



ENGINEERS • PLANNERS • SCIENTISTS • CONSTRUCTION MANAGERS

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

March 10, 2016

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

Re:	<b>Radon Testing Services</b>	
	KCI Job # 12146341.29	
Location:	Briggs Chaney Middle School	
	1901 Rainbow Drive	
	Silver Spring, MD 20904	

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 Briggs Chaney Middle School, located at 1901 Rainbow Drive in Silver Spring, Maryland 20904 (subject site).

#### Scope of Services:

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

KCI visited the site on February 22, 2016 and deployed nine (9) 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:

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

Notes:

D- Duplicate sample

The field blank, office 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.

Mr. Richard Cox March 10, 2016 Page 4

Sincerely,

James Makler

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

Attachments:

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

# ATTACHMENT A

Floor Plan With Test Locations

# ATTACHMENT B

# Radon Test Summary Spreadsheet

### Table Notes:

- AC- Activated Charcoal
- ACI- Air Chek, Inc.
- **D-** Duplicate
- FB- Field Blank
- KCI- KCI Technologies, Inc.
- **OB- Office Blank\***
- PM- Project Manager
- QC- Quality Control

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

Radon Testing Results Briggs Chaney Middle School Test Period: 02/22/16-02/25/16			
Kit Number	Room / Area	Result	
7729789	13	< 0.3	
7730086	13	< 0.3	
7730081	FINANCIAL OFFICE	0.9	
7730079	GYM	< 0.3	
7730080 *	* GYM (Missing)	-	
7730078	SPECIAL SERVICES	0.9	
7730082	STAFF LOUNGE	0.7	

	Radon Testing Results				
	Briggs Chaney Middle School				
Test Period: 02/22/16-02/25/16					
Kit Number	QC Type	Result			
7721408	D (STAFF LOUNGE)	1.0			
7730077	FB (STAFF LOUNGE)	< 0.3			

# ATTACHMENT C

# Laboratory Analytical Results

#### Mareha 8, **LABORATORY ANALYSIS** 2016 **REPORT** \*\*

#### Radon test result report for: BRIGGS CHANEY MIDDLE SCHOOL MAIN

Kit #	Room Id	Started		Ended		pCi/L	Analyzed
7729789	13	2016-02-22 @	) 11:00 am	2016-02-25 @	12:00 pm	< 0.3	2016-02-29
7730086	13	2016-02-22 @	) 11:00 am	2016-02-25 @	12:00 pm	< 0.3	2016-02-29
7730081 F	INANCIAL OFFICE	2016-02-22 @	11:00 am	2016-02-25 @	11:00 am	$0.9 \pm 0.3$	2016-02-29
7730080	GYM	@		@			
7730079	GYM	2016-02-22 @	11:00 am	2016-02-25 @	12:00 pm	< 0.3	2016-02-29
7730078 \$	SPECIAL SERVICES	2016-02-22 @	11:00 am	2016-02-25 @	11:00 am	$0.9 \pm 0.3$	2016-02-29
7721408	STAFF LOUNGE	2016-02-22 @	11:00 am	2016-02-25 @	12:00 pm	$1.0 \pm 0.3$	2016-02-29
7730077	STAFF LOUNGE	2016-02-22 @	11:00 am	2016-02-25 @	12:00 pm	< 0.3	2016-02-29
7730082	STAFF LOUNGE	2016-02-22 @	) 11:00 am	2016-02-25 @	12:00 pm	$0.7 \pm 0.3$	2016-02-29

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

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
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

#### 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

## February LABORATORY ANALYSIS 23, 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 LABORATORY ANALYSIS 15, 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	$6.5 \pm 0.6$	2016-02-04
,	7718281	102B	2016-01-30 @ 9:00 am	2016-02-01 @ 9:00 am	$6.4 \pm 0.6$	2016-02-04
,	7718282	103C	2016-01-30 @ 9:00 am	2016-02-01 @ 9:00 am	$6.3 \pm 0.6$	2016-02-04
,	7718288	104D	2016-01-30 @ 9:00 am	2016-02-01 @ 9:00 am	$6.7 \pm 0.6$	2016-02-04
,	7718289	105E	2016-01-30 @ 9:00 am	2016-02-01 @ 9:00 am	$6.6 \pm 0.6$	2016-02-04
	7718291	106F	2016-01-30 @ 9:00 am	2016-02-01 @ 9:00 am	$6.5 \pm 0.6$	2016-02-04
	//102/1	1001	2010 01 50 @ 9.00 ull	2010 02 01 @ 9.00 um	0.5 ± 0.0	2010 02 0

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 Technologie	5 Inc. Job Number 173704
NOMINAL Conditions: Radon Conc 5.9	pCi/L Rel. Hum <u>45.9</u> % Temp. <u>79.0</u> F
Date Start: 1/30/16 Date Stop: 2/1/16	Date Start: Date Stop:
Time Start: <u>9926</u> Time Stop: <u>9926</u>	Time Start: Time Stop:
Device No.'s: (6) Char. Bago-	Device No.'s:
, ופבצורר, הוצבצורר ווצבצורר	
7718288, 7718289, 7718273	
E3 Left	· · · · · · · · · · · · · · · · · · ·
Date Start: Date Stop:	Date Start: Date Stop:
Time Start: Time Stop:	Time Start: Time Stop:
Device No.'s:	Device No.'s:
	-
Date Start: Date Stop:	Date Start: Date Stop:
Time Start: Time Stop:	Time Start: Time Stop:
Device No.'s:	Device No.'s:
	· · · · · · · · · · · · · · · · · · ·

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



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### Radon Test Kit Chain of Custody

#### Project Name: MCPS Radon Phase 9

#### Name of Schools:

- 1. Rocking Horse Road ES
- 2. Rockwell ES
- 3. Oakland Terrace ES
- 4. Rosemont ES
- 5. Beall ES
- 6. Cresthaven ES
- 7. Quince Orchard HS
- 8. Smith Center
- 9. Ashburton ES
- 10. Bannockburn ES
- 11. Bradley Hills ES
- 12. Cannon Road ES
- 13. Flora M. Singer ES
- 14. Clarksburg HS
- 15. Briggs Chaney MS

- 16. Broad Acres ES
- 17. Belmont ES
- 18. Emory Grove Center
- 19. Forest Knolls ES
- 20. Baker MS
- 21. MLK MS
- 22. Richard Montgomery HS
- 23. Sherwood HS
- 24. Walter Johnson HS
- 25. Diamond ES
- 26. Newport Mill MS
- 27. Drew ES
- 28. Monocacy ES
- 29. Potomac ES
- 30. Rock Terrace School

- 31. Rosa Parks MS
- 32. Rosemary Hills ES
- 33. Sequoyah ES
- 34. Damascus HS
- 35. Einstein ES
- 36. Forest Oak MS
- 37. Hoover MS
- 38. Julius West MS
- 39. John F. Kennedy HS
- 40. Travilah ES
- 41. Watkins Mill HS
- 42. Northwood HS
- 43. Lincoln Center

	Date	Initials
Radon Test Kits Deployed	2/22/16	M
Radon Test Kits Collected	2/25/16	JM
Radon Test Kits Shipped to Lab*	2/25/16	UM
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



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### Radon Test Kit Chain of Custody

#### Project Name: MCPS Radon Phase 9

#### Name of Schools:

- 1. Banneker MS
- 2. Bethesda-Chevy Chase HS
- 3. Burtonsville ES
- 4. Chevy Chase ES
- 5. Clopper Mill ES
- 6. Edison HS
- 7. Flower Hill ES
- 8. Flower Valley ES
- 9. Greencastle ES

- 10. Maryvale ES
- 11. Montgomery Blair HS
- 12. Poolesville HS
- 13. Rachel Carson ES
- 14. Stedwick ES
- 15. Watkins Mill ES
- 16. Laytonsville ES
- 17. Lincoln Center

	Date	Initials
Radon Test Kits Deployed	2/23/16	,/M
Radon Test Kits Collected	2/26/16	JM
Radon Test Kits Shipped to Lab*	2/26/16	UM
Radon Test Kits Received by Lab*	3/01/16	JM
*All complex cent to Air Check Inc. 10201	Dutlan Duidea Dd. Mill	D' NC 20750

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



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#### MCPS RADON TESTING

#### Executive Summary: Briggs Chaney Middle School

Date of Test Report:	1/11/2016
Round of Testing:	Initial
	Follow-up
	Post Remediation
# Rooms Tested:	78
# Rooms $\geq$ 4.0 pCi/L:	0
Low Value:	< 0.3
High Value:	1.9

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



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January 11, 2016

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

Re:	<b>Radon Testing Services</b>
	KCI Job # 12146341.20
Location:	Briggs Chaney Middle School
	1901 Rainbow Drive
	Silver Spring, MD 20905

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 Briggs Chaney Middle School, located at 1901 Rainbow Drive in Silver Spring, Maryland 20905 (subject site).

#### Scope of Services:

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

KCI visited the site on December 21, 2015 and deployed ninety (90) 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 7 duplicate samples (10%), 4 field blanks (3%), and 1 office blank (1%). 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 during the deployment and collection of the radon test kits:

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

#### **Results:**

The results of the radon test analysis indicated the following:

Radon Concentration	Room	Result
≥4.0 piC/L	None	n/a
<4.0 piC/L	See Attachn	nent 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.

Mr. Richard Cox January 11, 2016 Page 4

Sincerely,

James Makler

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

Attachments:

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

# ATTACHMENT B

# Radon Test Summary Spreadsheet

### Table Notes:

- AC- Activated Charcoal
- ACI- Air Chek, Inc.
- D- Duplicate
- B- Field Blank
- KCI- KCI Technologies, Inc.
- **OB-** Office Blank
- PM- Project Manager
- QC- Quality Control

	Radon Testing Results					
	Briggs Chaney Middle School Test Period: 12/21/15-12/24/15					
Kit Number	Room / Area	Result				
7712951	3	< 0.3				
7712971	6	0.9				
7712977	5	< 0.3				
7712972	7	1.1				
7712973	8	0.6				
7712952	9	< 0.3				
7712959	10	< 0.3				
7712945	11	< 0.3				
7712963	12	< 0.3				
7712904	16	1.1				
7712931	16	0.5				
7712901	17	0.9				
7712909	18	0.7				
7712925	19	0.6				
7712969	36	< 0.3				
7712993	37	< 0.3				
7712990	38	< 0.3				
7712980	39	< 0.3				
7712981	40	< 0.3				
7712970	41	< 0.3				
7712958	11 B	< 0.3				
7712911	* 13 (missing)	-				
7712935	* 13 (missing)	-				
7712932	14 A	0.6				
7712940	14 B	< 0.3				
7712930	15 B	1				
7712929	15 B OFF	0.7				
7712905	15 OFF	< 0.3				
7712936	15A	1.2				
7712923	17 OFFICE	0.8				
7712926	17 OFFICE	1.1				
7712956	3A	0.6				
7712918	A	0.6				
7712906	ASST PRINCIPAL	< 0.3				
7712920	ASST PRINCIPAL	0.6				
7712953	BUILDING SERVICE	0.6				
7712994	BUILDING SERVICE	0.6				
7712995	BUILDING SERVICE	0.6				
7712957	CAFATERIA	0.7				
7712967	CAFATERIA	< 0.3				
7712966	CAFE OFFICE	0.8				
7712900	COMP LAB 6	< 0.3				
7712934	CONFERENCE RM	0.8				
7712938	CONFERENCE RM	0.8				
	COUNSELOR	0.5				
7712916 7712917	COUNSELOR	0.7				

Table Note: \* Missing or Compromised Sample

	Radon Testing Results					
	Briggs Chaney Middle School					
	Test Period: 12/21/15-12/24/15					
Kit Number	Room / Area	Result				
7712924	COUNSELOR	0.8				
7712941	COUNSELOR	0.8				
7712954	DANCE STUDIO	< 0.3				
7712979	DANCE STUDIO	< 0.3				
7712946	EXERCISE RM	0.6				
7712974	EXERCISE RM	< 0.3				
7712948	* FINANCIAL OFFICE (missing)	-				
7712949	GYM	< 0.3				
7712968	GYM	< 0.3				
7712989	GYM	< 0.3				
7712947	* GYM (missing)	-				
7712991	LAB ROOM 8	< 0.3				
7712913	Μ	< 0.3				
7712914	MAIN OFFICE	0.8				
7712927	MEDIA CENTER	< 0.3				
7712907	MEDIA CENTER OFF	< 0.3				
7712933	MEDIA CENTER OFF	0.6				
7712908	MEDIA STUDIO	< 0.3				
7712937	MEDIA STUDIO	< 0.3				
7712919	NURSES OFFICE	0.9				
7712921	OFFICE WORKROOM	1				
7712987	PE GIRLS	0.7				
7712943	PE MEN	0.7				
7712922	PRINCIPAL	0.8				
7712960	SECURITY OFF	< 0.3				
7712915	* SPECIAL SERVICES (missing)	-				
7712910	* STAFF LOUNGE (missing)	-				
7712939	STUDENT SUPPORT	< 0.3				
7712942	STUDENT SUPPORT	< 0.3				
7712975	TM 6 B	< 0.3				
7712950	TM 6A	0.8				
7712928	TV STUDIO	< 0.3				

Radon Testing Results Briggs Chaney Middle School Test Period: 12/21/15-12/24/15				
Kit Number	QC Type	Result		
7712902	D (15A)	1.9		
7712962	D (3A)	< 0.3		
7712955	D (9)	< 0.3		
7712961	D (CAFATERIA)	< 0.3		
7712944	D (GYM)	< 0.3		
7712964	D (PE GIRLS)	0.8		
7712912	* D (SPECIAL SERVICES:missing)	-		
7712903	FB (15 A)	< 0.3		
7712965	FB (CAFATERIA)	< 0.3		
7712978	FB (DANCE STUDIO)	< 0.3		
7713000	FB (PE MEN)	< 0.3		
7713910	OB (0)	< 0.3		

# ATTACHMENT C

# Laboratory Analytical Results

## Januates LABORATORY ANALYSIS 12, REPORT \*\*

#### Radon test result report for: BRIGGS CHENEY MIDDLE SCHOOL MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7713910	00	2015-12-21 @ 3:00 pm	2015-12-24 @ 2:00 pm	< 0.3	2015-12-28
7712959	10	2015-12-21 @ 11:00 am	2015-12-24 @ 9:00 am	< 0.3	2015-12-28
7712945	11	2015-12-21 @ 11:00 am	2015-12-24 @ 9:00 am	< 0.3	2015-12-28
7712958	11 B	2015-12-21 @ 11:00 am	2015-12-24 @ 9:00 am	< 0.3	2015-12-29
7712963	12	2015-12-21 @ 11:00 am	2015-12-24 @ 9:00 am	< 0.3	2015-12-28
7712935	13	@	@		
7712911	13	@	@		
7712932	14 A	2015-12-21 @ 10:00 am	2015-12-24 @ 10:00 am	$0.6 \pm 0.3$	2015-12-28
7712940	14 B	2015-12-21 @ 10:00 am	2015-12-24 @ 10:00 am	< 0.3	2015-12-29
7712903	15 A	2015-12-21 @ 10:00 am	2015-12-24 @ 10:00 am	< 0.3	2015-12-29
7712930	15 B	2015-12-21 @ 10:00 am	2015-12-24 @ 10:00 am	$1.0 \pm 0.3$	2015-12-28
7712929	15 B OFF	2015-12-21 @ 10:00 am	2015-12-24 @ 10:00 am	$0.7 \pm 0.3$	2015-12-28
7712905	15 OFF	2015-12-21 @ 10:00 am	2015-12-24 @ 10:00 am	< 0.3	2015-12-28
7712936	15A	2015-12-21 @ 10:00 am	2015-12-24 @ 10:00 am	$1.2 \pm 0.3$	2015-12-28
7712902	15A	2015-12-21 @ 10:00 am	2015-12-24 @ 9:00 am	$1.9 \pm 0.4$	2015-12-28
7712931	16	2015-12-21 @ 10:00 am	2015-12-24 @ 10:00 am	$0.5 \pm 0.3$	2015-12-28
7712904	16	2015-12-21 @ 10:00 am	2015-12-24 @ 10:00 am	$1.1 \pm 0.3$	2015-12-29
7712901	17	2015-12-21 @ 10:00 am	2015-12-24 @ 10:00 am	$0.9 \pm 0.4$	2015-12-29
7712923	17 OFFICE	2015-12-21 @ 10:00 am	2015-12-24 @ 10:00 am	$0.8 \pm 0.3$	2015-12-28
7712926	17 OFFICE	2015-12-21 @ 10:00 am	2015-12-24 @ 10:00 am	$1.1 \pm 0.3$	2015-12-28
7712909	18	2015-12-21 @ 10:00 am	2015-12-24 @ 10:00 am	$0.7 \pm 0.3$	2015-12-29
7712925	19	2015-12-21 @ 10:00 am	2015-12-24 @ 10:00 am	$0.6 \pm 0.3$	2015-12-28
7712951	3	2015-12-21 @ 11:00 am	2015-12-24 @ 9:00 am	< 0.3	2015-12-28
7712969	36	2015-12-21 @ 12:00 pm	2015-12-24 @ 10:00 am	< 0.3	2015-12-28
7712993	37	2015-12-21 @ 12:00 pm	2015-12-24 @ 10:00 am	< 0.3	2015-12-29
7712990	38	2015-12-21 @ 12:00 pm	2015-12-24 @ 10:00 am	< 0.3	2015-12-29
7712980	39	2015-12-21 @ 12:00 pm	2015-12-24 @ 10:00 am	< 0.3	2015-12-28
7712956	3A	2015-12-21 @ 11:00 am	2015-12-24 @ 10:00 am	$0.6 \pm 0.3$	2015-12-28
7712962	3A	2015-12-21 @ 11:00 am	2015-12-24 @ 9:00 am	< 0.3	2015-12-28
7712981	40	2015-12-21 @ 12:00 pm	2015-12-24 @ 10:00 am	< 0.3	2015-12-28
7712970	41	2015-12-21 @ 12:00 pm	2015-12-24 @ 10:00 am	< 0.3	2015-12-28
7712977	5	2015-12-21 @ 11:00 am	2015-12-24 @ 9:00 am	< 0.3	2015-12-28
7712971	5	2015-12-21 @ 11:00 am	2015-12-24 @ 9:00 am	$0.9 \pm 0.3$	2015-12-29
7712972	7	2015-12-21 @ 11:00 am	2015-12-24 @ 9:00 am	$1.1 \pm 0.3$	2015-12-28
7712973	8	2015-12-21 @ 11:00 am	2015-12-24 @ 9:00 am	$0.6 \pm 0.3$	2015-12-29
7712955	9	2015-12-21 @ 11:00 am	2015-12-24 @ 9:00 am	< 0.3	2015-12-28
7712952	9	2015-12-21 @ 11:00 am	2015-12-24 @ 9:00 am	< 0.3	2015-12-29

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

#### Radon test result report for: BRIGGS CHENEY MIDDLE SCHOOL MAIN

Kit #	Room Id	Started		Ended	pCi/L	Analyzed
7712918	А	2015-12-21	@ 10:00 am	2015-12-24 @ 9:00 a	m $0.6 \pm 0.3$	2015-12-28
7712906	ASST PRINCIPAL	2015-12-21	@ 10:00 am	2015-12-24 @ 9:00 a	m < 0.3	2015-12-29
7712920	ASST PRINCIPAL	2015-12-21	@ 10:00 am	2015-12-24 @ 9:00 a	m $0.6 \pm 0.3$	2015-12-29
7712994	BUILDING SERVICE	2015-12-21	@ 12:00 pm	2015-12-24 @ 8:00 a	m $0.6 \pm 0.3$	2015-12-28
7712995	BUILDING SERVICE	2015-12-21	@ 12:00 pm	2015-12-24 @ 8:00 a	m $0.6 \pm 0.3$	2015-12-28
7712953	BUILDING SERVICE	2015-12-21	@ 12:00 pm	2015-12-24 @ 8:00 a	m $0.6 \pm 0.3$	2015-12-29
7712957	CAFATERIA	2015-12-21	@ 11:00 am	2015-12-24 @ 8:00 a	m $0.7 \pm 0.3$	2015-12-28
7712967	CAFATERIA	2015-12-21	@ 11:00 am	2015-12-24 @ 8:00 a	m < 0.3	2015-12-28
7712961	CAFATERIA	2015-12-21	@ 11:00 am	2015-12-24 @ 8:00 a	m < 0.3	2015-12-29
7712965	CAFATERIA	2015-12-21	@ 11:00 am	2015-12-24 @ 8:00 a	m < 0.3	2015-12-29
7712966	CAFE OFFICE	2015-12-21	@ 11:00 am	2015-12-24 @ 8:00 a	m $0.8 \pm 0.3$	2015-12-28
7712976	COMP LAB 6	2015-12-21	@ 11:00 am	2015-12-24 @ 9:00 a	m < 0.3	2015-12-29
7712938	CONFERENCE RM	2015-12-21	@ 10:00 am	2015-12-24 @ 9:00 a	m $0.5 \pm 0.3$	2015-12-28
7712934	CONFERENCE RM	2015-12-21	@ 10:00 am	2015-12-24 @ 9:00 a	m $0.8 \pm 0.4$	2015-12-29
7712916	COUNSELOR	2015-12-21	@ 10:00 am	2015-12-24 @ 9:00 a	m $1.0 \pm 0.3$	2015-12-28
7712917	COUNSELOR	2015-12-21	@ 10:00 am	2015-12-24 @ 9:00 a	m $0.7 \pm 0.3$	2015-12-28
7712924	COUNSELOR	2015-12-21	@ 10:00 am	2015-12-24 @ 9:00 a	m $0.8 \pm 0.3$	2015-12-28
7712941	COUNSELOR	2015-12-21	@ 10:00 am	2015-12-24 @ 9:00 a	m $0.8 \pm 0.3$	2015-12-29
7712979	DANCE STUDIO	2015-12-21	@ 12:00 pm	2015-12-24 @ 10:00	am < 0.3	2015-12-28
7712978	DANCE STUDIO	2015-12-21	@ 12:00 pm	2015-12-24 @ 10:00	am < 0.3	2015-12-29
7712954	DANCE STUDIO	2015-12-21	@ 12:00 pm	2015-12-24 @ 8:00 a	m < 0.3	2015-12-29
7712974	EXERCISE RM	2015-12-21	@ 12:00 pm	2015-12-24 @ 10:00	am < 0.3	2015-12-28
7712946	EXERCISE RM	2015-12-21	@ 12:00 pm	2015-12-24 @ 8:00 a	m $0.6 \pm 0.3$	2015-12-29
7712948	FINANCIAL OFFICE	@		@		
7712947	GYM	@		@		
7712989	GYM	2015-12-21	@ 11:00 am	2015-12-24 @ 8:00 a	m < 0.3	2015-12-28
7712944	GYM	2015-12-21	@ 12:00 pm	2015-12-24 @ 8:00 a	m < 0.3	2015-12-29
7712949	GYM	2015-12-21	@ 11:00 am	2015-12-24 @ 8:00 a	m < 0.3	2015-12-29
7712968	GYM	2015-12-21	@ 11:00 am	2015-12-24 @ 8:00 a	m < 0.3	2015-12-29
7712991	LAB ROOM 8		-	2015-12-24 @ 10:00		2015-12-29
7712913	М	2015-12-21	@ 10:00 am	2015-12-24 @ 9:00 a	m < 0.3	2015-12-28
7712914	MAIN OFFICE			2015-12-24 @ 9:00 a		2015-12-29
7712927	MEDIA CENTER	2015-12-21	@ 10:00 am	2015-12-24 @ 10:00	am < 0.3	2015-12-29
7712907	MEDIA CENTER OFF	2015-12-21	@ 10:00 am	2015-12-24 @ 9:00 a	m < 0.3	2015-12-28
7712933	MEDIA CENTER OFF	2015-12-21	@ 10:00 am	2015-12-24 @ 10:00	am $0.6 \pm 0.3$	2015-12-29
7712937	MEDIA STUDIO	2015-12-21	@ 10:00 am	2015-12-24 @ 9:00 a	m < 0.3	2015-12-29
7712908	MEDIA STUDIO	2015-12-21	@ 10:00 am	2015-12-24 @ 9:00 a	m < 0.3	2015-12-29

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

#### Radon test result report for: BRIGGS CHENEY MIDDLE SCHOOL MAIN

Kit #	Room Id	Started		Ended	pCi/L	Analyzed
7712919	NURSES OFFICE	2015-12-21	@ 9:00 am	2015-12-24 @ 9:00 am	$0.9 \pm 0.3$	2015-12-28
7712921	OFFICE WORKROOM	2015-12-21	@ 10:00 am	2015-12-24 @ 9:00 am	$1.0 \pm 0.3$	2015-12-28
7712987	PE GIRLS	2015-12-21	@ 11:00 am	2015-12-24 @ 2:00 pm	$0.7 \pm 0.3$	2015-12-28
7712964	PE GIRLS	2015-12-21	@ 11:00 am	2015-12-24 @ 8:00 am	$0.8 \pm 0.4$	2015-12-29
7713000	PE MEN	2015-12-21	@ 11:00 am	2015-12-24 @ 8:00 am	< 0.3	2015-12-28
7712943	PE MEN	2015-12-21	@ 11:00 am	2015-12-24 @ 8:00 am	$0.7 \pm 0.4$	2015-12-29
7712922	PRINCIPAL	2015-12-21	@ 10:00 am	2015-12-24 @ 9:00 am	$0.8 \pm 0.3$	2015-12-28
7712960	SECURITY OFF	2015-12-21	@ 11:00 am	2015-12-24 @ 8:00 am	< 0.3	2015-12-29
7712912	SPECIAL SERVICES	@		@		
7712915	SPECIAL SERVICES	@		@		
7712910	STAFF LOUNGE	@		@		
7712942	STUDENT SUPPORT	2015-12-21	@ 11:00 am	2015-12-24 @ 8:00 am	< 0.3	2015-12-28
7712939	STUDENT SUPPORT	2015-12-21	@ 10:00 am	2015-12-24 @ 9:00 am	< 0.3	2015-12-29
7712975	TM 6 B	2015-12-21	@ 11:00 am	2015-12-24 @ 9:00 am	< 0.3	2015-12-28
7712950	TM 6A	2015-12-21	@ 11:00 am	2015-12-24 @ 9:00 am	$0.8 \pm 0.3$	2015-12-29
7712928	TV STUDIO	2015-12-21	@ 10:00 am	2015-12-24 @ 9:00 am	< 0.3	2015-12-29

## December LABORATORY ANALYSIS 29, 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	<b>TRANSIT 4</b>	2015-12-13 @ 10:00 am	2015-12-15 @ 10:00 am	< 0.3	2015-12-16
7704368	<b>TRANSIT 5</b>	2015-12-13 @ 10:00 am	2015-12-15 @ 10:00 am	< 0.3	2015-12-16
7706524	<b>TRANSIT 6</b>	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	<b>TRANSIT 8</b>	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

Decembe	LABORATORY ANALYSIS
23,	DEDODT **
2015	<b>REPORT</b> **

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
0	pCi/L Rel. Hum <u>49.6</u> % Temp. <u>69.9</u> F
Date Start: 12/18/15 Date Stop: 12/21/15	Date Start: Date Stop:
Time Start: <u>0929</u> Time Stop: <u>0929</u>	Time Start: Time Stop:
Device No.'s: 7705132,7706208,	Device No.'s:
7706211,7706366,	
7706380, 7706381	
F3 Loft	
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:
5. 8	
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### Note: All times are in 24-hour (military) notation, Eastern Standard Time (EST) Background = 7 μR/h Elevation = 820 ft



ENGINEERS • PLANNERS • SCIENTISTS • CONSTRUCTION MANAGERS Corporate Office: 936 Ridgebrook road • Sparks , Maryland 21152 • 410-316-7800 • (Fax) 410-316-7935

### **Chain of Custody**

#### Project Name: MCPS Radon Phase II

#### School Names:

- 1. Bannonckburn ES
- 2. Walt Whitman HS
- 3. Walter Johnson HS
- 4. North Chevy Chase ES
- 5. Piney Branch ES
- 6. Forest Knolls ES
- 7. Newport Mill MS
- 8. Broad Acres ES
- 9. Briggs Chaney MS
- 10. Blair G. Ewing Center

- 11. Sherwood HS
- 12. Hadley Farms
- 13. S. Christa McAuliffe ES
- 14. Ronald A. McNair ES
- 15. MLK MS
- 16. Ashburton ES
- 17. Bradley Hills ES
- 18. Flora M. Singer ES
- 19. Woodlin ES
- 20. Montgomery Knolls ES

- 21. Fairland ES
- 22. Cannon Road ES
- 23. Richard Montgomery HS
- 24. Brooke Grove ES
- 25. Belmont ES
- 26. Emory Grove
- 27. Clarksburg HS
- 28. Clarksburg ES
- 29. John T. Baker MS

DateInitialsRadon Test Kits Deployed12/21/2015Radon Test Kits Collected12/24/2015Radon Test Kits Shipped to Lab\*12/24/2015Radon Test Kits Received by Lab\*12/28/2015

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