



MCPS RADON TESTING - EXECUTIVE SUMMARY

Site Name	Stone Mill Elementary 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	3
# Rooms \geq 4.0 pCi/L	0
Lowest Value	<0.3 pCi/L
Highest Value	<0.3 pCi/L

Project Status

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



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 #1214634188

Location: Stone Mill Elementary School

14323 Stonebridge View Drive
North Potomac, Maryland 20878

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 Stone Mill Elementary School, located at 14323 Stonebridge View Drive in North Potomac, Maryland 20878 (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 2/4/2020 and deployed seven (7) activated charcoal (AC) radon test kits. KCI deployed radon test kits in frequently-occupied ground contact rooms, and other areas, (if applicable) in accordance with AARST guidance.

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),

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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. ≥ 3.5 pCi/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 2/7/2020 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 ranged from the mid-30s to the low-50s; and high temperatures ranged from the upper-40s to the mid-60s. Maximum sustained winds ranged from 13-21 miles per hour. Average humidity was approximately 76%. A total of 1.09 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 pCi/L	None	N/A
≤4.0 pCi/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

Floor Plan Legend

X-Sample Location (in red)

X- Previous Sample Location

1- Not Samled; No Ground Contact

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		
Stone Mill Elementary School		
Test Period: 02/04/20-02/07/20		
Kit Number	Room / Area	Result
9339941	15	<0.3
9339945	ASSISTANT PRINCIPAL'S OFFICE	<0.3
9339947	ASSISTANT PRINCIPAL'S OFFICE	<0.3
9339944	ASSISTANT PRINCIPAL'S OFFICE	<0.3
9339942	COUNSELORS OFFICE	<0.3
9334909	OFFICE BLANK	<0.3
9334910	OFFICE BLANK	<0.3

Table 2- Radon Testing Results			
Stone Mill Elementary School			
Test Period: 02/04/20-02/07/20			
Kit Number	QC Type	Room / Area	Result
9339944	D	ASSISTANT PRINCIPAL'S OFFICE	<0.3
9339947	FB	ASSISTANT PRINCIPAL'S OFFICE	<0.3
9334902	TRANSIT BLANK	NA	<0.3

ATTACHMENT C

Laboratory Analytical Results

February 11, 2020

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
9339941	15	2020-02-04 @ 9:00 am	2020-02-07 @ 8:00 am	< 0.3	2020-02-11
9339945	ASSISTANT PRINCIPAL'S OFFICE	2020-02-04 @ 9:00 am	2020-02-07 @ 8:00 am	< 0.3	2020-02-11
9339947	ASSISTANT PRINCIPAL'S OFFICE	2020-02-04 @ 9:00 am	2020-02-07 @ 8:00 am	< 0.3	2020-02-11
9339944	ASSISTANT PRINCIPAL'S OFFICE	2020-02-04 @ 9:00 am	2020-02-07 @ 8:00 am	< 0.3	2020-02-11
9339942	COUNSELOR'S OFFICE	2020-02-04 @ 9:00 am	2020-02-07 @ 8:00 am	< 0.3	2020-02-11

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

EXPOSURE IN BOWSER-MORNER RADON CHAMBER

CLIENT KCI Technologies, Inc. Job Number 194523

NOMINAL Conditions: Radon Conc 25.8 pCi/L Rel. Hum 49.8 % Temp. 70.2 F

Date Start: 2/21/20 Date Stop: 2/24/20 Date Start: _____ Date Stop: _____

Time Start: 0745 Time Stop: 0745 Time Start: _____ Time Stop: _____

Device No.'s: (9) Char Bags - Device No.'s: _____
9341725 thru 9341733

52 cPt

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 μ R/h Elevation = 820 ft

Radon test result report for:

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

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
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



Radon Test Kit Chain of Custody

Project Name: MCPS Radon 2019 Week 1 Retesting

Name of Schools:

1. Belmont E.S.
2. Clarksburg H.S.
3. Damascus E.S.
4. Damascus H.S.
5. DuFief E.S.
6. Fields Road E.S.
7. Gaithersburg E.S.
8. McAuliffe E.S.
9. Quince Orchard H.S.
10. Snowden Farms E.S.
11. South Lake E.S.
12. Stone Mill E.S.
13. Travilah ES
14. Watkins Mill ES
15. Whitman H.S.

	Date	Initials
Radon Test Kits Deployed	02/03/20 to 02/04/20	JM
Radon Test Kits Collected	02/06/20 to 02/07/20	JM
Radon Test Kits Shipped to Lab*	02/07/20	JM
Radon Test Kits Received by Lab*	02/10/20	JM

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



MCPS RADON TESTING - EXECUTIVE SUMMARY

Site Name	Stone Mill Elementary School
Date of Report	1/28/2020
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	45
# Rooms \geq 4.0 pCi/L	0
Lowest Value	<0.3 pCi/L
Highest Value	0.7 pCi/L

Project Status

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



1/28/2020

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

Re: Radon Testing Services

KCI Job #12146341126

Location: Stone Mill Elementary School

14323 Stonebridge View Drive
North Potomac, Maryland 20878

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 Stone Mill Elementary School, located at 14323 Stonebridge View Drive in North Potomac, Maryland 20878 (subject site).

SCOPE OF SERVICES

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

KCI visited the site on 12/10/2019 and deployed sixty-one (61) 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 12/13/2019 to retrieve the radon sampling test kits. KCI shipped all radon tests via overnight delivery to Aircheck, Inc. for analysis by gamma-ray spectroscopy. Aircheck, Inc. is a NRSB certified analytical laboratory for radon analysis (certification #ARL1402) located at 1936 Butler Bridge Road, Mills River, North Carolina.

EVALUATION OF TESTING CONDITIONS

These tests represent:

- Follow-up to initial testing.

These tests were conducted to:

- Evaluate radon concentrations at the facility.

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

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

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

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

RESULTS

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

The results of the radon test analysis indicated the following:

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

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

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

Sincerely,

Mr. Tyler P. McCleaf
Radon Measurement Provider
111004 RT

KCI Technologies, Inc.

Attachments:

A- Floor Plan with Test Locations

B - Tables 1-3, Radon Test Summary Spreadsheets

C- Laboratory Analytical Results

ATTACHMENT A

Floor Plan With Test Locations

ATTACHMENT B

Radon Test Summary Spreadsheet

Table Notes:

AC- Activated Charcoal

ACI- Air Chek, Inc.

D- Duplicate

FB- Field Blank

KCI- KCI Technologies, Inc.

OB- Office Blank

PM- Project Manager

QC- Quality Control

Table 1- Radon Testing Results		
Stone Mill Elementary School		
Test Period: 12/9/2019-12/12/2019		
Kit Number	Room / Area	Result
9334414	CONFERENCE ROOM	< 0.3
9334421	PRINCIPALS OFFICE	< 0.3
9334423	CLASSROOM 2	0.6
9334428	HEALTH OFFICE	< 0.3
9334429	WORK ROOM	< 0.3
9334438	CLASSROOM 4	< 0.3
9334439	TELEPHONE	< 0.3
9334440	MAIN OFFICE	< 0.3
9334441	HEALTH SUITE	< 0.3
9334442	MAIN OFFICE WAITING	< 0.3
9334443	CLASSROOM 7	< 0.3
9334444	CLASSROOM 5	< 0.3
9334445	CLASSROOM 6	< 0.3
9334446	CLASSROOM 1	< 0.3
9334447	CLASSROOM 23	< 0.3
9334449	CLASSROOM 3	< 0.3
9334450	CLASSROOM 1	< 0.3
9334451	CLASSROOM 23	< 0.3
9334452	CLASSROOM 23	< 0.3
9334453	OFFICE	< 0.3
9334454	COMPUTER OFFICE	< 0.3
9334455	MEDIA CENTER	< 0.3
9334456	MEDIA CENTER	< 0.3
9334457	OFFICE	0.7
9334458	OFFICE	< 0.3
9334459	CLASSROOM 11	< 0.3
9334460	CLASSROOM 21	< 0.3
9334461	CLASSROOM 10	< 0.3
9334462	CLASSROOM 13	< 0.3
9334463	MATERIAL PREP	< 0.3
9334464	MATH LAB	< 0.3
9334465	CLASSROOM 18	< 0.3
9334466	CLASSROOM 19	< 0.3
9334467	CLASSROOM 17	< 0.3
9334468	CLASSROOM 15 COMMUNICATION	< 0.3
9334469	ROOM 20 TEACHERS LOUNGE	< 0.3
9334470	CLASSROOM 8	< 0.3
9334471	CLASSROOM 12	< 0.3
9334472	CLASSROOM 12	< 0.3
9334473	CLASSROOM 9	< 0.3
9334474	CLASSROOM 16	< 0.3
9334475	GYM	< 0.3
9334476	GYM OFFICE	< 0.3
9334478	GYM	< 0.3
9334479	INSTRUMENTAL MUSIC	< 0.3
9334480	MULTIPURPOSE ROOM	< 0.3
9334481	CLASSROOM 24	0.6
9334482	GYM	< 0.3
9334483	SPEECH OFFICE	< 0.3
9334484	BUILDING SERVICES OFFICE	< 0.3

9334485	CLASSROOM 34	< 0.3
9334486	CLASSROOM 29	< 0.3
9334487	MULTIPURPOSE ROOM	< 0.3
9334488	MULTIPURPOSE ROOM	< 0.3
9334489	MULTIPURPOSE ROOM	< 0.3
9334490	MULTIPURPOSE ROOM	< 0.3
9334492	CLASSROOM 24	< 0.3
9334493	CLASSROOM 24	0.7
9334494	COUNSELORS OFFICE	< 0.3
9334994	OFFICE BLANK	< 0.3
9334448	CLASSROOM 15	MISSING

Table 2- Radon Testing Results			
Stone Mill Elementary School			
Test Period: 12/9/2019-12/12/2019			
Kit Number	QC Type	Room / Area	Result
9334450	D	CLASSROOM 1	<0.3
9334458	D	OFFICE	<0.3
9334453	FB	OFFICE	<0.3
9334471	D	CLASSROOM 12	<0.3
9334452	D	CLASSROOM 23	<0.3
9334451	FB	CLASSROOM 23	<0.3
9334480	D	MULTIPURPOSE ROOM	<0.3
9334493	D	CLASSROOM 24	0.7
9334492	FB	CLASSROOM 24	<0.3
9334850	TRANSIT BLANK	NA	< 0.3
9334914	TRANSIT BLANK	NA	< 0.3
9334916	TRANSIT BLANK	NA	< 0.3
9334963	TRANSIT BLANK	NA	< 0.3

ATTACHMENT C

Laboratory Analytical Results

Radon test result report for:**STONE MILL ES
MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
9334484	BUILDING SERVICES OFFICE	2019-12-10 @ 10:00 am	2019-12-13 @ 11:00 am	< 0.3	2019-12-17
9334450	CLASSROOM 1	2019-12-10 @ 8:00 am	2019-12-13 @ 11:00 am	< 0.3	2019-12-17
9334446	CLASSROOM 1	2019-12-10 @ 8:00 am	2019-12-13 @ 11:00 am	< 0.3	2019-12-17
9334461	CLASSROOM 10	2019-12-10 @ 10:00 am	2019-12-13 @ 11:00 am	< 0.3	2019-12-16
9334459	CLASSROOM 11	2019-12-10 @ 10:00 am	2019-12-13 @ 11:00 am	< 0.3	2019-12-16
9334472	CLASSROOM 12	2019-12-10 @ 10:00 am	2019-12-13 @ 11:00 am	< 0.3	2019-12-16
9334471	CLASSROOM 12	2019-12-10 @ 10:00 am	2019-12-13 @ 11:00 am	< 0.3	2019-12-16
9334462	CLASSROOM 13	2019-12-10 @ 10:00 am	2019-12-13 @ 11:00 am	< 0.3	2019-12-17
9334448	CLASSROOM 15	2019-12-10 @ 10:00 am	2019-12-13 @ 11:00 am	???? UI	2019-12-16
9334468	CLASSROOM 15 COMMUNICATION	2019-12-10 @ 10:00 am	2019-12-13 @ 11:00 am	< 0.3	2019-12-16
9334474	CLASSROOM 16	2019-12-10 @ 10:00 am	2019-12-13 @ 11:00 am	< 0.3	2019-12-16
9334467	CLASSROOM 17	2019-12-10 @ 10:00 am	2019-12-13 @ 11:00 am	< 0.3	2019-12-16
9334465	CLASSROOM 18	2019-12-10 @ 10:00 am	2019-12-13 @ 11:00 am	< 0.3	2019-12-16
9334466	CLASSROOM 19	2019-12-10 @ 10:00 am	2019-12-13 @ 11:00 am	< 0.3	2019-12-16
9334423	CLASSROOM 2	2019-12-10 @ 9:00 am	2019-12-13 @ 11:00 am	0.6 ± 0.3	2019-12-17
9334460	CLASSROOM 21	2019-12-10 @ 10:00 am	2019-12-13 @ 11:00 am	< 0.3	2019-12-16
9334447	CLASSROOM 23	2019-12-10 @ 10:00 am	2019-12-13 @ 11:00 am	< 0.3	2019-12-16
9334451	CLASSROOM 23	2019-12-10 @ 10:00 am	2019-12-13 @ 11:00 am	< 0.3	2019-12-16
9334452	CLASSROOM 23	2019-12-10 @ 10:00 am	2019-12-13 @ 11:00 am	< 0.3	2019-12-17
9334481	CLASSROOM 24	2019-12-10 @ 11:00 am	2019-12-13 @ 11:00 am	0.6 ± 0.3	2019-12-17
9334492	CLASSROOM 24	2019-12-10 @ 11:00 am	2019-12-13 @ 11:00 am	< 0.3	2019-12-17
9334493	CLASSROOM 24	2019-12-10 @ 11:00 am	2019-12-13 @ 11:00 am	0.7 ± 0.3	2019-12-17
9334486	CLASSROOM 29	2019-12-10 @ 11:00 am	2019-12-13 @ 11:00 am	< 0.3	2019-12-17
9334449	CLASSROOM 3	2019-12-10 @ 8:00 am	2019-12-13 @ 11:00 am	< 0.3	2019-12-16
9334485	CLASSROOM 34	2019-12-10 @ 11:00 am	2019-12-13 @ 11:00 am	< 0.3	2019-12-17
9334438	CLASSROOM 4	2019-12-10 @ 9:00 am	2019-12-13 @ 11:00 am	< 0.3	2019-12-17
9334444	CLASSROOM 5	2019-12-10 @ 9:00 am	2019-12-13 @ 11:00 am	< 0.3	2019-12-17
9334445	CLASSROOM 6	2019-12-10 @ 9:00 am	2019-12-13 @ 11:00 am	< 0.3	2019-12-17
9334470	CLASSROOM 8	2019-12-10 @ 9:00 am	2019-12-13 @ 11:00 am	< 0.3	2019-12-16
9334454	COMPUTER OFFICE	2019-12-10 @ 9:00 am	2019-12-13 @ 11:00 am	< 0.3	2019-12-17
9334414	CONFERENCE ROOM	2019-12-10 @ 8:00 am	2019-12-13 @ 11:00 am	< 0.3	2019-12-17
9334494	COUNSELORS OFFICE	2019-12-10 @ 11:00 am	2019-12-13 @ 11:00 am	< 0.3	2019-12-17
9334475	GYM	2019-12-10 @ 10:00 am	2019-12-13 @ 11:00 am	< 0.3	2019-12-16
9334482	GYM	2019-12-10 @ 10:00 am	2019-12-13 @ 11:00 am	< 0.3	2019-12-16
9334478	GYM	2019-12-10 @ 10:00 am	2019-12-13 @ 11:00 am	< 0.3	2019-12-16
9334476	GYM OFFICE	2019-12-10 @ 10:00 am	2019-12-13 @ 11:00 am	< 0.3	2019-12-16
9334428	HEALTH OFFICE	2019-12-10 @ 8:00 am	2019-12-13 @ 11:00 am	< 0.3	2019-12-17

Radon test result report for:
STONE MILL ES
MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
9334441	HEALTH SUITE	2019-12-10 @ 8:00 am	2019-12-13 @ 11:00 am	< 0.3	2019-12-16
9334479	INSTRUMENTAL MUSIC	2019-12-10 @ 11:00 am	2019-12-13 @ 11:00 am	< 0.3	2019-12-16
9334440	MAIN OFFICE	2019-12-10 @ 8:00 am	2019-12-13 @ 11:00 am	< 0.3	2019-12-17
9334442	MAIN OFFICE WAITING	2019-12-10 @ 8:00 am	2019-12-13 @ 11:00 am	< 0.3	2019-12-17
9334463	MATERIAL PREP	2019-12-10 @ 9:00 am	2019-12-13 @ 11:00 am	< 0.3	2019-12-17
9334464	MATH LAB	2019-12-10 @ 9:00 am	2019-12-13 @ 11:00 am	< 0.3	2019-12-17
9334455	MEDIA CENTER	2019-12-10 @ 9:00 am	2019-12-13 @ 11:00 am	< 0.3	2019-12-16
9334456	MEDIA CENTER	2019-12-10 @ 9:00 am	2019-12-13 @ 11:00 am	< 0.3	2019-12-17
9334489	MULTIPURPOSE ROOM	2019-12-10 @ 11:00 am	2019-12-13 @ 12:00 pm	< 0.3	2019-12-16
9334487	MULTIPURPOSE ROOM	2019-12-10 @ 11:00 am	2019-12-13 @ 11:00 am	< 0.3	2019-12-16
9334480	MULTIPURPOSE ROOM	2019-12-10 @ 11:00 am	2019-12-13 @ 11:00 am	< 0.3	2019-12-16
9334490	MULTIPURPOSE ROOM	2019-12-10 @ 11:00 am	2019-12-13 @ 11:00 am	< 0.3	2019-12-16
9334488	MULTIPURPOSE ROOM	2019-12-10 @ 11:00 am	2019-12-13 @ 11:00 am	< 0.3	2019-12-16
9334457	OFFICE	2019-12-10 @ 9:00 am	2019-12-13 @ 11:00 am	0.7 ± 0.3	2019-12-17
9334453	OFFICE	2019-12-10 @ 9:00 am	2019-12-13 @ 11:00 am	< 0.3	2019-12-17
9334458	OFFICE	2019-12-10 @ 9:00 am	2019-12-13 @ 11:00 am	< 0.3	2019-12-17
9334421	PRINCIPALS OFFICE	2019-12-10 @ 8:00 am	2019-12-13 @ 11:00 am	< 0.3	2019-12-17
9334469	ROOM 20 TEACHERS LOUNGE	2019-12-10 @ 10:00 am	2019-12-13 @ 11:00 am	< 0.3	2019-12-16
9334483	SPEECH OFFICE	2019-12-10 @ 11:00 am	2019-12-13 @ 11:00 am	< 0.3	2019-12-16
9334439	TELEPHONE	2019-12-10 @ 8:00 am	2019-12-13 @ 11:00 am	< 0.3	2019-12-17
9334429	WORK ROOM	2019-12-10 @ 8:00 am	2019-12-13 @ 11:00 am	< 0.3	2019-12-17

EXPOSURE IN BOWSER-MORNER RADON CHAMBER

CLIENT KEI Technologies Inc. Job Number 193475

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

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

Date Start: 12/13/19 Date Stop: 12/16/19 Date Start: _____ Date Stop: _____
0811
Time Start: 0806 acm Time Stop: 0811 Time Start: _____ Time Stop: _____
(Group 2)
Device No.'s: (20) Char. Bags - Device No.'s: _____
9334529 thru 9334538,
9334540,
9334542 thru 9334550
B3

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

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

Radon test result report for:

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

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

December 18, 2019

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

N/A

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

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

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

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



Radon Test Kit Chain of Custody

Project Name: MCPS Radon 2019 Week 1

Name of Schools:

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

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

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

RADON SCREENING SURVEY – FOLLOW-UP STONE MILL ELEMENTARY SCHOOL

14323 Stonebridge View Drive, North Potomac, Maryland 20878

EXECUTIVE SUMMARY

Date of Test Report:	4/1/16 Follow-Up
Round of Testing:	Initial Follow-up Post Remediation
# Rooms Tested	2
# Rooms \geq 4.0 pCi/L:	0
Low Value:	<0.4
High Value:	<0.4
Confirmed Rooms \geq 4.0 pCi/L US EPA Action Level	0

Summary of Sampling Events \geq 4.0 pCi/L

Room	Result (pCi/L) 2/29/16 Initial	Result (pCi/L) 4/1/16 Follow-Up	Average Result (pCi/L)
CR10	--- Missing	<0.4	<0.4
TL	--- Missing	<0.4	<0.4



MCPS RADON TESTING

Executive Summary: Stone Mill Elementary School

Date of Test Report:	4/1/2016
Round of Testing:	Initial Follow-up Post Remediation
# Rooms Tested:	2
# Rooms \geq 4.0 pCi/L:	0
Low Value:	< 0.4
High Value:	< 0.4

Project Status:

Retesting completed; no further action at this time.



April 1, 2016

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

Re: **Radon Testing Services**
KCI Job # 12146341.31

Location: Stone Mill Elementary School
14323 Stonebridge View Drive
North Potomac, MD 20878

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 Stone Mill Elementary School, located at 14323 Stonebridge View Drive in North Potomac, Maryland 20878 (subject site).

Scope of Services:

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

KCI visited the site on March 8, 2016 and deployed two (2) activated charcoal (AC) radon test kits. KCI deployed radon test kits in frequently-occupied ground contact rooms, and other areas, (if applicable) in accordance with AARST guidance. A floor plan map of the building with the test locations is included as Attachment A of this report.

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

KCI returned to the site on March 11, 2016 to retrieve the radon sampling test kits. KCI shipped all radon tests via overnight delivery to AccuStar Labs for analysis by gamma-ray spectroscopy. Accustar Labs is a NRSB certified analytical laboratory for radon analysis (certification # ARL0007) located at 929 Mount

Zion Road, Lebanon, Pennsylvania.

Evaluation of Testing Conditions:

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

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

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

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

Results:

The results of the radon test analysis indicated the following:

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

Notes:
D- Duplicate sample

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

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

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

Sincerely,



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

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

ATTACHMENT A

Floor Plan With Test Locations

ATTACHMENT B

Radon Test Summary Spreadsheet

Table Notes:

AC- Activated Charcoal

ACI- Air Chek, Inc.

D- Duplicate

FB- Field Blank

KCI- KCI Technologies, Inc.

OB- Office Blank*

PM- Project Manager

QC- Quality Control

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

Radon Testing Results		
Stone Mill ES		
Test Period: 03/08/16-03/11/16		
Kit Number	Room / Area	Result
3029012	CR-10	<0.4
3029013	TL	<0.4

Table Note:

* Missing or Compromised Sample

ATTACHMENT C

Laboratory Analytical Results

NRPP 10511AL
NRSB ARL0007

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

Laboratory Report for:

Property Tested: Project # 12146341

KCI Technologies
936 Ridgebrook Rd
Sparks MD 21152


Stone Mill ES
14323 Stonebridge View Dr
North Potomac MD 20878


Log Number	Device Number	Test Exposure Duration:		Area Tested	Result (pCi/L)
3016784	3029013	03/08/2016 1:59 pm	03/11/2016 11:29 am	Unit TL Teachers Lounge	<0.4
3016785	3029012	03/08/2016 2:04 pm	03/11/2016 11:31 am	Unit CR-10	<0.4

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

Distributed by: KCI Technologies, Inc.

Date Received: 03/15/2016 Date Logged: 03/15/2016 Date Analyzed: 03/16/2016 Date Reported: 03/16/2016

Report Reviewed By: 

Report Approved By: 
Carolyn D. Koke, President, AccuStar Labs

Disclaimer:

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

This report may only be transferred to a third party in its entirety. Analytical results relate to the samples AS RECEIVED BY THE LABORATORY. Results shown on this report represent levels of radon gas measured between the dates shown in the room or area of the site identified above as "Property Tested". Incorrect information will affect results. The results may not be construed as either predictive or supportive of measurements conducted in any area of this structure at any other time. AccuStar Labs, its employees and agents are not responsible for the consequences of any action taken or not taken based upon the results reported or any verbal or written interpretation of the results.

Send Written Report To:

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

Site Tested:

Site Name Stone Mill ES
Address 14323 Stonebridge View Dr.
Address
City / Town North Potomac
State/Province Postal Code MD
Test Country Montgomery County
Project Number 12146341

Contact Information:

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

Lab Use Only	Device Number	Building Number	Unit Number	Floor	Name of Room	Start Date mm/dd/yyyy	Start Time hh:mm am / pm	Stop Date mm/dd/yyyy	Stop Time hh:mm am / pm	Lab Use Only
	3029013		TL		Teachers Lounge 7 ^B	03/08/2016	13:59	03/11/2016	11:29	
	3029012		CR-10		7 ^D	03/08/2016	14:04	03/11/2016	11:31	

NRPP 10511AL
NRSB ARL0007

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

Laboratory Report for:

Property Tested: Project # 12146341

KCI Technologies
936 Ridgebrook Rd
Sparks MD 21152


MCPS Radon Phase 11 Office Blank


Log Number	Device Number	Test Exposure Duration:	Area Tested	Result (pCi/L)
3016739	3029191	03/08/2016 10:00 am 03/11/2016 10:00 am	Office Blank	<0.4

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

Distributed by: KCI Technologies, Inc.

Date Received: 03/15/2016 Date Logged: 03/15/2016 Date Analyzed: 03/15/2016 Date Reported: 03/16/2016

Report Reviewed By: 

Report Approved By: 
Carolyn D. Koke, President, AccuStar Labs

Disclaimer:

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

This report may only be transferred to a third party in its entirety. Analytical results relate to the samples AS RECEIVED BY THE LABORATORY. Results shown on this report represent levels of radon gas measured between the dates shown in the room or area of the site identified above as "Property Tested". Incorrect information will affect results. The results may not be construed as either predictive or supportive of measurements conducted in any area of this structure at any other time. AccuStar Labs, its employees and agents are not responsible for the consequences of any action taken or not taken based upon the results reported or any verbal or written interpretation of the results.

NRPP 10511AL
NRSB ARL0007

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

Laboratory Report for:

Property Tested:

KCI Technologies
936 Ridgebrook Rd
Sparks MD 21152

MCPS
Transit Blanks

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

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

Distributed by: KCI Technologies, Inc.

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

Report Reviewed By: Christie Bates

Report Approved By: Carolyn D. Koke

Carolyn D. Koke, President, AccuStar Labs

Disclaimer:

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

This report may only be transferred to a third party in its entirety. Analytical results relate to the samples AS RECEIVED BY THE LABORATORY. Results shown on this report represent levels of radon gas measured between the dates shown in the room or area of the site identified above as "Property Tested". Incorrect information will affect results. The results may not be construed as either predictive or supportive of measurements conducted in any area of this structure at any other time. AccuStar Labs, its employees and agents are not responsible for the consequences of any action taken or not taken based upon the results reported or any verbal or written interpretation of the results.

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

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

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

Test Site Info

Name of Building/Project or Owner: Transit
 Site Address: Transit
 City: _____ State: _____ Zip: _____ County: _____
 Projects Contact Name: Don Coale Phone: _____ Email: _____

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

Multi-Page Report Y-N

Detector Serial#	ROOM NAME & NUMBER - LOCATION OF DETECTOR IN ROOM (indicate duplicates and blanks)	Floor	Start Date	Start Time Include AM/PM	Stop Date	Stop Time Include AM/PM	LAB USE ONLY	
							Wgt. Gain	pCi/L
3028953	Transit	1	1/19/16	approx: 00pm 1/23/16		9:30am		<0.4
8955	Transit	1	1/19/16					<0.4
8954	Transit	1	1/19/16					<0.4
8997	Transit	1	1/19/16					<0.4

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

Structure Type: (circle one or more) Basement - Crawlspace - Slab on Grade - Other
Test Purpose: (Circle all that apply) Initial Screening - Follow Up Test - Post Mitigation - Real Estate - Other
Building Type: (Circle One) Residential - Non Residential Private Day Care - Private School Day Care in Public School - Public School

Both Placed by and Retrieved by signatures are required
 Canisters placed by _____ # _____
 Canisters retrieved by _____ # _____

Send Results To: _____
 Company Name: KCI Tech
 Address: 936 Ridgebrook
 City: Sparks State: MD Zip: 21152
 Phone: 410-599-3826
 EMAIL Results to: James.Mouldale@kci.com

Were general operating conditions maintained?
 Yes - No explain if NO
 Were closed building conditions maintained?
 Yes - No explain if NO
 Normal Temp. Yes - No
 Normal Humidity Yes - No
 Windy Y-N Rainy Y-N

Make sure information is complete and correct.
 If a recalculation is requested there is a \$10.00 recalc fee PER Canister.

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

TCS INDUSTRIES, INC.

(717) 657-7032

RADON GAS DETECTION

www.radondetek.com

4326 Crestview Road, Harrisburg, PA 17112

James Mouldale
KCI
936 Ridgebrook Rd.
Sparks, MD 21152

April 04, 2016

Dear Mr. Mouldale:

The spike exposure data were:

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

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

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

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

Sincerely,



Carl H. Distenfeld, CHP

TCS Radon Chamber NRSB CHM 0002

NRPP 10511AL
NRSB ARL0007

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

Laboratory Report for:

Property Tested:

KCI Technologies
936 Ridgebrook Rd
Sparks MD 21152

MCPS
Radon Spike Sample Laboratory Results


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

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

Distributed by: KCI Technologies, Inc.

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

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

Report Reviewed By: 

Report Approved By: 
Carolyn D. Koke, President, AccuStar Labs

Disclaimer:

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

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MCPS RADON TESTING

Executive Summary: Stone Mill Elementary School

Date of Test Report:	2/29/2016
Round of Testing:	Initial Follow-up Post Remediation
# Rooms Tested:	45
# Rooms \geq 4.0 pCi/L:	0
Low Value:	< 0.3
High Value:	1.2

Project Status:

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



February 29, 2016

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

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

Location: Stone Mill Elementary School
14323 Stonebridge View Drive
North Potomac, MD 20878

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 Stone Mill Elementary School, located at 14323 Stonebridge View Drive in North Potomac, Maryland 20878 (subject site).

Scope of Services:

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

KCI visited the site on February 1, 2016 and deployed fifty-nine (59) activated charcoal (AC) radon test kits. KCI deployed radon test kits in frequently-occupied ground contact rooms, and other areas, (if applicable) in accordance with AARST guidance. A floor plan map of the building with the test locations is included as Attachment A of this report.

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

KCI returned to the site on February 4, 2016 to retrieve the radon sampling test kits. KCI shipped all radon tests via overnight delivery to Airchek, Inc. for analysis by gamma-ray spectroscopy. Airchek, Inc. is a NRSB certified analytical laboratory for radon analysis (certification # ARL1402) located at 1936

Butler Bridge Road, Mills River, North Carolina.

Evaluation of Testing Conditions:

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

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

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

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

Results:

The results of the radon test analysis indicated the following:

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

Notes:
D- Duplicate sample

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

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

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

Sincerely,



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

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

ATTACHMENT A

Floor Plan With Test Locations

ATTACHMENT B

Radon Test Summary Spreadsheet

Table Notes:

AC- Activated Charcoal

ACI- Air Chek, Inc.

D- Duplicate

FB- Field Blank

KCI- KCI Technologies, Inc.

OB- Office Blank

PM- Project Manager

QC- Quality Control

Radon Testing Results		
Stone Mill Elementary School		
Test Period: 02/01/16-02/04/16		
Kit Number	Room / Area	Result
7732675	ASSIST. PRIN. OF	0.8
7732618	BSO	1.1
7732660	COUNSELOR OFFICE	< 0.3
7732677	CR1	< 0.3
7732647	* CR10 (Missing)	-
7732671	CR11	< 0.3
7732668	CR12	< 0.3
7732630	CR13	< 0.3
7732640	CR14	0.8
7732633	CR15	< 0.3
7732639	CR16	0.9
7732636	CR17	1.2
7732619	CR18	1.1
7732631	CR19	0.9
7732620	CR21	0.9
7732627	CR23	< 0.3
7732625	CR29	0.8
7732676	CR3	< 0.3
7732621	CR31	0.7
7732655	CR32	0.6
7732665	CR34	0.9
7732679	CR35	0.8
7732649	CR5	0.6
7732645	CR6	0.8
7732648	CR7	0.6
7732651	CR8	< 0.3
7732644	CR9	0.7
7732650	DUAL PURPOSE	1.2
7732615	GYM	< 0.3
7732617	GYM	< 0.3
7732628	GYM	0.8
7732629	GYM	0.8
7732659	GYM OFFICE	0.7
7732682	HEALTH RM	0.6
7732641	IMC	0.9
7732663	IMC	0.9
7732638	IMC COMPUTER	1
7732642	IMC OFFICE	0.8
7732680	INSTR MUSIC	< 0.3
7732678	MAIN OFFICE	0.8
7732643	MATERIAL PREP	0.9
7732652	MATH	0.7
7732616	MPR	0.8
7732632	MPR	0.6
7732657	MUSIC RM	1.2
7732661	NURSES OFFICE	0.5

Table Note:

* Missing or Compromised Sample

Radon Testing Results		
Stone Mill Elementary School		
Test Period: 02/01/16-02/04/16		
Kit Number	Room / Area	Result
7732666	PRINCIPAL OFFICE	< 0.3
7732623	PV	0.7
7732656	* TL (Missing)	-
7732681	WORK RM	< 0.3

Table Note:

* Missing or Compromised Sample

Radon Testing Results		
Stone Mill Elementary School		
Test Period: 02/01/16-02/04/16		
Kit Number	QC Type	Result
7732672	D (BSO)	0.7
7732662	D (CR11)	< 0.3
7732646	D (MATH)	0.8
7732658	D (OFFICE WORK RM)	0.6
7732634	D (TL)	< 0.3
7732667	FB (CR12)	< 0.3
7732653	FB (MATH)	< 0.3
7732664	FB (TL)	< 0.3
7732247	OB (0)	< 0.3

Table Note:

* Missing or Compromised Sample

ATTACHMENT C

Laboratory Analytical Results

February 23, 2016
LABORATORY ANALYSIS REPORT **

Radon test result report for:
**STONE MILL ELEMENTARY SCHOOL
 MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7732247	0	2016-02-01 @ 5:00 pm	2016-02-04 @ 12:00 pm	< 0.3	2016-02-09
7732675	ASSIST. PRIN. OF	2016-02-01 @ 10:00 am	2016-02-04 @ 7:00 am	0.8 ± 0.4	2016-02-09
7732618	BSO	2016-02-01 @ 11:00 am	2016-02-04 @ 8:00 am	1.1 ± 0.3	2016-02-08
7732672	BSO	2016-02-01 @ 11:00 am	2016-02-04 @ 8:00 am	0.7 ± 0.4	2016-02-09
7732660	COUNSELOR OFFICE	2016-02-01 @ 10:00 am	2016-02-04 @ 8:00 am	< 0.3	2016-02-09
7732677	CR1	2016-02-01 @ 10:00 am	2016-02-04 @ 7:00 am	< 0.3	2016-02-08
7732647	CR10	@	@		
7732671	CR11	2016-02-01 @ 11:00 am	2016-02-04 @ 8:00 am	< 0.3	2016-02-08
7732662	CR11	2016-02-01 @ 11:00 am	2016-02-04 @ 8:00 am	< 0.3	2016-02-09
7732668	CR12	2016-02-01 @ 11:00 am	2016-02-04 @ 8:00 am	< 0.3	2016-02-08
7732667	CR12	2016-02-01 @ 11:00 am	2016-02-04 @ 8:00 am	< 0.3	2016-02-09
7732630	CR13	2016-02-01 @ 11:00 am	2016-02-04 @ 8:00 am	< 0.3	2016-02-08
7732640	CR14	2016-02-01 @ 11:00 am	2016-02-04 @ 8:00 am	0.8 ± 0.4	2016-02-09
7732633	CR15	2016-02-01 @ 11:00 am	2016-02-04 @ 8:00 am	< 0.3	2016-02-09
7732639	CR16	2016-02-01 @ 11:00 am	2016-02-04 @ 8:00 am	0.9 ± 0.4	2016-02-09
7732636	CR17	2016-02-01 @ 11:00 am	2016-02-04 @ 8:00 am	1.2 ± 0.4	2016-02-09
7732619	CR18	2016-02-01 @ 11:00 am	2016-02-04 @ 8:00 am	1.1 ± 0.3	2016-02-08
7732631	CR19	2016-02-01 @ 11:00 am	2016-02-04 @ 8:00 am	0.9 ± 0.3	2016-02-08
7732620	CR21	2016-02-01 @ 11:00 am	2016-02-04 @ 8:00 am	0.9 ± 0.4	2016-02-08
7732627	CR23	2016-02-01 @ 11:00 am	2016-02-04 @ 8:00 am	< 0.3	2016-02-09
7732625	CR29	2016-02-01 @ 12:00 pm	2016-02-04 @ 8:00 am	0.8 ± 0.3	2016-02-08
7732676	CR3	2016-02-01 @ 10:00 am	2016-02-04 @ 7:00 am	< 0.3	2016-02-09
7732621	CR31	2016-02-01 @ 12:00 pm	2016-02-04 @ 8:00 am	0.7 ± 0.3	2016-02-08
7732655	CR32	2016-02-01 @ 12:00 pm	2016-02-04 @ 8:00 am	0.6 ± 0.4	2016-02-09
7732665	CR34	2016-02-01 @ 12:00 pm	2016-02-04 @ 8:00 am	0.9 ± 0.4	2016-02-09
7732679	CR35	2016-02-01 @ 12:00 pm	2016-02-04 @ 8:00 am	0.8 ± 0.4	2016-02-09
7732649	CR5	2016-02-01 @ 10:00 am	2016-02-04 @ 7:00 am	0.6 ± 0.4	2016-02-09
7732645	CR6	2016-02-01 @ 10:00 am	2016-02-04 @ 7:00 am	0.8 ± 0.3	2016-02-08
7732648	CR7	2016-02-01 @ 10:00 am	2016-02-04 @ 7:00 am	0.6 ± 0.3	2016-02-08
7732651	CR8	2016-02-01 @ 10:00 am	2016-02-04 @ 8:00 am	< 0.3	2016-02-09
7732644	CR9	2016-02-01 @ 11:00 am	2016-02-04 @ 8:00 am	0.7 ± 0.3	2016-02-08
7732650	DUAL PURPOSE	2016-02-01 @ 10:00 am	2016-02-04 @ 7:00 am	1.2 ± 0.4	2016-02-09
7732617	GYM	2016-02-01 @ 11:00 am	2016-02-04 @ 8:00 am	< 0.3	2016-02-08
7732615	GYM	2016-02-01 @ 11:00 am	2016-02-04 @ 8:00 am	< 0.3	2016-02-09
7732628	GYM	2016-02-01 @ 11:00 am	2016-02-04 @ 8:00 am	0.8 ± 0.4	2016-02-09
7732629	GYM	2016-02-01 @ 11:00 am	2016-02-04 @ 8:00 am	0.8 ± 0.4	2016-02-09
7732659	GYM OFFICE	2016-02-01 @ 11:00 am	2016-02-04 @ 8:00 am	0.7 ± 0.4	2016-02-09

February
23,
2016

**LABORATORY ANALYSIS
REPORT ****

Radon test result report for:
**STONE MILL ELEMENTARY SCHOOL
MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7732682	HEALTH RM	2016-02-01 @ 10:00 am	2016-02-04 @ 7:00 am	0.6 ± 0.4	2016-02-09
7732641	IMC	2016-02-01 @ 10:00 am	2016-02-04 @ 7:00 am	0.9 ± 0.4	2016-02-09
7732663	IMC	2016-02-01 @ 10:00 am	2016-02-04 @ 7:00 am	0.9 ± 0.4	2016-02-09
7732638	IMC COMPUTER	2016-02-01 @ 11:00 am	2016-02-04 @ 7:00 am	1.0 ± 0.4	2016-02-09
7732642	IMC OFFICE	2016-02-01 @ 10:00 am	2016-02-04 @ 7:00 am	0.8 ± 0.4	2016-02-09
7732680	INSTR MUSIC	2016-02-01 @ 11:00 am	2016-02-04 @ 8:00 am	< 0.3	2016-02-09
7732678	MAIN OFFICE	2016-02-01 @ 10:00 am	2016-02-04 @ 7:00 am	0.8 ± 0.3	2016-02-08
7732643	MATERIAL PREP	2016-02-01 @ 10:00 am	2016-02-04 @ 8:00 am	0.9 ± 0.4	2016-02-09
7732646	MATH	2016-02-01 @ 10:00 am	2016-02-04 @ 7:00 am	0.8 ± 0.4	2016-02-09
7732652	MATH	2016-02-01 @ 10:00 am	2016-02-04 @ 7:00 am	0.7 ± 0.3	2016-02-09
7732653	MATH	2016-02-01 @ 10:00 am	2016-02-04 @ 7:00 am	< 0.3	2016-02-09
7732632	MPR	2016-02-01 @ 11:00 am	2016-02-04 @ 8:00 am	0.6 ± 0.4	2016-02-09
7732616	MPR	2016-02-01 @ 11:00 am	2016-02-04 @ 8:00 am	0.8 ± 0.4	2016-02-09
7732657	MUSIC RM	2016-02-01 @ 10:00 am	2016-02-04 @ 7:00 am	1.2 ± 0.4	2016-02-09
7732661	NURSES OFFICE	2016-02-01 @ 10:00 am	2016-02-04 @ 7:00 am	0.5 ± 0.4	2016-02-09
7732658	OFFICE WORK RM	2016-02-01 @ 10:00 am	2016-02-04 @ 7:00 am	0.6 ± 0.4	2016-02-09
7732666	PRINCIPAL OFFICE	2016-02-01 @ 10:00 am	2016-02-04 @ 7:00 am	< 0.3	2016-02-09
7732623	PV	2016-02-01 @ 12:00 pm	2016-02-04 @ 8:00 am	0.7 ± 0.4	2016-02-09
7732656	TL	@	@		
7732634	TL	2016-02-01 @ 11:00 am	2016-02-04 @ 8:00 am	< 0.3	2016-02-08
7732664	TL	2016-02-01 @ 11:00 am	2016-02-04 @ 8:00 am	< 0.3	2016-02-08
7732681	WORK RM	2016-02-01 @ 10:00 am	2016-02-04 @ 7:00 am	< 0.3	2016-02-09

February 23, 2016
LABORATORY ANALYSIS REPORT

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

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

February
15,
2016

**** LABORATORY ANALYSIS
REPORT ****

Spike Sample Laboratory Results

Radon test result report for:
MCPS

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

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

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

EXPOSURE IN BOWSER-MORNER RADON CHAMBER

CLIENT KCF Technologies Inc. Job Number 173704

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

Date Start: 1/30/16 Date Stop: 2/1/16 Date Start: _____ Date Stop: _____

Time Start: 0926 Time Stop: 0926 Time Start: _____ Time Stop: _____

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

7718281, 7718282, 7718291, _____

7718288, 7718289, 7718273 _____

ε3 Left

Date Start: _____ Date Stop: _____ Date Start: _____ Date Stop: _____

Time Start: _____ Time Stop: _____ Time Start: _____ Time Stop: _____

Device No.'s: _____ Device No.'s: _____

Date Start: _____ Date Stop: _____ Date Start: _____ Date Stop: _____

Time Start: _____ Time Stop: _____ Time Start: _____ Time Stop: _____

Device No.'s: _____ Device No.'s: _____

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



Radon Test Kit Chain of Custody

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

Name of School/Facility:

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

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

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



Radon Test Kit Chain of Custody

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

Name of School/Facility:

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

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

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