

School Year: 24-25

Facility:	John F. I	ohn F. Kennedy High School			
Addross	1901 Ra	ndolph Road			
Address:	Wheato	Wheaton, MD 20902			
		Scheduled Re-Testing - ☑ 2-year or ☐ 5-year schedule			
Bosson for T	osting	☐ Clearance Testing (Post-Mitigation)			
Reason for Testing:		☑ Building Envelope or HVAC Upgrades			
		☐ New Construction – Addition or Facility			
		Active Mitigation (2-year regular schedule)			
Current Rador	Status:	Status: No Active Mitigation (5-year regular schedule)			
		☐ Not Previously Tested (New Facility)			
Round of Testing:		☐ Initial Testing -or- ☐ Follow-up Testing			
Testing Status:		☑ No Further Testing Needed -or- ☐ Follow-Up Testing Required			
	_				

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

Mitigation -		Facility Radon Status:	
☐ Not Required	☐ No Change in Status		
Required (≥4.0-pCi/L)	☐ Active Mitigation (2-year regular schedule)		
Rooms: 1800	☐ No Active Mitigation (5-year regular schedule)		
Number of Rooms Tested	143	Lowest Value (pCi/L)	< 0.3
Number of Rooms (≥4.0-pCi/L)	1	Highest Value (pCi/L)	4.0

**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**

	⊠ Passive	⊠ Char	coal Absorpti	ion (CAD) 🗆 A	Alpha Track ( <i>A</i>	ATD) 🗆 Other
Detector/Device	☐ Continuous ☐ Electret ion Chamber (EIC)				lectronic Inte	gration (EID)
Туре:	Other–Specify here	2:				
Detector/Device	At Chalas Badas	T - 1 1/1 -				
Name:	Air Chek – Rador	1 Test Kits				
Manufacturer:	Radon Lab					
Person(s) Deployi	ng or Retrieving	Test Device	s and	Orga	anization/Cor	npany
certification num	ber					
Shannon King				KCI Technolog	ies, Inc.	
Shakia Dawkins				KCI Technolog	ies, Inc.	
Tyler McCleaf, CSP	– Cert. #111004-R	MP		KCI Technolog	ies, Inc.	
If noncertified individ	uals, the qualified m	neasurement <sub>l</sub>	orofessional pro	viding oversight -	•	
Tyler McCleaf, CSP	– Cert. #111004-R	MP		KCI Technolog	ies, Inc.	
				<u> </u>		
Testing						
	n Length of		Date of Der	oloyment and	12/10/24	03/17/25
☐ Long-Term		3		mm/dd/yy):	12/13/24	03/20/25
Does the test period include weekends, school breaks or holidays?   Yes   No					No	
If " <b>Yes</b> " please explain/detail in the space below:						
Was HVAC ope	erating under occ	cupied cond	litions?		⊠ Yes □	No
If " <b>No</b> " please ex	If "No" please explain/detail in the space below:					



#### **Testing** (continued)

		Detectors Deployed			
	Ground-Contact		Upper-Level(s)		Total
Round of Testing	Initial	Follow-Up	Initial	Follow-Up	Total
Test Locations <sup>1</sup>	128	4	13	0	145
Duplicates <sup>2</sup>	15	1	1	0	17
Field Blanks <sup>3</sup>	7	1	1	0	8
			Grar	nd Total	170

<sup>1-</sup> include all detectors deployed (duplicates, field blanks); 1 detector per occupied (or intended to be occupied) ground-contact space  $\le 2,000$ -square feet; large spaces  $\ge 2,000$ -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 <u>per floor</u> (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.

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

<sup>1 - 3%</sup> of EIC detectors; and 3% from <u>each LOT</u> of CAD and ATD detectors; a <u>maximum of 6-spiked</u> 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, <u>analyzed prior to deployment</u>, 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 ± 25% of the chamber's reference value?	⊠ Yes	□ No
Quality Control measurements comply with QA/QC requirements in the submitted testing organization's/company's QA plan?	⊠ Yes	□ No
Round of Testing	Initial	Follow-Up
All Field, Trip and Office Blanks are ≤ (less than or equal to)	🛛 Yes	⊠ Yes
to the Method Detection Limit?	☐ No	☐ No
For all Duplicate Samples¹, the higher value is ≤ 2x the lower value?		⊠ Yes
		☐ No
For all Duplicate Samples <sup>1</sup> , Relative Percent Difference(s) (RPD) <sup>2</sup> are	✓ Yes	
less than the Warning Level <sup>3</sup> ?	□ No	□ No
For all Duplicate Samples <sup>1</sup> , Relative Percent Difference(s) (RPD) <sup>2</sup> are	✓ Yes	☑ Yes
less than the Control Level <sup>3</sup> ?	☐ No	□ 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 Results<sup>1</sup> and Determination of Valid Measurements<sup>2</sup>

	Ground-Contact		Upper-Level(s)		Total	
Round of Testing	Initial	Follow-Up	Initial	Follow-Up	TOLAT	
Number of test locations:	128	2	13	0	143	
Number of locations ≥8.0-pCi/L:	0	0	0	0	0	
Number of locations ≥4.0 and ≤8-pCi/L:	1	1	0	0	2	
Number of locations ≥2.7 and <4-pCi/L:	0	0	0	0	0	
Number of locations ≥2.0 and <2.7-pCi/L:	0	0	0	0	0	
Number of missing required test locations <sup>3</sup> :	0	0	0	0	0	
Number of failed duplicate control locations:	1	0	0	0	1	
Percentage of missing test locations for the facility <sup>4,5</sup> :	0	0	0	0	0	

<sup>1 –</sup> 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 ≤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  $\ge 4.0$ -pCi/L and the total number of test locations are  $\ge 20$ , there is an allowance of  $\le 25\%$  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 Results<sup>1</sup> and Determination of Valid Measurements<sup>2</sup> (continued)

Round of Testing	Initial	Follow-Up
Were test devices deployed in all occupied and intended to be occupied rooms in	☑ Yes	☑ Yes
contact with the ground, and, if applicable, 10% of upper floor rooms?	□ No	□ No
Were valid measurements obtained in all occupied and intended to be occupied	☐ Yes	☑ Yes
rooms in contact with the ground, and, if applicable, 10% of upper floor rooms?	⊠ No	□ No
<b>If Yes to both above</b> – then Testing Status – <b>'No Further Testing Needed'</b> mark 'NA' below and complete Conclusions section		
If No to either above, were all results obtained under 4.0-pCi/L and	☐ Yes	☐ Yes
were sufficient valid measurements obtained? <sup>1,2</sup> If Yes, then - 'No Further Testing Needed' complete Conclusion section on first page.	⊠ No	☐ No
If No, then - 'Follow-up Testing Required' continue below.	□ NA	⊠ 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	≥4.0	Mitigation Required
	tests and required blanks and	≥2.0 and <4.0	Consider Mitigation
Failed QC checks	duplicates; Average the results of the two tests	<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
John F. Kennedy High School
Test Period: 12/10/2024 - 12/13/2024

Kit Number         Room / Area         Result           11906540         106         < 0.3           11906541         106         < 0.3           11906542         106         < 0.3           11906552         1002         1.1           11906556         1003         0.7           11906556         1003         0.7           11906555         1005         1.6           11906554         1007         1.2           11906553         1009         1.0           11906554         1007         1.2           11906553         1009         1.0           11906554         1019         < 0.3           11906555         1019         < 0.3           11906450         1100         1.2           11906450         1100         1.2           11906453         1104         1.4           11906453         1105         1.2           11906454         1105         1.2           11906455         1106         1.1           11906451         1107         1.6           11906452         1107         1.6           11906454         1108         1.1			
11906541         106         < 0.3	Kit Number	Room / Area	Result
11906542         106         < 0.3	11906540	106	< 0.3
11906552         1002         1.1           11906556         1003         0.7           11906546         1004         0.7           11906555         1005         1.6           11906554         1007         1.2           11906553         1009         1.0           11906551         1017         < 0.3	11906541	106	< 0.3
11906556         1003         0.7           11906546         1004         0.7           11906555         1005         1.6           11906554         1007         1.2           11906553         1009         1.0           11906551         1017         < 0.3	11906542	106	< 0.3
11906546         1004         0.7           11906555         1005         1.6           11906554         1007         1.2           11906553         1009         1.0           11906551         1017         < 0.3	11906552	1002	1.1
11906555         1005         1.6           11906554         1007         1.2           11906553         1009         1.0           11906551         1017         < 0.3	11906556	1003	0.7
11906554         1007         1.2           11906553         1009         1.0           11906551         1017         < 0.3	11906546	1004	0.7
11906553         1009         1.0           11906551         1017         < 0.3	11906555	1005	1.6
11906551         1019         < 0.3	11906554	1007	1.2
11906545         1019         < 0.3	11906553	1009	1.0
11906544       1021       < 0.3	11906551	1017	< 0.3
11906450       1100       1.2         11906557       1103       1.7         11906453       1104       1.4         11906558       1105       1.2         11906455       1106       1.1         11906451       1107       1.6         11906452       1107       1.2         11906454       1108       1.1         11906459       1110       1.5         11906459       1110       1.5         11906460       1114       < 0.3	11906545	1019	< 0.3
11906557         1103         1.7           11906453         1104         1.4           11906558         1105         1.2           11906455         1106         1.1           11906451         1107         1.6           11906452         1107         1.2           11906454         1108         1.1           11906459         1110         1.5           11906460         1114         < 0.3	11906544	1021	< 0.3
11906453       1104       1.4         11906558       1105       1.2         11906455       1106       1.1         11906451       1107       1.6         11906452       1107       1.2         11906454       1108       1.1         11906459       1110       1.5         11906460       1114       < 0.3	11906450	1100	1.2
11906558       1105       1.2         11906455       1106       1.1         11906451       1107       1.6         11906452       1107       1.2         11906454       1108       1.1         11906459       1110       1.5         11906459       1110       1.5         11906460       1114       < 0.3	11906557	1103	1.7
11906455       1106       1.1         11906451       1107       1.6         11906452       1107       1.2         11906454       1108       1.1         11906459       1110       1.5         11906460       1114       < 0.3	11906453	1104	1.4
11906451       1107       1.6         11906452       1107       1.2         11906454       1108       1.1         11906459       1110       1.5         11906460       1114       < 0.3	11906558	1105	1.2
11906452       1107       1.2         11906454       1108       1.1         11906459       1110       1.5         11906460       1114       < 0.3	11906455	1106	1.1
11906454       1108       1.1         11906459       1110       1.5         11906460       1114       < 0.3	11906451	1107	1.6
11906459       1110       1.5         11906460       1114       < 0.3	11906452	1107	1.2
11906460       1114       < 0.3	11906454	1108	1.1
11906456       1115       < 0.3	11906459	1110	1.5
11906461       1116       1.1         11906462       1116       0.5         11906463       1116       < 0.3	11906460	1114	< 0.3
11906462       1116       0.5         11906463       1116       < 0.3	11906456	1115	< 0.3
11906463       1116       < 0.3	11906461	1116	1.1
11906457       1117       < 0.3	11906462	1116	0.5
11906464       1118       0.6         11906465       1119       0.9         11906467       1120       0.9         11906468       1121       1.1         11906469       1122       < 0.3	11906463	1116	< 0.3
11906465       1119       0.9         11906467       1120       0.9         11906468       1121       1.1         11906469       1122       < 0.3	11906457	1117	< 0.3
11906467       1120       0.9         11906468       1121       1.1         11906469       1122       < 0.3	11906464	1118	0.6
11906468       1121       1.1         11906469       1122       < 0.3	11906465	1119	0.9
11906469       1122       < 0.3	11906467	1120	0.9
11906470       1124       < 0.3	11906468	1121	1.1
11906475       1125       0.7         11906486       1128       < 0.3	11906469	1122	< 0.3
11906486       1128       < 0.3	11906470	1124	< 0.3
11906473 1132 0.7	11906475	1125	0.7
	11906486	1128	< 0.3
11906474 1134 0.9	11906473	1132	0.7
	11906474	1134	0.9

Table 1- Radon Testing Results
John F. Kennedy High School
Test Period: 12/10/2024 - 12/13/2024

	ı	
Kit Number	Room / Area	Result
11906564	1201	< 0.3
11906565	1203	< 0.3
11906520	1205	< 0.3
11906521	1205	< 0.3
11906523	1208	< 0.3
11906524	1208	< 0.3
11906527	1208	< 0.3
11906528	1208	< 0.3
11906566	1210	< 0.3
11906533	1212	< 0.3
11906525	1214	< 0.3
11906569	1301	0.8
11906568	1305	< 0.3
11906567	1307	< 0.3
11906519	1308	< 0.3
11906516	1309	< 0.3
11906515	1315	0.6
11906513	1317	< 0.3
11906511	1319	< 0.3
11906512	1319	0.5
11906514	1320	< 0.3
11906506	1321	0.7
11906509	1324	< 0.3
11906507	1326	0.9
11906503	1327	< 0.3
11906501	1329	< 0.3
11906502	1329	< 0.3
11906505	1329	< 0.3
11906504	1334	< 0.3
11906500	1336	< 0.3
11906499	1338	< 0.3
11906498	1342	< 0.3
11906497	1346	< 0.3
11906529	1401	< 0.3
11906537	1402	< 0.3
11906538	1402	< 0.3
11906530	1403	< 0.3

Table 1- Radon Testing Results
John F. Kennedy High School
Test Period: 12/10/2024 - 12/13/2024

Kit Number	Room / Area	Result
11906531	1405	< 0.3
11906532	1407	< 0.3
11906535	1409	< 0.3
11906536	1411	< 0.3
11906517	1502	0.8
11906518	1502	0.6
11906522	1507	0.6
11906571	1602	0.7
11906572	1602	1.0
11906570	1604	1.4
11906496	1800	4.0
11906477	1805	< 0.3
11906575	2007	< 0.3
11906581	2105	< 0.3
11906580	2112	< 0.3
11906574	2128	< 0.3
11906573	2129	0.7
11906577	2140	0.6
11906579	2336	0.6
11906576	2502	1.0
11906582	2502	1.2
11906583	2502	< 0.3
11906578	2805	0.5
11906585	3320	< 0.3
11906586	3803	< 0.3
11906422	1000A	< 0.3
11906424	1000B	< 0.3
11906425	1000E	< 0.3
11906426	1000F	< 0.3
11906427	1000H	< 0.3
11906428	1000M	< 0.3
11906429	1000N	< 0.3
11906430	1000O	< 0.3
11906431	1000P	< 0.3
11906432	1000P	< 0.3
11906547	1011A	1.0
11906548	1011C	0.8

Table 1- Radon Testing Results
John F. Kennedy High School
Test Period: 12/10/2024 - 12/13/2024

Kit Number	Room / Area	Result
11906549	1011D	0.9
11906550	1011D	0.7
11906448	1100A	0.6
11906449	1100B	0.6
11906447	1100D	0.6
11906446	1100E	< 0.3
11906445	1100F	0.6
11906444	11001	0.7
11906441	1100J	< 0.3
11906442	1100J	< 0.3
11906443	1100J	< 0.3
11906440	1100K	1.4
11906439	1100L	0.5
11906438	1100M	0.7
11906437	1100N	< 0.3
11906436	1100P	< 0.3
11906435	1100Q	0.6
11906434	1100R	< 0.3
11906433	1100S	0.5
11906559	1105A	1.4
11906560	1105C	< 0.3
11906561	1105D	1.0
11906562	1105D	0.7
11906563	1105D	< 0.3
11906458	1117A	< 0.3
11906466	1119A	1.3
11906471	1124A	0.5
11906472	1124A	< 0.3
11906485	1128E	< 0.3
11906481	1128H	< 0.3
11906482	1128H	< 0.3
11906483	1128H	< 0.3
11906490	1130Y	< 0.3
11906526	1214B	< 0.3
11906508	1326D	< 0.3
11906492	1333B	< 0.3
11906494	1333D	< 0.3

	1- Radon Testing R	
	F. Kennedy High S	
Test Per	iod: 12/10/2024 - 12	/13/2024
Kit Number	Room / Area	Result
11906495	1333E	< 0.3
11906491	1333F	0.6
11906493	1333F	< 0.3
11906489	1333H	< 0.3
11906476	1805A	< 0.3
11906478	1805B	< 0.3
11906479	1805C	< 0.3
11906480	1805F	< 0.3
11906484	1805G	< 0.3
11906488	1811D	< 0.3
11906487	1811E	< 0.3
11906510	DEI OFFICE	< 0.3
11906421	MAIN OFFICE	0.6
11906584	MEDIA CENTER	< 0.3
11906539	STAGE	< 0.3
11906534	THEATER	0.5
11906543	THEATER	< 0.3

	Table 2 - Summary Testing Results ≥2.0 pCi/L						
		Jo	hn F. Kenne	dy High School			
		Test F	Period: 12/10	/2024 - 12/13/20	24		
≥2.0 and <2	.7 pCi/L	≥2.7 and <4	l.0 pCi/L	≥4.0 and <	3.0 pCi/l	≥8.0 pC	i/L
Room / Area	Result	Room / Area	Result	Room / Area	Result	Room / Area	Result
N/A	N/A	N/A	N/A	1800	4.0	N/A	N/A

John E. Kennedy High School	able 3 - QC Radon Testing Results	
John F. Reinledy Flight Johnson	John F. Kennedy High School	

Test Period: 12/10/2024 - 12/13/2024

Kit Number	QC Type	Room / Area	Result
11906542	D	106	< 0.3
11906540	FB	106	< 0.3
11906452	D	1107	1.2
11906462	D	1116	0.5
11906463	FB	1116	< 0.3
11906512	D	1319	0.5
11906505	D	1329	< 0.3
11906502	FB	1329	< 0.3
11906538	D	1402	< 0.3
11906572	D	1602	1.0
11906582	D	2502	1.2
11906583	FB	2502	< 0.3
11906432	D	1000P	< 0.3
11906550	D	1011D	0.7
11906441	D	1100J	< 0.3
11906443	FB	1100J	< 0.3
11906562	D	1105D	0.7
11906563	FB	1105D	< 0.3
11906472	D	1124A	< 0.3
11906482	D	1128H	< 0.3
11906483	FB	1128H	< 0.3
11906524	D	1208 Office	< 0.3
11906527	FB	1208 Office	< 0.3
11906493	D	1333F	< 0.3
11907194	OB	OFFICE BLANK	< 0.3
11907193	TB	TRAVEL BLANK	< 0.3

#### Table 3a - Duplicate Worksheet / Data Validation

John F. Kennedy High School

Test Period: 12/09/2024 - 12/13/2024

	Sample I	D	Duplicate Concentrations (pCi/L) and OC Checks							
Kit Nu	ımbers	Room / Area	Higher	Lower	Check #1 (Pass/Fail)	2x the Lower	Check #2 (Pass/Fail)	Average	Relative Percent Difference (RPD)	Check #3
11906431	11906432	1000P	0.3	0.3	$\checkmark$	0.6	PASS	0.3	<1-pCi/L	✓
11906442	11906441	1100J	0.3	0.3	<b>✓</b>	0.6	PASS	0.3	<1-pCi/L	✓
11906451	11906452	1107	1.6	1.2	<b>✓</b>	2.4	PASS	1.4	<1-pCi/L	✓
11906461	11906462	1116	1.1	0.5	<b>✓</b>	1.0	FAIL	8.0	<1-pCi/L	×
11906471	11906472	1124A	0.5	0.3	<b>✓</b>	0.6	PASS	0.4	<1-pCi/L	✓
11906481	11906482	1128H	0.3	0.3	$\checkmark$	0.6	PASS	0.3	<1-pCi/L	✓
11906491	11906493	1333F	0.6	0.3	$\checkmark$	0.6	PASS	0.5	<1-pCi/L	✓
11906501	11906505	1329	0.3	0.3	<b>✓</b>	0.6	PASS	0.3	<1-pCi/L	✓
11906511	11906512	1319	0.5	0.3	</td <td>0.6</td> <td>PASS</td> <td>0.4</td> <td>&lt;1-pCi/L</td> <td>✓</td>	0.6	PASS	0.4	<1-pCi/L	✓
11906523	11906524	1208	0.3	0.3	</td <td>0.6</td> <td>PASS</td> <td>0.3</td> <td>&lt;1-pCi/L</td> <td>✓</td>	0.6	PASS	0.3	<1-pCi/L	✓
11906537	11906538	1402	0.3	0.3	✓	0.6	PASS	0.3	<1-pCi/L	✓
11906541	11906542	106	0.3	0.3	</td <td>0.6</td> <td>PASS</td> <td>0.3</td> <td>&lt;1-pCi/L</td> <td>✓</td>	0.6	PASS	0.3	<1-pCi/L	✓
11906549	11906550	1011D	0.9	0.7	</td <td>1.4</td> <td>PASS</td> <td>0.8</td> <td>&lt;1-pCi/L</td> <td>✓</td>	1.4	PASS	0.8	<1-pCi/L	✓
11906561	11906562	1105D	1.0	0.7	</td <td>1.4</td> <td>PASS</td> <td>0.9</td> <td>&lt;1-pCi/L</td> <td>✓</td>	1.4	PASS	0.9	<1-pCi/L	✓
11906571	11906572	1602	1.0	0.7	</td <td>1.4</td> <td>PASS</td> <td>0.9</td> <td>&lt;1-pCi/L</td> <td>✓</td>	1.4	PASS	0.9	<1-pCi/L	✓
11906576	11906583	2502	1.2	1.0	<b>✓</b>	2.0	PASS	1.1	<1-pCi/L	✓
NOTES:	NOTES:						Average	(pCi/L)	Warning Level	Control Level
QC Check #	1 - Data Entry						< 2	.0	1-pCi/L	NA

Between 2.0 and 3.9

≥ 4.0

50% RPD

28% RPD

67% RPD

36% RPD

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

Table 4 - Summary of Invalid Measurement Locations								
	John F Kennedy High School							
Те	Test Period: 12/10/24 - 12/13/24							
Kit Number   Deem/Area   Decem								
Kit Number	Room/Area	Reason						
N/A	N/A	N/A						

Table 1- Radon Testing Results					
John F. Kennedy High School RT					
Test Period: 3/17/2025 - 3/20/2025					
Kit Number	Room / Area	Result			
11892412	1116	< 0.3			
11892450	1116	0.8			
11892453	1116	0.6			
11892454	1116	0.6			
11892451	1800	4.0			
11892452	1800	4.0			

	Table 2 - S	Summary Te	sting Results ≥2.	.0 pCi/L		
John F. Kennedy High School						
	Tes	t Period: 3/1	7/2025 - 3/20/202	5		
2.7 pCi/L	≥2.7 and <	4.0 pCi/L	≥4.0 and <	8.0 pCi/l	≥8.0 p	Ci/L
Result	Room / Area	Result	Room / Area	Result	Room / Area	Result
N/A	N/A	N/A	1800	4.0	N/A	N/A
			1800	4.0		
			1			
					1	
	Result	Jo Tes 2.7 pCi/L ≥2.7 and < Result Room / Area	John F. Kenne Test Period: 3/1 2.7 pCi/L ≥2.7 and <4.0 pCi/L Result Room / Area Result	John F. Kennedy High School         Test Period: 3/17/2025 - 3/20/202         2.7 pCi/L       ≥2.7 and <4.0 pCi/L       ≥4.0 and          Result       Room / Area       Result       Room / Area         N/A       N/A       N/A       1800	Test Period: 3/17/2025 - 3/20/2025         2.7 pCi/L       ≥2.7 and <4.0 pCi/L       ≥4.0 and <8.0 pCi/l         Result       Room / Area       Result       Room / Area       Result         N/A       N/A       N/A       1800       4.0	John F. Kennedy High School         Test Period: 3/17/2025 - 3/20/2025         2.7 pCi/L       ≥2.7 and <4.0 pCi/L       ≥4.0 and <8.0 pCi/l       ≥8.0 pci/l         Result       Room / Area       Result       Room / Area       Result       Room / Area         N/A       N/A       N/A       1800       4.0       N/A

Table 3 - QC Radon Testing Results				
John F. Kennedy High School				
	Test Period	d: 3/17/2025 - 3/20/2025		
Kit Number	QC Type	Room / Area	Result	
11892454	D	1116	0.6	
11892412	FB	1116	< 0.3	
11892482	OB	OFFICE BLANK	< 0.3	
11892483	TB	TRAVEL BLANK	< 0.3	

#### Table 3a - Duplicate Worksheet / Data Validation John F. Kennedy High School RT Test Period: 3/17/2025 - 3/20/2025 Sample ID Duplicate Concentrations (pCi/L) and OC Checks **Relative Percent** Check #1 2x the Check #2 Kit Numbers Room / Area Higher Lower Check #3 Average (Pass/Fail) Lower (Pass/Fail) Difference (RPD) 11892450 11892454 1116 0.8 0.6 **V** 1.2 **PASS** 0.7 <1-pCi/L 11892453 NOTES: Average (pCi/L) Warning Level Control Level QC Check #1 - Data Entry 1-pCi/L QC Check #2 - Higher duplicate concentration is < or = to 2x the Lower Between 2.0 and 3.9 50% RPD 67% RPD QC Check #3 - Meets RPD Limits, by average duplicate concentration ≥ 4.0 28% RPD 36% RPD

- 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

Table 4 - Summary of Invalid Measurement Locations	
John F. Kennedy High School	
Test Period: 3/17/25 - 3/20/25	

Kit Number	Room/Area	Reason
N/A	N/A	N/A

# Attachment 2: Laboratory Reports

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11906422	1000A	2024-12-10 @ 7:00 am	2024-12-13 @ 8:00 am	< 0.3	2024-12-16
11906424	1000B	2024-12-10 @ 7:00 am	2024-12-13 @ 8:00 am	< 0.3	2024-12-16
11906425	1000E	2024-12-10 @ 7:00 am	2024-12-13 @ 8:00 am	< 0.3	2024-12-16
11906426	1000F	2024-12-10 @ 7:00 am	2024-12-13 @ 8:00 am	< 0.3	2024-12-16
11906427	1000H	2024-12-10 @ 7:00 am	2024-12-13 @ 8:00 am	< 0.3	2024-12-16
11906428	1000M	2024-12-10 @ 7:00 am	2024-12-13 @ 8:00 am	< 0.3	2024-12-16
11906429	1000N	2024-12-10 @ 7:00 am	2024-12-13 @ 8:00 am	< 0.3	2024-12-16
11906430	1000O	2024-12-10 @ 7:00 am	2024-12-13 @ 8:00 am	< 0.3	2024-12-16
11906431	1000P	2024-12-10 @ 7:00 am	2024-12-13 @ 8:00 am	< 0.3	2024-12-16
11906432	1000P DUPLICATE	2024-12-10 @ 7:00 am	2024-12-13 @ 8:00 am	< 0.3	2024-12-16
11906552	1002	2024-12-10 @ 11:00 am	2024-12-13 @ 10:00 am	$1.1 \pm 0.3$	2024-12-16
11906556	1003	2024-12-10 @ 12:00 pm	2024-12-13 @ 10:00 am	$0.7 \pm 0.3$	2024-12-16
11906546	1004	2024-12-10 @ 11:00 am	2024-12-13 @ 10:00 am	$0.7 \pm 0.3$	2024-12-16
11906555	1005	2024-12-10 @ 12:00 pm	2024-12-13 @ 10:00 am	$1.6 \pm 0.3$	2024-12-16
11906554	1007	2024-12-10 @ 12:00 pm	2024-12-13 @ 10:00 am	$1.2 \pm 0.3$	2024-12-16
11906553	1009	2024-12-10 @ 12:00 pm	2024-12-13 @ 10:00 am	$1.0 \pm 0.3$	2024-12-16
11906547	1011A	2024-12-10 @ 11:00 am	2024-12-13 @ 10:00 am	$1.0 \pm 0.3$	2024-12-16
11906548	1011C	2024-12-10 @ 11:00 am	2024-12-13 @ 10:00 am	$0.8 \pm 0.3$	2024-12-16
11906549	1011D	2024-12-10 @ 12:00 pm	2024-12-13 @ 10:00 am	$0.9 \pm 0.3$	2024-12-16
11906550	1011D DUPLICATE	2024-12-10 @ 12:00 pm	2024-12-13 @ 10:00 am	$0.7 \pm 0.3$	2024-12-16
11906551	1017	2024-12-10 @ 11:00 am	2024-12-13 @ 10:00 am	< 0.3	2024-12-16
11906545	1019	2024-12-10 @ 11:00 am	2024-12-13 @ 10:00 am	< 0.3	2024-12-16
11906544	1021	2024-12-10 @ 11:00 am	2024-12-13 @ 10:00 am	< 0.3	2024-12-16
11906541	106	2024-12-10 @ 11:00 am	2024-12-13 @ 10:00 am	< 0.3	2024-12-16
11906542	106 DUPLICATE	2024-12-10 @ 11:00 am	2024-12-13 @ 10:00 am	< 0.3	2024-12-16
11906450	1100	2024-12-10 @ 8:00 am	2024-12-13 @ 8:00 am	$1.2 \pm 0.3$	2024-12-16
11906448	1100A	2024-12-10 @ 8:00 am	2024-12-13 @ 8:00 am	$0.6 \pm 0.3$	2024-12-16
11906449	1100B	2024-12-10 @ 8:00 am	2024-12-13 @ 8:00 am	$0.6 \pm 0.3$	2024-12-16
11906447	1100D	2024-12-10 @ 8:00 am	2024-12-13 @ 8:00 am	$0.6 \pm 0.3$	2024-12-16
11906446	1100E	2024-12-10 @ 8:00 am	2024-12-13 @ 8:00 am	< 0.3	2024-12-16
11906445	1100F	2024-12-10 @ 8:00 am	2024-12-13 @ 11:00 am	$0.6 \pm 0.3$	2024-12-16
11906444	1100I	2024-12-10 @ 8:00 am	2024-12-13 @ 8:00 am	$0.7 \pm 0.3$	2024-12-16
11906442	1100J	2024-12-10 @ 8:00 am	2024-12-13 @ 8:00 am	< 0.3	2024-12-16
11906441	1100J DUPLICATE	2024-12-10 @ 8:00 am	2024-12-13 @ 8:00 am	< 0.3	2024-12-16
11906440	1100K	2024-12-10 @ 8:00 am	2024-12-13 @ 8:00 am	$1.4 \pm 0.3$	2024-12-16
11906439	1100L	2024-12-10 @ 8:00 am	2024-12-13 @ 11:00 am	$0.5 \pm 0.3$	2024-12-16
11906438	1100M	2024-12-10 @ 8:00 am	2024-12-13 @ 11:00 am	$0.7 \pm 0.3$	2024-12-16

Kit#	Room Id	Started	Ended	pCi/L	Analyzed
11906437	1100N	2024-12-10 @ 8:00 am	2024-12-13 @ 8:00 am	< 0.3	2024-12-16
11906436	1100P	2024-12-10 @ 8:00 am	2024-12-13 @ 8:00 am	< 0.3	2024-12-16
11906435	1100Q	2024-12-10 @ 8:00 am	2024-12-13 @ 8:00 am	$0.6 \pm 0.3$	2024-12-16
11906434	1100R	2024-12-10 @ 7:00 am	2024-12-13 @ 8:00 am	< 0.3	2024-12-16
11906433	1100S	2024-12-10 @ 7:00 am	2024-12-13 @ 8:00 am	$0.5 \pm 0.3$	2024-12-16
11906557	1103	2024-12-10 @ 12:00 pm	2024-12-13 @ 10:00 am	$1.7 \pm 0.3$	2024-12-16
11906453	1104	2024-12-10 @ 8:00 am	2024-12-13 @ 8:00 am	$1.4 \pm 0.3$	2024-12-16
11906558	1105	2024-12-10 @ 12:00 pm	2024-12-13 @ 10:00 am	$1.2 \pm 0.3$	2024-12-16
11906559	1105A	2024-12-10 @ 12:00 pm	2024-12-13 @ 10:00 am	$1.4 \pm 0.3$	2024-12-16
11906560	1105C	2024-12-10 @ 12:00 pm	2024-12-13 @ 10:00 am	< 0.3	2024-12-16
11906561	1105D	2024-12-10 @ 12:00 pm	2024-12-13 @ 10:00 am	$1.0 \pm 0.3$	2024-12-16
11906562	1105D DUPLICATE	2024-12-10 @ 12:00 pm	2024-12-13 @ 10:00 am	$0.7 \pm 0.3$	2024-12-16
11906455	1106	2024-12-10 @ 8:00 am	2024-12-13 @ 8:00 am	$1.1 \pm 0.3$	2024-12-16
11906452	1107 DUPLICATE	2024-12-10 @ 8:00 am	2024-12-13 @ 8:00 am	$1.2 \pm 0.3$	2024-12-16
11906451	1107 STAFF LOUNGE	2024-12-10 @ 8:00 am	2024-12-13 @ 8:00 am	$1.6 \pm 0.3$	2024-12-16
11906454	1108	2024-12-10 @ 8:00 am	2024-12-13 @ 8:00 am	$1.1 \pm 0.3$	2024-12-16
11906459	1110	2024-12-10 @ 8:00 am	2024-12-13 @ 8:00 am	$1.5 \pm 0.3$	2024-12-16
11906460	1114	2024-12-10 @ 8:00 am	2024-12-13 @ 8:00 am	< 0.3	2024-12-16
11906456	1115	2024-12-10 @ 8:00 am	2024-12-13 @ 8:00 am	< 0.3	2024-12-16
11906461	1116	2024-12-10 @ 8:00 am	2024-12-13 @ 8:00 am	$1.1 \pm 0.3$	2024-12-16
11906462	1116 DUPLICATE	2024-12-10 @ 8:00 am	2024-12-13 @ 8:00 am	$0.5 \pm 0.3$	2024-12-16
11906457	1117	2024-12-10 @ 8:00 am	2024-12-13 @ 8:00 am	< 0.3	2024-12-16
11906458	1117A	2024-12-10 @ 8:00 am	2024-12-13 @ 8:00 am	< 0.3	2024-12-16
11906464	1118	2024-12-10 @ 8:00 am	2024-12-13 @ 8:00 am	$0.6 \pm 0.3$	2024-12-16
11906465	1119	2024-12-10 @ 9:00 am	2024-12-13 @ 8:00 am	$0.9 \pm 0.3$	2024-12-16
11906466	1119A	2024-12-10 @ 9:00 am	2024-12-13 @ 8:00 am	$1.3 \pm 0.3$	2024-12-16
11906467	1120	2024-12-10 @ 9:00 am	2024-12-13 @ 8:00 am	$0.9 \pm 0.3$	2024-12-16
11906468	1121	2024-12-10 @ 9:00 am	2024-12-13 @ 8:00 am	$1.1 \pm 0.3$	2024-12-16
11906469	1122	2024-12-10 @ 9:00 am	2024-12-13 @ 8:00 am	< 0.3	2024-12-16
11906470	1124	2024-12-10 @ 9:00 am	2024-12-13 @ 8:00 am	< 0.3	2024-12-16
11906471	1124A	2024-12-10 @ 9:00 am	2024-12-13 @ 8:00 am	$0.5 \pm 0.3$	2024-12-16
11906472	1124A DUPLICATE	2024-12-10 @ 9:00 am	2024-12-13 @ 8:00 am	< 0.3	2024-12-16
11906475	1125	2024-12-10 @ 9:00 am	2024-12-13 @ 8:00 am	$0.7 \pm 0.3$	2024-12-16
11906486	1128 HEALTH	2024-12-10 @ 9:00 am	2024-12-13 @ 9:00 am	< 0.3	2024-12-16
11906485	1128E	2024-12-10 @ 9:00 am	2024-12-13 @ 9:00 am	< 0.3	2024-12-16
11906481	1128H	2024-12-10 @ 9:00 am	2024-12-13 @ 9:00 am	< 0.3	2024-12-16
11906482	1128H DUPLICATE	2024-12-10 @ 9:00 am	2024-12-13 @ 9:00 am	< 0.3	2024-12-16

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11906490	1130Y	2024-12-10 @ 9:00 am	2024-12-13 @ 9:00 am	< 0.3	2024-12-16
11906473	1132	2024-12-10 @ 9:00 am	2024-12-13 @ 8:00 am	$0.7 \pm 0.3$	2024-12-16
11906474	1134	2024-12-10 @ 9:00 am	2024-12-13 @ 8:00 am	$0.9 \pm 0.3$	2024-12-16
11906564	1201	2024-12-10 @ 12:00 pm	2024-12-13 @ 9:00 am	< 0.3	2024-12-16
11906565	1203	2024-12-10 @ 12:00 pm	2024-12-13 @ 9:00 am	< 0.3	2024-12-16
11906520	1205 CAFETERIA	2024-12-10 @ 10:00 am	2024-12-13 @ 9:00 am	< 0.3	2024-12-16
11906521	1205 CAFETERIA	2024-12-10 @ 10:00 am	2024-12-13 @ 9:00 am	< 0.3	2024-12-16
11906528	1208 OFFICE	2024-12-10 @ 10:00 am	2024-12-13 @ 9:00 am	< 0.3	2024-12-16
11906523	1208OFFICE	2024-12-10 @ 10:00 am	2024-12-13 @ 9:00 am	< 0.3	2024-12-16
11906524	12080FFICE DUPLICATE	2024-12-10 @ 10:00 am	2024-12-13 @ 9:00 am	< 0.3	2024-12-16
11906566	1210	2024-12-10 @ 12:00 pm	2024-12-13 @ 11:00 am	< 0.3	2024-12-16
11906533	1212	2024-12-10 @ 11:00 am	2024-12-13 @ 10:00 am	< 0.3	2024-12-16
11906525	1214	2024-12-10 @ 11:00 am	2024-12-13 @ 10:00 am	< 0.3	2024-12-16
11906526	1214B	2024-12-10 @ 11:00 am	2024-12-13 @ 10:00 am	< 0.3	2024-12-16
11906569	1301	2024-12-10 @ 12:00 pm	2024-12-13 @ 10:00 am	$0.8 \pm 0.3$	2024-12-16
11906568	1305	2024-12-10 @ 12:00 pm	2024-12-13 @ 10:00 am	< 0.3	2024-12-16
11906567	1307	2024-12-10 @ 12:00 pm	2024-12-13 @ 10:00 am	< 0.3	2024-12-16
11906519	1308	2024-12-10 @ 10:00 am	2024-12-13 @ 9:00 am	< 0.3	2024-12-16
11906516	1309	2024-12-10 @ 10:00 am	2024-12-13 @ 9:00 am	< 0.3	2024-12-16
11906515	1315	2024-12-10 @ 10:00 am	2024-12-13 @ 9:00 am	$0.6 \pm 0.3$	2024-12-16
11906513	1317	2024-12-10 @ 10:00 am	2024-12-13 @ 9:00 am	< 0.3	2024-12-16
11906511	1319	2024-12-10 @ 10:00 am	2024-12-13 @ 9:00 am	< 0.3	2024-12-16
11906512	1319 DUPLICATE	2024-12-10 @ 10:00 am	2024-12-13 @ 9:00 am	$0.5 \pm 0.3$	2024-12-16
11906514	1320	2024-12-10 @ 10:00 am	2024-12-13 @ 9:00 am	< 0.3	2024-12-16
11906506	1321	2024-12-10 @ 10:00 am	2024-12-13 @ 9:00 am	$0.7 \pm 0.3$	2024-12-16
11906509	1324	2024-12-10 @ 10:00 am	2024-12-13 @ 9:00 am	< 0.3	2024-12-16
11906507	1326	2024-12-10 @ 10:00 am	2024-12-13 @ 9:00 am	$0.9 \pm 0.3$	2024-12-16
11906508	1326D	2024-12-10 @ 10:00 am	2024-12-13 @ 9:00 am	< 0.3	2024-12-16
11906503	1327	2024-12-10 @ 10:00 am	2024-12-13 @ 9:00 am	< 0.3	2024-12-16
11906501	1329	2024-12-10 @ 10:00 am	2024-12-13 @ 9:00 am	< 0.3	2024-12-16
11906505	1329 DUPLICATE	2024-12-10 @ 10:00 am		< 0.3	2024-12-16
11906492	1333B	2024-12-10 @ 9:00 am	2024-12-13 @ 9:00 am	< 0.3	2024-12-16
11906494	1333D	2024-12-10 @ 9:00 am	2024-12-13 @ 9:00 am	< 0.3	2024-12-16
11906495	1333E	2024-12-10 @ 9:00 am	2024-12-13 @ 9:00 am	< 0.3	2024-12-16
11906491	1333F	2024-12-10 @ 9:00 am	2024-12-13 @ 9:00 am	$0.6 \pm 0.3$	2024-12-16
11906493	1333F DUPLICATE	2024-12-10 @ 9:00 am	2024-12-13 @ 9:00 am	< 0.3	2024-12-16
11906489	1333H	2024-12-10 @ 9:00 am	2024-12-13 @ 9:00 am	< 0.3	2024-12-16

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11906504	1334	2024-12-10 @ 10:00 am	2024-12-13 @ 9:00 am	< 0.3	2024-12-16
11906500	1336	2024-12-10 @ 10:00 am	2024-12-13 @ 9:00 am	< 0.3	2024-12-16
11906499	1338	2024-12-10 @ 10:00 am	2024-12-13 @ 9:00 am	< 0.3	2024-12-16
11906498	1342	2024-12-10 @ 10:00 am	2024-12-13 @ 9:00 am	< 0.3	2024-12-16
11906497	1346	2024-12-10 @ 10:00 am	2024-12-13 @ 9:00 am	< 0.3	2024-12-16
11906529	1401 GLR	2024-12-10 @ 11:00 am	2024-12-13 @ 9:00 am	< 0.3	2024-12-16
11906538	1402 DUPLICATE	2024-12-10 @ 11:00 am	2024-12-13 @ 9:00 am	< 0.3	2024-12-16
11906537	1402 GYM	2024-12-10 @ 11:00 am	2024-12-13 @ 9:00 am	< 0.3	2024-12-16
11906530	1403	2024-12-10 @ 11:00 am	2024-12-13 @ 9:00 am	< 0.3	2024-12-16
11906531	1405	2024-12-10 @ 11:00 am	2024-12-13 @ 9:00 am	< 0.3	2024-12-16
11906532	1407 BLR	2024-12-10 @ 11:00 am	2024-12-13 @ 9:00 am	< 0.3	2024-12-16
11906535	1409	2024-12-10 @ 11:00 am	2024-12-13 @ 9:00 am	< 0.3	2024-12-16
11906536	1411	2024-12-10 @ 11:00 am	2024-12-13 @ 9:00 am	< 0.3	2024-12-16
11906517	1502	2024-12-10 @ 11:00 am	2024-12-13 @ 9:00 am	$0.8 \pm 0.3$	2024-12-16
11906518	1502 MAIN GYM	2024-12-10 @ 11:00 am	2024-12-13 @ 9:00 am	$0.6 \pm 0.3$	2024-12-16
11906522	1507 KITCHEN OFFICE	2024-12-10 @ 10:00 am	2024-12-13 @ 9:00 am	$0.6 \pm 0.3$	2024-12-16
11906571	1602	2024-12-10 @ 12:00 pm	2024-12-13 @ 9:00 am	$0.7 \pm 0.3$	2024-12-16
11906572	1602 DUPLICATE	2024-12-10 @ 12:00 pm	2024-12-13 @ 9:00 am	$1.0 \pm 0.3$	2024-12-16
11906570	1604	2024-12-10 @ 12:00 pm	2024-12-13 @ 9:00 am	$1.4 \pm 0.3$	2024-12-16
11906496	1800	2024-12-10 @ 9:00 am	2024-12-13 @ 9:00 am	$4.0 \pm 0.4$	2024-12-16
11906477	1805	2024-12-10 @ 9:00 am	2024-12-13 @ 9:00 am	< 0.3	2024-12-16
11906476	1805A	2024-12-10 @ 9:00 am	2024-12-13 @ 9:00 am	< 0.3	2024-12-16
11906478	1805B	2024-12-10 @ 9:00 am	2024-12-13 @ 9:00 am	< 0.3	2024-12-16
11906479	1805C	2024-12-10 @ 9:00 am	2024-12-13 @ 9:00 am	< 0.3	2024-12-16
11906480	1805F	2024-12-10 @ 9:00 am	2024-12-13 @ 9:00 am	< 0.3	2024-12-16
11906484	1805G	2024-12-10 @ 9:00 am	2024-12-13 @ 11:00 am	< 0.3	2024-12-16
11906488	1811D	2024-12-10 @ 9:00 am	2024-12-13 @ 9:00 am	< 0.3	2024-12-16
11906487	1811E	2024-12-10 @ 9:00 am	2024-12-13 @ 9:00 am	< 0.3	2024-12-16
11906575	2007	2024-12-10 @ 1:00 pm	2024-12-13 @ 10:00 am	< 0.3	2024-12-16
11906581	2105	2024-12-10 @ 1:00 pm	2024-12-13 @ 10:00 am	< 0.3	2024-12-16
11906580	2112	2024-12-10 @ 1:00 pm	2024-12-13 @ 10:00 am	< 0.3	2024-12-16
11906574	2128	2024-12-10 @ 1:00 pm	2024-12-13 @ 10:00 am	< 0.3	2024-12-16
11906573	2129	2024-12-10 @ 12:00 pm	2024-12-13 @ 10:00 am	$0.7 \pm 0.3$	2024-12-16
11906577	2140	2024-12-10 @ 12:00 pm	2024-12-13 @ 10:00 am	$0.6 \pm 0.3$	2024-12-16
11906579	2336	2024-12-10 @ 1:00 pm	2024-12-13 @ 10:00 am	$0.6 \pm 0.3$	2024-12-16
11906576	2502	2024-12-10 @ 1:00 pm	2024-12-13 @ 10:00 am	$1.0 \pm 0.3$	2024-12-16
11906582	2502 DUPLICATE	2024-12-10 @ 1:00 pm	2024-12-13 @ 10:00 am	$1.2 \pm 0.3$	2024-12-16

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11906578	2805	2024-12-10 @ 1:00 pm	2024-12-13 @ 10:00 am	$0.5 \pm 0.3$	2024-12-16
11906585	3320	2024-12-10 @ 1:00 pm	2024-12-13 @ 10:00 am	< 0.3	2024-12-16
11906586	3803	2024-12-10 @ 1:00 pm	2024-12-13 @ 10:00 am	< 0.3	2024-12-16
11906510	DEI OFFICE	2024-12-10 @ 10:00 am	2024-12-13 @ 9:00 am	< 0.3	2024-12-16
11906563	FIELD BLANK	2024-12-10 @ 12:00 pm	2024-12-13 @ 12:00 pm	< 0.3	2024-12-16
11906463	FIELD BLANK	2024-12-10 @ 8:00 am	2024-12-13 @ 12:00 pm	< 0.3	2024-12-16
11906443	FIELD BLANK	2024-12-10 @ 8:00 am	2024-12-13 @ 12:00 pm	< 0.3	2024-12-16
11906527	FIELD BLANK	2024-12-10 @ 10:00 am	2024-12-13 @ 12:00 pm	< 0.3	2024-12-16
11906483	FIELD BLANK	2024-12-10 @ 9:00 am	2024-12-13 @ 12:00 pm	< 0.3	2024-12-16
11906540	FIELD BLANK	2024-12-10 @ 11:00 am	2024-12-13 @ 12:00 pm	< 0.3	2024-12-16
11906583	FIELD BLANK	2024-12-10 @ 1:00 pm	2024-12-13 @ 12:00 pm	< 0.3	2024-12-16
11906502	FIELD BLANK	2024-12-10 @ 10:00 am	2024-12-13 @ 12:00 pm	< 0.3	2024-12-16
11906421	MAIN OFFICE	2024-12-10 @ 7:00 am	2024-12-13 @ 8:00 am	$0.6 \pm 0.3$	2024-12-16
11906584	MEDIA CENTER	2024-12-10 @ 1:00 pm	2024-12-13 @ 10:00 am	< 0.3	2024-12-16
11906539	STAGE	2024-12-10 @ 11:00 am	2024-12-13 @ 10:00 am	< 0.3	2024-12-16
11906534	THEATER	2024-12-10 @ 11:00 am	2024-12-13 @ 10:00 am	$0.5 \pm 0.3$	2024-12-16
11906543	THEATER	2024-12-10 @ 11:00 am	2024-12-13 @ 10:00 am	< 0.3	2024-12-16

December 16, 2024

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

Radon test result report for:
OFFICE
MAIN

11477899 O 2024-12-09 @ 10:00 am 2024-12-12 @ 11:00 am < 0.3 2024-12-16 11907194 O 2024-12-10 @ 10:00 am 2024-12-13 @ 11:00 am < 0.3 2024-12-16	Kit#	Room Id	Started	Ended	pCi/L	Analyzed
11907194 O 2024-12-10 @ 10·00 am 2024-12-13 @ 11·00 am < 0.3 2024-12-16	11477899	O	2024-12-09 @ 10:00 am	2024-12-12 @ 11:00 am	< 0.3	2024-12-16
11707171 0 2021 12 10 C 10.00 um 2024 12 13 G 11.00 um \ \(\text{0.3}\)	11907194	O	2024-12-10 @ 10:00 am	2024-12-13 @ 11:00 am	< 0.3	2024-12-16

December 16, 2024

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

Radon test result report for: TRAVEL MAIN

		Ended	pCi/L	Analyzed
11482789 T	2024-12-09 @ 10:00 am	2024-12-12 @ 11:00 am	< 0.3	2024-12-16
11907193 T	2024-12-10 @ 10:00 am	2024-12-13 @ 11:00 am	< 0.3	2024-12-16

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

CLIENT KCI TECHNOLOGIES	INC	Job Number 7000 1560	)
NOMINAL Conditions: Radon Conc_50.6	pCi/L Rel. Hum	50.6% Temp. 70.8	F
Date Start: 12/14/24 Date Stop: 13/17/29	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			
By 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:_		
	<u> </u>		
S <del>T</del>	·		
! !			

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

December 23, 2024

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

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

MAIN

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



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#### **Radon Test Kit Chain of Custody**

Project Name: MCPS Radon - Testing December 10th - December 13th, 2024

#### Name of Schools:

1. Jackson Road ES

3. Montgomery Knolls ES

2. John F. Kennedy HS

	Date	Initials
Radon Test Kits Deployed	12/10/2024	Buy
Radon Test Kits Collected	12/13/2024	BUM
Radon Test Kits Shipped to Lab*	12/13/2024	Bulai
Radon Test Kits Received by Lab*	12/16/2024	MMM

<sup>\*</sup>All samples sent to Air Check, Inc., 2 Saber Way, Ward Hill, MA 01835

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

#### Radon test result report for:

Kit#	Room Id	Started	Ended	pCi/L	Analyzed
11892412	1116	2025-03-17 @ 12:00 pm	2025-03-20 @ 2:00 pm	< 0.3	2025-03-24
11892450	1116	2025-03-17 @ 12:00 pm	2025-03-20 @ 2:00 pm	$0.8 \pm 0.3$	2025-03-24
11892453	1116	2025-03-17 @ 12:00 pm	2025-03-20 @ 2:00 pm	$0.6 \pm 0.3$	2025-03-24
11892454	1116	2025-03-17 @ 12:00 pm	2025-03-20 @ 2:00 pm	$0.6 \pm 0.3$	2025-03-24
11892451	1800	2025-03-17 @ 12:00 pm	2025-03-20 @ 2:00 pm	$4.0 \pm 0.4$	2025-03-24
11892452	1800	2025-03-17 @ 12:00 pm	2025-03-20 @ 2:00 pm	$4.0 \pm 0.4$	2025-03-24

April 7, 2025

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

Radon test result report for: OFFICE MAIN

Kit#	Room Id	Started	Ended	pCi/L	Analyzed
11892482	OB	2025-03-17 @ 11:00 am	2025-03-21 @ 11:00 am	< 0.3	2025-03-24

April 7, 2025

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

Radon test result report for: TRAVEL MAIN

Kit#	Room Id	Started	Ended	pCi/L	Analyzed
11892483	TB	2025-03-17 @ 11:00 am	2025-03-21 @ 11:00 am	< 0.3	2025-03-24

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

CLIENT KCI TECHNOLOGIE	5, INC	Job Number	20002919
NOMINAL Conditions: Radon Conc 7. Q			
Date Start: 3/143 Date Stop: 3/10/4			
Time Start: O833 Time Stop: O833	Time Start:	Time S	Stop:
Device No.'s: (7) CHAR BAGS	Device No.'s:		
11886401 thru 11886406,			
11886410			
G3 Roght			
Date Start: Date Stop:	Date Start:	Date St	op:
Time Start: Time Stop:	Time Start:		
Device No.'s:	Device No.'s:_		
	_		-
Date Start: Date Stop:	Date Start:	Date Stop	o:
Time Start: Time Stop:	Time Start:	Time Sto	p:
D 1 37 .	Device No.'s:		

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

## \*\* 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	$7.8 \pm 1.1$	2025-03-19
11886405	SK2	2025-03-07 @ 9:00 am	2025-03-10 @ 9:00 am	$7.1 \pm 1.1$	2025-03-19
11886406	SK3	2025-03-07 @ 9:00 am	2025-03-10 @ 9:00 am	$7.7 \pm 1.1$	2025-03-19
11886403	SK4	2025-03-07 @ 9:00 am	2025-03-10 @ 9:00 am	$7.9 \pm 1.2$	2025-03-19
11886404	SK5	2025-03-07 @ 9:00 am	2025-03-10 @ 9:00 am	$7.6 \pm 1.2$	2025-03-19
11886410	SK6	2025-03-07 @ 9:00 am	2025-03-10 @ 9:00 am	$7.0 \pm 1.1$	2025-03-19
11886402	SK7	2025-03-07 @ 9:00 am	2025-03-10 @ 9:00 am	$8.6 \pm 1.2$	2025-03-19



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## **Radon Test Kit Chain of Custody**

Project Name: MCPS Radon – Re-Testing March 17<sup>th</sup> – March 20<sup>th</sup>, 2025

## Name of Schools:

- 1. Georgian Forest ES
- 2. Glen Haven ES
- 3. Jackson Road ES
- 4. John F. Kennedy HS

	Date	Initials
Radon Test Kits Deployed	3/17/2025	BNULL
Radon Test Kits Collected	3/20/2025	Buily
Radon Test Kits Shipped to Lab*	3/20/2025	Bally
Radon Test Kits Received by Lab*	3/24/2025	BAUTE

<sup>\*</sup>All samples sent to Air Check, Inc., 2 Saber Way, Ward Hill, MA 01835



**Instructions:** Submit one testing report form per-facility per-round of testing. 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; ≥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.

			School Year: 23-24				
Facility:	John F.	ohn F. Kennedy High School					
	1901 Ra	1901 Randolph Road					
Address:	Silver Sp	oring, MD 2090	2				
		☐ Scheduled	d Re-Testing (2 or 5-year schedule)				
Bosson for T	octing	□ Clearance	☐ Clearance Testing (Post-Mitigation)				
Reason for T	esting.	☐ System(s) Performance Testing (Post-Mitigation)					
		☐ New Construction/Facility					
		Active Mitigation (2-year regular schedule)					
1	Facility Current Radon Status:		☐ No Active Mitigation (5-year regular schedule)				
Status			☐ Not Previously Tested				
Round of Te	esting:	☐ Initial Testing - <b>or</b> - ☐ Follow-up Testing					
Testing Sta	atus:	No Further     ■     No Further     No Further     ■     No Further     No Further	er Testing Needed <b>-or-</b> Follow-Up Testing Required				
Conclusion (Wh	nen Testir	ng Status is - No	Further Testing Needed)				
IV	litigation	-	Facility Radon Status:				
☐ Not Required or Considered		Considered					
☑ Required (>8.0-pCi/L)		0-pCi/L)	☑ No Change in Status				
Room: 1137G			☐ Active Mitigation (2-year regular schedule)				
☐ Requ	uired (≥4.	0-pCi/L)	☐ No Active Mitigation (5-year regular schedule)				
☐ Consider (≥2.0 & <4.0-pCi/L)							



## **Detector and Deployment**

	□ Passive     □ Continuous		oal Absorption		Alpha Track (ATD) Other			
Detector/Device Type:	U Continuous  Other-Specify here		et ion Chamb	per (EIC) L E	lectronic Integration (EID)			
1,766.								
Detector/Device Name:	Air Chek – Radon	Test Kits						
Manufacturer:	Radon Lab							
Person(s) Deploying certification number	-	t Devices and	I	Or	ganization/Company			
Tyler McCleaf				KCI Technolo	gies, Inc.			
If noncertified individ	uals, the qualified m	easurement pi	rofessional pro	viding oversight	-			
Tyler McCleaf, CSP	– Cert. #111004-R	MP		KCI Technolo	gies, Inc.			
Testing								
Short-Term     ■	Length of		Date of Der	oloyment and	02/20/2024			
☐ Long-Term	Test (days):	3	•	(mm/dd/yy):	02/23/2024			
Does the test po	eriod include week	cends, school	breaks or ho	lidays?	☐ Yes ☒ No			
If " <b>Yes</b> " please ex	plain/detail in the sp	pace below:						
Was HVAC operating under occupied conditions?					⊠ Yes □ No			
If " <b>No</b> " please exp	If "No" please explain/detail in the space below:							
					J.			



### Testing (continued)

	Detectors Deployed			
	Ground-Contact	Upper-Level(s)	Total	
Test Locations <sup>1</sup>	1	0	1	
Duplicates <sup>2</sup>	1	0	1	
Field Blanks <sup>3</sup>	1	0	1	
		Grand Total	3	

- 1 include all detectors deployed (duplicates, field blanks); 1 detector per occupied (or intended to be occupied) ground-contact space  $\leq$  2,000-square feet; large spaces  $\geq$  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 <u>per floor</u> (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.

Spike Samples <sup>1</sup>	6	Trip Blank(s) <sup>2</sup>	1	Office	1
· ·				Blank(s) <sup>3,4</sup>	

- 1 3% of EIC detectors; and 3% from <u>each LOT</u> of CAD and ATD detectors; a <u>maximum of 6-spiked</u> <u>measurements</u> per month for both EIC detectors and <u>each LOT</u> 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, <u>analyzed prior to deployment</u>, for storage locations that have not been evaluated or monitored, for detectors that have been stored for more than 30-day durations.

Spike Sample Lab Results. Measured values are satisfactory, i.e., within ± 25% of the chamber's reference value.	⊠ Yes	□ No
Quality Control measurements comply with QA/QC requirements in the QA plan previously submitted?	⊠ Yes	□ No



## Quality Assurance / Quality Control (QA/QC) (continued)

If "No" to either, please describe any QC measurements that were missing or outside of control tolerances
established in the QAP here:

## Summary of Test Results<sup>1</sup> and Determination of Valid Measurements<sup>2</sup>

	Ground-Contact	Upper-Level(s)	Total
Number of test locations:	1	0	1
Number of locations ≥8.0-pCi/L:	2	0	2
Number of locations ≥4.0 and ≤8-pCi/L:	0	0	0
Number of locations ≥2.7 and ≤4-pCi/L:	0	0	0
Number of locations ≥2.0 and ≤4-pCi/L:	0	0	0
Number of missing required test locations <sup>3</sup> :	0	0	0
Percentage of missing test locations for the facility <sup>4,5</sup> :	0	0	0

- 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 ≤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 ≤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 Results<sup>1</sup> and Determination of Valid Measurements<sup>2</sup> (continued)

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?	Yes     No     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?					
If Yes to both above – then Testing Status – 'No Further Testing Needed' mark 'NA' below and complete Co					
If No to either above, were all results obtained under 4.0-pCi/L and were there sufficient valid measurements obtained? <sup>1,2</sup> If Yes – then Testing Status - 'No Further Testing Needed' complete Conclusion section  If No, then Testing Status - 'Follow-up Testing Required' continue below	☐ Yes ☐ No ☑ 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.

- If 'No Further Testing Needed' complete conclusions section on first page.
- If 'Follow-up Testing Required' complete Follow-up Testing described below and the
  conclusion section on the first page for only the valid measurements/results obtained

### Follow-Up Testing (if required)

#### Required if -

- 1- Not enough valid results were obtained from a facility (table above);
- 2- Any results ≥ 4.0 pCi/L; and
- 3- At the discretion of MCPS IAQ Staff

#### Follow-up Testing:

- 1- If an insufficient number of valid measurements obtained during initial round:
  - o return to facility to test locations that require valid measurements
- 2- Follow-up Testing for valid measurements ≥ 4.0-pCi/L

Initial Result(s)	Procedure	Follow-up Result	Conclusion
≥ 4.0-pCi/L	<ul><li>1- Short-term follow-up test</li><li>2- Average the results of the two tests</li></ul>	≥4.0	Mitigation Required
		<4.0 but >2.0	Consider Mitigation
		<2.0	Not Required or Considered



•	Complete second	School/Facility Rad	don Testing Report Form f	or only Fol	low-up Testing	locations.
---	-----------------	---------------------	---------------------------	-------------	----------------	------------

# Attachment 1: Summary Data Tables

Table 1- Radon Retesting Results  John F. Kennedy High School					
Te	Test Period: 02/20/2024 - 02/23/2024				
Kit Number	Room / Area	Result			
11477834	1137G	12.8			
11477839	1137G	<0.3			
11477987	1137G	12.9			

Table 3 - QC Radon Retesting Results					
,	John F. Kennedy High School				
Tes	t Period: 02	/20/2024 - 02/23/20	24		
Kit Number   QC Type   Room / Area   Result					
11477987	D	1137G	12.9		
11477839	FB	1137G	<0.3		

				sting Results ≥2.	0 pCi/L		
				dy High School	24		
Test Period: 02/20/2024 - 0 ≥2.0 and <2.7 pCi/L ≥2.7 and <4.0 pCi/L ≥4.0				≥4.0 and <8		≥8.0 pC	;i/L
Room / Area	Result	Room / Area	Result	Room / Area	Result	Room / Area	Result
N/A	N/A	N/A	N/A	N/A	N/A	1137G	12.8
						1137G	12.9

John F. Kennedy High School Test Period: 02/20/24 - 02/23/2024  Kit Number Room/Area Result N/A N/A N/A	Table 4 - Summary of Invalid Measurement Locations						
Kit Number Room/Area Result	John F. Kennedy High School						
	Test	Period: 02/20/2	4 - 02/23/2024				
N/A N/A N/A	Kit Number		Result				
	N/A	N/A	N/A				

## Attachment 2: Laboratory Reports

February 28, 2024

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

Radon test result report for: JFK MAIN

Kit#	Room Id	Started	Ended	pCi/L	Analyzed
11477834	1137G	2024-02-20 @ 10:00 an	2024-02-23 @ 9:00 am	$12.8 \pm 1.0$	2024-02-27
11477839	1137G	2024-02-20 @ 10:00 an	2024-02-23 @ 9:00 am	< 0.3	2024-02-27
11477987	1137G	2024-02-20 @ 10:00 am	2024-02-23 @ 9:00 am	$12.9 \pm 1.0$	2024-02-27

February 27, 2024

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

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

MAIN

11482793 OB 2024-02-23 @ 8:00 am 2024-02-26 @ 11:00 am < 0.3	004 00 07
	2024-02-27
11477841 TB 2024-02-23 @ 8:00 am 2024-02-26 @ 11:00 am < 0.3	2024-02-27
	2024-02-27
11482795 TB 2024-02-23 @ 8:00 am 2024-02-26 @ 11:00 am < 0.3	2024-02-27

January 29, 2024

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

Radon test result report for: STORAGE

KCI

Kit#	Room Id	Started	Ended	pCi/L	Analyzed
11635097	Storage	2024-01-07 @ 9:00 am	2024-01-11 @ 9:00 am	< 0.3	2024-01-15

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

CLIENT KCI TECHNOLOG	IES /Ne Job Number 213819
NOMINAL Conditions: Radon Conc_5Q.Q	pCi/L Rel. Hum 38.9 % Temp. 69.1 F
Date Start: <u>Ala3/a</u> 4 Date Stop: <u>alada</u>	Date Start: Date Stop:
Time Start: O812 Time Stop: 0812	Time Start: Time Stop:
Device No.'s: (6) CHAR BA65	Device No.'s:
11478400, 11477842, 11477845,	
11477 852 11477 996, 11477 999	
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 =  $7 \mu R/h$  Elevation = 820 ft

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

Radon test result report for: **FEB SK** 

**MAIN** 

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11477842	NA	2024-02-23 @ 8:00 am	2024-02-26 @ 8:00 am	$50.3 \pm 4.0$	2024-03-01
11477845	NA	2024-02-23 @ 8:00 am	2024-02-26 @ 8:00 am	$55.3 \pm 4.4$	2024-03-01
11477852	NA	2024-02-23 @ 8:00 am	2024-02-26 @ 8:00 am	$49.4 \pm 4.0$	2024-03-01
11477996	NA	2024-02-23 @ 8:00 am	2024-02-26 @ 8:00 am	$49.8 \pm 4.0$	2024-03-01
11477999	NA	2024-02-23 @ 8:00 am	2024-02-26 @ 8:00 am	$55.4 \pm 4.4$	2024-03-01
11478400	NA	2024-02-23 @ 8:00 am	2024-02-26 @ 8:00 am	$47.0 \pm 3.8$	2024-03-01



## 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 February 20<sup>th</sup> – February 23<sup>rd</sup>, 2024

## Name of Schools:

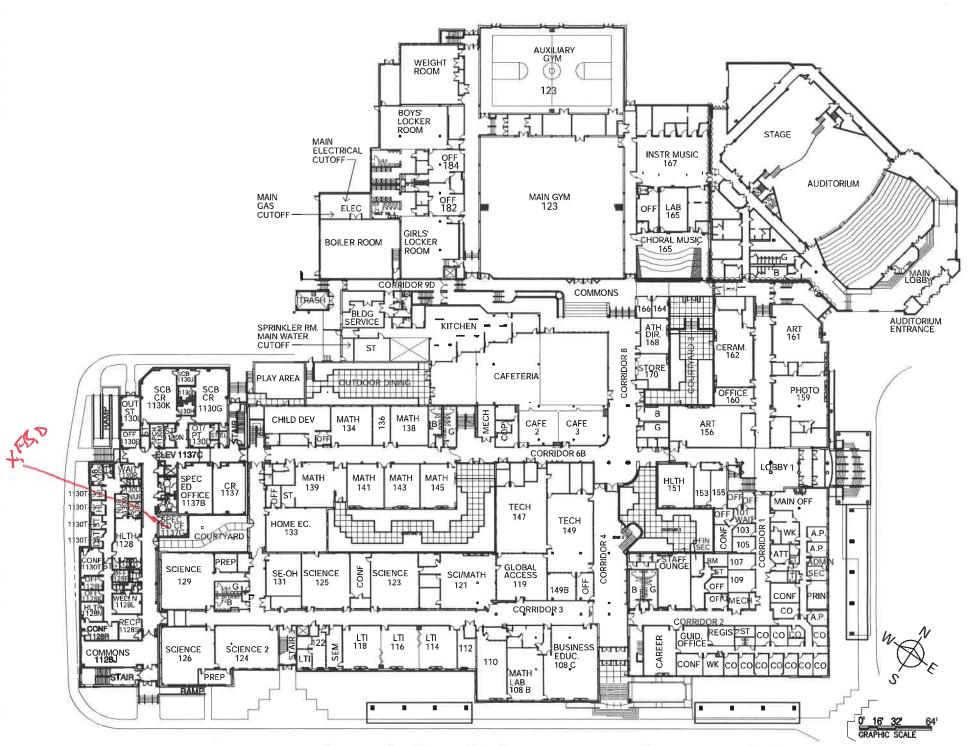
- 1. Cabin Branch ES
- 2. Clarksburg HS
- 3. Fairland ES
- 4. Jackson Road ES

- 5. JFK HS
- 6. John T. Baker MS
- 7. White Oak MS

	Date	Initials
Radon Test Kits Deployed	02/20/2024	Tu
Radon Test Kits Collected	02/23/2024	Ny
Radon Test Kits Shipped to Lab*	02/23/2024	ag
Radon Test Kits Received by Lab*	02/27/2024	an

<sup>\*</sup>All samples sent to Air Check, Inc., 2 Saber Way, Ward Hill, MA 01835

# Attachment 3: Sampling Location Map



**KENNEDY HIGH SCHOOL - FIRST FLOOR PLAN** 



**Instructions:** Submit one testing report form per-facility per-round of testing. 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; ≥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.

	tachment 2 – Laboratory Report(s) tachment 3 – Sampling Location Map(s) – indicating approximate location of samples, duplicates and blanks.					
			School Year: 23-24			
Facility:	John F.	Kennedy High S	School			
	1901 Ra	ndolph Road				
Address:	Silver Sp	oring, MD 2090	2			
☐ Scheduled			Re-Testing (2 or 5-year schedule)			
Reason for Testing: Clearance		□ Clearance	e Testing (Post-Mitigation)			
System(s)		☐ System(s)	Performance Testing (Post-Mitigation)			
		☐ New Cons	struction/Facility			
Facility Curron	+ Dadan	🛮 Active Mi	tigation (2-year regular schedule)			
Facility Currer Status		☐ No Active	Mitigation (5-year regular schedule)			
		☐ Not Previo	iously Tested			
Round of Te	esting:	☑ Initial Tes	sting -or-  Follow-up Testing			
Testing Sta	atus:	☐ No Furthe	er Testing Needed <b>-or-</b>			
Conclusion (W	nen Testir	ng Status is - No	Further Testing Needed)			
N	litigation	-	Facility Radon Status:			
☐ Not Red	quired or	Considered	☐ No Change in Status			
☐ Requ	uired (>8.	0-pCi/L)	☐ Active Mitigation (2-year regular schedule)			
☐ Requ	uired (≥4.	0-pCi/L)	☐ No Active Mitigation (5-year regular schedule)			
☐ Consider (≥2.0 & <4.0-pCi/L)		<4.0-pCi/L)	No Active Willigation (5-year regular scriedule)			



## **Detector and Deployment**

	Nassive Passive		oal Absorption		Alpha Track (	-		
Detector/Device	☐ Continuous		et ion Chamb	oer (EIC) 📙 E	lectronic Inte	egration (EID)		
Type:	Other–Specify here	:						
Detector/Device	Air Chek – Radon	Tost Kits						
Name:	All Cliek – Nadoli	TEST KITS						
Manufacturer:	Radon Lab	Radon Lab						
Person(s) Deploying or Retrieving Test Devices and Organization/Company						Company		
certification number	<u>er</u>							
Evy Rahmey				KCI Technolo	gies, Inc.			
If noncertified individ	uals. the aualified m	easurement p	rofessional pro	 ovidina oversiaht	 t -			
		•	., , , ,					
Tyler McCleaf, CSP – Cert. #111004-RMP KCI Technol					gies, inc.			
Testing								
	Length of	_	Date of Dep	oloyment and	01/2	29/2024		
☐ Long-Term	Test (days):	3	-	, (mm/dd/yy):	02/0	01/2024		
Does the test pe	eriod include week	ends, school	breaks or ho	lidays?	☐ Yes	⊠ No		
If <b>"Yes"</b> please ex	plain/detail in the sp	ace below:						
					Π			
Was HVAC operating under occupied conditions?						□ No		
If " <b>No</b> " please exp	olain/detail in the sp	ace below:						



#### **Testing** (continued)

	Detectors Deployed		
	Ground-Contact Upper-Level(s) Total		
Test Locations <sup>1</sup>	147	20	167
Duplicates <sup>2</sup>	16	3	19
Field Blanks <sup>3</sup>	8	1	9
		Grand Total	195

- 1 include all detectors deployed (duplicates, field blanks); 1 detector per occupied (or intended to be occupied) ground-contact space  $\leq$  2,000-square feet; large spaces  $\geq$  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.

Spike Samples <sup>1</sup>	6	Trip Blank(s) <sup>2</sup>	1	Office Blank(s) <sup>3,4</sup>	1
----------------------------	---	----------------------------	---	-----------------------------------	---

- 1 3% of EIC detectors; and 3% from <u>each LOT</u> of CAD and ATD detectors; a <u>maximum of 6-spiked</u> <u>measurements</u> per month for both EIC detectors and <u>each LOT</u> 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, <u>analyzed prior to deployment</u>, for storage locations that have not been evaluated or monitored, for detectors that have been stored for more than 30-day durations.

Spike Sample Lab Results. Measured values are satisfactory, i.e., within ± 25% of the chamber's reference value.	⊠ Yes	□ No
Quality Control measurements comply with QA/QC requirements in the QA plan previously submitted?	⊠ Yes	□ No



## Quality Assurance / Quality Control (QA/QC) (continued)

If "No" to either, please describe any QC measurements that were missing or outside of control tolerance	es
established in the QAP here:	

## Summary of Test Results<sup>1</sup> and Determination of Valid Measurements<sup>2</sup>

	Ground-Contact	Upper-Level(s)	Total
Number of test locations:	147	20	167
Number of locations ≥8.0-pCi/L:	0	0	0
Number of locations ≥4.0 and ≤8-pCi/L:	1	0	1
Number of locations ≥2.7 and ≤4-pCi/L:	0	0	0
Number of locations ≥2.0 and ≤4-pCi/L:	0	1	1
Number of missing required test locations <sup>3</sup> :	15	4	19
Percentage of missing test locations for the facility <sup>4,5</sup> :	10%	20%	30%

- 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 ≤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 ≤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 Results<sup>1</sup> and Determination of Valid Measurements<sup>2</sup> (continued)

Were test devices deployed in all occupied and intended to be occupied rooms in contact with		Yes
the ground, and, if applicable, 10% of upper floor rooms?	X	No
Were valid measurements obtained in all occupied and intended to be occupied rooms in	$\boxtimes$	Yes
contact with the ground, and, if applicable, 10% of upper floor rooms?		No
If Yes to both above — then Testing Status — 'No Further Testing Needed' mark 'NA' below and comple	te Co	
		section
If No to either above, were all results obtained under 4.0-pCi/L and were there sufficient valid		Yes
measurements obtained? <sup>1,2</sup>	$\boxtimes$	No
If Yes — then Testing Status - 'No Further Testing Needed' complete Conclusion section		NO
<b>If No</b> , then Testing Status - ' <b>Follow-up Testing Required</b> ' continue below		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.

- If 'No Further Testing Needed' complete conclusions section on first page.
- If 'Follow-up Testing Required' complete Follow-up Testing described below and the conclusion section on the first page for only the valid measurements/results obtained

#### Follow-Up Testing (if required)

Required if -

- 1- Not enough valid results were obtained from a facility (table above);
- 2- Any results  $\geq 4.0 pCi/L$ ; and
- 3- At the discretion of MCPS IAQ Staff

## Follow-up Testing:

- 1- If an insufficient number of valid measurements obtained during initial round:
  - o return to facility to test locations that require valid measurements
- 2- Follow-up Testing for valid measurements ≥ 4.0-pCi/L

Initial Result(s)	Procedure	Follow-up Result	Conclusion
		≥4.0	Mitigation Required
≥ 4.0-pCi/L	-pCi/L  1- Short-term follow-up test 2- Average the results of the two tests	<4.0 but >2.0	Consider Mitigation
		<2.0	Not Required or Considered

Complete second School/Facility Radon Testing Report Form for only Follow-up Testing locations.

# Attachment 1: Summary Data Tables

Table 1- Radon Testing Results
John F. Kennedy High School
Test Period: 01/29/2024 - 02/01/2024

Kit Number	Room / Area	Result
11464233	100	< 0.3
11464243	101	< 0.3
11464250	103	< 0.3
11464260	104	1.2
11464258	105	0.9
11464252	106	1.4
11464244	107	2.1
11464261	109	< 0.3
11464277	110	0.8
11464285	110	< 0.3
11464288	110	0.6
11464251	113	0.7
11464289	114	0.9
11464287	116	0.6
11464413	118	< 0.3
11464283	119	0.8
11464284	121	0.7
11464405	122	0.5
11464293	123	1.2
11464401	124	1.3
11464292	125	1.0
11464412	125	0.9
11464429	126	1.2
11464298	129	0.9
11464443	131	1.3
11464447	132	0.6
11464436	133	1.1
11464452	134	< 0.3
11464444	136	< 0.3
11464453	136	< 0.3
11464451	138	1.5
11464440	139	< 0.3
11464448	139	0.8
11464456	139	1.1
11464445	141	0.6
11464446	143	0.5
11464460	144	0.6
11464439	145	0.5
11464271	147	0.6
11464270	149	1.0
11464275	149	0.6

11464268	150	< 0.3
11464273	150	0.5
11464274	151	0.5
11464266	153	< 0.3
11464263	155	< 0.3
11464265	155	< 0.3
11464279	155	0.5
11464490	156	< 0.3
11464497	157	1.7
11464487	159	0.9
11464491	159	1.0
11464498	160	0.6
11464484	161	< 0.3
11464485	162	0.6
11464480	164	0.8
11464482	164	< 0.3
11464483	164	< 0.3
11464475	165	0.5
11464476		
	165	< 0.3
11464467	167	< 0.3
11464450	170	< 0.3
11464442	171	0.6
11464464	171	1.2
11464457	178	N/A
11464457	179	< 0.3
11464465	180	0.7
11464461	182	< 0.3
11464449	184	< 0.3
11464462	184	< 0.3
11464470	184	< 0.3
11464441	186	0.7
11464459	188	0.7
11464471	190	< 0.3
11464472	190	< 0.3
11464305	203	0.7
11464486	215	0.9
11464492	215	0.7
11464493	216	< 0.3
11464382	221	0.7
11464391	226	< 0.3
11464387	231	0.7
11464383	240	1.0
11464389	250	< 0.3
11464394	251	< 0.3
11464380	255	0.5
11464393	265	< 0.3
11464381	269	< 0.3

11464388         275         < 0.3           11464392         280         < 0.3           11464379         285         < 0.3           11464396         285         < 0.3           11464499         285         < 0.3           11464419         1128         < 0.3           11464378         3320         < 0.3           11464234         100A         < 0.3           11464231         100D         0.7           11464223         100B         < 0.3           11464231         100D         0.7           11464226         100F         0.7           11464226         100F         0.7           11464230         100K         0.7           11464230         100K         0.7           11464231         100L         < 0.3           11464236         100I         0.6           11464230         100K         0.7           11464231         100L         < 0.3           11464243         100L         < 0.3           11464241         100N         1.8           11464225         100M         0.7           11464264         101C         < 0.3			
11464379         285         < 0.3	11464388	275	< 0.3
11464396         285         < 0.3			
11464499         285         < 0.3			
11464419         1128         < 0.3			
11464435         1137         < 0.3			
11464378         3320         < 0.3			
11464234         100A         < 0.3		1137	
11464232         100B         < 0.3		3320	
11464231         100D         0.7           11464224         100E         0.7           11464236         100I         0.6           11464230         100K         0.7           11464218         100L         < 0.3	11464234		
11464224         100E         0.7           11464236         100I         0.6           11464230         100K         0.7           11464218         100L         < 0.3	11464232	100B	< 0.3
11464226         100F         0.7           11464230         100K         0.7           11464218         100L         < 0.3		100D	
11464236         100I         0.6           11464230         100K         0.7           11464218         100L         < 0.3	11464224	100E	0.7
11464230         100K         0.7           11464218         100L         < 0.3	11464226		0.7
11464218         100L         < 0.3	11464236	1001	0.6
11464225         100M         0.7           11464238         100N         0.9           11464241         100N         1.8           11464237         101A         < 0.3	11464230	100K	0.7
11464238         100N         0.9           11464241         100N         1.8           11464237         101A         < 0.3	11464218	100L	
11464241         100N         1.8           11464237         101A         < 0.3	11464225	100M	0.7
11464237         101A         < 0.3	11464238	100N	0.9
11464264         101C         < 0.3	11464241	100N	1.8
11464262         101D         < 0.3	11464237	101A	< 0.3
11464259       104A       1.0         11464254       104B       0.8         11464255       104C       0.7         11464253       104D       0.8         11464239       104G       0.7         11464240       104G       0.7         11464249       104G       <0.3	11464264	101C	< 0.3
11464254       104B       0.8         11464255       104C       0.7         11464253       104D       0.8         11464239       104G       0.7         11464240       104G       0.7         11464249       104G       0.7         11464245       104H       0.9         11464247       104J       0.6         11464248       104K       0.8         11464217       104L       < 0.3	11464262	101D	< 0.3
11464255       104C       0.7         11464253       104D       0.8         11464239       104G       0.7         11464240       104G       0.7         11464249       104G       < 0.3	11464259	104A	1.0
11464253       104D       0.8         11464239       104G       0.7         11464240       104G       0.7         11464249       104G       < 0.3	11464254	104B	0.8
11464239       104G       0.7         11464240       104G       0.7         11464249       104G       < 0.3	11464255	104C	0.7
11464240       104G       0.7         11464249       104G       < 0.3	11464253	104D	0.8
11464249       104G       < 0.3	11464239	104G	0.7
11464245       104H       0.9         11464247       104J       0.6         11464248       104K       0.8         11464217       104L       < 0.3	11464240	104G	0.7
11464247         104J         0.6           11464248         104K         0.8           11464217         104L         < 0.3		104G	< 0.3
11464248       104K       0.8         11464217       104L       < 0.3	11464245	104H	0.9
11464217       104L       < 0.3	11464247	104J	0.6
11464286       108A       0.8         11464280       108B       0.6         11464276       108C       0.9         11464295       108C OFFICE       < 0.3	11464248	104K	0.8
11464280       108B       0.6         11464276       108C       0.9         11464295       108C OFFICE       < 0.3	11464217	104L	< 0.3
11464276     108C     0.9       11464295     108C OFFICE     < 0.3	11464286	108A	0.8
11464295       108C OFFICE       < 0.3	11464280		
11464256       111C       < 0.3	11464276	108C	0.9
11464257       111C       < 0.3			
11464408       1123N       < 0.3			
11464422       1128A       0.5         11464427       1128E       < 0.3	11464257		
11464427       1128E       < 0.3			
11464417       1128F       < 0.3			
11464426       1128H       < 0.3			
11464297       1128J       < 0.3			
11464411 1128J 0.7			
11464420 1128J 0.6			
	11464420	1128J	0.6

11464407	1128K	< 0.3
11464409	1128L	0.6
11464423	1128R	< 0.3
11464424	1128R	0.6
11464425	1128R	< 0.3
11464418	1128S	0.6
11464242	112A	1.2
11464235	112B	0.5
11464246	112C	1.8
11464430	1130D	< 0.3
11464433	1130G	< 0.3
11464434	1130J	0.7
11464431	1130K	< 0.3
11464432	1130K	< 0.3
11464402	1130K	< 0.3
11464415	1130P	< 0.3
11464299	1130F	< 0.3
11464299	1130K	< 0.3
11464276	1130S 1130S	< 0.3
11464290	1130T	< 0.3
11464300	1130U	0.6
11464291	1130V	< 0.3
11464428	1130W	0.6
11464403	1130X	0.9
11464281	1130Y	0.5
11464410	1137B	< 0.3
11464416	1137G	5.7
11464437	113A	1.1
11464282	121A	0.6
11464406	122B	0.5
11464414	123 CONFERENCE	1.1
11464404	124A	1.6
11464421	129A	0.9
11464455	132B	0.7
11464437	133A	N/A
11464438	133B	1.4
11464454	139B	< 0.3
11464269	147A	0.7
11464272	149A	0.5
11464267	149E	0.7
11464496	162B	0.7
11464398	163 AUDITORIUM	< 0.3
11464489	163 AUDITORIUM	0.8
11464395	163C	< 0.3
11464399	163D	< 0.3
11464469	165B	< 0.3
11464466	165C	< 0.3

11464478	165E	0.7
11464500	167B	< 0.3
11464477	167E	< 0.3
11464473	167F	< 0.3
11464468	167G	< 0.3
11464481	167H	0.6
11464474	1671	< 0.3
11464479	167J	< 0.3
11464463	170A	< 0.3
11464494	222B	< 0.3
11464386	2246A	0.8
11464385	2246Q	< 0.3
11464384	2446Q	0.5
11464400	291B	< 0.3
11464488	STAGE	< 0.3

Table 2 - Summary Testing Results ≥2.0 pCi/L							
	John F. Kennedy High School						
Test Period: 01/29/2024 - 02/01/2024							
≥2.0 and <2	.7 pCi/L	≥2.7 and <4	.0 pCi/L	≥4.0 and <8	3.0 pCi/l	≥8.0 pC	i/L
Room / Area	Result	Room / Area	Result	Room / Area	Result	Room / Area	Result
107	2.1	N/A	N/A	1137G	5.7	N/A	N/A

Table 3 - QC Radon Testing Results			
John F. Kennedy High School			
- 1 D ' 1 04/00/0004 00/04/0004			

Test Period: 01/29/2024 - 02/01/2024

Kit Number	QC Type	Room / Area	Result
11464288	D	110	0.6
11464285	FB	110	< 0.3
11464292	D	125	1.0
11464453	D	136	< 0.3
11464448	D	139	0.8
11464440	FB	139	< 0.3
11464275	D	149	0.6
11464263	D	155	< 0.3
11464265	FB	155	< 0.3
11464491	D	159	1.0
11464482	D	164	< 0.3
11464483	FB	164	< 0.3
11464476	D	165	< 0.3
11464449	D	184	< 0.3
11464470	FB	184	< 0.3
11464396	D	285	< 0.3
11464499	FB	285	< 0.3
11464241	D	100N	1.8
11464240	D	104G	0.7
11464249	FB	104G	< 0.3
11464256	D	111C	< 0.3
11464411	D	1128J	0.7
11464297	FB	1128J	< 0.3
11464425	D	1128R	< 0.3
11464423	FB	1128R	< 0.3
11464432	D	1130K	< 0.3
11464278	D	1130S	< 0.3
11464385	D	2246Q	< 0.3

Table 4 - Summary of Invalid Measurement Locations				
John F. Kennedy High School				
Test Period: 01/29/24 - 02/01/24				
Kit Number	Room/Area	Result		
11464437	133A	Missing		
11464457	178	Missing		
N/A	110Q	Locked		
N/A	112C1	Locked		
N/A	111D	Locked		
N/A	111G	Locked		
N/A	111F	Locked		
N/A	111A	Locked		
N/A	149B	Locked		
N/A	112	Locked		
N/A	120	Locked		
N/A	176A	Locked		
N/A	168	Locked		
N/A	170B	Locked		
N/A	166	Locked		
N/A	163E	Locked		
N/A	163G	Locked		

# Attachment 2: Laboratory Reports

### Radon test result report for:

### **MAIN**

Kit#	Room Id	Started	Ended	pCi/L	Analyzed
11464490	156	2024-01-29 @ 2:00 pm	2024-02-01 @ 11:00 am	< 0.3	2024-02-05
11464497	157	2024-01-29 @ 3:00 pm	2024-02-01 @ 2:00 pm	$1.7 \pm 0.4$	2024-02-05
11464491	159	2024-01-29 @ 2:00 pm	2024-02-01 @ 2:00 pm	$1.0 \pm 0.3$	2024-02-05
11464487	159	2024-01-29 @ 2:00 pm	2024-02-01 @ 11:00 am	$0.9 \pm 0.3$	2024-02-05
11464498	160	2024-01-29 @ 2:00 pm	2024-02-01 @ 11:00 am	$0.6 \pm 0.3$	2024-02-05
11464484	161	2024-01-29 @ 2:00 pm	2024-02-01 @ 11:00 am	< 0.3	2024-02-05
11464485	162	2024-01-29 @ 2:00 pm	2024-02-01 @ 11:00 am	$0.6 \pm 0.3$	2024-02-05
11464496	162B	2024-01-29 @ 2:00 pm	2024-02-01 @ 11:00 am	$0.7 \pm 0.3$	2024-02-05
11464398	163 AUDITORIUM	2024-01-29 @ 3:00 pm	2024-02-01 @ 11:00 am	< 0.3	2024-02-05
11464489	163 AUDITORIUM	2024-01-29 @ 3:00 pm	2024-02-01 @ 11:00 am	$0.8 \pm 0.3$	2024-02-05
11464395	163C	2024-01-29 @ 3:00 pm	2024-02-01 @ 2:00 pm	< 0.3	2024-02-05
11464399	163D	2024-01-29 @ 3:00 pm	2024-02-01 @ 2:00 pm	< 0.3	2024-02-05
11464483	164	2024-01-29 @ 2:00 pm	2024-02-01 @ 2:00 pm	< 0.3	2024-02-05
11464480	164	2024-01-29 @ 2:00 pm	2024-02-01 @ 1:00 pm	$0.8 \pm 0.3$	2024-02-05
11464482	164	2024-01-29 @ 2:00 pm	2024-02-01 @ 1:00 pm	< 0.3	2024-02-05
11464475	165	2024-01-29 @ 2:00 pm	2024-02-01 @ 1:00 pm	$0.5 \pm 0.3$	2024-02-05
11464476	165	2024-01-29 @ 2:00 pm	2024-02-01 @ 1:00 pm	< 0.3	2024-02-05
11464469	165B	2024-01-29 @ 2:00 pm	2024-02-01 @ 1:00 pm	< 0.3	2024-02-05
11464466	165C	2024-01-29 @ 2:00 pm	2024-02-01 @ 1:00 pm	< 0.3	2024-02-05
11464478	165E	2024-01-29 @ 2:00 pm	2024-02-01 @ 1:00 pm	$0.7 \pm 0.3$	2024-02-05
11464467	167	2024-01-29 @ 2:00 pm	2024-02-01 @ 1:00 pm	< 0.3	2024-02-05
11464500	167B	2024-01-29 @ 2:00 pm	2024-02-01 @ 11:00 am	< 0.3	2024-02-05
11464477	167E	2024-01-29 @ 2:00 pm	2024-02-01 @ 1:00 pm	< 0.3	2024-02-05
11464473	167F	2024-01-29 @ 2:00 pm	2024-02-01 @ 1:00 pm	< 0.3	2024-02-05
11464468	167G	2024-01-29 @ 2:00 pm	2024-02-01 @ 1:00 pm	< 0.3	2024-02-05
11464481	167H	2024-01-29 @ 2:00 pm	2024-02-01 @ 1:00 pm	$0.6 \pm 0.3$	2024-02-05
11464474	167I	2024-01-29 @ 2:00 pm	2024-02-01 @ 1:00 pm	< 0.3	2024-02-05
11464479	167J	2024-01-29 @ 2:00 pm	2024-02-01 @ 1:00 pm	< 0.3	2024-02-05
11464457	179	2024-01-29 @ 1:00 pm	2024-02-01 @ 1:00 pm	< 0.3	2024-02-05
11464470	184	2024-01-29 @ 1:00 pm	2024-02-01 @ 1:00 pm	< 0.3	2024-02-05
11464449	184	2024-01-29 @ 1:00 pm	2024-02-01 @ 1:00 pm	< 0.3	2024-02-05
11464441	186	2024-01-29 @ 1:00 pm	2024-02-01 @ 1:00 pm	$0.7 \pm 0.3$	2024-02-05
11464459	188	2024-01-29 @ 1:00 pm	2024-02-01 @ 2:00 pm	$0.7 \pm 0.3$	2024-02-05
11464472	190	2024-01-29 @ 1:00 pm	2024-02-01 @ 1:00 pm	< 0.3	2024-02-05
11464471	190	2024-01-29 @ 1:00 pm	2024-02-01 @ 1:00 pm	< 0.3	2024-02-05
11464305	203	2024-01-29 @ 4:00 pm	2024-02-01 @ 1:00 pm	$0.7 \pm 0.3$	2024-02-05
11464492	215	2024-01-29 @ 4:00 pm	2024-02-01 @ 1:00 pm	$0.7 \pm 0.3$	2024-02-05

### Radon test result report for:

### **MAIN**

Kit#	Room Id	Started	Ended	pCi/L	Analyzed
11464486	215	2024-01-29 @ 4:00 pm	2024-02-01 @ 1:00 pm	$0.9 \pm 0.4$	2024-02-05
11464493	216	2024-01-29 @ 4:00 pm	2024-02-01 @ 1:00 pm	< 0.3	2024-02-05
11464382	221	2024-01-29 @ 4:00 pm	2024-02-01 @ 1:00 pm	$0.7 \pm 0.3$	2024-02-05
11464494	222B	2024-01-29 @ 4:00 pm	2024-02-01 @ 1:00 pm	< 0.3	2024-02-05
11464386	2246A	2024-01-29 @ 4:00 pm	2024-02-01 @ 1:00 pm	$0.8 \pm 0.3$	2024-02-05
11464385	2246Q	2024-01-29 @ 4:00 pm	2024-02-01 @ 1:00 pm	< 0.3	2024-02-05
11464391	226	2024-01-29 @ 5:00 pm	2024-02-01 @ 1:00 pm	< 0.3	2024-02-05
11464387	231	2024-01-29 @ 4:00 pm	2024-02-01 @ 1:00 pm	$0.7 \pm 0.3$	2024-02-05
11464383	240	2024-01-29 @ 4:00 pm	2024-02-01 @ 1:00 pm	$1.0 \pm 0.3$	2024-02-05
11464384	2446Q	2024-01-29 @ 4:00 pm	2024-02-01 @ 1:00 pm	$0.5 \pm 0.3$	2024-02-05
11464389	250	2024-01-29 @ 4:00 pm	2024-02-01 @ 1:00 pm	< 0.3	2024-02-05
11464394	251	2024-01-29 @ 4:00 pm	2024-02-01 @ 1:00 pm	< 0.3	2024-02-05
11464380	255	2024-01-29 @ 4:00 pm	2024-02-01 @ 1:00 pm	$0.5 \pm 0.3$	2024-02-05
11464393	265	2024-01-29 @ 4:00 pm	2024-02-01 @ 1:00 pm	< 0.3	2024-02-05
11464381	269	2024-01-29 @ 4:00 pm	2024-02-01 @ 1:00 pm	< 0.3	2024-02-05
11464388	275	2024-01-29 @ 4:00 pm	2024-02-01 @ 1:00 pm	< 0.3	2024-02-05
11464392	280	2024-01-29 @ 4:00 pm	2024-02-01 @ 1:00 pm	< 0.3	2024-02-05
11464379	285	2024-01-29 @ 3:00 pm	2024-02-01 @ 1:00 pm	< 0.3	2024-02-05
11464396	285	2024-01-29 @ 3:00 pm	2024-02-01 @ 1:00 pm	< 0.3	2024-02-05
11464499	285	2024-01-29 @ 3:00 pm	2024-02-01 @ 1:00 pm	< 0.3	2024-02-05
11464400	291B	2024-01-29 @ 3:00 pm	2024-02-01 @ 1:00 pm	< 0.3	2024-02-05
11464378	3320	2024-01-29 @ 5:00 pm	2024-02-01 @ 1:00 pm	< 0.3	2024-02-05
11464488	STAGE	2024-01-29 @ 3:00 pm	2024-02-01 @ 11:00 am	< 0.3	2024-02-05

Kit#	Room Id	Started	Ended	pCi/L	Analyzed
11464233	100	2024-01-29 @ 7:00 am	2024-02-01 @ 10:00 am	< 0.3	2024-02-05
11464234	100A	2024-01-29 @ 7:00 am	2024-02-01 @ 10:00 am	< 0.3	2024-02-05
11464232	100B	2024-01-29 @ 7:00 am	2024-02-01 @ 10:00 am	< 0.3	2024-02-05
11464231	100D	2024-01-29 @ 7:00 am	2024-02-01 @ 10:00 am	$0.7 \pm 0.3$	2024-02-05
11464224	100E	2024-01-29 @ 7:00 am	2024-02-01 @ 10:00 am	$0.7 \pm 0.3$	2024-02-05
11464226	100F	2024-01-29 @ 7:00 am	2024-02-01 @ 10:00 am	$0.7 \pm 0.3$	2024-02-05
11464236	100I	2024-01-29 @ 8:00 am	2024-02-01 @ 10:00 am	$0.6 \pm 0.3$	2024-02-05
11464230	100K	2024-01-29 @ 8:00 am	2024-02-01 @ 10:00 am	$0.7 \pm 0.3$	2024-02-05
11464218	100L	2024-01-29 @ 8:00 am	2024-02-01 @ 10:00 am	< 0.3	2024-02-05
11464225	100M	2024-01-29 @ 8:00 am	2024-02-01 @ 10:00 am	$0.7 \pm 0.3$	2024-02-05
11464241	100N	2024-01-29 @ 8:00 am	2024-02-01 @ 10:00 am	$1.8 \pm 0.4$	2024-02-05
11464238	100N	2024-01-29 @ 8:00 am	2024-02-01 @ 10:00 am	$0.9 \pm 0.3$	2024-02-05
11464243	101	2024-01-29 @ 9:00 am	2024-02-01 @ 2:00 pm	< 0.3	2024-02-05
11464237	101A	2024-01-29 @ 9:00 am	2024-02-01 @ 2:00 pm	< 0.3	2024-02-05
11464264	101C	2024-01-29 @ 9:00 am	2024-02-01 @ 2:00 pm	< 0.3	2024-02-05
11464262	101D	2024-01-29 @ 9:00 am	2024-02-01 @ 2:00 pm	< 0.3	2024-02-05
11464250	103	2024-01-29 @ 9:00 am	2024-02-01 @ 2:00 pm	< 0.3	2024-02-05
11464260	104	2024-01-29 @ 8:00 am	2024-02-01 @ 10:00 am	$1.2 \pm 0.3$	2024-02-05
11464259	104A	2024-01-29 @ 8:00 am	2024-02-01 @ 10:00 am	$1.0 \pm 0.3$	2024-02-05
11464254	104B	2024-01-29 @ 8:00 am	2024-02-01 @ 10:00 am	$0.8 \pm 0.3$	2024-02-05
11464255	104C	2024-01-29 @ 8:00 am	2024-02-01 @ 10:00 am	$0.7 \pm 0.3$	2024-02-05
11464253	104D	2024-01-29 @ 8:00 am	2024-02-01 @ 10:00 am	$0.8 \pm 0.3$	2024-02-05
11464249	104G	2024-01-29 @ 8:00 am	2024-02-01 @ 2:00 pm	< 0.3	2024-02-05
11464239	104G	2024-01-29 @ 8:00 am	2024-02-01 @ 10:00 am	$0.7 \pm 0.3$	2024-02-05
11464240	104G	2024-01-29 @ 8:00 am	2024-02-01 @ 10:00 am	$0.7 \pm 0.3$	2024-02-05
11464245	104H	2024-01-29 @ 8:00 am	2024-02-01 @ 10:00 am	$0.9 \pm 0.4$	2024-02-05
11464247	104J	2024-01-29 @ 8:00 am	2024-02-01 @ 10:00 am	$0.6 \pm 0.3$	2024-02-05
11464248	104K	2024-01-29 @ 8:00 am	2024-02-01 @ 10:00 am	$0.8 \pm 0.3$	2024-02-05
11464217	104L	2024-01-29 @ 8:00 am	2024-02-01 @ 10:00 am	< 0.3	2024-02-05
11464258	105	2024-01-29 @ 9:00 am	2024-02-01 @ 2:00 pm	$0.9 \pm 0.3$	2024-02-05
11464252	106	2024-01-29 @ 8:00 am	2024-02-01 @ 10:00 am	$1.4 \pm 0.4$	2024-02-05
11464244	107	2024-01-29 @ 9:00 am	2024-02-01 @ 2:00 pm	$2.1 \pm 0.4$	2024-02-05
11464286	108A	2024-01-29 @ 10:00 am	2024-02-01 @ 11:00 am	$0.8 \pm 0.3$	2024-02-05
11464280	108B	2024-01-29 @ 10:00 am	2024-02-01 @ 11:00 am	$0.6 \pm 0.3$	2024-02-05
11464276	108C	2024-01-29 @ 9:00 am	2024-02-01 @ 11:00 am	$0.9 \pm 0.3$	2024-02-05
11464295	108C OFFICE	2024-01-29 @ 10:00 am	2024-02-01 @ 11:00 am	< 0.3	2024-02-05
11464261	109	2024-01-29 @ 8:00 am	2024-02-01 @ 2:00 pm	< 0.3	2024-02-05

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11464285	110	2024-01-29 @ 10:00 am	2024-02-01 @ 11:00 am	< 0.3	2024-02-05
11464288	110	2024-01-29 @ 10:00 am	2024-02-01 @ 11:00 am	$0.6 \pm 0.3$	2024-02-05
11464277	110	2024-01-29 @ 10:00 am	2024-02-01 @ 11:00 am	$0.8 \pm 0.3$	2024-02-05
11464257	111C	2024-01-29 @ 8:00 am	2024-02-01 @ 2:00 pm	< 0.3	2024-02-05
11464256	111C	2024-01-29 @ 8:00 am	2024-02-01 @ 2:00 pm	< 0.3	2024-02-05
11464408	1123N	2024-01-29 @ 11:00 am	2024-02-01 @ 11:00 am	< 0.3	2024-02-05
11464419	1128	2024-01-29 @ 11:00 am	2024-02-01 @ 10:00 am	< 0.3	2024-02-05
11464422	1128A	2024-01-29 @ 11:00 am	2024-02-01 @ 10:00 am	$0.5 \pm 0.3$	2024-02-05
11464427	1128E	2024-01-29 @ 11:00 am	2024-02-01 @ 11:00 am	< 0.3	2024-02-05
11464417	1128F	2024-01-29 @ 12:00 pm	2024-02-01 @ 11:00 am	< 0.3	2024-02-05
11464426	1128H	2024-01-29 @ 11:00 am	2024-02-01 @ 11:00 am	< 0.3	2024-02-05
11464411	1128J	2024-01-29 @ 11:00 am	2024-02-01 @ 11:00 am	$0.7 \pm 0.3$	2024-02-05
11464297	1128J	2024-01-29 @ 11:00 am	2024-02-01 @ 11:00 am	< 0.3	2024-02-05
11464420	1128J	2024-01-29 @ 11:00 am	2024-02-01 @ 11:00 am	$0.6 \pm 0.3$	2024-02-05
11464407	1128K	2024-01-29 @ 11:00 am	2024-02-01 @ 11:00 am	< 0.3	2024-02-05
11464409	1128L	2024-01-29 @ 11:00 am	2024-02-01 @ 11:00 am	$0.6 \pm 0.3$	2024-02-05
11464423	1128R	2024-01-29 @ 12:00 pm	2024-02-01 @ 11:00 am	< 0.3	2024-02-05
11464425	1128R	2024-01-29 @ 12:00 pm	2024-02-01 @ 11:00 am	< 0.3	2024-02-05
11464424	1128R	2024-01-29 @ 12:00 pm	2024-02-01 @ 11:00 am	$0.6 \pm 0.3$	2024-02-05
11464418	1128S	2024-01-29 @ 12:00 pm	2024-02-01 @ 11:00 am	$0.6 \pm 0.3$	2024-02-05
11464242	112A	2024-01-29 @ 8:00 am	2024-02-01 @ 10:00 am	$1.2 \pm 0.3$	2024-02-05
11464235	112B	2024-01-29 @ 8:00 am	2024-02-01 @ 10:00 am	$0.5 \pm 0.3$	2024-02-05
11464246	112C	2024-01-29 @ 8:00 am	2024-02-01 @ 10:00 am	$1.8 \pm 0.4$	2024-02-05
11464251	113	2024-01-29 @ 8:00 am	2024-02-01 @ 10:00 am	$0.7 \pm 0.3$	2024-02-05
11464430	1130D	2024-01-29 @ 12:00 pm	2024-02-01 @ 10:00 am	< 0.3	2024-02-05
11464433	1130G	2024-01-29 @ 12:00 pm	2024-02-01 @ 10:00 am	< 0.3	2024-02-05
11464434	1130J	2024-01-29 @ 12:00 pm	2024-02-01 @ 10:00 am	$0.7 \pm 0.3$	2024-02-05
11464432	1130K	2024-01-29 @ 12:00 pm	2024-02-01 @ 10:00 am	< 0.3	2024-02-05
11464431	1130K	2024-01-29 @ 12:00 pm	2024-02-01 @ 10:00 am	< 0.3	2024-02-05
11464402	1130M	2024-01-29 @ 12:00 pm	2024-02-01 @ 10:00 am	< 0.3	2024-02-05
11464415	1130P	2024-01-29 @ 12:00 pm	2024-02-01 @ 10:00 am	< 0.3	2024-02-05
11464299	1130R	2024-01-29 @ 11:00 am	2024-02-01 @ 10:00 am	< 0.3	2024-02-05
11464278	1130S	2024-01-29 @ 11:00 am	2024-02-01 @ 10:00 am	< 0.3	2024-02-05
11464296	1130S	2024-01-29 @ 11:00 am	2024-02-01 @ 10:00 am	< 0.3	2024-02-05
11464290	1130T	2024-01-29 @ 11:00 am	2024-02-01 @ 10:00 am	< 0.3	2024-02-05
11464300	1130U	2024-01-29 @ 11:00 am	2024-02-01 @ 11:00 am	$0.6 \pm 0.3$	2024-02-05
11464291	1130V	2024-01-29 @ 11:00 am	2024-02-01 @ 10:00 am	< 0.3	2024-02-05

11464428 11464403 11464281 11464435 11464410 11464416	1130W 1130X 1130Y 1137	2024-01-29 @ 11:00 am 2024-01-29 @ 11:00 am 2024-01-29 @ 11:00 am	2024-02-01 @ 10:00 am 2024-02-01 @ 10:00 am	$0.6 \pm 0.3$ $0.9 \pm 0.3$	2024-02-05
11464281 11464435 11464410	1130Y 1137		2024-02-01 @ 10:00 am	$0.0\pm0.2$	
11464435 11464410	1137	2024-01-29 @ 11:00 am		0.9 ± 0.3	2024-02-05
11464410			2024-02-01 @ 10:00 am	$0.5 \pm 0.3$	2024-02-05
		2024-01-29 @ 12:00 pm	2024-02-01 @ 10:00 am	< 0.3	2024-02-05
11464416	1137B	2024-01-29 @ 12:00 pm	2024-02-01 @ 10:00 am	< 0.3	2024-02-05
	1137G	2024-01-29 @ 12:00 pm	2024-02-01 @ 10:00 am	$5.7 \pm 0.5$	2024-02-05
11464437	113A	2024-01-29 @ 12:00 pm	2024-02-01 @ 10:00 am	$1.1 \pm 0.4$	2024-02-05
11464289	114	2024-01-29 @ 10:00 am	2024-02-01 @ 11:00 am	$0.9 \pm 0.3$	2024-02-05
11464287	116	2024-01-29 @ 10:00 am	2024-02-01 @ 11:00 am	$0.6 \pm 0.3$	2024-02-05
11464413	118	2024-01-29 @ 10:00 am	2024-02-01 @ 11:00 am	< 0.3	2024-02-05
11464283	119	2024-01-29 @ 10:00 am	2024-02-01 @ 11:00 am	$0.8 \pm 0.3$	2024-02-05
11464284	121	2024-01-29 @ 10:00 am	2024-02-01 @ 11:00 am	$0.7 \pm 0.3$	2024-02-05
11464282	121A	2024-01-29 @ 10:00 am	2024-02-01 @ 11:00 am	$0.6 \pm 0.3$	2024-02-05
11464405	122	2024-01-29 @ 11:00 am	2024-02-01 @ 11:00 am	$0.5 \pm 0.3$	2024-02-05
11464406	122B	2024-01-29 @ 11:00 am	2024-02-01 @ 11:00 am	$0.5 \pm 0.3$	2024-02-05
11464293	123	2024-01-29 @ 10:00 am	2024-02-01 @ 11:00 am	$1.2 \pm 0.3$	2024-02-05
11464414 12	23 CONFERENCE	2024-01-29 @ 10:00 am	2024-02-01 @ 11:00 am	$1.1 \pm 0.4$	2024-02-05
11464401	124	2024-01-29 @ 11:00 am	2024-02-01 @ 11:00 am	$1.3 \pm 0.4$	2024-02-05
11464404	124A	2024-01-29 @ 11:00 am	2024-02-01 @ 11:00 am	$1.6 \pm 0.4$	2024-02-05
11464412	125	2024-01-29 @ 10:00 am	2024-02-01 @ 11:00 am	$0.9 \pm 0.3$	2024-02-05
11464292	125	2024-01-29 @ 10:00 am	2024-02-01 @ 11:00 am	$1.0 \pm 0.3$	2024-02-05
11464429	126	2024-01-29 @ 11:00 am	2024-02-01 @ 11:00 am	$1.2 \pm 0.3$	2024-02-05
11464298	129	2024-01-29 @ 11:00 am	2024-02-01 @ 11:00 am	$0.9 \pm 0.3$	2024-02-05
11464421	129A	2024-01-29 @ 11:00 am	2024-02-01 @ 2:00 pm	$0.9 \pm 0.3$	2024-02-05
11464443	131	2024-01-29 @ 12:00 pm	2024-02-01 @ 10:00 am	$1.3 \pm 0.4$	2024-02-05
11464447	132	2024-01-29 @ 12:00 pm	2024-02-01 @ 10:00 am	$0.6 \pm 0.3$	2024-02-05
11464455	132B	2024-01-29 @ 12:00 pm	2024-02-01 @ 10:00 am	$0.7 \pm 0.3$	2024-02-05
11464436	133	2024-01-29 @ 12:00 pm	2024-02-01 @ 10:00 am	$1.1 \pm 0.4$	2024-02-05
11464438	133B	2024-01-29 @ 12:00 pm	2024-02-01 @ 10:00 am	$1.4 \pm 0.4$	2024-02-05
11464452	134	2024-01-29 @ 12:00 pm	2024-02-01 @ 10:00 am	< 0.3	2024-02-05
11464453	136	2024-01-29 @ 1:00 pm	2024-02-01 @ 10:00 am	< 0.3	2024-02-05
11464444	136	2024-01-29 @ 1:00 pm	2024-02-01 @ 10:00 am	< 0.3	2024-02-05
11464451	138	2024-01-29 @ 1:00 pm	2024-02-01 @ 10:00 am	$1.5 \pm 0.4$	2024-02-05
11464448	139	2024-01-29 @ 12:00 pm	2024-02-01 @ 10:00 am	$0.8 \pm 0.3$	2024-02-05
11464456	139	2024-01-29 @ 12:00 pm	2024-02-01 @ 10:00 am	$1.1 \pm 0.3$	2024-02-05
11464440	139	2024-01-29 @ 12:00 pm	2024-02-01 @ 10:00 am	< 0.3	2024-02-05
11464454	139B	2024-01-29 @ 1:00 pm	2024-02-01 @ 10:00 am	< 0.3	2024-02-05

Kit#	Room Id	Started	Ended	pCi/L	Analyzed
11464445	141	2024-01-29 @ 1:00 pm	2024-02-01 @ 10:00 am	$0.6 \pm 0.3$	2024-02-05
11464446	143	2024-01-29 @ 1:00 pm	2024-02-01 @ 10:00 am	$0.5 \pm 0.3$	2024-02-05
11464460	144	2024-01-29 @ 1:00 pm	2024-02-01 @ 1:00 pm	$0.6 \pm 0.3$	2024-02-05
11464439	145	2024-01-29 @ 1:00 pm	2024-02-01 @ 10:00 am	$0.5 \pm 0.3$	2024-02-05
11464271	147	2024-01-29 @ 9:00 am	2024-02-01 @ 2:00 pm	$0.6 \pm 0.3$	2024-02-05
11464269	147A	2024-01-29 @ 9:00 am	2024-02-01 @ 2:00 pm	$0.7 \pm 0.3$	2024-02-05
11464275	149	2024-01-29 @ 9:00 am	2024-02-01 @ 10:00 am	$0.6 \pm 0.3$	2024-02-05
11464270	149	2024-01-29 @ 9:00 am	2024-02-01 @ 10:00 am	$1.0 \pm 0.3$	2024-02-05
11464272	149A	2024-01-29 @ 9:00 am	2024-02-01 @ 10:00 am	$0.5 \pm 0.3$	2024-02-05
11464267	149E	2024-01-29 @ 9:00 am	2024-02-01 @ 10:00 am	$0.7 \pm 0.3$	2024-02-05
11464273	150	2024-01-29 @ 9:00 am	2024-02-01 @ 10:00 am	$0.5 \pm 0.3$	2024-02-05
11464268	150	2024-01-29 @ 9:00 am	2024-02-01 @ 10:00 am	< 0.3	2024-02-05
11464274	151	2024-01-29 @ 9:00 am	2024-02-01 @ 11:00 am	$0.5 \pm 0.3$	2024-02-05
11464266	153	2024-01-29 @ 9:00 am	2024-02-01 @ 11:00 am	< 0.3	2024-02-05
11464265	155	2024-01-29 @ 9:00 am	2024-02-01 @ 11:00 am	< 0.3	2024-02-05
11464263	155	2024-01-29 @ 9:00 am	2024-02-01 @ 11:00 am	< 0.3	2024-02-05
11464279	155	2024-01-29 @ 9:00 am	2024-02-01 @ 11:00 am	$0.5 \pm 0.3$	2024-02-05
11464450	170	2024-01-29 @ 1:00 pm	2024-02-01 @ 1:00 pm	< 0.3	2024-02-05
11464463	170A	2024-01-29 @ 1:00 pm	2024-02-01 @ 1:00 pm	< 0.3	2024-02-05
11464464	171	2024-01-29 @ 1:00 pm	2024-02-01 @ 1:00 pm	$1.2 \pm 0.3$	2024-02-05
11464442	171	2024-01-29 @ 1:00 pm	2024-02-01 @ 1:00 pm	$0.6 \pm 0.3$	2024-02-05
11464465	180	2024-01-29 @ 1:00 pm	2024-02-01 @ 1:00 pm	$0.7 \pm 0.3$	2024-02-05
11464461	182	2024-01-29 @ 1:00 pm	2024-02-01 @ 1:00 pm	< 0.3	2024-02-05
11464462	184	2024-01-29 @ 1:00 pm	2024-02-01 @ 1:00 pm	< 0.3	2024-02-05

February 7, 2024

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

Radon test result report for: OFFICE BLANK MAIN

Kit#	Room Id	Started	Ended	pCi/L	Analyzed
11285577	OB	2024-01-29 @ 10:00 am	2024-02-01 @ 11:00 am	< 0.3	2024-02-05

February 7, 2024

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

Radon test result report for: TRAVEL BLANK MAIN

Kit#	Room Id	Started	Ended	pCi/L	Analyzed
11633585	TB	2024-01-29 @ 10:00 am	2024-02-01 @ 11:00 am	< 0.3	2024-02-05

January 29, 2024

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

Radon test result report for: STORAGE

**KCI** 

Kit#	Room Id	Started	Ended	pCi/L	Analyzed
11635097	Storage	2024-01-07 @ 9:00 am	2024-01-11 @ 9:00 am	< 0.3	2024-01-15

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

CLIENT <u>KCI TECHNOLOGIE</u>	5 /NC Job Number 213327
NOMINAL Conditions: Radon Conc 49.5	pCi/L Rel. Hum <u>34.7</u> % Temp. <u>69.8</u> F
Date Start: 1/19/24 Date Stop: 1/23/20	Date Start: Date Stop:
Time Start: 2831 Time Stop: 0831	Time Start: Time Stop:
Device No.'s: (6) CHAR BAGS.	Device No.'s:
11284003, 11284005, 11284006	
11294007, 11284008, 11284013	
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 =  $7 \mu R/h$  Elevation = 820 ft

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

# Radon test result report for: BOWSER MORNER MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11284003	SK	2024-01-19 @ 9:00 am	2024-01-22 @ 9:00 am	$47.0 \pm 3.8$	2024-01-29
11284005	SK	2024-01-19 @ 9:00 am	2024-01-22 @ 9:00 am	$43.4 \pm 3.5$	2024-01-29
11284006	SK	2024-01-19 @ 9:00 am	2024-01-22 @ 9:00 am	$42.1 \pm 3.4$	2024-01-29
11284007	SK	2024-01-19 @ 9:00 am	2024-01-22 @ 9:00 am	$46.4 \pm 3.7$	2024-01-29
11284008	SK	2024-01-19 @ 9:00 am	2024-01-22 @ 9:00 am	$46.2 \pm 3.7$	2024-01-29
11284013	SK	2024-01-19 @ 9:00 am	2024-01-22 @ 9:00 am	$45.6 \pm 3.6$	2024-01-29



### 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 January 29th - February 1st 2024

### Name of Schools:

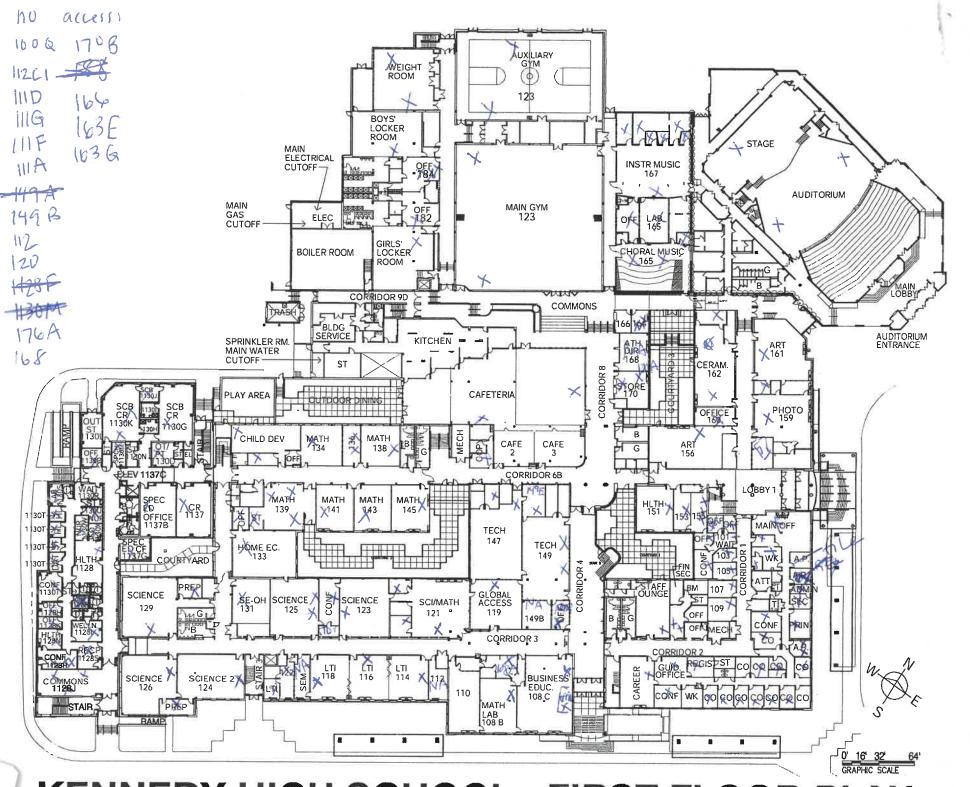
- 1. John F. Kennedy HS
- 2. Francis Scott Key MS
- 3. Montgomery Village MS

- 4. Oak View ES
- 5. North Chevy Chase ES
- 6. Cabin Branch ES

	Date	Initials
Radon Test Kits Deployed	01/29/2024	M
Radon Test Kits Collected	02/01/2024	tus
Radon Test Kits Shipped to Lab*	02/01/2024	an
Radon Test Kits Received by Lab*	02/05/2024	M

<sup>\*</sup>All samples sent to Air Check, Inc., 2 Saber Way, Ward Hill, MA 01835

# Attachment 3: Sampling Location Map

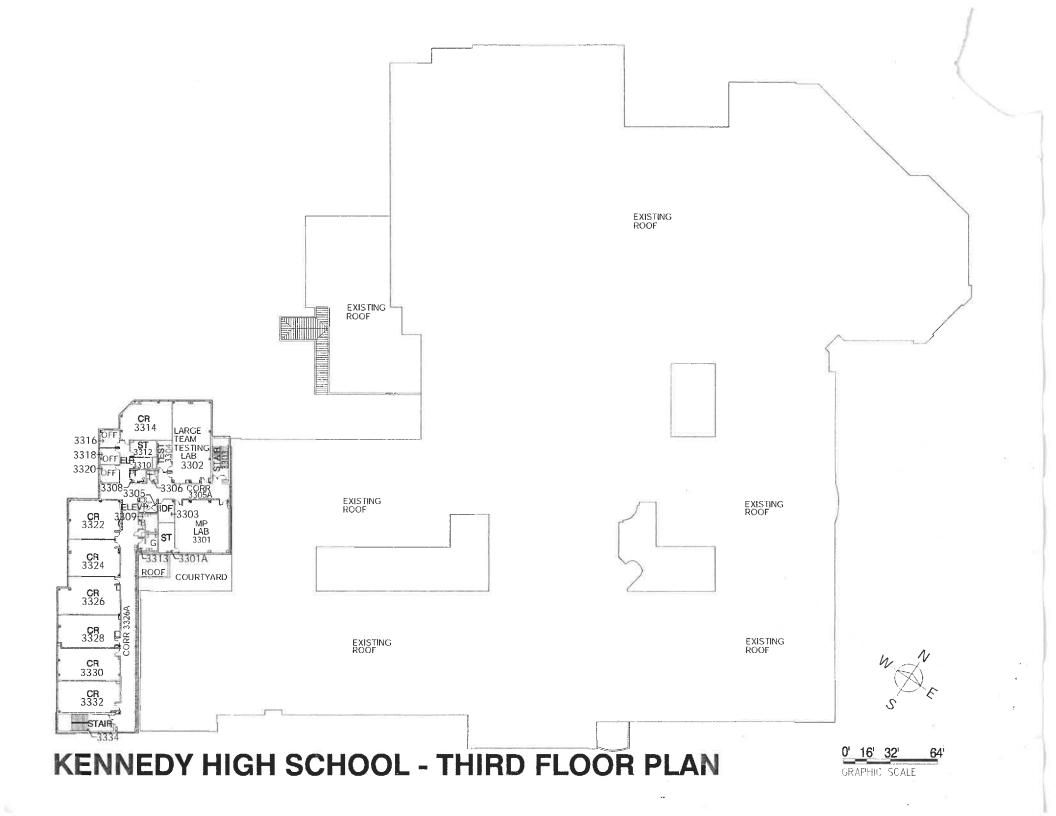


MENINEDW LUCHT COLLOCK

FIDOT FLOOD DLAM



KENNEDY HIGH SCHOOL - SECOND FLOOR PLAN



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

### MCPS RADON TESTING – EXECUTIVE SUMMARY

Site Name	John F. Kennedy
	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	113
# Rooms Re-tested	3
# Rooms ≥ 4.0 pCi/L	1
Lowest Value	<0.3 pCi/L
Highest Value	4.7 pCi/L

### Project Status:

- 1. Initial testing completed;
- 2. Missing or compromised samples need re-test.
  - 3. Retesting Completed  $\frac{2}{14/23} \frac{2}{17/23}$ .
    - 4. Mitigate Room 190.

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March 3, 2023

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

Re: Radon Testing Services

KCI Job # 122210551

Location: John F. Kennedy High School

1901 Randolph Road Silver Spring, MD 20902

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 John F. Kennedy High School, located at 1901 Randolph Road, Silver Spring, MD 20902 (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 <a href="https://www.montgomeryschoolsmd.org">https://www.montgomeryschoolsmd.org</a> or <a href="https://www.montgomeryschoolsmd.org">www.epa.gov/radon</a>.

KCI visited the site initially on January 23, 2023 and deployed one hundred thirty-one (131) 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 eight (8) activated charcoal (AC) radon test kits for testing of missed rooms or compromised test kits during initial testing.

www.kci.com

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.

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### **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 m;C/I	190	3.4
≥4.0 piC/L	190	4.7
<4.0 piC/L	See Attachment B	

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

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

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

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

Sincerely,

Tyler P. McCleaf

Radon Measurement Provider

#111004 RT

KCI Technologies, Inc.

Tyler McCleaf

Attachments: A- Floor Plan with Test Locations

B- Table 1-3, Radon Test Summary Spreadsheets

C- Laboratory Analytical Results

# ATTACHMENT A

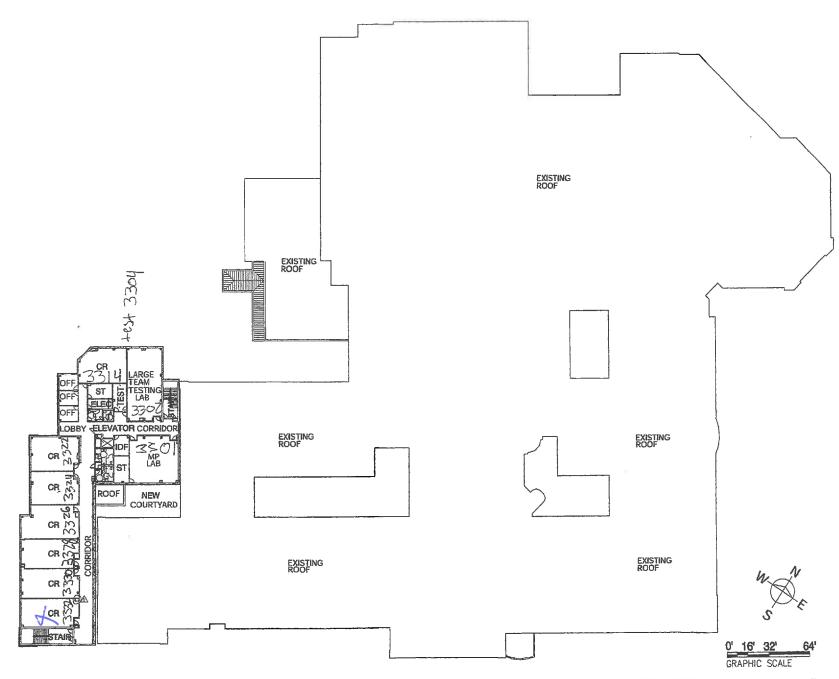
## Floor Plan With Test Locations

Gym AUX Main Gym 169 Kitchen catéteria 150 

KENNEDY HIGH SCHOOL - FIRST FLOOR PLAN



KENNEDY HIGH SCHOOL - SECOND FLOOR PLAN



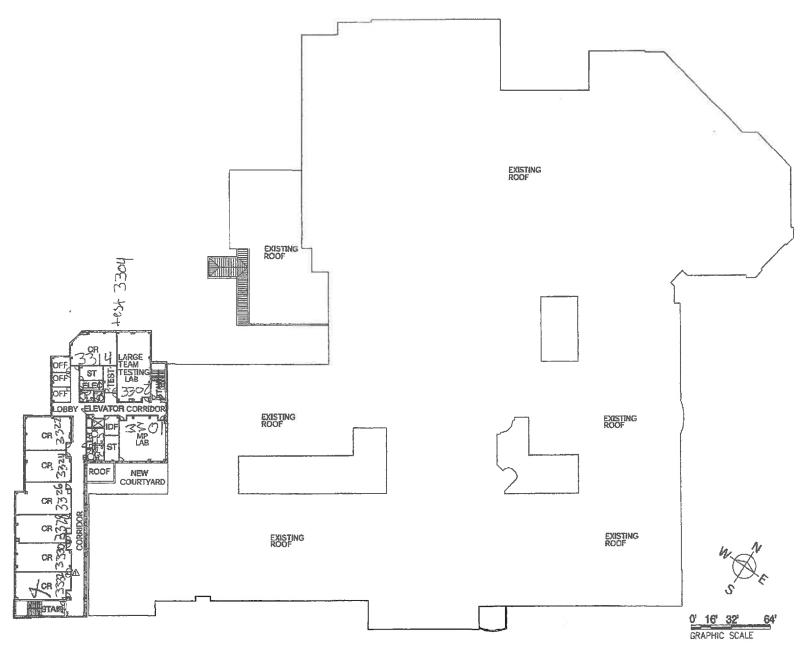
**KENNEDY HIGH SCHOOL - THIRD FLOOR PLAN** 

ANK Gym Main Gym 169 Trimin Juli Krichigh -

KENNEDY HIGH SCHOOL - FIRST FLOOR PLAN



KENNEDY HIGH SCHOOL - SECOND FLOOR PLAN



KENNEDY HIGH SCHOOL - THIRD FLOOR PLAN

## ATTACHMENT B

# Radon Test Summary Spreadsheet

### **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

Table 1- Radon Testing Results	
John F. Kennedy HS	

Test Period: 01/23/2023 - 01/26/2023

Kit Number	Room / Area	Result
11634520	100	0.9
11634590	101	0.6
11634586	103	1.3
11634209	105	1.4
11634214	105	1.1
11634548	106	2.0
11634577	107	2.2
11634598	109	2.3
11634542	110	0.8
11634215	111	0.8
11634543	112	< 0.3
11634206	113	< 0.3
11634541	114	0.9
11634538	116	< 0.3
11634540	118	0.7
11634203	119	< 0.3
11634212	119	0.7
11634213	119	0.9
11634539	120	< 0.3
11634202	121	0.9
11634535	122	< 0.3
11634537	122	< 0.3
11634549	122	< 0.3
11634201	123	0.8
11634562	124	< 0.3
11634229	125	1.2
11634561	126	0.6
11634560	129	0.9
11634224	131	0.6
11634558	132	0.8
11634228	133	1.3
11634557	134	1.0
11634556	136	< 0.3
11634554	138	1.3
11634555	138	1.3
11634223	139	0.7
11634227	139	0.9
11634222	141	< 0.3
11634220	143	< 0.3
11634553	144	< 0.3
11634219	145	< 0.3
11634225	147	0.6

Table 1- Radon Testing Results	
John F. Kennedy HS	

Test Period: 01/23/2023 - 01/26/2023

		<u> </u>
Kit Number	Room / Area	Result
11634218	149	1.0
11634591	157	1.5
11634592	159	0.8
11634594	161	< 0.3
11634595	161	< 0.3
11634596	161	0.6
11634585	165	0.7
11634583	167	0.5
11634564	179	< 0.3
11634565	179	< 0.3
11634571	182	1.9
11634568	184	1.7
11634566	188	2.8
11634567	190	3.4
11634570	190	< 0.3
11634572	190	4.7
11634238	216	< 0.3
11634231	218	< 0.3
11634233	220	1.1
11634239	241	0.6
11634232	243	N/A
11634217	248	0.9
11634240	250	< 0.3
11634235	262	< 0.3
11634234	264	< 0.3
11634241	3332	< 0.3
11634519	100A	1.0
11634514	100B	0.7
11634513	100E	1.1
11634512	100F	1.3
11634511	1001	1.0
11634515	100K	0.8
11634510	100L	1.2
11634518	100M	1.0
11634509	100N	2.1
11634517	100N	2.0
11634533	100Q	1.3
11634532	100R	0.6
11634589	101A	0.7
11634588	101C	1.4
11634587	101D	0.6
11634522	104A	1.4

Table 1- Radon Testing Results	
John F. Kennedy HS	

Test Period: 01/23/2023 - 01/26/2023

Kit Number	Kit Number Room / Area		
11634523	104B	0.9	
11634521	104C	1.0	
11634524	104D	0.9	
11634525	104G	1.1	
11634526	104G	< 0.3	
11634527	104G	1.2	
11634528	104H	0.8	
11634529	104J	1.1	
11634530	104K	1.2	
11634216	108A	1.1	
11634545	108A	0.9	
11634546	108A	1.1	
11634544	108B	0.6	
11634547	108C	0.8	
11634534	111A	1.2	
11634207	111D	1.1	
11634205	111F	< 0.3	
11634208	111G	< 0.3	
11634508	112A	2.8	
11634516	112B	1.0	
11634211	121C	0.6	
11634536	122B	< 0.3	
11634531	122C1	2.8	
11634559	129A	< 0.3	
11634226	139B	< 0.3	
11634221	147E	1.4	
11634204	149A	0.8	
11634593	161A	0.5	
11634582	167B	< 0.3	
11634584	167B	< 0.3	
11634581	167C	N/A	
11634580	167F	< 0.3	
11634579	167G	0.5	
11634578	167H	0.5	
11634576	1671	0.7	
11634575	167J	< 0.3	
11634574	176A	0.7	
11634597	AUDITORIUM	1.1	
11634600	AUDITORIUM	0.7	
11634551	CAFE	< 0.3	
11634552	CAFE	< 0.3	
11634573	GIRLS LOCKER ROOM	2.7	

Table 1- Radon Testing Results			
	John F. Kennedy HS		
Tes	Test Period: 01/23/2023 - 01/26/2023		
Kit Number Room / Area Result			
11634550 MAIN GYM 1		1.7	
11634563 MAIN GYM		1.6	
11634569	11634569 MEN'S LOCKER ROOM N		

Table 2- Radon Testing Results			
John F. Kennedy HS			
	Test Period:	01/23/23 - 01/26/23	
Kit Number	QC Type	Room / Area	Result
11634209	D	105	1.4
11634203	FB	119	< 0.3
11634212	D	119	0.7
11634535	FB	122	< 0.3
11634549	D	122	< 0.3
11634554	D	138	1.3
11634223	D	139	0.7
11634594	D	161	< 0.3
11634595	FB	161	< 0.3
11634570	FB	190	< 0.3
11634572	D	190	4.7
11634236	FB	241	< 0.3
11634237	D	241	< 0.3
11634509	D	100n	2.1
11634525	D	104g	1.1
11634526	FB	104g	< 0.3
11634545	D	108a	0.9
11634584	D	167b	< 0.3
11633990	ОВ	OFFICE BLANK	< 0.3
11633992	ТВ	TRAVEL BLANK	< 0.3

Summary of Missed Locations			
John F. Kennedy HS			
Test Period: 01/23/23 - 01/26/23			
Kit Number	Room/Area	Result	
	N/A		

Summary	of Missing, Compromised and >/=	4 piC/L Tests	
	John F. Kennedy HS		
Test Period: 01/23/23 - 01/26/23			
Kit Number	Room/Area	Result	
11634567	190	3.4	
11634572	190	4.7	
11634232	243	Missing	
11634581	167C	Missing	
11634569	MEN'S LOCKER ROOM	Missing	

### Table Note:

<sup>\*</sup> Missing or Compromised Sample

Table 1- Radon Testing Results					
John F. Kennedy HS RT					
Test Period: 02/14/2023 - 02/17/2023					
Kit Number Room / Area Result					
11634957	< 0.3				
11634958 167C < 0.3					
11634976 167C 0.5					
11634979 167C < 0.3					
11634980	BOYS LR	0.9			

Table 2- Radon Testing Results				
	John F	Kennedy HS RT		
	Test Period:	: 02/14/23 - 02/17/23		
Kit Number   QC Type   Room / Area   Result				
11634976	D	167c	0.5	
11634979	FB	167c	< 0.3	
11634060	ОВ	OFFICE BLANK	< 0.3	
11634067 TB TRAVEL BALNK < 0.3				

Summary of Missed Locations						
	John F. Kennedy HS RT					
т	est Period: 02/14/23 - 02/17/23					
	2501 21104. 02/11/25 02/11/25					
Kit Number	Room/Area	Result				
	N/A					

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

### Table Note:

<sup>\*</sup> Missing or Compromised Sample

### ATTACHMENT C

# Laboratory Analytical Results

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11634520	100	2023-01-23 @ 9:00 am	2023-01-26 @ 11:00 am	$0.9 \pm 0.4$	2023-01-30
11634519	100A	2023-01-23 @ 9:00 am	2023-01-26 @ 11:00 am	$1.0 \pm 0.3$	2023-01-30
11634514	100B	2023-01-23 @ 9:00 am	2023-01-26 @ 11:00 am	$0.7 \pm 0.3$	2023-01-30
11634513	100E	2023-01-23 @ 9:00 am	2023-01-26 @ 11:00 am	$1.1 \pm 0.4$	2023-01-30
11634512	100F	2023-01-23 @ 9:00 am	2023-01-26 @ 11:00 am	$1.3 \pm 0.4$	2023-01-30
11634511	100I	2023-01-23 @ 9:00 am	2023-01-26 @ 11:00 am	$1.0 \pm 0.4$	2023-01-30
11634515	100K	2023-01-23 @ 9:00 am	2023-01-26 @ 11:00 am	$0.8 \pm 0.3$	2023-01-30
11634510	100L	2023-01-23 @ 9:00 am	2023-01-26 @ 11:00 am	$1.2 \pm 0.4$	2023-01-30
11634518	100M	2023-01-23 @ 9:00 am	2023-01-26 @ 11:00 am	$1.0 \pm 0.4$	2023-01-30
11634517	100N	2023-01-23 @ 9:00 am	2023-01-26 @ 11:00 am	$2.0 \pm 0.4$	2023-01-30
11634509	100N	2023-01-23 @ 9:00 am	2023-01-26 @ 11:00 am	$2.1 \pm 0.4$	2023-01-30
11634533	100Q	2023-01-23 @ 10:00 am	2023-01-26 @ 11:00 am	$1.3 \pm 0.4$	2023-01-30
11634532	100R	2023-01-23 @ 10:00 am	2023-01-26 @ 11:00 am	$0.6 \pm 0.3$	2023-01-30
11634590	101	2023-01-23 @ 12:00 pm	2023-01-26 @ 11:00 am	$0.6 \pm 0.4$	2023-01-30
11634589	101A	2023-01-23 @ 12:00 pm	2023-01-26 @ 11:00 am	$0.7 \pm 0.4$	2023-01-30
11634588	101C	2023-01-23 @ 12:00 pm	2023-01-26 @ 11:00 am	$1.4 \pm 0.4$	2023-01-30
11634587	101D	2023-01-23 @ 12:00 pm	2023-01-26 @ 11:00 am	$0.6 \pm 0.3$	2023-01-30
11634586	103	2023-01-23 @ 12:00 pm	2023-01-26 @ 11:00 am	$1.3 \pm 0.4$	2023-01-30
11634522	104A	2023-01-23 @ 10:00 am	2023-01-26 @ 11:00 am	$1.4 \pm 0.4$	2023-01-30
11634523	104B	2023-01-23 @ 10:00 am	2023-01-26 @ 11:00 am	$0.9 \pm 0.3$	2023-01-30
11634521	104C	2023-01-23 @ 10:00 am	2023-01-26 @ 11:00 am	$1.0 \pm 0.4$	2023-01-30
11634524	104D	2023-01-23 @ 10:00 am	2023-01-26 @ 11:00 am	$0.9 \pm 0.3$	2023-01-30
11634527	104G	2023-01-23 @ 10:00 am	2023-01-26 @ 11:00 am	$1.2 \pm 0.4$	2023-01-30
11634526	104G	2023-01-23 @ 10:00 am	2023-01-26 @ 11:00 am	< 0.3	2023-01-30
11634525	104G	2023-01-23 @ 10:00 am	2023-01-26 @ 11:00 am	$1.1 \pm 0.3$	2023-01-30
11634528	104H	2023-01-23 @ 10:00 am	2023-01-26 @ 11:00 am	$0.8 \pm 0.4$	2023-01-30
11634529	104J	2023-01-23 @ 10:00 am	2023-01-26 @ 11:00 am	$1.1 \pm 0.4$	2023-01-30
11634530	104K	2023-01-23 @ 10:00 am	2023-01-26 @ 11:00 am	$1.2 \pm 0.4$	2023-01-30
11634209	105	2023-01-23 @ 1:00 pm	2023-01-26 @ 12:00 pm	$1.4 \pm 0.3$	2023-01-30
11634214	105	2023-01-23 @ 1:00 pm	2023-01-26 @ 12:00 pm	$1.1 \pm 0.4$	2023-01-30
11634548	106	2023-01-23 @ 10:00 am	2023-01-26 @ 11:00 am	$2.0 \pm 0.4$	2023-01-30
11634577	107	2023-01-23 @ 12:00 pm	2023-01-26 @ 11:00 am	$2.2 \pm 0.4$	2023-01-30
11634216	108A	2023-01-23 @ 1:00 pm	2023-01-26 @ 11:00 am	$1.1 \pm 0.3$	2023-01-30
11634545	108A	2023-01-23 @ 10:00 am	2023-01-26 @ 11:00 am	$0.9 \pm 0.3$	2023-01-30
11634546	108A	2023-01-23 @ 10:00 am	2023-01-26 @ 11:00 am	$1.1 \pm 0.3$	2023-01-30
11634544	108B	2023-01-23 @ 10:00 am	2023-01-26 @ 11:00 am	$0.6 \pm 0.3$	2023-01-30
11634547	108C	2023-01-23 @ 10:00 am	2023-01-26 @ 11:00 am	$0.8 \pm 0.4$	2023-01-30

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11634598	109	2023-01-23 @ 12:00 pm	2023-01-26 @ 11:00 am	$2.3 \pm 0.4$	2023-01-30
11634542	110	2023-01-23 @ 10:00 am	2023-01-26 @ 11:00 am	$0.8 \pm 0.3$	2023-01-30
11634215	111	2023-01-23 @ 1:00 pm	2023-01-26 @ 11:00 am	$0.8 \pm 0.3$	2023-01-30
11634534	111A	2023-01-23 @ 10:00 am	2023-01-26 @ 11:00 am	$1.2 \pm 0.4$	2023-01-30
11634207	111D	2023-01-23 @ 1:00 pm	2023-01-26 @ 11:00 am	$1.1 \pm 0.3$	2023-01-30
11634205	111F	2023-01-23 @ 1:00 pm	2023-01-26 @ 11:00 am	< 0.3	2023-01-30
11634208	111 <b>G</b>	2023-01-23 @ 1:00 pm	2023-01-26 @ 11:00 am	< 0.3	2023-01-30
11634543	112	2023-01-23 @ 10:00 am	2023-01-26 @ 11:00 am	< 0.3	2023-01-30
11634508	112A	2023-01-23 @ 9:00 am	2023-01-26 @ 11:00 am	$2.8 \pm 0.4$	2023-01-30
11634516	112B	2023-01-23 @ 9:00 am	2023-01-26 @ 11:00 am	$1.0 \pm 0.3$	2023-01-30
11634206	113	2023-01-23 @ 1:00 pm	2023-01-26 @ 11:00 am	< 0.3	2023-01-30
11634541	114	2023-01-23 @ 10:00 am	2023-01-26 @ 11:00 am	$0.9 \pm 0.4$	2023-01-30
11634538	116	2023-01-23 @ 10:00 am	2023-01-26 @ 11:00 am	< 0.3	2023-01-30
11634540	118	2023-01-23 @ 10:00 am	2023-01-26 @ 11:00 am	$0.7 \pm 0.3$	2023-01-30
11634212	119	2023-01-23 @ 1:00 pm	2023-01-26 @ 11:00 am	$0.7 \pm 0.3$	2023-01-30
11634203	119	2023-01-23 @ 1:00 pm	2023-01-26 @ 11:00 am	< 0.3	2023-01-30
11634213	119	2023-01-23 @ 1:00 pm	2023-01-26 @ 11:00 am	$0.9 \pm 0.3$	2023-01-30
11634539	120	2023-01-23 @ 10:00 am	2023-01-26 @ 11:00 am	< 0.3	2023-01-30
11634202	121	2023-01-23 @ 1:00 pm	2023-01-26 @ 11:00 am	$0.9 \pm 0.3$	2023-01-30
11634211	121C	2023-01-23 @ 1:00 pm	2023-01-26 @ 11:00 am	$0.6 \pm 0.3$	2023-01-30
11634549	122	2023-01-23 @ 10:00 am	2023-01-26 @ 11:00 am	< 0.3	2023-01-30
11634537	122	2023-01-23 @ 10:00 am	2023-01-26 @ 11:00 am	< 0.3	2023-01-30
11634535	122	2023-01-23 @ 10:00 am	2023-01-26 @ 11:00 am	< 0.3	2023-01-30
11634536	122B	2023-01-23 @ 10:00 am	2023-01-26 @ 11:00 am	< 0.3	2023-01-30
11634531	122C1	2023-01-23 @ 10:00 am	2023-01-26 @ 11:00 am	$2.8 \pm 0.4$	2023-01-30
11634201	123	2023-01-23 @ 1:00 pm	2023-01-26 @ 11:00 am	$0.8 \pm 0.3$	2023-01-30
11634562	124	2023-01-23 @ 10:00 am	2023-01-26 @ 11:00 am	< 0.3	2023-01-30
11634229	125	2023-01-23 @ 1:00 pm	2023-01-26 @ 11:00 am	$1.2 \pm 0.4$	2023-01-30
11634561	126	2023-01-23 @ 10:00 am	2023-01-26 @ 11:00 am	$0.6 \pm 0.3$	2023-01-30
11634560	129	2023-01-23 @ 10:00 am	2023-01-26 @ 11:00 am	$0.9 \pm 0.3$	2023-01-30
11634559	129A	2023-01-23 @ 10:00 am	2023-01-26 @ 11:00 am	< 0.3	2023-01-30
11634224	131	2023-01-23 @ 1:00 pm	2023-01-26 @ 11:00 am	$0.6 \pm 0.3$	2023-01-30
11634558	132	2023-01-23 @ 11:00 am	2023-01-26 @ 11:00 am	$0.8 \pm 0.3$	2023-01-30
11634228	133	2023-01-23 @ 1:00 pm	2023-01-26 @ 11:00 am	$1.3 \pm 0.4$	2023-01-30
11634557	134	2023-01-23 @ 11:00 am	2023-01-26 @ 11:00 am	$1.0 \pm 0.4$	2023-01-30
11634556	136	2023-01-23 @ 11:00 am	2023-01-26 @ 11:00 am	< 0.3	2023-01-30
11634555	138	2023-01-23 @ 11:00 am	2023-01-26 @ 11:00 am	$1.3 \pm 0.4$	2023-01-30

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11634554	138	2023-01-23 @ 11:00 am	2023-01-26 @ 11:00 am	$1.3 \pm 0.4$	2023-01-30
11634227	139	2023-01-23 @ 1:00 pm	2023-01-26 @ 11:00 am	$0.9 \pm 0.4$	2023-01-30
11634223	139	2023-01-23 @ 1:00 pm	2023-01-26 @ 11:00 am	$0.7 \pm 0.3$	2023-01-30
11634226	139B	2023-01-23 @ 1:00 pm	2023-01-26 @ 11:00 am	< 0.3	2023-01-30
11634222	141	2023-01-23 @ 1:00 pm	2023-01-26 @ 11:00 am	< 0.3	2023-01-30
11634220	143	2023-01-23 @ 1:00 pm	2023-01-26 @ 11:00 am	< 0.3	2023-01-30
11634553	144	2023-01-23 @ 11:00 am	2023-01-26 @ 11:00 am	< 0.3	2023-01-30
11634219	145	2023-01-23 @ 1:00 pm	2023-01-26 @ 11:00 am	< 0.3	2023-01-30
11634225	147	2023-01-23 @ 1:00 pm	2023-01-26 @ 11:00 am	$0.6 \pm 0.4$	2023-01-30
11634221	147E	2023-01-23 @ 1:00 pm	2023-01-26 @ 11:00 am	$1.4 \pm 0.4$	2023-01-30
11634218	149	2023-01-23 @ 1:00 pm	2023-01-26 @ 11:00 am	$1.0 \pm 0.4$	2023-01-30
11634204	149A	2023-01-23 @ 1:00 pm	2023-01-26 @ 11:00 am	$0.8 \pm 0.3$	2023-01-30
11634591	157	2023-01-23 @ 12:00 pm	2023-01-26 @ 11:00 am	$1.5 \pm 0.4$	2023-01-30
11634592	159	2023-01-23 @ 12:00 pm	2023-01-26 @ 11:00 am	$0.8 \pm 0.4$	2023-01-30
11634596	161	2023-01-23 @ 12:00 pm	2023-01-26 @ 11:00 am	$0.6 \pm 0.3$	2023-01-30
11634594	161	2023-01-23 @ 12:00 pm	2023-01-26 @ 11:00 am	< 0.3	2023-01-30
11634595	161	2023-01-23 @ 12:00 pm	2023-01-26 @ 11:00 am	< 0.3	2023-01-30
11634593	161A	2023-01-23 @ 12:00 pm	2023-01-26 @ 11:00 am	$0.5 \pm 0.3$	2023-01-30
11634585	165	2023-01-23 @ 12:00 pm	2023-01-26 @ 11:00 am	$0.7 \pm 0.3$	2023-01-30
11634583	167	2023-01-23 @ 12:00 pm	2023-01-26 @ 11:00 am	$0.5 \pm 0.3$	2023-01-30
11634584	167B	2023-01-23 @ 12:00 pm	2023-01-26 @ 11:00 am	< 0.3	2023-01-30
11634582	167B	2023-01-23 @ 12:00 pm	2023-01-26 @ 11:00 am	< 0.3	2023-01-30
11634580	167F	2023-01-23 @ 12:00 pm	2023-01-26 @ 11:00 am	< 0.3	2023-01-30
11634579	167G	2023-01-23 @ 12:00 pm	2023-01-26 @ 11:00 am	$0.5 \pm 0.3$	2023-01-30
11634578	167H	2023-01-23 @ 12:00 pm	2023-01-26 @ 11:00 am	$0.5 \pm 0.4$	2023-01-30
11634576	167I	2023-01-23 @ 12:00 pm	2023-01-26 @ 11:00 am	$0.7 \pm 0.3$	2023-01-30
11634575	167J	2023-01-23 @ 12:00 pm	2023-01-26 @ 11:00 am	< 0.3	2023-01-30
11634574	176A	2023-01-23 @ 11:00 am	2023-01-26 @ 11:00 am	$0.7 \pm 0.4$	2023-01-30
11634565	179	2023-01-23 @ 11:00 am	2023-01-26 @ 11:00 am	< 0.3	2023-01-30
11634564	179	2023-01-23 @ 11:00 am	2023-01-26 @ 11:00 am	< 0.3	2023-01-30
11634571	182	2023-01-23 @ 11:00 am	2023-01-26 @ 11:00 am	$1.9 \pm 0.4$	2023-01-30
11634568	184	2023-01-23 @ 11:00 am	2023-01-26 @ 11:00 am	$1.7 \pm 0.4$	2023-01-30
11634566	188	2023-01-23 @ 11:00 am	2023-01-26 @ 11:00 am	$2.8 \pm 0.4$	2023-01-30
11634567	190	2023-01-23 @ 11:00 am	2023-01-26 @ 11:00 am	$3.4 \pm 0.4$	2023-01-30
11634570	190	2023-01-23 @ 11:00 am	2023-01-26 @ 11:00 am	< 0.3	2023-01-30
11634572	190	2023-01-23 @ 11:00 am	2023-01-26 @ 11:00 am	$4.7 \pm 0.5$	2023-01-30
11634238	216	2023-01-23 @ 2:00 pm	2023-01-26 @ 11:00 am	< 0.3	2023-01-30

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11634231	218	2023-01-23 @ 2:00 pm	2023-01-26 @ 11:00 am	< 0.3	2023-01-30
11634233	220	2023-01-23 @ 2:00 pm	2023-01-26 @ 11:00 am	$1.1 \pm 0.3$	2023-01-30
11634239	241	2023-01-23 @ 2:00 pm	2023-01-26 @ 11:00 am	$0.6 \pm 0.3$	2023-01-30
11634217	248	2023-01-23 @ 1:00 pm	2023-01-26 @ 12:00 pm	$0.9 \pm 0.3$	2023-01-30
11634240	250	2023-01-23 @ 2:00 pm	2023-01-26 @ 12:00 pm	< 0.3	2023-01-30
11634235	262	2023-01-23 @ 2:00 pm	2023-01-26 @ 2:00 pm	< 0.3	2023-01-30
11634234	264	2023-01-23 @ 2:00 pm	2023-01-26 @ 11:00 am	< 0.3	2023-01-30
11634241	3332	2023-01-23 @ 2:00 pm	2023-01-26 @ 12:00 pm	< 0.3	2023-01-30
11634600	AUDITORIUM	2023-01-23 @ 12:00 pm	2023-01-26 @ 11:00 am	$0.7 \pm 0.4$	2023-01-30
11634597	AUDITORIUM	2023-01-23 @ 12:00 pm	2023-01-26 @ 11:00 am	$1.1 \pm 0.4$	2023-01-30
11634551	CAFE	2023-01-23 @ 11:00 am	2023-01-26 @ 11:00 am	< 0.3	2023-01-30
11634552	CAFE	2023-01-23 @ 11:00 am	2023-01-26 @ 11:00 am	< 0.3	2023-01-30
11634573	GIRLS LOCKER ROOM	2023-01-23 @ 11:00 am	2023-01-26 @ 11:00 am	$2.7 \pm 0.4$	2023-01-30
11634563	MAIN GYM	2023-01-23 @ 11:00 am	2023-01-26 @ 11:00 am	$1.6 \pm 0.4$	2023-01-30
11634550	MAIN GYM	2023-01-23 @ 12:00 pm	2023-01-26 @ 11:00 am	$1.7 \pm 0.4$	2023-01-30

January 30, 2023

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

Radon test result report for:
JOHN F. KENNEDY HS
MAIN

Kit#	Room Id	Started	Ended	pCi/L	Analyzed
11634236	241	2023-01-23 @ 9:00 am	2023-01-26 @ 12:00 pm	< 0.3	2023-01-30
11634237	241	2023-01-23 @ 9:00 am	2023-01-26 @ 12:00 pm	< 0.3	2023-01-30
1100 120 ,		2020 01 20 0 7,00 4111	2020 01 20 C 12000 pm	, ,,,	2020 01 00

February 20, 2023

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

# Radon test result report for: **JFK HS**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11634958	167C	2023-02-14 @ 9:00 am	2023-02-17 @ 10:00 am	< 0.3	2023-02-20
11634976	167C	2023-02-14 @ 9:00 am	2023-02-17 @ 10:00 am	$0.5 \pm 0.3$	2023-02-20
11634979	167C	2023-02-14 @ 9:00 am	2023-02-17 @ 10:00 am	< 0.3	2023-02-20
11634957	243	2023-02-14 @ 9:00 am	2023-02-17 @ 10:00 am	< 0.3	2023-02-20
11634980	BOYS LR	2023-02-14 @ 9:00 am	2023-02-17 @ 10:00 am	$0.9 \pm 0.3$	2023-02-20

## EXPOSURE IN BOWSER-MORNER RADON CHAMBER

CLIENT KCI TECHNOLOGI	ES, /NC Job Number 208802
	_pCi/L Rel. Hum <u> </u>
Date Start: 1/27/23 Date Stop: 1/30/	3 Date Start: Date Stop:
	Time Start: Time Stop:
Device No.'s: (5) CHAR BAGS.	Device No.'s:
11633682,11633687,11633688	
11633695 11633696	
F3 Celt	
Date Start: Date Stop:	Date Start: Date Stop:
Time Start: Time Stop:	Time Start: Time Stop:
B 1 22	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 =  $7 \mu R/h$  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	$24.2 \pm 1.9$	2023-02-03
11633682	SK6	2023-01-27 @ 8:00 am	2023-01-30 @ 8:00 am	$26.9 \pm 2.1$	2023-02-03
11633687	SK7	2023-01-27 @ 8:00 am	2023-01-30 @ 8:00 am	$23.8 \pm 1.9$	2023-02-03
11633688	SK8	2023-01-27 @ 8:00 am	2023-01-30 @ 8:00 am	$25.9 \pm 2.1$	2023-02-03
11633695	SK9	2023-01-27 @ 8:00 am	2023-01-30 @ 8:00 am	$27.0 \pm 2.2$	2023-02-03



### Engineers • Planners • Scientists • Construction Managers

Corporate Office: 936 Ridgebrook road • Sparks, Maryland 21152 • 410-316-7800 • (Fax) 410-316-7935

### **Radon Test Kit Chain of Custody**

Project Name: MCPS Radon - 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	BMMI
Radon Test Kits Shipped to Lab*	02/17/2023	pen
Radon Test Kits Received by Lab*	02/20/2023	Bon

<sup>\*</sup>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	John Kennedy High School
Date of Report	12/24/2020
Round of Testing	Initial
	Follow-up
	Post Remediation
	2 year testing
	5 year testing
	HVAC Upgrade
	Window Replacement
	New Addition
	New Facility
# of Rooms Tested	1
# Rooms ≥4.0 pCi/L	0
Lowest Value	<0.3 pCi/L
Highest Value	1.3 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

12/24/2020

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

Re: Radon Testing Services

SaLUT Job #20-173

**Location: John Kennedy High School** 1901 Randolph Road Wheaton, MD 20902

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 John Kennedy High School, located at 1901 Randolph Road Wheaton, MD 20902 (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 Radon and Radon Decay Products in Schools and Large Buildings. Additional information on radon the management and health effects of radon exposure is available from www.montgomerycountymd.gov/dep/air/radon or www.epa.gov/radon.

SaLUT visited the site on 12/1/2020 and deployed four (4) 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 12/4/2020 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-30s and high temperatures were in the mid-50s. Maximum sustained winds ranged from 10-15 miles per hour. Average humidity was around 57%. 0.0 inches of precipitation (rain) was recorded during the testing period.

### **RESULTS**

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

The results of the radon test analysis indicated the following:

Radon Concentration	Room	Result
≥4.0 piC/L	N/A	N/A
≤4.0 piC/L	See Attachment B	See Attachment B

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

Our professional services have been performed in accordance with customary principles and practices in the field of industrial hygiene and engineering. If you have any questions or comments regarding this report, please feel free to contact me at 301-595-3783.

Sincerely,

Mark McGrath

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

Attachments:

A- Floor Plan with Test Locations

B - Tables 1-3, Radon Test Summary Spreadsheets

C- Laboratory Analytical Results

### ATTACHMENT A

### Floor Plan With Test Locations

### ATTACHMENT B

### Radon Test Summary Spreadsheet

### **Table Notes:**

AC- Activated Charcoal

D- Duplicate

FB- Field Blank

OB- Office Blank

PM- Project Manager

QC- Quality Control

Table 1- Radon Testing Results						
	John Kennedy High School					
Test	Period: 12/1/2020-12/4	1/2020				
Kit Number	t Number Room / Area Result					
440248	440248 Auditorium					
440264 Auditorium 1.3						
440213 Auditorium 0.8						
440284	Auditorium	0.8				

Table 2- Radon Testing Results					
	John Kenned	ly High School			
	Test Period: 12,	/1/2020-12/4/2020			
Kit Number	QC Type	Room / Area	Result		
440248	FB	Auditorium	<0.3		
440264	D	Auditorium	0.8		
	Transit Blank	N/A	-0.2		

	Summary of Missed Locations						
Alb	ert Einstein High School						
Test Peri	iod: 01/06/2020 - 01/09/2020	)					
Kit Number	Kit Number Room/Area						
-	ART GALLERY	-					

Summary of	Missing, Compromised and >/= 4 piC,	/L Tests
	Albert Einstein High School	
Tes	t Period: 01/06/2020 - 01/09/2020	
Kit Number	Room/Area	Result
9346868	176	5.0
9346879	*183	MISSING
9346886	*184	MISSING
9346945	*39A	MISSING
9346947	*100D	MISSING
9346949	*100D	MISSING

### Table Note:

<sup>\*</sup> Missing or Compromised Sample

### ATTACHMENT C

## Laboratory Analytical Results



### **EMSL Analytical, Inc.**

200 Route 130 North, Cinnaminson, NJ 08077 (800) 220-3675 / (856) 786-0327 Phone/Fax:

http://www.EMSL.com cinnaminsonradonlab@emsl.com EMSL Order: CustomerID:

382013020 SALU50

CustomerPO: ProjectID:

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

(301) 595-3783 Phone: Fax: (301) 595-3787 Received: 12/7/2020 08:10 AM

Analysis Date: 12/7/2020 Collected: 12/1/2020

Project: John Kennedy HS / 1901 Randolph Road

John Kennedy HS Test Site:

1901 Randolph Road Wheaton, MD 20902

### **Test Report: Radon in Air Test Results**

#### Samples for EMSL Kit 252515

		Radon Activity			Temperature	Humidity	
Liquid Scintillation ID	Location	pCi/L	Start	Stop	F	%	Sample Type
440248	Auditorium	-0.3	12/1/2020	12/4/2020	35	70	Blank
382013020-0001			11:45:00 AM	11:53:00 AM			
Sample Notes:							
440264	Auditorium	1.3	12/1/2020	12/4/2020	35	69	Customer
382013020-0002			11:45:00 AM	11:53:00 AM			
Sample Notes:							

Samples for EMSL Kit 2	252258						
Liquid Scintillation ID	Location	Radon Activity pCi/L	Start	T Stop	emperature F	Humidity %	Sample Type
440213	Auditorium	0.8	12/1/2020	12/4/2020	35	69	Duplicate
382013020-0003			11:45:00 AM	11:53:00 AM			
Sample Notes:							
440284	Auditorium	0.8	12/1/2020	12/4/2020	35	69	Customer
382013020-0004			11:45:00 AM	11:53:00 AM			
Sample Notes:							
				Dı	plicate RPD	= 0%	

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**



### 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: CustomerID:

382013020 SALU50

CustomerID: S
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: 12/7/2020 08:10 AM

Analysis Date: 12/7/2020 Collected: 12/1/2020

Project: John Kennedy HS / 1901 Randolph Road

Test Site: John Kennedy HS

1901 Randolph Road Wheaton, MD 20902

**Test Report: Radon in Air Test Results** 

Analyst(s)

Racquel Hafiz (4)

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/R100179,WV RL000220,NRSB-ARL6006,NRPP

Initial report from 12/09/2020 14:54:10

Please visit www.radontestinglab.com



### Radon Testing Chain of Custody

EMSL Order Number (Lab Use Only):

CINHAMINSON NO. 382013020

200 Route 130 North

Cinnaminson, NJ 08077

PHONE: 1-800-220-3675 FAX: (856) 786-5974

Company	SaLUT	2020 DEC	-7 A 8 T	Ü	EMSL-Bill to: Sar	ne Different	
		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): Indik	a Jayatilake		Fax #: 30	1-595-3787		
	#: 301-595-3			Email Ad	idress: ijayatilake@saluti	nc.com	
Project Na	me/Number:	MCPS Johan C	ennedy	45			
Please Pro	vide Results:	: □Fax□Email□Mail			U.S. State Sam	<u>ples Taken: MD</u>	
Project N			Project Prope	rty inforn	nation	<del> </del>	
		01 Rand 011	14 0.1				
	Nec-40~		State: 71	<u></u>	Zip Code:	20902	
County:	W C.J.C. 10	<u> </u>	<u> </u>	Municip			
Technicia	Name:	A e	nician Cert#:		an Signature:		
<u> </u>			New Jersey Tes	ting Infor	mation		
		tory Certification # 0			Radon Business Certif		
					state Transaction 🗌 Hom	eowner Testing	<b>⊠</b> Other
2.) Test 0	onaitions of s the buildir	bserved? 🔀 Closed   na type? 🖂 Residen	nouse <u> </u>	i nouse idential	☐ Daycare ☒ School		
4.) What i	s the buildir	ng foundation type?	🔀 Basement 🗌	Crawlsp	ace 🗍 Slab on Grade 🏻	] Other	
5.) For Sc	hool Testing	g, please enter: Scho	ol Code		Room Name/Number _		
Box	Device	Location	Exposure P Beginning Da		Exposure Period	Temperature	Humidity,
Number	Number	Location	Time		Ending Date and Time	°F	%
252515	13/20/5	Auditorium	12-1-7	دع	12-4-20	35,2	68,9
152515	440264	_d。_	12-1-	2-9	12-4-20	35.2	68,9
<del>-</del>	Sample		11,45		11.53	33.6	0017
2593-							
252258	D611/cm	- Auditorium	12-1-2	2	12-4-23	35.2	68,9
353258	440284 Samp	_0_	12-1-2	2	12-4-20	35.2	68,9
<u> </u>	30001/10	<del>-</del>					
	_				<u> </u>		
				-			
				<u> </u>			
					<u> </u>		
Client San	nple # (s);				Total # of Sa	mples:	
Relinquish	ed (Client):_		Date:			Time:	
   Received (		R. Hafr	Date:	12.7.2	0	Time:	
Comments	s/Special Inst	ructions:					

Page 1 of \_\_\_\_\_ pages



EMSL Analytical, Inc. 200 Route 130 North Cinnaminson NJ 08077 800-220-3675 radiab@emsl.com

EMSL KIT ID NUMBER	
SEND REPORT TO	
EMSL CUSTOMER ID	<del></del>
NAME	
ADDRESS	—
CITY	
STATE ZIPGODE-	
PHONE	
EMAIL	
SEND COPY OF REPORT TO	
EMAIL	
EMAIL	
PROPERTY TESTED ☐ SAME AS ABOVE	
NAME	
ADDRESS	
CITY	
MUNICIPALITY	N/A
COUNTY	
STATEZIPCODE	
TECHNICIAN WHO DROPPED-OFF CANISTER(S)	
NAME	
CERTIFICATION # D	I/A
SIGNATURE	
TECHNICIAN WHO PICKED-UP CANISTER(S) ☐ SAME	
NAME	
CERTIFICATION # D	I/A
SIGNATURE	
NRPP ID 109000 • AL NRSB-ARL-6006 • NJDEP MEB92 EMSL MAINTAINS MULTIPLE NATIONAL AND STAT CERTIFICATIONS FOR RADON ANALYSIS. PLEASE SEE WEBSITE FOR THE MOST UP TO DATE LIST:	E

WWW.EMSL.COM

Expiration Date: 12/31/2022

### **RADON IN AIR CHAIN OF CUSTODY**

Turnaround: ☐ Same Day ☐ Next Day ☐ Two Day						
INDOOR CANISTER COLLECTION CONDITIONS						
	TEMPERATURE 68.0 °F HUMIDITY 34.7 %					
ST	START DATE 12 101 125 TIME 11 :45 DAM D PM					
ST	STOP DATE/ TIME: □ AM □ PM					
LO	LOCATION 🗖 BASEMENT 🔁 1st FLOOR 🗖 2nd FLOOR					
	☐ BEDROOM ☐ LIVING ROOM ☐ OTHER					
	1 <sup>st</sup> CANISTER NUMBER 2525 15					
	MPLE TYPE  CUSTOMER DUPLICATE  BLANK					
	CANISTER NUMBER 2.5 0 2 58					
SA	MPLE TYPE 🗖 CUSTOMER 💆 DUPLICATE 🗖 BLANK					
PR	OJECT BACKGROUND QUESTIONS					
1.	IS THIS A REAL ESTATE TRANSACTION? YES YOUNG					
	IS THIS A POST MITIGATION TEST? YES NO					
	B. IS THIS A RETEST? ☐ YES ☐ NO					
4.	BUILDING CONDITIONS:   OPEN   CLOSED					
5.	BUILDING TYPE:  RESIDENTIAL  NON-RESIDENTIAL					
	□ SINGLE FAMILY □ MULTI-UNIT					
	□ COMMERCIAL SCHOOL □ DAYCARE					
	OTHER					
6.	SCHOOL CODE DN/A					
7.	ROOM NUMBER □ N/A					
	ROOM LOCATION □ N/A					
8.	WHAT IS THE BUILDING FOUNDATION TYPE ~					
	☐ BASEMENT ☐ CRAWLSPACE ☐ SLAB ON GRADE					
	other n/A					
NO	ITES: Kemmedy Its Anditorium					
	COC Revision 3.0; 01/03/2020					
SAMPLES RELEASED TO THE LABORATORY						
NAMESIGNATURE						
DATE/ TIME: AM  PM  SAMPLES RECEIVED BY THE LABORATORY						
NAME						
SI	SIGNATURE DATE AM D PM					
/	DATE/ TIIVIE: U AIVI U PIVI					



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

### MCPS RADON TESTING - EXECUTIVE SUMMARY

Site Name	Kennedy High School	
Date of Report	2/28/2020	
Round of Testing	Initial	
	Follow-up	
	Post Remediation	
	2 year testing	
	5 year testing	
	HVAC Upgrade	
	Window Replacement	
	New Addition	
	New Facility	
# of Rooms Tested	3	
# Rooms ≥4.0 pCi/L	0	
Lowest Value	<0.3 pCi/L	
Highest Value	1.4 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

2/28/2020

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

Re: Radon Testing Services

KCI Job #12146341.126

Location: Kennedy High School 1901 Randoph Road Silver Spring, Maryland 20902

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 Kennedy High School, located at 1901 Randoph Road in Silver Spring, Maryland 20902 (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 <a href="https://www.montgomerycountymd.gov/dep/air/radon">www.montgomerycountymd.gov/dep/air/radon</a> or <a href="https://wwww.montgomerycountymd.gov/dep/air/radon">www.montgomer

KCI visited the site on 2/11/2020 and deployed five (5) activated charcoal (AC) radon test kits. KCI deployed radon test kits in frequently-occupied ground contact rooms, and other areas, (if applicable) in accordance with AARST guidance.

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

1. Rooms with missing test kits from the December 2019 testing period (i.e. test kit was deployed but not recovered),

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

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

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

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

#### **EVALUATION OF TESTING CONDITIONS**

These tests represent:

• Follow-up to initial testing.

These tests were conducted to:

• Evaluate radon concentrations at the facility.

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

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

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

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

#### RESULTS

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

The results of the radon test analysis indicated the following:

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

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

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

Sincerely,

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

Attachments

A- Floor Plan with Test Locations

B - Tables 1-3, Radon Test Summary Spreadsheets

C- Laboratory Analytical Results

### ATTACHMENT A

### Floor Plan With Test Locations

### 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

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

### Radon test result report for: KENNEDY HS RT 815

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
9348555	118	2020-02-11 @ 9:00 am	2020-02-14 @ 10:00 am	< 0.3	2020-02-18
9348552	149A	2020-02-11 @ 9:00 am	2020-02-14 @ 10:00 am	$0.9 \pm 0.4$	2020-02-18
9348559	163 - AUD	2020-02-11 @ 9:00 am	2020-02-14 @ 10:00 am	$1.1 \pm 0.4$	2020-02-18
9348560	163 - AUD	2020-02-11 @ 9:00 am	2020-02-14 @ 10:00 am	$1.4 \pm 0.4$	2020-02-18

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

# ATTACHMENT C

# Laboratory Analytical Results

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

### Radon test result report for: KENNEDY HS RT 815

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
9348555	118	2020-02-11 @ 9:00 am	2020-02-14 @ 10:00 am	< 0.3	2020-02-18
9348552	149A	2020-02-11 @ 9:00 am	2020-02-14 @ 10:00 am	$0.9 \pm 0.4$	2020-02-18
9348559	163 - AUD	2020-02-11 @ 9:00 am	2020-02-14 @ 10:00 am	$1.1 \pm 0.4$	2020-02-18
9348560	163 - AUD	2020-02-11 @ 9:00 am	2020-02-14 @ 10:00 am	$1.4 \pm 0.4$	2020-02-18

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

CLIENT KCI Technolog	gies, Inc.	Job Number 194523	_
NOMINAL Conditions: Radon Conc 45.8	,		F
Date Start: 2/21/20 Date Stop: 2/24/2	20 Date Start:	Date Stop:	
Time Start: Q745 Time Stop: Q745	Time Start:	Time Stop:	
Device No.'s: (9) Char Bags-	Device No.'s:_		
9341725 thru 9341733			
52 Ceft		1.	
Date Start: Date Stop:	Date Start:	Date Stop:	
Time Start: Time Stop:	Time Start:	Time Stop:	
Device No.'s:	Device No.'s:	·e	
± %			
Date Start: Date Stop:	Date Start:	Date Stop:	
Time Start: Time Stop:	Time Start:	Time Stop:	
Device No.'s:	Device No.'s:		
		g.	

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

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

## Radon test result report for:

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

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



# Engineers • Planners • Scientists • Construction Managers Corporate Office: 936 Ridgebrook road • Sparks , Maryland 21152 • 410-316-7800 • (Fax) 410-316-7935

# **Radon Test Kit Chain of Custody**

Project Name: MCPS Radon 2019 Week 2

#### Name of Schools:

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

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

	Date	Initials
Radon Test Kits Deployed	2/11/20	TM
Radon Test Kits Collected	2/14/20	m
Radon Test Kits Shipped to Lab*	2/14/20	(M
Radon Test Kits Received by Lab*	2/17/20	JUN

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



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#### MCPS RADON TESTING - EXECUTIVE SUMMARY

Site Name	John F. Kennedy High School
Date of Report	2/3/2020
Round of Testing	Initial
	Follow-up
	Post Remediation
	2 year testing
	5 year testing
	HVAC Upgrade
	Window Replacement
	New Addition
	New Facility
# of Rooms Tested	114
# Rooms ≥4.0 pCi/L	1
Lowest Value	<0.3 pCi/L
Highest Value	6.8 pCi/L

## **Project Status**

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



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2/3/2020

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

Re: Radon Testing Services

KCI Job #12146341126

**Location: John F. Kennedy High School** 1901 Randolph Rd Wheaton, Maryland 20902

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 John F. Kennedy High School, located at 1901 Randolph Rd in Wheaton, Maryland 20902 (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 <a href="https://www.montgomeryschoolsmd.org/departments/facilities/maintenance/default.aspx?id=458858">https://www.montgomeryschoolsmd.org/departments/facilities/maintenance/default.aspx?id=458858</a> or <a href="https://www.montgomeryschoolsmd.org/departments/facilities/maintenance/default.aspx?id=458858">https://www.montgomeryschoolsmd.org/departments/facilities/maintenance/default.aspx?id=458858</a>

KCI visited the site on 12/16/2019 and deployed one-hundred and thirty-seven (137) activated charcoal (AC) radon test kits. KCI deployed radon test kits in frequently-occupied ground contact rooms, and other areas, (if applicable) in accordance with AARST guidance.

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

As a quality control measure, KCI included duplicate samples, field blanks, lab transit blanks, and office blanks in accordance with AARST recommendations. In addition, KCI submitted sixty (60) test kits to Bowser-Morner, Inc. as spike samples. The spiked tests were exposed to a known radon concentration by Bowser-Morner, Inc. prior to being returned to the laboratory for analysis.

KCI returned to the site on 12/19/2019 to retrieve the radon sampling test kits. KCI shipped all radon tests via overnight delivery to Aircheck, Inc. for analysis by gamma-ray spectroscopy. Aircheck, Inc. is a National Radon Safety Board (NRSB) radon measurement provider and is a certified analytical laboratory for radon analysis (certification #ARL1402) located at 1936 Butler Bridge Road, Mills River, North Carolina.

#### **EVALUATION OF TESTING CONDITIONS**

These tests represent:

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

#### **RESULTS**

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

The results of the radon test analysis indicated the following:

Radon Concentration	Room	Result	
≥4.0 piC/L	163	6.8	
≤4.0 piC/L	See Attachment B	See Attachment B	

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

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

Sincerely,

Mr. Tyler P. McCleaf Radon Measurement Provider 111004 RT

KCI Technologies, Inc.

Attachments:

A- Floor Plan with Test Locations

B - Tables 1-3, Radon Test Summary Spreadsheets

C- Laboratory Analytical Results

# ATTACHMENT A

# Floor Plan With Test Locations

# ATTACHMENT B

# Radon Test Summary Spreadsheet

## **Table Notes:**

AC- Activated Charcoal

ACI- Air Chek, Inc.

D- Duplicate

FB- Field Blank

KCI- KCI Technologies, Inc.

OB- Office Blank

PM- Project Manager

QC- Quality Control

Tab	Table 1- Radon Testing Results			
Kennedy High School				
Test F	Period: 12/16/2019-12/19	9/2019		
ICAN December 1				
Kit Number	Room / Area	Result		
9339801	170	< 0.3		
9339805	170	0.7		
9339826	209	1.9		
9339827	219A	0.7		
9339828	234	0.5		
9339829	215	0.9		
9339830	215WR	1.5		
9339831	219A	0.8		
9339832	232	1.1		
9339833	221	1		
9339834	223	1.1		
9339835	236	1		
9339837	238	1.1		
9339838	240	1		
9339844	169	2.2		
9339846	179	1		
9339847	179	0.7		
9339848	188	2.4		
9339849	184	< 0.3		
9339850	184	0.7		
9339851	184	1.2		
9339852	176A	1.6		
9339853	186	< 0.3		
9339854	182	1.4		
9339855	180	2.1		
9339856	168	< 0.3		
9339857	164	0.9		
9339858	170B	0.8		
9339859	163	6.8		
9339860	163	1.6		
9339861	165	1.3		
9339862	165B	1		
9339863	165C	8.0		
9339864	165C	0.7		
9339865	167	0.9		
9339866	169	1.5		
9339867	169	1.3		
9340401	136	0.7		
9340402	138	1.4		
9340403	151	< 0.3		
9340404	145	1		
9340405	144	8.0		
9340406	153	0.5		
9340407	143	< 0.3		
9340408	152	< 0.3		
9340409	156	0.5		
9340410	160	< 0.3		
9340411	162	0.9		
9340412	161	0.8		
9340413	149	1.2		

9340414	147	11
9340415	159A	0.7
9340416	149E	1.2
9340417	159	1.4
9340418	155	1.1
9340419	101D	1.4
9340420	101D	1.4
9340421	101D	< 0.3
9340422	101C	2.1
9340423	101A	1.4
9340424	101	1.7
9340425	103	1.8
9340426	105	1.4
9340427	107	2.7
9340428	109	1.8
9340429	102	3.5
9340430	111F	1.8
9340431	111F	1.5
9340432	111	2.2
9340433	111B	1.4
9340434	113	1.3
9340435	106	2.8
9340436	104C	2
9340437	AP3	3.2
9340438	100Q	2.1
9340439	100R	1.8
9340440	104K	2.2
9340441	104J	1.9
9340442	104H	1.5
9340443	104G	2.3
9340444	104D	1.6
9340445	104B	< 0.3
9340446	104B	1.6
9340447	100A	1.1
9340448	100	1.5
9340449	104B	1.6
9340450	104A	2
9340451	1047	1.6
9340451	100B	1.1
9340453	AP-100E	1.1
9340453	100K	1.5
9340455	100K	1.8
9340456	AP2	2.5
9340457	100F	1.3
9340457	1001	1.5
9340456	BSM	1.5
		1.2
9340460	BSM 122B	
9340461	122B	0.5 1.8
9340462	114	
9340463	121	1 5
9340464	121C	1.5
9340465	119	1
9340466	150	0.6
9340467	170	< 0.3
9340468	133	3.2

9340469	108B	1.6
9340470	108A	1.1
9340471	122	< 0.3
9340472	108C	1
9340473	122	< 0.3
9340474	120	0.7
9340476	112	0.8
9340477	110	1
9340478	121	1
9340479	129A	1
9340480	125A	2.1
9340481	134A	1.4
9340482	116	1.4
9340484	150	0.5
9340485	132	1.1
9340486	132B	1.7
9340487	131	1.1
9340488	126	1.2
9340489	139B	< 0.3
9340490	141	1
9340491	139	2.4
9340492	133	2.2
9340493	124	1.1
9340494	123	1.5
9340495	134	1.5
9340496	125	2.4
9340497	129	1.8
9340498	122	< 0.3
9340499	143	8.0
9340500	143	1.2
9339845	169	1.4
9341397	OFFICE BLANK	< 0.3
9340475	118	MISSING
9340483	149A	MISSING

Table 2- Radon Testing Results				
Kennedy High School				
	Test Period: 12/16/2019-12/19/2019			
Kit Number	QC Type	Room / Area	Result	
9340459	D	BSM	1.2	
9340445	FB	104B	<0.3	
9340446	D	104B	1.6	
9340431	D	111F	1.5	
9340421	FB	101D	<0.3	
9340420	D	101D	1.4	
9340408	D	152	<0.3	
9340407	FB	143	<0.3	
9340499	D	143	0.8	
9340492	D	133	2.2	
9340471	FB	122	<0.3	
9340473	D	122	<0.3	
9340478	D	121	1	
9340467	FB	170	<0.3	
9339805	D	170	0.7	
9339863	D	165C	0.8	
9339849	FB	184	<0.3	
9339850	D	184	0.7	
9339827	D	219A	0.7	
9341377	TRANSIT BLANK	NA	0.5	
9341379	TRANSIT BLANK	NA	< 0.3	
9341380	TRANSIT BLANK	NA	< 0.3	
9341398	TRANSIT BLANK	NA	< 0.3	

	Summary of Missed Locations				
John F. Kennedy High School					
Test Period: 12/16/2019 - 12/19/2019					
Kit Number	Room/Area	Result			
	NA				

Summary of Missing, Compromised and >/= 4 piC/L Tests				
	John F. Kennedy High School			
Test Period: 12/16/2019-12/19/2019				
Kit Number	Room/Area	Result		
9340475	*118	Missing		
9340483	*149a	Missing		
9339859	163	6.8		

Table Note:

<sup>\*</sup> Missing or Compromised Sample

# ATTACHMENT C

# Laboratory Analytical Results

## Radon test result report for: KENNEDY HS MAIN

Kit#	Room Id	Started	Ended	pCi/L	Analyzed
9340448	100	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$1.5 \pm 0.4$	2019-12-23
9340447	100A	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$1.1 \pm 0.4$	2019-12-23
9340452	100B	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$1.1 \pm 0.4$	2019-12-23
9340457	100F	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$1.3 \pm 0.4$	2019-12-23
9340458	100I	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$1.5 \pm 0.4$	2019-12-23
9340454	100K	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$1.5 \pm 0.4$	2019-12-23
9340455	100L	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$1.8 \pm 0.4$	2019-12-23
9340438	100Q	2019-12-16 @ 1:00 pm	2019-12-19 @ 8:00 am	$2.1 \pm 0.4$	2019-12-23
9340439	100R	2019-12-16 @ 1:00 pm	2019-12-19 @ 8:00 am	$1.8 \pm 0.4$	2019-12-23
9340424	101	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$1.7 \pm 0.4$	2019-12-23
9340423	101A	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$1.4 \pm 0.4$	2019-12-23
9340422	101C	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$2.1 \pm 0.4$	2019-12-23
9340421	101D	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	< 0.3	2019-12-23
9340419	101D	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$1.4 \pm 0.5$	2019-12-23
9340420	101D	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$1.4 \pm 0.4$	2019-12-23
9340429	102	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$3.5 \pm 0.5$	2019-12-23
9340425	103	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$1.8 \pm 0.4$	2019-12-23
9340451	104	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$1.6 \pm 0.4$	2019-12-23
9340450	104A	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$2.0 \pm 0.5$	2019-12-23
9340445	104B	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	< 0.3	2019-12-23
9340446	104B	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$1.6 \pm 0.4$	2019-12-23
9340449	104B	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$1.6 \pm 0.4$	2019-12-23
9340436	104C	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$2.0 \pm 0.4$	2019-12-23
9340444	104D	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$1.6 \pm 0.4$	2019-12-23
9340443	104G	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$2.3 \pm 0.5$	2019-12-23
9340442	104H	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$1.5 \pm 0.4$	2019-12-23
9340441	104J	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$1.9 \pm 0.5$	2019-12-23
9340440	104K	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$2.2 \pm 0.5$	2019-12-23
9340426	105	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$1.4 \pm 0.4$	2019-12-23
9340435	106	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$2.8 \pm 0.5$	2019-12-23
9340427	107	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$2.7 \pm 0.4$	2019-12-23
9340470	108A	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$1.1 \pm 0.4$	2019-12-23
9340469	108B	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$1.6 \pm 0.4$	2019-12-23
9340472	108C	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$1.0 \pm 0.4$	2019-12-23
9340428	109	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$1.8 \pm 0.4$	2019-12-23
9340477	110	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$1.0 \pm 0.4$	2019-12-23
9340432	111	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$2.2 \pm 0.4$	2019-12-23

## Radon test result report for: KENNEDY HS MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
9340433	111B	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$1.4 \pm 0.4$	2019-12-23
9340430	111F	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$1.8 \pm 0.4$	2019-12-23
9340431	111F	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$1.5 \pm 0.4$	2019-12-23
9340476	112	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$0.8 \pm 0.4$	2019-12-23
9340434	113	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$1.3 \pm 0.4$	2019-12-23
9340462	114	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$1.8 \pm 0.4$	2019-12-23
9340482	116	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$1.4 \pm 0.4$	2019-12-23
9340465	119	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$1.0 \pm 0.4$	2019-12-23
9340474	120	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$0.7 \pm 0.4$	2019-12-23
9340478	121	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$1.0 \pm 0.4$	2019-12-23
9340463	121	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$1.0 \pm 0.4$	2019-12-23
9340464	121C	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$1.5 \pm 0.4$	2019-12-23
9340473	122	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	< 0.3	2019-12-23
9340471	122	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	< 0.3	2019-12-23
9340498	122	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	< 0.3	2019-12-23
9340461	122B	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$0.5 \pm 0.4$	2019-12-23
9340494	123	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$1.5 \pm 0.4$	2019-12-23
9340493	124	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$1.1 \pm 0.4$	2019-12-23
9340496	125	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$2.4 \pm 0.4$	2019-12-23
9340480	125A	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$2.1 \pm 0.5$	2019-12-23
9340488	126	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$1.2 \pm 0.4$	2019-12-23
9340497	129	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$1.8 \pm 0.4$	2019-12-23
9340479	129A	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$1.0 \pm 0.4$	2019-12-23
9340487	131	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$1.1 \pm 0.4$	2019-12-23
9340485	132	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$1.1 \pm 0.4$	2019-12-23
9340486	132B	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$1.7 \pm 0.4$	2019-12-23
9340492	133	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$2.2 \pm 0.4$	2019-12-23
9340468	133	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$3.2 \pm 0.5$	2019-12-23
9340495	134	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$1.5 \pm 0.4$	2019-12-23
9340481	134A	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$1.4 \pm 0.4$	2019-12-23
9340401	136	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$0.7 \pm 0.4$	2019-12-23
9340402	138	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$1.4 \pm 0.4$	2019-12-23
9340491	139	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$2.4 \pm 0.4$	2019-12-23
9340489	139B	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	< 0.3	2019-12-23
9340490	141	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$1.0 \pm 0.4$	2019-12-23
9340499	143	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$0.8 \pm 0.4$	2019-12-23
9340407	143	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	< 0.3	2019-12-23

## Radon test result report for: KENNEDY HS MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
9340500	143	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$1.2 \pm 0.4$	2019-12-23
9340405	144	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$0.8 \pm 0.4$	2019-12-23
9340404	145	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$1.0 \pm 0.4$	2019-12-23
9340414	147	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$1.0 \pm 0.4$	2019-12-23
9340413	149	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$1.2 \pm 0.4$	2019-12-23
9340416	149E	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$1.2 \pm 0.4$	2019-12-23
9340484	150	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$0.5 \pm 0.4$	2019-12-23
9340466	150	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$0.6 \pm 0.4$	2019-12-23
9340403	151	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	< 0.3	2019-12-23
9340408	152	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	< 0.3	2019-12-23
9340406	153	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$0.5 \pm 0.4$	2019-12-23
9340418	155	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$1.1 \pm 0.4$	2019-12-23
9340409	156	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$0.5 \pm 0.4$	2019-12-23
9340417	159	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$1.4 \pm 0.4$	2019-12-23
9340415	159A	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$0.7 \pm 0.4$	2019-12-23
9340410	160	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	< 0.3	2019-12-23
9340412	161	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$0.8 \pm 0.4$	2019-12-23
9340411	162	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$0.9 \pm 0.4$	2019-12-23
9339859	163	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$6.8 \pm 0.6$	2019-12-23
9339860	163	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$1.6 \pm 0.4$	2019-12-23
9339857	164	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$0.9 \pm 0.4$	2019-12-23
9339861	165	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$1.3 \pm 0.4$	2019-12-23
9339862	165B	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$1.0 \pm 0.5$	2019-12-23
9339863	165C	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$0.8 \pm 0.4$	2019-12-23
9339864	165C	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$0.7 \pm 0.4$	2019-12-23
9339865	167	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$0.9 \pm 0.4$	2019-12-23
9339856	168	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	< 0.3	2019-12-23
9339866	169	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$1.5 \pm 0.4$	2019-12-23
9339867	169	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$1.3 \pm 0.4$	2019-12-23
9339844	169	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$2.2 \pm 0.4$	2019-12-23
9340467	170	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	< 0.3	2019-12-23
9339801	170	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	< 0.3	2019-12-23
9339805	170	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$0.7 \pm 0.4$	2019-12-23
9339858	170B	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$0.8 \pm 0.4$	2019-12-23
9339852	176A	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$1.6 \pm 0.4$	2019-12-23
9339846	179	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$1.0 \pm 0.4$	2019-12-23
9339847	179	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$0.7 \pm 0.4$	2019-12-23
		•			

## Radon test result report for: KENNEDY HS MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
9339855	180	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$2.1 \pm 0.5$	2019-12-23
9339854	182	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$1.4 \pm 0.4$	2019-12-23
9339851	184	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$1.2 \pm 0.4$	2019-12-23
9339849	184	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	< 0.3	2019-12-23
9339850	184	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$0.7 \pm 0.4$	2019-12-23
9339853	186	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	< 0.3	2019-12-23
9339848	188	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$2.4 \pm 0.5$	2019-12-23
9339826	209	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$1.9 \pm 0.4$	2019-12-23
9339829	215	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$0.9 \pm 0.4$	2019-12-23
9339830	215WR	2019-12-16 @ 1:00 pm	2019-12-19 @ 8:00 am	$1.5 \pm 0.4$	2019-12-23
9339831	219A	2019-12-16 @ 1:00 pm	2019-12-19 @ 8:00 am	$0.8 \pm 0.4$	2019-12-23
9339827	219A	2019-12-16 @ 1:00 pm	2019-12-19 @ 8:00 am	$0.7 \pm 0.4$	2019-12-23
9339833	221	2019-12-16 @ 1:00 pm	2019-12-19 @ 8:00 am	$1.0 \pm 0.4$	2019-12-23
9339834	223	2019-12-16 @ 1:00 pm	2019-12-19 @ 8:00 am	$1.1 \pm 0.4$	2019-12-23
9339832	232	2019-12-16 @ 1:00 pm	2019-12-19 @ 8:00 am	$1.1 \pm 0.4$	2019-12-23
9339828	234	2019-12-16 @ 1:00 pm	2019-12-19 @ 8:00 am	$0.5 \pm 0.4$	2019-12-23
9339835	236	2019-12-16 @ 1:00 pm	2019-12-19 @ 8:00 am	$1.0 \pm 0.4$	2019-12-23
9339837	238	2019-12-16 @ 1:00 pm	2019-12-19 @ 8:00 am	$1.1 \pm 0.4$	2019-12-23
9339838	240	2019-12-16 @ 1:00 pm	2019-12-19 @ 8:00 am	$1.0 \pm 0.4$	2019-12-23
9340453	AP-100E	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$1.2 \pm 0.4$	2019-12-23
9340456	AP2	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$2.5 \pm 0.4$	2019-12-23
9340437	AP3	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$3.2 \pm 0.4$	2019-12-23
9340460	BSM	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$1.3 \pm 0.4$	2019-12-23
9340459	BSM	2019-12-16 @ 12:00 pm	2019-12-19 @ 8:00 am	$1.2 \pm 0.4$	2019-12-23

# EXPOSURE IN BOWSER-MORNER RADON CHAMBER

		CLIENT ICCI Technologies Inc. Job Number 193598	_
		NOMINAL Conditions: Radon ConcpCi/L Rel. Hum% Temp	F
والمراون و		Date Start: 12   21   19 Date Stop: 12   23   19	•
4	5.	Time Start: Q815 Time Stop: Q815	
50.	25	(Graup 1) Device No.'s: (20) Char. Bays-	
ا ا	i/L	9340001 thru 9340020	
Temp °F_ RH %	wg pC		
F CC	Ø	55	
		Date Start: 12/21/19 Date Stop: 12/23/19	
		Time Start: <u>0829</u> Time Stop: <u>0820</u>	
- 02	5.4	Oran 2) Device No.'s: (20) Char. Bago-	
0,		9340021 thno 9340040	
lemp °F RH %	Avg pCi/L		
RH	Avg	54	
ſ	ſſ	Date Start: 12/21/19 Date Stop: 12/23/19	
		Time Start: 0825 Time Stop: 0823	
	7:0	(Group 3) Device No.'s: (20) Char. Bags-	
50.	8	9340041 thas 9340060	
H .	pCi/L		
lemp RH %	Avg p	33	

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

# Radon test result report for:

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

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
9340067	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	$25.1 \pm 2.4 \mathrm{D}$	2020-01-03
9340035	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	$22.5 \pm 2.3 \mathrm{D}$	2020-01-03
9340003	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	$25.2 \pm 2.4 \mathrm{D}$	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	$18.3 \pm 2.0 \mathrm{D}$	2020-01-03
9340040	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	$27.3 \pm 2.6 \mathrm{D}$	2020-01-03
9340008	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	$24.8 \pm 2.5 \mathrm{D}$	2020-01-03
9340094	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	$24.7 \pm 2.5 \mathrm{D}$	2020-01-03
9340099	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	$27.5 \pm 2.6 \mathrm{D}$	2020-01-03
9340077	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	$25.2 \pm 2.5 \mathrm{D}$	2020-01-03
9340045	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	$24.7 \pm 2.4 \mathrm{D}$	2020-01-03
9340013	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	$25.9 \pm 2.6 \mathrm{D}$	2020-01-03
9340018	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	$29.1 \pm 2.8 \mathrm{D}$	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	$27.2 \pm 2.6 \mathrm{D}$	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	$25.5 \pm 2.4 \mathrm{D}$	2020-01-03
9340055	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	$27.8 \pm 2.6 \mathrm{D}$	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	$28.3 \pm 2.7 \mathrm{D}$	2020-01-03
9340082	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	$26.4 \pm 2.6 \mathrm{D}$	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	$26.2 \pm 2.5 \mathrm{D}$	2020-01-03
9341719	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	$26.7 \pm 2.5 \mathrm{D}$	2020-01-03
9340001	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	$26.3 \pm 2.5 \mathrm{D}$	2020-01-03
9340087	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	$24.8 \pm 2.4 \mathrm{D}$	2020-01-03
9340070	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	$19.5 \pm 2.4 \mathrm{D}$	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	$25.2 \pm 2.4 \mathrm{D}$	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	$26.7 \pm 2.5 \mathrm{D}$	2020-01-03
9340075	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	$29.6 \pm 2.6 \mathrm{D}$	2020-01-03
9340043	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	$28.1 \pm 2.6 \mathrm{D}$	2020-01-03
9340011	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	$26.8 \pm 2.5 \mathrm{D}$	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	$26.8 \pm 2.5 \mathrm{D}$	2020-01-03

Radon test result report for: S N/A

Kit#	Room Id	Started	Ended	pCi/L	Analyzed
9340048	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	$25.5 \pm 2.4 \mathrm{D}$	2020-01-03
9340021	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	$26.7 \pm 2.6 \mathrm{D}$	2020-01-03
9341707	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	$25.8 \pm 2.4 \mathrm{D}$	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	$28.5 \pm 2.7 \mathrm{D}$	2020-01-03
9340026	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	$25.9 \pm 2.4 \mathrm{D}$	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	$25.7 \pm 2.4 \mathrm{D}$	2020-01-03
9340085	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	$26.9 \pm 2.5 \mathrm{D}$	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	$26.9 \pm 2.6 \mathrm{D}$	2020-01-03
9340090	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	$26.3 \pm 2.5 \mathrm{D}$	2020-01-03
9340073	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	$26.8 \pm 2.5 \mathrm{D}$	2020-01-03
9340041	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	$25.6 \pm 2.4 \mathrm{D}$	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	$28.0 \pm 2.6 \mathrm{D}$	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	$27.8 \pm 2.6 \mathrm{D}$	2020-01-03
9340051	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	$25.5 \pm 2.4 \mathrm{D}$	2020-01-03
9340056	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	$27.7 \pm 2.6 \mathrm{D}$	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	$28.9 \pm 2.6 \mathrm{D}$	2020-01-03
9340029	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	$23.0 \pm 2.3 D$	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: S N/A

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
9340002	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	$25.7 \pm 2.5 \mathrm{D}$	2020-01-03
9340088	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	$26.4 \pm 2.5 \mathrm{D}$	2020-01-03
9340071	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	$24.9 \pm 2.4 \mathrm{D}$	2020-01-03
9340039	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	$26.9 \pm 2.5 \mathrm{D}$	2020-01-03
9340007	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	$26.9 \pm 2.4 \mathrm{D}$	2020-01-03
9340093	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	$25.1 \pm 2.5 \mathrm{D}$	2020-01-03
9340098	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	$26.8 \pm 2.5 \mathrm{D}$	2020-01-03
9340076	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	$25.1 \pm 2.5 \mathrm{D}$	2020-01-03
9340044	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	$25.2 \pm 2.5 \mathrm{D}$	2020-01-03
9340012	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	$22.5 \pm 2.2 \mathrm{D}$	2020-01-03
9340017	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	$25.3 \pm 2.5 \mathrm{D}$	2020-01-03
9341703	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	$26.0 \pm 2.5 \mathrm{D}$	2020-01-03
9340049	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	$26.0 \pm 2.5 \mathrm{D}$	2020-01-03
9340022	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	$28.6 \pm 2.6 \mathrm{D}$	2020-01-03
9341708	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	$28.8 \pm 2.8 \text{ D}$	2020-01-03
9340054	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	$26.8 \pm 2.5 \mathrm{D}$	2020-01-03
9340059	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	$26.5 \pm 2.6 \mathrm{D}$	2020-01-03
9340027	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	$26.6 \pm 2.5 \mathrm{D}$	2020-01-03
9341713	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	$26.5 \pm 2.5 \mathrm{D}$	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	$26.5 \pm 2.5 \mathrm{D}$	2020-01-03
9340032	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	$26.1 \pm 2.4 \mathrm{D}$	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	$26.9 \pm 2.6 \mathrm{D}$	2020-01-03
9340069	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	$25.6 \pm 2.5 \mathrm{D}$	2020-01-03
9340037	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	$28.4 \pm 2.6 \mathrm{D}$	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	$26.5 \pm 2.5 \mathrm{D}$	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	$26.6 \pm 2.5 \mathrm{D}$	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

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

Radon test result report for: S
N/A

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



#### Engineers • Planners • Scientists • Construction Managers

Corporate Office: 936 Ridgebrook road • Sparks , Maryland 21152 • 410-316-7800 • (Fax) 410-316-7935

## **Radon Test Kit Chain of Custody**

Project Name: MCPS Radon 2019 Week 2

#### Name of Schools:

1.	Argy	le	M	.S.
----	------	----	---	-----

2. Banneker M.S.

3. Bel Pre E.S.

4. Bells Mill E.S.

5. Bethesda Maintenance Depot

6. Beverly Farms E.S.

7. Blake H.S.

8. Dufief E.S.

9. Briggs Chaney M.S.

10. Brookhaven E.S.

11. Burtonsville E.S.

12. Cabin John M.S.

13. Candelwood E.S.

14. Drew E.S.

15. Fallsmead E.S.

16. Farquhar M.S.

17. Kennedy H.S.

18. Luxmanor E.S.

19. Magruder H.S.

20. Redland M.S.

21. Shriver E.S.

22. Smith Center

23. Viers Mill E.S.

24. Wheaton H.S.

	Date	Initials
Radon Test Kits Deployed	12/16/19 to 12/17/19	
Radon Test Kits Collected	12/19/19 to 12/20/19	m
Radon Test Kits Shipped to Lab*	12/20/19	Th
Radon Test Kits Received by Lab*	12/23/19	1 h

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

# RADON SCREENING SURVEY – FOLLOW-UP JOHN F KENNEDY HIGH SCHOOL

# 1901 Randolph Rd, Silver Spring, Maryland 20902

## **EXECUTIVE SUMMARY**

Date of Test Report:	3/15/19	
Round of Testing:	Initial	
	Follow-up	
	Post Remediation	
# Rooms Tested	2	
# Rooms ≥ 4.0 pCi/L:	0	
Low Value:	1.3	
High Value:	3.9	
Confirmed Rooms ≥ 4.0 pCi/L US EPA	1	
Action Level		

# Summary of Sampling Events ≥ 4.0 pCi/L

Room	Result (pCi/L)	Result (pCi/L)	Average Result
	2/13/19 Initial	3/15/19 Follow-Up	(pCi/L)
125	3.8	1.6	2.7
125 (D)	4.2	1.3	2.8
167C	4.9	3.9	4.4



# MONTGOMERY COUNTY PUBLIC SCHOOLS RADON TESTING

# **Executive Summary: John F. Kennedy High School**

1901 Randolph Road, Silver Spring, MD 20902

Date of Test Report:	3/15/2019	
Round of Testing:	<u>Initial</u>	
	Follow-up	
	Post Remediation	
	2 Year Testing	
	5 Year Testing	
	HVAC Upgrade	
	Window Replacement	
	New Addition	
	New Facility	
# of Rooms Tested:	2	
# of Rooms ≥ 4.0 pCi/L:	0	
Low Value:	1.3	
High Value:	3.9	

**Project Status** 

**Retesting completed:** No further action at this time.



March 15, 2019

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

Re: Radon Testing Services

Location: John F. Kennedy High School

1901 Randolph Road Silver Spring, MD 20902

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 John F. Kennedy High School, located at 1901 Randolph Road, Silver Spring, MD 20902 (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 three (3) 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  $\leq 65$ °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

Non-April Fourth

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			
John F. Kennedy High School			
•	Testing period: 2/25/19 - 2/28/19		
Kit Number	Room / Area	Result (pCi/L)	
3923367	125	1.6	
3923368	125 (D)	1.3	
3923369	167C	3.9	

# Table Notes:

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

# **ATTACHMENT C**

**Laboratory Analytical Results** 



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

Laboratory Report for:

Property Tested: Project # 04481387-1

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

MCPS Radon Survey John F Kennedy HS 1901 Randolph Road

Glenmont MD 20902

Log Number	Device Number		Test Expo	sure Duration:	Area Tested	Result pCi/L
3220647	3923367	02/25/2019	4:54 pm	02/28/2019 4:22 pr	n First Floor Room 125	1.6
3220648	3923368	02/25/2019	4:54 pm	02/28/2019 4:22 pr	First Floor Room 125 Duplicate	1.3
3220649	3923369	02/25/2019	5:12 pm	02/28/2019 4:27 pr	n First Floor Room 167C	3.9

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

Distributed by: Intertek-PSI (VA)

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

Report Reviewed By: \_

Report Approved By:

Shawn Price, Director of Laboratory Operations, AccuStar Labs

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

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.



# MONTGOMERY COUNTY PUBLIC SCHOOLS RADON TESTING

# **Executive Summary: John F. Kennedy High School**

1901 Randolph Road, Silver Spring, MD 20902

Date of Test Report:	2/13/2018
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:	116
# of Rooms ≥ 4.0 pCi/L:	2
Low Value:	< 0.4
High Value:	4.9
Rooms with Results	125 (D)
≥ 4.0 pCi/L:	167C

**Project Status** 

Initial testing complete: Re-test needed for results ≥ 4.0 pCi/L



February 13, 2019

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

Re: Radon Testing Services

Location: John F. Kennedy High School

1901 Randolph Road Silver Spring, MD 20902

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 John F. Kennedy High School, located at 1901 Randolph Road, Silver Spring, MD 20902 (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 <a href="https://www.montgomerycountymd.gov/dep/air/radon">www.montgomerycountymd.gov/dep/air/radon</a> or <a href="https://www.montgomerycountymd.gov/dep/air/radon">www.montgomerycoun

PSI visited the site on November 13, 2018 and deployed one hundred thirty-eight (138) 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°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 nCi/l	125 (D)	4.2
≥ 4.0 pCi/L	167C	4.9
≤ 4.0 pCi/L	See Attach	nment B

Notes:

D - Duplicate Sample

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

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

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



Respectfully Submitted,

**INTERTEK-PSI** 

Nand Kaushik, P.E.

Department Manager, Environmental Services

Nand.Kaushik@intertek.com

Non-April Coulin

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					
<b>T</b>	John F. Kennedy High School					
Testing period: 11/13/18 - 11/16/18  Kit Number Room / Area Result (pCi/L)						
3919845	100	1.3				
3918748	101	1.0				
3918743	102	2.8				
3918747	103	1.5				
3918760	104	1.8				
3918746	105	1.5				
3918752	106	2.6				
3918745	107	2.2				
3918744	109	1.5				
3918790	110	2.0				
3918742	111	2.7				
3918789	112	0.7				
3918768	113	0.6				
3918788	114	1.5				
3918787	116	1.1				
3918783	118	1.5				
3918763	119	0.5				
3918782	120	0.7				
3918761	121	< 0.4				
3918780	122	< 0.4				
3918786	123	2.9				
3918779	124	0.9				
3918784	125	3.8				
3918777	126	0.9				
3918775	129	1.2				
3918774	131	1.2				
3918728	132	1.9				
3918772	133	1.8				
3918725	136	0.6				
3918724	138	2.1				
3918771	139	1.9				
3918723	141	0.6				
3918722	143	0.7				
3918798	144	1.1				
3918800	145	0.6				
3918797	147	0.8				
3918770	149	0.8				
3919391	150	0.8				
3919392	150	0.8				
3918791	151	0.8				
3918732	153	< 0.4				
3918731	155	0.7				
3918733	156	0.4				

	Radon Testing Results	1				
Tax	John F. Kennedy High School					
Testing period: 11/13/18 - 11/16/18  Kit Number Room / Area Result (pCi/L)						
3918739	157	1.9				
3918738	159	0.8				
3918737	160	< 0.4				
3918735	161	0.6				
3918713	162	0.8				
3919403	164	0.9				
3918720	165	2.5				
3919401	166	1.9				
3918717	167	2.1				
3918795	168	0.6				
3918792	170	0.5				
3919395	171	2.5				
3918716	171	2.9				
3919393	176	0.4				
3881250	179	0.6				
3881230	179	1.0				
3919396	182	2.4				
3919399	184	1.7				
3919398	188	1.8				
3919400	190	2.7				
3918846	209	2.0				
3918842	215	1.0				
3918843	215	1.0				
3918841	234	0.5				
3918848	260	0.8				
3918847	264	0.9				
3918849	269	0.9				
3918850	272	0.8				
3919846	100A	1.1				
3919848	100B	0.7				
3919849	100E	1.5				
3919850	100F	1.2				
3919411	1001	1.0				
3919412 3919413	100L 100M	1.5 1.3				
3919414	100N	2.6				
3919414	1000	2.4				
3918750	101A	1.5				
3918749	101A 101C	1.3				
3918740	101D	1.2				
3918759	101B	1.9				
3918758	104A	2.0				
3919419	104C	1.8				

Radon Testing Results							
John F. Kennedy High School							
Testing period: 11/13/18 - 11/16/18							
Kit Number	Room / Area	Result (pCi/L)					
3918757	104D	1.3					
3918755	104G	2.0					
3918754	104H	1.4					
3918753	104J	1.9					
3919420	104K	0.9					
3918714	104K	1.5					
3918766	108A	1.3					
3918764	108B	1.5					
3918767	108C	0.9					
3919417	110Q	2.5					
3918715	111B	1.2					
3918762	121C	0.4					
3918781	122B	0.6					
3918776	129A	1.0					
3918729	132A	2.0					
3918730	132B	2.7					
3918773	133B	1.8					
3918726	139B	0.5					
3918769	149A	1.1					
3918799	149E	0.7					
3919409	163D	1.4					
3919410	163E	0.7					
3919408	163G	1.4					
3918718	167B	3.2					
3918719	167C	4.9					
3918793	170A	< 0.4					
3918794	170B	0.4					
3919394	176A	0.7					
3918844	215 - Workroom	0.8					
3919405	Auditorium	1.6					
3919404	Auditorium	1.8					
3919406	Auditorium Stage	1.7					
3919418	Building Services	1.5					
3919844	Outside Concession	0.6					
3919407	Projector Room	1.8					
3918712	Room Right of 100Q	1.3					

Radon Testing Results							
John F. Kennedy High School							
Te	sting period: 11/13/18 - 11/16	5/18					
Kit Number	QC Type	Result (pCi/L)					
3919847	100A (D)	0.9					
3919415	100N (D)	2.8					
3918756	104G (D)	2.2					
3918765	108B (D)	1.5					
3918785	125 (D)	4.2					
3918778	126 (D)	0.9					
3918721	143 (D)	0.8					
3918736	161 (D)	1.0					
3918734	162 (D)	0.7					
3919402	166 (D)	2.1					
3919397	182 (D)	2.5					
3918845	215 - Workroom (D)	1.0					
3918817	Field Blank	< 0.4					
3918820	Field Blank	< 0.4					
3917862	Office Blank	< 0.4					
3918819	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** 



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 JFK HS 1901 Randolph Road Silver Spring MD 20902

Log Number	Device Number	Test Exposu	re Duration:	Area Tested	Result (pCi/L)
3196186	3918712	11/13/2018 6:27 am	11/16/2018 6:20 am	First Floor Room 100Q Right	1.3
3196187	3918714	11/13/2018 6:28 am	11/16/2018 6:21 am	First Floor Room 104K	1.5
3196188	3918753	11/13/2018 6:29 am	11/16/2018 6:22 am	First Floor Room 104J	1.9
3196189	3918754	11/13/2018 6:30 am	11/16/2018 6:23 am	First Floor Room 104H	1.4
3196190	3918755	11/13/2018 6:31 am	11/16/2018 6:25 am	First Floor Room 104G	2.0
3196191	3918756	11/13/2018 6:31 am	11/16/2018 6:25 am	First Floor Room 104G Duplicate	2.2
3196192	3918757	11/13/2018 6:32 am	11/16/2018 6:26 am	First Floor Room 104D	1.3
3196193	3918758	11/13/2018 6:33 am	11/16/2018 6:27 am	First Floor Room 104B	2.0
3196194	3918759	11/13/2018 6:34 am	11/16/2018 6:28 am	First Floor Room 104A	1.9
3196195	3918760	11/13/2018 6:35 am	11/16/2018 6:29 am	First Floor Room 104	1.8

Comment: A copy of this report was e-mailed to PSI - VA.

Test Performed By: Nan Lin Lian Zadeng

Distributed by: Intertek-PSI (VA)

Date Received: 11/17/2018 11/17/2018 Date Analyzed: 11/17/2018 Date Reported: 11/28/2018 Date Logged:

Report Reviewed By: \_

Disclaimer:

Report Approved By:

Shawn Price, Director of Laboratory Operations, AccuStar Labs

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



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

Laboratory Report for:

Property Tested: Project # 04481387-1

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

MCPS Radon Survey JFK HS 1901 Randolph Road Silver Spring MD 20902

Log Number	Device Number	Test Exposu	re Duration:	Area Tested	Result (pCi/L)
3196196	3918752	11/13/2018 6:36 am	11/16/2018 6:30 am	First Floor Room 106	2.6
3196197	3918742	11/13/2018 6:38 am	11/16/2018 6:31 am	First Floor Room 111	2.7
3196198	3918715	11/13/2018 6:40 am	11/16/2018 6:32 am	First Floor Room 111B	1.2
3196199	3918743	11/13/2018 6:42 am	11/16/2018 6:33 am	First Floor Room 102	2.8
3196200	3918744	11/13/2018 6:43 am	11/16/2018 6:34 am	First Floor Room 109	1.5
3196201	3918745	11/13/2018 6:44 am	11/16/2018 6:35 am	First Floor Room 107	2.2
3196202	3918746	11/13/2018 6:45 am	11/16/2018 6:36 am	First Floor Room 105	1.5
3196203	3918747	11/13/2018 6:46 am	11/16/2018 6:37 am	First Floor Room 103	1.5
3196204	3918748	11/13/2018 6:47 am	11/16/2018 6:38 am	First Floor Room 101	1.0
3196205	3918750	11/13/2018 6:48 am	11/16/2018 6:39 am	First Floor Room 101A	1.5

Comment: A copy of this report was e-mailed to PSI - VA.

Test Performed By: Nan Lin Lian Zadeng

Distributed by: Intertek-PSI (VA)

Date Received: 11/17/2018 Date Logged: 11/17/2018 Date Analyzed: 11/17/2018 Date Reported: 11/28/2018

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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 JFK HS 1901 Randolph Road Silver Spring MD 20902

Log Number	Device Number	Test Exposu	re Duration:	Area Tested	Result (pCi/L)
3196206	3918749	11/13/2018 6:49 am	11/16/2018 6:40 am	First Floor Room 101C	1.3
3196207	3918740	11/13/2018 6:50 am	11/16/2018 6:41 am	First Floor Room 101D	1.2
3196208	3918739	11/13/2018 6:52 am	11/16/2018 6:42 am	First Floor Room 157	1.9
3196209	3918738	11/13/2018 6:53 am	11/16/2018 6:43 am	First Floor Room 159	0.8
3196210	3918737	11/13/2018 6:54 am	11/16/2018 6:44 am	First Floor Room 160	< 0.4
3196211	3918735	11/13/2018 6:55 am	11/16/2018 6:45 am	First Floor Room 161	0.6
3196212	3918736	11/13/2018 6:55 am	11/16/2018 6:45 am	First Floor Room 161 Duplicate	1.0
3196213	3918713	11/13/2018 6:57 am	11/16/2018 6:48 am	First Floor Room 162	0.8
3196214	3918734	11/13/2018 6:57 am	11/16/2018 6:48 am	First Floor Room 162 Duplicate	0.7
3196215	3918731	11/13/2018 6:59 am	11/16/2018 6:49 am	First Floor Room 155	0.7

Comment: A copy of this report was e-mailed to PSI - VA.

Test Performed By: Nan Lin Lian Zadeng

Distributed by: Intertek-PSI (VA)

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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 JFK HS 1901 Randolph Road Silver Spring MD 20902

Log Number	Device Number	Test Exposu	re Duration:	Area Tested	Result (pCi/L)
3196216	3918732	11/13/2018 7:01 am	11/16/2018 6:50 am	First Floor Room 153	< 0.4
3196217	3918733	11/13/2018 7:01 am	11/16/2018 6:51 am	First Floor Room 156	0.4
3196218	3918791	11/13/2018 7:03 am	11/16/2018 6:52 am	First Floor Room 151	0.8
3196219	3918792	11/13/2018 7:05 am	11/16/2018 6:53 am	First Floor Room 170	0.5
3196220	3918793	11/13/2018 7:06 am	11/16/2018 6:54 am	First Floor Room 170A	< 0.4
3196221	3918794	11/13/2018 7:06 am	11/16/2018 6:55 am	First Floor Room 170B	0.4
3196222	3918795	11/13/2018 7:08 am	11/16/2018 6:56 am	First Floor Room 168	0.6
3196223	3919410	11/13/2018 7:49 am	11/16/2018 8:10 am	First Floor Room 163E	0.7
3196224	3918797	11/13/2018 7:10 am	11/16/2018 6:58 am	First Floor Room 147	0.8
3196225	3918798	11/13/2018 7:11 am	11/16/2018 6:59 am	First Floor Room 144	1.1

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Test Performed By: Nan Lin Lian Zadeng

Distributed by: Intertek-PSI (VA)

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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 JFK HS 1901 Randolph Road Silver Spring MD 20902

Log Number	Device Number	Test Exposu	re Duration:	Area Tested	Result (pCi/L)
3196226	3918799	11/13/2018 7:13 am	11/16/2018 7:00 am	First Floor Room 149E	0.7
3196227	3918800	11/13/2018 7:14 am	11/16/2018 7:01 am	First Floor Room 145	0.6
3196228	3918721	11/13/2018 7:16 am	11/16/2018 7:02 am	First Floor Room 143	0.8
3196229	3918722	11/13/2018 7:16 am	11/16/2018 7:02 am	First Floor Room 143 Duplicate	0.7
3196230	3918723	11/13/2018 7:17 am	11/16/2018 7:04 am	First Floor Room 141	0.6
3196231	3918724	11/13/2018 7:18 am	11/16/2018 7:05 am	First Floor Room 138	2.1
3196232	3918725	11/13/2018 7:19 am	11/16/2018 7:06 am	First Floor Room 136	0.6
3196233	3918726	11/13/2018 7:20 am	11/16/2018 7:07 am	First Floor Room 139B	0.5
3196234	3919844	11/13/2018 7:21 am	11/16/2018 7:53 am	First Floor Room Concession	0.6
3196235	3918728	11/13/2018 7:22 am	11/16/2018 7:09 am	First Floor Room 132	1.9

Comment: A copy of this report was e-mailed to PSI - VA.

Test Performed By: Nan Lin Lian Zadeng

Distributed by: Intertek-PSI (VA)

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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 JFK HS 1901 Randolph Road Silver Spring MD 20902

Log Number	Device Number	Test Exposu	re Duration:	Area Tested	Result (pCi/L)
3196236	3918729	11/13/2018 7:23 am	11/16/2018 7:10 am	First Floor Room 132A	2.0
3196237	3918730	11/13/2018 7:23 am	11/16/2018 7:11 am	First Floor Room 132B	2.7
3196238	3918771	11/13/2018 7:25 am	11/16/2018 7:12 am	First Floor Room 139	1.9
3196239	3918772	11/13/2018 7:26 am	11/16/2018 7:13 am	First Floor Room 133	1.8
3196240	3918773	11/13/2018 7:28 am	11/16/2018 7:14 am	First Floor Room 133B	1.8
3196241	3918774	11/13/2018 7:29 am	11/16/2018 7:15 am	First Floor Room 131	1.2
3196242	3918775	11/13/2018 7:30 am	11/16/2018 7:16 am	First Floor Room 129	1.2
3196243	3918776	11/13/2018 7:30 am	11/16/2018 7:17 am	First Floor Room 129A	1.0
3196244	3918777	11/13/2018 7:32 am	11/16/2018 7:19 am	First Floor Room 126	0.9
3196245	3918778	11/13/2018 7:32 am	11/16/2018 7:19 am	First Floor Room 126 Duplicate	0.9

Comment: A copy of this report was e-mailed to PSI - VA.

Test Performed By: Nan Lin Lian Zadeng

Distributed by: Intertek-PSI (VA)

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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 JFK HS 1901 Randolph Road Silver Spring MD 20902

Log Number	Device Number	Test Exposu	re Duration:	Area Tested	Result (pCi/L)
3196246	3918779	11/13/2018 7:35 am	11/16/2018 7:20 am	First Floor Room 124	0.9
3196247	3918780	11/13/2018 7:36 am	11/16/2018 7:21 am	First Floor Room 122	< 0.4
3196248	3918781	11/13/2018 7:38 am	11/16/2018 7:22 am	First Floor Room 122B	0.6
3196249	3918782	11/13/2018 7:39 am	11/16/2018 7:23 am	First Floor Room 120	0.7
3196250	3918783	11/13/2018 7:40 am	11/16/2018 7:24 am	First Floor Room 118	1.5
3196251	3918784	11/13/2018 7:41 am	11/16/2018 7:25 am	First Floor Room 125	3.8
3196252	3918785	11/13/2018 7:41 am	11/16/2018 7:25 am	First Floor Room 125 Duplicate	4.2
3196253	3918786	11/13/2018 7:42 am	11/16/2018 7:27 am	First Floor Room 123	2.9
3196254	3918787	11/13/2018 7:43 am	11/16/2018 7:28 am	First Floor Room 116	1.1
3196255	3918788	11/13/2018 7:44 am	11/16/2018 7:29 am	First Floor Room 114	1.5

Comment: A copy of this report was e-mailed to PSI - VA.

Test Performed By: Nan Lin Lian Zadeng

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Date Received: 11/17/2018 11/17/2018 Date Analyzed: 11/17/2018 Date Reported: 11/28/2018 Date Logged:

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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 JFK HS 1901 Randolph Road Silver Spring MD 20902

Log Number	Device Number	Test Exposu	re Duration:	Area Tested	Result (pCi/L)
3196256	3918789	11/13/2018 7:45 am	11/16/2018 7:30 am	First Floor Room 112	0.7
3196257	3918790	11/13/2018 7:46 am	11/16/2018 7:31 am	First Floor Room 110	2.0
3196258	3918761	11/13/2018 7:48 am	11/16/2018 7:32 am	First Floor Room 121	< 0.4
3196259	3918762	11/13/2018 7:49 am	11/16/2018 7:33 am	First Floor Room 121C	0.4
3196260	3918763	11/13/2018 7:50 am	11/16/2018 7:34 am	First Floor Room 119	0.5
3196261	3918764	11/13/2018 7:51 am	11/16/2018 7:35 am	First Floor Room 108B	1.5
3196262	3918765	11/13/2018 7:51 am	11/16/2018 7:35 am	First Floor Room 108B Duplicate	1.5
3196263	3918766	11/13/2018 7:53 am	11/16/2018 7:37 am	First Floor Room 108A	1.3
3196264	3918767	11/13/2018 7:55 am	11/16/2018 7:38 am	First Floor Room 108C	0.9
3196265	3918768	11/13/2018 7:56 am	11/16/2018 7:39 am	First Floor Room 113	0.6

Comment: A copy of this report was e-mailed to PSI - VA.

Test Performed By: Nan Lin Lian Zadeng

Distributed by: Intertek-PSI (VA)

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Laboratory Report for:

Property Tested: Project # 04481387-1

Intertek-PSI (VA)
2930 Eskridge Road
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MCPS Radon Survey JFK HS 1901 Randolph Road Silver Spring MD 20902

Log Number	Device Number	Test Exposu	re Duration:	Area Tested	Result (pCi/L)
3196266	3918769	11/13/2018 7:58 am	11/16/2018 7:40 am	First Floor Room 149A	1.1
3196267	3918770	11/13/2018 7:59 am	11/16/2018 7:41 am	First Floor Room 149	0.8
3196268	3919391	11/13/2018 8:08 am	11/16/2018 7:42 am	First Floor Room 150	0.8
3196269	3919392	11/13/2018 8:09 am	11/16/2018 7:43 am	First Floor Room 150	0.8
3196270	3919393	11/13/2018 8:12 am	11/16/2018 7:44 am	First Floor Room 176	0.4
3196271	3919394	11/13/2018 8:13 am	11/16/2018 7:45 am	First Floor Room 176A	0.7
3196272	3919395	11/13/2018 8:19 am	11/16/2018 7:46 am	First Floor Room 171	2.5
3196273	3919396	11/13/2018 8:25 am	11/16/2018 7:47 am	First Floor Room 182	2.4
3196274	3919397	11/13/2018 8:25 am	11/16/2018 7:47 am	First Floor Room 182 Duplicate	2.5
3196275	3919398	11/13/2018 8:30 am	11/16/2018 7:49 am	First Floor Room 188	1.8

Comment: A copy of this report was e-mailed to PSI - VA.

Test Performed By: Nan Lin Lian Zadeng

Distributed by: Intertek-PSI (VA)

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Laboratory Report for:

Property Tested: Project # 04481387-1

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

MCPS Radon Survey JFK HS 1901 Randolph Road Silver Spring MD 20902

Log Number	Device Number	Test Exposu	re Duration:	Area Tested	Result (pCi/L)
3196276	3919399	11/13/2018 8:34 am	11/16/2018 7:50 am	First Floor Room 184	1.7
3196277	3919400	11/13/2018 8:40 am	11/16/2018 7:51 am	First Floor Room 190	2.7
3196278	3918716	11/13/2018 8:47 am	11/16/2018 7:52 am	First Floor Room 171	2.9
3196279	3918717	11/13/2018 9:09 am	11/16/2018 7:53 am	First Floor Room 167	2.1
3196280	3918718	11/13/2018 9:10 am	11/16/2018 7:54 am	First Floor Room 167B	3.2
3196281	3918719	11/13/2018 9:11 am	11/16/2018 7:55 am	First Floor Room 167C	4.9
3196282	3918720	11/13/2018 9:13 am	11/16/2018 7:56 am	First Floor Room 165	2.5
3196283	3919401	11/13/2018 9:17 am	11/16/2018 7:59 am	First Floor Room 166	1.9
3196284	3919402	11/13/2018 9:17 am	11/16/2018 8:00 am	First Floor Room 166 Duplicate	2.1
3196285	3919403	11/13/2018 9:20 am	11/16/2018 8:01 am	First Floor Room 164	0.9

Comment: A copy of this report was e-mailed to PSI - VA.

Test Performed By: Nan Lin Lian Zadeng

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Laboratory Report for:

Property Tested: Project # 04481387-1

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

MCPS Radon Survey JFK HS 1901 Randolph Road Silver Spring MD 20902

Log Number	Device Number	Test Exposur	re Duration:	Area Tested	Result (pCi/L)
3196286	3919404	11/13/2018 9:26 am	11/16/2018 8:02 am	First Floor Room AUD	1.8
3196287	3919405	11/13/2018 9:26 am	11/16/2018 8:03 am	First Floor Room AUD	1.6
3196288	3919406	11/13/2018 9:28 am	11/16/2018 8:04 am	First Floor Room AUD Stage	1.7
3196289	3919407	11/13/2018 9:45 am	11/16/2018 8:05 am	First Floor Proj Room	1.8
3196290	3919408	11/13/2018 9:46 am	11/16/2018 8:06 am	First Floor Room 163G	1.4
3196291	3919409	11/13/2018 9:47 am	11/16/2018 8:07 am	First Floor Room 163D	1.4
3196292	3919845	11/13/2018 10:07 am	11/16/2018 8:08 am	First Floor Room 100	1.3
3196293	3919846	11/13/2018 10:13 am	11/16/2018 8:09 am	First Floor Room 100A	1.1
3196294	3919847	11/13/2018 10:13 am	11/16/2018 8:10 am	First Floor Room 100A DUP	0.9
3196295	3919848	11/13/2018 10:14 am	11/16/2018 8:11 am	First Floor Room 100B	0.7

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Laboratory Report for:

Property Tested: Project # 04481387-1

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

MCPS Radon Survey JFK HS 1901 Randolph Road Silver Spring MD 20902

Log Number	Device Number	Test Exposur	re Duration:	Area Tested	Result (pCi/L)
3196296	3919849	11/13/2018 10:16 am	11/16/2018 8:12 am	First Floor Room 100E	1.5
3196297	3919850	11/13/2018 10:17 am	11/16/2018 8:13 am	First Floor Room 100F	1.2
3196298	3919411	11/13/2018 10:18 am	11/16/2018 8:14 am	First Floor Room 100I	1.0
3196299	3919412	11/13/2018 10:19 am	11/16/2018 8:15 am	First Floor Room 100L	1.5
3196300	3919413	11/13/2018 10:21 am	11/16/2018 8:16 am	First Floor Room 100M	1.3
3196301	3919414	11/13/2018 10:23 am	11/16/2018 8:17 am	First Floor Room 100N	2.6
3196302	3919415	11/13/2018 10:23 am	11/16/2018 8:18 am	First Floor Room 100N Duplicate	2.8
3196303	3919416	11/13/2018 10:29 am	11/16/2018 8:19 am	First Floor Room 100O	2.4
3196304	3919417	11/13/2018 10:31 am	11/16/2018 8:20 am	First Floor Room 110Q	2.5
3196305	3919418	11/13/2018 10:32 am	11/16/2018 8:21 am	First Floor Bldg Service Office	1.5

Comment: A copy of this report was e-mailed to PSI - VA.

Test Performed By: Nan Lin Lian Zadeng

Distributed by: Intertek-PSI (VA)

Date Received: 11/17/2018 11/17/2018 Date Analyzed: 11/17/2018 Date Reported: 11/28/2018 Date Logged:

Report Reviewed By: \_

Report Approved By:

Shawn Price, Director of Laboratory Operations, AccuStar Labs

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

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.



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 JFK HS 1901 Randolph Road Silver Spring MD 20902

Log Number	Device Number	Test Exposur	e Duration:	Area Tested	Result (pCi/L)
3196306	3919419	11/13/2018 10:34 am	11/16/2018 8:22 am	First Floor Room 104C	1.8
3196307	3919420	11/13/2018 10:37 am	11/16/2018 8:23 am	First Floor Room 104K	0.9
3196308	3918841	11/13/2018 10:57 am	11/16/2018 8:24 am	First Floor Room 234	0.5
3196309	3918842	11/13/2018 11:02 am	11/16/2018 8:25 am	First Floor Room 215	1.0
3196310	3918843	11/13/2018 11:02 am	11/16/2018 8:26 am	First Floor Room 215	1.0
3196311	3918844	11/13/2018 11:03 am	11/16/2018 8:27 am	First Floor Room 215	0.8
3196312	3918845	11/13/2018 11:03 am	11/16/2018 8:28 am	First Floor Room 215 Duplicate	1.0
3196313	3918846	11/13/2018 11:07 am	11/16/2018 8:29 am	First Floor Room 209	2.0
3196314	3918847	11/13/2018 11:09 am	11/16/2018 8:30 am	First Floor Room 264	0.9
3196315	3918848	11/13/2018 11:11 am	11/16/2018 8:31 am	First Floor Room 260	0.8

Comment: A copy of this report was e-mailed to PSI - VA.

Test Performed By: Nan Lin Lian Zadeng

Distributed by: Intertek-PSI (VA)

Date Received: 11/17/2018 11/17/2018 Date Analyzed: 11/17/2018 Date Reported: 11/28/2018 Date Logged:

Report Reviewed By: \_

Disclaimer:

Report Approved By:

Shawn Price, Director of Laboratory Operations, AccuStar Labs

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



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

Laboratory Report for:

Property Tested: Project # 04481387-1

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

MCPS Radon Survey JFK HS 1901 Randolph Road Silver Spring MD 20902

Log Number	Device Number	Test Exposu	re Duration:	Area Tested	Result (pCi/L)
3196316	3918849	11/13/2018 11:13 am	11/16/2018 8:32 am	First Floor Room 269	0.9
3196317	3918850	11/13/2018 11:16 am	11/16/2018 8:33 am	First Floor Room 272	0.8
3196318	3917862	11/13/2018 6:00 am	11/16/2018 4:00 pm	Office Blank	< 0.4
3196319	3918819	11/13/2018 6:00 am	11/16/2018 4:00 pm	Trip Blank	< 0.4
3196320	3918817	11/13/2018 6:27 am	11/16/2018 8:33 am	Field Blank	< 0.4
3196321	3918820	11/13/2018 6:27 am	11/16/2018 8:33 am	Field Blank	< 0.4

Comment: A copy of this report was e-mailed to PSI - VA.

Test Performed By: Nan Lin Lian Zadeng

Distributed by: Intertek-PSI (VA)

Date Received: 11/17/2018 Date Logged: 11/17/2018 Date Analyzed: 11/17/2018 Date Reported: 11/28/2018

Report Reviewed By: \_

Disclaimer:

Report Approved By:

Shawn Price, Director of Laboratory Operations, AccuStar Labs

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



NELAC NY 11769 NRPP 103216 AL NRSB ARL0017 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 1901 Randolph Road

Silver Spring MD 20902

Log Number	Device Number		Test Expos	sure Duration:	Area Tested	Result pCi/L
2393050	3881230 1	11/13/2018	9:05 am	11/16/2018 7:57 am	Floor First Room 179	1.0
2393051	3881250 1	11/13/2018	9:05 am	11/16/2018 7:58 am	Floor First Room 179	0.6

Comment: 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: 11/19/2018 Date Reported: 12/17/2018

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

Report Approved By:

Disclaimer:

Shawn Price, Director of Laboratory Operations, AccuStar Labs

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



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 Device Number 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	3 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	3 9:47 am 12/10/2018 9:47 am	Spike	35.0
3204130 3926836 12/07/2018	3 9:47 am 12/10/2018 9:47 am	Spike	34.5
3204131 3926837 12/07/2018	3 9:47 am 12/10/2018 9:47 am	Spike	34.6
3204132 3926838 12/07/2018	3 9:47 am 12/10/2018 9:47 am	Spike	34.3
3204133 3926839 12/07/2018	3 9:47 am 12/10/2018 9:47 am	Spike	33.2
3204134 3926840 12/07/2018	3 9:47 am 12/10/2018 9:47 am	Spike	34.0

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

Test Performed By: Unknown

Distributed by: Intertek-PSI (VA)

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

Report Reviewed By: \_

Report Approved By:

Shawn Price, Director of Laboratory Operations, AccuStar Labs

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

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

CLIENT Intentell - PSI		Job Number 187732	
NOMINAL Conditions: Radon Conc 39.6	pCi/L Rel. Hum	49.1 % Temp. 70.1	
Date Start: 12/7/18 Date Stop: 12/10/18	Pate Start:	Date Stop:	
Time Start: <u>0947</u> Time Stop: <u>0947</u>	Time Start:	Time Stop:	
Device No.'s: (10) Char. Cans-	Device No.'s:		
3926831 Thro 3926840			
GU Loft			
Date Start: Date Stop:	Date Start:	Date Stop:	
Time Start: Time Stop:	Time Start:	Time Stop:	
Device No.'s:	Device No.'s:_	74	
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 =  $7 \mu R/h$  Elevation = 820 ft



# **Chain of Custody**

Project Name: MCPS Radon Survey 2018

## Name of Schools:

1. Highland View ES

2. Kemp Mill ES

3. Sligo Creek ES

4. Highland ES

5. Kennedy HS

6. EB Lee MS

7. Forest Knolls ES

8. Galway ES

9. Wheaton HS

10. Briggs Chaney MS

11. Cannon Rd ES

12. Cloverly ES

13. Springbrook HS

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

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



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## MCPS RADON TESTING

Executive Summary: John F. Kennedy High School

Date of Test Report:	11/28/2016
Round of Testing:	Initial
	Follow-up
	Post Remediation
# Rooms Tested:	5
# Rooms $\geq$ 4.0 pCi/L:	0
Low Value:	< 0.3
High Value:	3.3

## Project Status:

Post remediation testing completed; No further action at this time.

KCI TECHNOLOGIES, INC. WWW.kci.com

#### ENGINEERS • PLANNERS • SCIENTISTS • CONSTRUCTION MANAGERS

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

November 28, 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 # 12146341.60

Location: John F. Kennedy High School

1901 Randolph Road

Silver Spring, Maryland 20902

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 John F. Kennedy High School, located at 1901 Randolph Road in Silver Spring, Maryland 20902 (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 <a href="https://www.montgomerycountymd.gov/dep/air/radon">www.montgomerycountymd.gov/dep/air/radon</a> or <a href="https://www.epa.gov/radon">www.epa.gov/radon</a>.

KCI visited the site on November 15, 2016 and deployed seven (7) activated charcoal (AC) radon test kits. KCI deployed radon test kits in frequently-occupied ground contact rooms, and other areas, (if applicable) in accordance with AARST guidance. 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 three (3) 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 November 18, 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.

KCI TECHNOLOGIES, INC. WWW.kci.com

## **Evaluation of Testing Conditions:**

These tests represent:

Post-mitigation testing for radon mitigation systems installed recently

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 60-70. Maximum sustained winds ranged from 8-14 miles per hour. Average humidity was around 65%. No precipitation was recorded during the testing period.

#### **Results:**

The results of the radon test analysis indicated the following:

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

Notes:

D- Duplicate sample

The office blank and lab transit blank 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

KCI TECHNOLOGIES, INC. WWW.kci.com

report, please feel free to contact me at (410) 316-7800.

Sincerely,

James M. Moulsdale

James Makden

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  John Kennedy High School  Test Period: 11/15/16-11/18/16		
Kit Number	Room / Area	Result
7826510	167	0.9
7826511	190	3.3
7826507	AUX	0.8
7826508	AUX	0.6
7826509	BOYS	0.6
7826512	OFFICE NEXT 149B	< 0.3

Test Period: 11/15/16-11/18/16		
Result		
0.7		

# ATTACHMENT C

# Laboratory Analytical Results

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

Radon test result report for:
KENNEDY HIGH SCHOOL
MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7826510	167	2016-11-15 @ 10:00 am	2016-11-18 @ 9:00 am	$0.9 \pm 0.3$	2016-11-21
7826511	190	2016-11-15 @ 10:00 am	2016-11-18 @ 9:00 am	$3.3 \pm 0.4$	2016-11-21
7826506	AUX	2016-11-15 @ 10:00 am	2016-11-18 @ 9:00 am	$0.7 \pm 0.3$	2016-11-21
7826507	AUX	2016-11-15 @ 10:00 am	2016-11-18 @ 9:00 am	$0.8 \pm 0.3$	2016-11-21
7826508	AUX	2016-11-15 @ 10:00 am	2016-11-18 @ 9:00 am	$0.6 \pm 0.3$	2016-11-21
7826509	BOYS	2016-11-15 @ 10:00 am	2016-11-18 @ 9:00 am	$0.6 \pm 0.3$	2016-11-21
7826512	OFFICE NEXT 149B	2016-11-15 @ 10:00 am	2016-11-18 @ 9:00 am	< 0.3	2016-11-21

November 22, 2016

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

Radon test result report for:

MCPS Radon Phase 19 BLANKS

Kit#	Room Id	Started	Ended	pCi/L	Analyzed
7802909	OFFICE	2016-11-11 @ 10:00 am	2016-11-14 @ 10:00 am	< 0.3	2016-11-16
7802910	TRANSIT	2016-11-11 @ 10:00 am	2016-11-14 @ 10:00 am	< 0.3	2016-11-16

November 22, 2016

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

Radon test result report for:

## MCPS Radon Spike Sample Results

		Started		Ended	pCi/L	Analyzed
7802912	1 2	2016-11-11 @	@ 10:00 am	2016-11-14 @ 10:00 am	$23.5 \pm 0.8$	2016-11-16
7802913	2 2	2016-11-11 @	@ 10:00 am	2016-11-14 @ 10:00 am	$23.0 \pm 0.8$	2016-11-16
7802911	3 2	2016-11-11 @	@ 10:00 am	2016-11-14 @ 10:00 am	$25.6 \pm 0.9$	2016-11-16

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 177376
NOMINAL Conditions: Radon Conc 26.3	_pCi/L Rel. Hum	<b>5</b> Q.1 % Temp. <b>2</b> Q.Q
Date Start: 11 11 16 Date Stop: 11 14	Date Start:	Date Stop:
Time Start: <u>1958</u> Time Stop: <u>0958</u>	_ Time Start:	Time Stop:
Device No.'s: (3) Char. Bags.	Device No.'s:_	
7802911 thro 7802913		
GS Middle		
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 =  $7 \mu R/h$  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 19

## Names of Schools:

- 1. Wood Acres Elementary School
- 2. Walt Whitman High School
- 3. East Silver Spring Elementary School

	Date	Initials
Radon Test Kits Deployed	11/14/16	JM
Radon Test Kits Collected	11/17/16	JM
Radon Test Kits Shipped to Lab*	11/18/16	JM
Radon Test Kits Received by Lab*	11/21/16	JM

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



## 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 19

### **Names of Schools:**

- 1. Montgomery Blair High School
- 2. Springbrook High School
- 3. Sligo Middle School
- 4. Einstein High School
- 5. John F. Kennedy High School
- 6. Blair Ewing Center
- 7. Rock Terrace School
- 8. Thomas Wootton High School
- 9. Fields Road Elementary School

	Date	Initials
Radon Test Kits Deployed	11/15/16	JM
Radon Test Kits Collected	11/18/16	JM
Radon Test Kits Shipped to Lab*	11/18/16	JM
Radon Test Kits Received by Lab*	11/21/16	JM

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



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### MCPS RADON TESTING

Executive Summary: John F. Kennedy High School

Date of Test Report:	10/19/2016
Round of Testing:	Initial
	Follow-up
	Post Remediation
# Rooms Tested:	17
# Rooms $\geq$ 4.0 pCi/L:	0
Low Value:	< 0.3
High Value:	1.7

### **Project Status:**

Post remediation testing completed; Re-test needed for Gym 2 (doors open).

### ENGINEERS • PLANNERS • SCIENTISTS • CONSTRUCTION MANAGERS

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

October 19, 2016

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

Re: Radon Testing Services

KCI Job # 12146341.54

Location: John F. Kennedy High School

1901 Randolph Road

Silver Spring, Maryland 20902

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 John F. Kennedy High School, located at 1901 Randolph Road in Silver Spring, Maryland 20902 (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 twenty-two (22) 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 piC/L	none	n/a
<4.0 piC/L	See Attachment B	

Notes:

D- Duplicate sample

The field blank, 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. Moulsdale

James Makden

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  John F. Kennedy High School  Test Period: 09/26/16-09/29/16		
Kit Number	Room / Area	Result	
7756818	119	< 0.3	
7769850	122	< 0.3	
7769894	124	1.0	
7769851	126	1.2	
7769833	129	1.4	
7756823	131	1.1	
7769876	147	< 0.3	
7769877	149	< 0.3	
7769823	165	1.4	
7769835	167	1.0	
7769839	149B	< 0.3	
7769830	149E	< 0.3	
7769845	165C	1.7	
7769840	* 167 (Tampered)	0.8	
7769834	* Gym 2 (Open Door)	1.0	
7769888	* Gym 2 (Tampered and Open Door)	0.7	
7769892	* Boys Locker Rm (Tampered)	< 0.3	
7756838	OFC	< 0.3	
7756839	Choral OFC 165B	1.7	

	Radon Testing Results		
	John F. Kennedy High School		
	Test Period: 09/26/16-09/29/16		
Kit Number	QC Type	Result	
7769841	D (147)	< 0.3	
7714168	D (Boys Locker Rm)	< 0.3	
7769893	FB (Boys Locker Rm)	< 0.3	

# ATTACHMENT C

# Laboratory Analytical Results

# Radon test result report for: KENNEDY HIGH SCHOOL MAIN

Kit#	Room Id	Started	Ended	pCi/L	Analyzed
7756818	119	2016-09-26 @ 5:00 pm	2016-09-29 @ 2:00 pm	< 0.3	2016-10-03
7769850	122	2016-09-26 @ 5:00 pm	2016-09-29 @ 2:00 pm	< 0.3	2016-10-03
7769894	124	2016-09-26 @ 5:00 pm	2016-09-29 @ 2:00 pm	$1.0 \pm 0.3$	2016-10-03
7769851	126	2016-09-26 @ 5:00 pm	2016-09-29 @ 2:00 pm	$1.2 \pm 0.3$	2016-10-03
7769833	129	2016-09-26 @ 5:00 pm	2016-09-29 @ 1:00 pm	$1.4 \pm 0.3$	2016-10-03
7756823	131	2016-09-26 @ 5:00 pm	2016-09-29 @ 2:00 pm	$1.1 \pm 0.3$	2016-10-03
7769876	147	2016-09-26 @ 5:00 pm	2016-09-29 @ 2:00 pm	< 0.3	2016-10-03
7769841	147	2016-09-26 @ 5:00 pm	2016-09-29 @ 2:00 pm	< 0.3	2016-10-03
7769877	149	2016-09-26 @ 5:00 pm	2016-09-29 @ 2:00 pm	< 0.3	2016-10-03
7769839	149B	2016-09-26 @ 5:00 pm	2016-09-29 @ 2:00 pm	< 0.3	2016-10-03
7769830	149E	2016-09-26 @ 5:00 pm	2016-09-29 @ 2:00 pm	< 0.3	2016-10-03
7769823	165	2016-09-26 @ 5:00 pm	2016-09-29 @ 2:00 pm	$1.4 \pm 0.3$	2016-10-03
7769845	165C	2016-09-26 @ 5:00 pm	2016-09-29 @ 2:00 pm	$1.7 \pm 0.4$	2016-10-03
7769840	167	2016-09-26 @ 5:00 pm	2016-09-29 @ 2:00 pm	$0.8 \pm 0.3$	2016-10-03
7769835	167	2016-09-26 @ 5:00 pm	2016-09-29 @ 2:00 pm	$1.0 \pm 0.3$	2016-10-03
7769888	GYM2	2016-09-26 @ 6:00 pm	2016-09-29 @ 2:00 pm	$0.7 \pm 0.3$	2016-10-03
7769834	GYM2	2016-09-26 @ 6:00 pm	2016-09-29 @ 2:00 pm	$1.0 \pm 0.3$	2016-10-03
7714168	BOYSLKRM	2016-09-26 @ 6:00 pm	2016-09-29 @ 2:00 pm	< 0.3	2016-10-03
7769892	BOYSLKRM	2016-09-26 @ 6:00 pm	2016-09-29 @ 2:00 pm	< 0.3	2016-10-03
7769893	BOYSLKRM	2016-09-26 @ 6:00 pm	2016-09-29 @ 2:00 pm	< 0.3	2016-10-03
7756838	OFC	2016-09-26 @ 5:00 pm	2016-09-29 @ 2:00 pm	< 0.3	2016-10-03
7756839	CHRLOFC1651	B 2016-09-26 @ 5:00 pm	2016-09-29 @ 2:00 pm	$1.7 \pm 0.4$	2016-10-03

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

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

Radon test result report for:

MCPS Radon Phase 18 Transit Blanks

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

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

Radon test result report for: MCPS Radon Spike Sample Results

7769880 101 2016-09-24 @ 8:00 am 2016-09-26 @ 8:00 am 22.9 ± 2016-09-24 @ 8:00 am 2016-09-26 @ 8:00 am 22.4 ± 2016-09-24 @ 8:00 am 2016-09-26 @ 8:00 am 23.0 ± 2016-09-20	2010 07 20
	.0 2016-09-28
7769885 103 2016-09-24 @ 8:00 am 2016-09-26 @ 8:00 am 23.0 +	
7707005 105 2010-07-24 @ 0.00 am 2010-07-20 @ 0.00 am 25.0 ±	1.0 2016-09-28
7769890 104 2016-09-24 @ 8:00 am 2016-09-26 @ 8:00 am 22.3 ± 1	1.0 2016-09-28
7769891 105 2016-09-24 @ 8:00 am 2016-09-26 @ 8:00 am 26.8 ± 1	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	Jnc. Job Number 176788
NOMINAL Conditions: Radon Conc 26.1	pCi/L Rel. Hum 49.6 % Temp. 70.0
Date Start: 9/24/16 Date Stop: 9/26/14	Date Start: Date Stop:
Time Start: 9758 Time Stop: 9758	Time Start: Time Stop:
Device No.'s: (6) Char. Bags.	Device No.'s:
7769899, 7769884, 7769885	
7769889, 7769899, 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  $\mu$ R/h Elevation = 820 ft



## $E\,\text{ngineers}\, \bullet\, P\,\text{lanners}\, \bullet\, S\,\text{cientists}\, \bullet\, C\,\text{onstruction}\,\, M\,\text{anagers}$

Corporate Office: 936 Ridgebrook road • Sparks , Maryland 21152 • 410-316-7800 • (Fax) 410-316-7935

## Radon Test Kit Chain of Custody

Project Name: MCPS Radon Phase 18

### Name of Schools:

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

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

	Date	Initials
Radon Test Kits Deployed	9/26/16	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	M

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



### Engineers • Planners • Scientists • Construction Managers

Corporate Office: 936 Ridgebrook road • Sparks, Maryland 21152 • 410-316-7800 • (Fax) 410-316-7935

## Radon Test Kit Chain of Custody

Project Name: MCPS Radon Phase 18

### Name of Schools:

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

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

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

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

## RADON SCREENING SURVEY – FOLLOW-UP JOHN F KENNEDY HIGH SCHOOL

## 1901 Randolph Rd, Silver Spring, Maryland 20902

## **EXECUTIVE SUMMARY**

Date of Test Report:	3/18/16 Follow-Up	
Round of Testing:	Initial	
	Follow-up	
	Post Remediation	
# Rooms Tested	12	
# Rooms ≥ 4.0 pCi/L:	0	
Low Value:	<0.3	
High Value:	3.3	
Confirmed Rooms ≥ 4.0 pCi/L US EPA	2	
Action Level		

## Summary of Sampling Events ≥ 4.0 pCi/L

Room	Result (pCi/L)	Result (pCi/L)	Average Result
	1/29/16 Initial	3/18/16 Follow-Up	(pCi/L)
149E	8.5	1.0	4.8
165	6.8	Not sampled	6.8
124	5.8	1.0	3.4
165	5.4	3.3	4.4
165C	4.8	2.8	3.8
126	4.4	0.9	2.7
165B	4.0	3.1	3.6
112	0.9 Tampered	1.1	1.0
163	Missing	1.5	1.5
190	Missing	3.1	3.1
Cafeteria	Missing	<0.3	<0.3
Cafeteria	Missing	<0.3	<0.3
Cafeteria	Missing	Not sampled	
Gym	Missing	1.0	1.0
Gym2	Missing	<0.3	<0.3
Gym2	Missing	<0.3	<0.3



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

### MCPS RADON TESTING

Executive Summary: John F. Kennedy High School

Date of Test Report:	3/18/2016
Round of Testing:	Initial
	Follow-up
	Post Remediation
# Rooms Tested:	12
# Rooms $\geq$ 4.0 pCi/L:	0
Low Value:	< 0.3
High Value:	3.3

### Project Status:

Retesting completed; use the average of the initial and re-test results in a room to determine if remediation is necessary.

### ENGINEERS • PLANNERS • SCIENTISTS • CONSTRUCTION MANAGERS

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

March 18, 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 # 12146341.29

Location: John F. Kennedy High School

1901 Randolph Road

Silver Spring, Maryland 20902

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 John F. Kennedy High School, located at 1901 Randolph Road in Silver Spring, Maryland 20902 (subject site).

### **Scope of Services:**

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

KCI visited the site on February 22, 2016 and deployed nineteen (19) activated charcoal (AC) radon test kits. KCI deployed radon test kits in frequently-occupied ground contact rooms, and other areas, (if applicable) in accordance with AARST guidance. A floor plan map of the building with the test locations is included as Attachment A of this report.

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

KCI returned to the site on February 25, 2016 to retrieve the radon sampling test kits. KCI shipped all radon tests via overnight delivery to Airchek, Inc. for analysis by gamma-ray spectroscopy. Airchek, Inc. is a NRSB certified analytical laboratory for radon analysis (certification # ARL1402) located at 1936

Butler Bridge Road, Mills River, North Carolina.

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

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

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

KCI also conducted observations of field conditions which could affect the results of the test and compiled weather data for the testing period. Note that strong storms and heavy rainfall were recorded during the test period. The unusual weather conditions may have resulted in atypical radon test results for this facility.

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

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

#### **Results:**

The results of the radon test analysis indicated the following:

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

Notes:

D- Duplicate sample

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

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

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

Mr. Richard Cox March 18, 2016 Page 4

Sincerely,

James M. Moulsdale

Radon Measurement Specialist

KCI Technologies, Inc.

James Makler

Attachments: A- Floor Plan with Test Locations

B- Table 1-Radon Test Summary Spreadsheet

C- Laboratory Analytical Results

# ATTACHMENT A

# Floor Plan With Test Locations

# ATTACHMENT B

# Radon Test Summary Spreadsheet

## **Table Notes:**

**AC-** Activated Charcoal

ACI- Air Chek, Inc.

D- Duplicate

FB- Field Blank

KCI- KCI Technologies, Inc.

**OB- Office Blank\*** 

PM- Project Manager

QC- Quality Control

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

	Radon Testing Results  John F. Kennedy High School  Test Period: 02/22/16-02/25/16					
Kit Number Room / Area Result						
7731455	112	1.1				
7731456	124	1.0				
7731446	126	0.9				
7731453	163	1.5				
7731454	163	1.4				
7731460	165	3.3				
7731461	190	3.1				
7731457	149E	1.0				
7731437	165B	3.1				
7731439	165C	2.8				
7731443	CAFE	< 0.3				
7731449	CAFE	< 0.3				
7731458	GYM	0.9				
7731450	GYM	1.0				
7731440	GYM2	< 0.3				
7731452	GYM2	< 0.3				

Table Note:
\* Missing or Compromised Sample

	Radon Testing Results			
	John F. Kennedy High School			
Test Period: 02/22/16-02/25/16				
Kit Number	QC Type	Result		
7731442	D (163)	1.5		
7731462	D (190)	2.5		
7731465	FB (149E)	< 0.3		

## ATTACHMENT C

## Laboratory Analytical Results

March\*\* LABORATORY ANALYSIS 8, REPORT \*\*

Radon test result report for:
KENNEDY HIGH SCHOOL
MAIN

Kit#	Room Id	Started	Ended	pCi/L	Analyzed
7731455	112	2016-02-22 @ 10:00 am	2016-02-25 @ 9:00 am	$1.1 \pm 0.3$	2016-02-29
7731456	124	2016-02-22 @ 10:00 am	2016-02-25 @ 9:00 am	$1.0 \pm 0.3$	2016-02-29
7731446	126	2016-02-22 @ 10:00 am	2016-02-25 @ 9:00 am	$0.9 \pm 0.3$	2016-02-29
7731457	149E	2016-02-22 @ 10:00 am	2016-02-25 @ 9:00 am	$1.0 \pm 0.3$	2016-02-29
7731465	149E	2016-02-22 @ 10:00 am	2016-02-25 @ 9:00 am	< 0.3	2016-02-29
7731442	163	2016-02-22 @ 10:00 am	2016-02-25 @ 9:00 am	$1.5 \pm 0.3$	2016-02-29
7731453	163	2016-02-22 @ 10:00 am	2016-02-25 @ 9:00 am	$1.5 \pm 0.3$	2016-02-29
7731454	163	2016-02-22 @ 10:00 am	2016-02-25 @ 9:00 am	$1.4 \pm 0.3$	2016-02-29
7731460	165	2016-02-22 @ 10:00 am	2016-02-25 @ 9:00 am	$3.3 \pm 0.4$	2016-02-29
7731437	165B	2016-02-22 @ 10:00 am	2016-02-25 @ 9:00 am	$3.1 \pm 0.4$	2016-02-29
7731439	165C	2016-02-22 @ 10:00 am	2016-02-25 @ 9:00 am	$2.8 \pm 0.4$	2016-02-29
7731461	190	2016-02-22 @ 11:00 am	2016-02-25 @ 9:00 am	$3.1 \pm 0.4$	2016-02-29
7731462	190	2016-02-22 @ 11:00 am	2016-02-25 @ 9:00 am	$2.5 \pm 0.4$	2016-02-29
7731443	CAFE	2016-02-22 @ 11:00 am	2016-02-25 @ 9:00 am	< 0.3	2016-02-29
7731449	CAFE	2016-02-22 @ 11:00 am	2016-02-25 @ 9:00 am	< 0.3	2016-02-29
7731450	GYM	2016-02-22 @ 11:00 am	2016-02-25 @ 9:00 am	$1.0 \pm 0.3$	2016-02-29
7731458	GYM	2016-02-22 @ 11:00 am	2016-02-25 @ 9:00 am	$0.9 \pm 0.3$	2016-02-29
7731440	GYM2	2016-02-22 @ 11:00 am	2016-02-25 @ 9:00 am	< 0.3	2016-02-29
7731452	GYM2	2016-02-22 @ 11:00 am	2016-02-25 @ 9:00 am	< 0.3	2016-02-29

March\*\* LABORATORY ANALYSIS 9, REPORT \*\*

Radon test result report for: MCPS

**Phase 9 Office Blanks** 

Kit#	Room Id	Started	Ended	pCi/L	Analyzed
7712568	0	2016-02-22 @ 6:00 pm	2016-02-25 @ 3:00 pm	< 0.3	2016-02-29
7712584	0	2016-02-22 @ 6:00 pm	2016-02-25 @ 3:00 pm	< 0.3	2016-02-29
7719460	0	2016-02-22 @ 6:00 pm	2016-02-25 @ 3:00 pm	< 0.3	2016-02-29
7719481	0	2016-02-22 @ 6:00 pm	2016-02-25 @ 3:00 pm	< 0.3	2016-02-29
7719497	0	2016-02-22 @ 6:00 pm	2016-02-25 @ 3:00 pm	< 0.3	2016-02-29
7719498	0	2016-02-22 @ 6:00 pm	2016-02-25 @ 3:00 pm	< 0.3	2016-02-29

March\*\* LABORATORY ANALYSIS 9, REPORT \*\*

Radon test result report for:

MCPS
Phase 9 Office Blanks

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7731626	0	2016-02-23 @ 2:00 pm	2016-02-26 @ 3:00 pm	< 0.3	2016-03-01
7731633	0	2016-02-23 @ 2:00 pm	2016-02-26 @ 3:00 pm	< 0.3	2016-03-01
7735204	0	2016-02-23 @ 2:00 pm	2016-02-26 @ 3:00 pm	< 0.3	2016-03-01
7733204		2010-02-23 @ 2.00 pm	2010-02-20 @ 3.00 pm	V 0.5	2010-03-0

# February LABORATORY ANALYSIS 23, REPORT \*\*

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

Kit#         Room Id         Started         Ended         pCi/L         Analyzed           7734937         1         2016-02-19 @ 3:00 pm         2016-02-22 @ 11:00 am         <0.3         2016-02-23           7734946         10         2016-02-19 @ 4:00 pm         2016-02-22 @ 11:00 am         <0.3         2016-02-23           7734955         11         2016-02-19 @ 4:00 pm         2016-02-22 @ 11:00 am         <0.3         2016-02-23           7734959         13         2016-02-19 @ 4:00 pm         2016-02-22 @ 11:00 am         <0.3         2016-02-23           7734950         14         2016-02-19 @ 4:00 pm         2016-02-22 @ 11:00 am         <0.3         2016-02-23           7734953         15         2016-02-19 @ 4:00 pm         2016-02-22 @ 11:00 am         <0.3         2016-02-23           7734954         16         2016-02-19 @ 4:00 pm         2016-02-22 @ 11:00 am         <0.3         2016-02-23           7734949         18         2016-02-19 @ 4:00 pm         2016-02-22 @ 11:00 am         <0.3         2016-02-23           7734949         18         2016-02-19 @ 4:00 pm         2016-02-22 @ 11:00 am         <0.3         2016-02-23           7734949         19         2016-02-19 @ 4:00 pm         2016-02-22 @ 11:00 am         <0.3 <t< th=""><th></th><th></th><th></th><th></th><th></th><th></th></t<>						
7734946         10         2016-02-19 @ 4:00 pm         2016-02-22 @ 11:00 am         < 0.3	Kit#	Room Id	Started	Ended	pCi/L	Analyzed
7734955 11 2016-02-19 @ 4:00 pm 2016-02-22 @ 11:00 am < 0.3 2016-02-23 7734956 12 2016-02-19 @ 4:00 pm 2016-02-22 @ 11:00 am < 0.3 2016-02-23 7734959 13 2016-02-19 @ 4:00 pm 2016-02-22 @ 11:00 am < 0.3 2016-02-23 7734959 14 2016-02-19 @ 4:00 pm 2016-02-22 @ 11:00 am < 0.3 2016-02-23 7734953 15 2016-02-19 @ 4:00 pm 2016-02-22 @ 11:00 am < 0.3 2016-02-23 7734954 16 2016-02-19 @ 4:00 pm 2016-02-22 @ 11:00 am < 0.3 2016-02-23 7734940 17 2016-02-19 @ 4:00 pm 2016-02-22 @ 11:00 am < 0.3 2016-02-23 7734949 18 2016-02-19 @ 4:00 pm 2016-02-22 @ 11:00 am < 0.3 2016-02-23 7734949 18 2016-02-19 @ 4:00 pm 2016-02-22 @ 11:00 am < 0.3 2016-02-23 7734949 20 2016-02-19 @ 4:00 pm 2016-02-22 @ 11:00 am < 0.3 2016-02-23 7734949 20 2016-02-19 @ 4:00 pm 2016-02-22 @ 11:00 am < 0.3 2016-02-23 7734943 20 2016-02-19 @ 4:00 pm 2016-02-22 @ 11:00 am < 0.3 2016-02-23 7734942 20 2016-02-19 @ 4:00 pm 2016-02-22 @ 11:00 am < 0.3 2016-02-23 7734939 2 2016-02-19 @ 4:00 pm 2016-02-22 @ 11:00 am < 0.3 2016-02-23 7734939 2 2016-02-19 @ 4:00 pm 2016-02-22 @ 11:00 am < 0.3 2016-02-23 7734934 20 2016-02-19 @ 4:00 pm 2016-02-22 @ 11:00 am < 0.3 2016-02-23 7734934 21 2016-02-19 @ 4:00 pm 2016-02-22 @ 11:00 am < 0.3 2016-02-23 7734934 23 2016-02-19 @ 4:00 pm 2016-02-22 @ 11:00 am < 0.3 2016-02-23 7734934 23 2016-02-19 @ 4:00 pm 2016-02-22 @ 11:00 am < 0.3 2016-02-23 7734934 25 2016-02-19 @ 4:00 pm 2016-02-22 @ 11:00 am < 0.3 2016-02-23 7734934 25 2016-02-19 @ 4:00 pm 2016-02-22 @ 11:00 am < 0.3 2016-02-23 7734935 27 2016-02-19 @ 4:00 pm 2016-02-22 @ 11:00 am < 0.3 2016-02-23 7734935 27 2016-02-19 @ 4:00 pm 2016-02-22 @ 11:00 am < 0.3 2016-02-23 7734935 27 2016-02-19 @ 4:00 pm 2016-02-22 @ 11:00 am < 0.3 2016-02-23 7734935 27 2016-02-19 @ 4:00 pm 2016-02-22 @ 11:00 am < 0.3 2016-02-23 7734935 29 2016-02-19 @ 4:00 pm 2016-02-22 @ 11:00 am < 0.3 2016-02-23 7734935 31 2016-02-19 @ 4:00 pm 2016-02-22 @ 11:00 am < 0.3 2016-02-23 7734931 30 2016-02-19 @ 4:00 pm 2016-02-22 @ 11:00 am < 0.3 2016-02-23 7734935 4 2016-02-19 @ 4:00 pm 2016-02-22 @ 11:00 am < 0.3 2	7734937	1	2016-02-19 @ 3:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23
7734956 12 2016-02-19 @ 4:00 pm 2016-02-22 @ 11:00 am < 0.3 2016-02-23 7734959 13 2016-02-19 @ 4:00 pm 2016-02-22 @ 11:00 am < 0.3 2016-02-23 7734930 14 2016-02-19 @ 4:00 pm 2016-02-22 @ 11:00 am < 0.3 2016-02-23 7734953 15 2016-02-19 @ 4:00 pm 2016-02-22 @ 11:00 am < 0.3 2016-02-23 7734954 16 2016-02-19 @ 4:00 pm 2016-02-22 @ 11:00 am < 0.3 2016-02-23 7734940 17 2016-02-19 @ 4:00 pm 2016-02-22 @ 11:00 am < 0.3 2016-02-23 7734949 18 2016-02-19 @ 4:00 pm 2016-02-22 @ 11:00 am < 0.3 2016-02-23 7734949 18 2016-02-19 @ 4:00 pm 2016-02-22 @ 11:00 am < 0.3 2016-02-23 7734949 19 2016-02-19 @ 4:00 pm 2016-02-22 @ 11:00 am < 0.3 2016-02-23 7734949 20 2016-02-19 @ 4:00 pm 2016-02-22 @ 11:00 am < 0.3 2016-02-23 7734949 20 2016-02-19 @ 4:00 pm 2016-02-22 @ 11:00 am < 0.3 2016-02-23 7734939 2 2016-02-19 @ 4:00 pm 2016-02-22 @ 11:00 am < 0.3 2016-02-23 7734929 21 2016-02-19 @ 4:00 pm 2016-02-22 @ 11:00 am < 0.3 2016-02-23 7734934 23 2016-02-19 @ 4:00 pm 2016-02-22 @ 11:00 am < 0.3 2016-02-23 7734934 23 2016-02-19 @ 4:00 pm 2016-02-22 @ 11:00 am < 0.3 2016-02-23 7734934 23 2016-02-19 @ 4:00 pm 2016-02-22 @ 11:00 am < 0.3 2016-02-23 7734934 23 2016-02-19 @ 4:00 pm 2016-02-22 @ 11:00 am < 0.3 2016-02-23 7734934 25 2016-02-19 @ 4:00 pm 2016-02-22 @ 11:00 am < 0.3 2016-02-23 7734944 26 2016-02-19 @ 4:00 pm 2016-02-22 @ 11:00 am < 0.3 2016-02-23 7734935 27 2016-02-19 @ 4:00 pm 2016-02-22 @ 11:00 am < 0.3 2016-02-23 7734935 27 2016-02-19 @ 4:00 pm 2016-02-22 @ 11:00 am < 0.3 2016-02-23 7734935 27 2016-02-19 @ 4:00 pm 2016-02-22 @ 11:00 am < 0.3 2016-02-23 7734935 27 2016-02-19 @ 4:00 pm 2016-02-22 @ 11:00 am < 0.3 2016-02-23 7734935 27 2016-02-19 @ 4:00 pm 2016-02-22 @ 11:00 am < 0.3 2016-02-23 7734937 30 2016-02-19 @ 4:00 pm 2016-02-22 @ 11:00 am < 0.3 2016-02-23 7734937 31 2016-02-19 @ 4:00 pm 2016-02-22 @ 11:00 am < 0.3 2016-02-23 7734935 31 2016-02-19 @ 4:00 pm 2016-02-22 @ 11:00 am < 0.3 2016-02-23 7734935 4 2016-02-19 @ 4:00 pm 2016-02-22 @ 11:00 am < 0.3 2016-02-23 7734935 4 2016-02-19 @ 4:00 pm 2016-02-22 @ 11:00 am < 0.3 2	7734946	10	2016-02-19 @ 4:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23
7734959         13         2016-02-19 @ 4:00 pm         2016-02-22 @ 11:00 am         < 0.3	7734955	11	2016-02-19 @ 4:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23
7734930         14         2016-02-19 @ 4:00 pm         2016-02-22 @ 11:00 am         < 0.3	7734956	12	2016-02-19 @ 4:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23
7734953 15 2016-02-19 @ 4:00 pm 2016-02-22 @ 11:00 am	7734959	13	2016-02-19 @ 4:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23
7734954         16         2016-02-19 @ 4:00 pm         2016-02-22 @ 11:00 am         < 0.3	7734930	14	2016-02-19 @ 4:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23
7734940         17         2016-02-19 @ 4:00 pm         2016-02-22 @ 11:00 am         < 0.3	7734953	15	2016-02-19 @ 4:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23
7734949         18         2016-02-19 @ 4:00 pm         2016-02-22 @ 11:00 am         < 0.3	7734954	16	2016-02-19 @ 4:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23
7734948         19         2016-02-19 @ 4:00 pm         2016-02-22 @ 11:00 am         < 0.3	7734940	17	2016-02-19 @ 4:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23
7734939         2         2016-02-19 @ 3:00 pm         2016-02-22 @ 11:00 am         < 0.3	7734949	18	2016-02-19 @ 4:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23
7734942         20         2016-02-19 @ 4:00 pm         2016-02-22 @ 11:00 am         < 0.3	7734948	19	2016-02-19 @ 4:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23
7734929         21         2016-02-19 @ 4:00 pm         2016-02-22 @ 11:00 am         < 0.3	7734939	2	2016-02-19 @ 3:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23
7734933         22         2016-02-19 @ 4:00 pm         2016-02-22 @ 11:00 am         < 0.3	7734942	20	2016-02-19 @ 4:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23
7734934         23         2016-02-19 @ 4:00 pm         2016-02-22 @ 11:00 am         < 0.3	7734929	21	2016-02-19 @ 4:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23
7734936         24         2016-02-19 @ 4:00 pm         2016-02-22 @ 11:00 am         < 0.3	7734933	22	2016-02-19 @ 4:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23
7734943         25         2016-02-19 @ 4:00 pm         2016-02-22 @ 11:00 am         < 0.3	7734934	23	2016-02-19 @ 4:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23
7734944         26         2016-02-19 @ 4:00 pm         2016-02-22 @ 11:00 am         < 0.3	7734936	24	2016-02-19 @ 4:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23
7734935         27         2016-02-19 @ 4:00 pm         2016-02-22 @ 11:00 am         < 0.3	7734943	25	2016-02-19 @ 4:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23
7734928         28         2016-02-19 @ 4:00 pm         2016-02-22 @ 11:00 am         < 0.3	7734944	26	2016-02-19 @ 4:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23
7734952       29       2016-02-19 @ 4:00 pm       2016-02-22 @ 11:00 am       < 0.3	7734935	27	2016-02-19 @ 4:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23
7734947 3 2016-02-19 @ 3:00 pm 2016-02-22 @ 11:00 am < 0.3 2016-02-23 7734931 30 2016-02-19 @ 4:00 pm 2016-02-22 @ 11:00 am < 0.3 2016-02-23 7734932 31 2016-02-19 @ 4:00 pm 2016-02-22 @ 11:00 am < 0.3 2016-02-23 7718520 32 2016-02-19 @ 4:00 pm 2016-02-22 @ 11:00 am < 0.3 2016-02-23 7718523 33 2016-02-19 @ 4:00 pm 2016-02-22 @ 11:00 am < 0.3 2016-02-23 7718522 34 2016-02-19 @ 4:00 pm 2016-02-22 @ 11:00 am < 0.3 2016-02-23 7718521 35 2016-02-19 @ 4:00 pm 2016-02-22 @ 11:00 am < 0.3 2016-02-23 7734945 4 2016-02-19 @ 4:00 pm 2016-02-22 @ 11:00 am < 0.3 2016-02-23 7734960 5 2016-02-19 @ 3:00 pm 2016-02-22 @ 11:00 am < 0.3 2016-02-23 7734958 6 2016-02-19 @ 4:00 pm 2016-02-22 @ 11:00 am < 0.3 2016-02-23 7734951 7 2016-02-19 @ 4:00 pm 2016-02-22 @ 11:00 am < 0.3 2016-02-23 7734957 8 2016-02-19 @ 4:00 pm 2016-02-22 @ 11:00 am < 0.3 2016-02-23 7734957 8 2016-02-19 @ 4:00 pm 2016-02-22 @ 11:00 am < 0.3 2016-02-23 7734957 8 2016-02-19 @ 4:00 pm 2016-02-22 @ 11:00 am < 0.3 2016-02-23 7734957 8 2016-02-19 @ 4:00 pm 2016-02-22 @ 11:00 am < 0.3 2016-02-23 7734957 8 2016-02-19 @ 4:00 pm 2016-02-22 @ 11:00 am < 0.3 2016-02-23 7734957 8 2016-02-19 @ 4:00 pm 2016-02-22 @ 11:00 am < 0.3 2016-02-23 7734957 8 2016-02-19 @ 4:00 pm 2016-02-22 @ 11:00 am < 0.3 2016-02-23 7734957 8 2016-02-19 @ 4:00 pm 2016-02-22 @ 11:00 am < 0.3 2016-02-23 7734957 8 2016-02-19 @ 4:00 pm 2016-02-22 @ 11:00 am < 0.3 2016-02-23	7734928	28	2016-02-19 @ 4:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23
7734931       30       2016-02-19 @ 4:00 pm       2016-02-22 @ 11:00 am       < 0.3	7734952	29	2016-02-19 @ 4:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23
7734932       31       2016-02-19 @ 4:00 pm       2016-02-22 @ 11:00 am       < 0.3	7734947	3	2016-02-19 @ 3:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23
7718520       32       2016-02-19 @ 4:00 pm       2016-02-22 @ 11:00 am       < 0.3	7734931	30	2016-02-19 @ 4:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23
7718523       33       2016-02-19 @ 4:00 pm       2016-02-22 @ 11:00 am       < 0.3	7734932	31	2016-02-19 @ 4:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23
7718522       34       2016-02-19 @ 4:00 pm       2016-02-22 @ 11:00 am       < 0.3	7718520	32	2016-02-19 @ 4:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23
7718521       35       2016-02-19 @ 4:00 pm       2016-02-22 @ 11:00 am       < 0.3	7718523	33	2016-02-19 @ 4:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23
7734945       4       2016-02-19 @ 3:00 pm       2016-02-22 @ 11:00 am       < 0.3	7718522	34	2016-02-19 @ 4:00 pm	2016-02-22 @ 11:00 am	< 0.3	
7734960       5       2016-02-19 @ 4:00 pm       2016-02-22 @ 11:00 am       < 0.3	7718521	35	2016-02-19 @ 4:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23
7734958 6 2016-02-19 @ 4:00 pm 2016-02-22 @ 11:00 am < 0.3 2016-02-23 7734951 7 2016-02-19 @ 4:00 pm 2016-02-22 @ 11:00 am < 0.3 2016-02-23 7734957 8 2016-02-19 @ 4:00 pm 2016-02-22 @ 11:00 am < 0.3 2016-02-23	7734945	4	2016-02-19 @ 3:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23
7734951 7 2016-02-19 @ 4:00 pm 2016-02-22 @ 11:00 am < 0.3 2016-02-23 7734957 8 2016-02-19 @ 4:00 pm 2016-02-22 @ 11:00 am < 0.3 2016-02-23		5	1			2016-02-23
7734957 8 2016-02-19 @ 4:00 pm 2016-02-22 @ 11:00 am < 0.3 2016-02-23	7734958	6	•	2016-02-22 @ 11:00 am		2016-02-23
<u>.</u>	7734951	7	•			2016-02-23
7734938 9 2016-02-19 @ 4:00 pm 2016-02-22 @ 11:00 am < 0.3 2016-02-23			•			
	7734938	9	2016-02-19 @ 4:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23

# February LABORATORY ANALYSIS 15, REPORT \*\*

## Spike Sample Laboratory Results

Radon test result report for: MCPS

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

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 Technologica	Inc. Job Number 173704
	pCi/L Rel. Hum 45.9 % Temp. 79.0
Date Start: 1/30/16 Date Stop: 2/1/16	Date Start: Date Stop:
Time Start: 9986 Time Stop: 9986	Time Start: Time Stop:
Device No.'s: (6) Char. Bags-	Device No.'s:
7718281, 7718282, 7718291,	
7718288, 7718289, 7718273	
E3 Left	
Date Start: Date Stop:	Date Start: Date Stop:
Time Start: Time Stop:	Time Start: Time Stop:
Device No.'s:	Device No.'s:
Date Start: Date Stop:	Date Start: Date Stop:
Time Start: Time Stop:	Time Start: Time Stop:
Device No.'s:	Device No.'s:
	· · · · · · · · · · · · · · · · · · ·

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



### Engineers • Planners • Scientists • Construction M anagers

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 9

15. Briggs Chaney MS

#### Name of Schools:

1.	Rocking Horse Road ES	16.	Broad Acres ES	31.	Rosa Parks MS
2.	Rockwell ES	17.	Belmont ES	32.	Rosemary Hills ES
3.	Oakland Terrace ES	18.	Emory Grove Center	33.	Sequoyah ES
4.	Rosemont ES	19.	Forest Knolls ES	34.	Damascus HS
5.	Beall ES	20.	Baker MS	35.	Einstein ES
6.	Cresthaven ES	21.	MLK MS	36.	Forest Oak MS
7.	Quince Orchard HS	22.	Richard Montgomery HS	37.	Hoover MS
8.	Smith Center	23.	Sherwood HS	38.	Julius West MS
9.	Ashburton ES	24.	Walter Johnson HS	39.	John F. Kennedy HS
10.	Bannockburn ES	25.	Diamond ES	40.	Travilah ES
11.	Bradley Hills ES	26.	Newport Mill MS	41.	Watkins Mill HS
12.	Cannon Road ES	27.	Drew ES	42.	Northwood HS
13.	Flora M. Singer ES	28.	Monocacy ES	43.	Lincoln Center
14.	Clarksburg HS	29.	Potomac ES		

30. Rock Terrace School

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	Date	Initials
Radon Test Kits Deployed	2/22/16	JM
Radon Test Kits Collected	2/25/16	JM
Radon Test Kits Shipped to Lab*	2/25/16	M
Radon Test Kits Received by Lab*	2/29/16	JM

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



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### **Radon Test Kit Chain of Custody**

Project Name: MCPS Radon Phase 9

#### Name of Schools:

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

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

	52.0	
	Date	Initials
Radon Test Kits Deployed	2/23/16	\/M
Radon Test Kits Collected	2/26/16	JM
Radon Test Kits Shipped to Lab*	2/26/16	JM
Radon Test Kits Received by Lab*	3/01/16	JM

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



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#### MCPS RADON TESTING

Executive Summary: John F. Kennedy High School

Date of Test Report:	1/29/2016
Round of Testing:	Initial
	Follow-up
	Post Remediation
# Rooms Tested:	117
# Rooms $\geq$ 4.0 pCi/L:	7
Low Value:	< 0.3
High Value:	8.5

#### Rooms with results $\geq 4.0 \text{ pCi/L}$ :

Room 149 E (8.5 pCi/L); Room 165 (6.8 pCi/L); Room 124 (5.8 pCi/L); Room 165 (5.4 pCi/L); Room 165 C (4.8 pCi/L); Room 126 (4.4 pCi/L); Room 165 B (4.0 pCi/L)

#### Project Status:

Initial testing completed; re-test needed for results  $\geq$  4.0 pCi/L. Initial testing completed; missing or compromised samples need re-test.

KCI TECHNOLOGIES, INC. WWW.kci.com

#### ENGINEERS • PLANNERS • SCIENTISTS • CONSTRUCTION MANAGERS

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

January 29, 2016

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

Re: Radon Testing Services

KCI Job # 12146341.22

Location: John F. Kennedy High School

1901 Randolph Road

Silver Spring, Maryland 20902

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 John F. Kennedy High School, located at 1901 Randolph Road in Silver Spring, Maryland 20902 (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 January 4, 2016 and deployed one hundred thirty-five (135) 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 January 7, 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

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Bridge Road, Mills River, North Carolina.

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

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

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

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

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

#### **Results:**

The results of the radon test analysis indicated the following:

Radon Concentration	Room	Result (pCi/L)
	149E	8.5
	165	6.8
	124	5.8
≥4.0 piC/L	165	5.0, 5.4 (D)
	165 C	4.8
	126	4.4
	165 B	4.0
<4.0 piC/L	See Attachment B	

Notes:

D- Duplicate sample

All 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.

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Mr. Richard Cox January 29, 2016 Page 4

Sincerely,

James M. Moulsdale

James Makler

Radon Measurement Specialist

KCI Technologies, Inc.

Attachments: A- Floor Plan with Test Locations

B- Table 1-Radon Test Summary Spreadsheet

C- Laboratory Analytical Results

## ATTACHMENT B

## Radon Test Summary Spreadsheet

### **Table Notes:**

AC- Activated Charcoal

ACI- Air Chek, Inc.

D- Duplicate

FB- Field Blank

KCI- KCI Technologies, Inc.

**OB- Office Blank** 

PM- Project Manager

QC- Quality Control

	Radon Testing Results				
John F. Kennedy HS  Test Period: 01/04/16-01/07/16					
Kit Number	Room / Area	Result			
7719787	101	1.5			
7719800	103	1			
7719789	104	2.6			
7719795	105	1.3			
7719763	107	0.7			
7719743	109	2			
7719766	110	0.9			
7719755	111	1.4			
7719750	113	1			
7719711	114	1.1			
7719762	116	0.8			
7719759	118	0.9			
7719761	119	1.2			
7719751	120	1.1			
7719791	121	0.8			
7719709	122	1.1			
7719740	123	2			
7719760	124	5.8			
7719752	125	2			
7719702	126	4.4			
7719747	129	2			
7719756	131	1.3			
7719715	132	1.5			
7719712	133	1.7			
7719712	134	1.4			
7719714	136	2.2			
7719717	136	0.5			
7719713	139	1.9			
7719719	141				
		0.7			
7719723	143	0.6			
7719724	144	1.1			
7719721	145	< 0.3			
7719729	147	1.5			
7719731	147	1.7			
7719732	149	1.8			
7719737	149	1.9			
7719730	151	0.7			
7719798	153	0.8			
7719792	155	1.7			
7719735	156	< 0.3			
7719856	157	0.8			
7719843	159	0.6			
7719834	160	< 0.3			
7719839	161	< 0.3			
7719835	162	< 0.3			
7719812	163	1.1			

Table Note:
\* Missing or Compromised Sample

Radon Testing Results				
Tes	John F. Kennedy HS st Period: 01/04/16-01/07/16			
Kit Number	Room / Area	Result		
7719810	163	0.7		
7719840	164	0.8		
7719846	165	6.8		
7719842	165	5		
7719855	167	1.8		
7719820	168	< 0.3		
7719824	182	1.2		
7719821	184	0.8		
7719807	188	< 0.3		
7719803	190	3.2		
7719823	201	< 0.3		
7719819	205	< 0.3		
7719809	209	1.2		
7719826	224	0.7		
7719813	227	< 0.3		
7719811	240	1.1		
7719815	241	< 0.3		
7719814	250	0.7		
7719851	260	0.5		
7719830	270	0.6		
7719768	100 B	0.8		
7719772	100 F	0.7		
7719773	100 I	1.4		
7719774	100 K	1.1		
7719776	100 L	1		
7719777	100 M	0.6		
7719794	100 Q	2.2		
7719753	101 A	2.4		
7719757	101 C	2		
7719754	101 D	2.1		
7719788	104 A	1.4		
7719781	104 B	1.5		
7719779	104 C	1.4		
7719782	104 D	2		
7719785	104 G	2.2		
7719793	104 H	1.6		
7719770	104 J	1.7		
7719797	104 K	1.8		
7719769	108 A	0.7		
7719744	108 B	0.6		
7719742	108 C	0.7		
7719790	108 C	0.6		
7719786	111B	2.8		
7719783 *	112 (Tampered)	0.9		
7719758	121 C	1.3		
7719746	122 B	1.2		
7719710	139 B	< 0.3		
7719733	149 A	1.1		
7719734	149 E	8.5		
7719816 *	163 (Missing)	0		

Table Note:
\* Missing or Compromised Sample

	Radon Testing Results						
	John F. Kennedy HS						
	Test Period: 01/04/16-01/07/16						
		Result					
Kit Number							
7719844	165 B	4					
7719845	165 C	4.8					
7719828	170 A	< 0.3					
7719817	170 B	< 0.3					
7719725	176A	0.8					
7719805	* 190 (Missing)	0					
7719799	ACADAMY	1.3					
7719771	ASST PRIN	< 0.3					
7719778	ASST PRIN	1.2					
7719784	BENITEZ	1.1					
7719775	BLDG SERV	1.2					
7719707	* CAFETERIA (Missing)	0					
7719720	* CAFETERIA (Missing)	0					
7719727	* CAFETERIA (Missing)	0					
7719806	GYM	1					
7719847	GYM	1.6					
7719850	* GYM (Missing)	0					
7719801	* GYM2 (Missing)	0					
7719853	* GYM2 (Missing)	0					
7719780	MAIN OFFICE	1.2					
7720650	OFFICE	< 0.3					

Table Note:
\* Missing or Compromised Sample

	Radon Testing Results						
	John F. Kennedy HS						
Test Period: 01/04/16-01/07/16							
Vit Normala au	OC Turns	Result					
	Kit Number QC Type						
7719749	D (104)	1.9					
7719767	D (123)	2					
7719736	D (151)	0.7					
7719833	D (159)	0.8					
7719818	D (163)	0.5					
7719825	D (163)	< 0.3					
7719849	D (165)	5.4					
7719841	D (167)	2					
7719822	D (168)	0.8					
7719718	D (CAFETERIA)	< 0.3					
7719852	* D (GYM2:Missing)	0					
7719802	* D (GYM2:Tampered)	1					
7719745	FB (104)	< 0.3					
7719748	FB (123)	< 0.3					
7719804	FB (190)	< 0.3					
7719716	FB (CAFETERIA)	< 0.3					
7719848	FB (GYM)	< 0.3					
7720647	OB (0)	< 0.3					

Table Note:
\* Missing or Compromised Sample

## ATTACHMENT C

## Laboratory Analytical Results

Kit#	Room Id	Started	Ended	pCi/L	Analyzed
7720647	0	2016-01-04 @ 3:00 pm	2016-01-07 @ 1:00 pm	< 0.3	2016-01-11
7719768	100 B	2016-01-04 @ 8:00 am	2016-01-07 @ 8:00 am	$0.8 \pm 0.3$	2016-01-11
7719772	100 F	2016-01-04 @ 8:00 am	2016-01-07 @ 8:00 am	$0.7 \pm 0.3$	2016-01-11
7719773	100 I	2016-01-04 @ 8:00 am	2016-01-07 @ 8:00 am	$1.4 \pm 0.4$	2016-01-12
7719774	100 K	2016-01-04 @ 8:00 am	2016-01-07 @ 8:00 am	$1.1 \pm 0.3$	2016-01-11
7719776	100 L	2016-01-04 @ 8:00 am	2016-01-07 @ 8:00 am	$1.0 \pm 0.4$	2016-01-12
7719777	100 M	2016-01-04 @ 9:00 am	2016-01-07 @ 8:00 am	$0.6 \pm 0.3$	2016-01-11
7719794	100 Q	2016-01-04 @ 9:00 am	2016-01-07 @ 9:00 am	$2.2 \pm 0.4$	2016-01-11
7719787	101	2016-01-04 @ 9:00 am	2016-01-07 @ 9:00 am	$1.5 \pm 0.3$	2016-01-11
7719753	101 A	2016-01-04 @ 9:00 am	2016-01-07 @ 9:00 am	$2.4 \pm 0.4$	2016-01-11
7719757	101 C	2016-01-04 @ 9:00 am	2016-01-07 @ 9:00 am	$2.0 \pm 0.4$	2016-01-11
7719754	101 D	2016-01-04 @ 9:00 am	2016-01-07 @ 9:00 am	$2.1 \pm 0.4$	2016-01-11
7719800	103	2016-01-04 @ 9:00 am	2016-01-07 @ 9:00 am	$1.0 \pm 0.3$	2016-01-11
7719789	104	2016-01-04 @ 9:00 am	2016-01-07 @ 9:00 am	$2.6 \pm 0.4$	2016-01-11
7719745	104	2016-01-04 @ 9:00 am	2016-01-07 @ 9:00 am	< 0.3	2016-01-11
7719749	104	2016-01-04 @ 9:00 am	2016-01-07 @ 9:00 am	$1.9 \pm 0.4$	2016-01-12
7719788	104 A	2016-01-04 @ 9:00 am	2016-01-07 @ 9:00 am	$1.4 \pm 0.3$	2016-01-11
7719781	104 B	2016-01-04 @ 9:00 am	2016-01-07 @ 9:00 am	$1.5 \pm 0.3$	2016-01-11
7719779	104 C	2016-01-04 @ 9:00 am	2016-01-07 @ 9:00 am	$1.4 \pm 0.3$	2016-01-11
7719782	104 D	2016-01-04 @ 9:00 am	2016-01-07 @ 9:00 am	$2.0 \pm 0.4$	2016-01-12
7719785	104 G	2016-01-04 @ 9:00 am	2016-01-07 @ 9:00 am	$2.2 \pm 0.4$	2016-01-11
7719793	104 H	2016-01-04 @ 9:00 am	2016-01-07 @ 9:00 am	$1.6 \pm 0.4$	2016-01-11
7719770	104 J	2016-01-04 @ 9:00 am	2016-01-07 @ 9:00 am	$1.7 \pm 0.4$	2016-01-11
7719797	104 K	2016-01-04 @ 9:00 am	2016-01-07 @ 9:00 am	$1.8 \pm 0.4$	2016-01-11
7719795	105	2016-01-04 @ 9:00 am	2016-01-07 @ 9:00 am	$1.3 \pm 0.4$	2016-01-11
7719763	107	2016-01-04 @ 9:00 am	2016-01-07 @ 9:00 am	$0.7 \pm 0.3$	2016-01-11
7719769	108 A	2016-01-04 @ 9:00 am	2016-01-07 @ 9:00 am	$0.7 \pm 0.3$	2016-01-11
7719744	108 B	2016-01-04 @ 9:00 am	2016-01-07 @ 9:00 am	$0.6 \pm 0.3$	2016-01-11
7719742	108 C	2016-01-04 @ 9:00 am	2016-01-07 @ 9:00 am	$0.7 \pm 0.3$	2016-01-11
7719790	108 C	2016-01-04 @ 9:00 am	2016-01-07 @ 9:00 am	$0.6 \pm 0.3$	2016-01-11
7719743	109	2016-01-04 @ 9:00 am	2016-01-07 @ 9:00 am	$2.0 \pm 0.4$	2016-01-11
7719766	110	2016-01-04 @ 9:00 am	2016-01-07 @ 9:00 am	$0.9 \pm 0.3$	2016-01-11
7719755	111	2016-01-04 @ 9:00 am	2016-01-07 @ 9:00 am	$1.4 \pm 0.3$	2016-01-11
7719786	111B	2016-01-04 @ 9:00 am	2016-01-07 @ 9:00 am	$2.8 \pm 0.4$	2016-01-11
7719783	112	2016-01-04 @ 9:00 am	2016-01-07 @ 9:00 am	$0.9 \pm 0.4$	2016-01-12
7719750	113	2016-01-04 @ 9:00 am	2016-01-07 @ 9:00 am	$1.0 \pm 0.3$	2016-01-11
7719711	114	2016-01-04 @ 9:00 am	2016-01-07 @ 9:00 am	$1.1 \pm 0.3$	2016-01-11

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7719762	116	2016-01-04 @ 9:00 am	2016-01-07 @ 9:00 am	$0.8 \pm 0.3$	2016-01-12
7719759	118	2016-01-04 @ 9:00 am	2016-01-07 @ 9:00 am	$0.9 \pm 0.3$	2016-01-11
7719761	119	2016-01-04 @ 9:00 am	2016-01-07 @ 9:00 am	$1.2 \pm 0.3$	2016-01-11
7719751	120	2016-01-04 @ 9:00 am	2016-01-07 @ 9:00 am	$1.1 \pm 0.3$	2016-01-11
7719758	121 C	2016-01-04 @ 9:00 am	2016-01-07 @ 9:00 am	$1.3 \pm 0.4$	2016-01-12
7719709	122	2016-01-04 @ 9:00 am	2016-01-07 @ 9:00 am	$1.1 \pm 0.4$	2016-01-12
7719746	122 B	2016-01-04 @ 9:00 am	2016-01-07 @ 9:00 am	$1.2 \pm 0.4$	2016-01-12
7719767	123	2016-01-04 @ 9:00 am	2016-01-07 @ 9:00 am	$2.0 \pm 0.4$	2016-01-11
7719740	123	2016-01-04 @ 9:00 am	2016-01-07 @ 9:00 am	$2.0 \pm 0.4$	2016-01-11
7719748	123	2016-01-04 @ 9:00 am	2016-01-07 @ 9:00 am	< 0.3	2016-01-11
7719760	124	2016-01-04 @ 9:00 am	2016-01-07 @ 9:00 am	$5.8 \pm 0.6$	2016-01-12
7719752	125	2016-01-04 @ 9:00 am	2016-01-07 @ 9:00 am	$2.0 \pm 0.4$	2016-01-11
7719702	126	2016-01-04 @ 9:00 am	2016-01-07 @ 9:00 am	$4.4 \pm 0.6$	2016-01-12
7719747	129	2016-01-04 @ 9:00 am	2016-01-07 @ 9:00 am	$2.0 \pm 0.4$	2016-01-11
7719756	131	2016-01-04 @ 9:00 am	2016-01-07 @ 9:00 am	$1.3 \pm 0.4$	2016-01-12
7719715	132	2016-01-04 @ 9:00 am	2016-01-07 @ 9:00 am	$1.5 \pm 0.3$	2016-01-11
7719712	133	2016-01-04 @ 9:00 am	2016-01-07 @ 9:00 am	$1.7 \pm 0.4$	2016-01-12
7719722	134	2016-01-04 @ 9:00 am	2016-01-07 @ 9:00 am	$1.4 \pm 0.4$	2016-01-12
7719717	136	2016-01-04 @ 9:00 am	2016-01-07 @ 9:00 am	$0.5 \pm 0.3$	2016-01-11
7719714	136	2016-01-04 @ 9:00 am	2016-01-07 @ 9:00 am	$2.2 \pm 0.4$	2016-01-12
7719713	139	2016-01-04 @ 9:00 am	2016-01-07 @ 9:00 am	$1.9 \pm 0.4$	2016-01-12
7719710	139 B	2016-01-04 @ 9:00 am	2016-01-07 @ 9:00 am	< 0.3	2016-01-11
7719719	141	2016-01-04 @ 9:00 am	2016-01-07 @ 9:00 am	$0.7 \pm 0.3$	2016-01-11
7719723	143	2016-01-04 @ 9:00 am	2016-01-07 @ 9:00 am	$0.6 \pm 0.3$	2016-01-12
7719724	144	2016-01-04 @ 10:00 am	2016-01-07 @ 9:00 am	$1.1 \pm 0.4$	2016-01-12
7719721	145	2016-01-04 @ 9:00 am	2016-01-07 @ 9:00 am	< 0.3	2016-01-11
7719729	147	2016-01-04 @ 10:00 am	2016-01-07 @ 9:00 am	$1.5 \pm 0.4$	2016-01-11
7719731	147	2016-01-04 @ 10:00 am	2016-01-07 @ 9:00 am	$1.7 \pm 0.4$	2016-01-12
7719732	149	2016-01-04 @ 10:00 am	2016-01-07 @ 9:00 am	$1.8 \pm 0.4$	2016-01-11
7719737	149	2016-01-04 @ 10:00 am	2016-01-07 @ 9:00 am	$1.9 \pm 0.4$	2016-01-11
7719733	149 A	2016-01-04 @ 10:00 am	2016-01-07 @ 10:00 am	$1.1 \pm 0.4$	2016-01-12
7719734	149 E	2016-01-04 @ 10:00 am	2016-01-07 @ 9:00 am	$8.5 \pm 0.7$	2016-01-12
7719730	151	2016-01-04 @ 10:00 am	2016-01-07 @ 10:00 am	$0.7 \pm 0.3$	2016-01-11
7719736	151	2016-01-04 @ 10:00 am	2016-01-07 @ 10:00 am	$0.7 \pm 0.3$	2016-01-11
7719798	153	2016-01-04 @ 10:00 am	2016-01-07 @ 10:00 am	$0.8 \pm 0.4$	2016-01-12
7719792	155	2016-01-04 @ 10:00 am	2016-01-07 @ 10:00 am	$1.7 \pm 0.4$	2016-01-11
7719735	156	2016-01-04 @ 10:00 am	2016-01-07 @ 10:00 am	< 0.3	2016-01-11

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7719856	157	2016-01-04 @ 10:00 am	2016-01-07 @ 10:00 am	$0.8 \pm 0.3$	2016-01-11
7719833	159	2016-01-04 @ 10:00 am	2016-01-07 @ 10:00 am	$0.8 \pm 0.3$	2016-01-11
7719843	159	2016-01-04 @ 10:00 am	2016-01-07 @ 11:00 am	$0.6 \pm 0.3$	2016-01-11
7719834	160	2016-01-04 @ 10:00 am	2016-01-07 @ 10:00 am	< 0.3	2016-01-11
7719839	161	2016-01-04 @ 10:00 am	2016-01-07 @ 10:00 am	< 0.3	2016-01-11
7719835	162	2016-01-04 @ 10:00 am	2016-01-07 @ 10:00 am	< 0.3	2016-01-11
7719816	163	@	@		
7719810	163	2016-01-04 @ 11:00 am	2016-01-07 @ 10:00 am	$0.7 \pm 0.3$	2016-01-11
7719812	163	2016-01-04 @ 11:00 am	2016-01-07 @ 10:00 am	$1.1 \pm 0.3$	2016-01-11
7719818	163	2016-01-04 @ 11:00 am	2016-01-07 @ 10:00 am	$0.5 \pm 0.3$	2016-01-11
7719825	163	2016-01-04 @ 11:00 am	2016-01-07 @ 10:00 am	< 0.3	2016-01-11
7719840	164	2016-01-04 @ 10:00 am	2016-01-07 @ 10:00 am	$0.8 \pm 0.3$	2016-01-11
7719842	165	2016-01-04 @ 10:00 am	2016-01-07 @ 10:00 am	$5.0 \pm 0.5$	2016-01-11
7719846	165	2016-01-04 @ 10:00 am	2016-01-07 @ 10:00 am	$6.8 \pm 0.6$	2016-01-11
7719849	165	2016-01-04 @ 10:00 am	2016-01-07 @ 10:00 am	$5.4 \pm 0.6$	2016-01-12
7719844	165 B	2016-01-04 @ 10:00 am	2016-01-07 @ 10:00 am	$4.0 \pm 0.5$	2016-01-12
7719845	165 C	2016-01-04 @ 10:00 am	2016-01-07 @ 11:00 am	$4.8 \pm 0.6$	2016-01-12
7719841	167	2016-01-04 @ 10:00 am	2016-01-07 @ 10:00 am	$2.0 \pm 0.4$	2016-01-11
7719855	167	2016-01-04 @ 10:00 am	2016-01-07 @ 10:00 am	$1.8 \pm 0.4$	2016-01-12
7719820	168	2016-01-04 @ 11:00 am	2016-01-07 @ 10:00 am	< 0.3	2016-01-11
7719822	168	2016-01-04 @ 11:00 am	2016-01-07 @ 10:00 am	$0.8 \pm 0.3$	2016-01-12
7719828	170 A	2016-01-04 @ 11:00 am	2016-01-07 @ 10:00 am	< 0.3	2016-01-12
7719817	170 B	2016-01-04 @ 11:00 am	2016-01-07 @ 10:00 am	< 0.3	2016-01-11
7719725	176A	2016-01-04 @ 10:00 am	2016-01-07 @ 9:00 am	$0.8 \pm 0.3$	2016-01-11
7719824	182	2016-01-04 @ 11:00 am	2016-01-07 @ 10:00 am	$1.2 \pm 0.4$	2016-01-12
7719821	184	2016-01-04 @ 10:00 am	2016-01-07 @ 10:00 am	$0.8 \pm 0.3$	2016-01-11
7719807	188	2016-01-04 @ 10:00 am	2016-01-07 @ 10:00 am	< 0.3	2016-01-11
7719805	190	@	@		
7719803	190	2016-01-04 @ 10:00 am	2016-01-07 @ 10:00 am	$3.2 \pm 0.4$	2016-01-11
7719804	190	2016-01-04 @ 10:00 am	2016-01-07 @ 10:00 am	< 0.3	2016-01-11
7719823	201	2016-01-04 @ 11:00 am	2016-01-07 @ 10:00 am	< 0.3	2016-01-11
7719819	205	2016-01-04 @ 11:00 am	2016-01-07 @ 10:00 am	< 0.3	2016-01-11
7719809	209	2016-01-04 @ 11:00 am	2016-01-07 @ 10:00 am	$1.2 \pm 0.4$	2016-01-12
7719826	224	2016-01-04 @ 11:00 am	2016-01-07 @ 10:00 am	$0.7 \pm 0.3$	2016-01-12
7719813	227	2016-01-04 @ 11:00 am	2016-01-07 @ 10:00 am	< 0.3	2016-01-11
7719811	240	2016-01-04 @ 11:00 am	2016-01-07 @ 10:00 am	$1.1 \pm 0.3$	2016-01-11
7719815	241	2016-01-04 @ 11:00 am	2016-01-07 @ 10:00 am	< 0.3	2016-01-11

Kit#	Room Id	Started	Ended	pCi/L	Analyzad
				-	Analyzed
7719814	250	2016-01-04 @ 11:00 am	2016-01-07 @ 10:00 am	$0.7 \pm 0.3$	2016-01-12
7719851	260	2016-01-04 @ 11:00 am	2016-01-07 @ 10:00 am	$0.5 \pm 0.3$	2016-01-12
7719830	270	2016-01-04 @ 11:00 am	2016-01-07 @ 10:00 am	$0.6 \pm 0.3$	2016-01-11
7719799	ACADAMY	2016-01-04 @ 9:00 am	2016-01-07 @ 9:00 am	$1.3 \pm 0.4$	2016-01-11
7719771	ASST PRIN	2016-01-04 @ 8:00 am	2016-01-07 @ 8:00 am	< 0.3	2016-01-11
7719778	ASST PRIN	2016-01-04 @ 9:00 am	2016-01-07 @ 8:00 am	$1.2 \pm 0.4$	2016-01-12
7719784	<b>BENITEZ</b>	2016-01-04 @ 9:00 am	2016-01-07 @ 9:00 am	$1.1 \pm 0.4$	2016-01-12
7719775	<b>BLDG SERV</b>	2016-01-04 @ 9:00 am	2016-01-07 @ 8:00 am	$1.2 \pm 0.4$	2016-01-12
7719707	CAFATERIA	@	@		
7719720	CAFATERIA	@	@		
7719727	CAFATERIA	@	@		
7719716	CAFATERIA	2016-01-04 @ 10:00 am	2016-01-07 @ 9:00 am	< 0.3	2016-01-11
7719718	CAFATERIA	2016-01-04 @ 10:00 am	2016-01-07 @ 9:00 am	< 0.3	2016-01-11
7719850	GYM	@	@		
7719806	GYM	2016-01-04 @ 10:00 am	2016-01-07 @ 10:00 am	$1.0 \pm 0.3$	2016-01-11
7719848	GYM	2016-01-04 @ 10:00 am	2016-01-07 @ 10:00 am	< 0.3	2016-01-12
7719847	GYM	2016-01-04 @ 10:00 am	2016-01-07 @ 10:00 am	$1.6 \pm 0.4$	2016-01-12
7719801	GYM2	@	@		
7719852	GYM2	@	@		
7719853	GYM2	@	@		
7719802	GYM2	2016-01-04 @ 10:00 am	2016-01-07 @ 10:00 am	$1.0 \pm 0.3$	2016-01-11
7719780	MAIN OFFICE	2016-01-04 @ 8:00 am	2016-01-07 @ 8:00 am	$1.2 \pm 0.4$	2016-01-12
7720650	OFFICE	2016-01-04 @ 3:00 pm	2016-01-07 @ 1:00 pm	< 0.3	2016-01-11

January LABORATORY ANALYSIS 25, REPORT \*\*

Radon test result report for: JOHN KENNEDY MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7719791	121	2016-01-04 @ 9:00 am	2016-01-07 @ 9:00 am	$0.8 \pm 0.4$	2016-01-12

January LABORATORY ANALYSIS 15, REPORT \*\*

Radon test result report for: MCPS PHASE 3 & 4 TRANSIT BLANKS

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7708218	TRAMSIT 4	2015-12-18 @ 12:00 pm	2015-12-21 @ 12:00 pm	< 0.3	2015-12-23
7708200	TRANSIT 1	2015-12-18 @ 12:00 pm	2015-12-21 @ 12:00 pm	< 0.3	2015-12-23
7708190	TRANSIT 10	2015-12-18 @ 12:00 pm	2015-12-21 @ 12:00 pm	< 0.3	2015-12-23
7708189	TRANSIT 11	2015-12-18 @ 12:00 pm	2015-12-21 @ 12:00 pm	< 0.3	2015-12-23
7708191	TRANSIT 12	2015-12-18 @ 12:00 pm	2015-12-21 @ 12:00 pm	< 0.3	2015-12-23
7708188	TRANSIT 13	2015-12-18 @ 12:00 pm	2015-12-21 @ 12:00 pm	< 0.3	2015-12-23
7708197	TRANSIT 14	2015-12-18 @ 12:00 pm	2015-12-21 @ 12:00 pm	< 0.3	2015-12-23
7708186	TRANSIT 15	2015-12-18 @ 12:00 pm	2015-12-21 @ 12:00 pm	< 0.3	2015-12-23
7708185	TRANSIT 16	2015-12-18 @ 12:00 pm	2015-12-21 @ 12:00 pm	< 0.3	2015-12-23
7708184	TRANSIT 17	2015-12-18 @ 12:00 pm	2015-12-21 @ 12:00 pm	< 0.3	2015-12-23
7708182	TRANSIT 18	2015-12-18 @ 12:00 pm	2015-12-21 @ 12:00 pm	< 0.3	2015-12-23
7708187	TRANSIT 18	2015-12-18 @ 12:00 pm	2015-12-21 @ 12:00 pm	< 0.3	2015-12-23
7708199	TRANSIT 2	2015-12-18 @ 12:00 pm	2015-12-21 @ 12:00 pm	< 0.3	2015-12-23
7708181	TRANSIT 20	2015-12-18 @ 12:00 pm	2015-12-21 @ 12:00 pm	< 0.3	2015-12-23
7708180	TRANSIT 21	2015-12-18 @ 12:00 pm	2015-12-21 @ 12:00 pm	< 0.3	2015-12-23
7708183	TRANSIT 22	2015-12-18 @ 12:00 pm	2015-12-21 @ 12:00 pm	< 0.3	2015-12-23
7708178	TRANSIT 23	2015-12-18 @ 12:00 pm	2015-12-21 @ 12:00 pm	< 0.3	2015-12-23
7708179	TRANSIT 24	2015-12-18 @ 12:00 pm	2015-12-21 @ 12:00 pm	< 0.3	2015-12-23
7708177	TRANSIT 25	2015-12-18 @ 12:00 pm	2015-12-21 @ 12:00 pm	< 0.3	2015-12-23
7708176	TRANSIT 26	2015-12-18 @ 12:00 pm	2015-12-21 @ 12:00 pm	< 0.3	2015-12-23
7708174	TRANSIT 27	2015-12-18 @ 12:00 pm	2015-12-21 @ 12:00 pm	< 0.3	2015-12-23
7708173	TRANSIT 28	2015-12-18 @ 12:00 pm	2015-12-21 @ 12:00 pm	< 0.3	2015-12-23
7708175	TRANSIT 29	2015-12-18 @ 12:00 pm	2015-12-21 @ 12:00 pm	< 0.3	2015-12-23
7708198	TRANSIT 3	2015-12-18 @ 12:00 pm	2015-12-21 @ 12:00 pm	< 0.3	2015-12-23
7708172	TRANSIT 30	2015-12-18 @ 12:00 pm	2015-12-21 @ 12:00 pm	< 0.3	2015-12-23
7708194	TRANSIT 5	2015-12-18 @ 12:00 pm	2015-12-21 @ 12:00 pm	< 0.3	2015-12-23
7708196	TRANSIT 6	2015-12-18 @ 12:00 pm	2015-12-21 @ 12:00 pm	< 0.3	2015-12-23
7708193	TRANSIT 7	2015-12-18 @ 12:00 pm	2015-12-21 @ 12:00 pm	< 0.3	2015-12-23
7708192	TRANSIT 8	2015-12-18 @ 12:00 pm	2015-12-21 @ 12:00 pm	< 0.3	2015-12-23
7708195	TRANSIT 9	2015-12-18 @ 12:00 pm	2015-12-21 @ 12:00 pm	< 0.3	2015-12-23

# December LABORATORY ANALYSIS 23, REPORT \*\*

## Spike Sample Laboratory Results

Radon test result report for: MCPS

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7706380	101	2015-12-18 @ 9:00 am	2015-12-21 @ 9:00 am	25.2	2015-12-23
7706381	102	2015-12-18 @ 9:00 am	2015-12-21 @ 9:00 am	26.5	2015-12-23
7706208	103	2015-12-18 @ 9:00 am	2015-12-21 @ 9:00 am	27.7	2015-12-23
7705132	104	2015-12-18 @ 9:00 am	2015-12-21 @ 9:00 am	28.6	2015-12-23
7706366	105	2015-12-18 @ 9:00 am	2015-12-21 @ 9:00 am	26.5	2015-12-23
7706211	106	2015-12-18 @ 9:00 am	2015-12-21 @ 9:00 am	26.1	2015-12-23

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

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

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

CLIENT KCI Technologies.	Inc. Job Number 173224
	pCi/L Rel. Hum <u>49.6</u> % Temp. <u>69.9</u>
Date Start: 12/18/15 Date Stop: 12/21/5	Date Start: Date Stop:
Time Start: <u>0929</u> Time Stop: <u>0929</u>	Time Start: Time Stop:
Device No.'s: 7705132,7766208	Device No.'s:
7706211,7706366,	
7706380, 7706381	
F3 Left	
Date Start: Date Stop:	Date Start: Date Stop:
Time Start: Time Stop:	Time Start: Time Stop:
Device No.'s:	Device No.'s:
	-
1	
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 =  $7 \mu R/h$  Elevation = 820 ft



### Engineers • Planners • Scientists • Construction Managers

Corporate Office: 936 Ridgebrook road • Sparks , Maryland 21152 • 410-316-7800 • (Fax) 410-316-7935

## **Chain of Custody**

Project Name: MCPS Radon Phase IV

#### Name of Schools:

1.	Albert Einstein HS	12. Herbert Hoover MS	23. Stephen Knolls School
2.	Bel Pre ES	13. Kohn F. Kennedy HS	24. Strathmore ES
3.	Benjamin Banneker MS	14. Julius West MS	25. Summit Hall ES
4.	Bethesda Chevy Chase HS	15. Kensington Parkwood ES	26. Travilah ES
5.	Beverly Farms ES	16. Lakewood ES	27. Twinbrook ES
6.	Cabin John MS	17. Mill Creek ES	28. Waters Landing ES
7.	Chevy Chase ES	18. Montgomery Blair HS	29. Watkins Mill HAS
8.	Farmland ES	19. Montgomery Village MS	30. Weller Road ES
9.	Forest Oak MS	20. Northwood HS	31. White Oak MS
10	. Gaithersburg HS	21. Paint Branch ES	32. Winston Churchill HS
11	. Garrett Park ES	22. Rock Creek Forest ES	

	Date	Initials
Radon Test Kits Deployed	1/4/16	JM
Radon Test Kits Sampled	1/7/16	JM
Radon Test Kits Shipped to Lab*	1/8/16	JM
Radon Test Kits Received by Lab*	1/11/16	JM

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

Note: tests kits deployed at Montgomery Blair HS 1/4/16 and 1/5/16, test kits sampled at Montgomery Blair HS 1/7/16 and 1/8/16