KCI TECHNOLOGIES

ENGINEERS • PLANNERS • SCIENTISTS • CONSTRUCTION MANAGERS

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

MCPS RADON TESTING – EXECUTIVE SUMMARY

Site Name	Springbrook High School
Date of Test Report	3/2/2023
Round of Testing	Initial Follow-up Post Remediation 2 Year Testing 5 Year Testing HVAC Upgrade Window Replacement New Addition New Facility
# Rooms Tested	115
# Rooms Re-tested	1
# Rooms ≥ 4.0 pCi/L	0
Lowest Value	<0.3 pCi/L
Highest Value	3.1 pCi/L

Project Status:

1. Initial testing completed;
2. Missing or compromised samples need re-test.
3. Retesting Completed 2/14/23 – 2/17/23.
4. 2-Year Testing Completed.

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March 3, 2023

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

Re: **Radon Testing Services**
KCI Job # 122210551

Location: Springbrook High School
201 Valleybrook Drive
Silver Spring, MD 20904

Dear Mr. Croyle:

KCI Technologies, Inc. (KCI) is pleased to submit the following report to Montgomery County Public Schools (MCPS) pursuant to completing a "short-term" 3 day radon test for the Springbrook High School, located at 201 Valleybrook Drive, Silver Spring, MD 20904 (subject site).

Scope of Services:

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

KCI visited the site initially on January 23, 2023 and deployed one hundred thirty-four (134) activated charcoal (AC) radon test kits. KCI deployed radon test kits in all frequently-occupied ground contact rooms, and other areas, (if applicable) in accordance with AARST guidance.

KCI returned to the site on January 26, 2023 to retrieve the radon sampling test kits. KCI shipped all radon tests via overnight delivery to Accustar Labs - MA. for analysis by gamma-ray spectroscopy. Accustar Labs - MA is a NRSB certified analytical laboratory for radon analysis (certification #ARL0017) located at 2 Saber Way, Ward Hill, MA 01835.

KCI re-visited the site on February 14, 2023 to deploy four (4) activated charcoal (AC) radon test kits for testing of missed rooms or compromised test kits during initial testing.

KCI returned to the site on February 17, 2023 to retrieve the radon re-sampling test kits. KCI shipped all radon tests via overnight delivery to Accustar Labs – MA for analysis by gamma-ray spectroscopy. Accustar Labs – MA is a NRSB certified analytical laboratory for radon analysis (certification #ARL0017) located at 2 Saber Way, Ward Hill, MA 01835.

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

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

Evaluation of Testing Conditions:

These tests represent:

- Follow up to initial testing.

These tests were conducted to:

- Evaluate radon concentration levels 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 during the time of deployment and collection of the radon test kits:

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

KCI also compiled weather data for the testing period and conducted observations of relevant field conditions. During the test period, weather records indicate temperatures ranged from the 31°F to 52°F. Maximum sustained winds ranged from 5-25 miles per hour. Average humidity was around 60% with .32 inches of precipitation (rain) was recorded during testing period.

During the re-testing period, weather records indicate low temperatures were in the mid-20s°F and high temperatures ranged to the 70s°F. Maximum sustained winds ranged from 0-33 miles per hour. Average humidity was around 62% with 1.01 inches of precipitation (rain) was recorded during testing period.

Results:

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

The results of the radon test analysis indicated the following:

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

The results of the radon re-testing analysis indicated the following:

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

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

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

Sincerely,

Tyler McCleaf

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

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

ATTACHMENT A

Floor Plan With Test Locations

ATTACHMENT B

Radon Test Summary Spreadsheet

Table 1- Radon Testing Results		
Springbrook HS		
Test Period: 01/23/2023 - 01/26/2023		
Kit Number	Room / Area	Result
11288708	A.SALZMAN OFFICE	0.9
11634430	A-102	< 0.3
11634899	A-103	< 0.3
11634432	A-104	< 0.3
11634415	A-105	< 0.3
11634456	A-106	< 0.3
11634427	A-108	< 0.3
11634442	A-109	< 0.3
11634435	A-111	< 0.3
11634428	A-112	< 0.3
11634436	A-112	< 0.3
11634898	A-114	< 0.3
11634900	ATTENDANCE OFFICE	< 0.3
11288701	AUDITORIUM	1.2
11288704	AUDITORIUM	0.9
11288771	AUXILIARY GYM	1.8
11288773	AUXILIARY GYM	1.8
11634412	B-101	< 0.3
11634433	B-101	< 0.3
11634441	B-101	0.6
11634434	B-102	< 0.3
11634446	B-103	< 0.3
11634413	B-104	0.8
11634453	B-104-C	0.8
11634449	B-105	< 0.3
11634447	B-106	< 0.3
11634452	B106C	< 0.3
11634451	B-107	< 0.3
11634401	B107C	< 0.3
11634421	B-108	< 0.3
11634448	B108C	< 0.3
11634440	B109/B110	< 0.3
11634450	B109/B110	< 0.3
11634439	B109-A	< 0.3
11634438	B-117	< 0.3
11634444	B-118	< 0.3
11634443	B-121	1.2
11634411	B-122	< 0.3
11634420	B-122 OFFICE	< 0.3
11288775	BOYS LOCKER ROOM D1	1.8
11634431	BUSINESS ADMIN OFFICE	< 0.3
11288778	C- 306	< 0.3

Table 1- Radon Testing Results		
Springbrook HS		
Test Period: 01/23/2023 - 01/26/2023		
Kit Number	Room / Area	Result
11634402	C-101-A	< 0.3
11634403	C-101-A	< 0.3
11634423	C-101-A	0.7
11634405	C-101-B	< 0.3
11634404	C-101-C	< 0.3
11634417	C-101-D	< 0.3
11634407	C-101-E	< 0.3
11634418	C-101-G	< 0.3
11634416	C-101-H	0.6
11634409	C-101-J	< 0.3
11634425	C-101-K	< 0.3
11634424	C-101-L	< 0.3
11634419	C-101-M	0.7
11634422	C-101-P	< 0.3
11634406	C-101-Q	0.6
11634408	C-101-R	< 0.3
11634410	C-101-R	< 0.3
11634426	C-101-S	< 0.3
11288711	C-102	< 0.3
11288703	C-102-A	< 0.3
11288707	C-102-A	0.7
11288710	C-102-A	< 0.3
11288709	C-102-D	< 0.3
11288768	C-202	< 0.3
11288774	C-202	< 0.3
11634437	CAFETERIA	< 0.3
11634445	CAFETERIA	< 0.3
11288716	D-103	1.2
11288726	D-104-C WEIGHT ROOM	0.8
11288720	D-107	0.8
11288714	D-107-E	0.6
11288717	D-108	0.5
11288724	D-108	< 0.3
11288723	D-108A	< 0.3
11288727	D-111	< 0.3
11288734	D112 GIRLS LOCKER ROOM OFFICE	0.7
11288733	DANCE STUDIO D118	0.9
11288741	E-102	< 0.3
11288765	E-105	0.7
11288719	E-106	0.5
11288763	E107	< 0.3
11288721	E-108	< 0.3

Table 1- Radon Testing Results		
Springbrook HS		
Test Period: 01/23/2023 - 01/26/2023		
Kit Number	Room / Area	Result
11288758	E-109	0.5
11288744	E-110	< 0.3
11288702	E-111	< 0.3
11288722	E-113	0.6
11288706	E114	< 0.3
11288713	E-114	< 0.3
11288718	E-114	< 0.3
11288705	E-115	< 0.3
11288725	E-116	0.9
11288728	E-116B	1.3
11288729	E-116C	1.3
11288747	E-117	< 0.3
11288745	E-118	1.1
11288746	E-118	0.9
11288772	E-210	0.6
11288748	F-101	< 0.3
11288740	F-103	< 0.3
11288731	F-104	1.5
11288735	F-105	1.0
11288730	F-106	1.1
11288742	F-107	0.6
11288732	F-108	0.8
11288738	F-108	< 0.3
11288739	F-108	< 0.3
11288736	F-109	0.8
11288743	F-113	< 0.3
11288737	F116B	1.3
11288777	F-208	< 0.3
11288750	G-1	0.7
11288749	G-101	0.9
11288754	G-105	< 0.3
11288756	G-106	0.5
11288755	G-108	0.6
11288757	G-109	0.6
11288761	G-11	0.5
11288751	G-110	< 0.3
11288752	G-111	0.9
11288753	G-111	1.4
11288766	G-12	< 0.3
11288759	G-2	< 0.3
11288776	G-202	0.7
11288767	G-3	2.1

Table 1- Radon Testing Results		
Springbrook HS		
Test Period: 01/23/2023 - 01/26/2023		
Kit Number	Room / Area	Result
11288760	G-8	3.1
11288762	G-8	2.7
11288764	G-8	< 0.3
11288712	GYM	1.2
11634414	KITCHEN OFFICE B-120B	0.8
11634429	MAIN OFFICE A101	< 0.3
11288769	MEDIA CENTER	< 0.3
11288770	MEDIA CENTER	< 0.3

Table 2- Radon Testing Results			
Springbrook HS			
Test Period: 01/24/23 - 01/27/23			
Kit Number	QC Type	Room / Area	Result
11634436	D	A-112	< 0.3
11634433	FB	B-101	< 0.3
11634441	D	B-101	0.6
11634450	D	B109/B110	< 0.3
11634403	FB	C-101-A	< 0.3
11634423	D	C-101-A	0.7
11634410	D	C-101-R	< 0.3
11288707	D	C-102-A	0.7
11288710	FB	C-102-A	< 0.3
11288774	D	C-202	< 0.3
11288724	D	D-108	< 0.3
11288713	D	E-114	< 0.3
11288718	FB	E-114	< 0.3
11288746	D	E-118	0.9
11288738	D	F-108	< 0.3
11288739	FB	F-108	< 0.3
11288753	D	G-111	1.4
11288762	D	G-8	2.7
11288764	FB	G-8	< 0.3
11633975	OB	OFFICE BLANK	< 0.3
11633983	TB	TRAVEL BLANK	< 0.3

Summary of Missed Locations		
Springbrook HS		
Test Period: 01/24/23 - 01/27/23		
Kit Number	Room/Area	Result
	N/A	

Summary of Missing, Compromised and >/= 4 piC/L Tests		
Springbrook HS		
Test Period: 01/24/23 - 01/27/23		
Kit Number	Room/Area	Result
11288715	Gym	Missing

Table Note:

* Missing or Compromised Sample

Table 1- Radon Testing Results		
Springbrook HS RT		
Test Period: 02/14/2023 - 02/17/2023		
Kit Number	Room / Area	Result
11633977	GYM	1.9
11633985	GYM	1.9
11634977	GYM	1.8
11634978	GYM	< 0.3

Table 2- Radon Testing Results			
Springbrook HS RT			
Test Period: 02/14/23 - 02/17/23			
Kit Number	QC Type	Room / Area	Result
11633985	D	Gym	1.9
11634978	FB	Gym	< 0.3
11634060	OB	OFFICE BLANK	< 0.3
11634067	TB	TRAVEL BALNK	< 0.3

Summary of Missed Locations		
Springbrook HS RT		
Test Period: 02/14/23 - 02/17/23		
Kit Number	Room/Area	Result
	N/A	

Summary of Missing, Compromised and >/= 4 piC/L Tests		
Springbrooke HS RT		
Test Period: 02/14/23 - 02/17/23		
Kit Number	Room/Area	Result
	N/A	

Table Note:
* Missing or Compromised Sample

ATTACHMENT C

Laboratory Analytical Results

Table Notes:

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

February 1, 2023

** LABORATORY ANALYSIS REPORT **

Radon test result report for:

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11288704	AUDITORIUM	2023-01-24 @ 11:00 am	2023-01-27 @ 11:00 am	0.9 ± 0.3	2023-01-31
11288701	AUDITORIUM	2023-01-24 @ 11:00 am	2023-01-27 @ 11:00 am	1.2 ± 0.4	2023-01-31
11288711	C-102	2023-01-24 @ 11:00 am	2023-01-27 @ 11:00 am	< 0.3	2023-01-31
11288710	C-102-A	2023-01-24 @ 11:00 am	2023-01-27 @ 11:00 am	< 0.3	2023-01-31
11288707	C-102-A	2023-01-24 @ 11:00 am	2023-01-27 @ 11:00 am	0.7 ± 0.3	2023-01-31
11288707	C-102-A	2023-01-24 @ 11:00 am	2023-01-27 @ 11:00 am	0.7 ± 0.3	2023-01-31
11288703	C-102-A	2023-01-24 @ 11:00 am	2023-01-27 @ 11:00 am	< 0.3	2023-01-31
11288709	C-102-D	2023-01-24 @ 11:00 am	2023-01-27 @ 11:00 am	< 0.3	2023-01-31

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February 1, 2023 **** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11634415	A-+95	2023-01-24 @ 11:00 am	2023-01-27 @ 9:00 am	< 0.3	2023-01-31
11634430	A-102	2023-01-24 @ 9:00 am	2023-01-27 @ 9:00 am	< 0.3	2023-01-31
11634899	A-103	2023-01-24 @ 9:00 am	2023-01-27 @ 9:00 am	< 0.3	2023-01-31
11634432	A-104	2023-01-24 @ 9:00 am	2023-01-27 @ 9:00 am	< 0.3	2023-01-31
11634456	A-106	2023-01-24 @ 9:00 am	2023-01-27 @ 9:00 am	< 0.3	2023-01-31
11634427	A-108	2023-01-24 @ 9:00 am	2023-01-27 @ 9:00 am	< 0.3	2023-01-31
11634442	A-109	2023-01-24 @ 9:00 am	2023-01-27 @ 9:00 am	< 0.3	2023-01-31
11634898	A-11	2023-01-24 @ 9:00 am	2023-01-27 @ 9:00 am	< 0.3	2023-01-31
11634435	A-111	2023-01-24 @ 9:00 am	2023-01-27 @ 9:00 am	< 0.3	2023-01-31
11634428	A-112	2023-01-24 @ 9:00 am	2023-01-27 @ 9:00 am	< 0.3	2023-01-31
11634436	A-112	2023-01-24 @ 9:00 am	2023-01-27 @ 9:00 am	< 0.3	2023-01-31
11288708	A.SALZMAN OFFICE	2023-01-24 @ 11:00 am	2023-01-27 @ 12:00 pm	0.9 ± 0.4	2023-01-31
11634900	ATTENDANCE OFFICE	2023-01-24 @ 9:00 am	2023-01-27 @ 9:00 am	< 0.3	2023-01-31
11288771	AUXILIARY GYM	2023-01-24 @ 3:00 pm	2023-01-27 @ 11:00 am	1.8 ± 0.4	2023-01-31
11288773	AUXILIARY GYM	2023-01-24 @ 3:00 pm	2023-01-27 @ 11:00 am	1.8 ± 0.4	2023-01-31
11634433	B-101	2023-01-24 @ 10:00 am	2023-01-27 @ 9:00 am	< 0.3	2023-01-31
11634441	B-101	2023-01-24 @ 10:00 am	2023-01-27 @ 9:00 am	0.6 ± 0.4	2023-01-31
11634412	B-101	2023-01-24 @ 10:00 am	2023-01-27 @ 9:00 am	< 0.3	2023-01-31
11634434	B-102	2023-01-24 @ 10:00 am	2023-01-27 @ 9:00 am	< 0.3	2023-01-31
11634446	B-103	2023-01-24 @ 10:00 am	2023-01-27 @ 9:00 am	< 0.3	2023-01-31
11634413	B-104	2023-01-24 @ 10:00 am	2023-01-27 @ 9:00 am	0.8 ± 0.4	2023-01-31
11634453	B-104-C	2023-01-24 @ 10:00 am	2023-01-27 @ 9:00 am	0.8 ± 0.3	2023-01-31
11634449	B-105	2023-01-24 @ 10:00 am	2023-01-27 @ 9:00 am	< 0.3	2023-01-31
11634447	B-106	2023-01-24 @ 10:00 am	2023-01-27 @ 9:00 am	< 0.3	2023-01-31
11634451	B-107	2023-01-24 @ 11:00 am	2023-01-27 @ 9:00 am	< 0.3	2023-01-31
11634421	B-108	2023-01-24 @ 10:00 am	2023-01-27 @ 9:00 am	< 0.3	2023-01-31
11634438	B-117	2023-01-24 @ 10:00 am	2023-01-27 @ 9:00 am	< 0.3	2023-01-31
11634444	B-118	2023-01-24 @ 10:00 am	2023-01-27 @ 9:00 am	< 0.3	2023-01-31
11634443	B-121	2023-01-24 @ 10:00 am	2023-01-27 @ 9:00 am	1.2 ± 0.4	2023-02-01
11634411	B-122	2023-01-24 @ 9:00 am	2023-01-27 @ 12:00 pm	< 0.3	2023-01-31
11634420	B-122 OFFICE	2023-01-24 @ 9:00 am	2023-01-27 @ 12:00 pm	< 0.3	2023-01-31
11634452	B106C	2023-01-24 @ 10:00 am	2023-01-27 @ 9:00 am	< 0.3	2023-01-31
11634401	B107C	2023-01-24 @ 11:00 am	2023-01-27 @ 9:00 am	< 0.3	2023-01-31
11634448	B108C	2023-01-24 @ 10:00 am	2023-01-27 @ 9:00 am	< 0.3	2023-01-31
11634439	B109-A	2023-01-24 @ 10:00 am	2023-01-27 @ 9:00 am	< 0.3	2023-01-31
11634440	B109/B110	2023-01-24 @ 10:00 am	2023-01-27 @ 9:00 am	< 0.3	2023-01-31
11634450	B109/B110	2023-01-24 @ 10:00 am	2023-01-27 @ 9:00 am	< 0.3	2023-01-31

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February 1, 2023

** LABORATORY ANALYSIS REPORT **

Radon test result report for:

MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11288775	BOYS LOCKER ROOM D1	2023-01-24 @ 3:00 pm	2023-01-27 @ 11:00 am	1.8 ± 0.4	2023-01-31
11634431	BUSINESS ADMIN OFFICE	2023-01-24 @ 9:00 am	2023-01-27 @ 9:00 am	< 0.3	2023-01-31
11288778	C- 306	2023-01-24 @ 3:00 pm	2023-01-27 @ 12:00 pm	< 0.3	2023-01-31
11634402	C-101-A	2023-01-24 @ 11:00 am	2023-01-27 @ 11:00 am	< 0.3	2023-01-31
11634423	C-101-A	2023-01-24 @ 11:00 am	2023-01-27 @ 11:00 am	0.7 ± 0.3	2023-01-31
11634403	C-101-A	2023-01-24 @ 11:00 am	2023-01-27 @ 11:00 am	< 0.3	2023-01-31
11634405	C-101-B	2023-01-24 @ 11:00 am	2023-01-27 @ 12:00 pm	< 0.3	2023-01-31
11634404	C-101-C	2023-01-24 @ 11:00 am	2023-01-27 @ 11:00 am	< 0.3	2023-01-31
11634417	C-101-D	2023-01-24 @ 11:00 am	2023-01-27 @ 12:00 pm	< 0.3	2023-01-31
11634407	C-101-E	2023-01-24 @ 11:00 am	2023-01-27 @ 12:00 pm	< 0.3	2023-01-31
11634418	C-101-G	2023-01-24 @ 11:00 am	2023-01-27 @ 12:00 pm	< 0.3	2023-01-31
11634416	C-101-H	2023-01-24 @ 11:00 am	2023-01-27 @ 12:00 pm	0.6 ± 0.3	2023-01-31
11634409	C-101-J	2023-01-24 @ 11:00 am	2023-01-27 @ 12:00 pm	< 0.3	2023-01-31
11634425	C-101-K	2023-01-24 @ 11:00 am	2023-01-27 @ 12:00 pm	< 0.3	2023-01-31
11634424	C-101-L	2023-01-24 @ 11:00 am	2023-01-27 @ 12:00 pm	< 0.3	2023-01-31
11634419	C-101-M	2023-01-24 @ 11:00 am	2023-01-27 @ 12:00 pm	0.7 ± 0.3	2023-01-31
11634422	C-101-P	2023-01-24 @ 11:00 am	2023-01-27 @ 11:00 am	< 0.3	2023-01-31
11634406	C-101-Q	2023-01-24 @ 11:00 am	2023-01-27 @ 11:00 am	0.6 ± 0.3	2023-01-31
11634408	C-101-R	2023-01-24 @ 11:00 am	2023-01-27 @ 12:00 pm	< 0.3	2023-01-31
11634410	C-101-R	2023-01-24 @ 11:00 am	2023-01-27 @ 12:00 pm	< 0.3	2023-01-31
11634426	C-101-S	2023-01-24 @ 11:00 am	2023-01-27 @ 12:00 pm	< 0.3	2023-01-31
11288774	C-202	2023-01-24 @ 2:00 pm	2023-01-27 @ 12:00 pm	< 0.3	2023-01-31
11288768	C-202	2023-01-24 @ 2:00 pm	2023-01-27 @ 12:00 pm	< 0.3	2023-01-31
11634445	CAFETERIA	2023-01-24 @ 9:00 am	2023-01-27 @ 9:00 am	< 0.3	2023-01-31
11634437	CAFETERIA	2023-01-24 @ 9:00 am	2023-01-27 @ 9:00 am	< 0.3	2023-01-31
11288716	D-103	2023-01-24 @ 12:00 pm	2023-01-27 @ 1:00 pm	1.2 ± 0.3	2023-01-31
11288726	D-104-C WEIGHT ROOM	2023-01-24 @ 12:00 pm	2023-01-27 @ 11:00 am	0.8 ± 0.4	2023-01-31
11288720	D-107	2023-01-24 @ 12:00 pm	2023-01-27 @ 11:00 am	0.8 ± 0.4	2023-01-31
11288714	D-107-E	2023-01-24 @ 12:00 pm	2023-01-27 @ 11:00 am	0.6 ± 0.4	2023-01-31
11288717	D-108	2023-01-24 @ 12:00 pm	2023-01-27 @ 11:00 am	0.5 ± 0.4	2023-01-31
11288724	D-108	2023-01-24 @ 12:00 pm	2023-01-27 @ 11:00 am	< 0.3	2023-01-31
11288723	D-108A	2023-01-24 @ 12:00 pm	2023-01-27 @ 11:00 am	< 0.3	2023-01-31
11288727	D-111	2023-01-24 @ 12:00 pm	2023-01-27 @ 11:00 am	< 0.3	2023-01-31
11288734	D112 GIRLS LOCKER ROOM OFFICE	2023-01-24 @ 12:00 pm	2023-01-27 @ 1:00 pm	0.7 ± 0.4	2023-01-31
11288733	DANCE STUDIO D118	2023-01-24 @ 12:00 pm	2023-01-27 @ 11:00 am	0.9 ± 0.4	2023-01-31
11288741	E-102	2023-01-24 @ 1:00 pm	2023-01-27 @ 10:00 am	< 0.3	2023-01-31
11288765	E-105	2023-01-24 @ 2:00 pm	2023-01-27 @ 11:00 am	0.7 ± 0.3	2023-01-31

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

February 1, 2023

** LABORATORY ANALYSIS REPORT **

Radon test result report for:

MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11288719	E-106	2023-01-24 @ 12:00 pm	2023-01-27 @ 11:00 am	0.5 ± 0.4	2023-01-31
11288721	E-108	2023-01-24 @ 12:00 pm	2023-01-27 @ 11:00 am	< 0.3	2023-01-31
11288758	E-109	2023-01-24 @ 2:00 pm	2023-01-27 @ 1:00 pm	0.5 ± 0.4	2023-01-31
11288744	E-110	2023-01-24 @ 2:00 pm	2023-01-27 @ 10:00 am	< 0.3	2023-01-31
11288702	E-111	2023-01-24 @ 12:00 pm	2023-01-27 @ 10:00 am	< 0.3	2023-01-31
11288722	E-113	2023-01-24 @ 12:00 pm	2023-01-27 @ 1:00 pm	0.6 ± 0.3	2023-01-31
11288713	E-114	2023-01-24 @ 12:00 pm	2023-01-27 @ 10:00 am	< 0.3	2023-01-31
11288718	E-114	2023-01-24 @ 12:00 pm	2023-01-27 @ 10:00 am	< 0.3	2023-01-31
11288705	E-115	2023-01-24 @ 12:00 pm	2023-01-27 @ 1:00 pm	< 0.3	2023-01-31
11288725	E-116	2023-01-24 @ 1:00 pm	2023-01-27 @ 10:00 am	0.9 ± 0.4	2023-01-31
11288728	E-116B	2023-01-24 @ 1:00 pm	2023-01-27 @ 10:00 am	1.3 ± 0.4	2023-01-31
11288729	E-116C	2023-01-24 @ 1:00 pm	2023-01-27 @ 10:00 am	1.3 ± 0.4	2023-01-31
11288747	E-117	2023-01-24 @ 1:00 pm	2023-01-27 @ 10:00 am	< 0.3	2023-01-31
11288745	E-118	2023-01-24 @ 1:00 pm	2023-01-27 @ 10:00 am	1.1 ± 0.4	2023-01-31
11288746	E-118	2023-01-24 @ 1:00 pm	2023-01-27 @ 10:00 am	0.9 ± 0.4	2023-01-31
11288772	E-210	2023-01-24 @ 2:00 pm	2023-01-27 @ 12:00 pm	0.6 ± 0.4	2023-01-31
11288763	E107	2023-01-24 @ 2:00 pm	2023-01-27 @ 1:00 pm	< 0.3	2023-01-31
11288706	E114	2023-01-24 @ 12:00 pm	2023-01-27 @ 10:00 am	< 0.3	2023-01-31
11288748	F-101	2023-01-24 @ 1:00 pm	2023-01-27 @ 10:00 am	< 0.3	2023-01-31
11288740	F-103	2023-01-24 @ 1:00 pm	2023-01-27 @ 10:00 am	< 0.3	2023-01-31
11288731	F-104	2023-01-24 @ 1:00 pm	2023-01-27 @ 10:00 am	1.5 ± 0.4	2023-01-31
11288735	F-105	2023-01-24 @ 1:00 pm	2023-01-27 @ 10:00 am	1.0 ± 0.4	2023-01-31
11288730	F-106	2023-01-24 @ 1:00 pm	2023-01-27 @ 10:00 am	1.1 ± 0.4	2023-01-31
11288742	F-107	2023-01-24 @ 1:00 pm	2023-01-27 @ 10:00 am	0.6 ± 0.3	2023-01-31
11288738	F-108	2023-01-24 @ 1:00 pm	2023-01-27 @ 10:00 am	< 0.3	2023-01-31
11288739	F-108	2023-01-24 @ 1:00 pm	2023-01-27 @ 10:00 am	< 0.3	2023-01-31
11288732	F-108	2023-01-24 @ 1:00 pm	2023-01-27 @ 10:00 am	0.8 ± 0.4	2023-01-31
11288736	F-109	2023-01-24 @ 1:00 pm	2023-01-27 @ 10:00 am	0.8 ± 0.4	2023-01-31
11288743	F-113	2023-01-24 @ 1:00 pm	2023-01-27 @ 10:00 am	< 0.3	2023-01-31
11288777	F-208	2023-01-24 @ 2:00 pm	2023-01-27 @ 12:00 pm	< 0.3	2023-01-31
11288737	F116B	2023-01-24 @ 1:00 pm	2023-01-27 @ 10:00 am	1.3 ± 0.4	2023-01-31
11288750	G-1	2023-01-24 @ 2:00 pm	2023-01-27 @ 10:00 am	0.7 ± 0.4	2023-01-31
11288749	G-101	2023-01-24 @ 1:00 pm	2023-01-27 @ 10:00 am	0.9 ± 0.4	2023-01-31
11288754	G-105	2023-01-24 @ 1:00 pm	2023-01-27 @ 10:00 am	< 0.3	2023-01-31
11288756	G-106	2023-01-24 @ 1:00 pm	2023-01-27 @ 10:00 am	0.5 ± 0.4	2023-01-31
11288755	G-108	2023-01-24 @ 1:00 pm	2023-01-27 @ 10:00 am	0.6 ± 0.4	2023-01-31
11288757	G-109	2023-01-24 @ 1:00 pm	2023-01-27 @ 10:00 am	0.6 ± 0.3	2023-01-31

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

February 1, 2023 **** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11288761	G-11	2023-01-24 @ 2:00 pm	2023-01-27 @ 10:00 am	0.5 ± 0.3	2023-01-31
11288751	G-110	2023-01-24 @ 1:00 pm	2023-01-27 @ 9:00 am	< 0.3	2023-01-31
11288753	G-111	2023-01-24 @ 1:00 pm	2023-01-27 @ 10:00 am	1.4 ± 0.4	2023-01-31
11288752	G-111	2023-01-24 @ 1:00 pm	2023-01-27 @ 10:00 am	0.9 ± 0.4	2023-01-31
11288766	G-12	2023-01-24 @ 2:00 pm	2023-01-27 @ 10:00 am	< 0.3	2023-01-31
11288759	G-2	2023-01-24 @ 2:00 pm	2023-01-27 @ 10:00 am	< 0.3	2023-01-31
11288776	G-202	2023-01-24 @ 2:00 pm	2023-01-27 @ 12:00 pm	0.7 ± 0.4	2023-01-31
11288767	G-3	2023-01-24 @ 2:00 pm	2023-01-27 @ 10:00 am	2.1 ± 0.4	2023-01-31
11288762	G-8	2023-01-24 @ 2:00 pm	2023-01-27 @ 10:00 am	2.7 ± 0.4	2023-01-31
11288760	G-8	2023-01-24 @ 2:00 pm	2023-01-27 @ 10:00 am	3.1 ± 0.4	2023-01-31
11288764	G-8	2023-01-24 @ 2:00 pm	2023-01-27 @ 10:00 am	< 0.3	2023-01-31
11288712	GYM	2023-01-24 @ 12:00 pm	2023-01-27 @ 11:00 am	1.2 ± 0.4	2023-01-31
11634414	KITCHEN OFFICE B-120B	2023-01-24 @ 10:00 am	2023-01-27 @ 9:00 am	0.8 ± 0.3	2023-01-31
11634429	MAIN OFFICE A101	2023-01-24 @ 9:00 am	2023-01-27 @ 9:00 am	< 0.3	2023-01-31
11288770	MEDIA CENTER	2023-01-24 @ 2:00 pm	2023-01-27 @ 12:00 pm	< 0.3	2023-01-31
11288770	MEDIA CENTER	2023-01-24 @ 2:00 pm	2023-01-27 @ 12:00 pm	< 0.3	2023-01-31
11288769	MEDIA CENTER	2023-01-24 @ 2:00 pm	2023-01-27 @ 12:00 pm	< 0.3	2023-01-31

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

February 20, 2023 **** LABORATORY ANALYSIS REPORT ****

Radon test result report for:
SPRINGBROOK HS
1

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11633977	GYM	2023-02-14 @ 9:00 am	2023-02-17 @ 10:00 am	1.9 ± 0.3	2023-02-20
11633985	GYM	2023-02-14 @ 9:00 am	2023-02-17 @ 10:00 am	1.9 ± 0.3	2023-02-20
11634977	GYM	2023-02-14 @ 9:00 am	2023-02-17 @ 10:00 am	1.8 ± 0.3	2023-02-20
11634978	GYM	2023-02-14 @ 9:00 am	2023-02-17 @ 10:00 am	< 0.3	2023-02-20

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 208802

NOMINAL Conditions: Radon Conc 24.4 pCi/L Rel. Hum 48.6 % Temp. 79.3 F

Date Start: 1/27/23 Date Stop: 1/30/23	Date Start: _____ Date Stop: _____
Time Start: 0816 Time Stop: 0816	Time Start: _____ Time Stop: _____
Device No.'s: (5) CHAR BAGS -	Device No.'s: _____
11633682, 11633687, 11633688	_____
11633695, 11633696	_____
F3 Cell	
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

February 3, 2023 **** LABORATORY ANALYSIS REPORT ****

Radon test result report for:
OFFICE
MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11633696	SK10	2023-01-27 @ 8:00 am	2023-01-30 @ 8:00 am	24.2 ± 1.9	2023-02-03
11633682	SK6	2023-01-27 @ 8:00 am	2023-01-30 @ 8:00 am	26.9 ± 2.1	2023-02-03
11633687	SK7	2023-01-27 @ 8:00 am	2023-01-30 @ 8:00 am	23.8 ± 1.9	2023-02-03
11633688	SK8	2023-01-27 @ 8:00 am	2023-01-30 @ 8:00 am	25.9 ± 2.1	2023-02-03
11633695	SK9	2023-01-27 @ 8:00 am	2023-01-30 @ 8:00 am	27.0 ± 2.2	2023-02-03

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

KCI TECHNOLOGIES

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 – Week 2 Retesting January Schools

Name of Schools:

1. A. Mario Loiederman MS
2. Cannon Road ES
3. Forest Knolls ES
4. Glen Haven ES
5. Goshen ES
6. Highland View ES
7. John F. Kennedy HS
8. Lakelands Park MS
9. Montgomery Village MS
10. Poolesville HS
11. Springbrook HS

	Date	Initials
Radon Test Kits Deployed	02/14/2023	BMM
Radon Test Kits Collected	02/17/2023	BMM
Radon Test Kits Shipped to Lab*	02/17/2023	BMM
Radon Test Kits Received by Lab*	02/20/2023	BMM

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

Soil and Land Use Technology, Inc.
1818 New York NE, Suite 231 • Washington, DC 20002
(301) 595-3783
www.SaLUTinc.com

MCPS RADON TESTING - EXECUTIVE SUMMARY

Site Name	Springbrook High School
Date of Report	2/9/2021
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	5
# Rooms ≥4.0 pCi/L	0
Lowest Value	<0.3 pCi/L
Highest Value	3.8 pCi/L

Project Status

Current Project Status at this time: Testing Complete.

Soil and Land Use Technology, Inc.

(301) 595-3783
1818 New York NE, Suite 231 • Washington, DC 20002 www.SaLUTinc.com

2/9/2021

Brian Croyle, PG, CHMM
Environmental Specialist
Environmental Services/Indoor Air Quality
Montgomery County Public Schools
Division oof Sustainability and Compliance
Gaithersburg, Maryland 20879

Re: Radon Testing Services

SaLUT Job #20-173

Location: Springbrook High School
201 Valley Brook Drive
Silver Spring, MD 20904

Dear Mr. Croyle:

Soil and Land Use Technology, Inc. (SaLUT) is pleased to submit the following report to Montgomery County Public Schools pursuant to completing a "Post Remediation radon test for the Springbrook High School, located at 201 Valley Brook Drive, Silver Spring, MD 20904 (subject site).

SCOPE OF SERVICES

SaLUT 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. SaLUT 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.* 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.

SaLUT visited the site on 1/26/2021 and deployed seven (7) activated charcoal (AC) radon test kits. SaLUT deployed radon test kits in remediated 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, SaLUT included duplicate samples, field blanks, lab transit blanks, and office blanks in accordance with AARST recommendations. In addition, SaLUT submitted one (1) test kit 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.

SaLUT returned to the site on 1/29/2021 to retrieve the radon sampling test kits. SaLUT shipped all radon tests via overnight delivery to EMSL Analytical, Inc. for analysis by gamma-ray spectroscopy. EMSL Analytical, Inc. is a National Radon Safety Board (NRSB) radon measurement provider and is a certified analytical laboratory for radon analysis (certification #109000 AL) located at 200 Route 130 North, Cinnaminson, NJ 08077.

EVALUATION OF TESTING CONDITIONS

These tests represent:

- Post Remediation 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, SaLUT concludes that this test was conducted during ideal testing conditions.

SaLUT 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.

SaLUT 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 and high temperatures were in the mid-40s. Maximum sustained winds ranged from 5-22 miles per hour. Average humidity was around 68%. <1.0 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 piC/L	N/A	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 301-595-3783.

Sincerely,

Mark McGrath

Soil and Land Use Technology, Inc. (SaLUT)
1818 New York Avenue, NE, Suite 231
Washington, DC 20002
202-446-7211 Mobile
301-595-3783
202-379-9504 fax

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

D- Duplicate

FB- Field Blank

OB- Office Blank

PM- Project Manager

QC- Quality Control

Table 1- Radon Testing Results		
Springbrook High School		
Test Period: 1/26/2021-1/29/2021		
Kit Number	Room / Area	Result
445832	Gym	2.4
445875	Gym	1.3
445851	Gym Closet	1.8
445193	Weight Room	2
445154	Weight Room	-0.1
445224	G-111	3.8
445236	G-111A	3.2

Table 2- Radon Testing Results			
Springbook High School			
Test Period: 1/26/2021-1/29/2021			
Kit Number	QC Type	Room / Area	Result
440197	FB	Weight Room	-0.1
429687	D	Gym	1.3
9346867	TRANSIT BLANK	N/A	0.0

ATTACHMENT C

Laboratory Analytical Results

EMSL Analytical, Inc.
200 Route 130 North, Cinnaminson, NJ 08077
Phone/Fax: (800) 220-3675 / (856) 786-0327
http://www.EMSL.com cinnaminsonradonlab@emsl.com

EMSL Order:	382100960
CustomerID:	SALU50
CustomerPO:	
ProjectID:	

Attn: **Indika Jayatilake**
SaLUT
1818 New York Avenue, NE
Suite 231
Washington, DC 20002

Phone:	(301) 595-3783
Fax:	(301) 595-3787
Received:	2/1/2021 10:20 AM
Analysis Date:	2/2/2021
Collected:	1/26/2021

Project: **201 Valley Brook Drive**

Test Site: **201 Valley Brook Drive**
Silver Spring, MD 20904

Test Report: Radon in Air Test Results

Samples for EMSL Kit 254592

Liquid Scintillation ID	Location	Radon Activity pCi/L	Start	Stop	Temperature F	Humidity %	Sample Type
445832	Gym	2.4	1/26/2021	1/29/2021	70	24	Customer
382100960-0001			9:59:00 AM	10:28:00 AM			
Sample Notes:							
445875	Gym	1.3	1/26/2021	1/29/2021	70	24	Duplicate
382100960-0002			9:59:00 AM	10:28:00 AM			
Sample Notes:							

Duplicate RPD = 59.5%

Samples for EMSL Kit 254593

Liquid Scintillation ID	Location	Radon Activity pCi/L	Start	Stop	Temperature F	Humidity %	Sample Type
445851	Gym Closet	1.8	1/26/2021	1/29/2021	70	42	Customer
382100960-0003			10:00:00 AM	10:30:00 AM			
Sample Notes:							

Samples for EMSL Kit 254595

Liquid Scintillation ID	Location	Radon Activity pCi/L	Start	Stop	Temperature F	Humidity %	Sample Type
445193	Weight Room	2	1/26/2021	1/29/2021	68	40	Customer
382100960-0004			10:04:00 AM	10:32:00 AM			
Sample Notes:							
445154	Weight Room	-0.1	1/26/2021	1/29/2021	68	40	Blank
382100960-0005			10:04:00 AM	10:32:00 AM			
Sample Notes:							

Samples for EMSL Kit 254596

Liquid Scintillation ID	Location	Radon Activity pCi/L	Start	Stop	Temperature F	Humidity %	Sample Type
445224	Room G-111	3.8	1/26/2021	1/29/2021	70	50	Customer
382100960-0006			10:10:00 AM	10:23:00 AM			
Sample Notes:							

EMSL Analytical, Inc.
200 Route 130 North, Cinnaminson, NJ 08077
Phone/Fax: (800) 220-3675 / (856) 786-0327
http://www.EMSL.com cinnaminsonradonlab@emsl.com

EMSL Order:	382100960
CustomerID:	SALU50
CustomerPO:	
ProjectID:	

Attn: **Indika Jayatilake**
SaLUT
1818 New York Avenue, NE
Suite 231
Washington, DC 20002

Phone:	(301) 595-3783
Fax:	(301) 595-3787
Received:	2/1/2021 10:20 AM
Analysis Date:	2/2/2021
Collected:	1/26/2021

Project: **201 Valley Brook Drive**

Test Site: **201 Valley Brook Drive**
Silver Spring, MD 20904

Test Report: Radon in Air Test Results

Samples for EMSL Kit 254594

Liquid Scintillation ID	Location	Radon Activity pCi/L	Start	Stop	Temperature F	Humidity %	Sample Type
445236	Room G-111A	3.2	1/26/2021	1/29/2021	65	50	Customer
382100960-0007			10:12:00 AM	10:24:00 AM			

Sample Notes:

Samples for EMSL Kit 252533

Liquid Scintillation ID	Location	Radon Activity pCi/L	Start	Stop	Temperature F	Humidity %	Sample Type
440298	Transit Blank	0	1/26/2021	2/1/2021	70	50	Blank
382100960-0008			10:00:00 AM	10:21:00 AM			

Sample Notes: Radon device exposed >96 hours

The radon test was performed using a liquid scintillation radon detector/s and counted on a liquid scintillation counter using approved EPA testing protocols for Radon in Air testing. The EPA recommends fixing your home if the average of two short-term tests taken in the lowest lived-in level of the home show radon levels that are equal to or greater than 4.0pCi/L.
The EPA recommends retesting your home every two years.

Please contact EMSL Analytical, Inc. or your State Health Department for further information.
All procedures used for generating this report are in complete accordance with the current EPA protocols for the analysis of Radon in Air.

Report Note

Analyst(s)

Kevin Schwartz (8)

Dominic Gehret, Radiochemistry Laboratory Manager, NJ Radon Measurement Specialist MES 13910
or other approved signatory

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ FL RB2034/R2687,IL RNL2008202,IN RTL00935,IA RNLAB10005,KS KS-LB-0005/KS-MS-0482,ME SPC202,MN RL-0005,NE 474/RMB-1083,NJ 03036/MEB92525/MES13910,NY 10872,OH RL39,OK D9952,PA 2573/3393/68-00367,RI RMB-108/RI00179,WV RL000220,NRSB-ARL6006,NRPP

Initial report from 02/04/2021 13:25:04

Please visit www.radontestinglab.com

OrderID: 382100960

Fedex 7960 5825 0538

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Radon Testing Chain of Custody

EMSL Order Number (*Lab Use Only*):

EMSL CINNAMINSON, N.J. 382100960

EMSL Analytical, Inc.
200 Route 130 North
Cinnaminson, NJ 08077
PHONE: 1-800-220-3675
FAX: (856) 786-5974

2021 JAN 32 A 10:21 KS

Company: SaLUT		**EMSL-Bill to:** ☐ Same ☐ Different If Bill to is Different note instructions in Comments** *Third Party Billing requires written authorization from third party*	
Street: 1818 New York Avenue, NE Suite 231			
City: Washington	**State/Province:** DC	**Zip/Postal Code:** 20002	**Country:** US
Report To (Name): Indika Jayatilake		**Fax #:** 301-595-3787	
Telephone #: 301-595-3783		**Email Address:** ijayatilake@salutinc.com	
Project Name/Number: MCPS			
Please Provide Results: ☐Fax ☐Email ☐Mail	**Purchase Order:**	**U.S. State Samples Taken:** MD	

Project Property Information

Project Name:		
Project Address: 201 Valley Brook Dr.		
City: Silver Spring	**State:** MD	**Zip Code:** 20904
County:	**Municipality:**	
Technician Name: Mark M.	**Technician Cert #:**	**Technician Signature:** MM

New Jersey Testing Information

NJDEP Laboratory Certification # 03036 **NJDEP Radon Business Certification #** MEB92525

1.) Is the radon test being conducted for the purpose of: ☐ Real Estate Transaction ☐ Homeowner Testing ☒ Other
2.) Test Conditions observed? ☒ Closed House ☐ Open House
3.) What is the building type? ☐ Residential ☐ Non-Residential ☐ Daycare ☒ School
4.) What is the building foundation type? ☒ Basement ☐ Crawlspace ☐ Slab on Grade ☒ Other
5.) For School Testing, please enter: School Code _____ Room Name/Number _____

	Box Number	Device Number	Location	Exposure Period Beginning Date and Time	Exposure Period Ending Date and Time	Temperature °F	Humidity, %
	254592	445832	Gym	1/26/21 9:59	1/29/21 10:28	70	24
DUP	254592	445875	Gym	1/26/21 9:59	1/29/21 10:28	70	24
	254593	445851	Gym Closet	1/26/21 10:00	1/29/21 10:30	70	42
	254595	445193	Weight Room	1/26/21 10:04	1/29/21 10:32	68	40
Blank	254595	445154	Weight Room	1/26/21 10:04	1/29/21 10:32	68	40
	254596	445224	Room G-111	1/26/21 10:10	1/29/21 10:23	70	50
	254594	445236	Room G-111A	1/26/21 10:12	1/29/21 10:24	65	50
	252533	440298	Transit Blank	1/26/21 10:00		70	50

Client Sample # (s): - **Total # of Samples:**

Relinquished (Client): **Date:** **Time:**

Received (Lab): **Date:** **Time:**

Comments/Special Instructions:

MONTGOMERY COUNTY PUBLIC SCHOOLS
RADON TESTING

Executive Summary:
Springbrook High School

201 Valley Brook Drive
Silver Spring, MD 20904

Date of Test Report:	3/29/2019
Round of Testing:	Initial **Follow-up** Post Remediation 2 Year Testing 5 Year Testing HVAC Upgrade Window Replacement New Addition New Facility
# of Rooms Tested:	6
# of Rooms ≥ 4.0 pCi/L:	0
Low Value:	<0.4
High Value:	1.8

Project Status

Missing Samples: Room E116

Current Project Status at this time: Retesting completed; remediation recommended for Room E116.

March 29, 2019

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

Re: Radon Testing Services

Location: Springbrook High School
201 Valley Brook Drive,
Silver Spring, MD 20904

Dear Mr. Cox:

Intertek-PSI (PSI) is pleased to submit the following report to the Montgomery County Public Schools (MCPS) for completion of a "short-term" 3-day radon test for Springbrook High School, located at 201 Valley Brook Drive, Silver Spring, MD 20904 (subject site).

Scope of Services:

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

PSI visited the site on February 25, 2019 and deployed seven (7) activated charcoal (AC) radon test kit. PSI deployed radon test kits in frequently-occupied ground contact rooms, and other areas, (if applicable) in accordance with AARST guidance. PSI returned to the site on February 28, 2019 to retrieve the radon sampling test kit. A floor plan map of the building with the test location is included as Attachment A of this report.

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

Evaluation of Testing Conditions:

The operating condition that represents the greatest amount of significantly occupied time for this building is; heating active, with outdoor temperature averages ≤ 65°F.

PSI concludes that the test period reasonably represents normal conditions when the building is significantly

occupied. Clear characterization of the radon hazard is most likely to be observed under this normal operating condition. Based on the evaluation of test conditions, this test should reasonably characterize radon hazards.

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

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

Results:

The results of the radon test analysis indicated the following:

Radon Concentration	Room	Result
≥ 4.0 pCi/L	None	NA
≤ 4.0 pCi/L	See 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 (703) 698-9300.

Respectfully Submitted,

INTERTEK-PSI

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

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

ATTACHMENT B

Radon Test Summary Spreadsheet

Radon Testing Results		
Springbrook High School		
Testing period: 02/25/19 - 02/28/19		
Kit Number	**Room / Area**	**Result (pCi/L)**
3923476	Room 112	0.6
3923473	Room F112	<0.4
3923474	Room F109	1.0
3923471	Room G12	<0.4
3923453	Room B122	<0.4
3923472	Room B122 (D)	<0.4
3923460	Auditorium	1.0
3923472	Auditorium (D)	<0.4
3923452	E116 (Missing)	--

Table Notes:

D – Duplicate

FB – Field Blank

OB – Office Blank

TB – Transit Blank

QC – Quality Control

ATTACHMENT C

Laboratory Analytical Results

AccuStar
Professional Radon Laboratory Services Since 1984

Radon in Air

NRPP 105011 AL
NRSB ARL0007

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

Laboratory Report for:

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

Property Tested: Project # 04481387-1

MCPS Radon Survey Springbrook HS
201 Valley Brook Drive
Silver Spring MD 20904

Log Number	Device Number	Test Exposure Duration:				Area Tested	Result pCi/L
3220662	3923476	02/25/2019	1:20 pm	02/28/2019	1:00 pm	Floor Main Room 112	0.6
3220663	3923473	02/25/2019	1:24 pm	02/28/2019	1:01 pm	Floor Main Room F112	< 0.4
3220664	3923474	02/25/2019	1:26 pm	02/28/2019	1:02 pm	Floor Main Room F109	1.0
3220665	3923471	02/25/2019	1:35 pm	02/28/2019	1:04 pm	Floor Main Room G12	< 0.4
3220666	3923453	02/25/2019	1:42 pm	02/28/2019	1:05 pm	Floor Main Room B122	< 0.4
3220667	3923472	02/25/2019	1:42 pm	02/28/2019	1:06 pm	Floor Main Room B122 Duplicate	< 0.4
3220668	3923460	02/25/2019	1:46 pm	02/28/2019	1:07 pm	Floor Main Room Auditorium	1.0

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

Distributed by: Intertek-PSI (VA)

Date Received: 03/04/2019 Date Logged: 03/04/2019 Date Analyzed: 03/05/2019 Date Reported: 03/05/2019

Report Reviewed By: _____ Report Approved By: _____

Shawn Price, Director of Laboratory Operations, 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.

KCI TECHNOLOGIES
ENGINEERS • PLANNERS • SCIENTISTS • CONSTRUCTION MANAGERS
936 RIDGEBROOK ROAD • SPARKS, MD 21152 • 410-316-7800 • (FAX) 410-316-7935

MCPS RADON TESTING - EXECUTIVE SUMMARY

Site Name	Springbrook High School
Date of Report	3/5/2020
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	4
# Rooms ≥4.0 pCi/L	0
Lowest Value	<0.3 pCi/L
Highest Value	3.6 pCi/L

Project Status

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

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3/5/2020

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: Springbrook High School
201 Valleybrook Drive
Silver Spring, Maryland 20904

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 Springbrook High School, located at 201 Valleybrook Drive in Silver Spring, Maryland 20904 (subject site).

SCOPE OF SERVICES

KCI conducted radon testing at the subject site to evaluate indoor radon levels relative to the USEPA's recommended action level of 4.0 picocuries per Liter (pCi/L) - the level at which EPA recommends that schools take action to reduce the level. KCI conducted the radon testing in accordance with American Association of Radon Scientists and Technologists (AARST) *Protocol for Conducting Measurements of Radon and Radon Decay Products in Schools and Large Buildings*. A National Radon Safety Board (NRSB) Radon Measurement Specialist (certification #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 2/18/2020 and deployed six (6) 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. ≥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 nine (9) 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 2/21/2020 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 lower-40s; and high temperatures ranged from the upper-30s to the upper-50s. Maximum sustained winds ranged from 13-21 miles per hour. Average humidity was approximately 50%. A total of .01 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

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		
Springbrook High School		
Test Period: 02/18/20-02/21/20		
Kit Number	Room / Area	Result
9348525	G111	3.5
9348531	TEAM OFFICE 1	1.3
9348549	GYM D104	2.5
9348567	GYM D104	3.6
9348568	WEIGHT ROOM	3
9348571	OFFICE BLANK	< 0.3

Table 2- Radon Testing Results			
Springbrook High School			
Test Period: 02/18/20-02/21/20			
Kit Number	QC Type	Room / Area	Result
9348506	TRANSIT BLANK	NA	< 0.3

ATTACHMENT C

Laboratory Analytical Results

February 28, 2020 **** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

MCPS - Spike Sample Lab Results. Measured values are satisfactory, i.e., within ± 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

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

March 5, 2020

** LABORATORY ANALYSIS REPORT **

Radon test result report for:

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

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
9341733		2020-02-21 @ 8:00 am	2020-02-24 @ 8:00 am	26.4 ± 1.6	2020-02-26

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

March 5, 2020

** LABORATORY ANALYSIS REPORT **

Radon test result report for:
S
N/A

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
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
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

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 - 9341725 thru 9341733	Device No.'s: _____
52 Cell	
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

P4792 / WILLIAM LYMAN

Kit Number	Start Date	Start Time	End Date	End Time	Temp.	Facility	Building	Room	Project ID	Floor	Result
9348506	2020-02-18	9:00 am	2020-02-21	2:00 pm	70	TRANIST BLANK				3	< 0.3
9348525	2020-02-18	2:00 pm	2020-02-21	1:00 pm	70	SPRINGBROOK HS	798	G111		1	3.5
9348531	2020-02-18	2:00 pm	2020-02-21	1:00 pm	70	SPRINGBROOK HS	798	TEAM OFFICE 1		1	1.3
9348549	2020-02-18	2:00 pm	2020-02-21	1:00 pm	70	SPRINGBROOK HS	798	GYM D104		1	2.5
9348567	2020-02-18	2:00 pm	2020-02-21	1:00 pm	70	SPRINGBROOK HS	798	GYM D104		1	3.6
9348568	2020-02-18	2:00 pm	2020-02-21	1:00 pm	70	SPRINGBROOK HS	798	WEIGHT ROOM		1	3.0
9348571	2020-02-18	9:00 am	2020-02-21	2:00 pm	70	OFFICE BLANK				3	< 0.3

KCI TECHNOLOGIES

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 3

Name of Schools:

1. Bannockburn E.S.
2. Bradley Hills E.S.
3. East Silver Spring E.S.
4. Einstein H.S.
5. Flora M. Singer E.S.
6. Francis Scott Key M.S.
7. Jones Lane E.S
8. Montgomery Blair H.S.
9. Oak View E.S.
10. Redland M.S.
11. Springbrook H.S.

	Date	Initials
Radon Test Kits Deployed	2/18/20	
Radon Test Kits Collected	2/21/20	
Radon Test Kits Shipped to Lab*	2/21/20	
Radon Test Kits Received by Lab*	2/24/20	

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

KCI TECHNOLOGIES
ENGINEERS • PLANNERS • SCIENTISTS • CONSTRUCTION MANAGERS
936 RIDGEBROOK ROAD • SPARKS, MD 21152 • 410-316-7800 • (FAX) 410-316-7935

MCPS RADON TESTING - EXECUTIVE SUMMARY

Site Name	Springbrook High School
Date of Report	2/21/2020
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	118
# Rooms ≥4.0 pCi/L	0
Lowest Value	<0.3 pCi/L
Highest Value	3.6 pCi/L

Project Status

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

KCI TECHNOLOGIES
ENGINEERS • PLANNERS • SCIENTISTS • CONSTRUCTION MANAGERS
936 RIDGEBROOK ROAD • SPARKS, MD 21152 • 410-316-7800 • (FAX) 410-316-7935

2/21/2020

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: Springbrook High School
201 Valleybrook Drive
Silver Spring, Maryland 20904

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 Springbrook High School, located at 201 Valleybrook Drive in Silver Spring, Maryland 20904 (subject site).

SCOPE OF SERVICES

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

KCI visited the site on 1/6/2020 and deployed one-hundred fifty-six 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 1/9/2020 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 National Radon Safety Board (NRSB) radon measurement provider and is a certified analytical laboratory for radon analysis (certification #ARL1402) located at 1936 Butler Bridge Road, Mills River, North Carolina.

EVALUATION OF TESTING CONDITIONS

These tests represent:

- Follow-up to initial testing and post-mitigation testing.

These tests were conducted to:

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

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

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

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

KCI also compiled weather data for the testing period and conducted observations of relevant field conditions. During the test period, weather records indicate low temperatures were in the upper-20s and high temperatures were in the mid-50s. Maximum sustained winds ranged from 10-23 miles per hour. Average humidity was around 64%. 0.32 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 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
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		
Springbrook High School		
Test Period: 1/6/2020-1/9/2020		
Kit Number	Room / Area	Result
9347044	G-307	0.8
9347045	G-209	1.1
9347046	C-206	2
9347047	E-206	< 0.3
9347048	E-206	< 0.3
9347049	F-201	< 0.3
9347050	F-209	< 0.3
9347051	G-202	< 0.3
9347052	G-202	0.8
9347053	STAGE	2.1
9347054	STAGE	2.1
9347055	AUDITORIUM	2.1
9347056	AUDITORIUM	2.4
9347057	AUDITORIUM	1.4
9347058	AUDITORIUM	1.7
9347059	D-1 AUX GYM 1	1.8
9347060	D-101	0.9
9347061	D-108-PR	0.9
9347062	D-108-H	0.9
9347063	D-103	1.7
9347064	D-108	0.6
9347065	D-108-A	< 0.3
9347066	D-1 AUX GYM 1	1.4
9347067	D-107-G	1
9347068	TRAINER	2
9347069	D-107-G	1.1
9347070	D-107	0.9
9347071	WEIGHT ROOM	3
9347072	D-104	3.6
9347073	D-102	1.2
9347074	D-104	3.3
9347075	D-104	3.3
9347076	D-104	3.6
9347077	D-105	2.6
9347078	TRAINER	< 0.3
9347079	WEIGHT ROOM	2.5
9347080	C-102	0.8
9347081	C-102-A	< 0.3
9347082	C-101	< 0.3
9347083	E-109	< 0.3
9347084	C-101-A	< 0.3
9347085	C-101-S	< 0.3

9347086	C-101-B	0.7
9347087	C-101-A	< 0.3
9347088	C-101-G	< 0.3
9347089	C-101-D	< 0.3
9347090	C-102-D	< 0.3
9347091	C-101-R	0.6
9347092	C-101-H	< 0.3
9347094	C-101-K	< 0.3
9347095	C-101-M	1.2
9347096	C-101-L	< 0.3
9347097	C-101-J	< 0.3
9347098	C-101-E	< 0.3
9347099	C-101-J	0.7
9347100	C-101-G	0.6
9348302	OFFICE BLANK	< 0.3
9348401	A-103	< 0.3
9348402	A-103	< 0.3
9348403	A-102	< 0.3
9348404	MAIN OFFICE	< 0.3
9348405	A-109	< 0.3
9348406	A-106	< 0.3
9348407	A-104	0.7
9348408	A-114	< 0.3
9348409	ATTENDANCE	< 0.3
9348410	A-106	< 0.3
9348411	CAFE	< 0.3
9348412	B-122B	0.7
9348413	B-122A	< 0.3
9348414	A-105	< 0.3
9348415	A-108	< 0.3
9348416	A-108	0.7
9348417	BUSINESS ADMIN	< 0.3
9348418	B-122	< 0.3
9348419	A-111	0.6
9348420	A-112	< 0.3
9348421	CAFE	< 0.3
9348422	CAFE	< 0.3
9348423	B-117	< 0.3
9348424	B-118	< 0.3
9348425	B-120-B	< 0.3
9348426	B-109-A	0.6
9348427	B-108-C	< 0.3
9348428	B-116	< 0.3
9348429	B-117	< 0.3
9348430	B-118	< 0.3
9348431	B-109	< 0.3
9348432	B-109-B	< 0.3

9348433	B-109	< 0.3
9348434	B-108	< 0.3
9348435	B-108	0.8
9348436	B-107	< 0.3
9348437	B-107	< 0.3
9348438	B-107	< 0.3
9348439	B-107-C	< 0.3
9348440	B-106	< 0.3
9348441	B-106-C	< 0.3
9348442	B-105-B	< 0.3
9348443	B-105	< 0.3
9348444	B-105	< 0.3
9348445	B-104	0.9
9348446	B-104	< 0.3
9348447	B-104-C	< 0.3
9348448	B-104-C	0.6
9348449	B-103	< 0.3
9348450	B-102-D	< 0.3
9348451	B-102	< 0.3
9348452	B-101	0.5
9348453	G-111	3
9348454	G-109	1.2
9348455	G-108	1.1
9348456	G-107	< 0.3
9348457	G-105	< 0.3
9348458	G-110	0.9
9348459	G-106	0.9
9348460	G-110	1.2
9348461	F-108	0.9
9348462	G-12	< 0.3
9348463	G-8	2.4
9348464	G-11	< 0.3
9348465	F-113	0.6
9348466	G-101	0.7
9348467	G-8	2.1
9348468	G-1	0.8
9348469	G-2	< 0.3
9348470	G-11	< 0.3
9348471	F-109	< 0.3
9348472	E-113	< 0.3
9348473	F-107	< 0.3
9348474	F-101	< 0.3
9348475	F-106	1.4
9348476	F-107	1
9348477	F-102	< 0.3
9348478	F-103	< 0.3
9348479	F-105	< 0.3

9348480	F-104	0.8
9348481	E-118	0.7
9348482	E-111	0.7
9348483	E-110	0.6
9348484	E-113	0.7
9348485	E-114	< 0.3
9348486	E-115	< 0.3
9348487	E-115	< 0.3
9348488	E-116 OFFICE	1.3
9348489	E-116	3
9348490	E-117	< 0.3
9348491	E-106	1.3
9348492	E-111	0.6
9348493	C-101-O	< 0.3
9348494	C-101-Q	1.2
9348495	E-111 WORKROOM	0.8
9348496	C-101-P	1
9348497	E-105	0.8
9348498	E-105	< 0.3
9348499	E-107	< 0.3
9348500	E-108	0.7

Table 2- Radon Testing Results			
Springbrook High School			
Test Period: 1/6/2020-1/9/2020			
Kit Number	QC Type	Room / Area	Result
9348402	D	A-103	<0.3
9348410	FB	A-106	<0.3
9348416	D	A-108	0.7
9348430	D	B-118	<0.3
9348423	FB	B-117	<0.3
9348437	D	B-107	<0.3
9348446	D	B-104	<0.3
9348447	FB	B-104-C	<0.3
9348460	D	G-110	1.2
9348467	D	G-8	2.1
9348470	FB	G-11	<0.3
9348473	D	F-107	<0.3
9348486	D	E-115	<0.3
9348472	FB	E-113	<0.3
9348498	D	E-105	<0.3
9347099	D	C-101-J	0.7
9347088	FB	C-101-G	<0.3
9347087	D	C-101-A	<0.3
9347079	D	WEIGHT ROOM	2.5
9347078	FB	TRAINER	<0.3
9347069	D	D-107-G	1.1
9347054	D	STAGE	2.1
9347051	FB	G-202	<0.3
9347047	D	E-206	<0.3
9348319	TRANSIT BLANK	NA	<0.3
9348320	TRANSIT BLANK	NA	<0.3
9348313	TRANSIT BLANK	NA	<0.3

Summary of Missed Locations		
Springbrook High School		
Test Period: 01/06/2020 - 01/09/2020		
Kit Number	Room/Area	Result
-	TEAM OFFICE 1 (LOCKED)	-

Summary of Missing, Compromised and >/= 4 piC/L Tests		
Springbrook High School		
Test Period: 01/06/2020 - 01/09/2020		
Kit Number	Room/Area	Result
-	N/A	-

Table Note:
* Missing or Compromised Sample

ATTACHMENT C

Laboratory Analytical Results

January 3, 2020

** LABORATORY ANALYSIS REPORT **

Radon test result report for:

MCPS - Spike Sample Lab Results. Measured values are satisfactory, i.e., within ± 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 ± 2.4 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 ± 2.4 D	2020-01-03
9340033	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	26.2 ± 2.5 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 ± 2.4 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 ± 2.4 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 ± 2.4 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

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

January 3, 2020

** LABORATORY ANALYSIS REPORT **

Radon test result report for:

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

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 ± 2.6 D	2020-01-03
9340090	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	26.3 ± 2.5 D	2020-01-03
9340073	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	26.8 ± 2.5 D	2020-01-03
9340041	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	25.6 ± 2.4 D	2020-01-03
9340009	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	24.1 ± 2.4 D	2020-01-03
9340095	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	25.2 ± 2.5 D	2020-01-03
9340100	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	24.5 ± 2.4 D	2020-01-03
9340078	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	25.0 ± 2.4 D	2020-01-03
9340046	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	28.0 ± 2.6 D	2020-01-03
9340014	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	21.8 ± 2.8 D	2020-01-03
9340019	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	26.0 ± 2.5 D	2020-01-03
9341705	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	27.8 ± 2.6 D	2020-01-03
9340051	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	25.5 ± 2.4 D	2020-01-03
9340056	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	27.7 ± 2.6 D	2020-01-03
9340024	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	28.3 ± 2.5 D	2020-01-03
9341710	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	24.2 ± 2.3 D	2020-01-03
9340061	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	28.9 ± 2.6 D	2020-01-03
9340029	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	23.0 ± 2.3 D	2020-01-03
9341715	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	27.0 ± 2.5 D	2020-01-03
9340083	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	24.9 ± 2.4 D	2020-01-03
9340066	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	25.1 ± 2.4 D	2020-01-03
9340034	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	26.4 ± 2.5 D	2020-01-03
9341720	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	25.3 ± 2.5 D	2020-01-03

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

January 3, 2020

** LABORATORY ANALYSIS REPORT **

Radon test result report for:

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

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 ± 2.5 D	2020-01-03
9340049	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	26.0 ± 2.5 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 ± 2.8 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 ± 2.6 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 ± 2.6 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 ± 2.5 D	2020-01-03
9340096	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	26.2 ± 2.5 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 ± 2.5 D	2020-01-03
9340010	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	27.5 ± 2.5 D	2020-01-03
9341701	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	22.9 ± 2.3 D	2020-01-03
9340047	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	26.7 ± 2.5 D	2020-01-03
9340015	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	25.4 ± 2.5 D	2020-01-03
9340020	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	24.1 ± 2.4 D	2020-01-03
9341706	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	31.0 ± 2.7 D	2020-01-03

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January 3, 2020

** LABORATORY ANALYSIS REPORT **

Radon test result report for:

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

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 ± 2.6 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 ± 2.2 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 ± 2.5 D	2020-01-03
9340030	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	25.0 ± 2.4 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

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EXPOSURE IN BOWSER-MORNER RADON CHAMBER

CLIENT KCI Technologies Inc Job Number 193598

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

Date Start: 12/21/19 Date Stop: 12/23/19

Time Start: 0830 Time Stop: 0830

(Group 4)
Device No.'s: (20) Char. Bags -

9340061 thru 9340080

52

Avg pCi/L 35.5 RH % 50.1 Temp °F 70.0

Date Start: 12/21/19 Date Stop: 12/23/19

Time Start: 0835 Time Stop: 0835

(Group 5)
Device No.'s: (20) Char. Bags -

9340081 thru 9340100

Q5

Avg pCi/L 35.5 RH % 50.1 Temp °F 70.0

Date Start: 12/21/19 Date Stop: 12/23/19

Time Start: 0840 Time Stop: 0840

(Group 6)
Device No.'s: (20) Char. Bags -

9341701 thru 9341720

R5

Avg pCi/L 35.5 RH % 50.1 Temp °F 70.0

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

January 14, 2020 **** LABORATORY ANALYSIS REPORT ****

Radon test result report for:
SPRINGBROOK HS
MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
9348403	A-102	2020-01-06 @ 7:00 am	2020-01-09 @ 9:00 am	< 0.3	2020-01-14
9348402	A-103	2020-01-06 @ 7:00 am	2020-01-09 @ 9:00 am	< 0.3	2020-01-14
9348401	A-103	2020-01-06 @ 7:00 am	2020-01-09 @ 9:00 am	< 0.3	2020-01-14
9348407	A-104	2020-01-06 @ 7:00 am	2020-01-09 @ 9:00 am	0.7 ± 0.4	2020-01-14
9348414	A-105	2020-01-06 @ 8:00 am	2020-01-09 @ 9:00 am	< 0.3	2020-01-14
9348410	A-106	2020-01-06 @ 8:00 am	2020-01-09 @ 9:00 am	< 0.3	2020-01-14
9348406	A-106	2020-01-06 @ 7:00 am	2020-01-09 @ 9:00 am	< 0.3	2020-01-14
9348415	A-108	2020-01-06 @ 8:00 am	2020-01-09 @ 9:00 am	< 0.3	2020-01-14
9348416	A-108	2020-01-06 @ 8:00 am	2020-01-09 @ 9:00 am	0.7 ± 0.5	2020-01-14
9348405	A-109	2020-01-06 @ 8:00 am	2020-01-09 @ 9:00 am	< 0.3	2020-01-14
9348419	A-111	2020-01-06 @ 8:00 am	2020-01-09 @ 9:00 am	0.6 ± 0.5	2020-01-14
9348420	A-112	2020-01-06 @ 8:00 am	2020-01-09 @ 9:00 am	< 0.3	2020-01-14
9348408	A-114	2020-01-06 @ 7:00 am	2020-01-09 @ 9:00 am	< 0.3	2020-01-14
9348409	ATTENDANCE	2020-01-06 @ 7:00 am	2020-01-09 @ 9:00 am	< 0.3	2020-01-14
9347057	AUDITORIUM	2020-01-06 @ 1:00 pm	2020-01-09 @ 12:00 pm	1.4 ± 0.5	2020-01-14
9347055	AUDITORIUM	2020-01-06 @ 1:00 pm	2020-01-09 @ 12:00 pm	2.1 ± 0.5	2020-01-14
9347058	AUDITORIUM	2020-01-06 @ 1:00 pm	2020-01-09 @ 12:00 pm	1.7 ± 0.5	2020-01-14
9347056	AUDITORIUM	2020-01-06 @ 1:00 pm	2020-01-09 @ 12:00 pm	2.4 ± 0.5	2020-01-14
9348452	B-101	2020-01-06 @ 9:00 am	2020-01-09 @ 10:00 am	0.5 ± 0.4	2020-01-14
9348451	B-102	2020-01-06 @ 9:00 am	2020-01-09 @ 10:00 am	< 0.3	2020-01-14
9348450	B-102-D	2020-01-06 @ 9:00 am	2020-01-09 @ 10:00 am	< 0.3	2020-01-14
9348449	B-103	2020-01-06 @ 9:00 am	2020-01-09 @ 10:00 am	< 0.3	2020-01-14
9348446	B-104	2020-01-06 @ 9:00 am	2020-01-09 @ 10:00 am	< 0.3	2020-01-14
9348445	B-104	2020-01-06 @ 9:00 am	2020-01-09 @ 10:00 am	0.9 ± 0.4	2020-01-14
9348447	B-104-C	2020-01-06 @ 9:00 am	2020-01-09 @ 10:00 am	< 0.3	2020-01-14
9348448	B-104-C	2020-01-06 @ 9:00 am	2020-01-09 @ 10:00 am	0.6 ± 0.4	2020-01-14
9348444	B-105	2020-01-06 @ 9:00 am	2020-01-09 @ 10:00 am	< 0.3	2020-01-14
9348443	B-105	2020-01-06 @ 9:00 am	2020-01-09 @ 10:00 am	< 0.3	2020-01-14
9348442	B-105-B	2020-01-06 @ 9:00 am	2020-01-09 @ 10:00 am	< 0.3	2020-01-14
9348440	B-106	2020-01-06 @ 9:00 am	2020-01-09 @ 10:00 am	< 0.3	2020-01-14
9348441	B-106-C	2020-01-06 @ 9:00 am	2020-01-09 @ 10:00 am	< 0.3	2020-01-14
9348436	B-107	2020-01-06 @ 9:00 am	2020-01-09 @ 10:00 am	< 0.3	2020-01-14
9348437	B-107	2020-01-06 @ 9:00 am	2020-01-09 @ 10:00 am	< 0.3	2020-01-14
9348438	B-107	2020-01-06 @ 9:00 am	2020-01-09 @ 10:00 am	< 0.3	2020-01-14
9348439	B-107-C	2020-01-06 @ 9:00 am	2020-01-09 @ 10:00 am	< 0.3	2020-01-14
9348434	B-108	2020-01-06 @ 9:00 am	2020-01-09 @ 10:00 am	< 0.3	2020-01-14
9348435	B-108	2020-01-06 @ 9:00 am	2020-01-09 @ 10:00 am	0.8 ± 0.4	2020-01-14

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January 14, 2020 **** LABORATORY ANALYSIS REPORT ****

Radon test result report for:
SPRINGBROOK HS
MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
9348427	B-108-C	2020-01-06 @ 9:00 am	2020-01-09 @ 10:00 am	< 0.3	2020-01-14
9348431	B-109	2020-01-06 @ 8:00 am	2020-01-09 @ 10:00 am	< 0.3	2020-01-14
9348433	B-109	2020-01-06 @ 8:00 am	2020-01-09 @ 10:00 am	< 0.3	2020-01-14
9348426	B-109-A	2020-01-06 @ 9:00 am	2020-01-09 @ 10:00 am	0.6 ± 0.4	2020-01-14
9348432	B-109-B	2020-01-06 @ 9:00 am	2020-01-09 @ 10:00 am	< 0.3	2020-01-14
9348428	B-116	2020-01-06 @ 8:00 am	2020-01-09 @ 10:00 am	< 0.3	2020-01-14
9348429	B-117	2020-01-06 @ 8:00 am	2020-01-09 @ 10:00 am	< 0.3	2020-01-14
9348423	B-117	2020-01-06 @ 8:00 am	2020-01-09 @ 10:00 am	< 0.3	2020-01-14
9348424	B-118	2020-01-06 @ 8:00 am	2020-01-09 @ 12:00 pm	< 0.3	2020-01-14
9348430	B-118	2020-01-06 @ 8:00 am	2020-01-09 @ 12:00 pm	< 0.3	2020-01-14
9348425	B-120-B	2020-01-06 @ 8:00 am	2020-01-09 @ 10:00 am	< 0.3	2020-01-14
9348418	B-122	2020-01-06 @ 8:00 am	2020-01-09 @ 10:00 am	< 0.3	2020-01-14
9348413	B-122A	2020-01-06 @ 8:00 am	2020-01-09 @ 10:00 am	< 0.3	2020-01-14
9348412	B-122B	2020-01-06 @ 8:00 am	2020-01-09 @ 10:00 am	0.7 ± 0.4	2020-01-14
9348417	BUSINESS ADMIN	2020-01-06 @ 8:00 am	2020-01-09 @ 9:00 am	< 0.3	2020-01-14
9347082	C-101	2020-01-06 @ 12:00 pm	2020-01-09 @ 12:00 pm	< 0.3	2020-01-14
9347084	C-101-A	2020-01-06 @ 12:00 pm	2020-01-09 @ 12:00 pm	< 0.3	2020-01-14
9347087	C-101-A	2020-01-06 @ 12:00 pm	2020-01-09 @ 12:00 pm	< 0.3	2020-01-14
9347086	C-101-B	2020-01-06 @ 12:00 pm	2020-01-09 @ 12:00 pm	0.7 ± 0.4	2020-01-14
9347089	C-101-D	2020-01-06 @ 11:00 am	2020-01-09 @ 12:00 pm	< 0.3	2020-01-14
9347098	C-101-E	2020-01-06 @ 11:00 am	2020-01-09 @ 12:00 pm	< 0.3	2020-01-14
9347100	C-101-G	2020-01-06 @ 11:00 am	2020-01-09 @ 12:00 pm	0.6 ± 0.4	2020-01-14
9347088	C-101-G	2020-01-06 @ 11:00 am	2020-01-09 @ 12:00 pm	< 0.3	2020-01-14
9347092	C-101-H	2020-01-06 @ 11:00 am	2020-01-09 @ 12:00 pm	< 0.3	2020-01-14
9347097	C-101-J	2020-01-06 @ 11:00 am	2020-01-09 @ 12:00 pm	< 0.3	2020-01-14
9347099	C-101-J	2020-01-06 @ 11:00 am	2020-01-09 @ 12:00 pm	0.7 ± 0.4	2020-01-14
9347094	C-101-K	2020-01-06 @ 11:00 am	2020-01-09 @ 12:00 pm	< 0.3	2020-01-14
9347096	C-101-L	2020-01-06 @ 11:00 am	2020-01-09 @ 12:00 pm	< 0.3	2020-01-14
9347095	C-101-M	2020-01-06 @ 11:00 am	2020-01-09 @ 12:00 pm	1.2 ± 0.4	2020-01-14
9348493	C-101-O	2020-01-06 @ 11:00 am	2020-01-09 @ 12:00 pm	< 0.3	2020-01-14
9348496	C-101-P	2020-01-06 @ 11:00 am	2020-01-09 @ 12:00 pm	1.0 ± 0.4	2020-01-14
9348494	C-101-Q	2020-01-06 @ 11:00 am	2020-01-09 @ 12:00 pm	1.2 ± 0.4	2020-01-14
9347091	C-101-R	2020-01-06 @ 11:00 am	2020-01-09 @ 12:00 pm	0.6 ± 0.4	2020-01-14
9347085	C-101-S	2020-01-06 @ 12:00 pm	2020-01-09 @ 12:00 pm	< 0.3	2020-01-14
9347080	C-102	2020-01-06 @ 12:00 pm	2020-01-09 @ 12:00 pm	0.8 ± 0.5	2020-01-14
9347081	C-102-A	2020-01-06 @ 12:00 pm	2020-01-09 @ 12:00 pm	< 0.3	2020-01-14
9347090	C-102-D	2020-01-06 @ 12:00 pm	2020-01-09 @ 12:00 pm	< 0.3	2020-01-14

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Radon test result report for:
SPRINGBROOK HS
MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
9347046	C-206	2020-01-06 @ 1:00 pm	2020-01-09 @ 11:00 am	2.0 ± 0.5	2020-01-14
9348422	CAFE	2020-01-06 @ 8:00 am	2020-01-09 @ 10:00 am	< 0.3	2020-01-14
9348411	CAFE	2020-01-06 @ 8:00 am	2020-01-09 @ 10:00 am	< 0.3	2020-01-14
9348421	CAFE	2020-01-06 @ 8:00 am	2020-01-09 @ 10:00 am	< 0.3	2020-01-14
9347059	D-1 AUX GYM 1	2020-01-06 @ 1:00 pm	2020-01-09 @ 12:00 pm	1.8 ± 0.5	2020-01-14
9347066	D-1 AUX GYM 1	2020-01-06 @ 1:00 pm	2020-01-09 @ 12:00 pm	1.4 ± 0.4	2020-01-14
9347060	D-101	2020-01-06 @ 12:00 pm	2020-01-09 @ 1:00 pm	0.9 ± 0.5	2020-01-14
9347073	D-102	2020-01-06 @ 12:00 pm	2020-01-09 @ 12:00 pm	1.2 ± 0.4	2020-01-14
9347063	D-103	2020-01-06 @ 12:00 pm	2020-01-09 @ 1:00 pm	1.7 ± 0.5	2020-01-14
9347076	D-104	2020-01-06 @ 12:00 pm	2020-01-09 @ 12:00 pm	3.6 ± 0.5	2020-01-14
9347074	D-104	2020-01-06 @ 12:00 pm	2020-01-09 @ 12:00 pm	3.3 ± 0.5	2020-01-14
9347072	D-104	2020-01-06 @ 12:00 pm	2020-01-09 @ 12:00 pm	3.6 ± 0.5	2020-01-14
9347075	D-104	2020-01-06 @ 12:00 pm	2020-01-09 @ 12:00 pm	3.3 ± 0.5	2020-01-14
9347077	D-105	2020-01-06 @ 12:00 pm	2020-01-09 @ 12:00 pm	2.6 ± 0.5	2020-01-14
9347070	D-107	2020-01-06 @ 1:00 pm	2020-01-09 @ 12:00 pm	0.9 ± 0.5	2020-01-14
9347069	D-107-G	2020-01-06 @ 12:00 pm	2020-01-09 @ 12:00 pm	1.1 ± 0.4	2020-01-14
9347067	D-107-G	2020-01-06 @ 12:00 pm	2020-01-09 @ 12:00 pm	1.0 ± 0.4	2020-01-14
9347064	D-108	2020-01-06 @ 1:00 pm	2020-01-09 @ 12:00 pm	0.6 ± 0.4	2020-01-14
9347065	D-108-A	2020-01-06 @ 1:00 pm	2020-01-09 @ 12:00 pm	< 0.3	2020-01-14
9347062	D-108-H	2020-01-06 @ 12:00 pm	2020-01-09 @ 12:00 pm	0.9 ± 0.4	2020-01-14
9347061	D-108-PR	2020-01-06 @ 12:00 pm	2020-01-09 @ 12:00 pm	0.9 ± 0.4	2020-01-14
9348498	E-105	2020-01-06 @ 11:00 am	2020-01-09 @ 12:00 pm	< 0.3	2020-01-14
9348497	E-105	2020-01-06 @ 11:00 am	2020-01-09 @ 12:00 pm	0.8 ± 0.4	2020-01-14
9348491	E-106	2020-01-06 @ 11:00 am	2020-01-09 @ 12:00 pm	1.3 ± 0.4	2020-01-14
9348499	E-107	2020-01-06 @ 11:00 am	2020-01-09 @ 1:00 pm	< 0.3	2020-01-14
9348500	E-108	2020-01-06 @ 11:00 am	2020-01-09 @ 12:00 pm	0.7 ± 0.4	2020-01-14
9347083	E-109	2020-01-06 @ 12:00 pm	2020-01-09 @ 12:00 pm	< 0.3	2020-01-14
9348483	E-110	2020-01-06 @ 11:00 am	2020-01-09 @ 12:00 pm	0.6 ± 0.4	2020-01-14
9348482	E-111	2020-01-06 @ 11:00 am	2020-01-09 @ 12:00 pm	0.7 ± 0.4	2020-01-14
9348492	E-111	2020-01-06 @ 11:00 am	2020-01-09 @ 12:00 pm	0.6 ± 0.4	2020-01-14
9348495	E-111 WORKROOM	2020-01-06 @ 11:00 am	2020-01-09 @ 12:00 pm	0.8 ± 0.4	2020-01-14
9348484	E-113	2020-01-06 @ 10:00 am	2020-01-09 @ 12:00 pm	0.7 ± 0.4	2020-01-14
9348472	E-113	2020-01-06 @ 10:00 am	2020-01-09 @ 12:00 pm	< 0.3	2020-01-14
9348485	E-114	2020-01-06 @ 10:00 am	2020-01-09 @ 12:00 pm	< 0.3	2020-01-14
9348486	E-115	2020-01-06 @ 10:00 am	2020-01-09 @ 1:00 pm	< 0.3	2020-01-14
9348487	E-115	2020-01-06 @ 10:00 am	2020-01-09 @ 1:00 pm	< 0.3	2020-01-14
9348489	E-116	2020-01-06 @ 10:00 am	2020-01-09 @ 11:00 am	3.0 ± 0.6	2020-01-14

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Radon test result report for:
SPRINGBROOK HS
MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
9348488	E-116 OFFICE	2020-01-06 @ 10:00 am	2020-01-09 @ 11:00 am	1.3 ± 0.5	2020-01-14
9348490	E-117	2020-01-06 @ 10:00 am	2020-01-09 @ 11:00 am	< 0.3	2020-01-14
9348481	E-118	2020-01-06 @ 10:00 am	2020-01-09 @ 11:00 am	0.7 ± 0.4	2020-01-14
9347047	E-206	2020-01-06 @ 1:00 pm	2020-01-09 @ 11:00 am	< 0.3	2020-01-14
9347048	E-206	2020-01-06 @ 1:00 pm	2020-01-09 @ 11:00 am	< 0.3	2020-01-14
9348474	F-101	2020-01-06 @ 10:00 am	2020-01-09 @ 11:00 am	< 0.3	2020-01-14
9348477	F-102	2020-01-06 @ 10:00 am	2020-01-09 @ 11:00 am	< 0.3	2020-01-14
9348478	F-103	2020-01-06 @ 10:00 am	2020-01-09 @ 11:00 am	< 0.3	2020-01-14
9348480	F-104	2020-01-06 @ 10:00 am	2020-01-09 @ 11:00 am	0.8 ± 0.5	2020-01-14
9348479	F-105	2020-01-06 @ 10:00 am	2020-01-09 @ 11:00 am	< 0.3	2020-01-14
9348475	F-106	2020-01-06 @ 10:00 am	2020-01-09 @ 11:00 am	1.4 ± 0.5	2020-01-14
9348473	F-107	2020-01-06 @ 10:00 am	2020-01-09 @ 11:00 am	< 0.3	2020-01-14
9348476	F-107	2020-01-06 @ 10:00 am	2020-01-09 @ 11:00 am	1.0 ± 0.4	2020-01-14
9348461	F-108	2020-01-06 @ 10:00 am	2020-01-09 @ 11:00 am	0.9 ± 0.5	2020-01-14
9348471	F-109	2020-01-06 @ 10:00 am	2020-01-09 @ 11:00 am	< 0.3	2020-01-14
9348465	F-113	2020-01-06 @ 10:00 am	2020-01-09 @ 11:00 am	0.6 ± 0.4	2020-01-14
9347049	F-201	2020-01-06 @ 1:00 pm	2020-01-09 @ 11:00 am	< 0.3	2020-01-14
9347050	F-209	2020-01-06 @ 1:00 pm	2020-01-09 @ 11:00 am	< 0.3	2020-01-14
9348468	G-1	2020-01-06 @ 10:00 am	2020-01-09 @ 11:00 am	0.8 ± 0.4	2020-01-14
9348466	G-101	2020-01-06 @ 10:00 am	2020-01-09 @ 11:00 am	0.7 ± 0.4	2020-01-14
9348457	G-105	2020-01-06 @ 10:00 am	2020-01-09 @ 11:00 am	< 0.3	2020-01-14
9348459	G-106	2020-01-06 @ 10:00 am	2020-01-09 @ 11:00 am	0.9 ± 0.5	2020-01-14
9348456	G-107	2020-01-06 @ 9:00 am	2020-01-09 @ 11:00 am	< 0.3	2020-01-14
9348455	G-108	2020-01-06 @ 9:00 am	2020-01-09 @ 11:00 am	1.1 ± 0.4	2020-01-14
9348454	G-109	2020-01-06 @ 9:00 am	2020-01-09 @ 11:00 am	1.2 ± 0.5	2020-01-14
9348464	G-11	2020-01-06 @ 10:00 am	2020-01-09 @ 11:00 am	< 0.3	2020-01-14
9348470	G-11	2020-01-06 @ 10:00 am	2020-01-09 @ 11:00 am	< 0.3	2020-01-14
9348460	G-110	2020-01-06 @ 9:00 am	2020-01-09 @ 11:00 am	1.2 ± 0.4	2020-01-14
9348458	G-110	2020-01-06 @ 9:00 am	2020-01-09 @ 11:00 am	0.9 ± 0.5	2020-01-14
9348453	G-111	2020-01-06 @ 9:00 am	2020-01-09 @ 11:00 am	3.0 ± 0.5	2020-01-14
9348462	G-12	2020-01-06 @ 10:00 am	2020-01-09 @ 11:00 am	< 0.3	2020-01-14
9348469	G-2	2020-01-06 @ 10:00 am	2020-01-09 @ 11:00 am	< 0.3	2020-01-14
9347052	G-202	2020-01-06 @ 1:00 pm	2020-01-09 @ 11:00 am	0.8 ± 0.5	2020-01-14
9347051	G-202	2020-01-06 @ 1:00 pm	2020-01-09 @ 11:00 am	< 0.3	2020-01-14
9347045	G-209	2020-01-06 @ 1:00 pm	2020-01-09 @ 11:00 am	1.1 ± 0.5	2020-01-14
9347044	G-307	2020-01-06 @ 2:00 pm	2020-01-09 @ 11:00 am	0.8 ± 0.4	2020-01-14
9348463	G-8	2020-01-06 @ 10:00 am	2020-01-09 @ 11:00 am	2.4 ± 0.5	2020-01-14

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

January 14, 2020 **** LABORATORY ANALYSIS REPORT ****

Radon test result report for:
SPRINGBROOK HS
MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
9348467	G-8	2020-01-06 @ 10:00 am	2020-01-09 @ 11:00 am	2.1 ± 0.5	2020-01-14
9348404	MAIN OFFICE	2020-01-06 @ 7:00 am	2020-01-09 @ 9:00 am	< 0.3	2020-01-14
9347054	STAGE	2020-01-06 @ 1:00 pm	2020-01-09 @ 12:00 pm	2.1 ± 0.5	2020-01-14
9347053	STAGE	2020-01-06 @ 1:00 pm	2020-01-09 @ 12:00 pm	2.1 ± 0.5	2020-01-14
9347068	TRAINER	2020-01-06 @ 12:00 pm	2020-01-09 @ 12:00 pm	2.0 ± 0.5	2020-01-14
9347078	TRAINER	2020-01-06 @ 12:00 pm	2020-01-09 @ 12:00 pm	< 0.3	2020-01-14
9347079	WEIGHT ROOM	2020-01-06 @ 12:00 pm	2020-01-09 @ 12:00 pm	2.5 ± 0.5	2020-01-14
9347071	WEIGHT ROOM	2020-01-06 @ 12:00 pm	2020-01-09 @ 12:00 pm	3.0 ± 0.5	2020-01-14

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KCI TECHNOLOGIES

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 3

Name of Schools:

1. Bannockburn E.S.
2. Bethesda E.S.
3. Bethesda-Chevy Chase H.S.
4. Bradley Hill E.S.
5. Burning Tree E.S.
6. Burnt Mills E.S.
7. East Silver Springs E.S.
8. Einstein H.S.
9. Flora Singer E.S.
10. Key M.S.
11. Montgomery Blair H.S.
12. Montgomery Knolls E.S.
13. Newport Mills M.S.
14. Oak View E.S.
15. Rock View E.S.
16. Roscoe Nix E.S.
17. Sligo M.S.
18. Spring Mill Center
19. Springbrook H.S.
20. Westland M.S.
21. Woodlin M.S.

	Date	Initials
Radon Test Kits Deployed	1/6/20 to 1/7/20	JM
Radon Test Kits Collected	1/9/20 to 1/10/20	JM
Radon Test Kits Shipped to Lab*	1/10/20	JM
Radon Test Kits Received by Lab*	1/13/202	JM

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