

School / Facility Radon Testing Report Form

School Year: **24-25**

Facility:	Springbrook High School		
Address:	201 Valley Brook Drive		
	Silver Spring, MD 20904		
Reason for Testing:	Scheduled Re-Testing - <input checked="" type="checkbox"/> 2-year or <input type="checkbox"/> 5-year schedule <input type="checkbox"/> Clearance Testing (Post-Mitigation) <input checked="" type="checkbox"/> Building Envelope or HVAC Upgrades <input type="checkbox"/> New Construction – Addition or Facility		
Current Radon Status:	<input checked="" type="checkbox"/> Active Mitigation (2-year regular schedule) <input type="checkbox"/> No Active Mitigation (5-year regular schedule) <input type="checkbox"/> Not Previously Tested (New Facility)		
Round of Testing:	<input type="checkbox"/> Initial Testing -or- <input checked="" type="checkbox"/> Follow-up Testing		
Testing Status:	<input checked="" type="checkbox"/> No Further Testing Needed -or- <input type="checkbox"/> Follow-Up Testing Required		

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

Mitigation -	Facility Radon Status:		
<input type="checkbox"/> Not Required <input checked="" type="checkbox"/> Consider (≥ 2.0 & < 4.0 -pCi/L) <input type="checkbox"/> Required (≥ 4.0 -pCi/L) Rooms:	<input checked="" type="checkbox"/> No Change in Status <input type="checkbox"/> Active Mitigation (2-year regular schedule) <input type="checkbox"/> No Active Mitigation (5-year regular schedule)		
Number of Rooms Tested	99	Lowest Value (pCi/L)	< 0.3
Number of Rooms (≥ 4.0 -pCi/L)	1	Highest Value (pCi/L)	4.4

Instructions: Submit one testing report form per-facility. Include the following as attachments:

Attachment 1- Summary Data Tables – containing the following: (see attached samples tables)

- Testing Results – lab/detector Identification, by room number/name (alpha-numeric order) as depicted on facility map/floor plan provided by the facility/school at the time of test device deployment;
- Summary Results – list of rooms by test result ≥ 2.0 -pCi/L; ≥ 2.7 -pCi/L; ≥ 4.0 -pCi/L; and ≥ 8.0 -pCi/L;
- QA/QC Results - (field blanks and duplicates) indicating location collected; trip and office blanks; and spike sample results;
- Invalid Measurement Locations – missed locations, missing and or damaged/compromised testing devices.

Attachment 2 – Laboratory Report(s)

Attachment 3 – Sampling Location Map(s) – indicating approximate location of samples, duplicates and blanks.

Detector and Deployment

Detector/Device Type:	<input checked="" type="checkbox"/> Passive	<input checked="" type="checkbox"/> Charcoal Absorption (CAD) <input type="checkbox"/> Alpha Track (ATD) <input type="checkbox"/> Other
	<input type="checkbox"/> Continuous	<input type="checkbox"/> Electret ion Chamber (EIC) <input type="checkbox"/> Electronic Integration (EID)
Other—Specify here:		
Detector/Device Name:	Air Chek – Radon Test Kits	
Manufacturer:	Radon Lab	
Person(s) Deploying or Retrieving Test Devices and certification number		Organization/Company
Shannon King		KCI Technologies, Inc.
If noncertified individuals, the qualified measurement professional providing oversight -		
Tyler McCleaf, CSP – Cert. #111004 – RMP		KCI Technologies, Inc.

Testing

<input checked="" type="checkbox"/> Short-Term	Length of Test (days):	3	Date of Deployment and Retrieval (mm/dd/yy):	01/12/25	03/24/25
<input type="checkbox"/> Long-Term				01/16/25	03/27/25
Does the test period include weekends, school breaks or holidays?				<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
If “Yes” please explain/detail in the space below:					
Was HVAC operating under occupied conditions?				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
If “No” please explain/detail in the space below:					

Testing (continued)

Round of Testing	Detectors Deployed				
	Ground-Contact		Upper-Level(s)		Total
	Initial	Follow-Up	Initial	Follow-Up	
Test Locations ¹	87	4	11	0	102
Duplicates ²	10	1	2	0	13
Field Blanks ³	5	1	1	0	7
Grand Total					122

1 – include all detectors deployed (duplicates, field blanks); 1 detector per occupied (or intended to be occupied) ground-contact space ≤ 2,000-square feet; large spaces ≥ 2,000-square feet - 1 detector per 2,000-square feet or part thereof; and upper floors - 10% of all occupied or intended to be occupied rooms per floor (these are in addition to ground contact locations)

2 - 10% of all locations tested, per floor

3 – 5% of all locations tested, per floor

Quality Assurance / Quality Control (QA/QC)

A Quality Assurance plan that is consistent with ANSI/AARST MS-QA (Radon Measurement Systems Quality Assurance) was submitted under separate cover, and is available to review at the MCPS Radon Testing and Mitigation Program website. The following number of QA/QC samples are associated this facility.

Round of Testing	QA/QC Samples		Total
	Initial	Follow-Up	
Spikes ¹	Not applicable		10
Trip Blanks ²	1	1	2
Office Blanks ^{3, 4}	1	1	2
			14

1 - 3% of EIC detectors; and 3% from each LOT of CAD and ATD detectors; a maximum of 6-spiked measurements per month for both EIC detectors and each LOT of CAD and ATD detectors.

2 – One per shipping container from start of detector deployment

3 – One per facility tested as devices are removed/allocated from the storage location for deployment;

4 - One additional blank, analyzed prior to deployment, for storage locations that have not been evaluated or monitored, for detectors that have been stored for more than 30-day durations.

Quality Assurance / Quality Control (continued)

Spike Sample Lab Results. Measured values are satisfactory, i.e., within $\pm 25\%$ of the chamber's reference value?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Quality Control measurements comply with QA/QC requirements in the submitted testing organization's/company's QA plan?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Round of Testing	Initial Follow-Up
All Field, Trip and Office Blanks are \leq (less than or equal to) to the Method Detection Limit?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
For all Duplicate Samples ¹ , the higher value is $\leq 2x$ the lower value?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
For all Duplicate Samples ¹ , Relative Percent Difference(s) (RPD) ² are less than the Warning Level ³ ?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
For all Duplicate Samples ¹ , Relative Percent Difference(s) (RPD) ² are less than the Control Level ³ ?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

1 – Duplicate Control – a “NO” response constitute a control failure and the space/location represented by the duplicate sample becomes an invalid measurement location and should be listed in the “Invalid Measurement Locations” Table attached to this report.

2 - The objective of duplicate tests is to assess the precision error of the measurement method or, how well two side-by-side measurements agree or disagree. Precision involving duplicates is calculated by using Relative Percent Difference (RPD). RPD is equal to the difference between the higher test result minus the lower value test result divided by the average of the two duplicate test results, multiplied by 100. The RPD result is then compared to the warning and control limits.

3 - The Warning Level is set at the deviation from ideal performance that would be expected to occur by chance only 5% of the time, and Control Limits are set at that deviation from ideal performance that would be expected to occur by chance only 1% of the time. The Warning Level indicates a potential problem, which should be investigated. The Control Level indicates that the measurement system should be subject to corrective action.

The control and warning levels for duplicates, based on the averaged duplicate test result, are -

Average concentration of the two duplicate test results	Warning Level	Control Level
< 2.0-pCi/L	1-pCi/L	Not applicable
Between 2.0 and 3.9-pCi/L	50% RPD	67% RPD
≥ 4.0 -pCi/L	28% RPD	36% RPD

Summary of Test Results¹ and Determination of Valid Measurements²

Round of Testing	Ground-Contact		Upper-Level(s)		Total
	Initial	Follow-Up	Initial	Follow-Up	
Number of test locations:	87	1	11	0	99
Number of locations ≥ 8.0 -pCi/L:	0	0	0	0	0
Number of locations ≥ 4.0 and ≤ 8 -pCi/L:	1	0	0	0	1
Number of locations ≥ 2.7 and < 4 -pCi/L:	1	0	0	0	1
Number of locations ≥ 2.0 and < 2.7 -pCi/L:	5	1	0	0	6
Number of missing required test locations ³ :	1	0	0	0	1
Number of failed duplicate control locations:	0	0	0	0	0
Percentage of missing test locations for the facility ^{4,5} :	1.15%	0	0	0	1.01%

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

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

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

4 – if all valid measurements are < 4.0 -pCi/L and the total number of test locations are ≥ 18 , there is an allowance of $\leq 33\%$. If less than 18 test locations please review section 6.2 of the ANSI/AARST MA-MFLB 2023;

5 – if any valid measurements are ≥ 4.0 -pCi/L and the total number of test locations are ≥ 20 , there is an allowance of $\leq 25\%$ of the total locations tested. If less than 20 test locations please review section 6.2 of the ANSI/AARST MA-MFLB 2023.

Summary of Test Results¹ and Determination of Valid Measurements² (continued)

Round of Testing	Initial	Follow-Up
Were test devices deployed in all occupied and intended to be occupied rooms in contact with the ground, and, if applicable, 10% of upper floor rooms?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Were valid measurements obtained in all occupied and intended to be occupied rooms in contact with the ground, and, if applicable, 10% of upper floor rooms?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<i>If Yes to both above – then Testing Status – ‘No Further Testing Needed’ mark ‘NA’ below and complete Conclusions section</i>		
If No to either above, were all results obtained under 4.0-pCi/L and were sufficient valid measurements obtained?^{1,2} <i>If Yes, then - ‘No Further Testing Needed’ complete Conclusion section on first page.</i> <i>If No, then - ‘Follow-up Testing Required’ continue below.</i>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA

1 – if all valid measurements are <4.0-pCi/L and the total number of test locations are ≥18, there is an allowance of ≤33%. If less than 18 test locations please review section 6.2 of the ANSI/AARST MA-MFLB 2023 – Conducting Measurements of Radon in Multifamily, School, Commercial and Mix-Use Buildings to determine the allowance;
 2 – if any valid measurements are ≥4.0-pCi/L and the total number of test locations are ≥20, there is an allowance of ≤25% of the total locations tested. If less than 20 test locations please review section 6.2 of the ANSI/AARST MA-MFLB 2023 – Conducting Measurements of Radon in Multifamily, School, Commercial and Mix-Use Buildings to determine the number the allowance.

Follow-Up Testing

Required –

- If an insufficient number (greater than the allowance provided above) of valid measurements were obtained during the initial round of testing (the “missing required test locations” in the table above);
- Any location test results ≥ 4.0-pCi/L;
- Any location where duplicates fail QC checks; and or
- At the discretion of MCPS IAQ Staff

Reason for Follow-Up Testing	Testing Procedure	Follow-up Result	Conclusion
Insufficient Number of Measurements	Follow same procedures as Initial Testing	Not Applicable	Follow Initial Testing procedures
Results ≥ 4.0-pCi/L	Deploy two Short-term follow-up tests and required blanks and duplicates; Average the results of the two tests	≥4.0	Mitigation Required
Failed QC checks		≥2.0 and <4.0	Consider Mitigation
		<2.0	Mitigation Not Required

- ***If follow-up testing identifies additional spaces requiring additional testing it will be performed as part of the ongoing follow-testing round.***

Attachment 1:

Summary Data Tables

Table 1- Radon Testing Results		
Springbrook High School		
Test Period: 1/12/2025 - 1/16/2025		
Kit Number	Room / Area	Result
11907259	116	1.9
11907252	116C	1.9
11907212	A102	< 0.3
11907217	A103	< 0.3
11907219	A104	< 0.3
11907220	A105	< 0.3
11907215	A106	< 0.3
11907216	A108	< 0.3
11907225	A109	< 0.3
11907213	A109	< 0.3
11907223	A111	< 0.3
11907214	A112	< 0.3
11907218	A114	< 0.3
11906910	ANNE SALZMAN	0.7
11907207	ATTENDANCE	< 0.3
11907298	AUDITORIUM	4.4
11907285	AUX GYM	3.6
11907286	AUX GYM	< 0.3
11907291	AUX GYM	3.2
11907226	B101	< 0.3
11907227	B102	< 0.3
11907235	B103	< 0.3
11907241	B104	< 0.3
11907236	B105	< 0.3
11906914	B106	< 0.3
11906934	B107	< 0.3
11907239	B108	< 0.3
11907243	B108C	0.5
11907242	B110	< 0.3
11907240	B117	< 0.3
11907228	B121	< 0.3
11907224	B122	< 0.3
11906902	C101A	0.8
11906904	C101B	0.9
11906926	C101D	0.9
11906927	C101E	0.6
11906928	C101G	1.2

Table 1- Radon Testing Results		
Springbrook High School		
Test Period: 1/12/2025 - 1/16/2025		
Kit Number	Room / Area	Result
11906920	C101H	1.4
11906918	C101J	0.8
11906919	C101J	0.8
11906925	c101j	< 0.3
11906917	C101K	1.0
11906912	C101L	1.0
11906911	C101M	1.7
11907294	C101Q	2.3
11907300	C101Q	1.8
11906909	C101R	0.9
11906903	C101S	0.5
11907292	C102D	0.9
11907296	C102G	1.3
11907297	C102H	1.3
11906908	C205	1.1
11906929	C307	< 0.3
11906931	C307	< 0.3
11906930	C307	< 0.3
11907232	CAFETERIA	< 0.3
11907233	CAFETERIA	< 0.3
11907234	CAFETERIA	< 0.3
11907231	CAFETERIA	< 0.3
11907293	CAREER CENTER	0.8
11907278	D1 BLR	1.3
11907284	D104F	1.7
11907288	D107	0.8
11907287	D107E	< 0.3
11907277	D107G	0.8
11907279	D107G	1.0
11907289	D108	< 0.3
11907280	D111 GLR	1.1
11907290	D117	0.7
11907275	E106	< 0.3
11907270	E107	0.9
11907276	E108	0.7
11907269	E110	< 0.3
11907274	E111	0.5

Table 1- Radon Testing Results		
Springbrook High School		
Test Period: 1/12/2025 - 1/16/2025		
Kit Number	Room / Area	Result
11907271	E113	0.6
11907272	E113	0.8
11907273	E113	< 0.3
11907268	E114	0.6
11907267	E115	0.9
11907260	E116	1.0
11907266	E117	0.8
11907265	E118	1.1
11906907	E209	< 0.3
11906924	E310	0.7
11906923	E319	0.7
11907263	F101	0.5
11907261	F102	1.5
11907262	F102	2.0
11907253	F103	0.8
11907254	F104	2.0
11907246	F105	1.0
11907264	F106	1.2
11907258	F107	0.9
11907257	F108	0.8
11907247	F109	0.9
11907256	F109	1.0
11907255	f109	< 0.3
11907250	F113	0.7
11907251	F116B	0.7
11906913	F209	0.8
11906933	F209	0.9
11906922	F308	0.8
11906901	G1	1.4
11907245	G101	1.3
11907244	G105	< 0.3
11907238	G106A	0.8
11907230	G108	1.0
11907237	G109	1.0
11907229	G110	0.8
11907222	G111	2.3
11906905	G2	< 0.3

Table 1- Radon Testing Results		
Springbrook High School		
Test Period: 1/12/2025 - 1/16/2025		
Kit Number	Room / Area	Result
11906906	G202	< 0.3
11906916	G206	1.1
11906915	G212	1.1
11906921	G307	0.7
11907282	GYM	1.4
11907281	GYM	1.5
11907295	HEALTH ROOM	1.6
11907210	MAIN OFFICE	< 0.3
11907248	OFFICE ACROSS FROM MAIN OFFICE	< 0.3
11907249	OFFICE ACROSS FROM MAIN OFFICE	< 0.3
11907221	SUSAN KATZ OFFICE	< 0.3
11907283	WEIGHT ROOM	2.1

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Table 3 - QC Radon Testing Results			
Springbrook High School			
Test Period: 1/12/2025 - 1/16/2025			
Kit Number	QC Type	Room / Area	Result
11907213	D	A109	< 0.3
11907291	D	Aux Gym	3.2
11907286	FB	Aux Gym	< 0.3
11906919	D	C101J	0.8
11906925	FB	C101J	< 0.3
11907294	D	C101Q	2.3
11906931	D	C307	< 0.3
11906930	FB	C307	< 0.3
11907234	D	Cafeteria	< 0.3
11907231	FB	Cafeteria	< 0.3
11907277	D	D107G	0.8
11907272	D	E113	0.8
11907273	FB	E113	< 0.3
11907262	D	F102	2.0
11907247	D	F109	0.9
11907255	FB	F109	< 0.3
11906933	D	F209	0.9
11907249	D	Office Across from Main Office	< 0.3
11906877	OB	OFFICE BLANK	< 0.3
11903993	TB	TRAVEL BLANK	< 0.3

Table 3a - Duplicate Worksheet / Data Validation										
Springbrook High School										
Test Period: 1/12/2025 - 1/16/2025										
Sample ID			Duplicate Concentrations (pCi/L) and OC Checks							
Kit Numbers		Room / Area	Higher	Lower	Check #1 (Pass/Fail)	2x the Lower	Check #2 (Pass/Fail)	Average	Relative Percent Difference (RPD)	Check #3
11907225	11907213	A109	0.3	0.3	✓	0.6	PASS	0.3	<1-pCi/L	✓
11907233	11907234	Cafeteria	0.3	0.3	✓	0.6	PASS	0.3	<1-pCi/L	✓
11907248	11907249	Office Across From Main Office	0.3	0.3	✓	0.6	PASS	0.3	<1-pCi/L	✓
11907256	11907247	F109	1.0	0.9	✓	1.8	PASS	1.0	<1-pCi/L	✓
11907261	11907262	F102	2.0	1.5	✓	3.0	PASS	1.8	<1-pCi/L	✓
11907271	11907272	E114	0.8	0.6	✓	1.2	PASS	0.7	<1-pCi/L	✓
11907279	11907277	D107G	1.0	0.8	✓	1.6	PASS	0.9	<1-pCi/L	✓
11907285	11907291	Aux Gym	3.6	3.2	✓	6.4	PASS	3.4	11.8%	✓
11907294	11907294	C101Q	2.3	1.8	✓	3.6	PASS	2.1	24.4%	✓
11906918	11906919	C101J	0.8	0.8	✓	1.6	PASS	0.8	<1-pCi/L	✓
11906913	11906933	F209	0.9	0.8	✓	1.6	PASS	0.9	<1-pCi/L	✓
11906929	11906931	C307	0.3	0.3	✓	0.6	PASS	0.3	<1-pCi/L	✓
NOTES: QC Check #1 - Data Entry QC Check #2 - Higher duplicate concentration is < or = to 2x the Lower QC Check #3 - Meets RPD Limits, by average duplicate concentration - enter 2 if RPD is BELOW warning and control levels, AND passes QC Check 1 and 2 - enter 1 if RPD is ABOVE warning and BELOW control levels, AND passes QC Check 1 and 2 - enter 0 if RPD is ABOVE control level, or 'FAILS' QC Check 1 or 2							Average (pCi/L)		Warning Level	Control Level
							< 2.0		1-pCi/L	NA
							Between 2.0 and 3.9		50% RPD	67% RPD
							≥ 4.0		28% RPD	36% RPD

[illegible]

Table 1- Radon Testing Results		
Springbrook High School RT		
Test Period: 3/24/2025 - 3/27/2025		
Kit Number	Room / Area	Result
11886579	AUDITORIUM	1.7
11886580	AUDITORIUM	1.5
11886593	AUDITORIUM	2.3
11886595	AUDITORIUM	1.5
11886597	AUDITORIUM	2.1
11886598	AUDITORIUM	< 0.3

[illegible]

Table 3 - QC Radon Testing Results			
Springbrook High School RT			
Test Period: 3/24/2025 - 3/27/2025			
Kit Number	QC Type	Room / Area	Result
11886579	D	AUDITORIUM	1.7
11886598	FB	AUDITORIUM	< 0.3
11886664	OB	OFFICE BLANK	< 0.3
11886691	TB	TRAVEL BLANK	< 0.3

Table 3a - Duplicate Worksheet / Data Validation										
Springbrook High School RT										
Test Period: 3/24/2025 - 3/27/2025										
Sample ID			Duplicate Concentrations (pCi/L) and OC Checks							
Kit Numbers		Room / Area	Higher	Lower	Check #1 (Pass/Fail)	2x the Lower	Check #2 (Pass/Fail)	Average	Relative Percent Difference (RPD)	Check #3
11886579	11886580 11886595 11886597 11886593	AUDITORIUM	2.1	1.5	✓	3.0	PASS	1.8	<1-pCi/L	✓
NOTES: QC Check #1 - Data Entry QC Check #2 - Higher duplicate concentration is < or = to 2x the Lower QC Check #3 - Meets RPD Limits, by average duplicate concentration							Average (pCi/L)		Warning Level	Control Level
							< 2.0		1-pCi/L	NA
							Between 2.0 and 3.9		50% RPD	67% RPD
							≥ 4.0		28% RPD	36% RPD

NOTES:

QC Check #1 - Data Entry

QC Check #2 - Higher duplicate concentration is < or = to 2x the Lower

QC Check #3 - Meets RPD Limits, by average duplicate concentration

- enter 2 if RPD is BELOW warning and control levels, AND passes QC Check 1 and 2
- enter 1 if RPD is ABOVE warning and BELOW control levels, AND passes QC Check 1 and 2
- enter 0 if RPD is ABOVE control level, or 'FAILS' QC Check 1 or 2

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Attachment 2:

Laboratory Reports

Radon test result report for:
SPRINGBROOK HS

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11907259	116	2025-01-13 @ 9:00 am	2025-01-16 @ 2:00 pm	1.9 ± 0.4	2025-01-20
11907252	116C	2025-01-13 @ 9:00 am	2025-01-16 @ 2:00 pm	1.9 ± 0.4	2025-01-20
11907212	A102	2025-01-13 @ 8:00 am	2025-01-16 @ 2:00 pm	< 0.3	2025-01-20
11907217	A103	2025-01-13 @ 8:00 am	2025-01-16 @ 12:00 pm	< 0.3	2025-01-20
11907219	A104	2025-01-13 @ 8:00 am	2025-01-16 @ 12:00 pm	< 0.3	2025-01-20
11907220	A105	2025-01-13 @ 8:00 am	2025-01-16 @ 12:00 pm	< 0.3	2025-01-20
11907215	A106	2025-01-13 @ 8:00 am	2025-01-16 @ 12:00 pm	< 0.3	2025-01-20
11907216	A108	2025-01-13 @ 8:00 am	2025-01-16 @ 2:00 pm	< 0.3	2025-01-20
11907225	A109	2025-01-13 @ 8:00 am	2025-01-16 @ 12:00 pm	< 0.3	2025-01-20
11907213	A109 DUP	2025-01-13 @ 8:00 am	2025-01-16 @ 12:00 pm	< 0.3	2025-01-20
11907223	A111	2025-01-13 @ 8:00 am	2025-01-16 @ 2:00 pm	< 0.3	2025-01-20
11907214	A112	2025-01-13 @ 8:00 am	2025-01-16 @ 12:00 pm	< 0.3	2025-01-20
11907218	A114	2025-01-13 @ 8:00 am	2025-01-16 @ 2:00 pm	< 0.3	2025-01-20
11906910	ANNE SALZMAN	2025-01-13 @ 11:00 am	2025-01-16 @ 1:00 pm	0.7 ± 0.3	2025-01-20
11907207	ATTENDANCE	2025-01-13 @ 8:00 am	2025-01-16 @ 2:00 pm	< 0.3	2025-01-20
11907298	AUDITORIUM	2025-01-13 @ 10:00 am	2025-01-16 @ 1:00 pm	4.4 ± 0.4	2025-01-20
11907285	AUX GYM	2025-01-13 @ 10:00 am	2025-01-16 @ 1:00 pm	3.6 ± 0.4	2025-01-20
11907291	AUX GYM DUP	2025-01-13 @ 10:00 am	2025-01-16 @ 1:00 pm	3.2 ± 0.4	2025-01-20
11907226	B101	2025-01-13 @ 8:00 am	2025-01-16 @ 12:00 pm	< 0.3	2025-01-20
11907227	B102	2025-01-13 @ 8:00 am	2025-01-16 @ 12:00 pm	< 0.3	2025-01-20
11907235	B103	2025-01-13 @ 8:00 am	2025-01-16 @ 12:00 pm	< 0.3	2025-01-20
11907241	B104	2025-01-13 @ 8:00 am	2025-01-16 @ 12:00 pm	< 0.3	2025-01-20
11907236	B105	2025-01-13 @ 8:00 am	2025-01-16 @ 12:00 pm	< 0.3	2025-01-20
11906914	B106	2025-01-13 @ 12:00 pm	2025-01-16 @ 12:00 pm	< 0.3	2025-01-20
11906934	B107	2025-01-13 @ 12:00 pm	2025-01-16 @ 12:00 pm	< 0.3	2025-01-20
11907239	B108	2025-01-13 @ 8:00 am	2025-01-16 @ 12:00 pm	< 0.3	2025-01-20
11907243	B108C	2025-01-13 @ 8:00 am	2025-01-16 @ 12:00 pm	0.5 ± 0.3	2025-01-20
11907242	B110	2025-01-13 @ 8:00 am	2025-01-16 @ 12:00 pm	< 0.3	2025-01-20
11907240	B117	2025-01-13 @ 8:00 am	2025-01-16 @ 12:00 pm	< 0.3	2025-01-20
11907228	B121	2025-01-13 @ 8:00 am	2025-01-16 @ 12:00 pm	< 0.3	2025-01-20
11907224	B122	2025-01-13 @ 8:00 am	2025-01-16 @ 12:00 pm	< 0.3	2025-01-20
11906902	C101A	2025-01-13 @ 10:00 am	2025-01-16 @ 1:00 pm	0.8 ± 0.3	2025-01-20
11906904	C101B	2025-01-13 @ 11:00 am	2025-01-16 @ 1:00 pm	0.9 ± 0.3	2025-01-20
11906926	C101D	2025-01-13 @ 11:00 am	2025-01-16 @ 1:00 pm	0.9 ± 0.3	2025-01-20
11906927	C101E	2025-01-13 @ 11:00 am	2025-01-16 @ 1:00 pm	0.6 ± 0.3	2025-01-20
11906928	C101G	2025-01-13 @ 11:00 am	2025-01-16 @ 1:00 pm	1.2 ± 0.3	2025-01-20
11906920	C101H	2025-01-13 @ 11:00 am	2025-01-16 @ 1:00 pm	1.4 ± 0.4	2025-01-20

Radon test result report for:
SPRINGBROOK HS

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11906918	C101J	2025-01-13 @ 11:00 am	2025-01-16 @ 1:00 pm	0.8 ± 0.3	2025-01-20
11906919	C101J DUP	2025-01-13 @ 11:00 am	2025-01-16 @ 1:00 pm	0.8 ± 0.3	2025-01-20
11906917	C101K	2025-01-13 @ 11:00 am	2025-01-16 @ 1:00 pm	1.0 ± 0.3	2025-01-20
11906912	C101L	2025-01-13 @ 11:00 am	2025-01-16 @ 1:00 pm	1.0 ± 0.3	2025-01-20
11906911	C101M	2025-01-13 @ 11:00 am	2025-01-16 @ 1:00 pm	1.7 ± 0.4	2025-01-20
11907294	C101Q	2025-01-13 @ 10:00 am	2025-01-16 @ 2:00 pm	2.3 ± 0.4	2025-01-20
11907300	C101Q DUP	2025-01-13 @ 10:00 am	2025-01-16 @ 2:00 pm	1.8 ± 0.3	2025-01-20
11906909	C101R	2025-01-13 @ 11:00 am	2025-01-16 @ 1:00 pm	0.9 ± 0.3	2025-01-20
11906903	C101S	2025-01-13 @ 10:00 am	2025-01-16 @ 1:00 pm	0.5 ± 0.3	2025-01-20
11907292	C102D	2025-01-13 @ 10:00 am	2025-01-16 @ 1:00 pm	0.9 ± 0.3	2025-01-20
11907296	C102G	2025-01-13 @ 10:00 am	2025-01-16 @ 1:00 pm	1.3 ± 0.4	2025-01-20
11907297	C102H	2025-01-13 @ 10:00 am	2025-01-16 @ 1:00 pm	1.3 ± 0.4	2025-01-20
11906908	C205	2025-01-13 @ 11:00 am	2025-01-16 @ 2:00 pm	1.1 ± 0.3	2025-01-20
11906929	C307	2025-01-13 @ 11:00 am	2025-01-16 @ 2:00 pm	< 0.3	2025-01-20
11906931	C307 DUP	2025-01-13 @ 11:00 am	2025-01-16 @ 2:00 pm	< 0.3	2025-01-20
11907232	CAFETERIA	2025-01-13 @ 8:00 am	2025-01-16 @ 12:00 pm	< 0.3	2025-01-20
11907233	CAFETERIA	2025-01-13 @ 8:00 am	2025-01-16 @ 12:00 pm	< 0.3	2025-01-20
11907234	CAFETERIA DUP	2025-01-13 @ 8:00 am	2025-01-16 @ 12:00 pm	< 0.3	2025-01-20
11907293	CAREER CENTER	2025-01-13 @ 10:00 am	2025-01-16 @ 1:00 pm	0.8 ± 0.3	2025-01-20
11907278	D1 BLR	2025-01-13 @ 10:00 am	2025-01-16 @ 1:00 pm	1.3 ± 0.3	2025-01-20
11907284	D104F	2025-01-13 @ 10:00 am	2025-01-16 @ 1:00 pm	1.7 ± 0.4	2025-01-20
11907288	D107	2025-01-13 @ 10:00 am	2025-01-16 @ 1:00 pm	0.8 ± 0.3	2025-01-20
11907287	D107E	2025-01-13 @ 10:00 am	2025-01-16 @ 1:00 pm	< 0.3	2025-01-20
11907279	D107G	2025-01-13 @ 10:00 am	2025-01-16 @ 1:00 pm	1.0 ± 0.3	2025-01-20
11907277	D107G DUP	2025-01-13 @ 10:00 am	2025-01-16 @ 1:00 pm	0.8 ± 0.3	2025-01-20
11907289	D108	2025-01-13 @ 10:00 am	2025-01-16 @ 1:00 pm	< 0.3	2025-01-20
11907280	D111 GLR	2025-01-13 @ 10:00 am	2025-01-16 @ 1:00 pm	1.1 ± 0.3	2025-01-20
11907290	D117	2025-01-13 @ 10:00 am	2025-01-16 @ 1:00 pm	0.7 ± 0.3	2025-01-20
11907275	E106	2025-01-13 @ 10:00 am	2025-01-16 @ 1:00 pm	< 0.3	2025-01-20
11907270	E107	2025-01-13 @ 10:00 am	2025-01-16 @ 1:00 pm	0.9 ± 0.3	2025-01-20
11907276	E108	2025-01-13 @ 10:00 am	2025-01-16 @ 1:00 pm	0.7 ± 0.3	2025-01-20
11907269	E110	2025-01-13 @ 9:00 am	2025-01-16 @ 1:00 pm	< 0.3	2025-01-20
11907274	E111	2025-01-13 @ 9:00 am	2025-01-16 @ 1:00 pm	0.5 ± 0.3	2025-01-20
11907271	E114	2025-01-13 @ 9:00 am	2025-01-16 @ 1:00 pm	0.6 ± 0.3	2025-01-20
11907268	E114	2025-01-13 @ 9:00 am	2025-01-16 @ 1:00 pm	0.6 ± 0.3	2025-01-20
11907272	E114 DUP	2025-01-13 @ 9:00 am	2025-01-16 @ 1:00 pm	0.8 ± 0.3	2025-01-20
11907267	E115	2025-01-13 @ 9:00 am	2025-01-16 @ 1:00 pm	0.9 ± 0.3	2025-01-20

Radon test result report for:
SPRINGBROOK HS

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11907260	E116	2025-01-13 @ 9:00 am	2025-01-16 @ 2:00 pm	1.0 ± 0.3	2025-01-20
11907266	E117	2025-01-13 @ 9:00 am	2025-01-16 @ 1:00 pm	0.8 ± 0.3	2025-01-20
11907265	E118	2025-01-13 @ 9:00 am	2025-01-16 @ 1:00 pm	1.1 ± 0.3	2025-01-20
11906907	E209	2025-01-13 @ 11:00 am	2025-01-16 @ 2:00 pm	< 0.3	2025-01-20
11906924	E310	2025-01-13 @ 11:00 am	2025-01-16 @ 2:00 pm	0.7 ± 0.3	2025-01-20
11906923	E319	2025-01-13 @ 11:00 am	2025-01-16 @ 2:00 pm	0.7 ± 0.3	2025-01-20
11907263	F101	2025-01-13 @ 9:00 am	2025-01-16 @ 2:00 pm	0.5 ± 0.3	2025-01-20
11907261	F102	2025-01-13 @ 9:00 am	2025-01-16 @ 1:00 pm	1.5 ± 0.3	2025-01-20
11907262	F102 DUP	2025-01-13 @ 9:00 am	2025-01-16 @ 1:00 pm	2.0 ± 0.4	2025-01-20
11907253	F103	2025-01-13 @ 9:00 am	2025-01-16 @ 1:00 pm	0.8 ± 0.3	2025-01-20
11907254	F104	2025-01-13 @ 9:00 am	2025-01-16 @ 2:00 pm	2.0 ± 0.4	2025-01-20
11907246	F105	2025-01-13 @ 9:00 am	2025-01-16 @ 1:00 pm	1.0 ± 0.3	2025-01-20
11907264	F106	2025-01-13 @ 9:00 am	2025-01-16 @ 1:00 pm	1.2 ± 0.3	2025-01-20
11907258	F107	2025-01-13 @ 9:00 am	2025-01-16 @ 1:00 pm	0.9 ± 0.3	2025-01-20
11907257	F108	2025-01-13 @ 9:00 am	2025-01-16 @ 2:00 pm	0.8 ± 0.3	2025-01-20
11907256	F109	2025-01-13 @ 9:00 am	2025-01-16 @ 1:00 pm	1.0 ± 0.3	2025-01-20
11907247	F109 DUP	2025-01-13 @ 9:00 am	2025-01-16 @ 1:00 pm	0.9 ± 0.3	2025-01-20
11907250	F113	2025-01-13 @ 9:00 am	2025-01-16 @ 1:00 pm	0.7 ± 0.3	2025-01-20
11907251	F116B	2025-01-13 @ 9:00 am	2025-01-16 @ 1:00 pm	0.7 ± 0.3	2025-01-20
11906913	F209	2025-01-13 @ 11:00 am	2025-01-16 @ 2:00 pm	0.8 ± 0.3	2025-01-20
11906933	F209 DUP	2025-01-13 @ 11:00 am	2025-01-16 @ 2:00 pm	0.9 ± 0.3	2025-01-20
11906922	F308	2025-01-13 @ 11:00 am	2025-01-16 @ 2:00 pm	0.8 ± 0.3	2025-01-20
11906930	FIELD BLANK	2025-01-13 @ 11:00 am	2025-01-16 @ 12:00 pm	< 0.3	2025-01-20
11906925	FIELD BLANK	2025-01-13 @ 11:00 am	2025-01-16 @ 12:00 pm	< 0.3	2025-01-20
11907255	FIELD BLANK	2025-01-13 @ 9:00 am	2025-01-16 @ 12:00 pm	< 0.3	2025-01-20
11907273	FIELD BLANK	2025-01-13 @ 9:00 am	2025-01-16 @ 12:00 pm	< 0.3	2025-01-20
11907231	FIELD BLANK	2025-01-13 @ 8:00 am	2025-01-16 @ 12:00 pm	< 0.3	2025-01-20
11907286	FIELD BLANK	2025-01-13 @ 10:00 am	2025-01-16 @ 12:00 pm	< 0.3	2025-01-20
11906901	G1	2025-01-13 @ 11:00 am	2025-01-16 @ 2:00 pm	1.4 ± 0.4	2025-01-20
11907245	G101	2025-01-13 @ 9:00 am	2025-01-16 @ 12:00 pm	1.3 ± 0.3	2025-01-20
11907244	G105	2025-01-13 @ 9:00 am	2025-01-16 @ 12:00 pm	< 0.3	2025-01-20
11907238	G106A	2025-01-13 @ 9:00 am	2025-01-16 @ 2:00 pm	0.8 ± 0.3	2025-01-20
11907230	G108	2025-01-13 @ 9:00 am	2025-01-16 @ 12:00 pm	1.0 ± 0.3	2025-01-20
11907237	G109	2025-01-13 @ 9:00 am	2025-01-16 @ 12:00 pm	1.0 ± 0.3	2025-01-20
11907229	G110	2025-01-13 @ 9:00 am	2025-01-16 @ 12:00 pm	0.8 ± 0.3	2025-01-20
11907222	G111	2025-01-13 @ 9:00 am	2025-01-16 @ 12:00 pm	2.3 ± 0.4	2025-01-20
11906905	G2	2025-01-13 @ 11:00 am	2025-01-16 @ 2:00 pm	< 0.3	2025-01-20

January 20, 2025

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:
SPRINGBROOK HS

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11906906	G202	2025-01-13 @ 11:00 am	2025-01-16 @ 2:00 pm	< 0.3	2025-01-20
11906916	G206	2025-01-13 @ 11:00 am	2025-01-16 @ 2:00 pm	1.1 ± 0.4	2025-01-20
11906915	G212	2025-01-13 @ 11:00 am	2025-01-16 @ 2:00 pm	1.1 ± 0.3	2025-01-20
11906921	G307	2025-01-13 @ 11:00 am	2025-01-16 @ 2:00 pm	0.7 ± 0.3	2025-01-20
11907282	GYM	2025-01-13 @ 10:00 am	2025-01-16 @ 1:00 pm	1.4 ± 0.3	2025-01-20
11907281	GYM	2025-01-13 @ 10:00 am	2025-01-16 @ 1:00 pm	1.5 ± 0.4	2025-01-20
11907295	HEALTH ROOM	2025-01-13 @ 10:00 am	2025-01-16 @ 1:00 pm	1.6 ± 0.4	2025-01-20
11907210	MAIN OFFICE	2025-01-13 @ 8:00 am	2025-01-16 @ 12:00 pm	< 0.3	2025-01-20
11907248	OFFICE ACROSS FROM MAIN OFFICE	2025-01-13 @ 9:00 am	2025-01-16 @ 12:00 pm	< 0.3	2025-01-20
11907249	OFFICE ACROSS FROM MAIN OFFICE DUP	2025-01-13 @ 9:00 am	2025-01-16 @ 12:00 pm	< 0.3	2025-01-20
11907221	SUSAN KATZ OFFICE	2025-01-13 @ 8:00 am	2025-01-16 @ 12:00 pm	< 0.3	2025-01-20
11907283	WEIGHT ROOM	2025-01-13 @ 10:00 am	2025-01-16 @ 1:00 pm	2.1 ± 0.4	2025-01-20

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

January 20, 2025

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

**OFFICE
MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11906876	O	2025-01-14 @ 11:00 am	2025-01-17 @ 11:00 am	< 0.3	2025-01-20
11906877	O	2025-01-13 @ 11:00 am	2025-01-16 @ 11:00 am	< 0.3	2025-01-20

January 20, 2025

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

**TRAVEL
MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11903993	T	2025-01-13 @ 11:00 am	2025-01-16 @ 11:00 am	< 0.3	2025-01-20
11906878	T	2025-01-14 @ 11:00 am	2025-01-17 @ 11:00 am	< 0.3	2025-01-20

EXPOSURE IN BOWSER-MORNER RADON CHAMBER

CLIENT KCI TECHNOLOGIES, INC Job Number 20001560

NOMINAL Conditions: Radon Conc 50.6 pCi/L Rel. Hum 50.6 % Temp. 70.8 F

Date Start: 12/14/24 Date Stop: 12/17/24 Date Start: _____ Date Stop: _____

Time Start: 0815 Time Stop: 0815 Time Start: _____ Time Stop: _____

Device No.'s: (3) CHAR BAGS Device No.'s: _____

11477880, 11477883, 11477896 _____

B4 Right

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

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

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

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

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

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

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

December 23, 2024

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

**SK
MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11477880	SK1	2024-12-14 @ 8:00 am	2024-12-17 @ 8:00 am	52.0 ± 4.2	2024-12-23
11477883	SK2	2024-12-14 @ 8:00 am	2024-12-17 @ 8:00 am	54.6 ± 4.4	2024-12-23
11477896	SK3	2024-12-14 @ 8:00 am	2024-12-17 @ 8:00 am	45.5 ± 3.6	2024-12-23



Radon Test Kit Chain of Custody

Project Name: MCPS Radon – Testing January 13th – January 16th, 2024

Name of Schools:

1. Springbrook HS
2. Woodlin ES
3. Parkside Center
4. Bannockburn ES
5. Beall ES
6. Bells Mill ES
7. Bethesda ES

	Date	Initials
Radon Test Kits Deployed	01/13/2025	BWM
Radon Test Kits Collected	01/16/2025	BWM
Radon Test Kits Shipped to Lab*	01/17/2025	BWM
Radon Test Kits Received by Lab*	01/21/2025	BWM

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

April 2, 2025

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:
SPRINGBROOK HS
MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11886579	AUDITORIUM	2025-03-24 @ 9:00 am	2025-03-27 @ 7:00 am	1.7 ± 0.6	2025-04-02
11886580	AUDITORIUM	2025-03-24 @ 9:00 am	2025-03-27 @ 7:00 am	1.5 ± 0.6	2025-04-02
11886593	AUDITORIUM	2025-03-24 @ 9:00 am	2025-03-27 @ 7:00 am	2.3 ± 0.6	2025-04-02
11886595	AUDITORIUM	2025-03-24 @ 9:00 am	2025-03-27 @ 7:00 am	1.5 ± 0.6	2025-04-02
11886597	AUDITORIUM	2025-03-24 @ 9:00 am	2025-03-27 @ 7:00 am	2.1 ± 0.6	2025-04-02
11886598	AUDITORIUM	2025-03-24 @ 9:00 am	2025-03-27 @ 7:00 am	< 0.3	2025-04-02

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April 3, 2025

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

**OFFICE
MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11886664	OB	2025-03-24 @ 11:00 am	2025-03-27 @ 11:00 am	< 0.3	2025-04-02
11886692	OB	2025-03-25 @ 11:00 am	2025-03-28 @ 11:00 am	< 0.3	2025-04-02
11951800	OB	2025-03-24 @ 11:00 am	2025-03-28 @ 11:00 am	< 0.3	2025-04-02

April 3, 2025

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

**TRAVEL
MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11886691	TB	2025-03-24 @ 11:00 am	2025-03-27 @ 11:00 am	< 0.3	2025-04-02
11886693	TB	2025-03-25 @ 11:00 am	2025-03-28 @ 11:00 am	< 0.3	2025-04-02
11892493	TB	2025-03-24 @ 11:00 am	2025-03-28 @ 11:00 am	< 0.3	2025-04-02

EXPOSURE IN BOWSER-MORNER RADON CHAMBER

CLIENT KCI TECHNOLOGIES, INC Job Number 20002919

NOMINAL Conditions: Radon Conc 7.0 pCi/L Rel. Hum 51.4 % Temp. 70.7 F

Date Start: 3/7/25 Date Stop: 3/10/25 Date Start: _____ Date Stop: _____

Time Start: 0832 Time Stop: 0832 Time Start: _____ Time Stop: _____

Device No.'s: (7) CHAR BAGS Device No.'s: _____

11886401 thru 11886406,

11886410

G3 Right

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

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

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

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

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

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

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

March 19, 2025

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

QC
MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11886401	SK1	2025-03-07 @ 9:00 am	2025-03-10 @ 9:00 am	7.8 ± 1.1	2025-03-19
11886405	SK2	2025-03-07 @ 9:00 am	2025-03-10 @ 9:00 am	7.1 ± 1.1	2025-03-19
11886406	SK3	2025-03-07 @ 9:00 am	2025-03-10 @ 9:00 am	7.7 ± 1.1	2025-03-19
11886403	SK4	2025-03-07 @ 9:00 am	2025-03-10 @ 9:00 am	7.9 ± 1.2	2025-03-19
11886404	SK5	2025-03-07 @ 9:00 am	2025-03-10 @ 9:00 am	7.6 ± 1.2	2025-03-19
11886410	SK6	2025-03-07 @ 9:00 am	2025-03-10 @ 9:00 am	7.0 ± 1.1	2025-03-19
11886402	SK7	2025-03-07 @ 9:00 am	2025-03-10 @ 9:00 am	8.6 ± 1.2	2025-03-19

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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 – Testing March 24th – March 27th, 2025

Name of Schools:

- | | |
|----------------------|----------------------------|
| 1. Beverly Farms ES | 7. Julius West MS |
| 2. Bradley Hills ES | 8. Parkland MS |
| 3. Cabin John MS | 9. Rockville HS |
| 4. Springbrook HS | 10. Westland MS |
| 5. Thomas Edison HS | 11. Charles W. Woodward HS |
| 6. Walter Johnson HS | 12. Walt Whitman HS |

	Date	Initials
Radon Test Kits Deployed	3/24/2025	BMM
Radon Test Kits Collected	3/27/2025	BMM
Radon Test Kits Shipped to Lab*	3/28/2025	BMM
Radon Test Kits Received by Lab*	4/01/2025	BMM

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

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.



ENGINEERS • PLANNERS • SCIENTISTS • CONSTRUCTION MANAGERS

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

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 pCi/L	None	N/A
<4.0 pCi/L	See Attachment B	

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

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

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

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

Sincerely,



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

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

ATTACHMENT A

Floor Plan With Test Locations

ATTACHMENT B

Radon Test Summary Spreadsheet

Table 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

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

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

OC- 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

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

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

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

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

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

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 _____

P3 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 μ R/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



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	BMU
Radon Test Kits Collected	02/17/2023	BMU
Radon Test Kits Shipped to Lab*	02/17/2023	BMU
Radon Test Kits Received by Lab*	02/20/2023	BMU

*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.



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www.SaLUTinc.com

2/9/2021

Brian Croyle, PG, CHMM
Environmental Specialist
Environmental Services/Indoor Air Quality
Montgomery County Public Schools
Division of 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 pCi/L	N/A	N/A
≤4.0 pCi/L	See Attachment B	See Attachment B

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

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

In no event shall EMSL be liable for indirect, special, consequential, or incidental damages, including, but not limited to, damages for loss of profit or goodwill regardless of the negligence (either sole or concurrent) of EMSL and whether EMSL has been informed of the possibility of such damages, arising out of or in connection with EMSL's services thereunder or the delivery, use, reliance upon or interpretation of test results by client or any third party. We accept no legal responsibility for the purposes for which the client uses the test results. In no event shall EMSL be liable to a client or any third party, whether based upon theories of tort, contract or any other legal or equitable theory, in excess of the amount paid to EMSL by client thereunder. The test results meets all NELAC requirements unless otherwise specified.

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

Fedex 7960 5825 0538

EMSL Analytical, Inc.

200 Route 130 North

MY 2D

Cinnaminson, NJ 08077

PHONE: 1-800-220-3675

FAX: (856) 786-5974

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Radon Testing Chain of Custody

EMSL Order Number (Lab Use Only):

EMSL
CINNAMINSON, NJ. 382100960

Company: SaLUT		2021 JAN 32 A 10:21 KS		EMSL-Bill to: <input type="checkbox"/> Same <input type="checkbox"/> Different If Bill to is Different note instructions in Comments**		
Street: 1818 New York Avenue, NE Suite 231				Third Party Billing requires written authorization from third party		
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: <input type="checkbox"/> Fax <input type="checkbox"/> Email <input type="checkbox"/> 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: <i>MM</i>		
New Jersey Testing Information						
NJDEP Laboratory Certification # 03036			NJDEP Radon Business Certification # MEB92525			
1.) Is the radon test being conducted for the purpose of: <input type="checkbox"/> Real Estate Transaction <input type="checkbox"/> Homeowner Testing <input checked="" type="checkbox"/> Other						
2.) Test Conditions observed? <input checked="" type="checkbox"/> Closed House <input type="checkbox"/> Open House						
3.) What is the building type? <input type="checkbox"/> Residential <input type="checkbox"/> Non-Residential <input type="checkbox"/> Daycare <input checked="" type="checkbox"/> School						
4.) What is the building foundation type? <input checked="" type="checkbox"/> Basement <input type="checkbox"/> Crawlspace <input type="checkbox"/> Slab on Grade <input checked="" type="checkbox"/> 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
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
254595	445154	Weight Room	1/26/21 10:04	1/29/21 10:32	68	40
254596	445224	Room G-III	1/26/21 10:10	1/29/21 10:23	70	50
254594	445236	Room G-III A	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:						

Page 1 of 1 pages



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 $\leq 65^{\circ}\text{F}$.

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

NRPP 105011 AL
NRSB ARL0007

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

Laboratory Report for:

Property Tested: Project # 04481387-1

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

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: 

Disclaimer:

The uncertainty of this radon measurement is $\sim \pm 10\%$. 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.

Shawn Price, Director of Laboratory Operations, AccuStar Labs

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.

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.



ENGINEERS • PLANNERS • SCIENTISTS • CONSTRUCTION MANAGERS

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

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 pCi/L),
 5. Rooms previously tested for radon but not tested in December 2019, and
 6. Additional rooms that require testing (if applicable.)

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

As a quality control measure, KCI included duplicate samples, field blanks, lab transit blanks, and office blanks in accordance with AARST recommendations. In addition, KCI submitted 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 pCi/L	None	N/A
≤ 4.0 pCi/L	See Attachment B	See Attachment B

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

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

Sincerely,

Mr. Tyler P. McCleaf
Radon Measurement Provider
KCI Technologies, Inc.

Attachments:

A- Floor Plan with Test Locations

B - Tables 1-3, Radon Test Summary Spreadsheets

C- Laboratory Analytical Results

ATTACHMENT A

Floor Plan With Test Locations

Floor Plan Legend

X-Sample Location (in red)

X- Previous Sample Location

1- Not Samled; No Ground Contact

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

3- Not Samled; High Humidity/Moisture

4- Not Samled; Bathroom/Hallway

ATTACHMENT B

Radon Test Summary Spreadsheet

Table Notes:

AC- Activated Charcoal

ACI- Air Chek, Inc.

D- Duplicate

FB- Field Blank

KCI- KCI Technologies, Inc.

OB- Office Blank

PM- Project Manager

QC- Quality Control

Table 1- Radon Testing Results		
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 $\pm 25\%$ of the chamber's reference value (25.7 pCi/L).

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
9341725	N/A	2020-02-21 @ 8:00 am	2020-02-24 @ 8:00 am	26.9 \pm 1.6	2020-02-26
9341730	N/A	2020-02-21 @ 8:00 am	2020-02-24 @ 8:00 am	26.1 \pm 1.6	2020-02-26
9341728	N/A	2020-02-21 @ 8:00 am	2020-02-24 @ 8:00 am	26.9 \pm 1.6	2020-02-26
9341726	N/A	2020-02-21 @ 8:00 am	2020-02-24 @ 8:00 am	25.8 \pm 1.5	2020-02-26
9341731	N/A	2020-02-21 @ 8:00 am	2020-02-24 @ 8:00 am	25.1 \pm 1.5	2020-02-26
9341729	N/A	2020-02-21 @ 8:00 am	2020-02-24 @ 8:00 am	26.2 \pm 1.6	2020-02-26
9341727	N/A	2020-02-21 @ 8:00 am	2020-02-24 @ 8:00 am	27.2 \pm 1.6	2020-02-26
9341732	N/A	2020-02-21 @ 8:00 am	2020-02-24 @ 8:00 am	27.3 \pm 1.6	2020-02-26

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 $\pm 25\%$ 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 \pm 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 - Device No.'s: _____

9341725 thru 9341733 _____

52 Left

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

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

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

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

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

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

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

[illegible]







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

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.



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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 pCi/L	None	N/A
≤ 4.0 pCi/L	See Attachment B	See Attachment B

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

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

Sincerely,

Mr. Tyler P. McCleaf
Radon Measurement Provider
111004 RT

KCI Technologies, Inc.

Attachments:

A- Floor Plan with Test Locations

B - Tables 1-3, Radon Test Summary Spreadsheets

C- Laboratory Analytical Results

ATTACHMENT A

Floor Plan With Test Locations

ATTACHMENT B

Radon Test Summary Spreadsheet

Table Notes:

AC- Activated Charcoal

ACI- Air Chek, Inc.

D- Duplicate

FB- Field Blank

KCI- KCI Technologies, Inc.

OB- Office Blank

PM- Project Manager

QC- Quality Control

Table 1- Radon Testing Results		
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

ATTACHMENT C

Laboratory Analytical Results

Radon test result report for:

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

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

Radon test result report for:

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

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

Radon test result report for:

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

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

January 3, 2020

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

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

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

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 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

Temp of 70.0
RH % 50.1
Avg pCi/L 25.5

52

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

Temp of 70.0
RH % 50.1
Avg pCi/L 25.5

25

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

Temp of 70.0
RH % 50.1
Avg pCi/L 25.5

25

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

Radon test result report for:
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

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

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

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

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

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



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

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

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



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 of 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 pCi/L	N/A	N/A
≤4.0 pCi/L	See Attachment B	See Attachment B

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

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

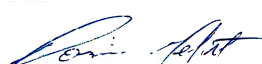
Please contact EMSL Analytical, Inc. or your State Health Department for further information.

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

In no event shall EMSL be liable for indirect, special, consequential, or incidental damages, including, but not limited to, damages for loss of profit or goodwill regardless of the negligence (either sole or concurrent) of EMSL and whether EMSL has been informed of the possibility of such damages, arising out of or in connection with EMSL's services thereunder or the delivery, use, reliance upon or interpretation of test results by client or any third party. We accept no legal responsibility for the purposes for which the client uses the test results. In no event shall EMSL be liable to a client or any third party, whether based upon theories of tort, contract or any other legal or equitable theory, in excess of the amount paid to EMSL by client thereunder. The test results meets all NELAC requirements unless otherwise specified.

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

Fedex 7960 5825 0538

EMSL Analytical, Inc.

200 Route 130 North

MY 2D

Cinnaminson, NJ 08077

PHONE: 1-800-220-3675

FAX: (856) 786-5974

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Radon Testing Chain of Custody

EMSL Order Number (Lab Use Only):

EMSL
CINNAMINSON, NJ. 382100960

Company: SaLUT		2021 JAN 32 A 10:21 KS		EMSL-Bill to: <input type="checkbox"/> Same <input type="checkbox"/> Different If Bill to is Different note instructions in Comments**		
Street: 1818 New York Avenue, NE Suite 231		Third Party Billing requires written authorization from third party				
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: <input type="checkbox"/> Fax <input type="checkbox"/> Email <input type="checkbox"/> 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: <i>MM</i>		
New Jersey Testing Information						
NJDEP Laboratory Certification # 03036			NJDEP Radon Business Certification # MEB92525			
1.) Is the radon test being conducted for the purpose of: <input type="checkbox"/> Real Estate Transaction <input type="checkbox"/> Homeowner Testing <input checked="" type="checkbox"/> Other						
2.) Test Conditions observed? <input checked="" type="checkbox"/> Closed House <input type="checkbox"/> Open House						
3.) What is the building type? <input type="checkbox"/> Residential <input type="checkbox"/> Non-Residential <input type="checkbox"/> Daycare <input checked="" type="checkbox"/> School						
4.) What is the building foundation type? <input checked="" type="checkbox"/> Basement <input type="checkbox"/> Crawlspace <input type="checkbox"/> Slab on Grade <input checked="" type="checkbox"/> 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
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
254595	445154	Weight Room	1/26/21 10:04	1/29/21 10:32	68	40
254596	445224	Room G-III	1/26/21 10:10	1/29/21 10:23	70	50
254594	445236	Room G-III A	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:						

Page 1 of 1 pages



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 $\leq 65^{\circ}\text{F}$.

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

NRPP 105011 AL
NRSB ARL0007

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

Laboratory Report for:

Property Tested: Project # 04481387-1

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

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: 

Disclaimer:

The uncertainty of this radon measurement is $\pm 10\%$. 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.

Shawn Price, Director of Laboratory Operations, AccuStar Labs

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.

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.



ENGINEERS • PLANNERS • SCIENTISTS • CONSTRUCTION MANAGERS

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

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 pCi/L),
 5. Rooms previously tested for radon but not tested in December 2019, and
 6. Additional rooms that require testing (if applicable.)

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

As a quality control measure, KCI included duplicate samples, field blanks, lab transit blanks, and office blanks in accordance with AARST recommendations. In addition, KCI submitted 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 pCi/L	None	N/A
≤ 4.0 pCi/L	See Attachment B	See Attachment B

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

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

Sincerely,

Mr. Tyler P. McCleaf
Radon Measurement Provider
KCI Technologies, Inc.

Attachments:

A- Floor Plan with Test Locations

B - Tables 1-3, Radon Test Summary Spreadsheets

C- Laboratory Analytical Results

ATTACHMENT A

Floor Plan With Test Locations

Floor Plan Legend

X-Sample Location (in red)

X- Previous Sample Location

1- Not Samled; No Ground Contact

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

3- Not Samled; High Humidity/Moisture

4- Not Samled; Bathroom/Hallway

ATTACHMENT B

Radon Test Summary Spreadsheet

Table Notes:

AC- Activated Charcoal

ACI- Air Chek, Inc.

D- Duplicate

FB- Field Blank

KCI- KCI Technologies, Inc.

OB- Office Blank

PM- Project Manager

QC- Quality Control

Table 1- Radon Testing Results		
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 $\pm 25\%$ of the chamber's reference value (25.7 pCi/L).

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
9341725	N/A	2020-02-21 @ 8:00 am	2020-02-24 @ 8:00 am	26.9 \pm 1.6	2020-02-26
9341730	N/A	2020-02-21 @ 8:00 am	2020-02-24 @ 8:00 am	26.1 \pm 1.6	2020-02-26
9341728	N/A	2020-02-21 @ 8:00 am	2020-02-24 @ 8:00 am	26.9 \pm 1.6	2020-02-26
9341726	N/A	2020-02-21 @ 8:00 am	2020-02-24 @ 8:00 am	25.8 \pm 1.5	2020-02-26
9341731	N/A	2020-02-21 @ 8:00 am	2020-02-24 @ 8:00 am	25.1 \pm 1.5	2020-02-26
9341729	N/A	2020-02-21 @ 8:00 am	2020-02-24 @ 8:00 am	26.2 \pm 1.6	2020-02-26
9341727	N/A	2020-02-21 @ 8:00 am	2020-02-24 @ 8:00 am	27.2 \pm 1.6	2020-02-26
9341732	N/A	2020-02-21 @ 8:00 am	2020-02-24 @ 8:00 am	27.3 \pm 1.6	2020-02-26

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 $\pm 25\%$ 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 \pm 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 - Device No.'s: _____

9341725 thru 9341733

52 Left

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

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

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

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

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

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

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

[illegible]







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

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.



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 pCi/L	None	N/A
≤ 4.0 pCi/L	See Attachment B	See Attachment B

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

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

Sincerely,

Mr. Tyler P. McCleaf
Radon Measurement Provider
111004 RT

KCI Technologies, Inc.

Attachments:

A- Floor Plan with Test Locations

B - Tables 1-3, Radon Test Summary Spreadsheets

C- Laboratory Analytical Results

ATTACHMENT A

Floor Plan With Test Locations

ATTACHMENT B

Radon Test Summary Spreadsheet

Table Notes:

AC- Activated Charcoal

ACI- Air Chek, Inc.

D- Duplicate

FB- Field Blank

KCI- KCI Technologies, Inc.

OB- Office Blank

PM- Project Manager

QC- Quality Control

Table 1- Radon Testing Results		
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

ATTACHMENT C

Laboratory Analytical Results

Radon test result report for:

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

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

Radon test result report for:

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

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

Radon test result report for:

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

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

January 3, 2020

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

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

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

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 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

Temp of 70.0
RH % 50.1
Avg pCi/L 25.5

52

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

Temp of 70.0
RH % 50.1
Avg pCi/L 25.5

25

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

Temp of 70.0
RH % 50.1
Avg pCi/L 25.5

25

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

Radon test result report for:
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

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

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

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

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

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



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

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

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

RADON SCREENING SURVEY – FOLLOW-UP SPRINGBROOK HIGH SCHOOL

201 Valley Brook Dr.,

Silver Spring, Maryland 20904

EXECUTIVE SUMMARY

Date of Test Report:	3/29/19
Round of Testing:	Initial Follow-up Post Remediation
# Rooms Tested	6
# Rooms \geq 4.0 pCi/L:	0
Low Value:	<0.4
High Value:	1.0
Confirmed Rooms \geq 4.0 pCi/L US EPA Action Level	1

Summary of Sampling Events \geq 4.0 pCi/L

Room	Result (pCi/L) 2/21/19	Result (pCi/L) 3/29/19	Average Result (pCi/L)
112	missing	0.6	0.6
F112	missed	<0.4	<0.4
F109	missing	1.0	1.0
G12	missed	<0.4	<0.4
B122	<0.4	<0.4	<0.4
B122(D)	Unable to report	<0.4	<0.4
Auditorium	missing	1.0	1.0
E116	9.5	Not sampled	9.5



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 $\leq 65^{\circ}\text{F}$.

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

NRPP 105011 AL
NRSB ARL0007

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

Laboratory Report for:

Property Tested: Project # 04481387-1

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

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: 

Disclaimer:

The uncertainty of this radon measurement is $\sim \pm 10\%$. 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.

Shawn Price, Director of Laboratory Operations, AccuStar Labs

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MONTGOMERY COUNTY PUBLIC SCHOOLS RADON TESTING

Executive Summary: Springbrook High School

201 Valley Brook Drive
Silver Spring, MD 20904

Date of Test Report:	02/21/2019
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:	127
# of Rooms ≥ 4.0 pCi/L:	1
Low Value:	< 0.4
High Value:	9.5
Rooms with Results ≥ 4.0 pCi/L:	E116

Project Status

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



February 21, 2019

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

Re: Radon Testing Services

Location: 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 November 13, 2018 and deployed one hundred and fifty-six (156) activated charcoal (AC) radon test kits. PSI deployed radon test kits in frequently-occupied ground contact rooms, and other areas, (if applicable) in accordance with AARST guidance. PSI returned to the site on November 16, 2018 to retrieve the radon sampling test kits. A floor plan map of the building with the test locations is included as Attachment A of this report.

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

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



Evaluation of Testing Conditions:

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

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	E116	9.5
≤ 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: 11/13/18 - 11/16/18		
Kit Number	Room / Area	Result (pCi/L)
3916239	A101	<0.4
3916242	A102	<0.4
3916244	A103	<0.4
3916245	A104	<0.4
3916246	A105	<0.4
3916247	A106	<0.4
3916250	A108	<0.4
3916249	A109	<0.4
3916001	A110	<0.4
3916002	A111	<0.4
3916243	A114	<0.4
3916240	Attendance	<0.4
3916228	Auditorium	0.7
3916227	Auditorium (MISSING)	--
3881179	Aux Gym	3.5
3881252	Aux Gym	3.8
3916235	B101	<0.4
3916233	B102	<0.4
3916234	B102D	<0.4
3916269	B103	<0.4
3916264	B104	<0.4
3916265	B104C	<0.4
3916218	B105	<0.4
3916263	B105B	<0.4
3916213	B106	<0.4
3916215	B106C	<0.4
3916216	B106D	<0.4
3916211	B107	<0.4
3916212	B107C	<0.4
3916214	B108	0.4
3916217	B108C	<0.4
3916220	B109A	<0.4
3916261	B109B	<0.4
3916219	B110	<0.4
3916267	B116	<0.4
3916266	B117	<0.4
3916231	B120	<0.4
3916232	B120	<0.4
3916236	B122	<0.4
3916237	B122	<0.4
3881202	Boy's Locker Room	3.0
3881222	Boy's Locker Room (MISSING)	--
3916170	C101	<0.4

Radon Testing Results		
Springbrook High School		
Testing period: 11/13/18 - 11/16/18		
Kit Number	Room / Area	Result (pCi/L)
3916178	C101	<0.4
3916181	C101	<0.4
3916186	C101A	<0.4
3916143	C101B	0.4
3916144	C101D	<0.4
3916146	C101E	<0.4
3916145	C101G	<0.4
3916180	C101H	<0.4
3916175	C101J	<0.4
3916172	C101K	0.4
3916176	C101L	0.4
3916179	C101M	1.4
3916185	C101Q	1.4
3916174	C101R	0.4
3916141	C101S	<0.4
3916182	C102	<0.4
3916183	C102A	<0.4
3916184	C102D	0.5
3916197	C103E	2.5
3916210	C205	0.9
3916207	C301	0.6
3881162	Cafeteria	<0.4
3881172	Cafeteria	<0.4
3916195	Call box	<0.4
3916150	Coach's Office	0.9
3916200	Concession	<0.4
3916241	Copy Room 112 (MISSING)	--
3881182	D014	2.1
3881251	D014	2.3
3916229	D101	<0.4
3881159	D102	0.8
3916164	D104	1.6
3916163	D105	2.0
3916162	D107	1.0
3916165	D107E	1.4
3916161	D107G	1.1
3916166	D108	1.0
3916168	D108A	1.1
3881169	D111	2.0
3881192	D111	1.7
3916189	D112	0.9
3916149	D115	1.9
3916190	D117	1.3

Radon Testing Results		
Springbrook High School		
Testing period: 11/13/18 - 11/16/18		
Kit Number	Room / Area	Result (pCi/L)
3916187	D118	0.8
3916169	D7	2.3
3916226	E105	0.5
3916225	E106	0.4
3916221	E107	<0.4
3916223	E108	0.4
3916224	E108 Office	0.6
3916222	E109	0.5
3916011	E110	0.6
3916012	E111	0.8
3916013	E113	0.6
3916015	E114	1.4
3916016	E115	0.5
3916017	E116	9.5
3916018	E116	2.8
3916019	E117	0.7
3916020	E118	1.4
3916205	E207	0.6
3196203	E309	0.5
3916160	F101	0.4
3916159	F102	1.8
3916156	F103	0.6
3916157	F104	2.5
3916155	F105	<0.4
3916153	F106	2.7
3916259	F107	1.0
3916151	F108	0.8
3916152	F109 (MISSING)	--
--	F112 (MISSED)	--
3916256	F113	0.9
3916254	F113 Office	0.8
3916206	F202	0.9
3916204	F302	0.5
3916251	G1	<0.4
3916253	G101	<0.4
3916010	G105	<0.4
3916255	G106	0.6
3916009	G107	<0.4
3916007	G108	0.7
3916005	G109	0.5
3916258	G11	<0.4
3916003	G110	<0.4
3916004	G111	3.7

Radon Testing Results		
Springbrook High School		
Testing period: 11/13/18 - 11/16/18		
Kit Number	Room / Area	Result (pCi/L)
3916006	G111A	3.2
--	G12 (MISSED)	--
3916260	G2	<0.4
3916209	G201	0.7
3916252	G3	1.7
3916201	G312	0.8
3916257	G8	0.6
3916148	Girl's Room Stage	1.2
3916268	Kitchen Office	<0.4
3916173	Stage Office	1.1
3916188	Studio 3	0.8
3916171	Weight Room	0.7
3916729	Weight Room Office	0.5

Radon Testing Results		
Springbrook High School		
Testing period: 11/13/18 - 11/16/18		
Kit Number	QC Type	Result (pCi/L)
3916248	A106 (D)	0.7
3916262	B109B (D)	<0.4
3916270	B120 (D)	<0.4
3916238	B122 (D)	Unable to Report
3916177	C101L (D)	0.4
3916142	C101S (D)	<0.4
3916208	C301 (D)	0.4
3916230	D101 (D)	<0.4
3916167	D108A (D)	0.9
3916014	E113 (D)	0.7
3916158	F104 (D)	2.4
3916154	F106 (D)	3.1
3916008	G107 (D)	<0.4
3916609	Coach's Office (D)	0.7
3916147	Stage Office (D)	1.1
3918182	Field Blank	<0.4
3918037	Field Blank	Unable to Report
3918013	Office Blank	<0.4
3918046	Trip Blank	<0.4

Table Notes:

D – Duplicate

FB – Field Blank

OB – Office Blank

TB – Transit Blank

QC – Quality Control

ATTACHMENT C

Laboratory Analytical Results

NELAC NY 11769
NRPP 103216 AL
NRSB ARL0017

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

Laboratory Report for:

Property Tested: Project # 04481387-1

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


MCPS Radon Survey
Springbrook High School
MD 20904


Log Number	Device Number	Test Exposure Duration:				Area Tested	Result pCi/L
2393598	3916001	11/13/2018 7:41 am	11/16/2018 8:05 am			Bldg Springbrook High School Floor 1 Room A11	< 0.4
2393599	3916002	11/13/2018 7:42 am	11/16/2018 8:26 am			Bldg Springbrook High School Floor 1 Room A11	< 0.4
2393600	3916003	11/13/2018 7:47 am	11/16/2018 6:54 am			Bldg Springbrook High School Floor 1 Room G11	< 0.4
2393601	3916004	11/13/2018 7:47 am	11/16/2018 6:04 am			Bldg Springbrook High School Floor 1 Room G11	3.7
2393602	3916005	11/13/2018 7:50 am	11/16/2018 6:08 am			Bldg Springbrook High School Floor 1 Room G10	0.5
2393603	3916006	11/13/2018 7:52 am	11/16/2018 6:04 am			Bldg Springbrook High School Floor 1 Room G11	3.2
2393604	3916007	11/13/2018 7:52 am	11/16/2018 6:02 am			Bldg Springbrook High School Floor 1 Room G10	0.7
2393605	3916008	11/13/2018 7:53 am	11/16/2018 6:59 am			Bldg Springbrook High School Floor 1 Room G10	< 0.4
2393606	3916009	11/13/2018 7:53 am	11/16/2018 6:09 am			Bldg Springbrook High School Floor 1 Room G10	< 0.4
2393607	3916010	11/13/2018 7:55 am	11/16/2018 7:00 am			Bldg Springbrook High School Floor 1 Room G10	< 0.4
2393608	3916011	11/13/2018 8:35 am	11/16/2018 7:03 am			Bldg Springbrook High School Floor 1 Room E11	0.6

Comment: Unable to report a result for 3918037. Device counts below blank counts. A copy of this report was emailed to Intertek-PSI (VA).

Distributed by: Intertek-PSI (VA)

Date Received: 11/17/2018 Date Logged: 11/17/2018 Date Analyzed: 11/18/2018 Date Reported: 01/02/2019

Report Reviewed By: 

Report Approved By: 

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NELAC NY 11769
NRPP 103216 AL
NRSB ARL0017

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

Laboratory Report for:

Property Tested: Project # 04481387-1

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


MCPS Radon Survey
Springbrook High School
MD 20904


Log Number	Device Number	Test Exposure Duration:				Area Tested	Result pCi/L
2393609	3916012	11/13/2018	8:34 am	11/16/2018	7:23 am	Bldg Springbrook High School Floor 1 Room E11	0.8
2393610	3916013	11/13/2018	8:33 am	11/16/2018	7:06 am	Bldg Springbrook High School Floor 1 Room E11	0.6
2393611	3916014	11/13/2018	8:33 am	11/16/2018	7:06 am	Bldg Springbrook High School Floor 1 Room E11	0.7
2393612	3916015	11/13/2018	8:32 am	11/16/2018	7:16 am	Bldg Springbrook High School Floor 1 Room E11	1.4
2393613	3916016	11/13/2018	8:32 am	11/16/2018	7:16 am	Bldg Springbrook High School Floor 1 Room E11	0.5
2393614	3916017	11/13/2018	8:30 am	11/16/2018	7:00 am	Bldg Springbrook High School Floor 1 Room E11	9.5
2393615	3916018	11/13/2018	8:30 am	11/16/2018	7:20 am	Bldg Springbrook High School Floor 1 Room E11	2.8
2393616	3916019	11/13/2018	8:29 am	11/16/2018	7:13 am	Bldg Springbrook High School Floor 1 Room E11	0.7
2393617	3916020	11/13/2018	8:28 am	11/16/2018	7:13 am	Bldg Springbrook High School Floor 1 Room E11	1.4
2393618	3916141	11/13/2018	9:42 am	11/16/2018	7:39 am	Bldg Springbrook High School Floor 1 Room C10	< 0.4
2393619	3916142	11/13/2018	9:42 am	11/16/2018	7:39 am	Bldg Springbrook High School Floor 1 Room C10	< 0.4

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Report Approved By: 

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NELAC NY 11769
NRPP 103216 AL
NRSB ARL0017

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

Laboratory Report for:

Property Tested: Project # 04481387-1

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


MCPS Radon Survey
Springbrook High School
MD 20904


Log Number	Device Number	Test Exposure Duration:		Area Tested		Result pCi/L
2393620	3916143	11/13/2018 9:46 am	11/16/2018 7:39 am	Bldg Springbrook High School Floor 1 Room C10		0.4
2393621	3916144	11/13/2018 9:46 am	11/16/2018 7:40 am	Bldg Springbrook High School Floor 1 Room C10		< 0.4
2393622	3916145	11/13/2018 9:47 am	11/16/2018 7:41 am	Bldg Springbrook High School Floor 1 Room C10		< 0.4
2393623	3916146	11/13/2018 9:49 am	11/16/2018 7:02 am	Bldg Springbrook High School Floor 1 Room C10		< 0.4
2393624	3916147	11/13/2018 10:26 am	11/16/2018 7:59 am	Bldg Springbrook High School Flr 1 Rm Stage Off		1.1
2393625	3916165	11/12/2018 8:47 am	11/15/2018 7:32 am	Floor First Room 100B		1.4
2393626	3916148	11/13/2018 10:27 am	11/16/2018 8:12 am	Bldg Springbrook High School Flr 1 Rm Girl's Rm		1.2
2393627	3916166	11/12/2018 8:52 am	11/15/2018 7:32 am	Floor First Room 102		1.0
2393628	3916149	11/13/2018 10:00 am	11/16/2018 8:30 am	Bldg Springbrook High School Floor 1 Room D11		1.9
2393629	3916150	11/13/2018 9:47 am	11/16/2018 8:30 am	Bldg Springbrook High School Flr 1 Rm Coach's		0.9
2393630	3916151	11/13/2018 8:08 am	11/16/2018 7:03 am	Bldg Springbrook High School Floor 1 Room F10		0.8

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Shawn Price, Director of Laboratory Operations, AccuStar Labs

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NELAC NY 11769
NRPP 103216 AL
NRSB ARL0017

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

Laboratory Report for:

Property Tested: Project # 04481387-1

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


MCPS Radon Survey
Springbrook High School
MD 20904


Log Number	Device Number	Test Exposure Duration:		Area Tested			Result pCi/L
2393632	3916153	11/13/2018 8:13 am	11/16/2018 7:07 am	Bldg Springbrook High School	Floor 1	Room F10	2.7
2393633	3916154	11/13/2018 8:13 am	11/16/2018 7:07 am	Bldg Springbrook High School	Floor 1	Room F10	3.1
2393634	3916155	11/13/2018 8:18 am	11/16/2018 7:09 am	Bldg Springbrook High School	Floor 1	Room F10	< 0.4
2393635	3916156	11/13/2018 8:20 am	11/16/2018 7:10 am	Bldg Springbrook High School	Floor 1	Room F10	0.6
2393636	3916157	11/13/2018 8:21 am	11/16/2018 7:00 am	Bldg Springbrook High School	Floor 1	Room F10	2.5
2393637	3916158	11/13/2018 8:21 am	11/16/2018 7:00 am	Bldg Springbrook High School	Floor 1	Room F10	2.4
2393638	3916159	11/13/2018 8:24 am	11/16/2018 7:11 am	Bldg Springbrook High School	Floor 1	Room F10	1.8
2393639	3916160	11/13/2018 8:27 am	11/16/2018 7:11 am	Bldg Springbrook High School	Floor 1	Room F10	0.4
2393640	3916161	11/13/2018 9:09 am	11/16/2018 8:01 am	Bldg Springbrook High School	Floor 1	Room D10	1.1
2393641	3916162	11/13/2018 9:18 am	11/16/2018 8:03 am	Bldg Springbrook High School	Floor 1	Room D10	1.0
2393642	3916163	11/13/2018 9:20 am	11/16/2018 8:11 am	Bldg Springbrook High School	Floor 1	Room D10	2.0

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Distributed by: Intertek-PSI (VA)

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Report Approved By: 

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NELAC NY 11769
NRPP 103216 AL
NRSB ARL0017

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

Laboratory Report for:

Property Tested: Project # 04481387-1

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


MCPS Radon Survey
Springbrook High School
MD 20904


Log Number	Device Number	Test Exposure Duration:				Area Tested	Result pCi/L
2393643	3916164	11/13/2018 9:21 am	11/16/2018 8:12 am			Bldg Springbrook High School Floor 1 Room D10	1.6
2393644	3916167	11/13/2018 9:24 am	11/16/2018 8:04 am			Bldg Springbrook High School Floor 1 Room D10	0.9
2393645	3916168	11/13/2018 9:24 am	11/16/2018 8:04 am			Bldg Springbrook High School Floor 1 Room D10	1.1
2393646	3916169	11/13/2018 9:30 am	11/16/2018 8:10 am			Bldg Springbrook High School Flr Lower Level R	2.3
2393647	3916170	11/13/2018 9:36 am	11/16/2018 7:39 am			Bldg Springbrook High School Floor 1 Room C10	< 0.4
2393648	3916171	11/13/2018 9:44 am	11/16/2018 8:29 am			Bldg Springbrook High School Flr 1 Rm Weight R	0.7
2393649	3916172	11/13/2018 9:56 am	11/16/2018 7:44 am			Bldg Springbrook High School Floor 1 Room C10	0.4
2393650	3916173	11/13/2018 10:06 am	11/16/2018 7:59 am			Bldg Springbrook High School Flr 1 Rm Stage Off	1.1
2393651	3916174	11/13/2018 9:54 am	11/16/2018 7:44 am			Bldg Springbrook High School Floor 1 Room C10	0.4
2393652	3916175	11/13/2018 9:55 am	11/16/2018 7:44 am			Bldg Springbrook High School Floor 1 Room C10	< 0.4
2393653	3916176	11/13/2018 9:57 am	11/16/2018 7:46 am			Bldg Springbrook High School Floor 1 Room C10	0.4

Comment: Unable to report a result for 3918037. Device counts below blank counts. A copy of this report was emailed to Intertek-PSI (VA).

Distributed by: Intertek-PSI (VA)

Date Received: 11/17/2018 Date Logged: 11/17/2018 Date Analyzed: 11/18/2018 Date Reported: 01/02/2019

Report Reviewed By: 

Report Approved By: 

Disclaimer:

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Shawn Price, Director of Laboratory Operations, AccuStar Labs

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NELAC NY 11769
NRPP 103216 AL
NRSB ARL0017

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

Laboratory Report for:

Property Tested: Project # 04481387-1

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


MCPS Radon Survey
Springbrook High School
MD 20904

Log Number	Device Number	Test Exposure Duration:				Area Tested	Result pCi/L
2393654	3916177	11/13/2018	9:57 am	11/16/2018	7:46 am	Bldg Springbrook High School Floor 1 Room C10	0.4
2393655	3916178	11/13/2018	10:01 am	11/16/2018	7:45 am	Bldg Springbrook High School Floor 1 Room C10	< 0.4
2393656	3916179	11/13/2018	10:00 am	11/16/2018	7:45 am	Bldg Springbrook High School Floor 1 Room C10	1.4
2393657	3916180	11/13/2018	9:53 am	11/16/2018	7:48 am	Bldg Springbrook High School Floor 1 Room C10	< 0.4
2393658	3916181	11/13/2018	9:40 am	11/16/2018	7:36 am	Bldg Springbrook High School Floor 1 Room C10	< 0.4
2393659	3916182	11/13/2018	9:33 am	11/16/2018	7:34 am	Bldg Springbrook High School Floor 1 Room C10	< 0.4
2393660	3916183	11/13/2018	9:33 am	11/16/2018	7:34 am	Bldg Springbrook High School Floor 1 Room C10	< 0.4
2393661	3916184	11/13/2018	9:34 am	11/16/2018	7:34 am	Bldg Springbrook High School Floor 1 Room C10	0.5
2393662	3916185	11/13/2018	9:37 am	11/16/2018	7:34 am	Bldg Springbrook High School Floor 1 Room C10	1.4
2393663	3916186	11/13/2018	9:41 am	11/16/2018	7:38 am	Bldg Springbrook High School Floor 1 Room C10	< 0.4
2393664	3916187	11/13/2018	9:41 am	11/16/2018	8:25 am	Bldg Springbrook High School Floor 1 Room D11	0.8

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NELAC NY 11769
NRPP 103216 AL
NRSB ARL0017

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

Laboratory Report for:

Property Tested: Project # 04481387-1

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


MCPS Radon Survey
Springbrook High School
MD 20904


Log Number	Device Number	Test Exposure Duration:				Area Tested	Result pCi/L
2393665	3916188	11/13/2018 9:42 am	11/16/2018 8:26 am			Bldg Springbrook High School Flr 1 Rm Studio 3	0.8
2393666	3916189	11/13/2018 9:35 am	11/16/2018 8:23 am			Bldg Springbrook High School Floor 1 Room D11	0.9
2393667	3916190	11/13/2018 9:40 am	11/16/2018 8:24 am			Bldg Springbrook High School Floor 1 Room D11	1.3
2393668	3916195	11/13/2018 11:32 am	11/16/2018 9:02 am			Bldg Springbrook High School Flr 2 Rm Call box	< 0.4
2393669	3916197	11/13/2018 11:15 am	11/16/2018 8:10 am			Bldg Springbrook High School Floor 1 Room C10	2.5
2393670	3916200	11/13/2018 11:36 am	11/16/2018 9:02 am			Bldg Springbrook High School Flr 1 Rm Concessi	< 0.4
2393671	3916201	11/13/2018 10:53 am	11/16/2018 7:46 am			Bldg Springbrook High School Floor 3 Room G31	0.8
2393672	3916204	11/13/2018 11:01 am	11/16/2018 7:42 am			Bldg Springbrook High School Floor 3 Room F30	0.5
2393673	3916205	11/13/2018 10:50 am	11/16/2018 7:45 am			Bldg Springbrook High School Floor 2 Room E20	0.6
2393674	3916206	11/13/2018 10:51 am	11/16/2018 7:46 am			Bldg Springbrook High School Floor 2 Room F20	0.9
2393675	3916207	11/13/2018 10:56 am	11/16/2018 7:47 am			Bldg Springbrook High School Floor 3 Room C30	0.6

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Report Approved By: 

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NELAC NY 11769
NRPP 103216 AL
NRSB ARL0017

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

Laboratory Report for:

Property Tested: Project # 04481387-1

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


MCPS Radon Survey
Springbrook High School
MD 20904


Log Number	Device Number	Test Exposure Duration:				Area Tested	Result pCi/L
2393676	3916208	11/13/2018	10:56 am	11/16/2018	7:48 am	Bldg Springbrook High School Floor 3 Room C30	0.4
2393677	3916209	11/13/2018	10:42 am	11/16/2018	7:43 am	Bldg Springbrook High School Floor 2 Room G20	0.7
2393678	3916210	11/13/2018	10:47 am	11/16/2018	7:44 am	Bldg Springbrook High School Floor 2 Room C20	0.9
2393679	3916211	11/13/2018	6:44 am	11/16/2018	6:18 am	Bldg Springbrook High School Floor 1 Room B10	< 0.4
2393680	3916212	11/13/2018	6:47 am	11/16/2018	6:08 am	Bldg Springbrook High School Floor 1 Room B10	< 0.4
2393681	3916213	11/13/2018	6:50 am	11/16/2018	6:22 am	Bldg Springbrook High School Floor 1 Room B10	< 0.4
2393682	3916214	11/13/2018	6:51 am	11/16/2018	6:24 am	Bldg Springbrook High School Floor 1 Room B10	0.4
2393683	3916215	11/13/2018	6:52 am	11/16/2018	6:02 am	Bldg Springbrook High School Floor 1 Room B10	< 0.4
2393684	3916216	11/13/2018	6:52 am	11/16/2018	6:22 am	Bldg Springbrook High School Floor 1 Room B10	< 0.4
2393685	3916217	11/13/2018	6:53 am	11/16/2018	6:24 am	Bldg Springbrook High School Floor 1 Room B10	< 0.4
2393686	3916218	11/13/2018	6:56 am	11/16/2018	6:29 am	Bldg Springbrook High School Floor 1 Room B10	< 0.4

Comment: Unable to report a result for 3918037. Device counts below blank counts. A copy of this report was emailed to Intertek-PSI (VA).

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Report Approved By: 

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NELAC NY 11769
NRPP 103216 AL
NRSB ARL0017

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

Laboratory Report for:

Property Tested: Project # 04481387-1

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


MCPS Radon Survey
Springbrook High School
MD 20904


Log Number	Device Number	Test Exposure Duration:				Area Tested	Result pCi/L
2393687	3916219	11/13/2018	6:55 am	11/16/2018	6:06 am	Bldg Springbrook High School Floor 1 Room B11	< 0.4
2393688	3916220	11/13/2018	6:59 am	11/16/2018	6:36 am	Bldg Springbrook High School Floor 1 Room B10	< 0.4
2393689	3916221	11/13/2018	8:39 am	11/16/2018	7:56 am	Bldg Springbrook High School Floor 1 Room E10	< 0.4
2393690	3916222	11/13/2018	8:41 am	11/16/2018	7:24 am	Bldg Springbrook High School Floor 1 Room E10	0.5
2393691	3916223	11/13/2018	8:48 am	11/16/2018	7:30 am	Bldg Springbrook High School Floor 1 Room E10	0.4
2393692	3916224	11/13/2018	8:58 am	11/16/2018	7:30 am	Bldg Springbrook High School Flr 1 Rm E108 Offi	0.6
2393693	3916225	11/13/2018	8:43 am	11/16/2018	7:29 am	Bldg Springbrook High School Floor 1 Room E10	0.4
2393694	3916226	11/13/2018	8:46 am	11/16/2018	7:28 am	Bldg Springbrook High School Floor 1 Room E10	0.5
2393695	3916228	11/13/2018	8:58 am	11/16/2018	7:57 am	Bldg Springbrook High School Flr 1 Rm Auditoriu	0.7
2393696	3916229	11/13/2018	9:02 am	11/16/2018	7:59 am	Bldg Springbrook High School Floor 1 Room D10	< 0.4
2393697	3916230	11/13/2018	9:02 am	11/16/2018	7:09 am	Bldg Springbrook High School Floor 1 Room D10	< 0.4

Comment: Unable to report a result for 3918037. Device counts below blank counts. A copy of this report was emailed to Intertek-PSI (VA).

Distributed by: Intertek-PSI (VA)

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Report Approved By: 

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Shawn Price, Director of Laboratory Operations, AccuStar Labs

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NELAC NY 11769
NRPP 103216 AL
NRSB ARL0017

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

Laboratory Report for:

Property Tested: Project # 04481387-1

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


MCPS Radon Survey
Springbrook High School
MD 20904


Log Number	Device Number	Test Exposure Duration:				Area Tested	Result pCi/L
2393698	3916231	11/13/2018 7:12 am	11/16/2018 6:36 am			Bldg Springbrook High School Floor 1 Room B12	< 0.4
2393699	3916232	11/13/2018 7:12 am	11/16/2018 6:36 am			Bldg Springbrook High School Floor 1 Room B12	< 0.4
2393700	3916233	11/13/2018 7:15 am	11/16/2018 6:41 am			Bldg Springbrook High School Floor 1 Room B10	< 0.4
2393701	3916234	11/13/2018 7:18 am	11/16/2018 6:01 am			Bldg Springbrook High School Floor 1 Room B10	< 0.4
2393702	3916235	11/13/2018 7:19 am	11/16/2018 6:42 am			Bldg Springbrook High School Floor 1 Room B10	< 0.4
2393703	3916236	11/13/2018 7:28 am	11/16/2018 6:51 am			Bldg Springbrook High School Floor 1 Room B12	< 0.4
2393704	3916237	11/13/2018 7:28 am	11/16/2018 6:51 am			Bldg Springbrook High School Floor 1 Room B12	< 0.4
2393705	3916238	11/13/2018 7:28 am	11/16/2018 6:51 am			Bldg Springbrook High School Floor 1 Room B12	Invalid
2393706	3916239	11/13/2018 7:32 am	11/16/2018 8:17 am			Bldg Springbrook High School Floor 1 Room A10	< 0.4
2393707	3916240	11/13/2018 7:33 am	11/16/2018 8:07 am			Bldg Springbrook High School Flr 1 Rm Attendan	< 0.4
2393708	3916242	11/13/2018 7:35 am	11/16/2018 8:19 am			Bldg Springbrook High School Floor 1 Room A10	< 0.4

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NELAC NY 11769
NRPP 103216 AL
NRSB ARL0017

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

Laboratory Report for:

Property Tested: Project # 04481387-1

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


MCPS Radon Survey
Springbrook High School
MD 20904


Log Number	Device Number	Test Exposure Duration:				Area Tested	Result pCi/L
2393709	3916243	11/13/2018	7:34 am	11/16/2018	8:09 am	Bldg Springbrook High School Floor 1 Room A11	< 0.4
2393710	3916244	11/13/2018	7:35 am	11/16/2018	8:09 am	Bldg Springbrook High School Floor 1 Room A10	< 0.4
2393711	3916245	11/13/2018	7:37 am	11/16/2018	8:20 am	Bldg Springbrook High School Floor 1 Room A10	< 0.4
2393712	3916246	11/13/2018	7:37 am	11/16/2018	8:01 am	Bldg Springbrook High School Floor 1 Room A10	< 0.4
2393713	3916247	11/13/2018	7:37 am	11/16/2018	8:22 am	Bldg Springbrook High School Floor 1 Room A10	< 0.4
2393714	3916248	11/13/2018	7:37 am	11/16/2018	8:23 am	Bldg Springbrook High School Floor 1 Room A10	0.7
2393715	3916249	11/13/2018	7:40 am	11/16/2018	6:00 am	Bldg Springbrook High School Floor 1 Room A10	< 0.4
2393716	3916250	11/13/2018	7:40 am	11/16/2018	8:25 am	Bldg Springbrook High School Floor 1 Room A10	< 0.4
2393717	3916251	11/13/2018	8:06 am	11/16/2018	7:02 am	Bldg Springbrook High School Flr Lower Level R	< 0.4
2393718	3916252	11/13/2018	8:05 am	11/16/2018	7:02 am	Bldg Springbrook High School Flr Lower Level R	1.7
2393719	3916253	11/13/2018	7:58 am	11/16/2018	7:03 am	Bldg Springbrook High School Floor 1 Room G10	< 0.4

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NRPP 103216 AL
NRSB ARL0017

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

Laboratory Report for:

Property Tested: Project # 04481387-1

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


MCPS Radon Survey
Springbrook High School
MD 20904


Log Number	Device Number	Test Exposure Duration:				Area Tested	Result pCi/L
2393720	3916254	11/13/2018	8:05 am	11/16/2018	7:02 am	Bldg Springbrook High School Flr 1 Rm F113 Offi	0.8
2393721	3916255	11/13/2018	7:56 am	11/16/2018	7:02 am	Bldg Springbrook High School Floor 1 Room G10	0.6
2393722	3916256	11/13/2018	8:03 am	11/16/2018	7:02 am	Bldg Springbrook High School Floor 1 Room F11	0.9
2393723	3916257	11/13/2018	8:04 am	11/16/2018	7:02 am	Bldg Springbrook High School Flr Lower Level R	0.6
2393724	3916258	11/13/2018	8:03 am	11/16/2018	7:02 am	Bldg Springbrook High School Flr Lower Level R	< 0.4
2393725	3916260	11/13/2018	8:07 am	11/16/2018	7:02 am	Bldg Springbrook High School Flr Lower Level R	< 0.4
2393726	3916261	11/13/2018	6:58 am	11/16/2018	6:36 am	Bldg Springbrook High School Floor 1 Room B10	< 0.4
2393727	3916262	11/13/2018	6:58 am	11/16/2018	6:36 am	Bldg Springbrook High School Floor 1 Room B10	< 0.4
2393728	3916263	11/13/2018	6:09 am	11/16/2018	6:37 am	Bldg Springbrook High School Floor 1 Room B10	< 0.4
2393729	3916264	11/13/2018	7:03 am	11/16/2018	6:27 am	Bldg Springbrook High School Floor 1 Room B10	< 0.4
2393730	3916265	11/13/2018	7:03 am	11/16/2018	6:27 am	Bldg Springbrook High School Floor 1 Room B10	< 0.4

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NRPP 103216 AL
NRSB ARL0017

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

Laboratory Report for:

Property Tested: Project # 04481387-1

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


MCPS Radon Survey
Springbrook High School
MD 20904


Log Number	Device Number	Test Exposure Duration:				Area Tested	Result pCi/L
2393731	3916266	11/13/2018	7:09 am	11/16/2018	6:31 am	Bldg Springbrook High School Floor 1 Room B11	< 0.4
2393732	3916267	11/13/2018	7:09 am	11/16/2018	6:33 am	Bldg Springbrook High School Floor 1 Room B11	< 0.4
2393733	3916268	11/13/2018	7:11 am	11/16/2018	6:35 am	Bldg Springbrook High School Floor 1 Room B12	< 0.4
2393734	3916269	11/13/2018	7:11 am	11/16/2018	6:40 am	Bldg Springbrook High School Floor 1 Room B10	< 0.4
2393735	3916270	11/13/2018	7:12 am	11/16/2018	6:36 am	Bldg Springbrook High School Floor 1 Room B12	< 0.4
2393736	3916609	11/13/2018	10:41 am	11/16/2018	8:30 am	Bldg Springbrook High School Flr 1 Rm Coach's	0.7
2393737	3916729	11/13/2018	9:43 am	11/16/2018	8:27 am	Bldg Springbrook High School Flr 1 Rm Weight R	0.5
2393738	3918013	11/13/2018	6:00 am	11/16/2018	9:02 am	Bldg Springbrook High School	< 0.4
2393739	3918037	11/13/2018	6:44 am	11/16/2018	9:02 am	Bldg Springbrook High School	Invalid
2393740	3918046	11/13/2018	6:00 am	11/16/2018	9:02 am	Bldg Springbrook High School	< 0.4
2393741	3918182	11/13/2018	6:44 am	11/16/2018	9:02 am	Bldg Springbrook High School	< 0.4

Comment: Unable to report a result for 3918037. Device counts below blank counts. A copy of this report was emailed to Intertek-PSI (VA).

Distributed by: Intertek-PSI (VA)

Date Received: 11/17/2018 Date Logged: 11/17/2018 Date Analyzed: 11/18/2018 Date Reported: 01/02/2019

Report Reviewed By: 

Report Approved By: 

Disclaimer:

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

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NELAC NY 11769
NRPP 103216 AL
NRSB ARL0017

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

Laboratory Report for:

Property Tested: Project # 04481387-1

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


MCPS Radon Survey
Springbrook High School
Potomac MD 20904


Log Number	Device Number	Test Exposure Duration:				Area Tested	Result pCi/L
2393596	3916259	11/13/2018	8:16 am	11/16/2018	7:06 pm	Not Indicated	1.0
2393597	3916203	11/13/2018	10:59 am	11/16/2018	7:42 am	Not Indicated	0.5
2393598	3916001	11/13/2018	7:41 am	11/16/2018	8:05 am	Bldg Springbrook High School Floor 1 Room A11	< 0.4

Comment: AMENDED REPORT for 3916259 and 3916203 on 2/1/2019 to add dates and times. A copy of this report was emailed to Intertek-PSI (VA).

Distributed by: Intertek-PSI (VA)

Date Received: 11/17/2018 Date Logged: 11/17/2018 Date Analyzed: 11/18/2018 Date Reported: 01/15/2019

Report Reviewed By: 

Report Approved By: 

Disclaimer:

Shawn Price, Director of Laboratory Operations, AccuStar Labs

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

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NELAC NY 11769
NRPP 103216 AL
NRSB ARL0017

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

Laboratory Report for:

Property Tested: Project # 04481387-1

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


MCPS Radon Survey
Springbrook High School
Potomac MD 20904


Log Number	Device Number	Test Exposure Duration:				Area Tested	Result pCi/L
2393074	3881159	11/13/2018	9:04 am	11/16/2018	7:08 am	Bldg Springbrook High School Floor 1 Room D10	0.8
2393075	3881162	11/13/2018	7:20 am	11/16/2018	6:37 am	Bldg Springbrook High School Floor 1 Room B11	<0.4
2393076	3881169	11/13/2018	9:31 am	11/16/2018	8:21 am	Bldg Springbrook High School Floor 1 Room D11	2.0
2393077	3881172	11/13/2018	7:20 am	11/16/2018	6:57 am	Bldg Springbrook High School Floor 1 Room B11	<0.4
2393078	3881179	11/13/2018	10:40 am	11/16/2018	8:14 am	Springbrook High School Flr Lower Level Rm Aux	3.5
2393079	3881192	11/13/2018	9:33 am	11/16/2018	8:22 am	Bldg Springbrook High School Floor 1 Room D11	1.7
2393080	3881182	11/13/2018	9:01 am	11/16/2018	8:01 am	Bldg Springbrook High School Floor 1 Room D01	2.1
2393081	3881202	11/13/2018	9:25 am	11/16/2018	8:12 am	Bldg Springbrook High School Flr Lower Level R	3.0
2393083	3881251	11/13/2018	9:01 am	11/16/2018	8:01 am	Bldg Springbrook High School Floor 1 Room D01	2.3
2393084	3881252	11/13/2018	10:40 am	11/16/2018	8:15 am	Bldg Springbrook High School Flr Lower Level R	3.8

Comment: A copy of this report was emailed to Intertek-PSI (VA).

Distributed by: Intertek-PSI (VA)

Date Received: 11/18/2018 Date Logged: 11/18/2018 Date Analyzed: 11/19/2018 Date Reported: 12/17/2018

Report Reviewed By: 

Report Approved By: 

Disclaimer:

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NELAC NY 11769
NRPP 103216 AL
NRSB ARL0017

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

Laboratory Report for:

Property Tested: Project # 04481387-1

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


MCPS Radon Survey
Springbrook High School
Potomac MD 20904


Log Number	Device Number	Test Exposure Duration:		Area Tested		Result pCi/L
2393074	3881159	11/13/2018 9:04 am	11/16/2018 7:08 am	Springbrook High School Floor 1 Room D102		0.8
2393075	3881162	11/13/2018 7:20 am	11/16/2018 6:37 am	Springbrook High School Floor 1 Room B119		<0.4
2393076	3881169	11/13/2018 9:31 am	11/16/2018 8:21 am	Springbrook High School Floor 1 Room D111		2.0
2393077	3881172	11/13/2018 7:20 am	11/16/2018 6:57 am	Springbrook High School Floor 1 Room B119		<0.4
2393078	3881179	11/13/2018 10:40 am	11/16/2018 8:14 am	Springbrook High School Flr Lower Level Rm Aux		3.5
2393079	3881192	11/13/2018 9:33 am	11/16/2018 8:22 am	Springbrook High School Floor 1 Room D111		1.7
2393080	3881182	11/13/2018 9:01 am	11/16/2018 8:01 am	Springbrook High School Floor 1 Room D014		2.1
2393081	3881202	11/13/2018 9:25 am	11/16/2018 8:12 am	Springbrook High School Flr Lower Level Rm Boy'		3.0
2393083	3881251	11/13/2018 9:01 am	11/16/2018 8:01 am	Springbrook High School Floor 1 Room D014		2.3
2393084	3881252	11/13/2018 10:40 am	11/16/2018 8:15 am	Springbrook High School Flr Lower Level Rm Aux		3.8

Comment: AMENDED REPORT 2/1/2019. A copy of this report was emailed to Intertek-PSI (VA).

Distributed by: Intertek-PSI (VA)

Date Received: 11/18/2018 Date Logged: 11/18/2018 Date Analyzed: 11/19/2018 Date Reported: 12/17/2018

Report Reviewed By: 

Report Approved By: 

Disclaimer:

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

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NRPP 105011 AL
NRSB ARL0007
Ohio RL41

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

Laboratory Report for:

Property Tested:

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

MCPS Radon Survey
4514 Taylorsville Road
Dayton OH 45424

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

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

Test Performed By: Unknown

Distributed by: Intertek-PSI (VA)

Date Received: 12/12/2018 Date Logged: 12/12/2018 Date Analyzed: 12/12/2018 Date Reported: 12/13/2018

Report Reviewed By: 

Report Approved By: 

Disclaimer:

The uncertainty of this radon measurement is $\sim \pm 10\%$. 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.

Shawn Price, Director of Laboratory Operations, AccuStar Labs

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EXPOSURE IN BOWSER-MORNER RADON CHAMBER

CLIENT Intertek - PSI

Job Number 187732

NOMINAL Conditions: Radon Conc 32.6 pCi/L Rel. Hum 49.1 % Temp. 70.1 F

Date Start: 12/7/18 Date Stop: 12/10/18

Date Start: _____ Date Stop: _____

Time Start: 0947 Time Stop: 0947

Time Start: _____ Time Stop: _____

Device No.'s: (10) Char. Cans-

Device No.'s: _____

3926831 thru 3926840

G2 Left

Date Start: _____ Date Stop: _____

Date Start: _____ Date Stop: _____

Time Start: _____ Time Stop: _____

Time Start: _____ Time Stop: _____

Device No.'s: _____

Device No.'s: _____

Date Start: _____ Date Stop: _____

Date Start: _____ Date Stop: _____

Time Start: _____ Time Stop: _____

Time Start: _____ Time Stop: _____

Device No.'s: _____

Device No.'s: _____

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

Chain of Custody

Project Name: MCPS Radon Survey 2018

Name of Schools:

- | | | |
|---------------------|----------------------|--------------------|
| 1. Highland View ES | 6. EB Lee MS | 11. Cannon Rd ES |
| 2. Kemp Mill ES | 7. Forest Knolls ES | 12. Cloverly ES |
| 3. Sligo Creek ES | 8. Galway ES | 13. Springbrook HS |
| 4. Highland ES | 9. Wheaton HS | |
| 5. Kennedy HS | 10. Briggs Chaney MS | |

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

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

RADON SCREENING SURVEY – FOLLOW-UP SPRINGBROOK HIGH SCHOOL

201 Valley Brook Dr., Silver Spring, Maryland 20904

EXECUTIVE SUMMARY

Date of Test Report:	3/14/18
Round of Testing:	Initial Follow-up Post Remediation
# Rooms Tested	76
# Rooms \geq 4.0 pCi/L:	7
Low Value:	<0.3
High Value:	7.9
Confirmed Rooms \geq 4.0 pCi/L US EPA Action Level	1 (plus 6 locations to be evaluated by mitigation contractor)

Summary of Sampling Events \geq 4.0 pCi/L

Room	Result (pCi/L) 2/8/18	Result (pCi/L) 3/14/18	Average Result (pCi/L)
G8	5.1	7.9	6.5
G111	4.1	2.9	3.5
D104	Missing	5.9	---*
D10	Not Tested	5.3	---*
D104F	1.9 (Tampered)	4.8	---*
D104E	Not Tested	4.6	---*
G111A	Not Tested	4.1	---*
C103H	Not Tested	4.0	---*

* -- To be evaluated by mitigation contractor

MCPS RADON TESTING - EXECUTIVE SUMMARY

Site Name	Springbrook High School
Date of Report	March 14, 2018
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	76
# Rooms ≥ 4.0 pCi/L	7
Lowest Value	<0.3 pCi/L
Highest Value	7.9 pCi/L

Project Status

Rooms with results ≥ 4.0 pCi/L: G8 (7.9 pCi/L), D104 (5.9, 5.4 pCi/L), D10 (5.3 pCi/L), D104F (4.8 pCi/L), D104E (4.6 pCi/L), G111A (4.1 pCi/L), C103H (4.0 pCi/L)

Current Project Status at this time: Retesting completed; use the average of the initial and re-test results in a room to determine if remediation is necessary.

Retest required for D104, D10, D104F, D104E, G111A, C103H



ENGINEERS • PLANNERS • SCIENTISTS • CONSTRUCTION MANAGERS

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

March 14, 2018

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

Re: Radon Testing Services

KCI Job #1214634188

Location: Springbrook High School

201 Valley Brook Dr.
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 Valley Brook Dr. in Silver Spring, Maryland 20904 (subject site).

SCOPE OF SERVICES

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

KCI visited the site on February 12, 2018 and deployed ninety-five (95) activated charcoal (AC) radon test kits. KCI deployed radon test kits in frequently-occupied ground contact rooms, and other areas, (if applicable) in accordance with AARST guidance.

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

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

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

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

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

EVALUATION OF TESTING CONDITIONS

These tests represent:

- Follow-up to post-mitigation biennial testing.

These tests were conducted to:

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

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

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

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

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

RESULTS

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

The results of the radon test analysis indicated the following:

Radon Concentration	Room	Result
≥4.0 pCi/L	G8	7.9
≥4.0 pCi/L	D104	5.9, 5.4
≥4.0 pCi/L	D10	5.3
≥4.0 pCi/L	D104F	4.8
≥4.0 pCi/L	D104E	4.6
≥4.0 pCi/L	G111A	4.1
≥4.0 pCi/L	C103H	4.0
≤4.0 pCi/L	See Attachment B	See Attachment B

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

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

Sincerely,



Radon Measurement Specialist
KCI Technologies, Inc.

Attachments:

B - Radon Test Summary Spreadsheets

C- Laboratory Analytical Results

ATTACHMENT B

Radon Test Summary Spreadsheet

Table Notes:

AC- Activated Charcoal

ACI- Air Chek, Inc.

D- Duplicate

FB- Field Blank

KCI- KCI Technologies, Inc.

OB- Office Blank

PM- Project Manager

QC- Quality Control

Table 1 - Radon Testing Results		
Springbrook High School		
Test Period: 02/12/18-02/15/18		
Kit Number	Room / Area	Result
7986079	C103A (Piano storage room.)	1.4
7985795	A102	0.5
7194179	A112	1.0
7978867	A114	0.9
7985741	B102B (Storage room)	< 0.3
7985773	B102D	0.6
7979396	B105	< 0.3
7979379	B105A	< 0.3
7986048	B110	0.6
7985746	B117	0.8
7986080	B119	1.0
7985774	B119	0.6
7985754	B120B	0.5
7978874	B122A	< 0.3
7978842	B122B	< 0.3
7986071	C101	1.1
7986074	C101A	0.9
7986075	C101B	0.8
7986078	C101C	1.2
7986055	C101D	0.8
7986095	C101E	0.9
7985738	C101G	1.1
7986058	C101H	0.9
7986057	C101J	1.1
7986022	C101K	1.2
7986063	C101L	1.7
7986064	C101M	2.1
7986065	C101O	1.0
7986072	C101P	0.9
7986096	C101Q	2.6
7986067	C101R	1.1
7986073	C101S	1.0
7985761	C102B (Kitchen area of health room)	1.1
7985724	C102H	1.3
7978891	C103	1.9
7985745	C103D	2.6
7979078	C103E	3.4
7979391	C103H	4.0
7194175	C310	1.2
7194176	D1	1.7
7976000	D1	2.9
7978894	D10	5.3
7979063	D102	1.6
7986088	D104	5.4
7985776	D104	5.9
7986087	D104E (Weight room)	4.6

Table Note:

* Missing or Compromised Sample

Table 1 - Radon Testing Results		
Springbrook High School		
Test Period: 02/12/18-02/15/18		
Kit Number	Room / Area	Result
7979059	D104F	4.8
7979397	D107A	1.8
7979033	D107C	2.3
7979381	D108	1.1
7979073	D108 PRACTICE RM	1.5
7194154	D11	3.4
7985701	D111	2.9
7975999	D4	2.8
7978889	D7	3.3
7194161	D9	2.8
7979394	E106A	0.8
7979057	E108B	0.7
7979058	E109	0.7
7979400	E111	0.8
7979066	E116A	2.8
7979081	E117	1.0
7978896	E308	0.9
7979389	F106	1.8
7985739	* F108 (Open Window, Humidifier on.)	0.9
7985897	F113	1.4
7979380	F113A	1.3
7978895	F307	< 0.3
7985777	G101A	2.3
7985726	G105	1.2
7979076	G106B	1.2
7979393	G107	0.7
7985775	* G108 (Open Window)	1.2
7985799	G111	2.9
7979335	G111A	4.1
7985896	G2	1.3
7985727	G8	7.9
7979392	KITCHEN	0.7
7979079	KITCHEN	0.5
7985800	STAGE	1.7
7985796	STAGE	1.9

Table Note:

* Missing or Compromised Sample

Table 2 - Radon Testing Results		
Springbrook High School		
Test Period: 02/12/18-02/15/18		
Kit Number	QC Type	Result
7978897	D (A112)	0.7
7986066	D (C101)	0.9
7978890	D (D1)	2.8
7979064	D (D102)	1.7
7979060	D (D108)	1.2
7979398	D (E109)	< 0.3
7979075	D (F108)	1.1
7979395	D (F113)	1.2
7979399	* D (G108:Open Window)	1.0
7985798	D (G111)	2.7
7986056	FB (C101A)	< 0.3
7979082	FB (D102)	< 0.3
7985895	FB (E109)	< 0.3
7985797	FB (G111)	< 0.3

Table Note:

* Missing or Compromised Sample

ATTACHMENT C

Laboratory Analytical Results

Radon test result report for:**SPRINGBROOK HIGH SCHOOL
MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7985795	A102	2018-02-12 @ 2:00 pm	2018-02-15 @ 9:00 am	0.5 ± 0.3	2018-02-19
7194179	A112	2018-02-12 @ 3:00 pm	2018-02-15 @ 9:00 am	1.0 ± 0.4	2018-02-19
7978897	A112	2018-02-12 @ 4:00 pm	2018-02-15 @ 9:00 am	0.7 ± 0.3	2018-02-19
7978867	A114	2018-02-12 @ 3:00 pm	2018-02-15 @ 10:00 am	0.9 ± 0.4	2018-02-19
7985741	B102B	2018-02-12 @ 1:00 pm	2018-02-15 @ 10:00 am	< 0.3	2018-02-19
7985773	B102D	2018-02-12 @ 1:00 pm	2018-02-15 @ 10:00 am	0.6 ± 0.3	2018-02-19
7979396	B105	2018-02-12 @ 1:00 pm	2018-02-15 @ 10:00 am	< 0.3	2018-02-19
7979379	B105A	2018-02-12 @ 1:00 pm	2018-02-15 @ 10:00 am	< 0.3	2018-02-19
7986048	B110	2018-02-12 @ 12:00 pm	2018-02-15 @ 12:00 pm	0.6 ± 0.3	2018-02-19
7985746	B117	2018-02-12 @ 2:00 pm	2018-02-15 @ 10:00 am	0.8 ± 0.4	2018-02-19
7986080	B119	2018-02-12 @ 2:00 pm	2018-02-15 @ 10:00 am	1.0 ± 0.3	2018-02-19
7985774	B119	2018-02-12 @ 2:00 pm	2018-02-15 @ 10:00 am	0.6 ± 0.3	2018-02-19
7985754	B120B	2018-02-12 @ 1:00 pm	2018-02-15 @ 10:00 am	0.5 ± 0.3	2018-02-19
7978874	B122A	2018-02-12 @ 3:00 pm	2018-02-15 @ 9:00 am	< 0.3	2018-02-19
7978842	B122B	2018-02-12 @ 3:00 pm	2018-02-15 @ 10:00 am	< 0.3	2018-02-19
7986071	C101	2018-02-12 @ 10:00 am	2018-02-15 @ 9:00 am	1.1 ± 0.3	2018-02-19
7986066	C101	2018-02-12 @ 10:00 am	2018-02-15 @ 9:00 am	0.9 ± 0.4	2018-02-19
7986056	C101A	2018-02-12 @ 10:00 am	2018-02-15 @ 9:00 am	< 0.3	2018-02-19
7986074	C101A	2018-02-12 @ 10:00 am	2018-02-15 @ 9:00 am	0.9 ± 0.3	2018-02-19
7986075	C101B	2018-02-12 @ 10:00 am	2018-02-15 @ 9:00 am	0.8 ± 0.3	2018-02-19
7986078	C101C	2018-02-12 @ 10:00 am	2018-02-15 @ 9:00 am	1.2 ± 0.3	2018-02-19
7986055	C101D	2018-02-12 @ 10:00 am	2018-02-15 @ 9:00 am	0.8 ± 0.3	2018-02-19
7986095	C101E	2018-02-12 @ 10:00 am	2018-02-15 @ 9:00 am	0.9 ± 0.3	2018-02-19
7985738	C101G	2018-02-12 @ 10:00 am	2018-02-15 @ 9:00 am	1.1 ± 0.3	2018-02-19
7986058	C101H	2018-02-12 @ 10:00 am	2018-02-15 @ 9:00 am	0.9 ± 0.3	2018-02-19
7986057	C101J	2018-02-12 @ 10:00 am	2018-02-15 @ 9:00 am	1.1 ± 0.4	2018-02-19
7986022	C101K	2018-02-12 @ 10:00 am	2018-02-15 @ 9:00 am	1.2 ± 0.3	2018-02-19
7986063	C101L	2018-02-12 @ 10:00 am	2018-02-15 @ 9:00 am	1.7 ± 0.4	2018-02-19
7986064	C101M	2018-02-12 @ 10:00 am	2018-02-15 @ 9:00 am	2.1 ± 0.4	2018-02-19
7986065	C101O	2018-02-12 @ 10:00 am	2018-02-15 @ 9:00 am	1.0 ± 0.3	2018-02-19
7986072	C101P	2018-02-12 @ 10:00 am	2018-02-15 @ 9:00 am	0.9 ± 0.3	2018-02-19
7986096	C101Q	2018-02-12 @ 10:00 am	2018-02-15 @ 9:00 am	2.6 ± 0.4	2018-02-19
7986067	C101R	2018-02-12 @ 10:00 am	2018-02-15 @ 9:00 am	1.1 ± 0.3	2018-02-19
7986073	C101S	2018-02-12 @ 10:00 am	2018-02-15 @ 9:00 am	1.0 ± 0.3	2018-02-19
7985761	C102B	2018-02-12 @ 10:00 am	2018-02-15 @ 9:00 am	1.1 ± 0.3	2018-02-19
7985724	C102H	2018-02-12 @ 10:00 am	2018-02-15 @ 9:00 am	1.3 ± 0.3	2018-02-19
7978891	C103	2018-02-12 @ 3:00 pm	2018-02-15 @ 9:00 am	1.9 ± 0.4	2018-02-19

Radon test result report for:**SPRINGBROOK HIGH SCHOOL
MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7986079	C103A	2018-02-12 @ 12:00 pm	2018-02-15 @ 12:00 pm	1.4 ± 0.3	2018-02-19
7985745	C103D	2018-02-12 @ 2:00 pm	2018-02-15 @ 11:00 am	2.6 ± 0.4	2018-02-19
7979078	C103E	2018-02-12 @ 2:00 pm	2018-02-15 @ 11:00 am	3.4 ± 0.5	2018-02-19
7979391	C103H	2018-02-12 @ 2:00 pm	2018-02-15 @ 11:00 am	4.0 ± 0.5	2018-02-19
7194175	C310	2018-02-12 @ 3:00 pm	2018-02-15 @ 10:00 am	1.2 ± 0.4	2018-02-19
7194176	D1	2018-02-12 @ 4:00 pm	2018-02-15 @ 10:00 am	1.7 ± 0.4	2018-02-19
7978890	D1	2018-02-12 @ 4:00 pm	2018-02-15 @ 10:00 am	2.8 ± 0.4	2018-02-19
7976000	D1	2018-02-12 @ 4:00 pm	2018-02-15 @ 10:00 am	2.9 ± 0.5	2018-02-19
7978894	D10	2018-02-12 @ 4:00 pm	2018-02-15 @ 10:00 am	5.3 ± 0.5	2018-02-19
7979064	D102	2018-02-12 @ 11:00 am	2018-02-15 @ 9:00 am	1.7 ± 0.3	2018-02-19
7979082	D102	2018-02-12 @ 11:00 am	2018-02-15 @ 9:00 am	< 0.3	2018-02-19
7979063	D102	2018-02-12 @ 11:00 am	2018-02-15 @ 9:00 am	1.6 ± 0.4	2018-02-19
7986088	D104	2018-02-12 @ 11:00 am	2018-02-15 @ 9:00 am	5.4 ± 0.5	2018-02-19
7985776	D104	2018-02-12 @ 11:00 am	2018-02-15 @ 9:00 am	5.9 ± 0.5	2018-02-19
7986087	D104E	2018-02-12 @ 11:00 am	2018-02-15 @ 9:00 am	4.6 ± 0.5	2018-02-19
7979059	D104F	2018-02-12 @ 11:00 am	2018-02-15 @ 9:00 am	4.8 ± 0.5	2018-02-19
7979397	D107A	2018-02-12 @ 11:00 am	2018-02-15 @ 9:00 am	1.8 ± 0.4	2018-02-19
7979033	D107C	2018-02-12 @ 11:00 am	2018-02-15 @ 9:00 am	2.3 ± 0.4	2018-02-19
7979381	D108	2018-02-12 @ 11:00 am	2018-02-15 @ 9:00 am	1.1 ± 0.3	2018-02-19
7979060	D108	2018-02-12 @ 11:00 am	2018-02-15 @ 9:00 am	1.2 ± 0.3	2018-02-19
7979073	D108 PRACTICE RM	2018-02-12 @ 11:00 am	2018-02-15 @ 9:00 am	1.5 ± 0.3	2018-02-19
7194154	D11	2018-02-12 @ 4:00 pm	2018-02-15 @ 10:00 am	3.4 ± 0.4	2018-02-19
7985701	D111	2018-02-12 @ 11:00 am	2018-02-15 @ 11:00 am	2.9 ± 0.4	2018-02-19
7975999	D4	2018-02-12 @ 12:00 pm	2018-02-15 @ 12:00 pm	2.8 ± 0.4	2018-02-19
7978889	D7	2018-02-12 @ 4:00 pm	2018-02-15 @ 11:00 am	3.3 ± 0.4	2018-02-19
7194161	D9	2018-02-12 @ 4:00 pm	2018-02-15 @ 10:00 am	2.8 ± 0.5	2018-02-19
7979394	E106A	2018-02-12 @ 12:00 pm	2018-02-15 @ 9:00 am	0.8 ± 0.3	2018-02-19
7979057	E108B	2018-02-12 @ 12:00 pm	2018-02-15 @ 9:00 am	0.7 ± 0.4	2018-02-19
7979058	E109	2018-02-12 @ 12:00 pm	2018-02-15 @ 9:00 am	0.7 ± 0.3	2018-02-19
7985895	E109	2018-02-12 @ 12:00 pm	2018-02-15 @ 9:00 am	< 0.3	2018-02-19
7979398	E109	2018-02-12 @ 12:00 pm	2018-02-15 @ 9:00 am	< 0.3	2018-02-19
7979400	E111	2018-02-12 @ 12:00 pm	2018-02-15 @ 9:00 am	0.8 ± 0.3	2018-02-19
7979066	E116A	2018-02-12 @ 12:00 pm	2018-02-15 @ 9:00 am	2.8 ± 0.4	2018-02-19
7979081	E117	2018-02-12 @ 12:00 pm	2018-02-15 @ 9:00 am	1.0 ± 0.3	2018-02-19
7978896	E308	2018-02-12 @ 3:00 pm	2018-02-15 @ 10:00 am	0.9 ± 0.4	2018-02-19
7979389	F106	2018-02-12 @ 12:00 pm	2018-02-15 @ 10:00 am	1.8 ± 0.4	2018-02-19
7985739	F108	2018-02-12 @ 12:00 pm	2018-02-15 @ 9:00 am	0.9 ± 0.3	2018-02-19

Radon test result report for:**SPRINGBROOK HIGH SCHOOL
MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7979075	F108	2018-02-12 @ 12:00 pm	2018-02-15 @ 9:00 am	1.1 ± 0.4	2018-02-19
7985897	F113	2018-02-12 @ 12:00 pm	2018-02-15 @ 9:00 am	1.4 ± 0.4	2018-02-19
7979395	F113	2018-02-12 @ 12:00 pm	2018-02-15 @ 9:00 am	1.2 ± 0.4	2018-02-19
7979380	F113A	2018-02-12 @ 12:00 pm	2018-02-15 @ 9:00 am	1.3 ± 0.4	2018-02-19
7978895	F307	2018-02-12 @ 3:00 pm	2018-02-15 @ 10:00 am	< 0.3	2018-02-19
7985777	G101A	2018-02-12 @ 12:00 pm	2018-02-15 @ 9:00 am	2.3 ± 0.4	2018-02-19
7985726	G105	2018-02-12 @ 1:00 pm	2018-02-15 @ 9:00 am	1.2 ± 0.4	2018-02-19
7979076	G106B	2018-02-12 @ 12:00 pm	2018-02-15 @ 9:00 am	1.2 ± 0.4	2018-02-19
7979393	G107	2018-02-12 @ 1:00 pm	2018-02-15 @ 9:00 am	0.7 ± 0.3	2018-02-19
7979399	G108	2018-02-12 @ 1:00 pm	2018-02-15 @ 9:00 am	1.0 ± 0.3	2018-02-19
7985775	G108	2018-02-12 @ 1:00 pm	2018-02-15 @ 9:00 am	1.2 ± 0.4	2018-02-19
7985798	G111	2018-02-12 @ 1:00 pm	2018-02-15 @ 9:00 am	2.7 ± 0.4	2018-02-19
7985799	G111	2018-02-12 @ 1:00 pm	2018-02-15 @ 9:00 am	2.9 ± 0.4	2018-02-19
7985797	G111	2018-02-12 @ 1:00 pm	2018-02-15 @ 9:00 am	< 0.3	2018-02-19
7979335	G111A	2018-02-12 @ 2:00 pm	2018-02-15 @ 11:00 am	4.1 ± 0.5	2018-02-19
7985896	G2	2018-02-12 @ 2:00 pm	2018-02-15 @ 10:00 am	1.3 ± 0.3	2018-02-19
7985727	G8	2018-02-12 @ 2:00 pm	2018-02-15 @ 10:00 am	7.9 ± 0.6	2018-02-19
7979079	KITCHEN	2018-02-12 @ 1:00 pm	2018-02-15 @ 10:00 am	0.5 ± 0.4	2018-02-19
7979392	KITCHEN	2018-02-12 @ 1:00 pm	2018-02-15 @ 10:00 am	0.7 ± 0.3	2018-02-19
7985800	STAGE	2018-02-12 @ 2:00 pm	2018-02-15 @ 11:00 am	1.7 ± 0.4	2018-02-19
7985796	STAGE	2018-02-12 @ 2:00 pm	2018-02-15 @ 11:00 am	1.9 ± 0.4	2018-02-19



Radon Test Kit Chain of Custody

Project Name: MCPS Radon

Names of Schools:

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

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

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

February 27, 2018

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

OFFICE BLANKS

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

February 27, 2018

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:
TRANSIT BLANKS

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

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

February 28, 2018

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

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

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

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

EXPOSURE IN BOWSER-MORNER RADON CHAMBER

CLIENT KCI Technologies Inc. Job Number 183530

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

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

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

MCPS RADON TESTING - EXECUTIVE SUMMARY

Site Name	Springbrook High School
Date of Report	February 8, 2018
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	105
# Rooms ≥ 4.0 pCi/L	2
Lowest Value	< 0.3 pCi/L
Highest Value	5.1 pCi/L

Rooms with results ≥ 4.0 pCi/L:

G8 (5.1 pCi/L), G111, (4.1 pCi/L)

Current Project Status at this time: Testing Completed; retesting needed for results ≥ 4.0 pCi/L.

Missing or compromised samples need re-test.



ENGINEERS • PLANNERS • SCIENTISTS • CONSTRUCTION MANAGERS

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

February 8, 2018

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

Re: Radon Testing Services

KCI Job #1214694182

Location: Springbrook High School

201 Valleybrook Dr.
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 Dr. in Silver Spring, Maryland 20904 (subject site).

SCOPE OF SERVICES

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

KCI visited the site on November 28, 2017 and deployed one-hundred-twenty-eight (128) activated charcoal (AC) radon test kits. KCI deployed radon test kits in frequently-occupied ground contact rooms, and other areas, (if applicable) in accordance with AARST guidance. A floor plan map of the building with the test locations is included as Appendix A of this report.

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

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

KCI returned to the site on December 1, 2017 to retrieve the radon sampling test kits. KCI shipped all radon tests via overnight delivery to Aircheck, Inc. for analysis by gamma-ray spectroscopy. Aircheck, Inc. is a NRSB certified analytical laboratory for radon analysis (certification #ARL1402) located at 1936 Butler Bridge Road, Mills River, North Carolina.

EVALUATION OF TESTING CONDITIONS

These tests represent:

- Post-mitigation biennial testing.

These tests were conducted to:

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

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

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

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

KCI also compiled weather data for the testing period and conducted observations of relevant field conditions. During the test period, weather records indicate low temperatures were in the 30s and high temperatures ranged from the low-50s to mid-60s. Maximum sustained winds ranged from 8-15 miles per hour. Average humidity was around 65%. 0.02 Inches of precipitation was recorded during the testing period.

A magnitude 4.1 earthquake was reported on Thursday, November 30 near Dover, Delaware approximately 95 miles east of Gaithersburg, Maryland. The earthquake occurred during or just after the radon testing period for this facility. In general, enhanced radon emissions have been observed prior to earthquakes and this has been recorded all over the world, according to the research article entitled *Radon-222: A Potential Short-Term Earthquake Precursor*, published June 30, 2015 in the Journal of Earth Science and Climate

Change. The nearby earthquake, which occurred during or prior to the testing period, may have resulted in higher-than-normal radon test results for this facility.

RESULTS

The sampling locations, field observations, and analytical results are listed on Table 1 (Attachment B). The quality control sample locations and analytical results are listed on Table 2 (Appendix B). Missing/compromised tests, missed rooms, and locked rooms are listed on Table 3 (Appendix B). The laboratory analytical results are included in Attachment C. Laboratory results and exposure data for the spike samples are also included in Attachment C.

The results of the radon test analysis indicated the following:

Radon Concentration	Room	Result
≥ 4.0 pCi/L	G8	5.1
≥ 4.0 pCi/L	G111	4.1
≤ 4.0 pCi/L	See Attachment B	See Attachment B

Quality Control Samples	
Results of Blank Canisters:	The field blanks, 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,



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

Attachments:

B - Tables 1-3, Radon Test Summary Spreadsheets

C- Laboratory Analytical Results

ATTACHMENT B

Radon Test Summary Spreadsheet

Table Notes:

AC- Activated Charcoal

ACI- Air Chek, Inc.

D- Duplicate

FB- Field Blank

KCI- KCI Technologies, Inc.

OB- Office Blank

PM- Project Manager

QC- Quality Control

Radon Testing Results		
Springbrook High School		
Test Period: 11/28/17-12/01/17		
Kit Number	Room / Area	Result
7978432	A101	0.8
7978433	* A102 (Tampered)	0.6
7978434	A103	< 0.3
7978435	A104	0.8
7978436	A105	0.6
7978437	A106	0.7
7978438	A108	0.8
7978439	A109	0.8
7978440	A110	0.8
7978441	A111	0.8
7978442	* A114 (Tampered)	0.7
7978416	B101	0.8
7978415	B102	1.1
7978413	* B102D (Tampered)	< 0.3
7978412	B103	0.9
7978410	B104	0.7
7978411	B104C	1.8
7978408	* B105 (Missing)	-
7978409	B105B	0.7
7978402	B106	< 0.3
7978406	B106C	0.9
7978407	B106D	< 0.3
7978404	B107	0.7
7978418	B108	0.7
7978420	B108C	< 0.3
7978421	B109	0.8
7978424	B109A	0.5
7978422	B109B	< 0.3
7978425	B118	0.6
7978429	B121	1.2
7978430	B122	< 0.3
7978431	B122 OFFICE	< 0.3
7978401	BLDG SERVICES	0.8
7978466	C102	1.0
7978467	C102A	0.7
7978468	C102D	1.1
7978469	C102G	1.4
7978473	* C102H (Missing)	-
7978465	C103	1.3
7978464	* C103 (Tampered)	0.9
7978499	* C310 (Open Window)	1.1
7978427	CAFETERIA	1.0
7978428	CAFETERIA	0.7
7978461	* D102 (Tampered)	1.1
7978463	D103	1.5
7978444	* D104 (Missing)	-

Table Note:

* Missing or Compromised Sample

Radon Testing Results		
Springbrook High School		
Test Period: 11/28/17-12/01/17		
Kit Number	Room / Area	Result
7978443	* D104 (Missing)	-
7978445	* D104F (Tampered)	1.9
7978457	D107	0.9
7978460	* D107A (Tampered)	0.5
7978459	D107B	1.1
7978458	* D107C (Missing)	-
7978455	D107E	1.0
7978454	D107F	0.6
7978462	D107G	0.9
7978451	* D108 (Open Door)	0.5
7978450	* D108 PRACTICE RM (Tampered)	0.8
7978453	D108A	0.8
7978448	D108H	0.8
7978452	D108J	0.6
7978447	D120	2.2
7978478	E105	0.9
7978477	E106	0.7
7978476	E107	0.6
7976218	E108	0.7
7976249	* E108B (Tampered)	0.9
7978475	* E109 (Tampered)	0.6
7978472	E110	0.7
7976219	E113	0.9
7978470	E114	< 0.3
7976300	E115	0.6
7978471	E116	1.4
7976204	* E117 (Open Window)	0.6
7976227	E118	0.9
7978486	E206	< 0.3
7978485	E211	0.6
7978488	* E308 (Missing)	-
7978480	E314	< 0.3
7978487	E319	< 0.3
7976289	F101	< 0.3
7976213	F102	< 0.3
7976221	F103	0.9
7976206	F104	1.0
7976235	F105	0.6
7976211	* F106 (Tampered)	1.6
7976234	F107	0.6
7976208	* F108 (Open Window, Tampered)	1.5
7976229	F109	0.8
7976207	* F112 (Tampered)	0.8
7976203	* F113 (Open Window)	0.8
7978483	F201	0.8
7978490	F202	0.6
7978489	F210	0.5
7978496	F302	0.7
7978481	* F307 (Tampered)	< 0.3
7978492	G1	1.5

Table Note:

* Missing or Compromised Sample

Radon Testing Results		
Springbrook High School		
Test Period: 11/28/17-12/01/17		
Kit Number	Room / Area	Result
7976246	G101	2.0
7976202	* G105 (Tampered)	0.9
7976223	G106A	0.7
7976201	* G107 (Tampered)	0.8
7976209	* G108 (Tampered)	1.0
7976216	G109	1.2
7978497	G11	0.9
7976212	G110	1.6
7976222	G110B	1.4
7976210	G111	4.1
7978498	G12	0.9
7978491	G8	5.1
7978446	WEIGHT ROOM	2.8

Table Note:

* Missing or Compromised Sample

Radon Testing Results		
Springbrook High School		
Test Period: 11/28/17-12/01/17		
Kit Number	QC Type	Result
7978417	D (B101)	0.8
7978414	* D (B102D:Tampered)	0.6
7978403	D (B107)	1.0
7978419	D (B108)	0.7
7978423	D (B109B)	< 0.3
7978456	D (D107)	0.8
7978449	D (D108H)	0.9
7978474	D (E113)	< 0.3
7978484	D (E211)	< 0.3
7976205	D (F104)	1.1
7976217	D (F105)	0.8
7978482	* D (F307:Tampered)	< 0.3
7978405	FB (B106)	< 0.3
7978426	* FB (B118:Tampered)	< 0.3
7978479	FB (E105)	< 0.3
7976215	FB (E108)	< 0.3
7976220	FB (G110)	< 0.3
7975551	OB (OB)	< 0.3
7975556	OB (OB)	< 0.3

Table Note:

* Missing or Compromised Sample

ATTACHMENT C

Laboratory Analytical Results

Radon test result report for:**SPRINGBROOK HS****1**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7978432	A101	2017-11-28 @ 1:00 pm	2017-12-01 @ 11:00 am	0.8 ± 0.3	2017-12-04
7978433	A102	2017-11-28 @ 1:00 pm	2017-12-01 @ 11:00 am	0.6 ± 0.3	2017-12-05
7978434	A103	2017-11-28 @ 1:00 pm	2017-12-01 @ 11:00 am	< 0.3	2017-12-04
7978435	A104	2017-11-28 @ 1:00 pm	2017-12-01 @ 11:00 am	0.8 ± 0.3	2017-12-04
7978436	A105	2017-11-28 @ 1:00 pm	2017-12-01 @ 11:00 am	0.6 ± 0.3	2017-12-04
7978437	A106	2017-11-28 @ 1:00 pm	2017-12-01 @ 11:00 am	0.7 ± 0.3	2017-12-05
7978438	A108	2017-11-28 @ 1:00 pm	2017-12-01 @ 11:00 am	0.8 ± 0.3	2017-12-04
7978439	A109	2017-11-28 @ 1:00 pm	2017-12-01 @ 11:00 am	0.8 ± 0.2	2017-12-04
7978440	A110	2017-11-28 @ 1:00 pm	2017-12-01 @ 11:00 am	0.8 ± 0.3	2017-12-04
7978441	A111	2017-11-28 @ 1:00 pm	2017-12-01 @ 11:00 am	0.8 ± 0.3	2017-12-04
7978442	A114	2017-11-28 @ 1:00 pm	2017-12-01 @ 11:00 am	0.7 ± 0.3	2017-12-04
7978417	B101	2017-11-28 @ 12:00 pm	2017-12-01 @ 10:00 am	0.8 ± 0.3	2017-12-04
7978416	B101	2017-11-28 @ 12:00 pm	2017-12-01 @ 10:00 am	0.8 ± 0.3	2017-12-04
7978415	B102	2017-11-28 @ 12:00 pm	2017-12-01 @ 10:00 am	1.1 ± 0.3	2017-12-05
7978413	B102D	2017-11-28 @ 12:00 pm	2017-12-01 @ 10:00 am	< 0.3	2017-12-04
7978414	B102D	2017-11-28 @ 12:00 pm	2017-12-01 @ 10:00 am	0.6 ± 0.2	2017-12-04
7978412	B103	2017-11-28 @ 12:00 pm	2017-12-01 @ 10:00 am	0.9 ± 0.3	2017-12-04
7978410	B104	2017-11-28 @ 12:00 pm	2017-12-01 @ 9:00 am	0.7 ± 0.3	2017-12-04
7978411	B104C	2017-11-28 @ 12:00 pm	2017-12-01 @ 9:00 am	1.8 ± 0.3	2017-12-04
7978409	B105B	2017-11-28 @ 12:00 pm	2017-12-01 @ 9:00 am	0.7 ± 0.3	2017-12-04
7978402	B106	2017-11-28 @ 11:00 am	2017-12-01 @ 9:00 am	< 0.3	2017-12-04
7978405	B106	2017-11-28 @ 11:00 am	2017-12-01 @ 9:00 am	< 0.3	2017-12-04
7978406	B106C	2017-11-28 @ 11:00 am	2017-12-01 @ 9:00 am	0.9 ± 0.3	2017-12-04
7978407	B106D	2017-11-28 @ 12:00 pm	2017-12-01 @ 9:00 am	< 0.3	2017-12-04
7978403	B107	2017-11-28 @ 11:00 am	2017-12-01 @ 9:00 am	1.0 ± 0.3	2017-12-05
7978404	B107	2017-11-28 @ 11:00 am	2017-12-01 @ 9:00 am	0.7 ± 0.3	2017-12-05
7978418	B108	2017-11-28 @ 12:00 pm	2017-12-01 @ 10:00 am	0.7 ± 0.3	2017-12-04
7978419	B108	2017-11-28 @ 12:00 pm	2017-12-01 @ 10:00 am	0.7 ± 0.3	2017-12-04
7978420	B108C	2017-11-28 @ 12:00 pm	2017-12-01 @ 10:00 am	< 0.3	2017-12-05
7978421	B109	2017-11-28 @ 12:00 pm	2017-12-01 @ 10:00 am	0.8 ± 0.3	2017-12-04
7978424	B109A	2017-11-28 @ 12:00 pm	2017-12-01 @ 10:00 am	0.5 ± 0.3	2017-12-04
7978423	B109B	2017-11-28 @ 12:00 pm	2017-12-01 @ 10:00 am	< 0.3	2017-12-04
7978422	B109B	2017-11-28 @ 12:00 pm	2017-12-01 @ 10:00 am	< 0.3	2017-12-04
7978425	B118	2017-11-28 @ 12:00 pm	2017-12-01 @ 10:00 am	0.6 ± 0.3	2017-12-04
7978426	B118	2017-11-28 @ 12:00 pm	2017-12-01 @ 10:00 am	< 0.3	2017-12-04
7978429	B121	2017-11-28 @ 12:00 pm	2017-12-01 @ 10:00 am	1.2 ± 0.3	2017-12-04
7978430	B122	2017-11-28 @ 1:00 pm	2017-12-01 @ 10:00 am	< 0.3	2017-12-04

Radon test result report for:**SPRINGBROOK HS****1**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7978431	B122 OFFICE	2017-11-28 @ 1:00 pm	2017-12-01 @ 10:00 am	< 0.3	2017-12-04
7978401	BLDG SERVICES	2017-11-28 @ 11:00 am	2017-12-01 @ 9:00 am	0.8 ± 0.3	2017-12-05
7978466	C102	2017-11-28 @ 2:00 pm	2017-12-01 @ 11:00 am	1.0 ± 0.3	2017-12-04
7978467	C102A	2017-11-28 @ 2:00 pm	2017-12-01 @ 11:00 am	0.7 ± 0.2	2017-12-04
7978468	C102D	2017-11-28 @ 2:00 pm	2017-12-01 @ 11:00 am	1.1 ± 0.3	2017-12-04
7978469	C102G	2017-11-28 @ 2:00 pm	2017-12-01 @ 11:00 am	1.4 ± 0.3	2017-12-04
7978464	C103	2017-11-28 @ 2:00 pm	2017-12-01 @ 10:00 am	0.9 ± 0.3	2017-12-04
7978465	C103	2017-11-28 @ 2:00 pm	2017-12-01 @ 10:00 am	1.3 ± 0.3	2017-12-05
7978499	C310	2017-11-28 @ 6:00 pm	2017-12-01 @ 12:00 pm	1.1 ± 0.3	2017-12-04
7978428	CAFETERIA	2017-11-28 @ 12:00 pm	2017-12-01 @ 10:00 am	0.7 ± 0.3	2017-12-04
7978427	CAFETERIA	2017-11-28 @ 12:00 pm	2017-12-01 @ 10:00 am	1.0 ± 0.3	2017-12-04
7978461	D102	2017-11-28 @ 2:00 pm	2017-12-01 @ 10:00 am	1.1 ± 0.2	2017-12-04
7978463	D103	2017-11-28 @ 2:00 pm	2017-12-01 @ 12:00 pm	1.5 ± 0.3	2017-12-04
7978445	D104F	2017-11-28 @ 1:00 pm	2017-12-01 @ 10:00 am	1.9 ± 0.3	2017-12-04
7978457	D107	2017-11-28 @ 2:00 pm	2017-12-01 @ 10:00 am	0.9 ± 0.3	2017-12-04
7978456	D107	2017-11-28 @ 2:00 pm	2017-12-01 @ 10:00 am	0.8 ± 0.3	2017-12-05
7978460	D107A	2017-11-28 @ 2:00 pm	2017-12-01 @ 10:00 am	0.5 ± 0.3	2017-12-05
7978459	D107B	2017-11-28 @ 2:00 pm	2017-12-01 @ 12:00 pm	1.1 ± 0.3	2017-12-04
7978455	D107E	2017-11-28 @ 2:00 pm	2017-12-01 @ 10:00 am	1.0 ± 0.3	2017-12-04
7978454	D107F	2017-11-28 @ 2:00 pm	2017-12-01 @ 10:00 am	0.6 ± 0.3	2017-12-04
7978462	D107G	2017-11-28 @ 2:00 pm	2017-12-01 @ 10:00 am	0.9 ± 0.3	2017-12-04
7978451	D108	2017-11-28 @ 2:00 pm	2017-12-01 @ 10:00 am	0.5 ± 0.3	2017-12-05
7978450	D108 PRACTICE RM	2017-11-28 @ 2:00 pm	2017-12-01 @ 10:00 am	0.8 ± 0.3	2017-12-04
7978453	D108A	2017-11-28 @ 2:00 pm	2017-12-01 @ 10:00 am	0.8 ± 0.3	2017-12-05
7978448	D108H	2017-11-28 @ 2:00 pm	2017-12-01 @ 10:00 am	0.8 ± 0.3	2017-12-04
7978449	D108H	2017-11-28 @ 2:00 pm	2017-12-01 @ 10:00 am	0.9 ± 0.3	2017-12-05
7978452	D108J	2017-11-28 @ 2:00 pm	2017-12-01 @ 10:00 am	0.6 ± 0.3	2017-12-04
7978447	D120	2017-11-28 @ 1:00 pm	2017-12-01 @ 12:00 pm	2.2 ± 0.3	2017-12-04
7978478	E105	2017-11-28 @ 5:00 pm	2017-12-01 @ 11:00 am	0.9 ± 0.3	2017-12-04
7978479	E105	2017-11-28 @ 5:00 pm	2017-12-01 @ 2:00 pm	< 0.3	2017-12-05
7978477	E106	2017-11-28 @ 5:00 pm	2017-12-01 @ 11:00 am	0.7 ± 0.3	2017-12-04
7978476	E107	2017-11-28 @ 5:00 pm	2017-12-01 @ 10:00 am	0.6 ± 0.3	2017-12-04
7976215	E108	2017-11-28 @ 3:00 pm	2017-12-01 @ 10:00 am	< 0.3	2017-12-04
7976218	E108	2017-11-28 @ 3:00 pm	2017-12-01 @ 10:00 am	0.7 ± 0.3	2017-12-05
7976249	E108B	2017-11-28 @ 3:00 pm	2017-12-01 @ 10:00 am	0.9 ± 0.3	2017-12-04
7978475	E109	2017-11-28 @ 5:00 pm	2017-12-01 @ 11:00 am	0.6 ± 0.3	2017-12-05
7978472	E110	2017-11-28 @ 5:00 pm	2017-12-01 @ 11:00 am	0.7 ± 0.2	2017-12-04

Radon test result report for:**SPRINGBROOK HS****1**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7976219	E113	2017-11-28 @ 5:00 pm	2017-12-01 @ 11:00 am	0.9 ± 0.3	2017-12-04
7978474	E113	2017-11-28 @ 5:00 pm	2017-12-01 @ 11:00 am	< 0.3	2017-12-05
7978470	E114	2017-11-28 @ 5:00 pm	2017-12-01 @ 11:00 am	< 0.3	2017-12-05
7976300	E115	2017-11-28 @ 3:00 pm	2017-12-01 @ 11:00 am	0.6 ± 0.3	2017-12-04
7978471	E116	2017-11-28 @ 5:00 pm	2017-12-01 @ 11:00 am	1.4 ± 0.3	2017-12-04
7976204	E117	2017-11-28 @ 3:00 pm	2017-12-01 @ 11:00 am	0.6 ± 0.3	2017-12-04
7976227	E118	2017-11-28 @ 4:00 pm	2017-12-01 @ 11:00 am	0.9 ± 0.3	2017-12-05
7978486	E206	2017-11-28 @ 5:00 pm	2017-12-01 @ 11:00 am	< 0.3	2017-12-04
7978485	E211	2017-11-28 @ 5:00 pm	2017-12-01 @ 11:00 am	0.6 ± 0.3	2017-12-04
7978484	E211	2017-11-28 @ 5:00 pm	2017-12-01 @ 11:00 am	< 0.3	2017-12-04
7978480	E314	2017-11-28 @ 6:00 pm	2017-12-01 @ 12:00 pm	< 0.3	2017-12-05
7978487	E319	2017-11-28 @ 6:00 pm	2017-12-01 @ 12:00 pm	< 0.3	2017-12-05
7976289	F101	2017-11-28 @ 3:00 pm	2017-12-01 @ 11:00 am	< 0.3	2017-12-04
7976213	F102	2017-11-28 @ 3:00 pm	2017-12-01 @ 11:00 am	< 0.3	2017-12-04
7976221	F103	2017-11-28 @ 4:00 pm	2017-12-01 @ 11:00 am	0.9 ± 0.3	2017-12-05
7976205	F104	2017-11-28 @ 3:00 pm	2017-12-01 @ 11:00 am	1.1 ± 0.3	2017-12-05
7976206	F104	2017-11-28 @ 3:00 pm	2017-12-01 @ 11:00 am	1.0 ± 0.3	2017-12-05
7976217	F105	2017-11-28 @ 4:00 pm	2017-12-01 @ 11:00 am	0.8 ± 0.3	2017-12-04
7976211	F106	2017-11-28 @ 3:00 pm	2017-12-01 @ 11:00 am	1.6 ± 0.3	2017-12-04
7976234	F107	2017-11-28 @ 4:00 pm	2017-12-01 @ 11:00 am	0.6 ± 0.2	2017-12-04
7976235	F105	2017-11-28 @ 4:00 pm	2017-12-01 @ 11:00 am	0.6 ± 0.2	2017-12-04
7976208	F108	2017-11-28 @ 3:00 pm	2017-12-01 @ 11:00 am	1.5 ± 0.3	2017-12-04
7976229	F109	2017-11-28 @ 4:00 pm	2017-12-01 @ 11:00 am	0.8 ± 0.3	2017-12-04
7976207	F112	2017-11-28 @ 3:00 pm	2017-12-01 @ 11:00 am	0.8 ± 0.3	2017-12-04
7976203	F113	2017-11-28 @ 3:00 pm	2017-12-01 @ 11:00 am	0.8 ± 0.2	2017-12-04
7978483	F201	2017-11-28 @ 5:00 pm	2017-12-01 @ 11:00 am	0.8 ± 0.3	2017-12-04
7978490	F202	2017-11-28 @ 5:00 pm	2017-12-01 @ 11:00 am	0.6 ± 0.3	2017-12-04
7978489	F210	2017-11-28 @ 5:00 pm	2017-12-01 @ 11:00 am	0.5 ± 0.3	2017-12-04
7978496	F302	2017-11-28 @ 6:00 pm	2017-12-01 @ 12:00 pm	0.7 ± 0.3	2017-12-04
7978481	F307	2017-11-28 @ 6:00 pm	2017-12-01 @ 12:00 pm	< 0.3	2017-12-04
7978482	F307	2017-11-28 @ 6:00 pm	2017-12-01 @ 12:00 pm	< 0.3	2017-12-04
7978492	G1	2017-11-28 @ 6:00 pm	2017-12-01 @ 12:00 pm	1.5 ± 0.3	2017-12-04
7976246	G101	2017-11-28 @ 4:00 pm	2017-12-01 @ 12:00 pm	2.0 ± 0.3	2017-12-04
7976202	G105	2017-11-28 @ 4:00 pm	2017-12-01 @ 11:00 am	0.9 ± 0.3	2017-12-04
7976223	G106A	2017-11-28 @ 4:00 pm	2017-12-01 @ 11:00 am	0.7 ± 0.3	2017-12-04
7976201	G107	2017-11-28 @ 4:00 pm	2017-12-01 @ 12:00 pm	0.8 ± 0.2	2017-12-04
7976209	G108	2017-11-28 @ 4:00 pm	2017-12-01 @ 11:00 am	1.0 ± 0.3	2017-12-04

December 19, 2017

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

SPRINGBROOK HS

1

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7976216	G109	2017-11-28 @ 4:00 pm	2017-12-01 @ 11:00 am	1.2 ± 0.3	2017-12-04
7978497	G11	2017-11-28 @ 6:00 pm	2017-12-01 @ 12:00 pm	0.9 ± 0.3	2017-12-04
7976212	G110	2017-11-28 @ 4:00 pm	2017-12-01 @ 11:00 am	1.6 ± 0.3	2017-12-04
7976220	G110	2017-11-28 @ 4:00 pm	2017-12-01 @ 11:00 am	< 0.3	2017-12-04
7976222	G110B	2017-11-28 @ 4:00 pm	2017-12-01 @ 12:00 pm	1.4 ± 0.3	2017-12-04
7976210	G111	2017-11-28 @ 4:00 pm	2017-12-01 @ 11:00 am	4.1 ± 0.4	2017-12-05
7978498	G12	2017-11-28 @ 6:00 pm	2017-12-01 @ 12:00 pm	0.9 ± 0.3	2017-12-04
7978491	G8	2017-11-28 @ 6:00 pm	2017-12-01 @ 12:00 pm	5.1 ± 0.4	2017-12-04
7975556	OB	2017-11-28 @ 2:00 pm	2017-12-01 @ 2:00 pm	< 0.3	2017-12-04
7975551	OB	2017-11-28 @ 2:00 pm	2017-12-01 @ 2:00 pm	< 0.3	2017-12-05
7978446	WEIGHT ROOM	2017-11-28 @ 1:00 pm	2017-12-01 @ 10:00 am	2.8 ± 0.3	2017-12-05

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

December 21, 2017

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

SPRINGBROOK HS

1

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7978408	B105	@	@		
7978473	C102H	@	@		
7978443	D104	@	@		
7978444	D104	@	@		
7978458	D107C	@	@		
7978488	E308	@	@		

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



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

Radon Test Kit Chain of Custody

Project Name: MCPS Radon Phase

Names of Schools:

- | | |
|------------------------------------|-----------------------------------|
| 1. Chevy Chase Elementary School | 15. Viers Mill Elementary School |
| 2. Greencastle Elementary School | 16. Albert Einstein High School |
| 3. English Manor | 17. Wayside Elementary School |
| 4. Rock View Elementary School | 18. Thomas S. Wootton High School |
| 5. Wheaton Woods Elementary School | 19. Highland Elementary School |
| 6. Sequoyah Elementary School | 20. Bethesda Transportation Depot |
| 7. Fallsmead Elementary School | 21. Bethesda Maintenance Depot |
| 8. Beall Elementary School | 22. Travilah Elementary School |
| 9. Stephen Knolls School | 23. Lathrop E. Smith Center |
| 10. Maryvale Elementary School | |
| 11. Redland Middle School | |
| 12. Walt Whitman High School | |
| 13. Springbrook High School | |
| 14. Blair G. Ewing Center | |

	Date	Initials
Radon Test Kits Deployed	11/28/17	JM
Radon Test Kits Collected	12/01/17	JM
Radon Test Kits Shipped to Lab*	12/01/17	JM
Radon Test Kits Received by Lab*	12/05/17	JM

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

Radon test result report for:**TRANSIT 1****NONE**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7978062	TRANSIT 1	2017-11-27 @ 4:00 pm	2017-11-30 @ 4:00 pm	< 0.3	2017-12-04
7975804	TRANSIT 10	2017-11-27 @ 4:00 pm	2017-11-30 @ 4:00 pm	< 0.3	2017-12-04
7977990	TRANSIT 11	2017-11-27 @ 4:00 pm	2017-11-30 @ 4:00 pm	< 0.3	2017-12-04
7978201	TRANSIT 12	2017-11-27 @ 4:00 pm	2017-11-30 @ 4:00 pm	< 0.3	2017-12-04
7978203	TRANSIT 13	2017-11-27 @ 4:00 pm	2017-11-30 @ 4:00 pm	< 0.3	2017-12-04
7978206	TRANSIT 14	2017-11-27 @ 4:00 pm	2017-11-30 @ 4:00 pm	< 0.3	2017-12-05
7978246	TRANSIT 15	2017-11-27 @ 4:00 pm	2017-11-30 @ 4:00 pm	< 0.3	2017-12-05
7978239	TRANSIT 16	2017-11-27 @ 4:00 pm	2017-11-30 @ 4:00 pm	< 0.3	2017-12-05
7978226	TRANSIT 17	2017-11-27 @ 4:00 pm	2017-11-30 @ 4:00 pm	< 0.3	2017-12-05
7975078	TRANSIT 18	2017-11-27 @ 4:00 pm	2017-11-30 @ 4:00 pm	< 0.3	2017-12-05
7975077	TRANSIT 19	2017-11-27 @ 4:00 pm	2017-11-30 @ 4:00 pm	< 0.3	2017-12-05
7978074	TRANSIT 2	2017-11-27 @ 4:00 pm	2017-11-30 @ 4:00 pm	< 0.3	2017-12-04
7975076	TRANSIT 20	2017-11-27 @ 4:00 pm	2017-11-30 @ 4:00 pm	< 0.3	2017-12-04
7975684	TRANSIT 21	2017-11-27 @ 4:00 pm	2017-11-30 @ 4:00 pm	< 0.3	2017-12-04
7975683	TRANSIT 22	2017-11-27 @ 4:00 pm	2017-11-30 @ 4:00 pm	< 0.3	2017-12-04
7975601	TRANSIT 23	2017-11-27 @ 4:00 pm	2017-11-30 @ 4:00 pm	< 0.3	2017-12-04
7978011	TRANSIT 24	2017-11-27 @ 4:00 pm	2017-11-30 @ 4:00 pm	< 0.3	2017-12-04
7978012	TRANSIT 25	2017-11-27 @ 4:00 pm	2017-11-30 @ 4:00 pm	< 0.3	2017-12-04
7978094	TRANSIT 26	2017-11-27 @ 4:00 pm	2017-11-30 @ 4:00 pm	< 0.3	2017-12-05
7975624	TRANSIT 27	2017-11-27 @ 4:00 pm	2017-11-30 @ 4:00 pm	< 0.3	2017-12-05
7834562	TRANSIT 28	2017-11-27 @ 4:00 pm	2017-11-30 @ 4:00 pm	< 0.3	2017-12-05
7977995	TRANSIT 29	2017-11-27 @ 4:00 pm	2017-11-30 @ 4:00 pm	< 0.3	2017-12-05
7978098	TRANSIT 3	2017-11-27 @ 4:00 pm	2017-11-30 @ 4:00 pm	< 0.3	2017-12-04
7977992	TRANSIT 30	2017-11-27 @ 4:00 pm	2017-11-30 @ 4:00 pm	< 0.3	2017-12-04
7978719	TRANSIT 4	2017-11-27 @ 4:00 pm	2017-11-30 @ 4:00 pm	< 0.3	2017-12-05
7978732	TRANSIT 5	2017-11-27 @ 4:00 pm	2017-11-30 @ 4:00 pm	< 0.3	2017-12-04
7978731	TRANSIT 6	2017-11-27 @ 4:00 pm	2017-11-30 @ 4:00 pm	< 0.3	2017-12-04
7975806	TRANSIT 7	2017-11-27 @ 4:00 pm	2017-11-30 @ 4:00 pm	< 0.3	2017-12-04
7975815	TRANSIT 8	2017-11-27 @ 4:00 pm	2017-11-30 @ 4:00 pm	< 0.3	2017-12-04
7975805	TRANSIT 9	2017-11-27 @ 4:00 pm	2017-11-30 @ 4:00 pm	< 0.3	2017-12-04

December 19, 2017

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

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

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

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

EXPOSURE IN BOWSER-MORNER RADON CHAMBER

CLIENT KCI Technologies Inc. Job Number 182393

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

Date Start: 12/1/17 Date Stop: 12/4/17 Date Start: _____ Date Stop: _____

Time Start: 1049 Time Stop: 1049 Time Start: _____ Time Stop: _____

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

7975075, 7975064, 7975063, _____

7975065, 7975069, 7975070 _____

F4 Right

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

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

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

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

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

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

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



MCPS RADON TESTING

Executive Summary: Springbrook High School

Date of Test Report:	10/20/2016
Round of Testing:	Initial Follow-up Post Remediation
# Rooms Tested:	40
# Rooms \geq 4.0 pCi/L:	2
Low Value:	< 0.3
High Value:	4.8

Rooms with results \geq 4.0 pCi/L:
F109 (4.8 pCi/L), F107 (4.2 pCi/L)

Project Status:

Post-remediation testing completed; additional remediation is required.
Retest needed for missing/compromised samples and inaccessible rooms.



ENGINEERS • PLANNERS • SCIENTISTS • CONSTRUCTION MANAGERS

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

October 20, 2016

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

Re: **Radon Testing Services**
KCI Job # 12146341.54

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

Dear Mr. Cox:

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

Scope of Services:

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

KCI visited the site on September 26, 2016 and deployed forty-five (45) activated charcoal (AC) radon test kits. KCI deployed radon test kits in frequently-occupied ground contact rooms, and other areas, (if applicable) in accordance with AARST guidance. A floor plan map of the building with the test locations is included as Attachment A of this report.

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

KCI returned to the site on September 29, 2016 to retrieve the radon sampling test kits. KCI shipped all radon tests via overnight delivery to Airchek, Inc. for analysis by gamma-ray spectroscopy. Airchek, Inc. is a NRSB certified analytical laboratory for radon analysis (certification # ARL1402) located at 1936 Butler Bridge Road, Mills River, North Carolina.

Evaluation of Testing Conditions:

These tests represent:

- Post-mitigation testing for radon mitigation systems installed recently.

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

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

Future periodic testing should be conducted during the heating season in ideal conditions as described below. According to AARST, *Protocol for Conducting Measurements of Radon and Radon Decay Products in Schools and Large Buildings*, ideal testing conditions would be when the building is fully occupied and the heating system is active. For this test, the facility's HVAC system was operating in cooling mode; therefore, KCI concludes that this test was not conducted during ideal testing conditions.

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

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

KCI also compiled weather data for the testing period and conducted observations of relevant field conditions. During the test period, weather records indicate low temperatures were in the 50s and high temperatures in the mid-60s to mid-70s. Maximum sustained winds ranged from 3-15 miles per hour. Average humidity ranged from 71 to 89 percent. Rain (1.83 inches in Gaithersburg, MD) was recorded on 9/29/16. The weather conditions during the testing period may have resulted in atypical radon test results for this facility.

Results:

The results of the radon test analysis indicated the following:

Radon Concentration	Room	Result
≥4.0 pCi/L	F109	4.8
	F107	4.2
<4.0 pCi/L	See Attachment B	

Notes:

D- Duplicate sample

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

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

for the spike samples are also included in Attachment C.

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

Sincerely,



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

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

ATTACHMENT A

Floor Plan With Test Locations

ATTACHMENT B

Radon Test Summary Spreadsheet

Radon Testing Results		
Springbrook High School		
Test Period: 09/26/16-09/29/16		
Kit Number	Room / Area	Result
-	* ART (Inaccessible/Locked Room)	-
7714189	B104	< 0.3
7714199	B106	< 0.3
7714198	B108	0.8
7769898	B108C	< 0.3
7769846	* B108D (Tampered)	0.6
7769847	B109	< 0.3
7714190	B109/110	< 0.3
7769848	B109A	< 0.3
7769897	B109B	< 0.3
7714175	B118	< 0.3
7714191	B120B	< 0.3
7714162	C103D	1.0
7714184	C103E	0.7
7714165	* C103H (Tampered)	0.6
7714141	D104	3.8
7714164	D104	2.3
7714186	D104E	< 0.3
7714161	* E106 (Tampered)	0.9
7714188	E108	< 0.3
7714172	E110	0.9
7714173	E111	< 0.3
7769849	E113	1.1
7714174	E115	0.8
7714196	F103	1.6
7714183	* F105 (Tampered)	3.6
7714182	F106	1.1
7714170	F107	4.2
7714169	F108	< 0.3
7714197	F109	4.8
7714159	G1	1.2
7769896	G108	< 0.3
7714193	G109	0.6
7714178	G11	1.0
7714195	G110	0.7
7714192	G111	< 0.3
7714194	G111A	0.7
7769853	G12	1.1
7714158	G8	1.7
7714167	KIT	0.6
7714166	TRAIN	< 0.3

Table Note:

* Missing or Compromised Sample

Radon Testing Results		
Springbrook High School		
Test Period: 09/26/16-09/29/16		
Kit Number	QC Type	Result
7769886	D (B104)	0.6
7714187	D (D104E)	0.7
7714171	D (F107)	3.5
7769900	D (KIT)	0.5

Table Note:

* Missing or Compromised Sample

ATTACHMENT C

Laboratory Analytical Results

Radon test result report for:**SPRINGBROOK HIGH SCHOOL
MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7714189	B104	2016-09-26 @ 2:00 pm	2016-09-29 @ 12:00 pm	< 0.3	2016-10-03
7769886	B104	2016-09-26 @ 2:00 pm	2016-09-29 @ 12:00 pm	0.6 ± 0.3	2016-10-03
7714200	B105	@	@		
7714199	B106	2016-09-26 @ 1:00 pm	2016-09-29 @ 12:00 pm	< 0.3	2016-10-03
7714198	B108	2016-09-26 @ 1:00 pm	2016-09-29 @ 11:00 am	0.8 ± 0.3	2016-10-03
7769898	B108C	2016-09-26 @ 1:00 pm	2016-09-29 @ 12:00 pm	< 0.3	2016-10-03
7769846	B108D	2016-09-26 @ 1:00 pm	2016-09-29 @ 12:00 pm	0.6 ± 0.3	2016-10-03
7769847	B109	2016-09-26 @ 2:00 pm	2016-09-29 @ 12:00 pm	< 0.3	2016-10-03
7714190	B109/110	2016-09-26 @ 2:00 pm	2016-09-29 @ 12:00 pm	< 0.3	2016-10-03
7769848	B109A	2016-09-26 @ 1:00 pm	2016-09-29 @ 12:00 pm	< 0.3	2016-10-03
7769897	B109B	2016-09-26 @ 2:00 pm	2016-09-29 @ 12:00 pm	< 0.3	2016-10-03
7714175	B118	2016-09-26 @ 4:00 pm	2016-09-29 @ 1:00 pm	< 0.3	2016-10-03
7714191	B120B	2016-09-26 @ 2:00 pm	2016-09-29 @ 12:00 pm	< 0.3	2016-10-03
7714162	C103D	2016-09-26 @ 3:00 pm	2016-09-29 @ 1:00 pm	1.0 ± 0.3	2016-10-03
7714184	C103E	2016-09-26 @ 3:00 pm	2016-09-29 @ 1:00 pm	0.7 ± 0.3	2016-10-03
7714165	C103H	2016-09-26 @ 3:00 pm	2016-09-29 @ 1:00 pm	0.6 ± 0.3	2016-10-03
7714164	D104	2016-09-26 @ 3:00 pm	2016-09-29 @ 12:00 pm	2.3 ± 0.5	2016-10-03
7714141	D104	2016-09-26 @ 3:00 pm	2016-09-29 @ 12:00 pm	3.8 ± 0.6	2016-10-03
7714186	D104E	2016-09-26 @ 3:00 pm	2016-09-29 @ 12:00 pm	< 0.3	2016-10-03
7714187	D104E	2016-09-26 @ 3:00 pm	2016-09-29 @ 12:00 pm	0.7 ± 0.3	2016-10-03
7714161	E106	2016-09-26 @ 3:00 pm	2016-09-29 @ 12:00 pm	0.9 ± 0.3	2016-10-03
7714188	E108	2016-09-26 @ 3:00 pm	2016-09-29 @ 12:00 pm	< 0.3	2016-10-03
7714172	E110	2016-09-26 @ 3:00 pm	2016-09-29 @ 12:00 pm	0.9 ± 0.3	2016-10-03
7714173	E111	2016-09-26 @ 3:00 pm	2016-09-29 @ 12:00 pm	< 0.3	2016-10-03
7769849	E113	2016-09-26 @ 3:00 pm	2016-09-29 @ 12:00 pm	1.1 ± 0.3	2016-10-03
7714174	E115	2016-09-26 @ 3:00 pm	2016-09-29 @ 12:00 pm	0.8 ± 0.3	2016-10-03
7714196	F103	2016-09-26 @ 2:00 pm	2016-09-29 @ 12:00 pm	1.6 ± 0.4	2016-10-03
7714183	F105	2016-09-26 @ 2:00 pm	2016-09-29 @ 12:00 pm	3.6 ± 0.5	2016-10-03
7714182	F106	2016-09-26 @ 2:00 pm	2016-09-29 @ 12:00 pm	1.1 ± 0.3	2016-10-03
7714171	F107	2016-09-26 @ 2:00 pm	2016-09-29 @ 12:00 pm	3.5 ± 0.5	2016-10-03
7714170	F107	2016-09-26 @ 2:00 pm	2016-09-29 @ 12:00 pm	4.2 ± 0.6	2016-10-03
7714169	F108	2016-09-26 @ 3:00 pm	2016-09-29 @ 12:00 pm	< 0.3	2016-10-03
7714197	F109	2016-09-26 @ 2:00 pm	2016-09-29 @ 12:00 pm	4.8 ± 0.6	2016-10-03
7714159	G1	2016-09-26 @ 4:00 pm	2016-09-29 @ 1:00 pm	1.2 ± 0.4	2016-10-03
7769896	G108	2016-09-26 @ 2:00 pm	2016-09-29 @ 1:00 pm	< 0.3	2016-10-03
7714193	G109	2016-09-26 @ 2:00 pm	2016-09-29 @ 12:00 pm	0.6 ± 0.3	2016-10-03
7714178	G11	2016-09-26 @ 4:00 pm	2016-09-29 @ 1:00 pm	1.0 ± 0.4	2016-10-03

October 17, 2016

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

**SPRINGBROOK HIGH SCHOOL
MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7714195	G110	2016-09-26 @ 2:00 pm	2016-09-29 @ 12:00 pm	0.7 ± 0.3	2016-10-03
7714192	G111	2016-09-26 @ 2:00 pm	2016-09-29 @ 12:00 pm	< 0.3	2016-10-03
7714194	G111A	2016-09-26 @ 2:00 pm	2016-09-29 @ 12:00 pm	0.7 ± 0.3	2016-10-03
7769853	G12	2016-09-26 @ 4:00 pm	2016-09-29 @ 1:00 pm	1.1 ± 0.3	2016-10-03
7714158	G8	2016-09-26 @ 4:00 pm	2016-09-29 @ 1:00 pm	1.7 ± 0.4	2016-10-03
7769900	KIT	2016-09-26 @ 4:00 pm	2016-09-29 @ 12:00 pm	0.5 ± 0.3	2016-10-03
7714167	KIT	2016-09-26 @ 4:00 pm	2016-09-29 @ 12:00 pm	0.6 ± 0.3	2016-10-03
7714166	TRAIN	2016-09-26 @ 3:00 pm	2016-09-29 @ 12:00 pm	< 0.3	2016-10-03

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

October 7, 2016

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

MCPS Radon

Phase 18 Office Blanks

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

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

October 7, 2016

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

MCPS Radon

Phase 18 Transit Blanks

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

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

October 12, 2016

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:
MCPS Radon
Spike Sample Results

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

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

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

EXPOSURE IN BOWSER-MORNER RADON CHAMBER

CLIENT KCI Technologies Inc. Job Number 176788

NOMINAL Conditions: Radon Conc 26.1 pCi/L Rel. Hum 49.6 % Temp. 70.0 F

Date Start: 9/24/16 Date Stop: 9/26/16 Date Start: _____ Date Stop: _____

Time Start: 0758 Time Stop: 0758 Time Start: _____ Time Stop: _____

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

7769899, 7769884, 7769885, _____

7769889, 7769890, 7769891 _____

F3 Left

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

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

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

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

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

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

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



Radon Test Kit Chain of Custody

Project Name: MCPS Radon Phase 18

Name of Schools:

- | | |
|-------------------------------------|--|
| 1. Wood Acres Elementary School | 14. Lourie Center |
| 2. Walt Whitman High School | 15. Shriver Elementary School |
| 3. Burning Tree Elementary School | 16. Viers Mill Elementary School |
| 4. Ashburton Elementary School | 17. Highland Elementary School |
| 5. Bethesda Maintenance | 18. Newport Middle School |
| 6. Bethesda Transportation | 19. Albert Einstein High School |
| 7. Herbert Hoover Middle School | 20. Sligo Middle School |
| 8. Cold Spring Elementary School | 21. East Silver Spring Elementary School |
| 9. Garret Park Elementary School | 22. Oak View Elementary School |
| 10. Rock View Elementary School | 23. Roscoe Nix Elementary School |
| 11. Francis Scott Key Middle School | 24. Northwood High School |
| 12. Montgomery Blair High School | 25. Springbrook High School |
| 13. Stephen Knolls School | 26. John F. Kennedy High School |

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

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



Radon Test Kit Chain of Custody

Project Name: MCPS Radon Phase 18

Name of Schools:

- | | |
|--|-----------------------------------|
| 1. Damascus High School | 17. Watkins Mills High School |
| 2. Cedar Grove Elementary School | 18. Forest Oak Middle School |
| 3. Hallie Wells Middle School | 19. Gaithersburg Middle School |
| 4. Clarksburg Elementary School | 20. Emory Grove |
| 5. Clarksburg High School | 21. Fields Road Elementary School |
| 6. Woodlin Elementary School | 22. Beall Elementary School |
| 7. Flora Singer Elementary School | 23. Julius West Middle School |
| 8. Spring Mill Center | 24. Thomas Wootton High School |
| 9. Dr. Charles Drew Elementary School | 25. Robert Frost High School |
| 10. William Farquah Middle School | 26. Travilah Elementary School |
| 11. Rosa Parks Middle School | 27. Jones Lane Elementary School |
| 12. Blair Ewing Center | 28. Longview School |
| 13. Lathrop Smith Environmental Center | 29. Rock Terrace High School |
| 14. Sequoyah Elementary School | 30. Germantown Elementary School |
| 15. Shady Grove Middle School | 31. Lake Seneca Elementary School |
| 16. Captain James Daly Elementary School | |

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

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

RADON SCREENING SURVEY – POST REMEDIATION SAMPLING SPRINGBROOK HIGH SCHOOL

201 Valley Brook Drive, Silver Spring, Maryland 20904

EXECUTIVE SUMMARY

Date of Test Report:	4/20/16 Post Remediation
Round of Testing:	Initial Follow-up <u>Post Remediation</u>
# Rooms Tested	116
# Rooms \geq 4.0 pCi/L:	11
Low Value:	<0.3
High Value:	12.3
Confirmed Rooms \geq 4.0 pCi/L US EPA Action Level	9

Summary of Sampling Events \geq 4.0 pCi/L

Room	Result (pCi/L) 12/11/15 Initial	Result (pCi/L) 12/31/15 Follow-Up	Average Result (pCi/L)	Post Remediation (pCi/L) 4/20/16
B109/110	6.1	5.0	5.6	2.8
B109A	14.6	11.3	12.9	12.3
B109B	5.5	5.7	5.6	5.2
B104	4.6	4.9	4.7	3.4
E111	8.9	7.7	8.3	1.3
E108	4.7	4.1	4.4	1.0
F105	6.3	7.9	7.1	1.7
C103H	Not tested	4.0	4.0	2.6
F106	4.3	1.2	2.8	1.0
F107	4.4	2.9	3.7	0.7
G108	4.8	2.7	3.8	2.5
G111A	Not tested	Not tested	n/a	7.0
D104	Not tested	Not tested	n/a	6.7
G8	Not tested	Not tested	n/a	6.6
D104E	Not tested	Not tested	n/a	5.8
G12	3.8	Not tested	3.8	5.5
C103E	Not tested	Not tested	n/a	4.6
B120B	Not tested	Not tested	n/a	4.1



MCPS RADON TESTING

Executive Summary: Springbrook High School

Date of Test Report:	4/20/2016
Round of Testing:	Initial Follow-up Post Remediation
# Rooms Tested:	116
# Rooms \geq 4.0 pCi/L:	11
Low Value:	< 0.3
High Value:	12.3

Rooms with results \geq 4.0 pCi/L:

B109A (12.3 pCi/L), G111A (7.3 pCi/L), G111 (7.0 pCi/L), D104 (6.7 pCi/L), G8 (6.6 pCi/L), D104 (6.2 pCi/L), D104E (5.8 pCi/L), G12 (5.5 pCi/L), B109B (5.2 pCi/L), C103E (4.6 pCi/L), B120B (4.1 pCi/L)

Project Status:

Post-remediation testing completed; additional remediation is required.



April 20, 2016

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

Re: **Radon Testing Services**
KCI Job # 12146341.34

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

Dear Mr. Cox:

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

Scope of Services:

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

KCI visited the site on March 29, 2016 and deployed one hundred forty-eight (148) activated charcoal (AC) radon test kits. KCI deployed radon test kits in frequently-occupied ground contact rooms, and other areas, (if applicable) in accordance with AARST guidance. A floor plan map of the building with the test locations is included as Attachment A of this report.

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

KCI returned to the site on April 1, 2016 to retrieve the radon sampling test kits. KCI shipped all radon tests via overnight delivery to Airchek, Inc. for analysis by gamma-ray spectroscopy. Airchek, Inc. is a NRSB certified analytical laboratory for radon analysis (certification # ARL1402) located at 1936 Butler Bridge Road, Mills River, North Carolina.

Evaluation of Testing Conditions:

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

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

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

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

School personnel informed KCI during the sample collection that numerous windows were opened for extended periods during the testing due to a problem with the facility's HVAC system.

Results:

The results of the radon test analysis indicated the following:

Radon Concentration	Room	Result
≥ 4.0 pCi/L	B109A	12.3
	G111A	7.3, 6.8 (D)
	G111	7.0
	D104	6.7
	G8	6.6
	D104	6.2
	D104E	5.8
	G12	5.5
	B109B	5.2
	C103E	4.2, 4.6 (D)
	B120B	4.1
< 4.0 pCi/L	See Attachment B	

Notes:

D- Duplicate sample

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

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

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

Sincerely,



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

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

ATTACHMENT A

Floor Plan With Test Locations

ATTACHMENT B

Radon Test Summary Spreadsheet

Table Notes:

AC- Activated Charcoal

ACI- Air Chek, Inc.

D- Duplicate

FB- Field Blank

KCI- KCI Technologies, Inc.

OB- Office Blank*

PM- Project Manager

QC- Quality Control

*Office blanks were submitted at a rate of 1% for all samples deployed in Phase 13 testing. Office blanks were not submitted under each school individually.

Radon Testing Results		
Springbrook High School		
Test Period: 03/29/16-04/01/16		
Kit Number	Room / Area	Result
7747873	A101	1.8
7747842	A102	1.3
7747867	A103	1.6
7747861	A104	1.2
7747860	A105	1.5
7747846	A106	1.5
7747859	A108	1.2
7747854	A109	1.0
7747851	A110	1.1
7747830	A112	1.8
7747868	A114	1.2
7747810	B101	1.4
7747801	B102	2.2
7747839	B102B	3.0
7747824	B103	2.7
7747554	B104	3.4
7747835	B105	2.3
7747850	B105A	2.5
7726896	B106	1.8
7747560	B107	1.4
7747841	B108	2.8
7747858	B108C	2.2
7747821	B109A	12.3
7747808	B109B	5.2
7747836	B110	2.8
7747840	B117	1.1
7747834	B117A	0.9
7747829	B119	< 0.3
7747827	B119	< 0.3
7747843	B120B	4.1
7747849	B122	0.8
7747844	B122A	1.2
7747845	B122B	1.1
7747892	C101	0.6
7747898	C101A	2.3
7747900	C101B	2.8
7747895	C101D	2.5
7747889	C101E	2.7
7747894	C101G	2.3
7747890	C101H	2.7
7747875	C101J	< 0.3
7747891	C101K	2.4
7747899	C101L	2.0
7747883	C101M	2.5
7747897	C101O	2.1
7747876	C101R	2.3

Table Note:

* Missing or Compromised Sample

Radon Testing Results		
Springbrook High School		
Test Period: 03/29/16-04/01/16		
Kit Number	Room / Area	Result
7747885	C101S	1.8
7747864	C102A	2.5
7747848	C102B	2.9
7747856	C102D	2.6
7747855	C102G	3.5
7747863	C102H	3.1
7747511	C103	2.0
7747501	C103	2.2
7747512	C103	2.3
7747567	C103A	2.2
7747559	C103D	3.6
7747568	C103E	4.2
7747557	C103H	2.6
7747565	D104	6.7
7747566	D104	6.2
7747822	D104E	5.8
7747572	D104F	2.4
7747564	D107	1.2
7747571	D107E	1.4
7747546	D107G	1.9
7747553	D108	1.4
7747816	E105	1.6
7747502	E106	1.2
7747515	E106A	1.1
7747837	E107	1.0
7747513	E108	1.0
7747509	E108B	1.1
7747505	E109	0.7
7747514	E110	1.0
7747510	E111	1.3
7747529	E113	0.6
7747504	E114	0.6
7747518	E115	1.2
7747517	E116	1.3
7747541	E116A	1.3
7747542	E117	0.8
7747516	E118	1.6
7747551	F101	0.7
7747544	F102	2.0
7747556	F103	1.3
7747522	F104	0.6
7747549	F105	1.7
7747555	F106	1.0
7747550	F107	0.7
7747519	F108	< 0.3
7747543	F109	0.8
7747527	F113	0.8
7747521	F113A	0.6
7747869	G1	1.4
7747539	G101	1.0

Table Note:

* Missing or Compromised Sample

Radon Testing Results		
Springbrook High School		
Test Period: 03/29/16-04/01/16		
Kit Number	Room / Area	Result
7747524	G101A	1.3
7747528	G105	1.0
7747520	G106A	0.8
7747530	G106B	1.4
7747533	G107	1.2
7747552	G108	2.5
7747523	G109	2.0
7747874	G11	2.6
7747548	G110L	2.8
7747540	G111	7.0
7747532	G111A	7.3
7747882	G12	5.5
7747881	G2	0.9
7747886	G206	1.1
7747871	G207	0.8
7747887	G208	1.4
7747893	G209	1.3
7747888	G210	3.2
7747831	G307	0.5
7747879	G311	0.7
7747880	G312	0.7
7747884	G313	0.9
7747878	G314	0.8
7747847	G8	6.6

Table Note:

* Missing or Compromised Sample

Radon Testing Results		
Springbrook High School		
Test Period: 03/29/16-04/01/16		
Kit Number	QC Type	Result
7747866	D (A101)	1.7
7747862	D (A110)	1.2
7747826	D (B103)	3.6
7747857	D (B122)	1.1
7747838	D (C102B)	2.4
7747573	D (C103E)	4.6
7747569	D (D107G)	2.4
7747506	D (E106)	1.1
7747508	D (E111)	1.0
7747547	D (F101)	0.7
7747525	D (F109)	0.6
7747526	D (G111A)	6.8
7747872	D (G207)	1.1
7747833	D (G307)	0.9
7747865	FB (A101)	< 0.3
7747828	FB (A110)	< 0.3
7747832	FB (B103)	< 0.3
7747852	FB (B122)	< 0.3
7747853	FB (C102B)	< 0.3
7747558	FB (C103E)	< 0.3
7747570	FB (D107G)	< 0.3
7747503	FB (E106)	< 0.3
7747507	FB (E111)	< 0.3
7747545	FB (F101)	< 0.3
7747534	FB (F109)	< 0.3
7747531	FB (G111A)	< 0.3
7747870	FB (G207)	< 0.3
7747877	FB (G307)	< 0.3

Table Note:

* Missing or Compromised Sample

ATTACHMENT C

Laboratory Analytical Results

April 8, 2016 **** LABORATORY ANALYSIS REPORT ****

Radon test result report for:
SPRINGBROOK HIGH SCHOOL
MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7747865	A101	2016-03-29 @ 4:00 pm	2016-04-01 @ 11:00 am	< 0.3	2016-04-05
7747866	A101	2016-03-29 @ 4:00 pm	2016-04-01 @ 11:00 am	1.7 ± 0.3	2016-04-05
7747873	A101	2016-03-29 @ 4:00 pm	2016-04-01 @ 11:00 am	1.8 ± 0.3	2016-04-05
7747867	A103	2016-03-29 @ 4:00 pm	2016-04-01 @ 11:00 am	1.6 ± 0.3	2016-04-05
7747861	A104	2016-03-29 @ 4:00 pm	2016-04-01 @ 11:00 am	1.2 ± 0.3	2016-04-05
7747860	A105	2016-03-29 @ 4:00 pm	2016-04-01 @ 11:00 am	1.5 ± 0.3	2016-04-05
7747846	A106	2016-03-29 @ 3:00 pm	2016-04-01 @ 11:00 am	1.5 ± 0.3	2016-04-05
7747859	A108	2016-03-29 @ 3:00 pm	2016-04-01 @ 11:00 am	1.2 ± 0.3	2016-04-05
7747854	A109	2016-03-29 @ 3:00 pm	2016-04-01 @ 11:00 am	1.0 ± 0.3	2016-04-05
7747828	A110	2016-03-29 @ 3:00 pm	2016-04-01 @ 11:00 am	< 0.3	2016-04-05
7747851	A110	2016-03-29 @ 3:00 pm	2016-04-01 @ 11:00 am	1.1 ± 0.3	2016-04-05
7747862	A110	2016-03-29 @ 3:00 pm	2016-04-01 @ 11:00 am	1.2 ± 0.3	2016-04-05
7747830	A112	2016-03-29 @ 3:00 pm	2016-04-01 @ 11:00 am	1.8 ± 0.3	2016-04-05
7747868	A114	2016-03-29 @ 4:00 pm	2016-04-01 @ 11:00 am	1.2 ± 0.3	2016-04-05
7747801	B102	2016-03-29 @ 2:00 pm	2016-04-01 @ 5:00 pm	2.2 ± 0.3	2016-04-05
7747839	B102B	2016-03-29 @ 2:00 pm	2016-04-01 @ 2:00 pm	3.0 ± 0.4	2016-04-05
7747824	B103	2016-03-29 @ 3:00 pm	2016-04-01 @ 2:00 pm	2.7 ± 0.4	2016-04-05
7747832	B103	2016-03-29 @ 3:00 pm	2016-04-01 @ 2:00 pm	< 0.3	2016-04-05
7747554	B104	2016-03-29 @ 6:00 pm	2016-04-01 @ 2:00 pm	3.4 ± 0.4	2016-04-05
7747835	B105	2016-03-29 @ 3:00 pm	2016-04-01 @ 2:00 pm	2.3 ± 0.3	2016-04-05
7747850	B105A	2016-03-29 @ 3:00 pm	2016-04-01 @ 2:00 pm	2.5 ± 0.4	2016-04-05
7726896	B106	2016-03-29 @ 6:00 pm	2016-04-01 @ 2:00 pm	1.8 ± 0.3	2016-04-05
7747560	B107	2016-03-29 @ 6:00 pm	2016-04-01 @ 2:00 pm	1.4 ± 0.3	2016-04-05
7747841	B108	2016-03-29 @ 3:00 pm	2016-04-01 @ 2:00 pm	2.8 ± 0.4	2016-04-05
7747821	B109A	2016-03-29 @ 3:00 pm	2016-04-01 @ 2:00 pm	12.3 ± 0.6	2016-04-05
7747808	B109B	2016-03-29 @ 3:00 pm	2016-04-01 @ 2:00 pm	5.2 ± 0.4	2016-04-05
7747836	B110	2016-03-29 @ 3:00 pm	2016-04-01 @ 2:00 pm	2.8 ± 0.4	2016-04-05
7747840	B117	2016-03-29 @ 3:00 pm	2016-04-01 @ 2:00 pm	1.1 ± 0.3	2016-04-05
7747834	B117A	2016-03-29 @ 3:00 pm	2016-04-01 @ 2:00 pm	0.9 ± 0.3	2016-04-05
7747827	B119	2016-03-29 @ 2:00 pm	2016-04-01 @ 2:00 pm	< 0.3	2016-04-05
7747829	B119	2016-03-29 @ 2:00 pm	2016-04-01 @ 2:00 pm	< 0.3	2016-04-05
7747843	B120B	2016-03-29 @ 3:00 pm	2016-04-01 @ 2:00 pm	4.1 ± 0.4	2016-04-05
7747849	B122	2016-03-29 @ 3:00 pm	2016-04-01 @ 11:00 am	0.8 ± 0.3	2016-04-05
7747852	B122	2016-03-29 @ 3:00 pm	2016-04-01 @ 11:00 am	< 0.3	2016-04-05
7747857	B122	2016-03-29 @ 3:00 pm	2016-04-01 @ 11:00 am	1.1 ± 0.3	2016-04-05
7747844	B122A	2016-03-29 @ 3:00 pm	2016-04-01 @ 2:00 pm	1.2 ± 0.3	2016-04-05
7747845	B122B	2016-03-29 @ 3:00 pm	2016-04-01 @ 11:00 am	1.1 ± 0.3	2016-04-05

April 8, 2016 **** LABORATORY ANALYSIS REPORT ****

Radon test result report for:
SPRINGBROOK HIGH SCHOOL
MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7747892	C101	2016-03-29 @ 5:00 pm	2016-04-01 @ 11:00 am	0.6 ± 0.3	2016-04-05
7747898	C101A	2016-03-29 @ 5:00 pm	2016-04-01 @ 11:00 am	2.3 ± 0.3	2016-04-05
7747900	C101B	2016-03-29 @ 5:00 pm	2016-04-01 @ 12:00 pm	2.8 ± 0.4	2016-04-05
7747889	C101E	2016-03-29 @ 5:00 pm	2016-04-01 @ 12:00 pm	2.7 ± 0.4	2016-04-05
7747894	C101G	2016-03-29 @ 5:00 pm	2016-04-01 @ 12:00 pm	2.3 ± 0.3	2016-04-05
7747875	C101J	2016-03-29 @ 5:00 pm	2016-04-01 @ 11:00 am	< 0.3	2016-04-05
7747891	C101K	2016-03-29 @ 5:00 pm	2016-04-01 @ 12:00 pm	2.4 ± 0.4	2016-04-05
7747899	C101L	2016-03-29 @ 5:00 pm	2016-04-01 @ 12:00 pm	2.0 ± 0.3	2016-04-05
7747883	C101M	2016-03-29 @ 5:00 pm	2016-04-01 @ 11:00 am	2.5 ± 0.4	2016-04-05
7747897	C101O	2016-03-29 @ 5:00 pm	2016-04-01 @ 12:00 pm	2.1 ± 0.3	2016-04-05
7747876	C101R	2016-03-29 @ 5:00 pm	2016-04-01 @ 11:00 am	2.3 ± 0.3	2016-04-05
7747885	C101S	2016-03-29 @ 5:00 pm	2016-04-01 @ 12:00 pm	1.8 ± 0.3	2016-04-05
7747864	C102A	2016-03-29 @ 4:00 pm	2016-04-01 @ 2:00 pm	2.5 ± 0.4	2016-04-05
7747838	C102B	2016-03-29 @ 4:00 pm	2016-04-01 @ 2:00 pm	2.4 ± 0.3	2016-04-05
7747848	C102B	2016-03-29 @ 4:00 pm	2016-04-01 @ 2:00 pm	2.9 ± 0.4	2016-04-05
7747853	C102B	2016-03-29 @ 4:00 pm	2016-04-01 @ 2:00 pm	< 0.3	2016-04-05
7747856	C102D	2016-03-29 @ 4:00 pm	2016-04-01 @ 2:00 pm	2.6 ± 0.3	2016-04-05
7747855	C102G	2016-03-29 @ 4:00 pm	2016-04-01 @ 2:00 pm	3.5 ± 0.4	2016-04-05
7747511	C103	2016-03-29 @ 2:00 pm	2016-04-01 @ 12:00 pm	2.0 ± 0.3	2016-04-05
7747512	C103	2016-03-29 @ 2:00 pm	2016-04-01 @ 12:00 pm	2.3 ± 0.4	2016-04-05
7747567	C103A	2016-03-29 @ 6:00 pm	2016-04-01 @ 12:00 pm	2.2 ± 0.4	2016-04-05
7747559	C103D	2016-03-29 @ 6:00 pm	2016-04-01 @ 12:00 pm	3.6 ± 0.4	2016-04-05
7747568	C103E	2016-03-29 @ 5:00 pm	2016-04-01 @ 5:00 pm	4.2 ± 0.4	2016-04-05
7747573	C103E	2016-03-29 @ 6:00 pm	2016-04-01 @ 12:00 pm	4.6 ± 0.4	2016-04-05
7747557	C103H	2016-03-29 @ 6:00 pm	2016-04-01 @ 12:00 pm	2.6 ± 0.4	2016-04-05
7747565	D104	2016-03-29 @ 6:00 pm	2016-04-01 @ 2:00 pm	6.7 ± 0.4	2016-04-05
7747566	D104	2016-03-29 @ 6:00 pm	2016-04-01 @ 2:00 pm	6.2 ± 0.4	2016-04-05
7747822	D104E	2016-03-29 @ 6:00 pm	2016-04-01 @ 2:00 pm	5.8 ± 0.4	2016-04-05
7747572	D104F	2016-03-29 @ 6:00 pm	2016-04-01 @ 2:00 pm	2.4 ± 0.4	2016-04-05
7747564	D107	2016-03-29 @ 6:00 pm	2016-04-01 @ 3:00 pm	1.2 ± 0.3	2016-04-05
7747546	D107G	2016-03-29 @ 6:00 pm	2016-04-01 @ 3:00 pm	1.9 ± 0.3	2016-04-05
7747569	D107G	2016-03-29 @ 6:00 pm	2016-04-01 @ 3:00 pm	2.4 ± 0.3	2016-04-05
7747570	D107G	2016-03-29 @ 6:00 pm	2016-04-01 @ 3:00 pm	< 0.3	2016-04-05
7747816	E105	2016-03-29 @ 2:00 pm	2016-04-01 @ 1:00 pm	1.6 ± 0.3	2016-04-05
7747502	E106	2016-03-29 @ 2:00 pm	2016-04-01 @ 1:00 pm	1.2 ± 0.3	2016-04-05
7747503	E106	2016-03-29 @ 2:00 pm	2016-04-01 @ 1:00 pm	< 0.3	2016-04-05
7747515	E106A	2016-03-29 @ 2:00 pm	2016-04-01 @ 1:00 pm	1.1 ± 0.3	2016-04-05

Radon test result report for:
SPRINGBROOK HIGH SCHOOL
MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7747837	E107	2016-03-29 @ 4:00 pm	2016-04-01 @ 3:00 pm	1.0 ± 0.3	2016-04-05
7747513	E108	2016-03-29 @ 2:00 pm	2016-04-01 @ 1:00 pm	1.0 ± 0.3	2016-04-05
7747509	E108B	2016-03-29 @ 2:00 pm	2016-04-01 @ 1:00 pm	1.1 ± 0.3	2016-04-05
7747505	E109	2016-03-29 @ 2:00 pm	2016-04-01 @ 1:00 pm	0.7 ± 0.3	2016-04-05
7747514	E110	2016-03-29 @ 2:00 pm	2016-04-01 @ 1:00 pm	1.0 ± 0.3	2016-04-05
7747507	E111	2016-03-29 @ 2:00 pm	2016-04-01 @ 1:00 pm	< 0.3	2016-04-05
7747508	E111	2016-03-29 @ 2:00 pm	2016-04-01 @ 1:00 pm	1.0 ± 0.3	2016-04-05
7747510	E111	2016-03-29 @ 2:00 pm	2016-04-01 @ 1:00 pm	1.3 ± 0.3	2016-04-05
7747529	E113	2016-03-29 @ 2:00 pm	2016-04-01 @ 1:00 pm	0.6 ± 0.3	2016-04-05
7747504	E114	2016-03-29 @ 2:00 pm	2016-04-01 @ 1:00 pm	0.6 ± 0.3	2016-04-05
7747518	E115	2016-03-29 @ 2:00 pm	2016-04-01 @ 3:00 pm	1.2 ± 0.3	2016-04-05
7747541	E116A	2016-03-29 @ 1:00 pm	2016-04-01 @ 1:00 pm	1.3 ± 0.3	2016-04-05
7747516	E118	2016-03-29 @ 1:00 pm	2016-04-01 @ 12:00 pm	1.6 ± 0.3	2016-04-05
7747545	F101	2016-03-29 @ 1:00 pm	2016-04-01 @ 12:00 pm	< 0.3	2016-04-05
7747547	F101	2016-03-29 @ 1:00 pm	2016-04-01 @ 12:00 pm	0.7 ± 0.3	2016-04-05
7747551	F101	2016-03-29 @ 1:00 pm	2016-04-01 @ 12:00 pm	0.7 ± 0.3	2016-04-05
7747544	F102	2016-03-29 @ 1:00 pm	2016-04-01 @ 12:00 pm	2.0 ± 0.3	2016-04-05
7747556	F103	2016-03-29 @ 1:00 pm	2016-04-01 @ 12:00 pm	1.3 ± 0.3	2016-04-05
7747549	F105	2016-03-29 @ 1:00 pm	2016-04-01 @ 12:00 pm	1.7 ± 0.3	2016-04-05
7747555	F106	2016-03-29 @ 1:00 pm	2016-04-01 @ 12:00 pm	1.0 ± 0.3	2016-04-05
7747550	F107	2016-03-29 @ 1:00 pm	2016-04-01 @ 12:00 pm	0.7 ± 0.3	2016-04-05
7747519	F108	2016-03-29 @ 1:00 pm	2016-04-01 @ 12:00 pm	< 0.3	2016-04-05
7747534	F109	2016-03-29 @ 1:00 pm	2016-04-01 @ 12:00 pm	< 0.3	2016-04-05
7747543	F109	2016-03-29 @ 1:00 pm	2016-04-01 @ 12:00 pm	0.8 ± 0.3	2016-04-05
7747525	F109	2016-03-29 @ 1:00 pm	2016-04-01 @ 12:00 pm	0.6 ± 0.3	2016-04-05
7747527	F113	2016-03-29 @ 1:00 pm	2016-04-01 @ 12:00 pm	0.8 ± 0.3	2016-04-05
7747521	F113A	2016-03-29 @ 1:00 pm	2016-04-01 @ 12:00 pm	0.6 ± 0.3	2016-04-05
7747869	G1	2016-03-29 @ 4:00 pm	2016-04-01 @ 1:00 pm	1.4 ± 0.3	2016-04-05
7747539	G101	2016-03-29 @ 1:00 pm	2016-04-01 @ 12:00 pm	1.0 ± 0.3	2016-04-05
7747524	G101A	2016-03-29 @ 1:00 pm	2016-04-01 @ 12:00 pm	1.3 ± 0.3	2016-04-05
7747528	G105	2016-03-29 @ 1:00 pm	2016-04-01 @ 12:00 pm	1.0 ± 0.3	2016-04-05
7747520	G106A	2016-03-29 @ 1:00 pm	2016-04-01 @ 12:00 pm	0.8 ± 0.3	2016-04-05
7747530	G106B	2016-03-29 @ 12:00 pm	2016-04-01 @ 12:00 pm	1.4 ± 0.3	2016-04-05
7747552	G108	2016-03-29 @ 12:00 pm	2016-04-01 @ 12:00 pm	2.5 ± 0.3	2016-04-05
7747523	G109	2016-03-29 @ 12:00 pm	2016-04-01 @ 12:00 pm	2.0 ± 0.4	2016-04-05
7747548	G110L	2016-03-29 @ 12:00 pm	2016-04-01 @ 12:00 pm	2.8 ± 0.4	2016-04-05
7747540	G111	2016-03-29 @ 12:00 pm	2016-04-01 @ 12:00 pm	7.0 ± 0.4	2016-04-05

April 8, 2016 ** **LABORATORY ANALYSIS
REPORT** **

Radon test result report for:
**SPRINGBROOK HIGH SCHOOL
MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7747532	G111A	2016-03-29 @ 12:00 pm	2016-04-01 @ 12:00 pm	7.3 ± 0.5	2016-04-05
7747526	G111A	2016-03-29 @ 12:00 pm	2016-04-01 @ 12:00 pm	6.8 ± 0.4	2016-04-05
7747531	G111A	2016-03-29 @ 12:00 pm	2016-04-01 @ 12:00 pm	< 0.3	2016-04-05
7747882	G12	2016-03-29 @ 4:00 pm	2016-04-01 @ 1:00 pm	5.5 ± 0.4	2016-04-05
7747881	G2	2016-03-29 @ 4:00 pm	2016-04-01 @ 1:00 pm	0.9 ± 0.3	2016-04-05
7747886	G206	2016-03-29 @ 5:00 pm	2016-04-01 @ 1:00 pm	1.1 ± 0.3	2016-04-05
7747870	G207	2016-03-29 @ 5:00 pm	2016-04-01 @ 1:00 pm	< 0.3	2016-04-05
7747871	G207	2016-03-29 @ 5:00 pm	2016-04-01 @ 1:00 pm	0.8 ± 0.3	2016-04-05
7747872	G207	2016-03-29 @ 5:00 pm	2016-04-01 @ 1:00 pm	1.1 ± 0.3	2016-04-05
7747887	G208	2016-03-29 @ 5:00 pm	2016-04-01 @ 1:00 pm	1.4 ± 0.3	2016-04-05
7747893	G209	2016-03-29 @ 5:00 pm	2016-04-01 @ 1:00 pm	1.3 ± 0.3	2016-04-05
7747888	G210	2016-03-29 @ 5:00 pm	2016-04-01 @ 1:00 pm	3.2 ± 0.4	2016-04-05
7747833	G307	2016-03-29 @ 4:00 pm	2016-04-01 @ 1:00 pm	0.9 ± 0.3	2016-04-05
7747877	G307	2016-03-29 @ 4:00 pm	2016-04-01 @ 1:00 pm	< 0.3	2016-04-05
7747880	G312	2016-03-29 @ 5:00 pm	2016-04-01 @ 1:00 pm	0.7 ± 0.3	2016-04-05
7747884	G313	2016-03-29 @ 4:00 pm	2016-04-01 @ 1:00 pm	0.9 ± 0.3	2016-04-05
7747878	G314	2016-03-29 @ 5:00 pm	2016-04-01 @ 1:00 pm	0.8 ± 0.3	2016-04-05

April 8, 2016 **** LABORATORY ANALYSIS
REPORT ****

Radon test result report for:

OFFICE BLANKS

Phase 13

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7726894	0	2016-03-29 @ 3:00 pm	2016-04-01 @ 3:00 pm	< 0.3	2016-04-05
7747563	0	2016-03-29 @ 3:00 pm	2016-04-01 @ 3:00 pm	< 0.3	2016-04-05
7747791	0	2016-03-29 @ 3:00 pm	2016-04-01 @ 3:00 pm	< 0.3	2016-04-05
7747792	0	2016-03-29 @ 3:00 pm	2016-04-01 @ 3:00 pm	< 0.3	2016-04-05

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

April 8, 2016 **** LABORATORY ANALYSIS
REPORT ****

Radon test result report for:

TRANSIT BLANKS

Phase 13

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7747741	1	2016-03-29 @ 3:00 pm	2016-04-01 @ 3:00 pm	< 0.3	2016-04-05
7747742	2	2016-03-29 @ 3:00 pm	2016-04-01 @ 3:00 pm	< 0.3	2016-04-05
7726876	3	2016-03-29 @ 3:00 pm	2016-04-01 @ 3:00 pm	< 0.3	2016-04-05
7726875	4	2016-03-29 @ 3:00 pm	2016-04-01 @ 3:00 pm	< 0.3	2016-04-05

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

March 24, 2016

**** LABORATORY ANALYSIS
REPORT ****

Radon test result report for:

MCPS

Spike Sample Results

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7735295	1	2016-03-18 @ 1:00 pm	2016-03-21 @ 1:00 pm	30.0 ± 2.0	2016-03-24
7735289	2	2016-03-18 @ 1:00 pm	2016-03-21 @ 1:00 pm	29.9 ± 2.0	2016-03-24
7735274	3	2016-03-18 @ 1:00 pm	2016-03-21 @ 1:00 pm	25.6 ± 1.7	2016-03-24
7735278	4	2016-03-18 @ 1:00 pm	2016-03-21 @ 1:00 pm	26.2 ± 1.8	2016-03-24
7735299	5	2016-03-18 @ 1:00 pm	2016-03-21 @ 1:00 pm	28.3 ± 1.9	2016-03-24
7735293	6	2016-03-18 @ 1:00 pm	2016-03-21 @ 1:00 pm	31.0 ± 2.0	2016-03-24

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

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

EXPOSURE IN BOWSER-MORNER RADON CHAMBER

CLIENT KCI Technologies Inc. Job Number 174430

NOMINAL Conditions: Radon Conc 26.1 pCi/L Rel. Hum 48.8 % Temp. 79.1 F

Date Start: 3/18/16 Date Stop: 3/21/16 Date Start: _____ Date Stop: _____

Time Start: 1250 Time Stop: 1250 Time Start: _____ Time Stop: _____

Device No.'s: (6) Char. Cans. Device No.'s: _____

3029154 thru 3029157, _____

3029083, 3029086 _____

FS Right

Date Start: 3/18/16 Date Stop: 3/21/16 Date Start: _____ Date Stop: _____

Time Start: 1250 Time Stop: 1250 Time Start: _____ Time Stop: _____

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

7735299, 7735293, 7735295, _____

7735274, 7735278, 7735289 _____

FS Right

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

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

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

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



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

Radon Test Kit Chain of Custody

Project Name: MCPS Radon Phase 13

Name of Schools:

1. Northwood HS
2. South Lake ES
3. Whetstone ES
4. Springbrook HS
5. Kensington Parkwood ES

	Date	Initials
Radon Test Kits Deployed	3/29/16	JM
Radon Test Kits Collected	4/1/16	JM
Radon Test Kits Shipped to Lab*	4/1/16	JM
Radon Test Kits Received by Lab*	4/5/16	JM

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

RADON SCREENING SURVEY – FOLLOW-UP SPRINGBROOK HIGH SCHOOL
201 Valley Brook Drive, Silver Spring, Maryland 20904

EXECUTIVE SUMMARY

Date of Test Report:	9 February 2016																																																				
Round of Testing:	Initial Follow-up Post Remediation																																																				
# rooms tested:	16																																																				
# rooms \geq 4.0 pCi/L:	8																																																				
Low Value:	1.0 pCi/L																																																				
High Value:	11.3 pCi/L																																																				
Confirmed Rooms \geq 4.0 pCi/L US EPA Action Level	Classroom B109/110 (5.5 pCi/L) Office B109A (11.3 pCi/L) Office B109B (5.7 pCi/L) Classroom B104 (4.9 pCi/L) Classroom E111 (7.7 pCi/L) Daycare E108 (4.1 pCi/L) Classroom F105 (7.9 pCi/L) Auditorium Office C103H (4.0 pCi/L)																																																				
<table><tr><th colspan="4">Summary of Sampling Events \geq 4.0 pCi/L</th></tr><tr><th>Room</th><th>December 8-11 2015</th><th>December 28-31 2015</th><th>Average Result</th></tr><tr><td>B109/110</td><td>6.1 pCi/L</td><td>5.0 pCi/L</td><td>5.6 pCi/L</td></tr><tr><td>B109A</td><td>14.6 pCi/L</td><td>11.3 pCi/L</td><td>12.9 pCi/L</td></tr><tr><td>B109B</td><td>5.5 pCi/L</td><td>5.7 pCi/L</td><td>5.6 pCi/L</td></tr><tr><td>B104</td><td>4.6 pCi/L</td><td>4.9 pCi/L</td><td>4.7 pCi/L</td></tr><tr><td>E111</td><td>8.9 pCi/L</td><td>7.7 pCi/L</td><td>8.3 pCi/L</td></tr><tr><td>E108</td><td>4.7 pCi/L</td><td>4.1 pCi/L</td><td>4.4 pCi/L</td></tr><tr><td>F105</td><td>6.3 pCi/L</td><td>7.9 pCi/L</td><td>7.1 pCi/L</td></tr><tr><td>C103H</td><td>N/A</td><td>4.0 pCi/L</td><td>4.0 pCi/L</td></tr><tr><td>F106</td><td>4.3 pCi/L</td><td>1.2 pCi/L</td><td>2.8 pCi/L</td></tr><tr><td>F107</td><td>4.4 pCi/L</td><td>2.9 pCi/L</td><td>3.7 pCi/L</td></tr><tr><td>G108</td><td>4.8 pCi/L</td><td>2.7 pCi/L</td><td>3.8 pCi/L</td></tr></table>		Summary of Sampling Events \geq 4.0 pCi/L				Room	December 8-11 2015	December 28-31 2015	Average Result	B109/110	6.1 pCi/L	5.0 pCi/L	5.6 pCi/L	B109A	14.6 pCi/L	11.3 pCi/L	12.9 pCi/L	B109B	5.5 pCi/L	5.7 pCi/L	5.6 pCi/L	B104	4.6 pCi/L	4.9 pCi/L	4.7 pCi/L	E111	8.9 pCi/L	7.7 pCi/L	8.3 pCi/L	E108	4.7 pCi/L	4.1 pCi/L	4.4 pCi/L	F105	6.3 pCi/L	7.9 pCi/L	7.1 pCi/L	C103H	N/A	4.0 pCi/L	4.0 pCi/L	F106	4.3 pCi/L	1.2 pCi/L	2.8 pCi/L	F107	4.4 pCi/L	2.9 pCi/L	3.7 pCi/L	G108	4.8 pCi/L	2.7 pCi/L	3.8 pCi/L
Summary of Sampling Events \geq 4.0 pCi/L																																																					
Room	December 8-11 2015	December 28-31 2015	Average Result																																																		
B109/110	6.1 pCi/L	5.0 pCi/L	5.6 pCi/L																																																		
B109A	14.6 pCi/L	11.3 pCi/L	12.9 pCi/L																																																		
B109B	5.5 pCi/L	5.7 pCi/L	5.6 pCi/L																																																		
B104	4.6 pCi/L	4.9 pCi/L	4.7 pCi/L																																																		
E111	8.9 pCi/L	7.7 pCi/L	8.3 pCi/L																																																		
E108	4.7 pCi/L	4.1 pCi/L	4.4 pCi/L																																																		
F105	6.3 pCi/L	7.9 pCi/L	7.1 pCi/L																																																		
C103H	N/A	4.0 pCi/L	4.0 pCi/L																																																		
F106	4.3 pCi/L	1.2 pCi/L	2.8 pCi/L																																																		
F107	4.4 pCi/L	2.9 pCi/L	3.7 pCi/L																																																		
G108	4.8 pCi/L	2.7 pCi/L	3.8 pCi/L																																																		

At the request of Montgomery County Public Schools (MCPS), Leidos conducted a follow-up radon gas screening survey at Springbrook High School (HS) from December 28-31 in accordance with the protocols in the United States Environmental Protection Agency (USEPA) *Radon Measurement in Schools* (July 1993). The survey involved re-sampling at ten rooms containing radon gas detected above the USEPA Action Level of 4 pCi/L during the previous sampling event (conducted December 8-11). The locations of these ten rooms are shown in Figure 1. Radon gas samples were also collected at ten percent of the 29 occupied classrooms and offices (i.e., three) on the second floor of Springbrook HS. The locations of these three rooms are shown in Figure 2. Also, at the request of MCPS, the Boys Locker Room (BLR) and the Auditorium Theater Office (C103H) were sampled over December 28-31. Finally, Classroom E115 was re-tested because the sample from the previous event (December 8-11) had been tampered with. The locations of these three samples are shown in Figure 1.

The radon sampling survey followed the USEPA protocols including placing a dual sampling device in each room selected as a sampling location. Each device or kit contains two activated charcoal adsorption devices, set at a distance of 4 inches apart. A photograph of the radon sampling kit is shown in Figure 3. Each radon sampling kit was placed at least 20 inches above the ground surface, and was usually placed on top of a surface such as a 5-foot file cabinet or 6-foot shelf. The radon sampling kits were also placed away from exterior walls and windows, out of direct sunlight, and away from HVAC vents as much as possible.

The radon test kits were installed on Monday morning and were then picked up on early Thursday morning (i.e., approximately 70 hours later). According to the Building Services personnel, the HVAC system was functioning in the school during the testing period, and no exterior windows were open. The average outdoor temperature (48 degrees F), humidity (86%), wind speed (4 mph), and total precipitation (0.00 inches) during the December 28-31 testing period were obtained from Weather Underground (www.weatherunderground.com).

In accordance with the USEPA protocols, the ten rooms exceeding the radon gas Action Level during the previous sampling event (December 8-11) were re-tested under similar conditions. These included four rooms in the B-Wing (Classroom B109/110 with the adjacent B109A and B109B offices and Classroom B104), two rooms in the E-Wing (Classroom E111 and the E108 Daycare), three rooms in the F-Wing (Classrooms F105, F106, and F107), and one room

in the G-Wing (Classroom G108). In addition, one room (Classroom E115) had sampling devices which were determined to have been tampered with (i.e., moved and partially closed by someone) and retesting in this room was performed over the December 28-31 period. In addition, in accordance with the American Association of Radon Scientist and Technologist (AARST) recommendations, ten percent of the 29 occupied classrooms and offices on the second floor (i.e., three) were sampled. One second floor sample was collected in each wing (i.e, E-Wing, F-Wing, and G-Wing) and occupied classrooms above rooms with elevated radon gas concentrations (i.e., E209, F206, and G208) were selected for sampling. Finally, at the request of MCPS, the Boys Locker Room (BLR) in the lower level and the Auditorium Theater Office (C103H) on the first floor were sampled over December 28-31, even though these areas are not occupied on a regular basis.

The radon test kits were shipped to EMSL Analytical, Inc. in Cinnaminson, NJ, on 31 December 2015 for analysis by liquid scintillation counter using the USEPA testing protocols for testing Radon in Air. EMSL is accredited by the National Radon Safety Board (NRSB) under ARL6006 for radon analysis and the radon test kits are approved devices by the NRSB under #12199. A total of 19 paired devices were submitted for analysis, including the screening samples for 16 sampling locations (i.e., ten confirmation re-testing rooms, one tampered re-testing room, three representative second floor rooms, and two MCPS requested rooms), two duplicate samples, and one field blank. The Chain of Custody for the shipment of the radon test kits is shown in Appendix B. The laboratory analysis results are shown in Appendix C and are summarized in the table in Appendix A.

The results of the re-sampling for the ten confirmation rooms are summarized in Table 1. As shown in this table, seven out of the ten rooms which exceeded the USEPA Action Level during previous sampling event also had an average concentration above the Action Level over the two sampling events (i.e., December 8-11 and December 28-31) and require further action to mitigate these concentrations. The remaining three rooms which had an overall average less than the Action Level (i.e., F106, F107, and G108) do not require immediate action but should be re-tested within two years in accordance with the USEPA protocols. In addition, for the room that had a tampered test kit (i.e., E115) the re-testing was below the USEPA Action Level and no further action is necessary at this room.

For the two rooms requested by MCPS, the Boys Locker Room in the Lower Level had a result of 2.8 pCi/L which is below the USEPA Action Level. For the Auditorium Theater Office (C103H), the radon gas screening result was 4.0 pCi/L which is equal to the USEPA Action Level. Normally, this would require a second set of radon gas samples for confirmation, but the Auditorium Office is not normally occupied by students or teachers on a regular basis during the school week which limits the potential exposure.

For the three classrooms on the second floor, none of the rooms had radon results above the USEPA Action Level. As a result, mitigation measures should be confined to the seven first floor rooms which exceed the USEPA Action Levels.

As part of the USEPA Quality Assurance (QA) procedures, Leidos collected two duplicates (covering over 10% of the 16 rooms sampled) and one field blank (representing over 5% of the 16 rooms sampled). The two duplicates had average relative percent differences (ARPDs) within the QA limit of 25% with SB 1C at 4% and SB 59 at 10%. In addition, the field blank (SB 62) was less than the QA limit of 1.0 pCi/L.

Table 1 – Summary of December 8-11 and December 28-31 Sampling Events (in pCi/L)

Room	December 8-11 Max	December 28-31 Max	Average of Both Events	Notes and Recommendation
B109/110	6.1	5.0	5.6	Confirmed Action Level Exceedance
B019A	14.6	11.3	12.9	Confirmed Action Level Exceedance
B109B	5.5	5.7	5.6	Confirmed Action Level Exceedance
B104	4.6	4.9	4.7	Confirmed Action Level Exceedance
E108	4.7	4.1	4.4	Confirmed Action Level Exceedance
E111	8.9	7.7	8.3	Confirmed Action Level Exceedance
F105	6.3	7.9	7.1	Confirmed Action Level Exceedance
F106	4.3	1.2	2.8	Re-test in two years
F107	4.4	2.9	3.7	Re-test in two years
G108	4.8	2.7	3.8	Re-test in two years
E115	0.4	2.5	1.5	Initial sample had been tampered with

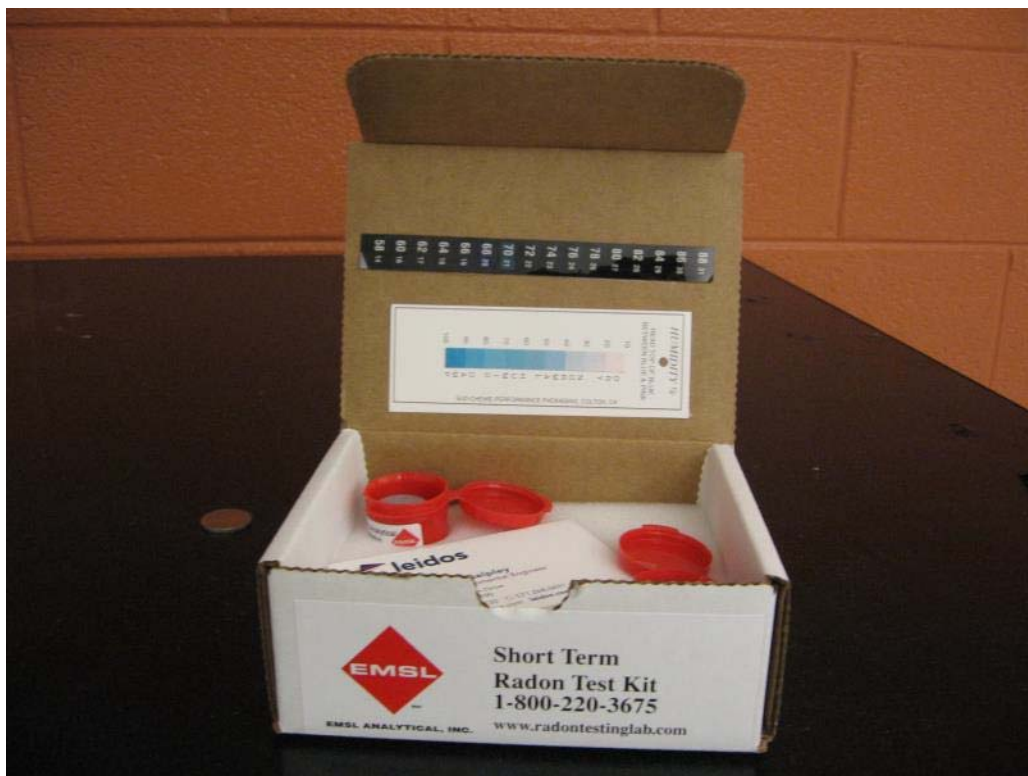


Figure 3. Photograph of Typical Radon Test Kit With Dual Devices

Appendix A. Radon Survey Results

Unique Sample Identifier	Sample Location Description (Room Number, Area)	Sample Result
230151	SB 1B - Classroom B110/109 - South side, 6 ft shelf	4.8
230323	SB 1B - Classroom B110/109 - South side, 6 ft shelf	5.0
230213	SB 1C - Classroom B110/109 - South side, 6 ft shelf	4.4
230131	SB 1C - Classroom B110/109 - South side, 6 ft shelf	4.9
231863	SB 2B - Office B109B, South Side, 5 ft shelf	5.7
231813	SB 2B - Office B109B, South Side, 5 ft shelf	5.6
230189	SB 53B - Classroom B104, South Side, 6 ft shelf	4.9
230340	SB 53B - Classroom B104, South Side, 6 ft shelf	4.3
231835	SB 3B - Office B109A, East side, 6 ft shelf	11.3
231785	SB 3B - Office B109A, East side, 6 ft shelf	10.8
231833	SB 56 - Auditorium Office C-103-H, North side, 4 ft shelf	4.2

Unique Sample Identifier	Sample Location Description (Room Number, Area)	Sample Result
231837	SB 56 - Auditorium Office C-103-H, North side, 4 ft shelf	3.8
231832	SB 18B - Classroom G108, NW side, 6 ft shelf	2.7
231831	SB 18B - Classroom G108, NW side, 6 ft shelf	2.5
231741	SB 22B - Lab F106, East Side, 6 ft Shelf	1.2
231822	SB 22B - Lab F106, East Side, 6 ft Shelf	1.0
230250	SB 23B - Classroom F107, NE Side, On teacher computer at 3 ft	2.9
230239	SB 23B - Classroom F107, NE Side, On teacher computer at 3 ft	2.9
230103	SB 24B - Classroom F105, SW Side, 5 ft File Cabinet	7.7
230228	SB 24B - Classroom F105, SW Side, 5 ft File Cabinet	7.9
230178	SB 57 - Boys Locker Room D-1, SE side, 5 ft locker	2.6
230334	SB 57 - Boys Locker Room D-1, SE side, 5 ft locker	2.9

Unique Sample Identifier	Sample Location Description (Room Number, Area)	Sample Result
231874	SB 58 - Classroom E209, SE side, 3 ft table	1.7
231734	SB 58 - Classroom E209, SE side, 3 ft table	1.9
230290	SB 59 - Classroom E209, SE side, 3 ft table	2.0
230123	SB 59 - Classroom E209, SE side, 3 ft table	2.0
231869	SB 60 - Classroom F206, NE side, 3 ft table	1.1
231827	SB 60 - Classroom F206, NE side, 3 ft table	1.1
230198	SB 61 - Classroom G208, NW side, 6 ft shelf	1.3
230128	SB 61 - Classroom G208, NW side, 6 ft shelf	1.6
231790	SB 34B - Daycare E108, SE Side, 6 ft Shelf	4.1
231866	SB 34B - Daycare E108, SE Side, 6 ft Shelf	3.1
231781	SB 33B - Classroom E111, SE Side, 6.5 ft Shelf	7.6

Unique Sample Identifier	Sample Location Description (Room Number, Area)	Sample Result
231865	SB 33B - Classroom E111, SE Side, 6.5 ft Shelf	7.7
231807	SB 8B - Classroom E115, SE Side, 3 ft table	2.5
231794	SB 8B - Classroom E115, SE Side, 3 ft table	2.3
231814	SB 62 - Field Blank	0.0
231888	SB 62 - Field Blank	-0.2

Appendix B. Chain of Custody



EMSL ANALYTICAL, INC.

CHAIN OF CUSTODY
RADON LABORATORY SERVICES
(COMMERCIAL USE)

EMSL ANALYTICAL, INC.
200 ROUTE 130 NORTH
CINNAMINSON, NJ 08077
PHONE: 800-220-3675
FAX: 856-786-0327

EMSL Job #: ~~381507176~~ CINNAMINSON, N.J.

2016 JAN -5 P 2:30

Company Information

Company Name: LEIDOS
EMSL Account #: LEID423day
Contact: John Whelpley
Address: 11951 Freedom Dr.
City: Reston
State: VA Zip Code: 20190
Phone: 571-268-0697
Fax: —
Email: whelpley.j@leidos.com

Project / Property Information:

Name: SPRINGBROOK HS
Address: 201 Valley Brook Drive
City: Silver Spring
Municipality: — County: Montgomery
State: MD Zip Code: 20904
PO#/Project#: 316041.00.00.001
☐ Please check box if this is a Post Mitigation Test
Technician Name: John Whelpley
Technician Certification #: —
Technician Signature: John Whelpley

Disclaimer

In no event shall EMSL be liable for indirect, special, consequential, or incidental damages for loss of profit or goodwill regardless of the negligence (either sole or concurrent) of EMSL and whether EMSL has been informed of the possibility of such damages arising out of or in connection with EMSL's services there under or the delivery, use, reliance upon or interpretation of test results by client or third party. We accept no legal responsibility for the purposes for which the client uses the test results. In no event shall EMSL be liable to a client or any third party, whether based upon theories of tort, contract or any other legal or equitable theory, in excess of the amount paid to EMSL by client thereafter.

Box Number	Device Number	Location	Exposure Period Beginning Date and Time	Exposure Period Ending Date and Time	Temperature, °F	Humidity, %
S010 136272	230151	Classroom 0110/0109 S Side, 6' Shelf	12/28/15 0939	12/31/15 808	70°	40%
"	230323	"	"	"	"	"
S01C 136271	230213	D	12/28/15 0940	12/31/15 809	70°	40%
"	230131	D	"	"	"	"
S020 136303	231863	Office 0109/0109 S Side, 5' Shelf	12/28/15 0944	12/31/15 810	68°	50%
"	231813	"	"	"	"	"
S05B 136273	230189	Classroom 0104/0104 S Side, 6' Shelf	12/28/15 0951	12/31/15 814	68°	60%
"	230340	"	"	"	"	"
S03W 136298	231835	Office 0109A E Side, 6' Shelf	12/28/15 0959	12/31/15 811	68°	60%
"	231785	"	"	"	"	"
S056 136302	231833	Auditorium Office C-103-H N Side, 4' Shelf	12/28/15 1010	12/31/15 752	68°	40%
"	231837	"	"	"	"	"

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Received By:

381600078



EMSL ANALYTICAL, INC.

CHAIN OF CUSTODY RADON LABORATORY SERVICES (COMMERCIAL USE)

EMSL Job #: 381509976

EMSL ANALYTICAL, INC.
200 ROUTE 130 NORTH
CINNAMINSON, NJ 08077
PHONE: 800-220-3675
FAX: 856-786-0327

Box Number	Device Number	Location	Exposure Period Beginning Date and Time	Exposure Period Ending Date and Time	Temperature, °F	Humidity, %
SO180	136299	231832 ✓ Classroom G108 NW Side, 6' Shelf	12/28/15 1016	12/31/15 742	78°	40%
"	231831	"	"	"	"	"
SO220	136296	231741 ✓ Lab F106 E Side, 6' Shelf	12/28/15 1019	12/31/15 745	68°	40%
"	231822	"	"	"	"	"
SO230	136274	230250 ✓ Classm F107 NE Side, 3' Table	12/28/15 1022	12/31/15 746	68°	40%
"	230239	"	"	"	"	"
SO240	136269	230103 ✓ Classm F105 SW Side, 5' File Cabinet	12/28/15 1026	12/31/15 747	68°	50%
"	230228	"	"	"	"	"
SO57	136275	230178 ✓ Boys Locker Room D-1 SE Side, 5' Locker	12/28/15 1039	12/31/15 726	68°	60%
"	230334	"	"	"	"	"
SO58	136295	231874 ✓ Classroom E209 SE Side, 3' Table	12/28/15 1048	12/31/15 734	70°	40%
"	231734	"	"	"	"	"
SO59	136276	230290 ✓ D	12/28/15 1049	12/31/15 735	70°	40%
"	230123	D	"	"	"	"
SO60	136297	231869 ✓ Classm F206 NE Side, 3' Table	12/28/15 1054	12/31/15 737	66°	60%
"	231827	"	"	"	"	"
SO61	136270	230198 ✓ Classroom G208 NW Side, 6' Shelf	12/28/15 1058	12/31/15 739	70°	40%
"	230128	"	"	"	"	"
SO340	136300	231790 ✓ Daycare E108 SE Side, 6' Shelf	12/28/15 1108	12/31/15 729	80°	30%
"	231866	"	"	"	"	"
SO330	136301	231781 ✓ Kitchen E111 SE Side, 4' Shelf	12/28/15 1111	12/31/15 731	72°	40%
"	231865	"	"	"	"	"
SO80	136304	231807 ✓ Classm E115 SE Side, 3' Table	12/28/15 1115	12/31/15 803	68°	40%
"	231794	"	"	"	"	"
SO61	136294	231814 ✓ P	12/28/15 1116	12/31/15 804	72°	60%
"	231888	P	"	"	"	"

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Page 2 of 2

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Appendix C. Laboratory 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: 381600078
CustomerID: LEID42
CustomerPO: 316041.00.00.
ProjectID:

Attn: **John Whelpley**
Leidos Engineering, LLC
11951 Freedom Dr.
Reston, VA 20190

Phone: (571) 268-0697
Fax:
Received: 01/05/16 2:30 PM
Analysis Date: 1/6/2016
Collected: 12/28/2015

Project: **201 Valley Brook Drive**

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

Test Report: Radon in Air Test Results**Samples for EMSL Kit 136272**

Liquid Scintillation ID	Location	Radon Activity pCi/L	Start	Stop	Temperature F	Humidity %	Sample Type
230151 381600078-0001	Classroom B110/B109 S side, 6' shelf	4.8	12/28/2015 9:39:00 AM	12/31/2015 8:08:00 AM	70	40	Customer

Sample Notes:

230323 381600078-0002	Classroom B110/B109 S side, 6' shelf	5	12/28/2015 9:39:00 AM	12/31/2015 8:08:00 AM	70	40	Customer
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Sample Notes:**Summary for EMSL Kit 136272** **Average Radon Result: 4.9 pCi/L****Samples for EMSL Kit 136271**

Liquid Scintillation ID	Location	Radon Activity pCi/L	Start	Stop	Temperature F	Humidity %	Sample Type
230213 381600078-0003	D	4.4	12/28/2015 9:40:00 AM	12/31/2015 8:09:00 AM	70	40	Customer

Sample Notes:

230131 381600078-0004	D	4.9	12/28/2015 9:40:00 AM	12/31/2015 8:09:00 AM	70	40	Customer
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Sample Notes:**Summary for EMSL Kit 136271** **Average Radon Result: 4.7 pCi/L****Samples for EMSL Kit 136303**

Liquid Scintillation ID	Location	Radon Activity pCi/L	Start	Stop	Temperature F	Humidity %	Sample Type
231863 381600078-0005	Office B109B, S side, 5' shelf	5.7	12/28/2015 9:44:00 AM	12/31/2015 8:10:00 AM	68	50	Customer

Sample Notes:

231813 381600078-0006	Office B109B, S side, 5' shelf	5.6	12/28/2015 9:44:00 AM	12/31/2015 8:10:00 AM	68	50	Customer
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Sample Notes:**Summary for EMSL Kit 136303** **Average Radon Result: 5.6 pCi/L**

**EMSL Analytical, Inc.**

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EMSL Order: 381600078
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CustomerPO: 316041.00.00.
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Reston, VA 20190

Phone: (571) 268-0697
Fax:
Received: 01/05/16 2:30 PM
Analysis Date: 1/6/2016
Collected: 12/28/2015

Project: **201 Valley Brook Drive**

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

Test Report: Radon in Air Test Results**Samples for EMSL Kit 136273**

Liquid Scintillation ID	Location	Radon Activity pCi/L	Start	Stop	Temperature F	Humidity %	Sample Type
230189 381600078-0007	Classroom B104, S side, 6' shelf	4.9	12/28/2015 9:51:00 AM	12/31/2015 8:14:00 AM	68	60	Customer

Sample Notes:

230340 381600078-0008	Classroom B104, S side, 6' shelf	4.3	12/28/2015 9:51:00 AM	12/31/2015 8:14:00 AM	68	60	Customer
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Sample Notes:**Summary for EMSL Kit 136273** **Average Radon Result: 4.6 pCi/L****Samples for EMSL Kit 136298**

Liquid Scintillation ID	Location	Radon Activity pCi/L	Start	Stop	Temperature F	Humidity %	Sample Type
231835 381600078-0009	Office B109A, E side, 6' shelf	11.3	12/28/2015 9:59:00 AM	12/31/2015 8:11:00 AM	68	60	Customer

Sample Notes:

231785 381600078-0010	Office B109A, E side, 6' shelf	10.8	12/28/2015 9:59:00 AM	12/31/2015 8:11:00 AM	68	60	Customer
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Sample Notes:**Summary for EMSL Kit 136298** **Average Radon Result: 11.1 pCi/L****Samples for EMSL Kit 136302**

Liquid Scintillation ID	Location	Radon Activity pCi/L	Start	Stop	Temperature F	Humidity %	Sample Type
231833 381600078-0011	Auditorium office C- 103-H N side, 4' shelf	4.2	12/28/2015 10:10:00 AM	12/31/2015 7:52:00 AM	68	40	Customer

Sample Notes:

231837 381600078-0012	Auditorium office C- 103-H N side, 4' shelf	3.8	12/28/2015 10:10:00 AM	12/31/2015 7:52:00 AM	68	40	Customer
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Sample Notes:**Summary for EMSL Kit 136302** **Average Radon Result: 4.0 pCi/L**

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Phone: (571) 268-0697
Fax:
Received: 01/05/16 2:30 PM
Analysis Date: 1/6/2016
Collected: 12/28/2015

Project: **201 Valley Brook Drive**

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

Test Report: Radon in Air Test Results**Samples for EMSL Kit 136299**

Liquid Scintillation ID	Location	Radon Activity pCi/L	Start	Stop	Temperature F	Humidity %	Sample Type
231832 381600078-0013	Classroom G108 NW side, 6' shelf	2.7	12/28/2015 10:16:00 AM	12/31/2015 7:42:00 AM	78	40	Customer

Sample Notes:

231831 381600078-0014	Classroom G108 NW side, 6' shelf	2.5	12/28/2015 10:16:00 AM	12/31/2015 7:42:00 AM	78	40	Customer
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Sample Notes:**Summary for EMSL Kit 136299** **Average Radon Result: 2.6 pCi/L****Samples for EMSL Kit 136296**

Liquid Scintillation ID	Location	Radon Activity pCi/L	Start	Stop	Temperature F	Humidity %	Sample Type
231741 381600078-0015	Lab F106, E side, 6' shelf	1.2	12/28/2015 10:19:00 AM	12/31/2015 7:45:00 AM	68	40	Customer

Sample Notes:

231822 381600078-0016	Lab F106, E side, 6' shelf	1	12/28/2015 10:19:00 AM	12/31/2015 7:45:00 AM	68	40	Customer
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Sample Notes:**Summary for EMSL Kit 136296** **Average Radon Result: 1.1 pCi/L****Samples for EMSL Kit 136274**

Liquid Scintillation ID	Location	Radon Activity pCi/L	Start	Stop	Temperature F	Humidity %	Sample Type
230250 381600078-0017	Classroom F107, NE side, 3' table	2.9	12/28/2015 10:22:00 AM	12/31/2015 7:46:00 AM	68	40	Customer

Sample Notes:

230239 381600078-0018	Classroom F107, NE side, 3' table	2.9	12/28/2015 10:22:00 AM	12/31/2015 7:46:00 AM	68	40	Customer
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Sample Notes:**Summary for EMSL Kit 136274** **Average Radon Result: 2.9 pCi/L**

**EMSL Analytical, Inc.**

200 Route 130 North, Cinnaminson, NJ 08077

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<http://www.EMSL.com>cinnaminsonradonlab@emsl.com

EMSL Order: 381600078
CustomerID: LEID42
CustomerPO: 316041.00.00.
ProjectID:

Attn: **John Whelpley**
Leidos Engineering, LLC
11951 Freedom Dr.
Reston, VA 20190

Phone: (571) 268-0697
Fax:
Received: 01/05/16 2:30 PM
Analysis Date: 1/6/2016
Collected: 12/28/2015

Project: **201 Valley Brook Drive**

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

Test Report: Radon in Air Test Results**Samples for EMSL Kit 136269**

Liquid Scintillation ID	Location	Radon Activity pCi/L	Start	Stop	Temperature F	Humidity %	Sample Type
230103 381600078-0019	Classroom F105 SW side, 5' file cabinet	7.7	12/28/2015 10:26:00 AM	12/31/2015 7:47:00 AM	68	50	Customer

Sample Notes:

230228 381600078-0020	Classroom F105 SW side, 5' file cabinet	7.9	12/28/2015 10:26:00 AM	12/31/2015 7:47:00 AM	68	50	Customer
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Sample Notes:**Summary for EMSL Kit 136269** **Average Radon Result: 7.8 pCi/L****Samples for EMSL Kit 136275**

Liquid Scintillation ID	Location	Radon Activity pCi/L	Start	Stop	Temperature F	Humidity %	Sample Type
230178 381600078-0021	Boys' locker room D- 1 SE side, 5' locker	2.6	12/28/2015 10:39:00 AM	12/31/2015 7:26:00 AM	68	60	Customer

Sample Notes:

230334 381600078-0022	Boys' locker room D- 1 SE side, 5' locker	2.9	12/28/2015 10:39:00 AM	12/31/2015 7:26:00 AM	68	60	Customer
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Sample Notes:**Summary for EMSL Kit 136275** **Average Radon Result: 2.8 pCi/L****Samples for EMSL Kit 136295**

Liquid Scintillation ID	Location	Radon Activity pCi/L	Start	Stop	Temperature F	Humidity %	Sample Type
231874 381600078-0023	Classroom E209, SE side, 3' table	1.7	12/28/2015 10:48:00 AM	12/31/2015 7:34:00 AM	70	40	Customer

Sample Notes:

231734 381600078-0024	Classroom E209, SE side, 3' table	1.9	12/28/2015 10:48:00 AM	12/31/2015 7:34:00 AM	70	40	Customer
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Sample Notes:**Summary for EMSL Kit 136295** **Average Radon Result: 1.8 pCi/L**

**EMSL Analytical, Inc.**

200 Route 130 North, Cinnaminson, NJ 08077

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CustomerPO: 316041.00.00.
ProjectID:

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Fax:
Received: 01/05/16 2:30 PM
Analysis Date: 1/6/2016
Collected: 12/28/2015

Project: **201 Valley Brook Drive**

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

Test Report: Radon in Air Test Results**Samples for EMSL Kit 136276**

Liquid Scintillation ID	Location	Radon Activity pCi/L	Start	Stop	Temperature F	Humidity %	Sample Type
230290	D	2	12/28/2015	12/31/2015	70	40	Customer
381600078-0025			10:49:00 AM	7:35:00 AM			

Sample Notes:

230123	D	2	12/28/2015	12/31/2015	70	40	Customer
381600078-0026			10:49:00 AM	7:35:00 AM			

Sample Notes:**Summary for EMSL Kit 136276** **Average Radon Result: 2.0 pCi/L****Samples for EMSL Kit 136297**

Liquid Scintillation ID	Location	Radon Activity pCi/L	Start	Stop	Temperature F	Humidity %	Sample Type
231869	Classroom F206 NE side, 3' table	1.1	12/28/2015	12/31/2015	66	60	Customer
381600078-0027			10:54:00 AM	7:37:00 AM			

Sample Notes:

231827	Classroom F206 NE side, 3' table	1.1	12/28/2015	12/31/2015	66	60	Customer
381600078-0028			10:54:00 AM	7:37:00 AM			

Sample Notes:**Summary for EMSL Kit 136297** **Average Radon Result: 1.1 pCi/L****Samples for EMSL Kit 136270**

Liquid Scintillation ID	Location	Radon Activity pCi/L	Start	Stop	Temperature F	Humidity %	Sample Type
230198	Classroom G208 NW side, 6' shelf	1.3	12/28/2015	12/31/2015	70	40	Customer
381600078-0029			10:58:00 AM	7:39:00 AM			

Sample Notes:

230128	Classroom G208 NW side, 6' shelf	1.6	12/28/2015	12/31/2015	70	40	Customer
381600078-0030			10:58:00 AM	7:39:00 AM			

Sample Notes:**Summary for EMSL Kit 136270** **Average Radon Result: 1.5 pCi/L**

**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: 381600078
CustomerID: LEID42
CustomerPO: 316041.00.00.
ProjectID:

Attn: **John Whelpley**
Leidos Engineering, LLC
11951 Freedom Dr.
Reston, VA 20190

Phone: (571) 268-0697
Fax:
Received: 01/05/16 2:30 PM
Analysis Date: 1/6/2016
Collected: 12/28/2015

Project: **201 Valley Brook Drive**

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

Test Report: Radon in Air Test Results**Samples for EMSL Kit 136300**

Liquid Scintillation ID	Location	Radon Activity pCi/L	Start	Stop	Temperature F	Humidity %	Sample Type
231790 381600078-0031	Daycare E108 SE side, 6' shelf	4.1	12/28/2015 11:08:00 AM	12/31/2015 7:29:00 AM	80	30	Customer

Sample Notes:

231866 381600078-0032	Daycare E108 SE side, 6' shelf	3.1	12/28/2015 11:08:00 AM	12/31/2015 7:29:00 AM	80	30	Customer
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Sample Notes:**Summary for EMSL Kit 136300** **Average Radon Result: 3.6 pCi/L****Samples for EMSL Kit 136301**

Liquid Scintillation ID	Location	Radon Activity pCi/L	Start	Stop	Temperature F	Humidity %	Sample Type
231781 381600078-0033	Kitchen E111, SE side, 4' shelf	7.6	12/28/2015 11:11:00 AM	12/31/2015 7:31:00 AM	72	40	Customer

Sample Notes:

231865 381600078-0034	Kitchen E111, SE side, 4' shelf	7.7	12/28/2015 11:11:00 AM	12/31/2015 7:31:00 AM	72	40	Customer
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Sample Notes:**Summary for EMSL Kit 136301** **Average Radon Result: 7.6 pCi/L****Samples for EMSL Kit 136304**

Liquid Scintillation ID	Location	Radon Activity pCi/L	Start	Stop	Temperature F	Humidity %	Sample Type
231807 381600078-0035	Classroom E115 SE side, 3' table	2.5	12/28/2015 11:15:00 AM	12/31/2015 8:03:00 AM	68	40	Customer

Sample Notes:

231794 381600078-0036	Classroom E115 SE side, 3' table	2.3	12/28/2015 11:15:00 AM	12/31/2015 8:03:00 AM	68	40	Customer
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Sample Notes:**Summary for EMSL Kit 136304** **Average Radon Result: 2.4 pCi/L**

**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: 381600078
CustomerID: LEID42
CustomerPO: 316041.00.00.
ProjectID:

Attn: **John Whelpley**
Leidos Engineering, LLC
11951 Freedom Dr.
Reston, VA 20190

Phone: (571) 268-0697
Fax:
Received: 01/05/16 2:30 PM
Analysis Date: 1/6/2016
Collected: 12/28/2015

Project: **201 Valley Brook Drive**

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

Test Report: Radon in Air Test Results**Samples for EMSL Kit 136294**

Liquid Scintillation ID	Location	Radon Activity pCi/L	Start	Stop	Temperature F	Humidity %	Sample Type
231814	B	0	12/28/2015	12/31/2015	72	60	Customer
381600078-0037			11:16:00 AM	8:04:00 AM			

Sample Notes:

231888	B	-0.2	12/28/2015	12/31/2015	72	60	Customer
381600078-0038			11:16:00 AM	8:04:00 AM			

Sample Notes:**Summary for EMSL Kit 136294** **Average Radon Result: 0.0 pCi/L**

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.

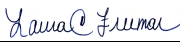

Please contact EMSL Analytical, Inc. or your State Health Department for further information.

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)

Tiffanie Cosgrove (38)

 
Laura Freeman, Interim Laboratory Manager &
Subash Rashat, New Jersey Radiation Specialist NJ MES 10152
or other approved signatory

In no event shall EMSL be liable for indirect, special, consequential, or incidental damages, including, but not limited to, damages for loss of profit or goodwill regardless of the negligence (either sole or concurrent) of EMSL and whether EMSL has been informed of the possibility of such damages, arising out of or in connection with EMSL's services thereunder or the delivery, use, reliance upon or interpretation of test results by client or any third party. We accept no legal responsibility for the purposes for which the client uses the test results. In no event shall EMSL be liable to a client or any third party, whether based upon theories of tort, contract or any other legal or equitable theory, in excess of the amount paid to EMSL by client thereunder. The test results meets all NELAC requirements unless otherwise specified. Accreditations: NRSB ARL6006, NJ DEP 03036, MEB 92525, PA 2573, IN 00455, IA L00032, RI RAS-024, ME 20200C, NE RMB-1083, NY ELAP 10872, NM 885-10L, FL RB2034, OH RL-39, NRPP #106178AL, KS-LB-0005

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ Accreditations: NRSB ARL6006, NJ DEP 03036, MEB 92525, PA 2573, IN 00455, IA L00032, RI RAS-024, ME 20200C, NE RMB-1083, NY ELAP 10872, NM 885-10L, FL RB2034, OH RL-39, NRPP #106178AL, KS-LB-0005. Subash Rashat certification #MES10152

Initial report from 01/08/2016 13:23:54

Please visit www.radontestinglab.com

RADON SURVEY SCREENING REPORT – FINAL

SPRINGBROOK HIGH SCHOOL

201 Valley Brook Drive, Silver Spring, Maryland 20904

5 January 2016



EXECUTIVE SUMMARY

Name of Facility:	Springbrook High School, Silver Spring, MD
Date of Test Report:	5 January 2016
Round of Testing:	Initial Follow-up Post Remediation
# rooms tested:	46
# rooms \geq 4.0 pCi/L:	10
Low Value:	1.3 pCi/L
High Value:	14.6 pCi/L Classroom B109/110 (6.1 pCi/L) Office B109A (14.6 pCi/L) Office B109B (5.5 pCi/L) Classroom B104 (4.6 pCi/L) Classroom E111 (8.9 pCi/L) Daycare E108 (4.7 pCi/L) Classroom F105 (6.3 pCi/L) Classroom F106 (4.3 pCi/L) Classroom F107 (4.4 pCi/L) Classroom G108 (4.8 pCi/L)

At the request of Montgomery County Public Schools (MCPS), Leidos conducted a radon survey at Springbrook High School (HS) in accordance with the protocols in the United States Environmental Protection Agency (USEPA) *Radon Measurement in Schools* (July 1993). On 8 December 2015, John Whelpley, P.E. (Leidos) installed sampling kits in 46 occupied classrooms and offices on the first floor and lower level of Springbrook HS. The locations of the 46 occupied classrooms and offices are shown in Figure 1. The high school was constructed in 1964 and had its last major renovation in 1994.

The radon sampling survey followed the USEPA protocols including placing a sampling device in each room selected as a sampling location. Each device or kit contains two activated charcoal adsorption devices, set at a distance of 4 inches apart. A photograph of the radon sampling kit is shown in Figure 2. Each radon sampling kit was placed at least 20 inches above the ground surface, and was usually placed on top of a surface such as a 5-foot file cabinet or 6-foot shelf to avoid contact by students during the 3-day sampling period. The radon sampling kits were also placed away from exterior walls and windows, out of direct sunlight, and away from HVAC vents as much as possible. A photograph of the radon sampling kit on a 6-foot cabinet is shown in Figure 3.

The radon test kits were installed on Tuesday after classes ended for the day at 3pm. The samples were then picked up on Friday before classes began at 8am (i.e., approximately 65 hours later). According to the Building Services personnel, the HVAC system was functioning in the school prior to and during the testing period, and no exterior windows were open. The average outdoor temperature (45 degrees F), humidity (86%), wind (0 mph), and total precipitation (0.00 inches) during the December 8-11 testing period were obtained from Weather Underground (www.weatherunderground.com).

In accordance with the USEPA protocols, all Lower Level and First Floor occupied classrooms and offices in contact with the ground were sampled. These included four rooms on the Lower Level (G1, G2, G11, and G12) and 42 rooms on the First Floor. In addition, because the C103 Auditorium was over 2,000 square feet, a second set of samples was collected within this room (SB43 and SB44 in the Western and Southern corners, respectively) in accordance with the USEPA protocols. Also, in accordance with the USEPA protocols, one First Floor

classroom (F113) was not sampled because it was directly above two classrooms on the Lower Level (G1 and G2) that were sampled (as SB9 and SB10).

The radon test kits were shipped to EMSL Analytical, Inc. in Cinnaminson, NJ, on 11 December 2015 for analysis by liquid scintillation counter using the USEPA testing protocols for testing Radon in Air. EMSL is accredited by the National Radon Safety Board (NRSB) under ARL6006 for radon analysis and the radon test kits are approved devices by the NRSB under #12199. A total of 55 paired devices were submitted for analysis, including the screening samples for 47 sampling locations (i.e., the 46 rooms include two samples in the C103 Auditorium), five duplicate samples, and three field blanks. The Chain of Custody for the shipment of the radon test kits is shown in Appendix B. The laboratory analysis results are shown in Appendix C and are summarized in the table in Appendix A.

As shown in the table in Appendix A, ten rooms had radon results above the USEPA Action Level of 4 Picocuries per Liter (pCi/L). These included four rooms in the B-Wing (Classroom B109/110 with the adjacent B109A and B109B offices and Classroom B104), two rooms in the E-Wing (Classroom E111 and the E108 Daycare), three rooms in the F-Wing (Classrooms F105, F106, and F107), and one room in the G-Wing (Classroom G108). (None of the four rooms in the Lower Level tested above the USEPA action level.) In accordance with the USEPA procedures, the ten rooms exceeding the USEPA Action Level require retesting. In addition, one room (Classroom E115) had sampling devices which were determined to have been tampered with (i.e., moved and partially closed by someone) and retesting in this room will be required. (In Classroom F105 one of the two sampling devices was moved and partially closed, but the reported result for the other fully open device was 6.3 pCi/L, and therefore, in accordance with the USEPA protocol, the location should be retested in any case). Also, at the request of MCPS, two other rooms will also be sampled during the retesting: the Boys Locker Room in the lower level and the Auditorium dressing room.

As part of the USEPA Quality Assurance (QA) procedures, Leidos collected five duplicates (covering over 10% of rooms) and three field blanks (representing more than 5% of the rooms). The five duplicates (SB 7, SB 16, SB 28, SB 45, and SB 48) all had average relative percent differences (ARPDs) within the QA limit of 25%. The three field blanks (SB 26, SB 50, and SB 55) were all between 0.1 and 0.4 pCi/L and were less than the QA limit of 1.0 pCi/L.

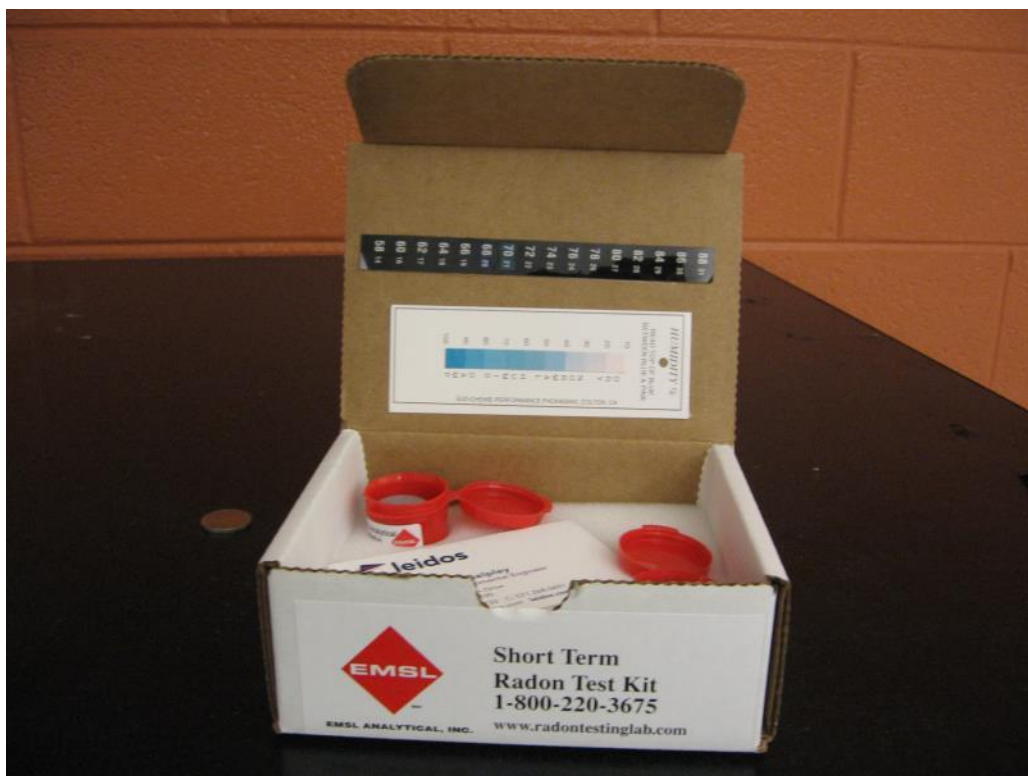


Figure 2. Photograph of Typical Radon Test Kit With Dual Devices



Figure 3. Typical Placement of Radon Test Kit

Appendix A. Radon Survey Results

Unique Sample Identifier	Sample Location Description (Room Number, Area)	Sample Result
225514	SB1 - Classroom B110/109, South Side, 6 ft Shelf	6.1
225488	SB1 - Classroom B110/109, South Side, 6 ft Shelf	6.1
225720	SB 2 - Office B109B, South Side, 5 ft Shelf	5.0
225518	SB 2 - Office B109B, South Side, 5 ft Shelf	5.5
225764	SB 3 - Office B109A, East Side, 6 ft Shelf	14.1
225547	SB 3 - Office B109A, East Side, 6 ft Shelf	14.6
225579	SB 4- Classroom B108, North Side, 6 ft Shelf	3.6
225716	SB 4- Classroom B108, North Side, 6 ft Shelf	3.3
225721	SB 5 - Office B108C, West Side, 5 ft Shelf	2.2
225689	SB 5 - Office B108C, West Side, 5 ft Shelf	2.0
225501	SB 6 - Special Education Classroom B105, South Side, 4.5 ft File Cabinet	2.6
225535	SB 6 - Special Education Classroom B105, South Side, 4.5 ft File Cabinet	2.4
225540	SB 7 - Special Education Classroom B105, South Side, 4.5 ft File Cabinet	2.7
225690	SB 7 - Special Education Classroom B105, South Side, 4.5 ft File Cabinet	2.7
225508	SB 8 - Classroom E115, North Side, On Wall at 5.5 ft over Closet Door	0.3
225703	SB 8 - Classroom E115, North Side, On Wall at 5.5 ft over Closet Door	0.4
225575	SB 9 - Classroom G2, South Side, 6 ft Shelf	1.6
225712	SB 9 - Classroom G2, South Side, 6 ft Shelf	1.7
225773	SB 10 - Classroom G1, West Side, 6 ft Shelf	2.2
225509	SB 10 - Classroom G1, West Side, 6 ft Shelf	2.3
225741	SB 11 - Classroom G11, South Side, On Wall at 6 ft over Whiteboard	2.0
225708	SB 11 - Classroom G11, South Side, On Wall at 6 ft over Whiteboard	1.7
225576	SB 12 - Classroom G12, North Side, 4.5 ft Bookshelf	3.8
225420	SB 12 - Classroom G12, North Side, 4.5 ft Bookshelf	3.5
225696	SB 13 - Lab G101, NW Side, 6 ft above Eyewash	2.3
225766	SB 13 - Lab G101, NW Side, 6 ft above Eyewash	2.1
225429	SB 14 - Lab G106, SE Side, 6 ft above Safety Shower	1.4
225686	SB 14 - Lab G106, SE Side, 6 ft above Safety Shower	1.6
225592	SB 15 - Lab G105, NW Side, 6 ft Shelf	1.7
225794	SB 15 - Lab G105, NW Side, 6 ft Shelf	1.4
225730	SB 16 - Lab G105, NW Side, 6 ft Shelf	1.4
225578	SB 16 - Lab G105, NW Side, 6 ft Shelf	1.3
225503	SB 17 - Lab G109, SE Side, 6 ft Shelf	3.5
225528	SB 17 - Lab G109, SE Side, 6 ft Shelf	3.5
225577	SB 18 - Lab G108, NW Side, 6 ft Shelf	4.5
225392	SB 18 - Lab G108, NW Side, 6 ft Shelf	4.8
225912	SB 19 - Lab G110, SW Side, 6 ft Shelf	3.9
225599	SB 19 - Lab G110, SW Side, 6 ft Shelf	3.9

Unique Sample Identifier	Sample Location Description (Room Number, Area)	Sample Result
225497	SB 20 - Lab F108, NW Side, 6 ft Shelf	2.2
225549	SB 20 - Lab F108, NW Side, 6 ft Shelf	2.2
225506	SB 21 - Classroom F109, SE Side, On teacher computer at 4 ft	3.1
225770	SB 21 - Classroom F109, SE Side, On teacher computer at 4 ft	3.7
225697	SB 22 - Lab F106, East Side, 6 ft Shelf	4.3
225795	SB 22 - Lab F106, East Side, 6 ft Shelf	4.3
225751	SB 23 - Classroom F107, NE Side, On teacher computer at 3 ft	4.0
225725	SB 23 - Classroom F107, NE Side, On teacher computer at 3 ft	4.4
225728	SB 24 - Classroom F105, SW Side, 5 ft File Cabinet	6.3
225568	SB 24 - Classroom F105, SW Side, 5 ft File Cabinet	3.6
225797	SB 25 - Classroom F103, SW Side, On chalkboard at 3 ft	3.2
225552	SB 25 - Classroom F103, SW Side, On chalkboard at 3 ft	2.8
225584	SB 26 - Field Blank	0.2
225522	SB 26 - Field Blank	0.1
225520	SB 27 - Office F104, NE Side, 5 ft Shelf	2.3
225684	SB 27 - Office F104, NE Side, 5 ft Shelf	2.7
225711	SB 28 - Office F104, NE Side, 5 ft Shelf	2.4
225726	SB 28 - Office F104, NE Side, 5 ft Shelf	2.6
225735	SB 29 - Classroom F102, SW Side, On teacher computer at 3 ft	1.3
225793	SB 29 - Classroom F102, SW Side, On teacher computer at 3 ft	1.7
225591	SB 30 - Classroom F101, NW Side, 3 ft credenza	1.4
225596	SB 30 - Classroom F101, NW Side, 3 ft credenza	1.4
225784	SB 31 - Classroom E117, NE Side, 4 ft file cabinet	1.9
225567	SB 31 - Classroom E117, NE Side, 4 ft file cabinet	1.8
225531	SB 32 - Classroom E118, NW Side, 6 ft Shelf	2.5
225839	SB 32 - Classroom E118, NW Side, 6 ft Shelf	2.9
225760	SB 33 - Classroom E111, SE Side, 6.5 ft Shelf	8.9
225771	SB 33 - Classroom E111, SE Side, 6.5 ft Shelf	8.5
225855	SB 34 - Daycare E108, SE Side, 6 ft Shelf	4.5
225758	SB 34 - Daycare E108, SE Side, 6 ft Shelf	4.7
225521	SB 35 - Office E107, SW Side, 6 ft Shelf	1.4
225529	SB 35 - Office E107, SW Side, 6 ft Shelf	1.6
225705	SB 36 - Classroom E105, NW Side, 4 ft File Cabinet	2.7
225565	SB 36 - Classroom E105, NW Side, 4 ft File Cabinet	2.4
225719	SB 37 - Classroom E106, East Side, 6 ft Shelf	1.6
225767	SB 37 - Classroom E106, East Side, 6 ft Shelf	1.8
225749	SB 38 - Classroom E110, NW Side, Over fridge at 5 ft	1.8
225888	SB 38 - Classroom E110, NW Side, Over fridge at 5 ft	1.9
225731	SB 39 - Office E114, NW Side, 6 ft Shelf	2.0

Unique Sample Identifier	Sample Location Description (Room Number, Area)	Sample Result
225543	SB 39 - Office E114, NW Side, 6 ft Shelf	1.8
225566	SB 40 - Classroom E113, NW Side, 5 ft File Cabinet	1.7
225718	SB 40 - Classroom E113, NW Side, 5 ft File Cabinet	1.9
225714	SB 41 - Music Room D107, West Side, 4 ft Shelf	3.9
225738	SB 41 - Music Room D107, West Side, 4 ft Shelf	3.4
225571	SB 42 - Music Room D108, East Side, On teacher desk at 3 ft	2.8
225772	SB 42 - Music Room D108, East Side, On teacher desk at 3 ft	3.2
225910	SB 43 - Auditorium C103, West Side, 5 ft light stand	3.6
225722	SB 43 - Auditorium C103, West Side, 5 ft light stand	3.9
225550	SB 44 - Auditorium C103, South Side, 5 ft light stand	3.0
225580	SB 44 - Auditorium C103, South Side, 5 ft light stand	3.3
225707	SB 45 - Auditorium C103, South Side, 5 ft light stand	3.8
225897	SB 45 - Auditorium C103, South Side, 5 ft light stand	3.7
225753	SB 46 - Machine Shop B107, East Side, 6 ft Shelf	2.8
225583	SB 46 - Machine Shop B107, East Side, 6 ft Shelf	2.7
225768	SB 47 - Classroom B106, South Side, 6 ft Shelf	2.7
225553	SB 47 - Classroom B106, South Side, 6 ft Shelf	2.3
225802	SB 48 - Classroom B106, South Side, 6 ft Shelf	3.0
225527	SB 48 - Classroom B106, South Side, 6 ft Shelf	2.4
225587	SB 49 - Classroom B103, East Side, 6 ft Shelf	2.7
225572	SB 49 - Classroom B103, East Side, 6 ft Shelf	2.5
225574	SB 50- Field Blank	0.2
225743	SB 50- Field Blank	0.1
225545	SB 51 - Classroom B102, South Side, 6 ft Shelf	2.4
225597	SB 51 - Classroom B102, South Side, 6 ft Shelf	2.9
225788	SB 52 - Classroom B101, South Side, 6 ft Shelf	1.9
225524	SB 52 - Classroom B101, South Side, 6 ft Shelf	1.6
225715	SB 53 - Classroom B104, South Side, 6 ft Shelf	4.6
225791	SB 53 - Classroom B104, South Side, 6 ft Shelf	4.3
225713	SB 54 - Office A101, West Side, 6 ft Shelf	2.0
225891	SB 54 - Office A101, West Side, 6 ft Shelf	1.9
225776	SB 55 - Field Blank	0.1
225746	SB 55 - Field Blank	0.4

Appendix B. Chain of Custody



RECEIVED
EMSL
CINNAMINSON, N.J.

CHAIN OF CUSTODY
RADON LABORATORY SERVICES
(COMMERCIAL USE)

EMSL ANALYTICAL, INC.
200 ROUTE 130 NORTH
CINNAMINSON, NJ 08077

PHONE: 800-220-3675
FAX: 856-786-0327

EMSL ANALYTICAL, INC.

EMSL Job #: 381509976

Company Information

Company Name: LEIDOS
EMSL Account #: 86184864
Contact: JOHN WHELPLEY
Address: 11951 Freedom Dr.
City: Reston
State: VA Zip Code: 20190
Phone: 571-268-0697
Fax: NA
Email: whelpleyj@leidos.com

Project / Property Information:

Name: SPRING BROOK
Address: 201 Valley Brook Drive
City: Silver Spring
Municipality: - County: Montgomery
State: MD Zip Code: 20904
PO#/Project#: PO-MISC-PROD-86184864
☐ Please check box if this is a Post Mitigation Test
Technician Name: JOHN WHELPLEY, P.E.
Technician Certification #: NA
Technician Signature: [Signature]

Disclaimer

In no event shall EMSL be liable for indirect, special, consequential, or incidental damages for loss of profit or goodwill regardless of the negligence (either sole or concurrent) of EMSL and whether EMSL has been informed of the possibility of such damages arising out of or in connection with EMSL's services there under or the delivery, use, reliance upon or interpretation of test results by client or third party. We accept no legal responsibility for the purposes for which the client uses the test results. In no event shall EMSL be liable to a client or any third party, whether based upon theories of tort, contract or any other legal or equitable theory, in excess of the amount paid to EMSL by client thereafter.

Box Number	Device Number	Location	Exposure Period Beginning Date and Time	Exposure Period Ending Date and Time	Temperature, °F	Humidity, %
S01	133259	Classroom 6110/109 S Side - Shelf 6	12/8/15 1451	12/11/15 0751	72°	60%
	225488	"	"	"	"	"
S02	133265	Office 61096 S Side - Shelf 5	12/8/15 1453	12/11/15 0753	72°	60%
	225518	"	"	"	"	"
S03	133275	Office 6109A E Side - Shelf 6	12/8/15 1456	12/11/15 0754	72°	60%
	225547	"	"	"	"	"
S04	133268	Classroom 6108 N Side - Shelf 6	12/8/15 1500	12/11/15 0758	74°	30%
	225716	"	"	"	"	"
S05	133269	Office 61082 W Side - Shelf 5	12/8/15 1502	12/11/15 0759	76°	30%
	225689	"	"	"	"	"
S06	133260	Special Educ Classroom 61056 S Side - Shelf 4	12/8/15 1512	12/11/15 0746	74°	40%
	225535	"	"	"	"	"

Relinquished By: [Signature] 12/11/15 1500 to UPS
Received By: [Signature]

Page 1 of 6

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EMSL ANALYTICAL, INC.

 RECEIVED
 EMSL
 CINNAMINSON, NJ

 CHAIN OF CUSTODY
 RADON LABORATORY SERVICES
 (COMMERCIAL USE)

2015 DEC 15 P 12:34

EMSL Job #:

381509976

 EMSL ANALYTICAL, INC.
 200 ROUTE 130 NORTH
 CINNAMINSON, NJ 08077

PHONE: 800-220-3675

FAX: 856-786-0327

	Box Number	Device Number	Location	Exposure Period Beginning Date and Time	Exposure Period Ending Date and Time	Temperature, °F	Humidity, %
SP7	133276	225540	D	12/8/15 1516	12/11/15 0747	74°	40%
	"	225690	D	" "	" "	"	"
SP8	133277	225508	Classroom E115 Nside - 5 1/2'	12/8/15 1524	12/11/15 0808	68°	30%
	"	225703	" Door Somb	" "	" "	"	"
SP9	133258	225575	Classroom G2 S Side - Shelf	12/8/15 1547	12/11/15 0652	64°	30%
	"	225712	" " 6'	" "	" "	"	"
SP10	133273	225773	Classroom G1 W Side Shelf	12/8/15 1551	12/11/15 0653	66°	40%
	"	225509	" " 6'	" "	" "	"	"
SP11	133257	225741	Classroom G11 S Side - White Board	12/8/15 1600	12/11/15 0655	66°	30%
	"	225708	" " 6'	" "	" "	"	"
SP12	133261	225576	Classroom G12 N Side - Bookshelf	12/8/15 1602	12/11/15 0657	68°	70%
	"	225420	" " 4 1/2'	" "	" "	"	"
SP13	133244	225696	Lab G101 NW Side - Eye	12/8/15 1616	12/11/15 0659	74°	30%
	"	225766	" " W side 6"	" "	" "	"	"
SP14	133243	225429	Lab G106 S Side Shelf	12/8/15 1623	12/11/15 0645	76°	30%
	"	225686	" " Shelf 6'	" "	" "	"	"
SP15	133236	225592	Lab G105 NW Side Shelf	12/8/15 1628	12/11/15 0647	68°	40%
	"	225794	" " 6"	" "	" "	"	"
SP16	133235	225730	D	12/8/15 1630	12/11/15 0648	68°	40%
	"	225578	D	" "	" "	"	"
SP17	133242	225503	Lab G109 S Side Shelf	12/8/15 1637	12/11/15 0642	68°	80%
	"	225528	" " "	" "	" "	"	"
SP18	133252	225577	Lab G108 NW Side - Shelf	12/8/15 1643	12/11/15 0641	78°	80%
	"	225392	" " 6"	" "	" "	"	"
SP19	133253	225912	Lab G110 SW Side - Shelf	12/8/15 1648	12/11/15 0639	72°	30%
	"	225599	" " 6"	" "	" "	"	"
SP20	133251	225497	Lab F108 N Side	12/8/15 1657	12/11/15 0702	74°	60%

Relinquished By:

Received By:

225549

Page 2 of 6

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* Fell Down, Plaster on Wind Shift, Patrick



EMSL ANALYTICAL, INC.

CHAIN OF CUSTODY
RADON LABORATORY SERVICES
 (COMMERCIAL USE)

EMSL ANALYTICAL, INC.
 200 ROUTE 130 NORTH
 CINNAMINSON, NJ 08077

PHONE: 800-220-3675
 FAX: 856-786-0327

EMSL Job #:

381509976

2015 DEC 15 P 12:34

Company Information

Company Name: <SAME>

EMSL Account #: "

Contact: "

Address: "

City: "

State: " Zip Code: "

Phone: "

Fax: "

Email: "

Project / Property Information:

Name: SPRING BROOK HS

Address: <SAME>

City: "

Municipality: " County: "

State: " Zip Code: "

PO#/Project#:

☐ Please check box if this is a Post Mitigation Test

Technician Name: "

Technician Certification #: "

Technician Signature: "

Disclaimer

In no event shall EMSL be liable for indirect, special, consequential, or incidental damages for loss of profit or goodwill regardless of the negligence (either sole or concurrent) of EMSL and whether EMSL has been informed of the possibility of such damages arising out of or in connection with EMSL's services there under or the delivery, use, reliance upon or interpretation of test results by client or third party. We accept no legal responsibility for the purposes for which the client uses the test results. In no event shall EMSL be liable to a client or any third party, whether based upon theories of tort, contract or any other legal or equitable theory, in excess of the amount paid to EMSL by client thereafter.

	Box Number	Device Number	Location	Exposure Period Beginning Date and Time	Exposure Period Ending Date and Time	Temperature, °F	Humidity, %
5021	133234	225506	Classroom F109 SE Side - Teacher	12/8/15 1702	12/11/15 0708	72°	30%
	"	225770	" Computer 4'	" "	" "	"	"
5022	133238	225697	Lab F106 E Side - Shelf 6'	12/8/15 1710	12/11/15 0704	68°	30%
	"	225795	" "	" "	" "	"	"
5023	133222	225751	Classroom F107 NE Side - Teacher	12/8/15 1713	12/11/15 0710	72°	30%
	"	225725	" Computer 3'	" "	" "	"	"
5024	133250	225728	Classroom F105 SW Side - File	12/8/15 1721	12/11/15 0712	72°	40%
	"	225568	" Cabinet 5'	" "	" "	"	"
5025	133245	225797	Classroom F103 SW Side - Chalkboard	12/8/15 1725	12/11/15 0714	70°	60%
	"	225552	" 3'	" "	" "	"	"
5026	133246	225584	B	12/8/15 1727	12/11/15 0715	72°	40%
	"	225522	B	" "	" "	"	"

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EMSL Job #: 381509976

EMSL ANALYTICAL, INC.
200 ROUTE 130 NORTH
CINNAMINSON, NJ 08077

PHONE: 800-220-3675
FAX: 856-786-0327

	Box Number	Device Number	Location	Exposure Period Beginning Date and Time	Exposure Period Ending Date and Time	Temperature, °F	Humidity, %
SO27	133249	225520	Office F104 NESide Shelf	12/8/15 1740	12/11/15 0704	68°	30%
	"	225684	" " "	" "	" "	"	"
SO28	133248	225711	D	12/8/15 1742	12/11/15 0708	68°	30%
	"	225726	D	12/8/15 1742	" "	"	"
SO29	133247	225735	Classroom F102 SWSide Teacher	12/8/15 1746	12/11/15 0715	68°	40%
	"	225793	" " Computer 3'	" "	" "	"	"
SO30	133237	225591	Classroom F101 NWSide Credenza	12/8/15 1751	12/11/15 0716	64°	50%
	"	225596	" " " 3'	" "	" "	"	"
SO31	133241	225784	Class E117 NESide File	12/8/15 1758	12/11/15 0718	68°	30%
	"	225567	" " Cabinet 4'	" "	" "	"	"
SO32	133232	225531	Classroom E118 NWSide Shelf	12/8/15 1803	12/11/15 0723	76°	40%
	"	225839	" " " 6"	" "	" "	"	"
SO33	133240	225760	Classroom E111 SE Side Shelf	12/8/15 1813	12/11/15 0721	72°	30%
	"	225771	" " " 6 1/2'	" "	" "	"	"
SO34	133230	225855	Day Care E108 SE Side Shelf	12/8/15 1818	12/11/15 0725	72°	30%
	"	225758	" " " 6"	" "	" "	"	"
SO35	133227	225527	Office E107 SWSide Shelf	12/8/15 1824	12/11/15 0730	68°	40%
(Lack)	"	225524	" " " 6"	" "	" "	"	"
SO36	133225	225705	Class E105 NWSide File	12/8/15 1831	12/11/15 0732	74°	30%
	"	225565	" " Cabinet 4'	" "	" "	"	"
SO37	133231	225719	Classroom E106 ESide Shelf	12/8/15 1836	12/11/15 0733	72°	30%
	"	225767	" " " 6"	" "	" "	"	"
SO38	133239	225749	Classroom E110 NWSide Top of	12/8/15 1842	12/11/15 0729	70°	30%
	"	225888	" " Fridge 5'	" "	" "	"	"
SO39	133223	225731	Office E114 NWSide Shelf	12/8/15 1846	12/11/15 0726	70°	40%
	"	225543	" " " "	" "	" "	"	"
SO40	133228	225566	Classroom E113 NWSide File	12/8/15 1849	12/11/15 0727	70°	30%

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PHONE: 800-220-3675
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EMSL Job #:

381509976 0015 DEC 15 P 12:34

Company Information

Company Name: <SAME>
 EMSL Account #: "
 Contact: "
 Address: "
 City: "
 State: " Zip Code: "
 Phone: "
 Fax: "
 Email: "

Project / Property Information:

Name: SPRING BROOK HS
 Address: <SAME>
 City: "
 Municipality: " County: "
 State: " Zip Code: "
 PO#/Project#: "
☐ Please check box if this is a Post Mitigation Test
 Technician Name: "
 Technician Certification #: "
 Technician Signature: "

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	Box Number	Device Number	Location	Exposure Period Beginning Date and Time	Exposure Period Ending Date and Time	Temperature, °F	Humidity, %
5041	133224	225714	Music Room D107 West Side, Shelf	12/8/15 1858	12/11/15 0737	70°	40%
	"	225738	" " 4'	" "	" "	"	"
5042	133226	225571	Music Room D108 E Side, Teacher Desk 3'	12/8/15 1902	12/11/15 0739	72°	30%
	"	225772	" "	" "	" "	"	"
5043	133229	225910	Auditorium W Side - Light Stand 5'	12/8/15 1908	12/11/15 0619	70°	60%
	"	225722	" "	" "	" "	"	"
5044	133233	225550	Auditorium S Side - Light Stand 5'	12/8/15 1910	12/11/15 0620	70°	60%
	"	225580	" "	" "	" "	"	"
5045	133191	(225707) 225707	D	12/8/15 1914	12/11/15 0621	70°	60%
	"	225897	D	" "	" "	"	"
5046	133197	225753	Music Room D107 E Side, Shelf 6'	12/8/15 1923	12/11/15 0801	74°	30%
	"	225583	" "	" "	" "	"	"

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EMSL Job #: 381509976

EMSL ANALYTICAL, INC.
200 ROUTE 130 NORTH
CINNAMINSON, NJ 08077

PHONE: 800-220-3675
FAX: 856-786-0327

	Box Number	Device Number	Location	Exposure Period Beginning Date and Time	Exposure Period Ending Date and Time	Temperature, °F	Humidity, %
SB47	133207	225 768	Class B106 S Side, Shelf	12/8/15 1931	12/11/15 0756	72°	30%
	"	225 553	" " " "	" "	" "	"	"
SB48	133206	225 802	D	12/8/15 1933	12/11/15 0757	72°	30%
	"	225 527	D	" "	" "	"	"
SB49	133198	225 587	Class B103 E Side, Shelf	12/8/15 1946	12/11/15 0634	66°	60%
	"	225 572	" " " "	" "	" "	"	"
SB50	133214	225 574	B	12/8/15 1948	12/11/15 0635	72°F	40%
	"	225 743	B	" "	" "	"	"
SB51	133196	225 545	Class B102 S Side, Shelf	12/8/15 1951	12/11/15 0637	66°	60%
	"	225 597	" " " "	" "	" "	"	"
SB52	133205	225 788	Class B101 S Side, Shelf	12/8/15 1955	12/11/15 0630	66°	30%
	"	225 524	" " " "	" "	" "	"	"
SB53	133213	225 715	Class B104 S Side, Shelf	12/8/15 2005	12/11/15 0744	70°	30%
	"	225 791	" " " "	" "	" "	"	"
SB54	133204	225 713	Office A101 W Side, Shelf	12/8/15 2009	12/11/15 0614	72°	30%
	"	225 891	" " " "	" "	" "	"	"
SB55	133221	225 776	B	12/8/15 1220	12/11/15 0615	72°	40%
	"	225 746	B	" "	" "	"	"

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Appendix C. Laboratory Results

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<http://www.EMSL.com>cinnaminsonradonlab@emsl.com

EMSL Order: 381509976

CustomerID: LEID42

CustomerPO:

ProjectID:

Attn: **John Whelpley**
Leidos Engineering, LLC
11951 Freedom Dr.
Reston, VA 20190

Phone: (571) 268-0697
Fax:
Received: 12/15/15 12:34 PM
Analysis Date: 12/17/2015
Collected: 12/8/2015

Project: **Spring Brook High School / 201 Valley Brook Drive**

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

Test Report: Radon in Air Test Results**Samples for EMSL Kit 133259**

Liquid Scintillation ID	Location	Radon Activity pCi/L	Start	Stop	Temperature F	Humidity %	Sample Type
225514 381509976-0001	Classroom B110/109 S. Side- Shelf 6'	6.1	12/8/2015 2:51:00 PM	12/11/2015 7:51:00 AM	72	60	Customer

Sample Notes:

225488 381509976-0002	Classroom B110/109 S. Side- Shelf 6'	6.1	12/8/2015 2:51:00 PM	12/11/2015 7:51:00 AM	72	60	Customer
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Sample Notes:**Summary for EMSL Kit 133259** **Average Radon Result: 6.1 pCi/L****Samples for EMSL Kit 133265**

Liquid Scintillation ID	Location	Radon Activity pCi/L	Start	Stop	Temperature F	Humidity %	Sample Type
225720 381509976-0003	Office B109B S. Side- Shelf 5'	5	12/8/2015 2:53:00 PM	12/11/2015 7:53:00 AM	72	60	Customer

Sample Notes:

225518 381509976-0004	Office B109B S. Side- Shelf 5'	5.5	12/8/2015 2:53:00 PM	12/11/2015 7:53:00 AM	72	60	Customer
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Sample Notes:**Summary for EMSL Kit 133265** **Average Radon Result: 5.3 pCi/L****Samples for EMSL Kit 133275**

Liquid Scintillation ID	Location	Radon Activity pCi/L	Start	Stop	Temperature F	Humidity %	Sample Type
225764 381509976-0005	Office B109A E. Side- Shelf 6'	14.1	12/8/2015 2:56:00 PM	12/11/2015 7:54:00 AM	72	60	Customer

Sample Notes:

225547 381509976-0006	Office B109A E. Side- Shelf 6'	14.6	12/8/2015 2:56:00 PM	12/11/2015 7:54:00 AM	72	60	Customer
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Sample Notes:**Summary for EMSL Kit 133275** **Average Radon Result: 14.4 pCi/L**

**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: 381509976

CustomerID: LEID42

CustomerPO:

ProjectID:

Attn: **John Whelpley**
Leidos Engineering, LLC
11951 Freedom Dr.
Reston, VA 20190

Phone: (571) 268-0697
Fax:
Received: 12/15/15 12:34 PM
Analysis Date: 12/17/2015
Collected: 12/8/2015

Project: **Spring Brook High School / 201 Valley Brook Drive**

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

Test Report: Radon in Air Test Results**Samples for EMSL Kit 133268**

Liquid Scintillation ID	Location	Radon Activity pCi/L	Start	Stop	Temperature F	Humidity %	Sample Type
225579 381509976-0007	Classroom B108 N. Side- Shelf 6'	3.6	12/8/2015 3:00:00 PM	12/11/2015 7:58:00 AM	74	30	Customer

Sample Notes:

225716 381509976-0008	Classroom B108 N. Side- Shelf 6'	3.3	12/8/2015 3:00:00 PM	12/11/2015 7:58:00 AM	74	30	Customer
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Sample Notes:**Summary for EMSL Kit 133268** **Average Radon Result: 3.4 pCi/L****Samples for EMSL Kit 133269**

Liquid Scintillation ID	Location	Radon Activity pCi/L	Start	Stop	Temperature F	Humidity %	Sample Type
225721 381509976-0009	Office B108C W. Side- Shelf 5'	2.2	12/8/2015 3:02:00 PM	12/11/2015 7:59:00 AM	76	30	Customer

Sample Notes:

225689 381509976-0010	Office B108C W. Side- Shelf 5'	2	12/8/2015 3:02:00 PM	12/11/2015 7:59:00 AM	76	30	Customer
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Sample Notes:**Summary for EMSL Kit 133269** **Average Radon Result: 2.1 pCi/L****Samples for EMSL Kit 133260**

Liquid Scintillation ID	Location	Radon Activity pCi/L	Start	Stop	Temperature F	Humidity %	Sample Type
225501 381509976-0011	Special Ed Classrm B105 S Side-File Cabinet 4 1/2'	2.6	12/8/2015 3:12:00 PM	12/11/2015 7:46:00 AM	74	40	Customer

Sample Notes:

225535 381509976-0012	Special Ed Classrm B105 S Side-File Cabinet 4 1/2'	2.4	12/8/2015 3:12:00 PM	12/11/2015 7:46:00 AM	74	40	Customer
--------------------------	--	-----	-------------------------	--------------------------	----	----	----------

Sample Notes:**Summary for EMSL Kit 133260** **Average Radon Result: 2.5 pCi/L**

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EMSL Order: 381509976

CustomerID: LEID42

CustomerPO:

ProjectID:

Attn: **John Whelpley**
Leidos Engineering, LLC
11951 Freedom Dr.
Reston, VA 20190

Phone: (571) 268-0697
Fax:
Received: 12/15/15 12:34 PM
Analysis Date: 12/17/2015
Collected: 12/8/2015

Project: **Spring Brook High School / 201 Valley Brook Drive**

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

Test Report: Radon in Air Test Results**Samples for EMSL Kit 133276**

Liquid Scintillation ID	Location	Radon Activity pCi/L	Start	Stop	Temperature F	Humidity %	Sample Type
225540 381509976-0013	D	2.7	12/8/2015 3:16:00 PM	12/11/2015 7:47:00 AM	74	40	Customer

Sample Notes:

225690 381509976-0014	D	2.7	12/8/2015 3:16:00 PM	12/11/2015 7:47:00 AM	74	40	Customer
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Sample Notes:**Summary for EMSL Kit 133276** **Average Radon Result: 2.7 pCi/L****Samples for EMSL Kit 133277**

Liquid Scintillation ID	Location	Radon Activity pCi/L	Start	Stop	Temperature F	Humidity %	Sample Type
225508 381509976-0015	Classroom E115 N.Side- 5 1/2' Door Jamb	0.3	12/8/2015 3:24:00 PM	12/11/2015 8:08:00 AM	68	30	Customer

Sample Notes: Device fell during testing, was retrieved partially closed.

225703 381509976-0016	Classroom E115 N.Side- 5 1/2' Door Jamb	0.4	12/8/2015 3:24:00 PM	12/11/2015 8:08:00 AM	68	30	Customer
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Sample Notes:**Summary for EMSL Kit 133277** **Average Radon Result: 0.4 pCi/L****Samples for EMSL Kit 133258**

Liquid Scintillation ID	Location	Radon Activity pCi/L	Start	Stop	Temperature F	Humidity %	Sample Type
225575 381509976-0017	Classroom G2 S. Side- Shelf 6'	1.6	12/8/2015 3:47:00 PM	12/11/2015 6:52:00 AM	64	30	Customer

Sample Notes:

225712 381509976-0018	Classroom G2 S. Side- Shelf 6'	1.7	12/8/2015 3:47:00 PM	12/11/2015 6:52:00 AM	64	30	Customer
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Sample Notes:**Summary for EMSL Kit 133258** **Average Radon Result: 1.7 pCi/L**

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EMSL Order: 381509976

CustomerID: LEID42

CustomerPO:

ProjectID:

Attn: **John Whelpley**
Leidos Engineering, LLC
11951 Freedom Dr.
Reston, VA 20190

Phone: (571) 268-0697
Fax:
Received: 12/15/15 12:34 PM
Analysis Date: 12/17/2015
Collected: 12/8/2015

Project: **Spring Brook High School / 201 Valley Brook Drive**

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

Test Report: Radon in Air Test Results**Samples for EMSL Kit 133273**

Liquid Scintillation ID	Location	Radon Activity pCi/L	Start	Stop	Temperature F	Humidity %	Sample Type
225773 381509976-0019	Classroom G1 W. Side Shelf 6'	2.2	12/8/2015 3:51:00 PM	12/11/2015 6:53:00 AM	66	40	Customer

Sample Notes:

225509 381509976-0020	Classroom G1 W. Side Shelf 6'	2.3	12/8/2015 3:51:00 PM	12/11/2015 6:53:00 AM	66	40	Customer
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Sample Notes:**Summary for EMSL Kit 133273** **Average Radon Result: 2.3 pCi/L****Samples for EMSL Kit 133257**

Liquid Scintillation ID	Location	Radon Activity pCi/L	Start	Stop	Temperature F	Humidity %	Sample Type
225741 381509976-0021	Classroom G11 S. Side- White Board 6'	2	12/8/2015 4:00:00 PM	12/11/2015 6:55:00 AM	66	30	Customer

Sample Notes:

225708 381509976-0022	Classroom G11 S. Side- White Board 6'	1.7	12/8/2015 4:00:00 PM	12/11/2015 6:55:00 AM	66	30	Customer
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Sample Notes:**Summary for EMSL Kit 133257** **Average Radon Result: 1.9 pCi/L****Samples for EMSL Kit 133261**

Liquid Scintillation ID	Location	Radon Activity pCi/L	Start	Stop	Temperature F	Humidity %	Sample Type
225576 381509976-0023	Classroom G12 N.Side- Book Shelf 4 1/2'	3.8	12/8/2015 4:02:00 PM	12/11/2015 6:57:00 AM	68	70	Customer

Sample Notes:

225420 381509976-0024	Classroom G12 N.Side- Book Shelf 4 1/2'	3.5	12/8/2015 4:02:00 PM	12/11/2015 6:57:00 AM	68	70	Customer
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Sample Notes:**Summary for EMSL Kit 133261** **Average Radon Result: 3.7 pCi/L**

**EMSL Analytical, Inc.**

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EMSL Order: 381509976

CustomerID: LEID42

CustomerPO:

ProjectID:

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11951 Freedom Dr.
Reston, VA 20190

Phone: (571) 268-0697
Fax:
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Analysis Date: 12/17/2015
Collected: 12/8/2015

Project: **Spring Brook High School / 201 Valley Brook Drive**

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

Test Report: Radon in Air Test Results**Samples for EMSL Kit 133244**

Liquid Scintillation ID	Location	Radon Activity pCi/L	Start	Stop	Temperature F	Humidity %	Sample Type
225696 381509976-0025	Lab G101 NW. Sode Rye Wash 6'	2.3	12/8/2015 4:16:00 PM	12/11/2015 6:59:00 AM	74	30	Customer

Sample Notes:

225766 381509976-0026	Lab G101 NW. Sode Rye Wash 6'	2.1	12/8/2015 4:16:00 PM	12/11/2015 6:59:00 AM	74	30	Customer
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Sample Notes:**Summary for EMSL Kit 133244** **Average Radon Result: 2.2 pCi/L****Samples for EMSL Kit 133243**

Liquid Scintillation ID	Location	Radon Activity pCi/L	Start	Stop	Temperature F	Humidity %	Sample Type
225429 381509976-0027	Lab G106 SE. Side S.S. 6'	1.4	12/8/2015 4:23:00 PM	12/11/2015 6:45:00 AM	76	30	Customer

Sample Notes:

225686 381509976-0028	Lab G106 SE. Side S.S. 6'	1.6	12/8/2015 4:23:00 PM	12/11/2015 6:45:00 AM	76	30	Customer
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Sample Notes:**Summary for EMSL Kit 133243** **Average Radon Result: 1.5 pCi/L****Samples for EMSL Kit 133236**

Liquid Scintillation ID	Location	Radon Activity pCi/L	Start	Stop	Temperature F	Humidity %	Sample Type
225592 381509976-0029	Lab G105 NW. Side Shelf 6'	1.7	12/8/2015 4:28:00 PM	12/11/2015 6:47:00 AM	68	40	Customer

Sample Notes:

225794 381509976-0030	Lab G105 NW. Side Shelf 6'	1.4	12/8/2015 4:28:00 PM	12/11/2015 6:47:00 AM	68	40	Customer
--------------------------	-------------------------------	-----	-------------------------	--------------------------	----	----	----------

Sample Notes:**Summary for EMSL Kit 133236** **Average Radon Result: 1.5 pCi/L**

**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: 381509976

CustomerID: LEID42

CustomerPO:

ProjectID:

Attn: **John Whelpley**
Leidos Engineering, LLC
11951 Freedom Dr.
Reston, VA 20190

Phone: (571) 268-0697
Fax:
Received: 12/15/15 12:34 PM
Analysis Date: 12/17/2015
Collected: 12/8/2015

Project: **Spring Brook High School / 201 Valley Brook Drive**

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

Test Report: Radon in Air Test Results**Samples for EMSL Kit 133235**

Liquid Scintillation ID	Location	Radon Activity pCi/L	Start	Stop	Temperature F	Humidity %	Sample Type
225730 381509976-0031	D	1.4	12/8/2015 4:30:00 PM	12/11/2015 6:48:00 AM	68	40	Customer

Sample Notes:

225578 381509976-0032	D	1.3	12/8/2015 4:30:00 PM	12/11/2015 6:48:00 AM	68	40	Customer
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Sample Notes:**Summary for EMSL Kit 133235** **Average Radon Result: 1.3 pCi/L****Samples for EMSL Kit 133242**

Liquid Scintillation ID	Location	Radon Activity pCi/L	Start	Stop	Temperature F	Humidity %	Sample Type
225503 381509976-0033	Lab G109 SE. Side Shelf 6'	3.5	12/8/2015 4:37:00 PM	12/11/2015 6:42:00 AM	68	60	Customer

Sample Notes:

225528 381509976-0034	Lab G109 SE. Side Shelf 6'	3.5	12/8/2015 4:37:00 PM	12/11/2015 6:42:00 AM	68	60	Customer
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Sample Notes:**Summary for EMSL Kit 133242** **Average Radon Result: 3.5 pCi/L****Samples for EMSL Kit 133252**

Liquid Scintillation ID	Location	Radon Activity pCi/L	Start	Stop	Temperature F	Humidity %	Sample Type
225577 381509976-0035	Lab G108 NW. Side- Shelf 6'	4.5	12/8/2015 4:43:00 PM	12/11/2015 6:41:00 AM	78	70	Customer

Sample Notes:

225392 381509976-0036	Lab G108 NW. Side- Shelf 6'	4.8	12/8/2015 4:43:00 PM	12/11/2015 6:41:00 AM	78	70	Customer
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Sample Notes:**Summary for EMSL Kit 133252** **Average Radon Result: 4.7 pCi/L**

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Test Report: Radon in Air Test Results**Samples for EMSL Kit 133253**

Liquid Scintillation ID	Location	Radon Activity pCi/L	Start	Stop	Temperature F	Humidity %	Sample Type
225912 381509976-0037	Lab G110 SW. Side- Shelf 6'	3.9	12/8/2015 4:48:00 PM	12/11/2015 6:39:00 AM	72	30	Customer

Sample Notes:

225599 381509976-0038	Lab G110 SW. Side- Shelf 6'	3.9	12/8/2015 4:48:00 PM	12/11/2015 6:39:00 AM	72	30	Customer
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Sample Notes:**Summary for EMSL Kit 133253** **Average Radon Result: 3.9 pCi/L****Samples for EMSL Kit 133234**

Liquid Scintillation ID	Location	Radon Activity pCi/L	Start	Stop	Temperature F	Humidity %	Sample Type
225506 381509976-0040	Classroom F109 SE. Side- Teacher Compter 4'	3.1	12/8/2015 5:02:00 PM	12/11/2015 7:08:00 AM	72	30	Customer

Sample Notes:

225770 381509976-0041	Classroom F109 SE. Side- Teacher Compter 4'	3.7	12/8/2015 5:02:00 PM	12/11/2015 7:08:00 AM	72	30	Customer
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Sample Notes:**Summary for EMSL Kit 133234** **Average Radon Result: 3.4 pCi/L****Samples for EMSL Kit 133238**

Liquid Scintillation ID	Location	Radon Activity pCi/L	Start	Stop	Temperature F	Humidity %	Sample Type
225697 381509976-0042	Lab F106 E. Side- Shelf 6'	4.3	12/8/2015 5:10:00 PM	12/11/2015 7:04:00 AM	68	30	Customer

Sample Notes:

225795 381509976-0043	Lab F106 E. Side- Shelf 6'	4.3	12/8/2015 5:10:00 PM	12/11/2015 7:04:00 AM	68	30	Customer
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Sample Notes:**Summary for EMSL Kit 133238** **Average Radon Result: 4.3 pCi/L**

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Test Report: Radon in Air Test Results**Samples for EMSL Kit 133222**

Liquid Scintillation ID	Location	Radon Activity pCi/L	Start	Stop	Temperature F	Humidity %	Sample Type
225751 381509976-0044	Classroom F107 NE. Side- Teacher Computer 3'	4	12/8/2015 5:13:00 PM	12/11/2015 7:10:00 AM	72	30	Customer

Sample Notes:

225725 381509976-0045	Classroom F107 NE. Side- Teacher Computer 3'	4.4	12/8/2015 5:13:00 PM	12/11/2015 7:10:00 AM	72	30	Customer
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Sample Notes:**Summary for EMSL Kit 133222** **Average Radon Result: 4.2 pCi/L****Samples for EMSL Kit 133250**

Liquid Scintillation ID	Location	Radon Activity pCi/L	Start	Stop	Temperature F	Humidity %	Sample Type
225728 381509976-0046	Classroom F105 SW. Side- File Cabinet 5'	6.3	12/8/2015 5:21:00 PM	12/11/2015 7:12:00 AM	72	40	Customer

Sample Notes:

225568 381509976-0047	Classroom F105 SW. Side- File Cabinet 5'	3.6	12/8/2015 5:21:00 PM	12/11/2015 7:12:00 AM	72	40	Customer
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Sample Notes: Radon device was tampered with during testing, found partially closed.**Summary for EMSL Kit 133250** **Average Radon Result: 4.9 pCi/L****Samples for EMSL Kit 133245**

Liquid Scintillation ID	Location	Radon Activity pCi/L	Start	Stop	Temperature F	Humidity %	Sample Type
225797 381509976-0048	Classroom F103 SW. Side- Chalkboard 3'	3.2	12/8/2015 5:25:00 PM	12/11/2015 7:17:00 AM	70	60	Customer

Sample Notes:

2225552 381509976-0049	Classroom F103 SW. Side- Chalkboard 3'	2.8	12/8/2015 5:25:00 PM	12/11/2015 7:17:00 AM	70	60	Customer
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Sample Notes:**Summary for EMSL Kit 133245** **Average Radon Result: 3.0 pCi/L**

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Test Report: Radon in Air Test Results**Samples for EMSL Kit 133246**

Liquid Scintillation ID	Location	Radon Activity pCi/L	Start	Stop	Temperature F	Humidity %	Sample Type
225584	B	0.2	12/8/2015	12/11/2015	72	40	Customer
381509976-0050			5:27:00 PM	7:15:00 AM			

Sample Notes:

225522	B	0.1	12/8/2015	12/11/2015	72	40	Customer
381509976-0051			5:27:00 PM	7:15:00 AM			

Sample Notes:**Summary for EMSL Kit 133246** **Average Radon Result: 0.2 pCi/L****Samples for EMSL Kit 133249**

Liquid Scintillation ID	Location	Radon Activity pCi/L	Start	Stop	Temperature F	Humidity %	Sample Type
225520	Office F104 NE. Side Shelf 5'	2.3	12/8/2015	12/11/2015	68	30	Customer
381509976-0052			5:40:00 PM	7:04:00 AM			

Sample Notes:

225684	Office F104 NE. Side Shelf 5'	2.7	12/8/2015	12/11/2015	68	30	Customer
381509976-0053			5:40:00 PM	7:04:00 AM			

Sample Notes:**Summary for EMSL Kit 133249** **Average Radon Result: 2.5 pCi/L****Samples for EMSL Kit 133248**

Liquid Scintillation ID	Location	Radon Activity pCi/L	Start	Stop	Temperature F	Humidity %	Sample Type
225711	D	2.4	12/8/2015	12/11/2015	68	30	Customer
381509976-0054			5:42:00 PM	7:08:00 AM			

Sample Notes:

225726	D	2.6	12/8/2015	12/11/2015	68	30	Customer
381509976-0055			5:42:00 PM	7:08:00 AM			

Sample Notes:**Summary for EMSL Kit 133248** **Average Radon Result: 2.5 pCi/L**

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Test Report: Radon in Air Test Results**Samples for EMSL Kit 133247**

Liquid Scintillation ID	Location	Radon Activity pCi/L	Start	Stop	Temperature F	Humidity %	Sample Type
225735 381509976-0056	Classroom F102 SW. Side Teacher Computer 3'	1.3	12/8/2015 5:46:00 PM	12/11/2015 7:15:00 AM	68	40	Customer

Sample Notes:

225793 381509976-0057	Classroom F102 SW. Side Teacher Computer 3'	1.7	12/8/2015 5:46:00 PM	12/11/2015 7:15:00 AM	68	40	Customer
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Sample Notes:**Summary for EMSL Kit 133247** **Average Radon Result: 1.5 pCi/L****Samples for EMSL Kit 133237**

Liquid Scintillation ID	Location	Radon Activity pCi/L	Start	Stop	Temperature F	Humidity %	Sample Type
225591 381509976-0058	Classroom F101 SW Side Credenza 3'	1.4	12/8/2015 5:51:00 PM	12/11/2015 7:16:00 AM	64	50	Customer

Sample Notes:

225596 381509976-0059	Classroom F101 SW Side Credenza 3'	1.4	12/8/2015 5:51:00 PM	12/11/2015 7:16:00 AM	64	50	Customer
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Sample Notes:**Summary for EMSL Kit 133237** **Average Radon Result: 1.4 pCi/L****Samples for EMSL Kit 133241**

Liquid Scintillation ID	Location	Radon Activity pCi/L	Start	Stop	Temperature F	Humidity %	Sample Type
225784 381509976-0060	Class E117 NE. Side File Cabinet 4'	1.9	12/8/2015 5:58:00 PM	12/11/2015 7:18:00 AM	68	30	Customer

Sample Notes:

225567 381509976-0061	Class E117 NE. Side File Cabinet 4'	1.8	12/8/2015 5:58:00 PM	12/11/2015 7:18:00 AM	68	30	Customer
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Sample Notes:**Summary for EMSL Kit 133241** **Average Radon Result: 1.8 pCi/L**

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Test Report: Radon in Air Test Results**Samples for EMSL Kit 133232**

Liquid Scintillation ID	Location	Radon Activity pCi/L	Start	Stop	Temperature F	Humidity %	Sample Type
225531 381509976-0062	Classroom E118 NW. Side Shelf 6'	2.5	12/8/2015 6:03:00 PM	12/11/2015 7:23:00 AM	76	40	Customer

Sample Notes:

225839 381509976-0063	Classroom E118 NW. Side Shelf 6'	2.9	12/8/2015 6:03:00 PM	12/11/2015 7:23:00 AM	76	40	Customer
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Sample Notes:

Summary for EMSL Kit 133232	Average Radon Result: 2.7 pCi/L
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Samples for EMSL Kit 133240

Liquid Scintillation ID	Location	Radon Activity pCi/L	Start	Stop	Temperature F	Humidity %	Sample Type
225760 381509976-0064	Classroom E111 SE Side. Shelf 6 1/2	8.9	12/8/2015 6:13:00 PM	12/11/2015 7:21:00 AM	72	30	Customer

Sample Notes:

225771 381509976-0065	Classroom E111 SE Side. Shelf 6 1/2	8.5	12/8/2015 6:13:00 PM	12/11/2015 7:21:00 AM	72	30	Customer
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Sample Notes:

Summary for EMSL Kit 133240	Average Radon Result: 8.7 pCi/L
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Samples for EMSL Kit 133230

Liquid Scintillation ID	Location	Radon Activity pCi/L	Start	Stop	Temperature F	Humidity %	Sample Type
225855 381509976-0066	Day Care E108 SE. Side Shelf 6'	4.5	12/8/2015 6:18:00 PM	12/11/2015 7:35:00 AM	72	30	Customer

Sample Notes:

225758 381509976-0067	Day Care E108 SE. Side Shelf 6'	4.7	12/8/2015 6:18:00 PM	12/11/2015 7:35:00 AM	72	30	Customer
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Sample Notes:

Summary for EMSL Kit 133230	Average Radon Result: 4.6 pCi/L
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Test Report: Radon in Air Test Results**Samples for EMSL Kit 133227**

Liquid Scintillation ID	Location	Radon Activity pCi/L	Start	Stop	Temperature F	Humidity %	Sample Type
225521 381509976-0068	Office E107 SW. Side- Shelf 6'	1.4	12/8/2015 6:24:00 PM	12/11/2015 7:30:00 AM	68	40	Customer

Sample Notes:

225529 381509976-0069	Office E107 SW. Side- Shelf 6'	1.6	12/8/2015 6:24:00 PM	12/11/2015 7:30:00 AM	68	40	Customer
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Sample Notes:**Summary for EMSL Kit 133227** **Average Radon Result: 1.5 pCi/L****Samples for EMSL Kit 133225**

Liquid Scintillation ID	Location	Radon Activity pCi/L	Start	Stop	Temperature F	Humidity %	Sample Type
225705 381509976-0070	Class E105 NW Side- File Cabinet 4'	2.7	12/8/2015 6:31:00 PM	12/11/2015 7:32:00 AM	74	30	Customer

Sample Notes:

225565 381509976-0071	Class E105 NW Side- File Cabinet 4'	2.4	12/8/2015 6:31:00 PM	12/11/2015 7:32:00 AM	74	30	Customer
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Sample Notes:**Summary for EMSL Kit 133225** **Average Radon Result: 2.6 pCi/L****Samples for EMSL Kit 133231**

Liquid Scintillation ID	Location	Radon Activity pCi/L	Start	Stop	Temperature F	Humidity %	Sample Type
225719 381509976-0072	Classroom E106 W. Side Shelf6'	1.6	12/8/2015 6:36:00 PM	12/11/2015 7:35:00 AM	72	30	Customer

Sample Notes:

225767 381509976-0073	Classroom E106 W. Side Shelf6'	1.8	12/8/2015 6:36:00 PM	12/11/2015 7:35:00 AM	72	30	Customer
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Sample Notes:**Summary for EMSL Kit 133231** **Average Radon Result: 1.7 pCi/L**

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Test Report: Radon in Air Test Results**Samples for EMSL Kit 133239**

Liquid Scintillation ID	Location	Radon Activity pCi/L	Start	Stop	Temperature F	Humidity %	Sample Type
225749 381509976-0074	Classroom E110 NW Side Top Of Fridge 5'	1.8	12/8/2015 6:42:00 PM	12/11/2015 7:29:00 AM	70	30	Customer

Sample Notes:

225888 381509976-0075	Classroom E110 NW Side Top Of Fridge 5'	1.9	12/8/2015 6:42:00 PM	12/11/2015 7:29:00 AM	70	30	Customer
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Sample Notes:**Summary for EMSL Kit 133239** **Average Radon Result: 1.8 pCi/L****Samples for EMSL Kit 133223**

Liquid Scintillation ID	Location	Radon Activity pCi/L	Start	Stop	Temperature F	Humidity %	Sample Type
225731 381509976-0076	Office E114 NW. Side Shelf 6'	2	12/8/2015 6:46:00 PM	12/11/2015 7:26:00 AM	70	40	Customer

Sample Notes:

225543 381509976-0077	Office E114 NW. Side Shelf 6'	1.8	12/8/2015 6:46:00 PM	12/11/2015 7:26:00 AM	70	40	Customer
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Sample Notes:**Summary for EMSL Kit 133223** **Average Radon Result: 1.9 pCi/L****Samples for EMSL Kit 133224**

Liquid Scintillation ID	Location	Radon Activity pCi/L	Start	Stop	Temperature F	Humidity %	Sample Type
225714 381509976-0079	Music Room D107 West Side Shelf 4'	3.9	12/8/2015 6:58:00 PM	12/11/2015 7:37:00 AM	70	40	Customer

Sample Notes:

225738 381509976-0080	Music Room D107 West Side Shelf 4'	3.4	12/8/2015 6:58:00 PM	12/11/2015 7:37:00 AM	70	40	Customer
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Sample Notes:**Summary for EMSL Kit 133224** **Average Radon Result: 3.7 pCi/L**

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Test Report: Radon in Air Test Results**Samples for EMSL Kit 133226**

Liquid Scintillation ID	Location	Radon Activity pCi/L	Start	Stop	Temperature F	Humidity %	Sample Type
225571 381509976-0081	Music Rm D108 E. Side Teacher Desk 3'	2.8	12/8/2015 7:02:00 PM	12/11/2015 7:39:00 AM	72	30	Customer

Sample Notes:

225772 381509976-0082	Music Rm D108 E. Side Teacher Desk 3'	3.2	12/8/2015 7:02:00 PM	12/11/2015 7:39:00 AM	72	30	Customer
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Sample Notes:**Summary for EMSL Kit 133226** **Average Radon Result: 3.0 pCi/L****Samples for EMSL Kit 133229**

Liquid Scintillation ID	Location	Radon Activity pCi/L	Start	Stop	Temperature F	Humidity %	Sample Type
225910 381509976-0083	Auditorium W. Side- Light Stand 5'	3.6	12/8/2015 6:08:00 PM	12/11/2015 6:19:00 AM	70	60	Customer

Sample Notes:

225722 381509976-0084	Auditorium W. Side- Light Stand 5'	3.9	12/8/2015 6:08:00 PM	12/11/2015 6:19:00 AM	70	60	Customer
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Sample Notes:**Summary for EMSL Kit 133229** **Average Radon Result: 3.8 pCi/L****Samples for EMSL Kit 133233**

Liquid Scintillation ID	Location	Radon Activity pCi/L	Start	Stop	Temperature F	Humidity %	Sample Type
225550 381509976-0085	Auditorium S. Side- Light Stand 5'	3	12/8/2015 7:10:00 PM	12/11/2015 6:20:00 AM	70	60	Customer

Sample Notes:

225580 381509976-0086	Auditorium S. Side- Light Stand 5'	3.3	12/8/2015 7:10:00 PM	12/11/2015 6:20:00 AM	70	60	Customer
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Sample Notes:**Summary for EMSL Kit 133233** **Average Radon Result: 3.2 pCi/L**

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Test Report: Radon in Air Test Results**Samples for EMSL Kit 133191**

Liquid Scintillation ID	Location	Radon Activity pCi/L	Start	Stop	Temperature F	Humidity %	Sample Type
225707	D	3.8	12/8/2015	12/11/2015	70	60	Customer
381509976-0087			7:14:00 PM	6:21:00 AM			

Sample Notes:

225897	D	3.7	12/8/2015	12/11/2015	70	60	Customer
381509976-0088			7:14:00 PM	6:21:00 AM			

Sample Notes:**Summary for EMSL Kit 133191** **Average Radon Result: 3.8 pCi/L****Samples for EMSL Kit 133197**

Liquid Scintillation ID	Location	Radon Activity pCi/L	Start	Stop	Temperature F	Humidity %	Sample Type
225753	M. Shop B107 W. Side- Shelf 6'	2.8	12/8/2015	12/11/2015	74	30	Customer
381509976-0089			7:23:00 PM	8:01:00 AM			

Sample Notes:

225583	M. Shop B107 W. Side- Shelf 6'	2.7	12/8/2015	12/11/2015	74	30	Customer
381509976-0090			7:23:00 PM	8:01:00 AM			

Sample Notes:**Summary for EMSL Kit 133197** **Average Radon Result: 2.8 pCi/L****Samples for EMSL Kit 133207**

Liquid Scintillation ID	Location	Radon Activity pCi/L	Start	Stop	Temperature F	Humidity %	Sample Type
225768	Class B106 S. Side Shelf 6'	2.7	12/8/2015	12/11/2015	72	30	Customer
381509976-0091			7:31:00 PM	7:56:00 AM			

Sample Notes:

225553	Class B106 S. Side Shelf 6'	2.3	12/8/2015	12/11/2015	72	30	Customer
381509976-0092			7:31:00 PM	7:56:00 AM			

Sample Notes:**Summary for EMSL Kit 133207** **Average Radon Result: 2.5 pCi/L**

**EMSL Analytical, Inc.**

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<http://www.EMSL.com>cinnaminsonradonlab@emsl.com

EMSL Order: 381509976

CustomerID: LEID42

CustomerPO:

ProjectID:

Attn: **John Whelpley**
Leidos Engineering, LLC
11951 Freedom Dr.
Reston, VA 20190

Phone: (571) 268-0697
Fax:
Received: 12/15/15 12:34 PM
Analysis Date: 12/17/2015
Collected: 12/8/2015

Project: **Spring Brook High School / 201 Valley Brook Drive**

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

Test Report: Radon in Air Test Results**Samples for EMSL Kit 133206**

Liquid Scintillation ID	Location	Radon Activity pCi/L	Start	Stop	Temperature F	Humidity %	Sample Type
225802	D	3	12/8/2015	12/11/2015	72	30	Customer
381509976-0093			7:33:00 PM	7:57:00 AM			

Sample Notes:

225527	D	2.4	12/8/2015	12/11/2015	72	30	Customer
381509976-0094			7:33:00 PM	7:57:00 AM			

Sample Notes:**Summary for EMSL Kit 133206** **Average Radon Result: 2.7 pCi/L****Samples for EMSL Kit 133198**

Liquid Scintillation ID	Location	Radon Activity pCi/L	Start	Stop	Temperature F	Humidity %	Sample Type
225587	Classroom B103 E. Side Shelf 6'	2.7	12/8/2015	12/11/2015	66	60	Customer
381509976-0095			7:46:00 PM	6:34:00 AM			

Sample Notes:

225572	Classroom B103 E. Side Shelf 6'	2.5	12/8/2015	12/11/2015	66	60	Customer
381509976-0096			7:46:00 PM	6:34:00 AM			

Sample Notes:**Summary for EMSL Kit 133198** **Average Radon Result: 2.6 pCi/L****Samples for EMSL Kit 133214**

Liquid Scintillation ID	Location	Radon Activity pCi/L	Start	Stop	Temperature F	Humidity %	Sample Type
225574	B	0.2	12/8/2015	12/11/2015	72	40	Customer
381509976-0097			7:48:00 PM	6:35:00 AM			

Sample Notes:

225743	B	0.1	12/8/2015	12/11/2015	72	40	Customer
381509976-0098			7:48:00 PM	6:35:00 AM			

Sample Notes:**Summary for EMSL Kit 133214** **Average Radon Result: 0.2 pCi/L**

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CustomerID: LEID42

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Phone: (571) 268-0697
 Fax:
 Received: 12/15/15 12:34 PM
 Analysis Date: 12/17/2015
 Collected: 12/8/2015

Project: **Spring Brook High School / 201 Valley Brook Drive**

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

Test Report: Radon in Air Test Results**Samples for EMSL Kit 133196**

Liquid Scintillation ID	Location	Radon Activity pCi/L	Start	Stop	Temperature F	Humidity %	Sample Type
225545 381509976-0099	Classroom B102 S. Side- Shelf 6'	2.4	12/8/2015 7:51:00 PM	12/11/2015 6:32:00 AM	66	60	Customer

Sample Notes:

225597 381509976-0100	Classroom B102 S. Side- Shelf 6'	2.9	12/8/2015 7:51:00 PM	12/11/2015 6:32:00 AM	66	60	Customer
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Sample Notes:

Summary for EMSL Kit 133196 **Average Radon Result: 2.7 pCi/L**

Samples for EMSL Kit 133205

Liquid Scintillation ID	Location	Radon Activity pCi/L	Start	Stop	Temperature F	Humidity %	Sample Type
225788 381509976-0101	Classroom B101 S. Side Shelf 6'	1.9	12/8/2015 7:55:00 PM	12/11/2015 6:30:00 AM	66	30	Customer

Sample Notes:

225524 381509976-0102	Classroom B101 S. Side Shelf 6'	1.6	12/8/2015 7:55:00 PM	12/11/2015 6:30:00 AM	66	30	Customer
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Sample Notes:

Summary for EMSL Kit 133205 **Average Radon Result: 1.8 pCi/L**

Samples for EMSL Kit 133213

Liquid Scintillation ID	Location	Radon Activity pCi/L	Start	Stop	Temperature F	Humidity %	Sample Type
225715 381509976-0103	Classroom B104 S. Side Shelf 6'	4.6	12/8/2015 8:05:00 PM	12/11/2015 7:44:00 AM	70	30	Customer

Sample Notes:

225791 381509976-0104	Classroom B104 S. Side Shelf 6'	4.3	12/8/2015 8:05:00 PM	12/11/2015 7:44:00 AM	70	30	Customer
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Sample Notes:

Summary for EMSL Kit 133213 **Average Radon Result: 4.4 pCi/L**

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EMSL Order: 381509976

CustomerID: LEID42

CustomerPO:

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Phone: (571) 268-0697
Fax:
Received: 12/15/15 12:34 PM
Analysis Date: 12/17/2015
Collected: 12/8/2015

Project: **Spring Brook High School / 201 Valley Brook Drive**

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

Test Report: Radon in Air Test Results**Samples for EMSL Kit 133204**

Liquid Scintillation ID	Location	Radon Activity pCi/L	Start	Stop	Temperature F	Humidity %	Sample Type
225713 381509976-0105	Office A101 W. Side Shelf 6'	2	12/8/2015 8:09:00 PM	12/11/2015 6:14:00 AM	72	30	Customer

Sample Notes:

225891 381509976-0106	Office A101 W. Side Shelf 6'	1.9	12/8/2015 8:09:00 PM	12/11/2015 6:14:00 AM	72	30	Customer
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Sample Notes:**Summary for EMSL Kit 133204** **Average Radon Result: 2.0 pCi/L****Samples for EMSL Kit 133221**

Liquid Scintillation ID	Location	Radon Activity pCi/L	Start	Stop	Temperature F	Humidity %	Sample Type
225776 381509976-0107	B	0.1	12/8/2015 12:20:00 PM	12/11/2015 6:15:00 AM	72	40	Customer

Sample Notes:

225746 381509976-0108	B	0.4	12/8/2015 12:20:00 PM	12/11/2015 6:15:00 AM	72	40	Customer
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Sample Notes:**Summary for EMSL Kit 133221** **Average Radon Result: 0.3 pCi/L****Samples for EMSL Kit 133251**

Liquid Scintillation ID	Location	Radon Activity pCi/L	Start	Stop	Temperature F	Humidity %	Sample Type
225497 381509976-0039	Lab F108 NE Side	2.2	12/8/2015 4:57:00 PM	12/11/2015 7:02:00 AM	74	60	Customer

Sample Notes:

225549 381509976-0109	Lab F108 NE Side	2.2	12/8/2015 4:57:00 PM	12/11/2015 7:02:00 AM	74	60	Customer
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Sample Notes:**Summary for EMSL Kit 133251** **Average Radon Result: 2.2 pCi/L**

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EMSL Order: 381509976

CustomerID: LEID42

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Project: **Spring Brook High School / 201 Valley Brook Drive**

Test Site: **Spring Brook High School**
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Test Report: Radon in Air Test Results**Samples for EMSL Kit 133228**

Liquid Scintillation ID	Location	Radon Activity pCi/L	Start	Stop	Temperature F	Humidity %	Sample Type
225566 381509976-0078	Classroom E113 NE Side- File Cabinet 5'	1.7	12/8/2015 6:49:00 PM	12/11/2015 7:29:00 AM	70	30	Customer

Sample Notes:

225718 381509976-0110	Class E113 NW Side, File Cabinet 5'	1.9	12/8/2015 6:49:00 PM	12/11/2015 7:27:00 AM	70	30	Customer
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Sample Notes:**Summary for EMSL Kit 133228** **Average Radon Result: 1.8 pCi/L**

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.

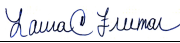

Please contact EMSL Analytical, Inc. or your State Health Department for further information.

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)

Tiffanie Cosgrove (110)

 
Laura Freeman, Interim Laboratory Manager &
Subash Rashat, New Jersey Radiation Specialist NJ MES 10152
or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ Accreditations: NRSB ARL6006, NJ DEP 03036, MEB 92525, PA 2573, IN 00455, IA L00032, RI RAS-024, ME 20200C, NE RMB-1083, NY ELAP 10872, NM 885-10L, FL RB2034, OH RL-39, NRPP #106178AL, KS-LB-0005. Subash Rashat certification #MES10152

Initial report from 12/18/2015 10:47:53

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