

**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; ≥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:	Stonega	Stonegate Elementary School				
14811 Notely Road						
Address:	Silver Sp	oring, MD 2090	5			
		☐ Scheduled	Re-Testing (2 or 5-year schedule)			
Reason for T	octina:	☐ Clearance	☐ Clearance Testing (Post-Mitigation)			
Reason for f	esting.	☐ System(s) Performance Testing (Post-Mitigation)				
		New Cons	struction/Facility			
Facility Curron	+ Dadan	☐ Active Mitigation (2-year regular schedule)				
Facility Curren		☐ No Active Mitigation (5-year regular schedule)				
514143		■ Not Previ	ously Tested			
Round of Te	esting:	☑ Initial Tes	ting -or-  Follow-up Testing			
Testing Sta	atus:	☑ No Furthe	er Testing Needed <b>-or-</b>			
Conclusion (Wh	nen Testin	g Status is - No	Further Testing Needed)			
Mitigation -		-	Facility Radon Status:			
☑ Not Required or Considered		Considered	☐ No Change in Status			
☐ Required (>8.0-pCi/L)		O-pCi/L)	_			
☐ Required (≥4.0-pCi/L)		O-pCi/L)	Active Mitigation (2-year regular schedule)			
☐ Consider (≥2.0 & <4.0-pCi/L)			☑ No Active Mitigation (5-year regular schedule)			



	Passive	⊠ Charc	oal Absorptio	on (CAD) 🔲 A	Alpha Track	(ATD) 🗌 Other
Detector/Device	<u> </u>				lectronic Int	egration (EID)
Type:	Other–Specify here:					
Detector/Device	Air Chek – Radon Test Kits					
Name:						
Manufacturer:	Radon Lab					
Person(s) Deploying	g or Retrieving Test	Devices and		Or	ganization/	Company
certification number	er					
Brittany Maas				KCI Technolo	gies, Inc.	
	_					
If noncertified individ	uals, the qualified me	easurement pr	rofessional pro	oviding oversight I	<del>;</del> -	
Tyler McCleaf, CSP	– Cert. #111004-RN	ИP		KCI Technolo	gies, Inc.	
_						
Testing						
Short-Term     ■	Length of		Date of Der	oloyment and	02/	12/2024
☐ Long-Term	Test (days):	3	·	(mm/dd/yy):		15/2024
Long-Term	. , , ,			. , , , , , ,	02,	13/2021
Does the test po	eriod include week	ends, school	breaks or ho	lidays?	☐ Yes	⊠ No
If " <b>Yes</b> " please ex	plain/detail in the sp	ace below:				
Was HVAC oper	Was HVAC operating under occupied conditions?  ☐ Yes ☐ No					
If "No" please explain/detail in the space below:						

Testing (continued)



	Detectors Deployed		
	Ground-Contact Upper-Level(s) Total		
Test Locations <sup>1</sup>	43	2	45
Duplicates <sup>2</sup>	4	0	4
Field Blanks <sup>3</sup>	2	0	2
		Grand Total	51

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

#### Summary of Test Results¹ and Determination of Valid Measurements²

	Ground-Contact	Upper-Level(s)	Total
Number of test locations:	43	2	45
Number of locations ≥8.0-pCi/L:	0	0	0
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
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?	Yes     □     No
If Yes to both above – then Testing Status – 'No Further Testing Needed' mark 'NA' below and comple	te Conclusions section
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 Radon Testing Report Form for only Follow-up Testing locations.

# Attachment 1: Summary Data Tables

Table 1- Radon Testir	ng Results
Stonegate Elementa	ry School
Test Period: 02/12/2024	- 02/15/2024
	I

Kit Number	Room / Area	Result
11478202	2	< 0.3
11478203	5	< 0.3
11478205	8	< 0.3
11478206	10	< 0.3
11478214	11	< 0.3
11478216	13	< 0.3
11478213	16	< 0.3
11478215	17	< 0.3
11478221	19	< 0.3
11478244	100	< 0.3
11478262	100	< 0.3
11478227	101	< 0.3
11478236	101	< 0.3
11478255	101	< 0.3
11478256	101	< 0.3
11478234	102	< 0.3
11478225	104	< 0.3
11478243	106	< 0.3
11478208	111	< 0.3
11478210	113	< 0.3
11478212	114	< 0.3
11478217	114	< 0.3
11478223	115	< 0.3
11478218	117	< 0.3
11478253	153	< 0.3
11478238	154	< 0.3
11478220	155	< 0.3
11478240	156	< 0.3
11478245	156	< 0.3
11478247	158	< 0.3
11478246	160	< 0.3
11478207	209	< 0.3
11478204	220	< 0.3
11478261	100A	< 0.3
11478263	100E	< 0.3
11478219	100H	< 0.3
11478241	102B	< 0.3
11478209	107B	< 0.3
11478230	107C	< 0.3
11478231	107C	< 0.3
11478232	107C	< 0.3
11478229	107D	< 0.3
11478224	107E	< 0.3

Table 1- Radon Testing Results					
Stone	Stonegate Elementary School				
Test Per	iod: 02/12/2024 - 02/1	5/2024			
Kit Number	Room / Area	Result			
11478248	159A	< 0.3			
11478222	GYM	< 0.3			
11478226	GYM	< 0.3			
11478201	GYM OFFICE	< 0.3			
11478235	KITCHEN OFFICE	< 0.3			
11478237	MEDIA CENTER	< 0.3			
11478239	MEDIA CENTER	< 0.3			
11478254	STAGE	< 0.3			

Table 2 - Summary Testing Results ≥2.0 pCi/L						
· · · · · · · · · · · · · · · · · · ·						
Test Period: 02/12/2024 - 02/15/2024						
.7 pCi/L	≥2.7 and <4	.0 pCi/L	≥4.0 and <8	3.0 pCi/l	≥8.0 pC	Ci/L
Result	Room / Area	Result	Room / Area	Result	Room / Area	Result
N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Result	Sto	Stonegate Eler Test Period: 02/12 7 pCi/L ≥2.7 and <4.0 pCi/L Result Room / Area Result	Stonegate Elementary School           Test Period: 02/12/2024 - 02/15/202           7 pCi/L         ≥2.7 and <4.0 pCi/L	Stonegate Elementary School           Test Period: 02/12/2024 - 02/15/2024           7 pCi/L         ≥2.7 and <4.0 pCi/L	Stonegate Elementary School           Test Period: 02/12/2024 - 02/15/2024           7 pCi/L         ≥2.7 and <4.0 pCi/L

Tab	Table 3 - QC Radon Testing Results					
Stonegate Elementary School						
Tes	t Period: 02	/12/2024 - 02/15/20	24			
Kit Number	QC Type	Room / Area	Result			
11478227	D	101	< 0.3			
11478255	FB	101	< 0.3			
11478217	D	114	< 0.3			
11478240	D	156	< 0.3			
11478231	D	107c	< 0.3			
11478232	11478232 FB 107c < 0.3					
11284661	11284661 OB OFFICE BLANK < 0.3					
11284664	TB	TRAVEL BLANK	< 0.3			

Table 4 - Summary of Invalid Measurement Locations						
	Stonegate Elementary School					
Tes	st Period: 02/12/	24 - 02/15/24				
Kit Number	Room/Area	Result				
N/A	N/A	N/A				

# Attachment 2: Laboratory Reports

February 19, 2024

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

#### Radon test result report for:

Kit#	Room Id	Started	Ended	pCi/L	Analyzed
11478210	113	2024-02-12 @ 8:00 am	2024-02-15 @ 10:00 am	< 0.3	2024-02-19
11478212	114	2024-02-12 @ 8:00 am	2024-02-15 @ 10:00 am	< 0.3	2024-02-19
11478217	114	2024-02-12 @ 8:00 am	2024-02-15 @ 10:00 am	< 0.3	2024-02-19
11478223	115	2024-02-12 @ 8:00 am	2024-02-15 @ 10:00 am	< 0.3	2024-02-19
11478218	117	2024-02-12 @ 8:00 am	2024-02-15 @ 10:00 am	< 0.3	2024-02-19

#### Radon test result report for: STONEGATE ES MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11478205	008	2024-02-12 @ 8:00 am	2024-02-15 @ 10:00 am	< 0.3	2024-02-19
11478206	010	2024-02-12 @ 8:00 am	2024-02-15 @ 10:00 am	< 0.3	2024-02-19
11478214	011	2024-02-12 @ 8:00 am	2024-02-15 @ 10:00 am	< 0.3	2024-02-19
11478216	013	2024-02-12 @ 8:00 am	2024-02-15 @ 10:00 am	< 0.3	2024-02-19
11478244	100	2024-02-12 @ 9:00 am	2024-02-15 @ 10:00 am	< 0.3	2024-02-19
11478262	100	2024-02-12 @ 9:00 am	2024-02-15 @ 10:00 am	< 0.3	2024-02-19
11478261	100A	2024-02-12 @ 9:00 am	2024-02-15 @ 10:00 am	< 0.3	2024-02-19
11478263	100E	2024-02-12 @ 9:00 am	2024-02-15 @ 10:00 am	< 0.3	2024-02-19
11478219	100H	2024-02-12 @ 9:00 am	2024-02-15 @ 10:00 am	< 0.3	2024-02-19
11478255	101	2024-02-12 @ 9:00 am	2024-02-15 @ 10:00 am	< 0.3	2024-02-19
11478256	101	2024-02-12 @ 9:00 am	2024-02-15 @ 10:00 am	< 0.3	2024-02-19
11478227	101	2024-02-12 @ 9:00 am	2024-02-15 @ 10:00 am	< 0.3	2024-02-19
11478236	101	2024-02-12 @ 9:00 am	2024-02-15 @ 10:00 am	< 0.3	2024-02-19
11478234	102	2024-02-12 @ 9:00 am	2024-02-15 @ 10:00 am	< 0.3	2024-02-19
11478241	102B	2024-02-12 @ 9:00 am	2024-02-15 @ 10:00 am	< 0.3	2024-02-19
11478225	104	2024-02-12 @ 9:00 am	2024-02-15 @ 10:00 am	< 0.3	2024-02-19
11478243	106	2024-02-12 @ 9:00 am	2024-02-15 @ 10:00 am	< 0.3	2024-02-19
11478209	107B	2024-02-12 @ 9:00 am	2024-02-15 @ 10:00 am	< 0.3	2024-02-19
11478232	107C	2024-02-12 @ 9:00 am	2024-02-15 @ 10:00 am	< 0.3	2024-02-19
11478230	107C	2024-02-12 @ 9:00 am	2024-02-15 @ 10:00 am	< 0.3	2024-02-19
11478231	107C	2024-02-12 @ 9:00 am	2024-02-15 @ 10:00 am	< 0.3	2024-02-19
11478229	107D	2024-02-12 @ 9:00 am	2024-02-15 @ 10:00 am	< 0.3	2024-02-19
11478224	107E	2024-02-12 @ 8:00 am	2024-02-15 @ 10:00 am	< 0.3	2024-02-19
11478208	111	2024-02-12 @ 8:00 am	2024-02-15 @ 10:00 am	< 0.3	2024-02-19
11478253	153	2024-02-12 @ 9:00 am	2024-02-15 @ 10:00 am	< 0.3	2024-02-19
11478238	154	2024-02-12 @ 9:00 am	2024-02-15 @ 10:00 am	< 0.3	2024-02-19
11478220	155	2024-02-12 @ 9:00 am	2024-02-15 @ 10:00 am	< 0.3	2024-02-19
11478245	156	2024-02-12 @ 9:00 am	2024-02-15 @ 10:00 am	< 0.3	2024-02-19
11478240	156	2024-02-12 @ 9:00 am	2024-02-15 @ 10:00 am	< 0.3	2024-02-19
11478247	158	2024-02-12 @ 9:00 am	2024-02-15 @ 10:00 am	< 0.3	2024-02-19
11478248	159A	2024-02-12 @ 9:00 am	2024-02-15 @ 10:00 am	< 0.3	2024-02-19
11478213	16	2024-02-12 @ 8:00 am	2024-02-15 @ 10:00 am	< 0.3	2024-02-19
11478246	160	2024-02-12 @ 9:00 am	2024-02-15 @ 10:00 am	< 0.3	2024-02-19
11478215	17	2024-02-12 @ 8:00 am	2024-02-15 @ 10:00 am	< 0.3	2024-02-19
11478221	19	2024-02-12 @ 8:00 am	2024-02-15 @ 10:00 am	< 0.3	2024-02-19
11478202	2	2024-02-12 @ 8:00 am	2024-02-15 @ 10:00 am	< 0.3	2024-02-19
11478207	209	2024-02-12 @ 8:00 am	2024-02-15 @ 10:00 am	< 0.3	2024-02-19

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

#### Radon test result report for: STONEGATE ES MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11478204	220	2024-02-12 @ 8:00 am	2024-02-15 @ 10:00 am	< 0.3	2024-02-19
11478203	5	2024-02-12 @ 8:00 am	2024-02-15 @ 10:00 am	< 0.3	2024-02-19
11478226	GYM	2024-02-12 @ 9:00 am	2024-02-15 @ 10:00 am	< 0.3	2024-02-19
11478222	GYM	2024-02-12 @ 9:00 am	2024-02-15 @ 10:00 am	< 0.3	2024-02-19
11478201	GYM OFFICE	2024-02-12 @ 9:00 am	2024-02-15 @ 10:00 am	< 0.3	2024-02-19
11478235	KITCHEN OFFICE	2024-02-12 @ 9:00 am	2024-02-15 @ 10:00 am	< 0.3	2024-02-19
11478237	MEDIA CENTER	2024-02-12 @ 9:00 am	2024-02-15 @ 10:00 am	< 0.3	2024-02-19
11478239	MEDIA CENTER	2024-02-12 @ 9:00 am	2024-02-15 @ 10:00 am	< 0.3	2024-02-19
11478254	STAGE	2024-02-12 @ 9:00 am	2024-02-15 @ 10:00 am	< 0.3	2024-02-19

February 20, 2024

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

#### Radon test result report for: OFFICE BLANK MAIN

Kit#	Room Id	Started	Ended	pCi/L	Analyzed
11284661	OB	2024-02-12 @ 10:00 am	2024-02-15 @ 11:00 am	< 0.3	2024-02-20
11284674	OB	2024-02-13 @ 10:00 am	2024-02-16 @ 11:00 am	< 0.3	2024-02-20

February 20, 2024

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

#### Radon test result report for: TRAVEL BLANK MAIN

Kit#	Room Id	Started	Ended	pCi/L	Analyzed
11284664	TB	2024-02-12 @ 10:00 am	2024-02-15 @ 11:00 am	< 0.3	2024-02-20
11285521	TB	2024-02-13 @ 10:00 am	2024-02-16 @ 11:00 am	< 0.3	2024-02-20

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**

<u>Project Name:</u> MCPS Radon – Testing February 12<sup>th</sup> – February 15<sup>th</sup> 2024

#### Name of Schools:

- 1. Montgomery Blair HS
- 2. Sargent Shriver ES
- 3. Southlake ES
- 4. Stonegate ES

- 5. Flora M. Singer ES
- 6. Sligo Creek ES
- 7. Travilah ES

	Date	Initials
Radon Test Kits Deployed	02/12/2024	Rs
Radon Test Kits Collected	02/15/2024	en
Radon Test Kits Shipped to Lab*	02/15/2024	an
Radon Test Kits Received by Lab*	02/19/2024	per

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

# Attachment 3: Sampling Location Map



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

#### MCPS RADON TESTING

**Executive Summary:** Stonegate Elementary School

Date of Test Report:	4/6/2016 (Rev 1)
Round of Testing:	Initial
	Follow-up
	Post Remediation
# Rooms Tested:	33
# Rooms $\geq$ 4.0 pCi/L:	0
Low Value:	< 0.3
High Value:	2.4

#### Project Status:

Initial testing completed; one sample missing (Principal Office). No further action at this time based on the results for other rooms in the facility.

KCI TECHNOLOGIES, INC. WWW.kci.com

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

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

April 6, 2016 (Rev 1)

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

Re: Radon Testing Services

KCI Job # 12146341.26

Location: Stonegate Elementary School

14811 Notley Road Silver Spring, MD 20905

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 Stonegate Elementary School, located at 14811 Notley Road in Silver Spring, Maryland 20905 (subject site).

#### **Scope of Services:**

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

KCI visited the site on February 1, 2016 and deployed forty-three (43) activated charcoal (AC) radon test kits. KCI deployed radon test kits in frequently-occupied ground contact rooms, and other areas, (if applicable) in accordance with AARST guidance. A floor plan map of the building with the test locations is included as Attachment A of this report.

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

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

KCI TECHNOLOGIES, INC. WWW.kci.com

Butler Bridge Road, Mills River, North Carolina.

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

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

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

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

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

#### **Results:**

The results of the radon test analysis indicated the following:

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

Notes:

D- Duplicate sample

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

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

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

KCI TECHNOLOGIES, INC. WWW.kci.com

Employee-Owned Since 1988

Mr. Richard Cox April 6, 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 A

## Floor Plan With Test Locations

## ATTACHMENT B

# Radon Test Summary Spreadsheet

#### **Table Notes:**

AC- Activated Charcoal

ACI- Air Chek, Inc.

D- Duplicate

FB- Field Blank

KCI- KCI Technologies, Inc.

**OB- Office Blank** 

PM- Project Manager

QC- Quality Control

#### **Radon Testing Results Stonegate Elementary School** Test Period: 02/01/16-02/04/16 Kit Number Room / Area Result 7731608 1.5 7731617 2 1.7 7731613 3 8.0 7731606 4 0.7 7731604 5 1.7 7731614 0.7 6 7731620 10 8.0 7731621 11 0.6 12 7731623 < 0.3 7731605 13 0.7 7731603 14 0.6 7731602 15 0.6 7726780 17 0.7 21 7726785 0.6 7731625 22 < 0.3 7726776 26 0.9 7726790 CONF 1.5 7726772 **FAC** 0.9 7726787 G4 1.0 7726793 G4 1.3 GOF 7731619 1.5 7731622 HE 1.5 7726783 IMC 2.0 7726784 IMC 2.4 7731611 KIT 1.1 7731618 ML408 < 0.3 7731616 ML488 8.0 7731615 ML554 < 0.3 7731624 ML752 < 0.3 7726778 MPR 1.5 7726782 MPR 1.1 7731612 PΕ 1.9 7726794 PEO 1.0 7721409 PRN (Missing) 7731601 SHARK SHACK 0.9 7726779 WR 1.5

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

	Radon Testing Results Stonegate Elementary School		
Test Period: 02/01/16-02/04/16			
Kit Number	QC Type	Result	
7731609	D (11)	0.8	
7726774	D (17)	< 0.3	
7731610	D (2)	1.3	
7726777	D (GOF)	1.3	
7731607	FB (3)	< 0.3	
7726773	FB (PEO)	< 0.3	
7726788	OB (0)	< 0.3	

## ATTACHMENT C

# Laboratory Analytical Results

Radon test result report for:
STONEGATE ELEMENTARY SCHOOL
MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7726788	0	2016-02-01 @ 11:00 am	2016-02-04 @ 10:00 am	< 0.3	2016-02-09
7731608	1	2016-02-01 @ 9:00 am	2016-02-04 @ 8:00 am	$1.5 \pm 0.5$	2016-02-09
7731620	10	2016-02-01 @ 9:00 am	2016-02-04 @ 8:00 am	$0.8 \pm 0.4$	2016-02-08
7731609	11	2016-02-01 @ 9:00 am	2016-02-04 @ 8:00 am	$0.8 \pm 0.3$	2016-02-08
7731621	11	2016-02-01 @ 9:00 am	2016-02-04 @ 8:00 am	$0.6 \pm 0.4$	2016-02-09
7731623	12	2016-02-01 @ 9:00 am	2016-02-04 @ 8:00 am	< 0.3	2016-02-09
7731605	13	2016-02-01 @ 9:00 am	2016-02-04 @ 8:00 am	$0.7 \pm 0.4$	2016-02-09
7731603	14	2016-02-01 @ 9:00 am	2016-02-04 @ 8:00 am	$0.6 \pm 0.3$	2016-02-08
7731602	15	2016-02-01 @ 9:00 am	2016-02-04 @ 8:00 am	$0.6 \pm 0.4$	2016-02-09
7726774	17	2016-02-01 @ 10:00 am	2016-02-04 @ 9:00 am	< 0.3	2016-02-08
7726780	17	2016-02-01 @ 10:00 am	2016-02-04 @ 9:00 am	$0.7 \pm 0.4$	2016-02-08
7731610	2	2016-02-01 @ 9:00 am	2016-02-04 @ 8:00 am	$1.3 \pm 0.4$	2016-02-09
7731617	2	2016-02-01 @ 9:00 am	2016-02-04 @ 8:00 am	$1.7 \pm 0.4$	2016-02-09
7726785	21	2016-02-01 @ 10:00 am	2016-02-04 @ 9:00 am	$0.6 \pm 0.4$	2016-02-09
7731625	22	2016-02-01 @ 10:00 am	2016-02-04 @ 9:00 am	< 0.3	2016-02-09
7726776	26	2016-02-01 @ 11:00 am	2016-02-04 @ 9:00 am	$0.9 \pm 0.4$	2016-02-09
7731607	3	2016-02-01 @ 9:00 am	2016-02-04 @ 8:00 am	< 0.3	2016-02-09
7731613	3	2016-02-01 @ 9:00 am	2016-02-04 @ 8:00 am	$0.8 \pm 0.4$	2016-02-09
7731606	4	2016-02-01 @ 9:00 am	2016-02-04 @ 8:00 am	$0.7 \pm 0.4$	2016-02-08
7731604	5	2016-02-01 @ 9:00 am	2016-02-04 @ 8:00 am	$1.7 \pm 0.4$	2016-02-09
7731614	6	2016-02-01 @ 9:00 am	2016-02-04 @ 8:00 am	$0.7 \pm 0.4$	2016-02-09
7726790	CONF	2016-02-01 @ 10:00 am	2016-02-04 @ 8:00 am	$1.5 \pm 0.4$	2016-02-09
7726772	FAC	2016-02-01 @ 10:00 am	2016-02-04 @ 9:00 am	$0.9 \pm 0.4$	2016-02-09
7726787	G4	2016-02-01 @ 10:00 am	2016-02-04 @ 9:00 am	$1.0 \pm 0.4$	2016-02-09
7726793	G4	2016-02-01 @ 10:00 am	2016-02-04 @ 9:00 am	$1.3 \pm 0.4$	2016-02-09
7726777	GOF	2016-02-01 @ 9:00 am	2016-02-04 @ 8:00 am	$1.3 \pm 0.4$	2016-02-09
7731619	GOF	2016-02-01 @ 9:00 am	2016-02-04 @ 8:00 am	$1.5 \pm 0.4$	2016-02-09
7731622	HE	2016-02-01 @ 10:00 am	2016-02-04 @ 8:00 am	$1.5 \pm 0.4$	2016-02-09
7726783	IMC	2016-02-01 @ 10:00 am	2016-02-04 @ 9:00 am	$2.0 \pm 0.5$	2016-02-09
7726784	IMC	2016-02-01 @ 10:00 am	2016-02-04 @ 9:00 am	$2.4 \pm 0.5$	2016-02-09
7731611	KIT	2016-02-01 @ 10:00 am	2016-02-04 @ 9:00 am	$1.1 \pm 0.4$	2016-02-09
7726778	MPR	2016-02-01 @ 10:00 am	2016-02-04 @ 8:00 am	$1.5 \pm 0.4$	2016-02-09
7726782	MPR	2016-02-01 @ 10:00 am	2016-02-04 @ 8:00 am	$1.1 \pm 0.4$	2016-02-09
7731612	PE	2016-02-01 @ 10:00 am	2016-02-04 @ 8:00 am	$1.9 \pm 0.5$	2016-02-09
7726773	PEO	2016-02-01 @ 10:00 am	2016-02-04 @ 9:00 am	< 0.3	2016-02-09
7726794	PEO	2016-02-01 @ 10:00 am	2016-02-04 @ 9:00 am	$1.0 \pm 0.4$	2016-02-09
7721409	PRN	@	@		

# February LABORATORY ANALYSIS 23, REPORT \*\*

Radon test result report for:
STONEGATE ELEMENTARY SCHOOL MAIN

Kit#	Room Id	Started	Ended	pCi/L	Analyzed
7731601	SHARK SHACK	2016-02-01 @ 9:00 am	2016-02-04 @ 8:00 am	$0.9 \pm 0.4$	2016-02-09
7726779	WR	2016-02-01 @ 10:00 am	2016-02-04 @ 8:00 am	$1.5 \pm 0.4$	2016-02-09

# February LABORATORY ANALYSIS 23, REPORT \*\*

Radon test result report for:
STONEGATE ELEMENTARY SCHOOL PORTABLE

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7731618	ML408	2016-02-01 @ 9:00 am	2016-02-04 @ 8:00 am	< 0.3	2016-02-09
7731616	ML488	2016-02-01 @ 8:00 am	2016-02-04 @ 8:00 am	$0.8 \pm 0.4$	2016-02-09
7731615	ML554	2016-02-01 @ 9:00 am	2016-02-04 @ 8:00 am	< 0.3	2016-02-09
7731624	ML752	2016-02-01 @ 9:00 am	2016-02-04 @ 8:00 am	< 0.3	2016-02-09
7731624	ML752	2016-02-01 @ 9:00 am	2016-02-04 @ 8:00 am	< 0.3	2010

# 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           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           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 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 7 (2-1-2016)

#### Name of School/Facility:

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

9. Bethesda Annex

-----

	Date	Initials
Radon Test Kits Deployed	2/1/16	M
Radon Test Kits Collected	2/4/16	JM
Radon Test Kits Shipped to Lab*	2/4/16	UM
Radon Test Kits Received by Lab*	2/8/16	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 7 (2-2-2016)

#### Name of School/Facility:

4	_			_	
7	( )	ncor	'M'	Or	ntar

- 2. Lynnbrook Center
- 3. Carver (CESC)
- 4. Spring Mill (area 1 Office)
- 5. Wheaton H.S.
- 6. Montrose Center
- 7. West Farm Trans Depot

- 8. Food & Nutritional Services
- 9. Fairland Center
- 10. Redland M.S. (retest)
- 11. Clarksburg Trans Depot
- 12. Clarksburg Main Depot
- 13. Clarksburg E.S.

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

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