

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

Site Name	Farquhar Middle Schoo
Date of Report	2/28/202
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	
# Rooms ≥4.0 pCi/L	
Lowest Value	<0.3 pCi/l
Highest Value	<0.3 pCi/I

MCPS RADON TESTING - EXECUTIVE SUMMARY

Project Status

Current Project Status at this time: Retesting completed;



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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: Farquhar Middle School 17017 Batchellors Forest Road Olney, Maryland 20832

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 Farquhar Middle School, located at 17017 Batchellors Forest Road in Olney, Maryland 20832 (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 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.

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		
Farquhar Middle School		
Test Period: 02/11/20-02/14/20		
Kit Number Room / Area Result		
9348564 29 < 0.3		
9348502 OFFICE BLANK < 0.3		

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

ATTACHMENT C

Laboratory Analytical Results

Radon test result report for: FARQUHAR MS RT 507

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
9348564	029	2020-02-11 @ 1:00 pm	2020-02-14 @ 12:00 pm	< 0.3	2020-02-18

EXPOSURE IN BOWSER-	MORNER RADON CHAMBER
CLIENT KCI Technolog	gies, Inc. Job Number 194523
NOMINAL Conditions: Radon Conc 35.8	_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: (9) Char Bags-	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 ± 1.6	2020-02-26
9341730	N/A	2020-02-21 @ 8:00 am	2020-02-24 @ 8:00 am	26.1 ± 1.6	2020-02-26
9341728	N/A	2020-02-21 @ 8:00 am	2020-02-24 @ 8:00 am	26.9 ± 1.6	2020-02-26
9341726	N/A	2020-02-21 @ 8:00 am	2020-02-24 @ 8:00 am	25.8 ± 1.5	2020-02-26
9341731	N/A	2020-02-21 @ 8:00 am	2020-02-24 @ 8:00 am	25.1 ± 1.5	2020-02-26
9341729	N/A	2020-02-21 @ 8:00 am	2020-02-24 @ 8:00 am	26.2 ± 1.6	2020-02-26
9341727	N/A	2020-02-21 @ 8:00 am	2020-02-24 @ 8:00 am	27.2 ± 1.6	2020-02-26
9341732	N/A	2020-02-21 @ 8:00 am	2020-02-24 @ 8:00 am	27.3 ± 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	TW
Radon Test Kits Received by Lab*	2/17/20	TUN

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



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Site Name	Farquhar 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	58
# Rooms ≥4.0 pCi/L	1.3
Lowest Value	<0.3 pCi/L
Highest Value	1.3 pCi/L

MCPS RADON TESTING - EXECUTIVE SUMMARY

Project Status

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



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: Farquhar Middle School 17017 Batchellors Forest Road Olney, Maryland 20832

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SCOPE OF SERVICES

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KCI visited the site on 12/17/2019 and deployed seventy-two (72) 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 12/20/2019 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.

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- 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.

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Sincerely,

Mr. Tyler P. McCleaf Radon Measurement Provider 111004 RT

KCI Technologies, Inc.

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ATTACHMENT A

Floor Plan With Test Locations

ATTACHMENT B

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Farquhar Elementary School Test Period: 12/17/2019-12/20/2019 Kit Number Room / Area Result 9340935 100E < 0.3 9340936 100F 0.6 9340937 100E < 0.3 9340938 100N WORKROOM 0.6 9340940 100B PRINCIPAL < 0.3 9340941 100D 0.7 9340942 100A ADMIN ASSISTANT 0.6 9340943 100N WORKROOM 0.6 9340944 MAIN OFFICE < 0.3 9340945 159C 0.5 9340946 159C < 0.3 9340947 160D < 0.3 9340950 100J < 0.3 9340951 100J < 0.3 9340952 160E < 0.3 9340953 100H < 0.3 9340954 138A < 0.3 9340955 138A < 0.3 9340956 1335 < 0.3 9340957 1115	Ta	able 1- Radon Testing Resu	lts
Test Period: 12/17/2019-12/20/2019 Kit Number Room / Area Result 9340935 100E < 0.3	F	Farquhar Elementary Schoo)
Kit NumberRoom / AreaResult 9340935 100E< 0.3	Test	Period: 12/17/2019-12/20/2	2019
Kit Number Room / Area Result 9340935 100E < 0.3			
9340935 100E < 0.3	Kit Number	Room / Area	Result
9340936 100F 0.6 9340937 100E < 0.3	9340935	100E	< 0.3
9340937 100E < 0.3	9340936	100F	0.6
9340938 100N WORKROOM 0.6 9340939 100M < 0.3	9340937	100E	< 0.3
9340939 100M < 0.3	9340938	100N WORKROOM	0.6
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9340944 MAIN OFFICE < 0.3 9340945 159C 0.5 9340946 159C < 0.3	9340943	100N WORKROOM	0.6
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9340934 $136A$ < 0.3 9340955 $138A$ < 0.3 9340956 135 < 0.3 9340957 115 0.6 9340958 136 0.7 9340959 135 < 0.3 9340960 $160F$ 0.7 9340961 137 1.1 9340962 $160G$ < 0.3 9340963 $135A$ < 0.3 9340964 101 < 0.3 9340965 $139E$ < 0.3 9340966 CAFETERIA < 0.3 9340967 CAFETERIA < 0.3 9340968 STAGE 0.6 9340970 $141C$ 0.7 9340971 $143C$ 0.7 9340972 142 < 0.3 9340973 STAGE < 0.3 9340974 150 0.8 9340975 149 < 0.3 9340976 GYM < 0.3 9340977 127 < 0.3 9340978 127 < 0.3 9340978 127 < 0.3 9340978 127 < 0.3 9340978 127 < 0.3 9340980 153 < 0.3 9340981 153 < 0.3 9340981 153 < 0.3 9340983 $027B$ 1.3 9340984 30 < 0.3	9340955	1294	< 0.3
9340955 $136A$ < 0.3 9340956 135 < 0.3 9340957 115 0.6 9340958 136 0.7 9340959 135 < 0.3 9340960 $160F$ 0.7 9340961 137 1.1 9340962 $160G$ < 0.3 9340963 $135A$ < 0.3 9340964 101 < 0.3 9340965 $139E$ < 0.3 9340966 CAFETERIA < 0.3 9340967 CAFETERIA < 0.3 9340969 129 < 0.3 9340970 $141C$ 0.7 9340971 $143C$ 0.7 9340972 142 < 0.3 9340973 STAGE < 0.3 9340974 150 0.8 9340975 149 < 0.3 9340976 GYM 0.9 9340978 127 < 0.3 9340979 127 < 0.3 9340979 127 < 0.3 9340979 127 < 0.3 9340978 127 < 0.3 9340979 127 < 0.3 9340980 153 < 0.3 9340981 153 < 0.3 9340982 220 < 0.3 9340983 $027B$ 1.3 9340984 30 < 0.3	9340954	130A	< 0.3
9340950 135 < 0.3 9340957 115 0.6 9340958 136 0.7 9340959 135 < 0.3 9340960 $160F$ 0.7 9340961 137 1.1 9340962 $160G$ < 0.3 9340963 $135A$ < 0.3 9340964 101 < 0.3 9340965 $139E$ < 0.3 9340966 CAFETERIA < 0.3 9340967 CAFETERIA < 0.3 9340968 STAGE 0.6 9340970 $141C$ 0.7 9340971 $143C$ 0.7 9340972 142 < 0.3 9340973 STAGE < 0.3 9340974 150 0.8 9340975 149 < 0.3 9340976 GYM 0.9 9340978 127 < 0.3 9340979 127 < 0.3 9340978 127 < 0.3 9340979 127 < 0.3 9340978 127 < 0.3 9340978 127 < 0.3 9340980 153 < 0.3 9340981 153 < 0.3 9340982 220 < 0.3 9340984 30 < 0.3	9340955	130A	< 0.3
9340957 115 0.6 9340958 136 0.7 9340959 135 < 0.3	9340956	135	< 0.3
9340956 136 0.7 9340959 135 < 0.3	9340957	115	0.6
9340959 135 < 0.3 9340960 $160F$ 0.7 9340961 137 1.1 9340962 $160G$ < 0.3 9340963 $135A$ < 0.3 9340964 101 < 0.3 9340965 $139E$ < 0.3 9340966 CAFETERIA < 0.3 9340967 CAFETERIA < 0.3 9340968 STAGE 0.6 9340969 129 < 0.3 9340970 $141C$ 0.7 9340971 $143C$ 0.7 9340972 142 < 0.3 9340973 STAGE < 0.3 9340974 150 0.8 9340975 149 < 0.3 9340976 GYM < 0.3 9340978 127 < 0.3 9340979 127 < 0.3 9340978 127 < 0.3 9340980 153 < 0.3 9340980 153 < 0.3 9340980 153 < 0.3 9340981 153 < 0.3 9340984 30 < 0.3	9340958	130	0.7
9340960 $160F$ 0.7 9340961 137 1.1 9340962 $160G$ < 0.3 9340963 $135A$ < 0.3 9340964 101 < 0.3 9340965 $139E$ < 0.3 9340966 CAFETERIA < 0.3 9340967 CAFETERIA < 0.3 9340968 STAGE 0.6 9340969 129 < 0.3 9340970 $141C$ 0.7 9340971 $143C$ 0.7 9340972 142 < 0.3 9340973 STAGE < 0.3 9340974 150 0.8 9340975 149 < 0.3 9340976 GYM 0.9 9340978 127 < 0.3 9340979 127 < 0.3 9340980 153 < 0.3 9340981 153 < 0.3 9340984 30 < 0.3	9340959		< 0.3
9340961 137 1.1 9340962 $160G$ < 0.3 9340963 $135A$ < 0.3 9340964 101 < 0.3 9340965 $139E$ < 0.3 9340966 CAFETERIA < 0.3 9340967 CAFETERIA < 0.3 9340968 STAGE 0.6 9340969 129 < 0.3 9340969 129 < 0.3 9340970 $141C$ 0.7 9340971 $143C$ 0.7 9340972 142 < 0.3 9340973 STAGE < 0.3 9340974 150 0.8 9340975 149 < 0.3 9340976 GYM 0.9 9340978 127 < 0.3 9340979 127 < 0.3 9340980 153 < 0.3 9340981 153 < 0.3 9340984 30 < 0.3	9340960	100F	0.7
9340962 160G < 0.3	9340961	137	1.1
9340963 135A < 0.3	9340962	160G	< 0.3
9340964 101 < 0.3 9340965 139E < 0.3	9340963	135A	< 0.3
9340965 139E < 0.3	9340964	101	< 0.3
9340966 CAFETERIA < 0.3 9340967 CAFETERIA < 0.3	9340965	139E	< 0.3
9340967 CAFETERIA < 0.3 9340968 STAGE 0.6 9340969 129 < 0.3	9340966	CAFETERIA	< 0.3
9340968 STAGE 0.6 9340969 129 < 0.3	9340967	CAFETERIA	< 0.3
9340969 129 < 0.3 9340970 141C 0.7 9340971 143C 0.7 9340972 142 < 0.3	9340968	STAGE	0.6
9340970141C0.79340971143C0.79340972142<0.3	9340969	129	< 0.3
9340971143C0.79340972142<0.3	9340970	141C	0.7
9340972142< 0.39340973STAGE< 0.3	9340971	143C	0.7
9340973 STAGE < 0.3 9340974 150 0.8 9340975 149 < 0.3	9340972	142	< 0.3
93409741500.89340975149< 0.3	9340973	STAGE	< 0.3
9340975149< 0.39340976GYM< 0.3	9340974	150	0.8
9340976GYM< 0.39340977GYM0.99340978127< 0.3	9340975	149	< 0.3
9340977GYM0.99340978127< 0.3	9340976	GYM	< 0.3
9340978127< 0.39340979127< 0.3	9340977	GYM	0.9
9340979127< 0.39340980153< 0.3	9340978	127	< 0.3
9340980153< 0.39340981153< 0.3	9340979	127	< 0.3
9340981 153 < 0.3 9340982 220 < 0.3	9340980	153	< 0.3
9340982 220 < 0.3 9340983 027B 1.3 9340984 30 < 0.3	9340981	153	< 0.3
9340983 027B 1.3 9340984 30 < 0.3	9340982	220	< 0.3
9340984 30 < 0.3	9340983	027B	1.3
	9340984	30	< 0.3

9340985	33	< 0.3
9340986	15	0.7
9340987	12	< 0.3
9340988	10	0.6
9340989	6	< 0.3
9340990	7	< 0.3
9340991	9	< 0.3
9340992	18	0.5
9340993	29	MISSING
9340994	30	< 0.3
9340995	012A	< 0.3
9340996	11	0.7
9340997	20	0.8
9340998	3	< 0.3
9340999	3	< 0.3
9341000	4	0.6
9341383	18	< 0.3
9341384	029A	0.6
9341385	157	< 0.3
9341387	157	< 0.3
9341399	1	< 0.3
9341400	16	0.5
9341392	OFFICE BLANK	< 0.3

	Table 2- Radon Testing Results				
	Farquhar Middle School				
	Test Period: 12/16/2019-12/19/2019				
Kit Number	QC Type	Room / Area	Result		
9340938	D	100N WORKROOM	0.6		
9340935	FB	100E	<0.3		
9340946	D	159C	<0.3		
9340956 D 135 <0.3					
9340954 FB 138A <0.3					
9340973 D STAGE <0.3					
9340979 D 127 <0.3					
9340981	FB	153	<0.3		
9340994	D	30	<0.3		
9340998	FB	3	<0.3		
9341383	D	18	<0.3		
9341385	D	157	<0.3		
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	
Willian	n H. Farquhar Middle School	
Test Per	iod: 12/17/2019 - 12/20/201	9
Kit Number	Room/Area	Result
	NA	

Summary of	Summary of Missing, Compromised and >/= 4 piC/L Tests				
W	William H. Farquhar Middle School				
Tes	st Period: 12/17/2019-12/20/2019				
Kit Number	Room/Area	Result			
9340993	*29	Missing			

Table Note:

* Missing or Compromised Sample

ATTACHMENT C

Laboratory Analytical Results

Radon test result report for: FARQUHAR MS MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
9341399	001	2019-12-17 @ 3:00 pm	2019-12-20 @ 10:00 am	< 0.3	2019-12-24
9340998	003	2019-12-17 @ 3:00 pm	2019-12-20 @ 10:00 am	< 0.3	2019-12-24
9340999	003	2019-12-17 @ 3:00 pm	2019-12-20 @ 10:00 am	< 0.3	2019-12-24
9341000	004	2019-12-17 @ 3:00 pm	2019-12-20 @ 10:00 am	0.6 ± 0.4	2019-12-24
9340989	006	2019-12-17 @ 3:00 pm	2019-12-20 @ 10:00 am	< 0.3	2019-12-24
9340990	007	2019-12-17 @ 3:00 pm	2019-12-20 @ 10:00 am	< 0.3	2019-12-24
9340991	009	2019-12-17 @ 3:00 pm	2019-12-20 @ 10:00 am	< 0.3	2019-12-24
9340988	010	2019-12-17 @ 3:00 pm	2019-12-20 @ 10:00 am	0.6 ± 0.4	2019-12-24
9340996	011	2019-12-17 @ 3:00 pm	2019-12-20 @ 10:00 am	0.7 ± 0.4	2019-12-24
9340987	012	2019-12-17 @ 3:00 pm	2019-12-20 @ 10:00 am	< 0.3	2019-12-24
9340995	012A	2019-12-17 @ 3:00 pm	2019-12-20 @ 10:00 am	< 0.3	2019-12-24
9340986	015	2019-12-17 @ 3:00 pm	2019-12-20 @ 10:00 am	0.7 ± 0.4	2019-12-24
9341400	016	2019-12-17 @ 3:00 pm	2019-12-20 @ 10:00 am	0.5 ± 0.4	2019-12-24
9340992	018	2019-12-17 @ 3:00 pm	2019-12-20 @ 10:00 am	0.5 ± 0.4	2019-12-24
9341383	018	2019-12-17 @ 3:00 pm	2019-12-20 @ 10:00 am	< 0.3	2019-12-24
9340997	020	2019-12-17 @ 3:00 pm	2019-12-20 @ 10:00 am	0.8 ± 0.4	2019-12-24
9340983	027B	2019-12-17 @ 3:00 pm	2019-12-20 @ 10:00 am	1.3 ± 0.4	2019-12-24
9341384	029A	2019-12-17 @ 3:00 pm	2019-12-20 @ 10:00 am	0.6 ± 0.3	2019-12-24
9340984	030	2019-12-17 @ 3:00 pm	2019-12-20 @ 10:00 am	< 0.3	2019-12-24
9340994	030	2019-12-17 @ 3:00 pm	2019-12-20 @ 10:00 am	< 0.3	2019-12-24
9340985	033	2019-12-17 @ 3:00 pm	2019-12-20 @ 10:00 am	< 0.3	2019-12-24
9340942	100A ADMIN ASSISTANT	2019-12-17 @ 1:00 pm	2019-12-20 @ 9:00 am	0.6 ± 0.4	2019-12-24
9340940	100B PRINCIPAL	2019-12-17 @ 1:00 pm	2019-12-20 @ 9:00 am	< 0.3	2019-12-24
9340941	100D	2019-12-17 @ 1:00 pm	2019-12-20 @ 9:00 am	0.7 ± 0.4	2019-12-24
9340937	100E	2019-12-17 @ 1:00 pm	2019-12-20 @ 9:00 am	< 0.3	2019-12-24
9340935	100E	2019-12-17 @ 1:00 pm	2019-12-20 @ 9:00 am	< 0.3	2019-12-24
9340936	100F	2019-12-17 @ 1:00 pm	2019-12-20 @ 9:00 am	0.6 ± 0.4	2019-12-24
9340953	100H	2019-12-17 @ 2:00 pm	2019-12-20 @ 9:00 am	< 0.3	2019-12-24
9340950	1001	2019-12-17 @ 2:00 pm	2019-12-20 @ 9:00 am	< 0.3	2019-12-24
9340951	100J	2019-12-17 @ 2:00 pm	2019-12-20 @ 9:00 am	< 0.3	2019-12-24
9340939	100M	2019-12-17 @ 1:00 pm	2019-12-20 @ 9:00 am	< 0.3	2019-12-24
9340938	100N WORKROOM	2019-12-17 @ 1:00 pm	2019-12-20 @ 9:00 am	0.6 ± 0.4	2019-12-24
9340943	100N WORKROOM	2019-12-17 @ 1:00 pm	2019-12-20 @ 9:00 am	0.6 ± 0.3	2019-12-24
9340964	101	2019-12-17 @ 2:00 pm	2019-12-20 @ 9:00 am	< 0.3	2019-12-24
9340957	115	2019-12-17 @ 2:00 pm	2019-12-20 @ 9:00 am	0.6 ± 0.3	2019-12-24
9340979	127	2019-12-17 @ 3:00 pm	2019-12-20 @ 10:00 am	< 0.3	2019-12-24
9340978	127	2019-12-17 @ 3:00 pm	2019-12-20 @ 10:00 am	< 0.3	2019-12-24

Radon test result report for: FARQUHAR MS MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
9340969	129	2019-12-17 @ 2:00 pm	2019-12-20 @ 9:00 am	< 0.3	2019-12-24
9340956	135	2019-12-17 @ 2:00 pm	2019-12-20 @ 9:00 am	< 0.3	2019-12-24
9340959	135	2019-12-17 @ 2:00 pm	2019-12-20 @ 9:00 am	< 0.3	2019-12-24
9340963	135A	2019-12-17 @ 2:00 pm	2019-12-20 @ 9:00 am	< 0.3	2019-12-24
9340958	136	2019-12-17 @ 2:00 pm	2019-12-20 @ 10:00 am	0.7 ± 0.4	2019-12-24
9340961	137	2019-12-17 @ 2:00 pm	2019-12-20 @ 10:00 am	1.1 ± 0.4	2019-12-24
9340955	138A	2019-12-17 @ 2:00 pm	2019-12-20 @ 10:00 am	< 0.3	2019-12-24
9340954	138A	2019-12-17 @ 2:00 pm	2019-12-20 @ 10:00 am	< 0.3	2019-12-24
9340965	139E	2019-12-17 @ 2:00 pm	2019-12-20 @ 10:00 am	< 0.3	2019-12-24
9340970	141C	2019-12-17 @ 2:00 pm	2019-12-20 @ 10:00 am	0.7 ± 0.4	2019-12-24
9340972	142	2019-12-17 @ 2:00 pm	2019-12-20 @ 10:00 am	< 0.3	2019-12-24
9340971	143C	2019-12-17 @ 2:00 pm	2019-12-20 @ 10:00 am	0.7 ± 0.4	2019-12-24
9340975	149	2019-12-17 @ 2:00 pm	2019-12-20 @ 10:00 am	< 0.3	2019-12-24
9340974	150	2019-12-17 @ 2:00 pm	2019-12-20 @ 10:00 am	0.8 ± 0.4	2019-12-24
9340980	153	2019-12-17 @ 3:00 pm	2019-12-20 @ 10:00 am	< 0.3	2019-12-24
9340981	153	2019-12-17 @ 3:00 pm	2019-12-20 @ 10:00 am	< 0.3	2019-12-24
9341385	157	2019-12-17 @ 3:00 pm	2019-12-20 @ 9:00 am	< 0.3	2019-12-24
9341387	157	2019-12-17 @ 3:00 pm	2019-12-20 @ 9:00 am	< 0.3	2019-12-24
9340949	159 HEALTH OFFICE	2019-12-17 @ 2:00 pm	2019-12-20 @ 9:00 am	< 0.3	2019-12-24
9340945	159C	2019-12-17 @ 2:00 pm	2019-12-20 @ 9:00 am	0.5 ± 0.4	2019-12-24
9340946	159C	2019-12-17 @ 2:00 pm	2019-12-20 @ 9:00 am	< 0.3	2019-12-24
9340948	160C	2019-12-17 @ 2:00 pm	2019-12-20 @ 9:00 am	0.5 ± 0.3	2019-12-24
9340947	160D	2019-12-17 @ 2:00 pm	2019-12-20 @ 9:00 am	< 0.3	2019-12-24
9340952	160E	2019-12-17 @ 2:00 pm	2019-12-20 @ 9:00 am	< 0.3	2019-12-24
9340960	160F	2019-12-17 @ 2:00 pm	2019-12-20 @ 9:00 am	0.7 ± 0.4	2019-12-24
9340962	160G	2019-12-17 @ 2:00 pm	2019-12-20 @ 9:00 am	< 0.3	2019-12-24
9340982	220	2019-12-17 @ 3:00 pm	2019-12-20 @ 10:00 am	< 0.3	2019-12-24
9340967	CAFETERIA	2019-12-17 @ 2:00 pm	2019-12-20 @ 10:00 am	< 0.3	2019-12-24
9340966	CAFETERIA	2019-12-17 @ 2:00 pm	2019-12-20 @ 10:00 am	< 0.3	2019-12-24
9340977	GYM	2019-12-17 @ 2:00 pm	2019-12-20 @ 10:00 am	0.9 ± 0.4	2019-12-24
9340976	GYM	2019-12-17 @ 2:00 pm	2019-12-20 @ 10:00 am	< 0.3	2019-12-24
9340944	MAIN OFFICE	2019-12-17 @ 1:00 pm	2019-12-20 @ 9:00 am	< 0.3	2019-12-24
9340968	STAGE	2019-12-17 @ 2:00 pm	2019-12-20 @ 10:00 am	0.6 ± 0.3	2019-12-24
9340973	STAGE	2019-12-17 @ 2:00 pm	2019-12-20 @ 10:00 am	< 0.3	2019-12-24

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



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

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 ± 2.0 D	2020-01-03
9340040	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	27.3 ± 2.6 D	2020-01-03
9340008	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	24.8 ± 2.5 D	2020-01-03
9340094	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	24.7 ± 2.5 D	2020-01-03
9340099	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	27.5 ± 2.6 D	2020-01-03
9340077	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	25.2 ± 2.5 D	2020-01-03
9340045	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	24.7 ± 2.4 D	2020-01-03
9340013	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	25.9 ± 2.6 D	2020-01-03
9340018	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	29.1 ± 2.8 D	2020-01-03
9341704	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	25.1 ± 2.4 D	2020-01-03
9340050	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	27.2 ± 2.6 D	2020-01-03
9340023	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	28.2 ± 2.7 D	2020-01-03
9341709	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	25.5 ± 2.4 D	2020-01-03
9340055	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	27.8 ± 2.6 D	2020-01-03
9340060	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	27.3 ± 2.5 D	2020-01-03
9340028	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	23.9 ± 2.3 D	2020-01-03
9341714	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	28.3 ± 2.7 D	2020-01-03
9340082	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	26.4 ± 2.6 D	2020-01-03
9340065	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	$24.2 \pm 2.4 \text{ D}$	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 ± 2.5 D	2020-01-03
9340001	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	26.3 ± 2.5 D	2020-01-03
9340087	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	$24.8 \pm 2.4 \text{ D}$	2020-01-03
9340070	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	19.5 ± 2.4 D	2020-01-03
9340038	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	24.7 ± 2.3 D	2020-01-03
9340006	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	$25.2 \pm 2.4 \text{ D}$	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 ± 2.5 D	2020-01-03
9340075	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	29.6 ± 2.6 D	2020-01-03
9340043	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	28.1 ± 2.6 D	2020-01-03
9340011	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	26.8 ± 2.5 D	2020-01-03
9340016	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	$23.2 \pm 2.4 \text{ D}$	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 ± 2.4 D	2020-01-03
9340021	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	26.7 ± 2.6 D	2020-01-03
9341707	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	25.8 ± 2.4 D	2020-01-03
9340053	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	25.8 ± 2.5 D	2020-01-03
9340058	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	28.5 ± 2.7 D	2020-01-03
9340026	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	25.9 ± 2.4 D	2020-01-03
9341712	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	24.3 ± 2.4 D	2020-01-03
9340080	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	25.1 ± 2.4 D	2020-01-03
9340063	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	25.8 ± 2.5 D	2020-01-03
9340031	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	24.9 ± 2.4 D	2020-01-03
9341717	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	25.7 ± 2.4 D	2020-01-03
9340085	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	26.9 ± 2.5 D	2020-01-03
9340068	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	26.2 ± 2.5 D	2020-01-03
9340036	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	23.6 ± 2.3 D	2020-01-03
9340004	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	$26.9 \pm 2.6 \text{ D}$	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	$25.2 \pm 2.5 \text{ D}$	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	$21.8 \pm 2.8 \text{ D}$	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	$28.3 \pm 2.5 \text{ D}$	2020-01-03
9341710	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	$24.2 \pm 2.3 \text{ D}$	2020-01-03
9340061	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	$28.9 \pm 2.6 \text{ D}$	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	$26.4 \pm 2.5 \text{ D}$	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 ± 2.4 D	2020-01-03
9340039	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	26.9 ± 2.5 D	2020-01-03
9340007	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	26.9 ± 2.4 D	2020-01-03
9340093	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	25.1 ± 2.5 D	2020-01-03
9340098	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	26.8 ± 2.5 D	2020-01-03
9340076	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	25.1 ± 2.5 D	2020-01-03
9340044	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	25.2 ± 2.5 D	2020-01-03
9340012	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	22.5 ± 2.2 D	2020-01-03
9340017	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	25.3 ± 2.5 D	2020-01-03
9341703	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	$26.0 \pm 2.5 \text{ D}$	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 ± 2.6 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 ± 2.5 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 ± 2.5 D	2020-01-03
9340081	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	18.4 ± 2.1 D	2020-01-03
9340064	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	26.5 ± 2.5 D	2020-01-03
9340032	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	26.1 ± 2.4 D	2020-01-03
9341718	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	23.7 ± 2.4 D	2020-01-03
9340086	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	$26.9 \pm 2.6 \text{ D}$	2020-01-03
9340069	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	25.6 ± 2.5 D	2020-01-03
9340037	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	28.4 ± 2.6 D	2020-01-03
9340005	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	???? DIF1	2020-01-03
9340091	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	$26.5 \pm 2.5 \text{ D}$	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	$27.5 \pm 2.5 \text{ D}$	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	$26.7 \pm 2.5 \text{ D}$	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

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

N/A

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



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

MCPS RADON TESTING

Executive Summary: William H. Farquhar Middle School

Date of Test Report:	10/19/2016
Round of Testing:	Initial
	Follow-up
	Post Remediation
# Rooms Tested:	54
# Rooms \geq 4.0 pCi/L:	0
Low Value:	< 0.3
High Value:	2.1

Project Status: Initial testing 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

October 19, 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 # 12146341.54

 Location:
 William H. Farquhar Middle School

 16015 D to be the three to be all

16915 Batchellors Forest Road Olney, MD 20832

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 William H. Farquhar Middle School, located at 16915 Batchellors Forest Road in Olney, Maryland 20832 (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 September 27, 2016 and deployed sixty-eight (68) 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 September 30, 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:

These tests represent:

• Initial testing of a newly constructed facility.

To expedite the testing, tests were conducted in September as soon as students and staff returned to:

• Determine if the newly constructed facility needs a mitigation system.

Future periodic testing should be conducted during the heating season in ideal conditions as described below. 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 cooling mode; therefore, KCI concludes that this test was not 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 50s and high temperatures in the mid-60s to mid-70s. Maximum sustained winds ranged from 3-15 miles per hour. Average humidity ranged from 71 to 89 percent. Rain (1.83 inches in Gaithersburg, MD) was recorded on 9/29/16. The weather conditions during the testing period may have resulted in atypical radon test results for this facility.

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

The field blanks, 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.

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KCI TECHNOLOGIES, INC.
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Mr. Richard Cox October 19, 2016 Page 4

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 Makler

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

Attachments:

A- Floor Plan with Test LocationsB- Table 1-Radon Test Summary SpreadsheetC- Laboratory Analytical Results

ATTACHMENT A

Floor Plan With Test Locations

ATTACHMENT B

Radon Test Summary Spreadsheet

	Radon Testing Results				
	Farquhar Middle School				
	Test Period: 09/27/16-09/30/16				
Kit Number	Room / Area	Result			
7802540	1	< 0.3			
7802549	3	< 0.3			
7802562	4	0.5			
7802559	6	0.5			
7802558	7	0.7			
7802555	9	0.9			
7802554	10	< 0.3			
7802553	11	0.8			
7802556	12	0.6			
7802547	15	0.7			
7802548	16	1.8			
7802557	18	0.7			
7802563	20	0.6			
7802568	29	0.9			
7802571	30	0.5			
7802566	33	0.7			
7802508	100	< 0.3			
7802544	101	< 0.3			
7802543	111	< 0.3			
7802404	136	< 0.3			
7802575	137	< 0.3			
7802434	140	< 0.3			
7802479	140	< 0.3			
7802452	140	< 0.3			
7801872	140	< 0.3			
7802496	142	< 0.3			
7802474	148	< 0.3			
7802501	148	< 0.3			
7802546	148	< 0.3			
7802473	148	< 0.3			
7802545	149	< 0.3			
7802539	150	< 0.3			
7802565	153	0.6			
7802531	157	< 0.3			
7802541	159	0.6			
7802527	201	< 0.3			
7802551	233	< 0.3			
7802550	012A	0.5			
7802564	027B	0.8			
7802561	029A	0.9			
7802507	100A	0.8			
7802569	100B	0.6			
7802570	100D	< 0.3			
7802533	100E	< 0.3			
7802521	100F	< 0.3			
7802528	100G	< 0.3			

Table Note: * Missing or Compromised Sample

	Radon Testing Results				
	Farquhar Middle School				
	Test Period: 09/27/16-09/30/16				
Kit Number	Room / Area	Result			
7802522	100H	0.7			
7802526	1001	2.1			
7802537	100J	0.6			
7802530	100M	< 0.3			
7802524	100N	< 0.3			
7802573	138A	< 0.3			
7802572	139E	< 0.3			
7802461	141B	< 0.3			
7802536	159C	< 0.3			
7802523	160C	0.8			
7802534	160D	0.7			
7802535	160E	< 0.3			
7802525	160F	< 0.3			
7802529	160G	< 0.3			

	Radon Testing Results			
	Farquhar Middle School			
	Test Period: 09/27/16-09/30/16			
Kit Number	QC Type	Result		
7802552	D (012A)	0.6		
7802567	D (1)	< 0.3		
7802532	D (100H)	1.0		
7802560	D (101)	< 0.3		
7802403	D (136)	< 0.3		
7802538	D (157)	< 0.3		
7802542	FB (100J)	< 0.3		
7802574	FB (138A)	< 0.3		

ATTACHMENT C

Laboratory Analytical Results

Radon test result report for: FARQUHAR MIDDLE SCHOOL MAIN

	Koom Iu	Starteu	Ended	pCI/L	Analyzed
7802552	012A	2016-09-27 @ 7:00 am	2016-09-30 @ 7:00 am	0.6 ± 0.2	2016-10-03
7802550	012A	2016-09-27 @ 7:00 am	2016-09-30 @ 7:00 am	0.5 ± 0.3	2016-10-03
7802564	027B	2016-09-27 @ 6:00 am	2016-09-30 @ 7:00 am	0.8 ± 0.2	2016-10-03
7802561	029A	2016-09-27 @ 7:00 am	2016-09-30 @ 7:00 am	0.9 ± 0.3	2016-10-03
7802540	1	2016-09-27 @ 6:00 am	2016-09-30 @ 7:00 am	< 0.3	2016-10-03
7802567	1	2016-09-27 @ 6:00 am	2016-09-30 @ 7:00 am	< 0.3	2016-10-03
7802554	10	2016-09-27 @ 7:00 am	2016-09-30 @ 7:00 am	< 0.3	2016-10-03
7802508	100	2016-09-27 @ 7:00 am	2016-09-30 @ 8:00 am	< 0.3	2016-10-03
7802507	100A	2016-09-27 @ 7:00 am	2016-09-30 @ 8:00 am	0.8 ± 0.2	2016-10-03
7802569	100B	2016-09-27 @ 7:00 am	2016-09-30 @ 8:00 am	0.6 ± 0.2	2016-10-03
7802570	100D	2016-09-27 @ 7:00 am	2016-09-30 @ 8:00 am	< 0.3	2016-10-03
7802533	100E	2016-09-27 @ 7:00 am	2016-09-30 @ 8:00 am	< 0.3	2016-10-03
7802521	100F	2016-09-27 @ 7:00 am	2016-09-30 @ 8:00 am	< 0.3	2016-10-03
7802528	100G	2016-09-27 @ 7:00 am	2016-09-30 @ 8:00 am	< 0.3	2016-10-03
7802532	100H	2016-09-27 @ 7:00 am	2016-09-30 @ 8:00 am	1.0 ± 0.3	2016-10-03
7802522	100H	2016-09-27 @ 7:00 am	2016-09-30 @ 8:00 am	0.7 ± 0.2	2016-10-03
7802526	100I	2016-09-27 @ 7:00 am	2016-09-30 @ 8:00 am	2.1 ± 0.3	2016-10-03
7802542	100J	2016-09-27 @ 7:00 am	2016-09-30 @ 8:00 am	< 0.3	2016-10-03
7802537	100J	2016-09-27 @ 7:00 am	2016-09-30 @ 8:00 am	0.6 ± 0.2	2016-10-03
7802530	100M	2016-09-27 @ 7:00 am	2016-09-30 @ 8:00 am	< 0.3	2016-10-03
7802524	100N	2016-09-27 @ 7:00 am	2016-09-30 @ 8:00 am	< 0.3	2016-10-03
7802544	101	2016-09-27 @ 7:00 am	2016-09-30 @ 7:00 am	< 0.3	2016-10-03
7802560	101	2016-09-27 @ 7:00 am	2016-09-30 @ 7:00 am	< 0.3	2016-10-03
7802553	11	2016-09-27 @ 7:00 am	2016-09-30 @ 7:00 am	0.8 ± 0.2	2016-10-03
7802543	111	2016-09-27 @ 7:00 am	2016-09-30 @ 7:00 am	< 0.3	2016-10-03
7802556	12	2016-09-27 @ 7:00 am	2016-09-30 @ 7:00 am	0.6 ± 0.2	2016-10-03
7802403	136	2016-09-27 @ 9:00 am	2016-09-30 @ 8:00 am	< 0.3	2016-10-03
7802404	136	2016-09-27 @ 9:00 am	2016-09-30 @ 8:00 am	< 0.3	2016-10-03
7802575	137	2016-09-27 @ 9:00 am	2016-09-30 @ 8:00 am	< 0.3	2016-10-03
7802573	138A	2016-09-27 @ 9:00 am	2016-09-30 @ 7:00 am	< 0.3	2016-10-03
7802574	138A	2016-09-27 @ 9:00 am	2016-09-30 @ 7:00 am	< 0.3	2016-10-03
7802572	139E	2016-09-27 @ 9:00 am	2016-09-30 @ 8:00 am	< 0.3	2016-10-03
7801872	140	2016-09-27 @ 9:00 am	2016-09-30 @ 7:00 am	< 0.3	2016-10-03
7802479	140	2016-09-27 @ 9:00 am	2016-09-30 @ 7:00 am	< 0.3	2016-10-03
7802434	140	2016-09-27 @ 9:00 am	2016-09-30 @ 7:00 am	< 0.3	2016-10-03
7802452	140	2016-09-27 @ 9:00 am	2016-09-30 @ 7:00 am	< 0.3	2016-10-03
7802461	141B	2016-09-27 @ 8:00 am	2016-09-30 @ 8:00 am	< 0.3	2016-10-03

Radon test result report for: MCPS Radon Phase 18 Office Blanks

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7802697	1	2016-09-26 @ 11:00 am	2016-09-29 @ 11:00 am	< 0.3	2016-10-03
7801899	10	2016-09-26 @ 11:00 am	2016-09-29 @ 11:00 am	< 0.3	2016-10-03
7802932	11	2016-09-26 @ 11:00 am	2016-09-29 @ 11:00 am	< 0.3	2016-10-03
7802935	12	2016-09-26 @ 11:00 am	2016-09-29 @ 11:00 am	< 0.3	2016-10-03
7802915	13	2016-09-26 @ 11:00 am	2016-09-29 @ 11:00 am	< 0.3	2016-10-03
7802941	2	2016-09-26 @ 11:00 am	2016-09-29 @ 11:00 am	< 0.3	2016-10-03
7802942	3	2016-09-26 @ 11:00 am	2016-09-29 @ 11:00 am	< 0.3	2016-10-03
7802919	4	2016-09-26 @ 11:00 am	2016-09-29 @ 11:00 am	< 0.3	2016-10-03
7802918	5	2016-09-26 @ 11:00 am	2016-09-29 @ 11:00 am	< 0.3	2016-10-03
7802917	6	2016-09-26 @ 11:00 am	2016-09-29 @ 11:00 am	< 0.3	2016-10-03
7802916	7	2016-09-26 @ 11:00 am	2016-09-29 @ 11:00 am	< 0.3	2016-10-03
7802952	8	2016-09-26 @ 11:00 am	2016-09-29 @ 11:00 am	< 0.3	2016-10-03
7802928	9	2016-09-26 @ 11:00 am	2016-09-29 @ 11:00 am	< 0.3	2016-10-03

Radon test result report for: MCPS Radon Phase 18 Transit Blanks

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7714274	1	2016-09-26 @ 10:00 am	2016-09-29 @ 10:00 am	< 0.3	2016-10-03
7802962	10	2016-09-26 @ 10:00 am	2016-09-29 @ 10:00 am	< 0.3	2016-10-03
7714295	11	2016-09-26 @ 10:00 am	2016-09-29 @ 10:00 am	< 0.3	2016-10-03
7714299	12	2016-09-26 @ 10:00 am	2016-09-29 @ 10:00 am	< 0.3	2016-10-03
7714273	13	2016-09-26 @ 10:00 am	2016-09-29 @ 10:00 am	< 0.3	2016-10-03
7714270	14	2016-09-26 @ 10:00 am	2016-09-29 @ 10:00 am	< 0.3	2016-10-03
7802965	2	2016-09-26 @ 10:00 am	2016-09-29 @ 10:00 am	< 0.3	2016-10-03
7802696	3	2016-09-26 @ 10:00 am	2016-09-29 @ 10:00 am	< 0.3	2016-10-03
7802690	4	2016-09-26 @ 10:00 am	2016-09-29 @ 10:00 am	< 0.3	2016-10-03
7714275	5	2016-09-26 @ 10:00 am	2016-09-29 @ 10:00 am	< 0.3	2016-10-03
7714298	6	2016-09-26 @ 10:00 am	2016-09-29 @ 10:00 am	< 0.3	2016-10-03
7802990	7	2016-09-26 @ 10:00 am	2016-09-29 @ 10:00 am	< 0.3	2016-10-03
7802974	8	2016-09-26 @ 10:00 am	2016-09-29 @ 10:00 am	< 0.3	2016-10-03
7802694	9	2016-09-26 @ 10:00 am	2016-09-29 @ 10:00 am	< 0.3	2016-10-03

Radon test result report for: MCPS Radon Spike Sample Results

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7769880	101	2016-09-24 @ 8:00 am	2016-09-26 @ 8:00 am	22.9 ± 1.0	2016-09-28
7769884	102	2016-09-24 @ 8:00 am	2016-09-26 @ 8:00 am	22.4 ± 1.0	2016-09-28
7769885	103	2016-09-24 @ 8:00 am	2016-09-26 @ 8:00 am	23.0 ± 1.0	2016-09-28
7769890	104	2016-09-24 @ 8:00 am	2016-09-26 @ 8:00 am	22.3 ± 1.0	2016-09-28
7769891	105	2016-09-24 @ 8:00 am	2016-09-26 @ 8:00 am	26.8 ± 1.2	2016-09-28
7769899	106	2016-09-24 @ 8:00 am	2016-09-26 @ 8:00 am	24.1 ± 1.1	2016-09-28

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

s Inc. Job Number 176788
pCi/L Rel. Hum <u>49.6</u> % Temp. <u>70.0</u> F
Date Start: Date Stop:
Time Start: Time Stop:
Device No.'s:
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Date Start: Date Stop:
Time Start: Time Stop:
Device No.'s:
Date Start: Date Stop:
Time Start: Time Stop:
Device No.'s:
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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

Radon Test Kit Chain of Custody

Project Name: MCPS Radon Phase 18

Name of Schools:

- 1. Wood Acres Elementary School
- 2. Walt Whitman High School
- 3. Burning Tree Elementary School
- 4. Ashburton Elementary School
- 5. Bethesda Maintenance
- 6. Bethesda Transportation
- 7. Herbert Hoover Middle School
- 8. Cold Spring Elementary School
- 9. Garret Park Elementary School
- 10. Rock View Elementary School
- 11. Francis Scott Key Middle School
- 12. Montgomery Blair High School
- 13. Stephen Knolls School

- 14. Lourie Center
- 15. Shriver Elementary School
- 16. Viers Mill Elementary School
- 17. Highland Elementary School
- 18. Newport Middle School
- 19. Albert Einstein High School
- 20. Sligo Middle School
- 21. East Silver Spring Elementary School
- 22. Oak View Elementary School
- 23. Roscoe Nix Elementary School
- 24. Northwood High School
- 25. Springbrook High School
- 26. John F. Kennedy High School

	Date	Initials
Radon Test Kits Deployed	9/26/16	M
Radon Test Kits Collected	9/29/16	IM
Radon Test Kits Shipped to Lab*	9/30/16	M
Radon Test Kits Received by Lab*	10/03/16	M

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



Engineers • Planners • Scientists • Construction Managers

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Radon Test Kit Chain of Custody

Project Name: MCPS Radon Phase 18

Name of Schools:

- 1. Damascus High School
- 2. Cedar Grove Elementary School
- 3. Hallie Wells Middle School
- 4. Clarksburg Elementary School
- 5. Clarksburg High School
- 6. Woodlin Elementary School
- 7. Flora Singer Elementary School
- 8. Spring Mill Center
- 9. Dr. Charles Drew Elementary School
- 10. William Farquah Middle School
- 11. Rosa Parks Middle School
- 12. Blair Ewing Center
- 13. Lathrop Smith Environmental Center
- 14. Sequoyah Elementary School
- 15. Shady Grove Middle School
- 16. Captain James Daly Elementary School

- 17. Watkins Mills High School
- 18. Forest Oak Middle School
- 19. Gaithersburg Middle School
- 20. Emory Grove
- 21. Fields Road Elementary School
- 22. Beall Elementary School
- 23. Julius West Middle School
- 24. Thomas Wootton High School
- 25. Robert Frost High School
- 26. Travilah Elementary School
- 27. Jones Lane Elementary School
- 28. Longview School
- 29. Rock Terrace High School
- 30. Germantown Elementary School
- 31. Lake Seneca Elementary School

	Date	Initials
Radon Test Kits Deployed	9/27/16	UM
Radon Test Kits Collected	9/30/16	JM
Radon Test Kits Shipped to Lab*	9/30/16	JM
Radon Test Kits Received by Lab*	10/03/16	JM

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

Radon test result report for: FARQUHAR MIDDLE SCHOOL MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7802496	142	2016-09-27 @ 8:00 am	2016-09-30 @ 8:00 am	< 0.3	2016-10-03
7802546	148	2016-09-27 @ 8:00 am	2016-09-30 @ 7:00 am	< 0.3	2016-10-03
7802473	148	2016-09-27 @ 8:00 am	2016-09-30 @ 7:00 am	< 0.3	2016-10-03
7802474	148	2016-09-27 @ 8:00 am	2016-09-30 @ 7:00 am	< 0.3	2016-10-03
7802501	148	2016-09-27 @ 8:00 am	2016-09-30 @ 7:00 am	< 0.3	2016-10-03
7802545	149	2016-09-27 @ 8:00 am	2016-09-30 @ 7:00 am	< 0.3	2016-10-03
7802547	15	2016-09-27 @ 7:00 am	2016-09-30 @ 7:00 am	0.7 ± 0.2	2016-10-03
7802539	150	2016-09-27 @ 8:00 am	2016-09-30 @ 7:00 am	< 0.3	2016-10-03
7802565	153	2016-09-27 @ 8:00 am	2016-09-30 @ 7:00 am	0.6 ± 0.2	2016-10-03
7802531	157	2016-09-27 @ 8:00 am	2016-09-30 @ 8:00 am	< 0.3	2016-10-03
7802538	157	2016-09-27 @ 8:00 am	2016-09-30 @ 8:00 am	< 0.3	2016-10-03
7802541	159	2016-09-27 @ 8:00 am	2016-09-30 @ 8:00 am	0.6 ± 0.2	2016-10-03
7802536	159C	2016-09-27 @ 8:00 am	2016-09-30 @ 8:00 am	< 0.3	2016-10-03
7802548	16	2016-09-27 @ 7:00 am	2016-09-30 @ 7:00 am	1.8 ± 0.3	2016-10-03
7802523	160C	2016-09-27 @ 8:00 am	2016-09-30 @ 8:00 am	0.8 ± 0.2	2016-10-03
7802534	160D	2016-09-27 @ 8:00 am	2016-09-30 @ 8:00 am	0.7 ± 0.2	2016-10-03
7802535	160E	2016-09-27 @ 8:00 am	2016-09-30 @ 8:00 am	< 0.3	2016-10-03
7802525	160F	2016-09-27 @ 8:00 am	2016-09-30 @ 8:00 am	< 0.3	2016-10-03
7802529	160G	2016-09-27 @ 8:00 am	2016-09-30 @ 8:00 am	< 0.3	2016-10-03
7802557	18	2016-09-27 @ 7:00 am	2016-09-30 @ 7:00 am	0.7 ± 0.2	2016-10-03
7802563	20	2016-09-27 @ 7:00 am	2016-09-30 @ 7:00 am	0.6 ± 0.2	2016-10-03
7802527	201	2016-09-27 @ 8:00 am	2016-09-30 @ 7:00 am	< 0.3	2016-10-03
7802551	233	2016-09-27 @ 8:00 am	2016-09-30 @ 7:00 am	< 0.3	2016-10-03
7802568	29	2016-09-27 @ 7:00 am	2016-09-30 @ 7:00 am	0.9 ± 0.2	2016-10-03
7802549	3	2016-09-27 @ 7:00 am	2016-09-30 @ 7:00 am	< 0.3	2016-10-03
7802571	30	2016-09-27 @ 7:00 am	2016-09-30 @ 7:00 am	0.5 ± 0.2	2016-10-03
7802566	33	2016-09-27 @ 7:00 am	2016-09-30 @ 7:00 am	0.7 ± 0.2	2016-10-03
7802562	4	2016-09-27 @ 7:00 am	2016-09-30 @ 7:00 am	0.5 ± 0.2	2016-10-03
7802559	6	2016-09-27 @ 7:00 am	2016-09-30 @ 7:00 am	0.5 ± 0.2	2016-10-03
7802558	7	2016-09-27 @ 7:00 am	2016-09-30 @ 7:00 am	0.7 ± 0.3	2016-10-03
7802555	9	2016-09-27 @ 7:00 am	2016-09-30 @ 7:00 am	0.9 ± 0.3	2016-10-03