



School / Facility Radon Testing Report Form

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; ≥ 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.

School Year: **23-24**

Facility:	Fields Road Elementary School
Address:	One School Drive
	Gaithersburg, MD 20878

Reason for Testing:	<input checked="" type="checkbox"/> Scheduled Re-Testing (2 or 5-year schedule) <input type="checkbox"/> Clearance Testing (Post-Mitigation) <input type="checkbox"/> System(s) Performance Testing (Post-Mitigation) <input type="checkbox"/> New Construction/Facility
Facility Current Radon Status:	<input checked="" type="checkbox"/> Active Mitigation (2-year regular schedule) <input type="checkbox"/> No Active Mitigation (5-year regular schedule) <input type="checkbox"/> Not Previously Tested
Round of Testing:	<input checked="" type="checkbox"/> Initial Testing -or- <input type="checkbox"/> Follow-up Testing
Testing Status:	<input checked="" type="checkbox"/> No Further Testing Needed -or- <input type="checkbox"/> Follow-Up Testing Required

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

Mitigation -	Facility Radon Status:
<input checked="" type="checkbox"/> Not Required or Considered <input type="checkbox"/> Required (>8.0 -pCi/L) <input type="checkbox"/> Required (≥ 4.0 -pCi/L) <input type="checkbox"/> Consider (≥ 2.0 & <4.0 -pCi/L)	<input checked="" type="checkbox"/> No Change in Status <input type="checkbox"/> Active Mitigation (2-year regular schedule) <input type="checkbox"/> No Active Mitigation (5-year regular schedule)

Detector and Deployment

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

Testing

<input checked="" type="checkbox"/> Short-Term	Length of Test (days):	3	Date of Deployment and Retrieval (mm/dd/yy):	01/22/24
<input type="checkbox"/> Long-Term				01/25/24
Does the test period include weekends, school breaks or holidays?				<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<i>If "Yes" please explain/detail in the space below:</i>				
Was HVAC operating under occupied conditions?				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<i>If "No" please explain/detail in the space below:</i>				

Testing (continued)

	Detectors Deployed		
	Ground-Contact	Upper-Level(s)	Total
Test Locations ¹	60	0	60
Duplicates ²	7	0	7
Field Blanks ³	4	0	4
Grand Total			71

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

2 - 10% of all locations tested, per floor

3 – 5% of all locations tested, per floor

Quality Assurance / Quality Control (QA/QC)

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

Spike Samples ¹	6	Trip Blank(s) ²	2	Office Blank(s) ^{3,4}	2
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1 - 3% of EIC detectors; and 3% from each LOT of CAD and ATD detectors; a maximum of 6-spiked measurements per month for both EIC detectors and each LOT of CAD and ATD detectors.

2 – One per shipping container from start of detector deployment

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

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

Spike Sample Lab Results. Measured values are satisfactory, i.e., within ± 25% of the chamber's reference value.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Quality Control measurements comply with QA/QC requirements in the QA plan previously submitted?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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 Results¹ and Determination of Valid Measurements²

	Ground-Contact	Upper-Level(s)	Total
Number of test locations:	60	0	60
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 ³ :	0	0	0
Percentage of missing test locations for the facility ^{4,5} :	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 $\leq 33\%$. If less than 18 test locations please review section 6.2 of the ANSI/AARST MA-MFLB 2023;

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

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

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

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

- **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:
 - 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	1- Short-term follow-up test 2- Average the results of the two tests	≥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 Testing Results		
Fields Road Elementary School		
Test Period: 01/22/2024 - 01/25/2024		
Kit Number	Room / Area	Result
11284018	8	0.9
11284023	8	0.8
11284061	101	0.6
11284065	102	< 0.3
11284066	103	< 0.3
11284059	104	0.6
11284060	104	< 0.3
11284054	105	< 0.3
11284057	105	0.5
11284056	106	< 0.3
11284058	107	< 0.3
11284063	108	< 0.3
11284052	109	< 0.3
11284053	115	< 0.3
11284048	116	0.6
11284049	116	< 0.3
11284062	117	< 0.3
11284067	118	0.6
11284068	118	< 0.3
11284071	119	< 0.3
11284072	119	0.5
11284069	123	< 0.3
11284073	124	< 0.3
11284074	125	< 0.3
11284070	126	< 0.3
11284050	128	< 0.3
11284051	128	< 0.3
11284046	129	0.6
11284042	130	< 0.3
11284047	131	< 0.3
11284044	133	< 0.3
11284045	135	0.7
11284043	139	< 0.3
11284041	140	< 0.3
11284040	141	< 0.3
11284032	143	< 0.3
11284033	143	0.7
11284034	149	< 0.3

Table 1- Radon Testing Results		
Fields Road Elementary School		
Test Period: 01/22/2024 - 01/25/2024		
11284035	151	< 0.3
11284037	153	0.9
11284036	155	< 0.3
11284039	157	0.6
11284027	159	< 0.3
11284028	159	< 0.3
11284038	160	0.6
11284029	161	< 0.3
11284030	161	0.6
11284031	162	< 0.3
11284026	164	< 0.3
11284024	168	< 0.3
11284022	169	< 0.3
11284025	171	0.5
11284021	174	0.6
11284011	100F	< 0.3
11284012	100G	< 0.3
11284014	100H	< 0.3
11284017	100I	0.7
11284055	104A	< 0.3
11284064	104B	N/A
11284015	APR	0.5
11284016	APR	0.6
11284019	GYM	0.9
11284019	GYM	N/A
11284009	MAIL	0.7
11284010	MAIN OFFICE 100	0.7
11284004	NURSE	< 0.3
11477873	104B	<0.3
11477895	104B	<0.3
11477872	GYM	1.1
11477876	GYM	<0.3
11477884	GYM	1.4

Table 3 - QC Radon Testing Results			
Fields Road Elementary School			
Test Period: 01/22/2024 - 01/25/2024			
Kit Number	QC Type	Room / Area	Result
11284023	D	8	0.8
11284054	D	105	< 0.3
11284049	FB	116	< 0.3
11284067	D	118	0.6
11284071	FB	119	< 0.3
11284050	D	128	< 0.3
11284033	D	143	0.7
11284027	D	159	< 0.3
11284029	FB	161	< 0.3
11463686	OB	OFFICE BLANK	< 0.3
11463685	TB	TRAVEL BLANK	< 0.3

Attachment 2:
Laboratory Reports

Radon test result report for:
FIELDS RD ES
MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11284023	008	2024-01-22 @ 9:00 am	2024-01-25 @ 10:00 am	0.8 ± 0.3	2024-01-29
11284018	008	2024-01-22 @ 9:00 am	2024-01-25 @ 10:00 am	0.9 ± 0.3	2024-01-29
11284011	100F	2024-01-22 @ 9:00 am	2024-01-25 @ 10:00 am	< 0.3	2024-01-29
11284012	100G	2024-01-22 @ 9:00 am	2024-01-25 @ 10:00 am	< 0.3	2024-01-29
11284014	100H	2024-01-22 @ 9:00 am	2024-01-25 @ 10:00 am	< 0.3	2024-01-29
11284017	100I	2024-01-22 @ 9:00 am	2024-01-25 @ 10:00 am	0.7 ± 0.3	2024-01-29
11284061	101	2024-01-22 @ 10:00 am	2024-01-25 @ 10:00 am	0.6 ± 0.3	2024-01-29
11284065	102	2024-01-22 @ 10:00 am	2024-01-25 @ 10:00 am	< 0.3	2024-01-29
11284066	103	2024-01-22 @ 10:00 am	2024-01-25 @ 10:00 am	< 0.3	2024-01-29
11284060	104	2024-01-22 @ 10:00 am	2024-01-25 @ 10:00 am	< 0.3	2024-01-29
11284059	104	2024-01-22 @ 10:00 am	2024-01-25 @ 10:00 am	0.6 ± 0.3	2024-01-29
11284055	104A	2024-01-22 @ 10:00 am	2024-01-25 @ 10:00 am	< 0.3	2024-01-29
11284057	105	2024-01-22 @ 10:00 am	2024-01-25 @ 10:00 am	0.5 ± 0.3	2024-01-29
11284054	105	2024-01-22 @ 10:00 am	2024-01-25 @ 10:00 am	< 0.3	2024-01-29
11284056	106	2024-01-22 @ 10:00 am	2024-01-25 @ 10:00 am	< 0.3	2024-01-29
11284058	107	2024-01-22 @ 10:00 am	2024-01-25 @ 10:00 am	< 0.3	2024-01-29
11284063	108	2024-01-22 @ 10:00 am	2024-01-25 @ 10:00 am	< 0.3	2024-01-29
11284052	109	2024-01-22 @ 10:00 am	2024-01-25 @ 10:00 am	< 0.3	2024-01-29
11284053	115	2024-01-22 @ 10:00 am	2024-01-25 @ 10:00 am	< 0.3	2024-01-29
11284049	116	2024-01-22 @ 10:00 am	2024-01-25 @ 10:00 am	< 0.3	2024-01-29
11284048	116	2024-01-22 @ 10:00 am	2024-01-25 @ 10:00 am	0.6 ± 0.3	2024-01-29
11284062	117	2024-01-22 @ 10:00 am	2024-01-25 @ 10:00 am	< 0.3	2024-01-29
11284067	118	2024-01-22 @ 10:00 am	2024-01-25 @ 10:00 am	0.6 ± 0.3	2024-01-29
11284068	118	2024-01-22 @ 10:00 am	2024-01-25 @ 10:00 am	< 0.3	2024-01-29
11284071	119	2024-01-22 @ 10:00 am	2024-01-25 @ 10:00 am	< 0.3	2024-01-29
11284072	119	2024-01-22 @ 10:00 am	2024-01-25 @ 10:00 am	0.5 ± 0.3	2024-01-29
11284069	123	2024-01-22 @ 10:00 am	2024-01-25 @ 10:00 am	< 0.3	2024-01-29
11284073	124	2024-01-22 @ 10:00 am	2024-01-25 @ 10:00 am	< 0.3	2024-01-29
11284074	125	2024-01-22 @ 10:00 am	2024-01-25 @ 10:00 am	< 0.3	2024-01-29
11284070	126	2024-01-22 @ 10:00 am	2024-01-25 @ 10:00 am	< 0.3	2024-01-29
11284050	128	2024-01-22 @ 10:00 am	2024-01-25 @ 10:00 am	< 0.3	2024-01-29
11284051	128	2024-01-22 @ 10:00 am	2024-01-25 @ 10:00 am	< 0.3	2024-01-29
11284046	129	2024-01-22 @ 10:00 am	2024-01-25 @ 10:00 am	0.6 ± 0.3	2024-01-29
11284042	130	2024-01-22 @ 10:00 am	2024-01-25 @ 10:00 am	< 0.3	2024-01-29
11284047	131	2024-01-22 @ 10:00 am	2024-01-25 @ 10:00 am	< 0.3	2024-01-29
11284044	133	2024-01-22 @ 10:00 am	2024-01-25 @ 10:00 am	< 0.3	2024-01-29
11284045	135	2024-01-22 @ 10:00 am	2024-01-25 @ 10:00 am	0.7 ± 0.3	2024-01-29

Radon test result report for:**FIELDS RD ES****MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11284043	139	2024-01-22 @ 10:00 am	2024-01-25 @ 10:00 am	< 0.3	2024-01-29
11284041	140	2024-01-22 @ 10:00 am	2024-01-25 @ 10:00 am	< 0.3	2024-01-29
11284040	141	2024-01-22 @ 10:00 am	2024-01-25 @ 10:00 am	< 0.3	2024-01-29
11284032	143	2024-01-22 @ 10:00 am	2024-01-25 @ 10:00 am	< 0.3	2024-01-29
11284033	143	2024-01-22 @ 10:00 am	2024-01-25 @ 10:00 am	0.7 ± 0.3	2024-01-29
11284034	149	2024-01-22 @ 9:00 am	2024-01-25 @ 10:00 am	< 0.3	2024-01-29
11284035	151	2024-01-22 @ 9:00 am	2024-01-25 @ 10:00 am	< 0.3	2024-01-29
11284037	153	2024-01-22 @ 9:00 am	2024-01-25 @ 10:00 am	0.9 ± 0.3	2024-01-29
11284036	155	2024-01-22 @ 9:00 am	2024-01-25 @ 10:00 am	< 0.3	2024-01-29
11284039	157	2024-01-22 @ 9:00 am	2024-01-25 @ 10:00 am	0.6 ± 0.3	2024-01-29
11284027	159	2024-01-22 @ 9:00 am	2024-01-25 @ 10:00 am	< 0.3	2024-01-29
11284028	159	2024-01-22 @ 9:00 am	2024-01-25 @ 10:00 am	< 0.3	2024-01-29
11284038	160	2024-01-22 @ 9:00 am	2024-01-25 @ 10:00 am	0.6 ± 0.3	2024-01-29
11284030	161	2024-01-22 @ 9:00 am	2024-01-25 @ 10:00 am	0.6 ± 0.3	2024-01-29
11284029	161	2024-01-22 @ 9:00 am	2024-01-25 @ 10:00 am	< 0.3	2024-01-29
11284031	162	2024-01-22 @ 9:00 am	2024-01-25 @ 10:00 am	< 0.3	2024-01-29
11284026	164	2024-01-22 @ 9:00 am	2024-01-25 @ 10:00 am	< 0.3	2024-01-29
11284024	168	2024-01-22 @ 9:00 am	2024-01-25 @ 10:00 am	< 0.3	2024-01-29
11284022	169	2024-01-22 @ 9:00 am	2024-01-25 @ 10:00 am	< 0.3	2024-01-29
11284025	171	2024-01-22 @ 9:00 am	2024-01-25 @ 10:00 am	0.5 ± 0.3	2024-01-29
11284021	174	2024-01-22 @ 9:00 am	2024-01-25 @ 10:00 am	0.6 ± 0.3	2024-01-29
11284016	APR	2024-01-22 @ 9:00 am	2024-01-25 @ 10:00 am	0.6 ± 0.3	2024-01-29
11284015	APR	2024-01-22 @ 9:00 am	2024-01-25 @ 10:00 am	0.5 ± 0.3	2024-01-29
11284019	GYM	2024-01-22 @ 9:00 am	2024-01-25 @ 10:00 am	0.9 ± 0.3	2024-01-29
11284009	MAIL	2024-01-22 @ 9:00 am	2024-01-25 @ 10:00 am	0.7 ± 0.3	2024-01-29
11284010	MAIN OFFICE 100	2024-01-22 @ 9:00 am	2024-01-25 @ 10:00 am	0.7 ± 0.3	2024-01-29
11284004	NURSE	2024-01-22 @ 9:00 am	2024-01-25 @ 10:00 am	< 0.3	2024-01-29

February 27, 2024

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11477873	104B	2024-02-20 @ 12:00 pm	2024-02-23 @ 9:00 am	< 0.3	2024-02-27
11477895	104B	2024-02-20 @ 12:00 pm	2024-02-23 @ 9:00 am	< 0.3	2024-02-27
11477872	GYM	2024-02-20 @ 1:00 pm	2024-02-23 @ 9:00 am	1.1 ± 0.3	2024-02-27
11477876	GYM	2024-02-20 @ 1:00 pm	2024-02-23 @ 9:00 am	< 0.3	2024-02-27
11477884	GYM	2024-02-20 @ 1:00 pm	2024-02-23 @ 9:00 am	1.4 ± 0.3	2024-02-27

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

January 30, 2024

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

**KCI
MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11463691	OB	2024-01-23 @ 8:00 am	2024-01-26 @ 2:00 pm	< 0.3	2024-01-30
11463647	TB	2024-01-23 @ 8:00 am	2024-01-26 @ 2:00 pm	< 0.3	2024-01-30

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

February 27, 2024

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

**KCI
MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11477832	OB	2024-02-23 @ 8:00 am	2024-02-26 @ 11:00 am	< 0.3	2024-02-27
11482793	OB	2024-02-23 @ 8:00 am	2024-02-26 @ 11:00 am	< 0.3	2024-02-27
11477841	TB	2024-02-23 @ 8:00 am	2024-02-26 @ 11:00 am	< 0.3	2024-02-27
11482795	TB	2024-02-23 @ 8:00 am	2024-02-26 @ 11:00 am	< 0.3	2024-02-27

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

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

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

EXPOSURE IN BOWSER-MORNER RADON CHAMBER

CLIENT KCI TECHNOLOGIES, INC Job Number 213327

NOMINAL Conditions: Radon Conc 49.5 pCi/L Rel. Hum 24.7 % Temp. 69.8 F

Date Start: 1/19/24 Date Stop: 1/22/24 Date Start: _____ Date Stop: _____

Time Start: 0831 Time Stop: 0831 Time Start: _____ Time Stop: _____

Device No.'s: (6) CHAR BAGS - Device No.'s: _____

11284003, 11284005, 11284006

11284007, 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 μ R/h Elevation = 820 ft**

January 29, 2024

**** 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 ± 3.8	2024-01-29
11284005	SK	2024-01-19 @ 9:00 am	2024-01-22 @ 9:00 am	43.4 ± 3.5	2024-01-29
11284006	SK	2024-01-19 @ 9:00 am	2024-01-22 @ 9:00 am	42.1 ± 3.4	2024-01-29
11284007	SK	2024-01-19 @ 9:00 am	2024-01-22 @ 9:00 am	46.4 ± 3.7	2024-01-29
11284008	SK	2024-01-19 @ 9:00 am	2024-01-22 @ 9:00 am	46.2 ± 3.7	2024-01-29
11284013	SK	2024-01-19 @ 9:00 am	2024-01-22 @ 9:00 am	45.6 ± 3.6	2024-01-29

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

EXPOSURE IN BOWSER-MORNER RADON CHAMBER

CLIENT KCI TECHNOLOGIES, Inc Job Number 213819

NOMINAL Conditions: Radon Conc 50.0 pCi/L Rel. Hum 28.9 % Temp. 69.1 F

Date Start: 2/23/24 Date Stop: 2/26/24 Date Start: _____ Date Stop: _____

Time Start: 0812 Time Stop: 0812 Time Start: _____ Time Stop: _____

Device No.'s: (6) CHAR BAGS Device No.'s: _____

11478400, 11477842, 11477845, _____

11477852, 11477996, 11477999 _____

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 µR/h Elevation = 820 ft**

March 1, 2024

**** 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 ± 4.0	2024-03-01
11477845	NA	2024-02-23 @ 8:00 am	2024-02-26 @ 8:00 am	55.3 ± 4.4	2024-03-01
11477852	NA	2024-02-23 @ 8:00 am	2024-02-26 @ 8:00 am	49.4 ± 4.0	2024-03-01
11477996	NA	2024-02-23 @ 8:00 am	2024-02-26 @ 8:00 am	49.8 ± 4.0	2024-03-01
11477999	NA	2024-02-23 @ 8:00 am	2024-02-26 @ 8:00 am	55.4 ± 4.4	2024-03-01
11478400	NA	2024-02-23 @ 8:00 am	2024-02-26 @ 8:00 am	47.0 ± 3.8	2024-03-01

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



Radon Test Kit Chain of Custody

Project Name: MCPS Radon – Testing January 22nd to January 25th

Name of Schools:

1. Fields Road ES
2. Germantown ES
3. Highland View ES
4. Westbrook ES
5. John T. Baker MS
6. Herbert Hoover MS

	Date	Initials
Radon Test Kits Deployed	01/22/2024	BMM
Radon Test Kits Collected	01/25/2024	BMM
Radon Test Kits Shipped to Lab*	01/25/2024	BMM
Radon Test Kits Received by Lab*	01/29/2024	BMM

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



Radon Test Kit Chain of Custody

Project Name: MCPS Radon – Retesting February 20th to the 23rd 2024

Name of Schools:

- | | |
|----------------------|--------------------------|
| 1. Fields Road ES | 8. Thomas Wootton HS |
| 2. Highland View ES | 9. Fairland ES |
| 3. John T. Baker MS | 10. Cabin Branch ES |
| 4. Sligo MS | 11. John F. Kennedy HS |
| 5. White Oak MS | 12. Jackson Road ES |
| 6. Laytonsville ES | 13. Clarksburg HS |
| 7. Herbert Hoover MS | 14. North Chevy Chase ES |

	Date	Initials
Radon Test Kits Deployed	02/20/2024	JM
Radon Test Kits Collected	02/23/2024	JM
Radon Test Kits Shipped to Lab*	02/23/2024	JM
Radon Test Kits Received by Lab*	02/27/2024	JM

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

Attachment 3:
Sampling Location Map



MCPS RADON TESTING – EXECUTIVE SUMMARY

Site Name	Fields Road Elementary School
Date of Test Report	4/7/2022
Round of Testing	Initial Follow-up Post Remediation 2 Year Testing 5 Year Testing HVAC Upgrade Window Replacement New Addition New Facility
# Rooms Tested	57
# Rooms \geq 4.0 pCi/L	0
Lowest Value	<0.3 pCi/L
Highest Value	1.8 pCi/L

Project Status:
Initial testing completed; no further action needed.



April 7, 2022

Brian T. Croyle, PG, CHMM
Environmental Specialist
Montgomery County Public Schools
Gaithersburg, MD 20879

Re: **Radon Testing Services**
KCI Job # 122108316

Location: Fields Road ES
One School Dr.
Gaithersburg, MD 20878

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 Fields Road ES, located at One School Dr. Gaithersburg, MD 20878 (subject site).

Scope of Services:

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

KCI visited the site on February 22, 2022 and deployed sixty four (64) 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.

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.

KCI returned to the site on February 25, 2022 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:

- Follow-up to post-mitigation biennial testing.

These tests were conducted to:

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

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

KCI recorded observations of the following conditions in each room 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 low temperatures were in the 20s and high temperatures ranged from the high 30s to the high 40s Fahrenheit. Maximum sustained winds ranged from 5-18 miles per hour. Average humidity was around 15% with 1.5 inches of precipitation (rain) was recorded during testing period.

Results:

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

The results of the radon test analysis indicated the following:

Radon Concentration	Room	Result
≥4.0 pCi/L	NA	NA
<4.0 pCi/L	See Attachment B	

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

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

Sincerely,



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

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

ATTACHMENT A

Floor Plan With Test Locations

ATTACHMENT B

Radon Test Summary Spreadsheet

Table 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		
Fields Rd ES		
Test Period: 02/22/2022 - 02/25/2022		
Kit Number	Room / Area	Result
11131463	4	< 0.3
11131442	8	1.2
11131411	101	< 0.3
11131405	102	< 0.3
11131415	103	< 0.3
11131419	103	< 0.3
11131407	105	< 0.3
11131410	106	< 0.3
11131417	107	< 0.3
11131401	108	< 0.3
11131402	108	< 0.3
11131409	115	< 0.3
11131423	115	< 0.3
11131418	116	< 0.3
11131471	117	< 0.3
11131450	118	< 0.3
11131472	119	< 0.3
11131449	123	< 0.3
11131470	124	< 0.3
11131448	125	< 0.3
11131478	125	< 0.3
11131468	126	< 0.3
11131479	126	< 0.3
11131429	128	< 0.3
11131427	129	0.6
11131425	130	< 0.3
11131426	131	< 0.3
11131428	133	< 0.3
11131435	135	< 0.3
11131436	135	< 0.3
11131430	139	0.6
11131434	140	< 0.3
11131424	141	< 0.3
11131431	143	< 0.3
11131437	149	< 0.3
11131432	151	< 0.3
11131438	153	< 0.3
11131433	155	< 0.3
11131443	157	< 0.3
11131444	157	< 0.3
11131439	159	< 0.3
11131445	160	< 0.3
11131462	160	< 0.3
11131446	161	< 0.3
11131447	162	< 0.3

Table 1- Radon Testing Results		
Fields Rd ES		
Test Period: 02/22/2022 - 02/25/2022		
Kit Number	Room / Area	Result
11131455	164	< 0.3
11131460	168	0.9
11131456	169	< 0.3
11131454	172	0.7
11131461	172	< 0.3
11131440	174	< 0.3
11131414	ASSISTANT PRINCIPAL	< 0.3
11131453	CAFETERIA	< 0.3
11131469	CAFETERIA	0.8
11131406	CONFERENCE ROOM	< 0.3
11131416	CONFERENCE ROOM MEDIA CENTER	< 0.3
11131404	COUNSELOR	< 0.3
11131441	GYM	1.1
11131464	GYM	1.8
11131413	HEALTH ROOM	< 0.3
11131412	MAIN OFFICE	< 0.3
11131421	MEDIA CENTER	< 0.3
11131422	MEDIA CENTER	< 0.3
11131408	MEDIA PTA	< 0.3
11131403	PRINCIPAL	< 0.3
11131420	STAFF LOUNGE	< 0.3

Table 2- Radon Testing Results			
Fields Rd. ES			
Test Period: 02/22/2022 - 02/25/2022			
Kit Number	QC Type	Room / Area	Result
11131415	D	103	< 0.3
11131402	D	108	< 0.3
11131423	FB	115	< 0.3
11131435	D	135	< 0.3
11131444	D	157	< 0.3
11131462	FB	160	< 0.3
11131454	D	172	0.7
11131478	D	125	< 0.3
11131468	FB	126	< 0.3
11139384	OB	OFFICE BLANK	< 0.3
11131222	TB	TRAVEL BLANK	< 0.3

ATTACHMENT C

Laboratory Analytical Results

March 3, 2022

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:
FIELDS ROAD ES
MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11131402	108	2022-02-22 @ 9:00 am	2022-02-25 @ 9:00 am	< 0.3	2022-03-03
11131409	115	2022-02-22 @ 9:00 am	2022-02-25 @ 9:00 am	< 0.3	2022-03-03

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

Radon test result report for:
FIELDS ROAD ES
MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11131463	004	2022-02-22 @ 10:00 am	2022-02-25 @ 9:00 am	< 0.3	2022-03-03
11131442	008	2022-02-22 @ 10:00 am	2022-02-25 @ 9:00 am	1.2 ± 0.5	2022-03-03
11131411	101	2022-02-22 @ 8:00 am	2022-02-25 @ 8:00 am	< 0.3	2022-03-03
11131405	102	2022-02-22 @ 8:00 am	2022-02-25 @ 8:00 am	< 0.3	2022-03-03
11131419	103	2022-02-22 @ 8:00 am	2022-02-25 @ 8:00 am	< 0.3	2022-03-03
11131415	103	2022-02-22 @ 8:00 am	2022-02-25 @ 8:00 am	< 0.3	2022-03-03
11131407	105	2022-02-22 @ 9:00 am	2022-02-25 @ 9:00 am	< 0.3	2022-03-03
11131410	106	2022-02-22 @ 9:00 am	2022-02-25 @ 9:00 am	< 0.3	2022-03-03
11131417	107	2022-02-22 @ 9:00 am	2022-02-25 @ 9:00 am	< 0.3	2022-03-03
11131401	108	2022-02-22 @ 9:00 am	2022-02-25 @ 9:00 am	< 0.3	2022-03-03
11131423	115	2022-02-22 @ 9:00 am	2022-02-25 @ 9:00 am	< 0.3	2022-03-03
11131418	116	2022-02-22 @ 9:00 am	2022-02-25 @ 9:00 am	< 0.3	2022-03-03
11131471	117	2022-02-22 @ 10:00 am	2022-02-25 @ 9:00 am	< 0.3	2022-03-03
11131450	118	2022-02-22 @ 10:00 am	2022-02-25 @ 9:00 am	< 0.3	2022-03-03
11131472	119	2022-02-22 @ 10:00 am	2022-02-25 @ 9:00 am	< 0.3	2022-03-03
11131449	123	2022-02-22 @ 10:00 am	2022-02-25 @ 9:00 am	< 0.3	2022-03-03
11131470	124	2022-02-22 @ 10:00 am	2022-02-25 @ 9:00 am	< 0.3	2022-03-03
11131478	125	2022-02-22 @ 10:00 am	2022-02-25 @ 9:00 am	< 0.3	2022-03-03
11131448	125	2022-02-22 @ 10:00 am	2022-02-25 @ 9:00 am	< 0.3	2022-03-03
11131468	126	2022-02-22 @ 10:00 am	2022-02-25 @ 9:00 am	< 0.3	2022-03-03
11131479	126	2022-02-22 @ 10:00 am	2022-02-25 @ 9:00 am	< 0.3	2022-03-03
11131429	128	2022-02-22 @ 9:00 am	2022-02-25 @ 9:00 am	< 0.3	2022-03-03
11131427	129	2022-02-22 @ 9:00 am	2022-02-25 @ 9:00 am	0.6 ± 0.5	2022-03-03
11131425	130	2022-02-22 @ 9:00 am	2022-02-25 @ 9:00 am	< 0.3	2022-03-03
11131426	131	2022-02-22 @ 9:00 am	2022-02-25 @ 9:00 am	< 0.3	2022-03-03
11131428	133	2022-02-22 @ 9:00 am	2022-02-25 @ 9:00 am	< 0.3	2022-03-03
11131436	135	2022-02-22 @ 9:00 am	2022-02-25 @ 9:00 am	< 0.3	2022-03-03
11131435	135	2022-02-22 @ 9:00 am	2022-02-25 @ 9:00 am	< 0.3	2022-03-03
11131430	139	2022-02-22 @ 9:00 am	2022-02-25 @ 9:00 am	0.6 ± 0.4	2022-03-03
11131434	140	2022-02-22 @ 9:00 am	2022-02-25 @ 9:00 am	< 0.3	2022-03-03
11131424	141	2022-02-22 @ 9:00 am	2022-02-25 @ 9:00 am	< 0.3	2022-03-03
11131431	143	2022-02-22 @ 9:00 am	2022-02-25 @ 9:00 am	< 0.3	2022-03-03
11131437	149	2022-02-22 @ 9:00 am	2022-02-25 @ 9:00 am	< 0.3	2022-03-03
11131432	151	2022-02-22 @ 9:00 am	2022-02-25 @ 9:00 am	< 0.3	2022-03-03
11131438	153	2022-02-22 @ 9:00 am	2022-02-25 @ 9:00 am	< 0.3	2022-03-03
11131433	155	2022-02-22 @ 9:00 am	2022-02-25 @ 9:00 am	< 0.3	2022-03-03
11131444	157	2022-02-22 @ 9:00 am	2022-02-25 @ 9:00 am	< 0.3	2022-03-03

Radon test result report for:
FIELDS ROAD ES
MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11131443	157	2022-02-22 @ 9:00 am	2022-02-25 @ 9:00 am	< 0.3	2022-03-03
11131439	159	2022-02-22 @ 9:00 am	2022-02-25 @ 9:00 am	< 0.3	2022-03-03
11131462	160	2022-02-22 @ 9:00 am	2022-02-25 @ 9:00 am	< 0.3	2022-03-03
11131445	160	2022-02-22 @ 9:00 am	2022-02-25 @ 9:00 am	< 0.3	2022-03-03
11131446	161	2022-02-22 @ 9:00 am	2022-02-25 @ 9:00 am	< 0.3	2022-03-03
11131447	162	2022-02-22 @ 9:00 am	2022-02-25 @ 9:00 am	< 0.3	2022-03-03
11131455	164	2022-02-22 @ 9:00 am	2022-02-25 @ 9:00 am	< 0.3	2022-03-03
11131460	168	2022-02-22 @ 9:00 am	2022-02-25 @ 9:00 am	0.9 ± 0.5	2022-03-03
11131456	169	2022-02-22 @ 9:00 am	2022-02-25 @ 9:00 am	< 0.3	2022-03-03
11131454	172	2022-02-22 @ 9:00 am	2022-02-25 @ 9:00 am	0.7 ± 0.5	2022-03-03
11131461	172	2022-02-22 @ 9:00 am	2022-02-25 @ 9:00 am	< 0.3	2022-03-03
11131440	174	2022-02-22 @ 9:00 am	2022-02-25 @ 9:00 am	< 0.3	2022-03-03
11131414	ASSISTANT PRINCIPAL	2022-02-22 @ 8:00 am	2022-02-25 @ 8:00 am	< 0.3	2022-03-03
11131453	CAFETERIA	2022-02-22 @ 10:00 am	2022-02-25 @ 9:00 am	< 0.3	2022-03-03
11131469	CAFETERIA	2022-02-22 @ 10:00 am	2022-02-25 @ 9:00 am	0.8 ± 0.5	2022-03-03
11131406	CONFERENCE ROOM	2022-02-22 @ 8:00 am	2022-02-25 @ 8:00 am	< 0.3	2022-03-03
11131416	CONFERENCE ROOM MEDIA CENTER	2022-02-22 @ 9:00 am	2022-02-25 @ 9:00 am	< 0.3	2022-03-03
11131404	COUNSELOR	2022-02-22 @ 8:00 am	2022-02-25 @ 8:00 am	< 0.3	2022-03-03
11131464	GYM	2022-02-22 @ 10:00 am	2022-02-25 @ 9:00 am	1.8 ± 0.5	2022-03-03
11131441	GYM	2022-02-22 @ 10:00 am	2022-02-25 @ 9:00 am	1.1 ± 0.5	2022-03-03
11131413	HEALTH ROOM	2022-02-22 @ 8:00 am	2022-02-25 @ 8:00 am	< 0.3	2022-03-03
11131412	MAIN OFFICE	2022-02-22 @ 8:00 am	2022-02-25 @ 8:00 am	< 0.3	2022-03-03
11131421	MEDIA CENTER	2022-02-22 @ 9:00 am	2022-02-25 @ 8:00 am	< 0.3	2022-03-03
11131422	MEDIA CENTER	2022-02-22 @ 9:00 am	2022-02-25 @ 9:00 am	< 0.3	2022-03-03
11131408	MEDIA PTA	2022-02-22 @ 9:00 am	2022-02-25 @ 9:00 am	< 0.3	2022-03-03
11131403	PRINCIPAL	2022-02-22 @ 8:00 am	2022-02-25 @ 8:00 am	< 0.3	2022-03-03
11131420	STAFF LOUNGE	2022-02-22 @ 9:00 am	2022-02-25 @ 9:00 am	< 0.3	2022-03-03

EXPOSURE IN BOWSER-MORNER RADON CHAMBER

CLIENT KCI Technologies, Inc. Job Number 204186

NOMINAL Conditions: Radon Conc 25.8 pCi/L Rel. Hum 50.1 % Temp. 70.9 F

Date Start: 2/18/22 Date Stop: 2/21/22 Date Start: _____ Date Stop: _____

Time Start: 0911 Time Stop: 0911 Time Start: _____ Time Stop: _____

Device No.'s: (3) Char Bags -
11113484, 1112998, 20107126 Device No.'s: _____

23 Right

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

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

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

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

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

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

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

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 Number	Start Date	Start Time	End Date	End Time	Temp.	Facility	Building	Room	Project ID	Floor	Result
11113484	2022-02-18	9:00 am	2022-02-21	9:00 am	71	OFFICE	MAIN	SK1		1	27.9
11122998	2022-02-18	9:00 am	2022-02-21	9:00 am	71	OFFICE	MAIN	SK2		1	26.0
20107126	2022-02-18	9:00 am	2022-02-21	9:00 am	71	OFFICE	MAIN	SK3		1	27.6



Radon Test Kit Chain of Custody

Project Name: MCPS Radon – February 2022 Schools

Name of Schools:

1. Dufief ES
2. Emory Grove Center
3. Fields Road ES
4. Forest Oak MS
5. Gaithersburg ES
6. Gaithersburg MS
7. Jones Lane ES
8. Rachel Carson ES
9. Rosemont ES
10. Shady Grove MS
11. Summit Hall ES
12. Washington Grove ES

	Date	Initials
Radon Test Kits Deployed	02/22/2022	PM
Radon Test Kits Collected	02/25/2022	PM
Radon Test Kits Shipped to Lab*	02/25/2022	JM
Radon Test Kits Received by Lab*	02/28/2022	PM

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



MCPS RADON TESTING - EXECUTIVE SUMMARY

Site Name	Fields Road Elementary 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	1
# Rooms \geq 4.0 pCi/L	0
Lowest Value	<0.3 pCi/L
Highest Value	<0.3 pCi/L

Project Status

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



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 #1214634188

Location: Fields Road Elementary School

One School Drive
Gaithersburg, Maryland 20878

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 Fields Road Elementary School, located at One School Drive in Gaithersburg, Maryland 20878 (subject site).

SCOPE OF SERVICES

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

KCI visited the site on 2/4/2020 and deployed four (4) activated charcoal (AC) radon test kits. KCI deployed radon test kits in frequently-occupied ground contact rooms, and other areas, (if applicable) in accordance with AARST guidance.

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

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

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

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

As a quality control measure, KCI included duplicate samples, field blanks, lab transit blanks, and office blanks in accordance with AARST recommendations. In addition, KCI submitted 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 2/7/2020 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 ranged from the mid-30s to the low-50s; and high temperatures ranged from the upper-40s to the mid-60s. Maximum sustained winds ranged from 13-21 miles per hour. Average humidity was approximately 76%. A total of 1.09 Inches of rain were recorded during the testing period. The weather conditions during the testing period may have resulted in atypical radon test results for this facility.

RESULTS

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

The results of the radon test analysis indicated the following:

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

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

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

Sincerely,

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

Attachments:

A- Floor Plan with Test Locations

B - Tables 1-3, Radon Test Summary Spreadsheets

C- Laboratory Analytical Results

ATTACHMENT A

Floor Plan With Test Locations

Floor Plan Legend

X-Sample Location (in red)

X- Previous Sample Location

1- Not Samled; No Ground Contact

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

3- Not Samled; High Humidity/Moisture

4- Not Samled; Bathroom/Hallway

ATTACHMENT B

Radon Test Summary Spreadsheet

Table Notes:

AC- Activated Charcoal

ACI- Air Chek, Inc.

D- Duplicate

FB- Field Blank

KCI- KCI Technologies, Inc.

OB- Office Blank

PM- Project Manager

QC- Quality Control

Table 1- Radon Testing Results		
Fields Road Elementary School		
Test Period: 02/04/20-02/07/20		
Kit Number	Room / Area	Result
9348540	GYM 006	<0.3
9348546	GYM 006	<0.3
9334909	OFFICE BLANK	<0.3
9334910	OFFICE BLANK	<0.3

Table 2- Radon Testing Results			
Fields Road Elementary School			
Test Period: 02/04/20-02/07/20			
Kit Number	QC Type	Room / Area	Result
9334902	TRANSIT BLANK	NA	<0.3

ATTACHMENT C

Laboratory Analytical Results

February 11, 2020

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:
FIELDS ROAD ES
566

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
9348540	GYM 006	2020-02-04 @ 12:00 pm	2020-02-07 @ 9:00 am	< 0.3	2020-02-11
9348546	GYM 006	2020-02-04 @ 12:00 pm	2020-02-07 @ 9:00 am	< 0.3	2020-02-11

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

EXPOSURE IN BOWSER-MORNER RADON CHAMBER

CLIENT KCI Technologies, Inc. Job Number 194523

NOMINAL Conditions: Radon Conc 25.8 pCi/L Rel. Hum 49.8 % Temp. 70.2 F

Date Start: 2/21/20 Date Stop: 2/24/20 Date Start: _____ Date Stop: _____

Time Start: 0745 Time Stop: 0745 Time Start: _____ Time Stop: _____

Device No.'s: (9) Char Bags - Device No.'s: _____

9341725 thru 9341733

52 ceph

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

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

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

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

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

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

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

Radon test 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



Radon Test Kit Chain of Custody

Project Name: MCPS Radon 2019 Week 1 Retesting

Name of Schools:

1. Belmont E.S.
2. Clarksburg H.S.
3. Damascus E.S.
4. Damascus H.S.
5. DuFief E.S.
6. Fields Road E.S.
7. Gaithersburg E.S.
8. McAuliffe E.S.
9. Quince Orchard H.S.
10. Snowden Farms E.S.
11. South Lake E.S.
12. Stone Mill E.S.
13. Travilah ES
14. Watkins Mill ES
15. Whitman H.S.

	Date	Initials
Radon Test Kits Deployed	02/03/20 to 02/04/20	JM
Radon Test Kits Collected	02/06/20 to 02/07/20	JM
Radon Test Kits Shipped to Lab*	02/07/20	JM
Radon Test Kits Received by Lab*	02/10/20	JM

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



MCPS RADON TESTING - EXECUTIVE SUMMARY

Site Name	Fields Road Elementary School
Date of Report	1/28/2020
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	52
# Rooms \geq 4.0 pCi/L	0
Lowest Value	<0.3 pCi/L
Highest Value	0.6 pCi/L

Project Status

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



1/28/2020

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: Fields Road Elementary School

One School Drive
Gaithersburg, Maryland 20878

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 Fields Road Elementary School, located at One School Drive in Gaithersburg, Maryland 20878 (subject site).

SCOPE OF SERVICES

KCI conducted radon testing at the subject site to evaluate indoor radon levels relative to the USEPA's recommended action level of 4.0 picocuries per Liter (pCi/L) - the level at which EPA recommends that schools take action to reduce the level. KCI conducted the radon testing in accordance with American Association of Radon Scientists and Technologists (AARST) *Protocol for Conducting Measurements of Radon and Radon Decay Products in Schools and Large Buildings*. A National Radon Proficiency Program (NRPP) Radon Measurement Specialist (certification #111004 RT) supervised the testing. Additional information on radon management and the health effects of radon exposure is available from <https://www.montgomeryschoolsmd.org/departments/facilities/maintenance/default.aspx?id=458858> or www.epa.gov/radon.

KCI visited the site on 12/9/2019 and deployed sixty-four (64) 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 12/12/2019 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 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 upper-30s and high temperatures ranged from the upper-30s to the mid-50s. Maximum sustained winds ranged from 7-21 miles per hour. Average humidity was around 75%. 0.52 inches of precipitation (rain) was recorded during the testing period.

RESULTS

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

The results of the radon test analysis indicated the following:

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

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

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

Sincerely,

Mr. Tyler P. McCleaf
Radon Measurement Provider
111004 RT

KCI Technologies, Inc.

Attachments:

A- Floor Plan with Test Locations

B - Tables 1-3, Radon Test Summary Spreadsheets

C- Laboratory Analytical Results

ATTACHMENT A

Floor Plan With Test Locations

ATTACHMENT B

Radon Test Summary Spreadsheet

Table Notes:

AC- Activated Charcoal

ACI- Air Chek, Inc.

D- Duplicate

FB- Field Blank

KCI- KCI Technologies, Inc.

OB- Office Blank

PM- Project Manager

QC- Quality Control

Table 1- Radon Testing Results		
Fields Road Elementary School		
Test Period: 12/9/2019-12/12/2019		
Kit Number	Room / Area	Result
9334831	172	< 0.3
9334832	101	< 0.3
9334833	108	< 0.3
9334834	109	< 0.3
9334837	105	< 0.3
9334838	106	< 0.3
9334840	109	0.6
9334841	LIBRARY	< 0.3
9334842	LIBRARY	0.6
9334843	139	< 0.3
9334844	130	< 0.3
9334845	107	< 0.3
9334846	102	< 0.3
9334847	141	0.6
9334848	140	< 0.3
9334849	139	< 0.3
9334851	131	< 0.3
9334852	135	< 0.3
9334853	131	< 0.3
9334854	153	< 0.3
9334855	157	< 0.3
9334856	155	< 0.3
9334857	151	< 0.3
9334858	149	< 0.3
9334859	142	< 0.3
9334860	174	< 0.3
9334861	APR 005	< 0.3
9334862	GYM	0.5
9334863	APR 005	< 0.3
9334864	124	< 0.3
9334865	126	< 0.3
9334866	125	< 0.3
9334867	123	< 0.3
9334868	106	< 0.3
9334869	1W8	0.5
9334870	103	< 0.3
9334871	119	< 0.3
9334872	118	< 0.3
9334873	117	< 0.3
9334874	116	< 0.3
9334875	115	< 0.3
9334876	104A	< 0.3
9334877	169	< 0.3
9334878	169	< 0.3
9334879	169	< 0.3
9334880	168	< 0.3
9334881	164	< 0.3
9334882	162	< 0.3
9334883	161	< 0.3
9334884	159	< 0.3

9334885	160	< 0.3
9334886	GYM OFFICE 005	< 0.3
9334887	171	< 0.3
9334889	100F CONF	< 0.3
9334890	ASSISTANT PRINCIPAL	< 0.3
9334891	100F CONF	< 0.3
9334892	100F CONF	< 0.3
9334893	PRINCIPAL OFFICE	< 0.3
9334894	MAIN OFFICE	0.5
9334895	100A WORK ROOM	< 0.3
9334896	100B	< 0.3
9334897	100I	< 0.3
9334898	100I	< 0.3
9334900	100I	< 0.3
9334511	OFFICE BLANK	<0.3
9334899	GYM 006	MISSING

Table 2- Radon Testing Results			
Fields Road Elementary School			
Test Period: 12/9/2019-12/12/2019			
Kit Number	QC Type	Room / Area	Result
9334891	D	100F CONF	<0.3
9334892	FB	100F CONF	<0.3
9334898	D	100I	<0.3
9334898	FB	100I	<0.3
9334878	D	169	<0.3
9334879	FB	169	<0.3
9334849	D	139	<0.3
9334840	D	109	0.6
9334868	D	106	<0.3
9334831	D	172	<0.3
9334850	TRANSIT BLANK	NA	< 0.3
9334914	TRANSIT BLANK	NA	< 0.3
9334916	TRANSIT BLANK	NA	< 0.3
9334963	TRANSIT BLANK	NA	< 0.3

ATTACHMENT C

Laboratory Analytical Results

Radon test result report for:
FIELDS ROAD ES
MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
9334895	100A WORK ROOM	2019-12-09 @ 8:00 am	2019-12-12 @ 9:00 am	< 0.3	2019-12-17
9334896	100B	2019-12-09 @ 8:00 am	2019-12-12 @ 9:00 am	< 0.3	2019-12-17
9334889	100F CONF	2019-12-09 @ 8:00 am	2019-12-12 @ 9:00 am	< 0.3	2019-12-17
9334892	100F CONF	2019-12-09 @ 8:00 am	2019-12-12 @ 9:00 am	< 0.3	2019-12-17
9334891	100F CONF	2019-12-09 @ 8:00 am	2019-12-12 @ 9:00 am	< 0.3	2019-12-17
9334900	100I	2019-12-09 @ 8:00 am	2019-12-12 @ 9:00 am	< 0.3	2019-12-17
9334897	100I	2019-12-09 @ 8:00 am	2019-12-12 @ 9:00 am	< 0.3	2019-12-17
9334898	100I	2019-12-09 @ 8:00 am	2019-12-12 @ 9:00 am	< 0.3	2019-12-17
9334832	101	2019-12-09 @ 10:00 am	2019-12-12 @ 8:00 am	< 0.3	2019-12-17
9334846	102	2019-12-09 @ 10:00 am	2019-12-12 @ 9:00 am	< 0.3	2019-12-17
9334870	103	2019-12-09 @ 9:00 am	2019-12-12 @ 9:00 am	< 0.3	2019-12-17
9334876	104A	2019-12-09 @ 9:00 am	2019-12-12 @ 9:00 am	< 0.3	2019-12-17
9334837	105	2019-12-09 @ 9:00 am	2019-12-12 @ 9:00 am	< 0.3	2019-12-17
9334868	106	2019-12-09 @ 9:00 am	2019-12-12 @ 9:00 am	< 0.3	2019-12-17
9334838	106	2019-12-09 @ 9:00 am	2019-12-12 @ 9:00 am	< 0.3	2019-12-17
9334845	107	2019-12-09 @ 9:00 am	2019-12-12 @ 9:00 am	< 0.3	2019-12-17
9334833	108	2019-12-09 @ 9:00 am	2019-12-12 @ 9:00 am	< 0.3	2019-12-17
9334840	109	2019-12-09 @ 9:00 am	2019-12-12 @ 9:00 am	0.6 ± 0.4	2019-12-17
9334834	109	2019-12-09 @ 9:00 am	2019-12-12 @ 9:00 am	< 0.3	2019-12-17
9334875	115	2019-12-09 @ 9:00 am	2019-12-12 @ 9:00 am	< 0.3	2019-12-17
9334874	116	2019-12-09 @ 9:00 am	2019-12-12 @ 9:00 am	< 0.3	2019-12-17
9334873	117	2019-12-09 @ 10:00 am	2019-12-12 @ 9:00 am	< 0.3	2019-12-17
9334872	118	2019-12-09 @ 10:00 am	2019-12-12 @ 9:00 am	< 0.3	2019-12-17
9334871	119	2019-12-09 @ 10:00 am	2019-12-12 @ 9:00 am	< 0.3	2019-12-17
9334867	123	2019-12-09 @ 10:00 am	2019-12-12 @ 9:00 am	< 0.3	2019-12-17
9334864	124	2019-12-09 @ 10:00 am	2019-12-12 @ 9:00 am	< 0.3	2019-12-17
9334866	125	2019-12-09 @ 10:00 am	2019-12-12 @ 9:00 am	< 0.3	2019-12-17
9334865	126	2019-12-09 @ 10:00 am	2019-12-12 @ 9:00 am	< 0.3	2019-12-17
9334844	130	2019-12-09 @ 9:00 am	2019-12-12 @ 9:00 am	< 0.3	2019-12-17
9334851	131	2019-12-09 @ 9:00 am	2019-12-12 @ 9:00 am	< 0.3	2019-12-17
9334853	131	2019-12-09 @ 9:00 am	2019-12-12 @ 9:00 am	< 0.3	2019-12-17
9334852	135	2019-12-09 @ 9:00 am	2019-12-12 @ 9:00 am	< 0.3	2019-12-17
9334843	139	2019-12-09 @ 9:00 am	2019-12-12 @ 9:00 am	< 0.3	2019-12-17
9334849	139	2019-12-09 @ 9:00 am	2019-12-12 @ 9:00 am	< 0.3	2019-12-17
9334848	140	2019-12-09 @ 9:00 am	2019-12-12 @ 9:00 am	< 0.3	2019-12-17
9334847	141	2019-12-09 @ 9:00 am	2019-12-12 @ 9:00 am	0.6 ± 0.4	2019-12-17
9334859	142	2019-12-09 @ 9:00 am	2019-12-12 @ 9:00 am	< 0.3	2019-12-17

Radon test result report for:

FIELDS ROAD ES**MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
9334858	149	2019-12-09 @ 9:00 am	2019-12-12 @ 9:00 am	< 0.3	2019-12-17
9334857	151	2019-12-09 @ 9:00 am	2019-12-12 @ 9:00 am	< 0.3	2019-12-17
9334854	153	2019-12-09 @ 9:00 am	2019-12-12 @ 9:00 am	< 0.3	2019-12-17
9334856	155	2019-12-09 @ 9:00 am	2019-12-12 @ 9:00 am	< 0.3	2019-12-17
9334855	157	2019-12-09 @ 9:00 am	2019-12-12 @ 9:00 am	< 0.3	2019-12-17
9334884	159	2019-12-09 @ 9:00 am	2019-12-12 @ 9:00 am	< 0.3	2019-12-17
9334885	160	2019-12-09 @ 9:00 am	2019-12-12 @ 9:00 am	< 0.3	2019-12-17
9334883	161	2019-12-09 @ 9:00 am	2019-12-12 @ 9:00 am	< 0.3	2019-12-17
9334882	162	2019-12-09 @ 9:00 am	2019-12-12 @ 9:00 am	< 0.3	2019-12-17
9334881	164	2019-12-09 @ 9:00 am	2019-12-12 @ 9:00 am	< 0.3	2019-12-17
9334880	168	2019-12-09 @ 9:00 am	2019-12-12 @ 9:00 am	< 0.3	2019-12-17
9334878	169	2019-12-09 @ 8:00 am	2019-12-12 @ 9:00 am	< 0.3	2019-12-17
9334879	169	2019-12-09 @ 8:00 am	2019-12-12 @ 9:00 am	< 0.3	2019-12-17
9334877	169	2019-12-09 @ 8:00 am	2019-12-12 @ 9:00 am	< 0.3	2019-12-17
9334887	171	2019-12-09 @ 8:00 am	2019-12-12 @ 9:00 am	< 0.3	2019-12-17
9334831	172	2019-12-09 @ 10:00 am	2019-12-12 @ 9:00 am	< 0.3	2019-12-17
9334860	174	2019-12-09 @ 8:00 am	2019-12-12 @ 9:00 am	< 0.3	2019-12-17
9334869	1W8	2019-12-09 @ 9:00 am	2019-12-12 @ 9:00 am	0.5 ± 0.4	2019-12-17
9334863	APR 005	2019-12-09 @ 8:00 am	2019-12-12 @ 9:00 am	< 0.3	2019-12-17
9334861	APR 005	2019-12-09 @ 8:00 am	2019-12-12 @ 9:00 am	< 0.3	2019-12-17
9334890	ASSISTANT PRINCIPLE	2019-12-09 @ 8:00 am	2019-12-12 @ 9:00 am	< 0.3	2019-12-17
9334862	GYM	2019-12-09 @ 8:00 am	2019-12-12 @ 9:00 am	0.5 ± 0.4	2019-12-17
9334886	GYM OFFICE 005	2019-12-09 @ 8:00 am	2019-12-12 @ 9:00 am	< 0.3	2019-12-17
9334841	LIBRARY	2019-12-09 @ 9:00 am	2019-12-12 @ 9:00 am	< 0.3	2019-12-17
9334842	LIBRARY	2019-12-09 @ 9:00 am	2019-12-12 @ 9:00 am	0.6 ± 0.4	2019-12-17
9334894	MAIN OFFICE	2019-12-09 @ 8:00 am	2019-12-12 @ 8:00 am	0.5 ± 0.4	2019-12-17
9334893	PRINCIPLE OFFICE	2019-12-09 @ 8:00 am	2019-12-12 @ 9:00 am	< 0.3	2019-12-17

EXPOSURE IN BOWSER-MORNER RADON CHAMBER

CLIENT KEI Technologies Inc. Job Number 193475

NOMINAL Conditions: Radon Conc 25.7 pCi/L Rel. Hum 74.6 % Temp. 69.9 F

Date Start: 12/13/19 Date Stop: 12/16/19 Date Start: _____ Date Stop: _____
Time Start: 0806 Time Stop: 0806 Time Start: _____ Time Stop: _____
(Group 1)
Device No.'s: (20) Char. Bags - Device No.'s: _____
9334502 thru 9334510,
9334514, 9334516, 9334517,
9334519, 9334519
9334522 thru 9334528
B4

Date Start: 12/13/19 Date Stop: 12/16/19 Date Start: _____ Date Stop: _____
0811
Time Start: ~~0806~~ acm Time Stop: 0811 Time Start: _____ Time Stop: _____
(Group 2)
Device No.'s: (20) Char. Bags - Device No.'s: _____
9334529 thru 9334538,
9334540,
9334542 thru 9334550
B3

Date Start: 12/13/19 Date Stop: 12/16/19 Date Start: _____ Date Stop: _____
Time Start: 0816 Time Stop: 0816 Time Start: _____ Time Stop: _____
(Group 3)
Device No.'s: (20) Char. Bags - Device No.'s: _____
9334551, 9334552, 9334562,
9334555 thru 9334559,
9334569, 9334576, 9334579,
9334580, 9334583, 9334584,
9334591, 9334593, 9334594,
9334597, 9334598, 9334599
B2

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

Radon test result report for:

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
9334583	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	23.3 \pm 1.4	2019-12-18
9334529	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	24.3 \pm 1.5	2019-12-18
9334597	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	23.8 \pm 1.4	2019-12-18
9334534	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	23.3 \pm 1.4	2019-12-18
9334540	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	23.9 \pm 1.4	2019-12-18
9334546	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	24.9 \pm 1.5	2019-12-18
9334551	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	23.3 \pm 1.4	2019-12-18
9334558	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	23.6 \pm 1.4	2019-12-18
9334579	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	23.6 \pm 1.4	2019-12-18
9334593	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	23.3 \pm 1.4	2019-12-18
9334532	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	23.6 \pm 1.4	2019-12-18
9334537	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	23.8 \pm 1.4	2019-12-18
9334544	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	23.5 \pm 1.4	2019-12-18
9334549	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	24.4 \pm 1.5	2019-12-18
9334556	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	24.1 \pm 1.4	2019-12-18
9334569	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	23.7 \pm 1.4	2019-12-18
9334584	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	24.4 \pm 1.5	2019-12-18
9334530	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	23.6 \pm 1.4	2019-12-18
9334598	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	23.7 \pm 1.4	2019-12-18
9334535	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	23.0 \pm 1.4	2019-12-18
9334542	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	23.7 \pm 1.4	2019-12-18
9334547	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	25.2 \pm 1.5	2019-12-18
9334552	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	24.2 \pm 1.4	2019-12-18
9334559	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	24.1 \pm 1.4	2019-12-18
9334580	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	24.1 \pm 1.4	2019-12-18
9334594	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	24.1 \pm 1.4	2019-12-18
9334533	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	24.3 \pm 1.5	2019-12-18
9334538	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	24.6 \pm 1.5	2019-12-18
9334545	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	24.0 \pm 1.4	2019-12-18
9334550	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	24.1 \pm 1.4	2019-12-18
9334557	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	24.6 \pm 1.5	2019-12-18
9334576	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	23.3 \pm 1.4	2019-12-18
9334591	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	23.7 \pm 1.4	2019-12-18
9334531	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	24.3 \pm 1.5	2019-12-18
9334599	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	23.8 \pm 1.4	2019-12-18
9334536	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	24.4 \pm 1.5	2019-12-18
9334543	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	24.4 \pm 1.5	2019-12-18

December 18, 2019

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

N/A

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
9334548	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	24.0 ± 1.4	2019-12-18
9334555	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	23.4 ± 1.4	2019-12-18
9334562	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	23.5 ± 1.4	2019-12-18

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

Radon test result report for:**S****N/A**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
9334505	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	24.5 ± 1.5	2019-12-18
9334510	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	24.4 ± 1.5	2019-12-18
9334522	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	23.9 ± 1.4	2019-12-18
9334527	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	22.6 ± 1.4	2019-12-18
9334503	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	23.6 ± 1.4	2019-12-18
9334508	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	24.7 ± 1.5	2019-12-18
9334517	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	23.5 ± 1.4	2019-12-18
9334525	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	23.8 ± 1.4	2019-12-18
9334506	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	24.3 ± 1.5	2019-12-18
9334514	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	24.5 ± 1.5	2019-12-18
9334523	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	23.6 ± 1.4	2019-12-18
9334528	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	23.8 ± 1.4	2019-12-18
9334504	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	23.8 ± 1.4	2019-12-18
9334509	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	23.5 ± 1.4	2019-12-18
9334519	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	24.1 ± 1.4	2019-12-18
9334526	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	23.3 ± 1.4	2019-12-18
9334502	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	23.7 ± 1.4	2019-12-18
9334507	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	24.7 ± 1.5	2019-12-18
9334516	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	22.2 ± 1.3	2019-12-18
9334524	N/A	2019-12-13 @ 8:00 am	2019-12-16 @ 8:00 am	24.6 ± 1.5	2019-12-18



Radon Test Kit Chain of Custody

Project Name: MCPS Radon 2019 Week 1

Name of Schools:

- | | |
|-----------------------------|-------------------------|
| 1. Baker M.S. | 13. Jones Lane E.S. |
| 2. Belmont E.S. | 14. Lake Seneca E.S. |
| 3. Clarksburg E.S. | 15. McAuliffe E.S. |
| 4. Clarksburg H.S. | 16. Quince Orchard H.S. |
| 5. Clearspring E.S. | 17. Rosa Parks M.S. |
| 6. Damascus E.S. | 18. Snowden Farm E.S. |
| 7. Damascus H.S. | 19. South Lake E.S. |
| 8. Dufief E.S. | 20. Stone Mill E.S. |
| 9. Fields Road E.S. | 21. Travilah E.S. |
| 10. Gaithersburg E.S. | 22. Watkins Mill E.S. |
| 11. Germantown E.S. | 23. Watkins Mill H.S. |
| 12. Great Seneca Creek E.S. | 24. Whitman H.S. |

	Date	Initials
Radon Test Kits Deployed	12/09/19 to 12/10/19	JM
Radon Test Kits Collected	12/12/19 to 12/13/19	JM
Radon Test Kits Shipped to Lab*	12/13/19	JM
Radon Test Kits Received by Lab*	12/16/19	JM

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



MCPS RADON TESTING - EXECUTIVE SUMMARY

Site Name	Fields Road Elementary School
Date of Report	March 9, 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	3
# Rooms ≥ 4.0 pCi/L	0
Lowest Value	< 0.3 pCi/L
Highest Value	0.7 pCi/L

Project Status

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



March 9, 2018

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

Re: Radon Testing Services

KCI Job #1214634188

Location: Fields Road Elementary School

One School Dr.
Gaithersburg, Maryland 20878

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 Fields Road Elementary School, located at One School Dr. in Gaithersburg, Maryland 20878 (subject site).

SCOPE OF SERVICES

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

KCI visited the site on February 12, 2018 and deployed 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 not successfully tested,
2. Rooms with elevated November 2017 results (i.e. ≥ 3.5 pCi/L).

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

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

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

EVALUATION OF TESTING CONDITIONS

These tests represent:

- Follow-up to post-mitigation biennial testing.

These tests were conducted to:

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

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

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

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

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

RESULTS

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

The results of the radon test analysis indicated the following:

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

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

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

Sincerely,



Radon Measurement Specialist
KCI Technologies, Inc.

Attachments:

B - Radon Test Summary Spreadsheets

C - Laboratory Analytical Results

ATTACHMENT B

Radon Test Summary Spreadsheet

Table Notes:

AC- Activated Charcoal

ACI- Air Chek, Inc.

D- Duplicate

FB- Field Blank

KCI- KCI Technologies, Inc.

OB- Office Blank

PM- Project Manager

QC- Quality Control

Table 1- Radon Testing Results		
Fields Road Elementary School		
Test Period: 02/12/18-02/15/18		
Kit Number	Room / Area	Result
7978900	109	< 0.3
7978882	KITCHEN	< 0.3
7194192	STAGE	0.7

Table Note:

* Missing or Compromised Sample

Table 2- Radon Testing Results		
Fields Road Elementary School		
Test Period: 02/12/18-02/15/18		
Kit Number	QC Type	Result
7978899	D (109)	< 0.3
7978898	FB (109)	< 0.3

Table Note:

* Missing or Compromised Sample

ATTACHMENT C

Laboratory Analytical Results

February 27, 2018

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

**FIELDS ROAD ELEMENTARY SCHOOL
MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7978898	109	2018-02-12 @ 1:00 pm	2018-02-15 @ 10:00 am	< 0.3	2018-02-19
7978899	109	2018-02-12 @ 1:00 pm	2018-02-15 @ 10:00 am	< 0.3	2018-02-19
7978900	109	2018-02-12 @ 1:00 pm	2018-02-15 @ 10:00 am	< 0.3	2018-02-19
7978882	KITCHEN	2018-02-12 @ 1:00 pm	2018-02-15 @ 11:00 am	< 0.3	2018-02-19
7194192	STAGE	2018-02-12 @ 1:00 pm	2018-02-15 @ 11:00 am	0.7 ± 0.4	2018-02-19

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



Radon Test Kit Chain of Custody

Project Name: MCPS Radon

Names of Schools:

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

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

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

Radon test result report for:
OFFICE BLANKS

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

Radon test result report for:
TRANSIT BLANKS

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

February 28, 2018

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

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

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

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

EXPOSURE IN BOWSER-MORNER RADON CHAMBER

CLIENT KCI Technologies Inc. Job Number 183530

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

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

Date Start: _____ Date Stop: _____	Date Start: _____ Date Stop: _____
Time Start: _____ Time Stop: _____	Time Start: _____ Time Stop: _____
Device No.'s: _____	Device No.'s: _____
_____	_____
_____	_____

Date Start: _____ Date Stop: _____	Date Start: _____ Date Stop: _____
Time Start: _____ Time Stop: _____	Time Start: _____ Time Stop: _____
Device No.'s: _____	Device No.'s: _____
_____	_____
_____	_____

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



MCPS RADON TESTING - EXECUTIVE SUMMARY

Site Name	Fields Road Elementary School
Date of Report	February 1, 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	52
# Rooms ≥ 4.0 pCi/L	0
Lowest Value	< 0.3 pCi/L
Highest Value	1.8 pCi/L

Current Project Status at this time: Testing Completed; no further action at this time.



February 1, 2018

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

Re: Radon Testing Services

KCI Job #1214694182

Location: Fields Road Elementary School

One School Dr.
Gaithersburg , Maryland 20878

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 Fields Road Elementary School, located at One School Dr. in Gaithersburg , Maryland 20878 (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 December 4, 2017 and deployed sixty-one (61) activated charcoal (AC) radon test kits. KCI deployed radon test kits in frequently-occupied ground contact rooms, and other areas, (if applicable) in accordance with AARST guidance. A floor plan map of the building with the test locations is included as Appendix A of this report.

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

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

KCI returned to the site on December 7, 2017 to retrieve the radon sampling test kits. KCI shipped all radon tests via overnight delivery to Aircheck, Inc. for analysis by gamma-ray spectroscopy. Aircheck, Inc. is a NRSB certified analytical laboratory for radon analysis (certification #ARL1402) located at 1936 Butler Bridge Road, Mills River, North Carolina.

EVALUATION OF TESTING CONDITIONS

These tests represent:

- Post-mitigation biennial testing.

These tests were conducted to:

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

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

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

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

KCI also compiled weather data for the testing period and conducted observations of relevant field conditions. During the test period, weather records indicate low temperatures were in the high-20s to mid-40s and high temperatures ranged from the low-40s to mid-50s. Maximum sustained winds ranged from 12-17 miles per hour. Average humidity was around 65%. 0.16 Inches of precipitation was recorded during the testing period.

RESULTS

The sampling locations, field observations, and analytical results are listed on Table 1 (Attachment B). The quality control sample locations and analytical results are listed on Table 2 (Attachment B). Missing/compromised tests, missed rooms, and locked rooms are listed on Table 3 (Attachment B). The laboratory

analytical results are included in Attachment C. Laboratory results and exposure data for the spike samples are also included in Attachment C.

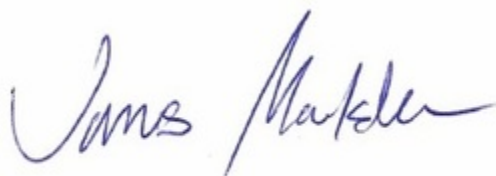
The results of the radon test analysis indicated the following:

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

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

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

Sincerely,



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

Attachments:

B- Tables 1-3, Radon Test Summary Spreadsheets

C- Laboratory Analytical Results

ATTACHMENT B

Radon Test Summary Spreadsheet

Table Notes:

AC- Activated Charcoal

ACI- Air Chek, Inc.

D- Duplicate

FB- Field Blank

KCI- KCI Technologies, Inc.

OB- Office Blank

PM- Project Manager

QC- Quality Control

Radon Testing Results		
Fields Rd Elementary School		
Test Period: 12/04/17-12/07/17		
Kit Number	Room / Area	Result
7985975	5	1.0
7985976	5	0.6
7985977	6	1.2
7985978	6	1.8
7985958	8	1.1
7978759	100	< 0.3
7985953	101	< 0.3
7985957	102	< 0.3
7985979	103	< 0.3
7978714	104	0.6
7978715	104	< 0.3
7985961	105	< 0.3
7985980	106	< 0.3
7985960	107	< 0.3
7985962	108	0.7
7978740	115	< 0.3
7978716	116	< 0.3
7978741	117	0.5
7978713	118	< 0.3
7978746	119	< 0.3
7978734	123	< 0.3
7978723	124	< 0.3
7978738	125	< 0.3
7978737	126	< 0.3
7978747	128	< 0.3
7985999	129	< 0.3
7978739	130	< 0.3
7986000	131	< 0.3
7985956	133	< 0.3
7985982	135	< 0.3
7985986	139	< 0.3
7985984	140	0.6
7985985	141	< 0.3
7985993	143	< 0.3
7985992	149	< 0.3
7985991	151	0.5
7985989	153	0.6
7985996	155	< 0.3
7985983	157	< 0.3
7985995	159	0.8
7985988	160	0.6
7985998	161	< 0.3
7985987	162	< 0.3
7985997	164	0.6
7985959	168	< 0.3
7985971	169	< 0.3

Table Note:

* Missing or Compromised Sample

Radon Testing Results		
Fields Rd Elementary School		
Test Period: 12/04/17-12/07/17		
Kit Number	Room / Area	Result
7985994	172	< 0.3
7985990	174	0.9
7985925	100A	0.5
7985906	100B	< 0.3
7978768	100F	< 0.3
7978677	100G	< 0.3
7978767	100H	< 0.3
7978760	100I	< 0.3
7978765	104A	< 0.3

Table Note:

* Missing or Compromised Sample

Radon Testing Results		
Fields Rd Elementary School		
Test Period: 12/04/17-12/07/17		
Kit Number	QC Type	Result
7985907	D (100A)	< 0.3
7985908	D (100B)	< 0.3
7978766	D (104A)	< 0.3
7985981	D (133)	0.8
7978745	FB (119)	< 0.3
7979050	OB (OFFICE BLANK)	< 0.3

Table Note:

* Missing or Compromised Sample

ATTACHMENT C

Laboratory Analytical Results

Radon test result report for:

**FIELDS RD ELEMENTARY SCHOOL
MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7978759	100	2017-12-04 @ 2:00 pm	2017-12-07 @ 10:00 am	< 0.3	2017-12-12
7985907	100A	2017-12-04 @ 2:00 pm	2017-12-07 @ 10:00 am	< 0.3	2017-12-11
7985925	100A	2017-12-04 @ 2:00 pm	2017-12-07 @ 10:00 am	0.5 ± 0.3	2017-12-11
7985908	100B	2017-12-04 @ 2:00 pm	2017-12-07 @ 10:00 am	< 0.3	2017-12-11
7985906	100B	2017-12-04 @ 2:00 pm	2017-12-07 @ 10:00 am	< 0.3	2017-12-11
7978768	100F	2017-12-04 @ 2:00 pm	2017-12-07 @ 10:00 am	< 0.3	2017-12-11
7978677	100G	2017-12-04 @ 2:00 pm	2017-12-07 @ 10:00 am	< 0.3	2017-12-11
7978767	100H	2017-12-04 @ 2:00 pm	2017-12-07 @ 10:00 am	< 0.3	2017-12-11
7978760	100I	2017-12-04 @ 2:00 pm	2017-12-07 @ 10:00 am	< 0.3	2017-12-11
7985953	101	2017-12-04 @ 4:00 pm	2017-12-07 @ 9:00 am	< 0.3	2017-12-11
7985957	102	2017-12-04 @ 4:00 pm	2017-12-07 @ 9:00 am	< 0.3	2017-12-12
7985979	103	2017-12-04 @ 4:00 pm	2017-12-07 @ 9:00 am	< 0.3	2017-12-12
7978714	104	2017-12-04 @ 3:00 pm	2017-12-07 @ 10:00 am	0.6 ± 0.3	2017-12-11
7978715	104	2017-12-04 @ 3:00 pm	2017-12-07 @ 10:00 am	< 0.3	2017-12-11
7978765	104A	2017-12-04 @ 3:00 pm	2017-12-07 @ 10:00 am	< 0.3	2017-12-11
7978766	104A	2017-12-04 @ 3:00 pm	2017-12-07 @ 10:00 am	< 0.3	2017-12-11
7985961	105	2017-12-04 @ 4:00 pm	2017-12-07 @ 9:00 am	< 0.3	2017-12-11
7985980	106	2017-12-04 @ 4:00 pm	2017-12-07 @ 9:00 am	< 0.3	2017-12-11
7985960	107	2017-12-04 @ 4:00 pm	2017-12-07 @ 9:00 am	< 0.3	2017-12-11
7985962	108	2017-12-04 @ 4:00 pm	2017-12-07 @ 9:00 am	0.7 ± 0.3	2017-12-11
7978740	115	2017-12-04 @ 3:00 pm	2017-12-07 @ 9:00 am	< 0.3	2017-12-11
7978716	116	2017-12-04 @ 3:00 pm	2017-12-07 @ 9:00 am	< 0.3	2017-12-11
7978741	117	2017-12-04 @ 3:00 pm	2017-12-07 @ 10:00 am	0.5 ± 0.4	2017-12-12
7978713	118	2017-12-04 @ 3:00 pm	2017-12-07 @ 10:00 am	< 0.3	2017-12-11
7978745	119	2017-12-04 @ 3:00 pm	2017-12-07 @ 10:00 am	< 0.3	2017-12-11
7978746	119	2017-12-04 @ 3:00 pm	2017-12-07 @ 10:00 am	< 0.3	2017-12-11
7978734	123	2017-12-04 @ 2:00 pm	2017-12-07 @ 10:00 am	< 0.3	2017-12-11
7978723	124	2017-12-04 @ 2:00 pm	2017-12-07 @ 10:00 am	< 0.3	2017-12-11
7978738	125	2017-12-04 @ 2:00 pm	2017-12-07 @ 10:00 am	< 0.3	2017-12-11
7978737	126	2017-12-04 @ 2:00 pm	2017-12-07 @ 10:00 am	< 0.3	2017-12-11
7978747	128	2017-12-04 @ 3:00 pm	2017-12-07 @ 9:00 am	< 0.3	2017-12-11
7985999	129	2017-12-04 @ 3:00 pm	2017-12-07 @ 9:00 am	< 0.3	2017-12-11
7978739	130	2017-12-04 @ 3:00 pm	2017-12-07 @ 9:00 am	< 0.3	2017-12-12
7986000	131	2017-12-04 @ 3:00 pm	2017-12-07 @ 9:00 am	< 0.3	2017-12-11
7985956	133	2017-12-04 @ 3:00 pm	2017-12-07 @ 9:00 am	< 0.3	2017-12-11
7985981	133	2017-12-04 @ 3:00 pm	2017-12-07 @ 9:00 am	0.8 ± 0.4	2017-12-12
7985982	135	2017-12-04 @ 3:00 pm	2017-12-07 @ 9:00 am	< 0.3	2017-12-11

Radon test result report for:

**FIELDS RD ELEMENTARY SCHOOL
MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7985986	139	2017-12-04 @ 3:00 pm	2017-12-07 @ 9:00 am	< 0.3	2017-12-11
7985984	140	2017-12-04 @ 3:00 pm	2017-12-07 @ 9:00 am	0.6 ± 0.3	2017-12-11
7985985	141	2017-12-04 @ 3:00 pm	2017-12-07 @ 9:00 am	< 0.3	2017-12-11
7985993	143	2017-12-04 @ 3:00 pm	2017-12-07 @ 9:00 am	< 0.3	2017-12-11
7985992	149	2017-12-04 @ 3:00 pm	2017-12-07 @ 10:00 am	< 0.3	2017-12-12
7985991	151	2017-12-04 @ 3:00 pm	2017-12-07 @ 10:00 am	0.5 ± 0.4	2017-12-12
7985989	153	2017-12-04 @ 3:00 pm	2017-12-07 @ 10:00 am	0.6 ± 0.4	2017-12-12
7985996	155	2017-12-04 @ 3:00 pm	2017-12-07 @ 10:00 am	< 0.3	2017-12-11
7985983	157	2017-12-04 @ 3:00 pm	2017-12-07 @ 10:00 am	< 0.3	2017-12-12
7985995	159	2017-12-04 @ 3:00 pm	2017-12-07 @ 10:00 am	0.8 ± 0.4	2017-12-12
7985988	160	2017-12-04 @ 3:00 pm	2017-12-07 @ 10:00 am	0.6 ± 0.3	2017-12-12
7985998	161	2017-12-04 @ 4:00 pm	2017-12-07 @ 10:00 am	< 0.3	2017-12-12
7985987	162	2017-12-04 @ 4:00 pm	2017-12-07 @ 10:00 am	< 0.3	2017-12-11
7985997	164	2017-12-04 @ 4:00 pm	2017-12-07 @ 10:00 am	0.6 ± 0.3	2017-12-11
7985959	168	2017-12-04 @ 4:00 pm	2017-12-07 @ 10:00 am	< 0.3	2017-12-11
7985971	169	2017-12-04 @ 4:00 pm	2017-12-07 @ 10:00 am	< 0.3	2017-12-12
7985994	172	2017-12-04 @ 4:00 pm	2017-12-07 @ 10:00 am	< 0.3	2017-12-11
7985990	174	2017-12-04 @ 4:00 pm	2017-12-07 @ 10:00 am	0.9 ± 0.3	2017-12-11
7985975	5	2017-12-04 @ 4:00 pm	2017-12-07 @ 10:00 am	1.0 ± 0.3	2017-12-11
7985976	5	2017-12-04 @ 4:00 pm	2017-12-07 @ 10:00 am	0.6 ± 0.3	2017-12-11
7985978	6	2017-12-04 @ 4:00 pm	2017-12-07 @ 10:00 am	1.8 ± 0.4	2017-12-11
7985977	6	2017-12-04 @ 4:00 pm	2017-12-07 @ 10:00 am	1.2 ± 0.4	2017-12-12
7985958	8	2017-12-04 @ 4:00 pm	2017-12-07 @ 10:00 am	1.1 ± 0.4	2017-12-11
7979050	OFFICE BLANK	2017-12-04 @ 1:00 pm	2017-12-07 @ 1:00 pm	< 0.3	2017-12-11



Radon Test Kit Chain of Custody

Project Name: MCPS Radon Phase

Names of Schools:

1. Brooke Grove Elementary School
2. Brown Station Elementary School
3. Diamond Elementary School Addition
4. Dufief Elementary School
5. Emory Grove Center
6. Fields Road Elementary School
7. Facilities Maintenance Depot
8. Forest Oak Middle School
9. Francis Scott Key Middle School
10. Gaithersburg Elementary School
11. Gaithersburg Middle School
12. Germantown Elementary School
13. Greenwood Elementary School
14. Jones Lane Elementary School
14. Newport Mill Middle School
15. Oakview Elementary School
16. Quince Orchard High School
17. Robert Frost Middle School
18. Rosa Parks Middle School
19. South Lake Elementary School

	Date	Initials
Radon Test Kits Deployed	12/04/17	JM
Radon Test Kits Collected	12/07/17	JM
Radon Test Kits Shipped to Lab*	12/07/17	JM
Radon Test Kits Received by Lab*	12/11/17	JM

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

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

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

December 19, 2017

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

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

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

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

EXPOSURE IN BOWSER-MORNER RADON CHAMBER

CLIENT KCI Technologies Inc. Job Number 182393

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

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

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

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

7975075, 7975064, 7975063, _____

7975065, 7975069, 7975070 _____

F4 Right

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

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

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

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

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

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

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



MCPS RADON TESTING

Executive Summary: Fields Road Elementary School

Date of Test Report:	11/28/2016
Round of Testing:	Initial Follow-up Post Remediation
# Rooms Tested:	3
# Rooms \geq 4.0 pCi/L:	0
Low Value:	0.6
High Value:	2.1

Project Status:

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



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: Fields Road Elementary School
1 School Drive
Gaithersburg, MD 20878

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 Fields Road Elementary School, located at 1 School Drive in Gaithersburg, Maryland 20878 (subject site).

Scope of Services:

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

KCI visited the site on November 15, 2016 and deployed four (4) 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.

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 pCi/L	none	n/a
<4.0 pCi/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

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

Sincerely,



James M. Mouldale
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		
Fields Rd Elementary School		
Test Period: 11/15/16-11/18/16		
Kit Number	Room / Area	Result
7826525	6	2.1
7826526	6	1.8
7826527	MPR	0.8
7826528	OFF NXT COUNSELOR	0.6

Table Note:

* Missing or Compromised Sample

ATTACHMENT C

Laboratory Analytical Results

November 22, 2016

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

**FIELDS RD ELEMENTARY SCHOOL
MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7826525	6	2016-11-15 @ 12:00 pm	2016-11-18 @ 11:00 am	2.1 ± 0.3	2016-11-21
7826526	6	2016-11-15 @ 12:00 pm	2016-11-18 @ 11:00 am	1.8 ± 0.3	2016-11-21
7826527	MPR	2016-11-15 @ 12:00 pm	2016-11-18 @ 11:00 am	0.8 ± 0.3	2016-11-21
7826528	OFF NXT COUNSELO	2016-11-15 @ 12:00 pm	2016-11-18 @ 11:00 am	0.6 ± 0.3	2016-11-21

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

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

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

November 22, 2016

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:
**MCPS Radon
Spike Sample Results**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7802912	1	2016-11-11 @ 10:00 am	2016-11-14 @ 10:00 am	23.5 ± 0.8	2016-11-16
7802913	2	2016-11-11 @ 10:00 am	2016-11-14 @ 10:00 am	23.0 ± 0.8	2016-11-16
7802911	3	2016-11-11 @ 10:00 am	2016-11-14 @ 10:00 am	25.6 ± 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 59.1 % Temp. 29.0 F

Date Start: 11/11/16 Date Stop: 11/14/16 Date Start: _____ Date Stop: _____

Time Start: 0958 Time Stop: 0958 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 μ R/h Elevation = 820 ft**



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

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



Radon Test Kit Chain of Custody

Project Name: MCPS Radon Phase 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

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



MCPS RADON TESTING

Executive Summary: Fields Road Elementary School

Date of Test Report:	10/19/2016
Round of Testing:	Initial Follow-up Post Remediation
# Rooms Tested:	22
# Rooms \geq 4.0 pCi/L:	0
Low Value:	< 0.3
High Value:	1.2

Project Status:

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



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: Fields Road Elementary School
1 School Drive
Gaithersburg, MD 20878

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 Fields Road Elementary School, located at 1 School Drive in Gaithersburg, Maryland 20878 (subject site).

Scope of Services:

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

KCI visited the site on September 27, 2016 and deployed twenty-seven (27) activated charcoal (AC) radon test kits. KCI deployed radon test kits in frequently-occupied ground contact rooms, and other areas, (if applicable) in accordance with AARST guidance. A floor plan map of the building with the test locations is included as Attachment A of this report.

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

KCI returned to the site on September 30, 2016 to retrieve the radon sampling test kits. KCI shipped all radon tests via overnight delivery to Airchek, Inc. for analysis by gamma-ray spectroscopy. Airchek, Inc. is a NRSB certified analytical laboratory for radon analysis (certification # ARL1402) located at 1936 Butler Bridge Road, Mills River, North Carolina.

Evaluation of Testing Conditions:

These tests represent:

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

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

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

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

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

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

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

Results:

The results of the radon test analysis indicated the following:

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

Notes:

D- Duplicate sample

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

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

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

Sincerely,



James M. Mouldale
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		
Fields Rd Elementary School		
Test Period: 09/27/16-09/30/16		
Kit Number	Room / Area	Result
7802992	8	< 0.3
7802998	104	< 0.3
7802996	104	< 0.3
7802986	125	< 0.3
7802972	126	< 0.3
7802981	128	< 0.3
7802979	130	1.2
7802971	131	0.9
7802987	133	0.5
7802988	135	0.6
7802985	139	< 0.3
7802980	140	1.0
7803000	141	< 0.3
7802999	143	< 0.3
7802997	005C (Stage)	< 0.3
7802995	100B	< 0.3
7802963	100H	< 0.3
7802684	104A (Media Office)	< 0.3
7802601	104B (Media Office)	< 0.3
7802695	4 (Kitchen)	0.7
7802989	* 6 (Missing)	-
7802993	* 6 (Missing)	-
7802994	MPR	0.6
7802991	* MPR (Missing)	-
7802982	Rm 129	< 0.3

Table Note:

* Missing or Compromised Sample

Radon Testing Results		
Fields Rd Elementary School		
Test Period: 09/27/16-09/30/16		
Kit Number	QC Type	Result
7802983	D (100H)	< 0.3
7802978	D (126)	< 0.3

Table Note:

* Missing or Compromised Sample

ATTACHMENT C

Laboratory Analytical Results

Radon test result report for:**FIELDS RD ELEMENTARY SCHOOL
MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7802997	005C	2016-09-27 @ 5:00 pm	2016-09-30 @ 1:00 pm	< 0.3	2016-10-03
7802995	100B	2016-09-27 @ 5:00 pm	2016-09-30 @ 1:00 pm	< 0.3	2016-10-03
7802963	100H	2016-09-27 @ 4:00 pm	2016-09-30 @ 1:00 pm	< 0.3	2016-10-03
7802983	100H	2016-09-27 @ 5:00 pm	2016-09-30 @ 1:00 pm	< 0.3	2016-10-03
7802998	104	2016-09-27 @ 5:00 pm	2016-09-30 @ 1:00 pm	< 0.3	2016-10-03
7802996	104	2016-09-27 @ 5:00 pm	2016-09-30 @ 1:00 pm	< 0.3	2016-10-03
7802684	104A	2016-09-27 @ 5:00 pm	2016-09-30 @ 1:00 pm	< 0.3	2016-10-03
7802601	104B	2016-09-27 @ 5:00 pm	2016-09-30 @ 1:00 pm	< 0.3	2016-10-03
7802986	125	2016-09-27 @ 4:00 pm	2016-09-30 @ 1:00 pm	< 0.3	2016-10-03
7802972	126	2016-09-27 @ 4:00 pm	2016-09-30 @ 1:00 pm	< 0.3	2016-10-03
7802978	126	2016-09-27 @ 4:00 pm	2016-09-30 @ 1:00 pm	< 0.3	2016-10-03
7802981	128	2016-09-27 @ 5:00 pm	2016-09-30 @ 1:00 pm	< 0.3	2016-10-03
7802982	129	2016-09-27 @ 5:00 pm	2016-09-30 @ 1:00 pm	< 0.3	2016-10-03
7802979	130	2016-09-27 @ 5:00 pm	2016-09-30 @ 1:00 pm	1.2 ± 0.3	2016-10-03
7802971	131	2016-09-27 @ 5:00 pm	2016-09-30 @ 1:00 pm	0.9 ± 0.3	2016-10-03
7802987	133	2016-09-27 @ 5:00 pm	2016-09-30 @ 1:00 pm	0.5 ± 0.2	2016-10-03
7802988	135	2016-09-27 @ 5:00 pm	2016-09-30 @ 1:00 pm	0.6 ± 0.2	2016-10-03
7802985	139	2016-09-27 @ 5:00 pm	2016-09-30 @ 1:00 pm	< 0.3	2016-10-03
7802980	140	2016-09-27 @ 5:00 pm	2016-09-30 @ 1:00 pm	1.0 ± 0.3	2016-10-03
7803000	141	2016-09-27 @ 5:00 pm	2016-09-30 @ 1:00 pm	< 0.3	2016-10-03
7802999	143	2016-09-27 @ 5:00 pm	2016-09-30 @ 1:00 pm	< 0.3	2016-10-03
7802695	4	2016-09-27 @ 5:00 pm	2016-09-30 @ 1:00 pm	0.7 ± 0.2	2016-10-03
7802991	MPR	@	@		
7802994	MPR	2016-09-27 @ 5:00 pm	2016-09-30 @ 1:00 pm	0.6 ± 0.2	2016-10-03
7802993	6	@	@		
7802989	6	@	@		
7802992	8	2016-09-27 @ 5:00 pm	2016-09-30 @ 1:00 pm	< 0.3	2016-10-03

October 7, 2016

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

MCPS Radon

Phase 18 Office Blanks

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

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

October 12, 2016

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:
**MCPS Radon
Spike Sample Results**

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

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

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

EXPOSURE IN BOWSER-MORNER RADON CHAMBER

CLIENT KCI Technologies Inc. Job Number 176788

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

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

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

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

7769899, 7769884, 7769885, _____

7769889, 7769890, 7769891 _____

F3 Left

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

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

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

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

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

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

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



Radon Test Kit Chain of Custody

Project Name: MCPS Radon Phase 18

Name of Schools:

1. Wood Acres Elementary School
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	JM

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



Radon Test Kit Chain of Custody

Project Name: MCPS Radon Phase 18

Name of Schools:

1. Damascus High School
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	JM
Radon Test Kits Collected	9/30/16	JM
Radon Test Kits Shipped to Lab*	9/30/16	JM
Radon Test Kits Received by Lab*	10/03/16	JM

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

RADON SCREENING SURVEY – FOLLOW-UP FIELDS ROAD ELEMENTARY SCHOOL

1 School Drive, Gaithersburg, Maryland 20878

EXECUTIVE SUMMARY

Date of Test Report:	3/22/16 (Follow-Up)
Round of Testing:	Initial Follow-up Post Remediation
# Rooms Tested	18
# Rooms \geq 4.0 pCi/L:	7
Low Value:	0.9
High Value:	8.2
Confirmed Rooms \geq 4.0 pCi/L US EPA Action Level	8

Summary of Sampling Events \geq 4.0 pCi/L

Room	Result (pCi/L) 2/9/16 Initial	Result (pCi/L) 3/22/16 Follow-Up	Average Result (pCi/L)
135	12.9	7.8	10.4
133	10.8	8.2	9.5
126	9.2	7.3	8.3
8	8.7	3.1	5.9
131	7.7	6.4	7.1
6	7.5	4.5	6.0
129	4.6	4.9	4.8
139	4.6	2.4	3.5
104	4.5	4.1	4.3
109	1.3 Tampered	1.2	1.3
128	4.5 Tampered	2.9	3.7
168	--- Missing	0.9	0.9
151	1.9 Tampered	1.3	1.6
MPR (5)	3.8	3.3	3.6
MPR (5)	3.4	2.8	3.1
100B	3.4	1.8	2.6
100H	3.3	1.7	2.5
125	3.6	1.7	2.7
141	3.8	2.3	3.1



MCPS RADON TESTING

Executive Summary: Fields Road Elementary School

Date of Test Report:	3/22/2016
Round of Testing:	Initial Follow-up Post Remediation
# Rooms Tested:	18
# Rooms \geq 4.0 pCi/L:	7
Low Value:	0.9
High Value:	8.2

Rooms with results \geq 4.0 pCi/L:
133 (8.2 pCi/L), 135 (7.8 pCi/L), 126 (7.3 pCi/L), 131 (6.4 pCi/L), 129 (4.9 pCi/L), 6 (4.3 and 4.5 pCi/L),
104 (4.1 pCi/L)

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



March 22, 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 # 12146341.30

Location: Fields Road Elementary School
1 School Drive
Gaithersburg, MD 20878

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 Fields Road Elementary School, located at 1 School Drive in Gaithersburg, Maryland 20878 (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 29, 2016 and deployed twenty-three (23) 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 March 3, 2016 to retrieve the radon sampling test kits. KCI shipped all radon tests via overnight delivery to Airchek, Inc. for analysis by gamma-ray spectroscopy. Airchek, Inc. is a NRSB certified analytical laboratory for radon analysis (certification # ARL1402) located at 1936 Butler

Bridge Road, Mills River, North Carolina.

Evaluation of Testing Conditions:

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

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

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

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

Results:

The results of the radon test analysis indicated the following:

Radon Concentration	Room	Result
≥ 4.0 pCi/L	133	8.2
	135	6.4, 7.8 (D)
	126	7.3
	131	6.4
	129	4.9
	6	4.5, 4.3
	104	4.1
< 4.0 pCi/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.

Sincerely,



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

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

ATTACHMENT A

Floor Plan With Test Locations

ATTACHMENT B

Radon Test Summary Spreadsheet

Table Notes:

AC- Activated Charcoal

ACI- Air Chek, Inc.

D- Duplicate

FB- Field Blank

KCI- KCI Technologies, Inc.

OB- Office Blank*

PM- Project Manager

QC- Quality Control

*Office blanks were submitted at a rate of 1% for all samples deployed in Phase 10 testing. Office blanks were not submitted under each school individually.

Radon Testing Results		
Fields Road Elementary School		
Test Period: 02/29/16-03/03/16		
Kit Number	Room / Area	Result
7719186	5	3.3
7731149	5	2.8
7729862	6	4.5
7731417	6	4.3
7729858	8	3.1
7729861	104	4.1
7732200	109	1.2
7719495	125	1.7
7729902	126	7.3
7729901	128	2.9
7719493	129	4.9
7717382	131	6.4
7729920	133	8.2
7731170	135	6.4
7731412	139	2.4
7731411	141	2.3
7729863	151	1.3
7729856	168	0.9
7731150	100B	1.8
7729903	100H	1.7

Table Note:

* Missing or Compromised Sample

Radon Testing Results		
Fields Road Elementary School		
Test Period: 02/29/16-03/03/16		
Kit Number	QC Type	Result
7731171	D (100H)	1.4
7729906	D (135)	7.8
7731419	FB (133)	< 0.3

Table Note:

* Missing or Compromised Sample

ATTACHMENT C

Laboratory Analytical Results

March 16, 2016
** LABORATORY ANALYSIS
REPORT **

Radon test result report for:
**FIELDS ROAD ELEMENTARY SCHOOL
MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7731150	100B	2016-02-29 @ 11:00 am	2016-03-03 @ 9:00 am	1.8 ± 0.4	2016-03-07
7729903	100H	2016-02-29 @ 11:00 am	2016-03-03 @ 9:00 am	1.7 ± 0.4	2016-03-07
7731171	100H	2016-02-29 @ 11:00 am	2016-03-03 @ 9:00 am	1.4 ± 0.4	2016-03-07
7729861	104	2016-02-29 @ 11:00 am	2016-03-03 @ 10:00 am	4.1 ± 0.5	2016-03-07
7732200	109	2016-02-29 @ 11:00 am	2016-03-03 @ 9:00 am	1.2 ± 0.3	2016-03-07
7719495	125	2016-02-29 @ 11:00 am	2016-03-03 @ 9:00 am	1.7 ± 0.4	2016-03-07
7729902	126	2016-02-29 @ 11:00 am	2016-03-03 @ 9:00 am	7.3 ± 0.7	2016-03-07
7729901	128	2016-02-29 @ 11:00 am	2016-03-03 @ 10:00 am	2.9 ± 0.5	2016-03-07
7719493	129	2016-02-29 @ 11:00 am	2016-03-03 @ 10:00 am	4.9 ± 0.6	2016-03-07
7717382	131	2016-02-29 @ 11:00 am	2016-03-03 @ 10:00 am	6.4 ± 0.7	2016-03-07
7729920	133	2016-02-29 @ 11:00 am	2016-03-03 @ 10:00 am	8.2 ± 0.8	2016-03-07
7731419	133	2016-02-29 @ 11:00 am	2016-03-03 @ 10:00 am	< 0.3	2016-03-07
7729906	135	2016-02-29 @ 11:00 am	2016-03-03 @ 10:00 am	7.8 ± 0.8	2016-03-07
7731170	135	2016-02-29 @ 11:00 am	2016-03-03 @ 10:00 am	6.4 ± 0.7	2016-03-07
7731412	139	2016-02-29 @ 11:00 am	2016-03-03 @ 10:00 am	2.4 ± 0.4	2016-03-07
7731411	141	2016-02-29 @ 11:00 am	2016-03-03 @ 10:00 am	2.3 ± 0.4	2016-03-07
7729863	151	2016-02-29 @ 11:00 am	2016-03-03 @ 10:00 am	1.3 ± 0.4	2016-03-07
7729856	168	2016-02-29 @ 11:00 am	2016-03-03 @ 10:00 am	0.9 ± 0.3	2016-03-07
7719186	5	2016-02-29 @ 11:00 am	2016-03-03 @ 9:00 am	3.3 ± 0.5	2016-03-07
7731149	5	2016-02-29 @ 11:00 am	2016-03-03 @ 9:00 am	2.8 ± 0.4	2016-03-07
7729862	6	2016-02-29 @ 12:00 pm	2016-03-03 @ 9:00 am	4.5 ± 0.6	2016-03-07
7731417	6	2016-02-29 @ 12:00 pm	2016-03-03 @ 9:00 am	4.3 ± 0.6	2016-03-07
7729858	8	2016-02-29 @ 12:00 pm	2016-03-03 @ 9:00 am	3.1 ± 0.5	2016-03-07

March 16, 2016 **** LABORATORY ANALYSIS REPORT ****

Radon test result report for:
**MCPS Radon
Phase 10 Office Blanks**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7726881	0	2016-02-29 @ 12:00 pm	2016-03-03 @ 12:00 pm	< 0.3	2016-03-07
7735197	0	2016-02-29 @ 12:00 pm	2016-03-03 @ 12:00 pm	< 0.3	2016-03-07

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

March 22, 2016 **** LABORATORY ANALYSIS REPORT ****

Radon test result report for:
TRANSIT - PHASE 10 & 11
MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7735300	1	2016-03-18 @ 4:00 pm	2016-03-21 @ 4:00 pm	< 0.3	2016-03-22
7735296	2	2016-03-18 @ 4:00 pm	2016-03-21 @ 4:00 pm	< 0.3	2016-03-22
7735294	3	2016-03-18 @ 4:00 pm	2016-03-21 @ 4:00 pm	< 0.3	2016-03-22

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

February
15,
2016

**** LABORATORY ANALYSIS
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 ± 0.6	2016-02-04
7718281	102B	2016-01-30 @ 9:00 am	2016-02-01 @ 9:00 am	6.4 ± 0.6	2016-02-04
7718282	103C	2016-01-30 @ 9:00 am	2016-02-01 @ 9:00 am	6.3 ± 0.6	2016-02-04
7718288	104D	2016-01-30 @ 9:00 am	2016-02-01 @ 9:00 am	6.7 ± 0.6	2016-02-04
7718289	105E	2016-01-30 @ 9:00 am	2016-02-01 @ 9:00 am	6.6 ± 0.6	2016-02-04
7718291	106F	2016-01-30 @ 9:00 am	2016-02-01 @ 9:00 am	6.5 ± 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 KCF Technologies Inc. Job Number 173704

NOMINAL Conditions: Radon Conc 5.9 pCi/L Rel. Hum 45.9 % Temp. 79.0 F

Date Start: 11/30/16 Date Stop: 2/1/16 Date Start: _____ Date Stop: _____

Time Start: 0926 Time Stop: 0926 Time Start: _____ Time Stop: _____

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

7718281, 7718282, 7718291, _____

7718288, 7718289, 7718273 _____

ε3 Left

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

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

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

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

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

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

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



Radon Test Kit Chain of Custody

Project Name: MCPS Radon Phase 10

Name of Schools:

1. Clarksburg Annex
2. Gaithersburg HS
3. Garrett Park Annex
4. Fields Road ES
5. Whitman HS
6. Rockview ES
7. Whittier Woods
8. Roscoe Nix ES
9. Clearspring ES
10. Key MS

	Date	Initials
Radon Test Kits Deployed	2/29/16	JM
Radon Test Kits Collected	3/3/16	JM
Radon Test Kits Shipped to Lab*	3/3/16	JM
Radon Test Kits Received by Lab*	3/7/16	JM

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



MCPS RADON TESTING

Executive Summary: Fields Road Elementary School

Date of Test Report:	2/9/2016
Round of Testing:	Initial Follow-up Post Remediation
# Rooms Tested:	58
# Rooms \geq 4.0 pCi/L:	10
Low Value:	<0.3
High Value:	12.9

Rooms with results \geq 4.0 pCi/L:

Room 135 (12.9 pCi/L), Room 133 (10.8 pCi/L), Room 126 (9.2 pCi/L); Room 8 (8.7 pCi/L);
Room 131 (7.7 pCi/L); Room 6 (7.5 pCi/L); Room 129 (4.6 pCi/L);
Room 139 (4.6 pCi/L); Room 104 (4.5 pCi/L); Room 128 (4.5 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.



February 9, 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 # 12146341.24

Location: Fields Road Elementary School
1 School Drive
Gaithersburg, MD 20878

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 Fields Road Elementary School, located at 1 School Drive in Gaithersburg, Maryland 20878 (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 11, 2016 and deployed seventy-three (73) 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 14, 2016 to retrieve the radon sampling test kits. KCI shipped all radon tests via overnight delivery to Airchek, Inc. for analysis by gamma-ray spectroscopy. Airchek, Inc. is a NRSB certified analytical laboratory for radon analysis (certification # ARL1402) located at 1936

Butler Bridge Road, Mills River, North Carolina.

Evaluation of Testing Conditions:

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

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

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

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

Results:

The results of the radon test analysis indicated the following:

Radon Concentration	Room	Result (pCi/L)
≥ 4.0 pCi/L	135	12.9(D), 11.0
	133	10.8
	126	9.2
	8	8.7
	131	7.7
	6	7.5
	129	4.6
	139	4.6
	104	4.5
	128	4.5
< 4.0 pCi/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.

Sincerely,



H. Allen Bennett
Certified Industrial Hygienist
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		
Fields Road Elementary School		
Test Period: 01/11/16-01/14/16		
Kit Number	Room / Area	Result
7714412	6	7.5
7714448	6	7.5
7714408	8	8.7
7714446	100	1.9
7714426	101	1.7
7714427	102	1.1
7714437	103	0.7
7714404	104	4.5
7714423	105	< 0.3
7711588	106	< 0.3
7711571	107	1.7
7707925	108	< 0.3
7714435	115	0.9
7715015	116	1.2
7719305	116	1.3
7711581	117	0.9
7707926	118	< 0.3
7711547	119	0.6
7714440	123	1.4
7714413	124	1.7
7714439	125	3.3
7714422	126	9.2
7719302	129	4.6
7719309	130	2.2
7714419	130	2.4
7719315	131	7.7
7719316	133	10.8
7719311	135	11
7714441	139	4.6
7714424	140	2.3
7714443	141	3.8
7714416	143	3.2
7714410	149	3.1
7714445	151	1.9
7711606	153	2
7711624	155	3
7714420	157	1.9
7711613	159	2.9
7714438	160	1.7
7714968	161	2.3
7714451	162	1.7
7714449	164	1.4
7714407	169	1.8
7714434	172	1.7
7714444	174	2.7
7719314	1046	< 0.3

Table Note:

* Missing or Compromised Sample

Radon Testing Results		
Fields Road Elementary School		
Test Period: 01/11/16-01/14/16		
Kit Number	Room / Area	Result
7719307	1047	< 0.3
7719318	1048	< 0.3
7719317	1078	< 0.3
7714414	005 MPR	3.8
7714447	005 MPR	3.4
7711556	100A	2.7
7714417	100B	3.4
7711628	100F	1.9
7714425	100G	2.6
7711551	100H	3.3
7711620	100I	2.6
7714436	104A	2.3
7714415	104B	2.4
7714418	* 109 (Tampered)	1.3
7719303	* 128 (Tampered)	4.5
7714442	* 168 (Missing)	0

Table Note:

* Missing or Compromised Sample

Radon Testing Results		
Fields Road Elementary School		
Test Period: 01/11/16-01/14/16		
Kit Number	QC Type	Result
7719319	D (100A)	2.4
7714453	D (104)	3.4
7719301	D (1047)	< 0.3
7711583	D (125)	3.6
7719306	D (135)	12.9
7714421	* D (151:Tampered)	1.9
7714450	D (172)	1
7714409	FB (100)	< 0.3
7719308	FB (100A)	< 0.3
7714411	FB (116)	< 0.3
7719392	OB (0)	< 0.3

Table Note:

* Missing or Compromised Sample

ATTACHMENT C

Laboratory Analytical Results

February 4, 2016
**LABORATORY ANALYSIS
REPORT ****

Radon test result report for:
**FIELDS ROAD ELEMENTARY SCHOOL
MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7719392	0	2016-01-11 @ 4:00 pm	2016-01-14 @ 4:00 pm	< 0.3	2016-01-19
7714414	005 MPR	2016-01-11 @ 10:00 am	2016-01-14 @ 10:00 am	3.8 ± 0.5	2016-01-19
7714447	005 MPR	2016-01-11 @ 10:00 am	2016-01-14 @ 10:00 am	3.4 ± 0.5	2016-01-19
7714409	100	2016-01-11 @ 9:00 am	2016-01-14 @ 9:00 am	< 0.3	2016-01-19
7714446	100	2016-01-11 @ 9:00 am	2016-01-14 @ 9:00 am	1.9 ± 0.4	2016-01-19
7719308	100A	2016-01-11 @ 12:00 pm	2016-01-14 @ 9:00 am	< 0.3	2016-01-19
7719319	100A	2016-01-11 @ 12:00 pm	2016-01-14 @ 9:00 am	2.4 ± 0.4	2016-01-19
7711556	100A	2016-01-11 @ 9:00 am	2016-01-14 @ 9:00 am	2.7 ± 0.4	2016-01-19
7714417	100B	2016-01-11 @ 9:00 am	2016-01-14 @ 9:00 am	3.4 ± 0.5	2016-01-19
7711628	100F	2016-01-11 @ 9:00 am	2016-01-14 @ 9:00 am	1.9 ± 0.4	2016-01-19
7714425	100G	2016-01-11 @ 9:00 am	2016-01-14 @ 9:00 am	2.6 ± 0.4	2016-01-19
7711551	100H	2016-01-11 @ 9:00 am	2016-01-14 @ 9:00 am	3.3 ± 0.5	2016-01-19
7711620	100I	2016-01-11 @ 9:00 am	2016-01-14 @ 9:00 am	2.6 ± 0.4	2016-01-19
7714426	101	2016-01-11 @ 9:00 am	2016-01-14 @ 9:00 am	1.7 ± 0.4	2016-01-19
7714427	102	2016-01-11 @ 9:00 am	2016-01-14 @ 9:00 am	1.1 ± 0.4	2016-01-19
7714437	103	2016-01-11 @ 9:00 am	2016-01-14 @ 9:00 am	0.7 ± 0.3	2016-01-19
7714453	104	2016-01-11 @ 9:00 am	2016-01-14 @ 9:00 am	3.4 ± 0.5	2016-01-19
7714404	104	2016-01-11 @ 9:00 am	2016-01-14 @ 9:00 am	4.5 ± 0.6	2016-01-19
7714436	104A	2016-01-11 @ 9:00 am	2016-01-14 @ 9:00 am	2.3 ± 0.4	2016-01-19
7714415	104B	2016-01-11 @ 10:00 am	2016-01-14 @ 9:00 am	2.4 ± 0.4	2016-01-19
7714423	105	2016-01-11 @ 10:00 am	2016-01-14 @ 9:00 am	< 0.3	2016-01-19
7711588	106	2016-01-11 @ 10:00 am	2016-01-14 @ 9:00 am	< 0.3	2016-01-19
7711571	107	2016-01-11 @ 10:00 am	2016-01-14 @ 9:00 am	1.7 ± 0.4	2016-01-19
7707925	108	2016-01-11 @ 10:00 am	2016-01-14 @ 9:00 am	< 0.3	2016-01-19
7714418	109	2016-01-11 @ 10:00 am	2016-01-14 @ 9:00 am	1.3 ± 0.3	2016-01-19
7714435	115	2016-01-11 @ 10:00 am	2016-01-14 @ 9:00 am	0.9 ± 0.3	2016-01-19
7715015	116	2016-01-11 @ 10:00 am	2016-01-14 @ 9:00 am	1.2 ± 0.3	2016-01-19
7719305	116	2016-01-11 @ 11:00 am	2016-01-14 @ 10:00 am	1.3 ± 0.3	2016-01-19
7714411	116	2016-01-11 @ 10:00 am	2016-01-14 @ 9:00 am	< 0.3	2016-01-19
7711581	117	2016-01-11 @ 10:00 am	2016-01-14 @ 9:00 am	0.9 ± 0.3	2016-01-19
7707926	118	2016-01-11 @ 10:00 am	2016-01-14 @ 9:00 am	< 0.3	2016-01-19
7711547	119	2016-01-11 @ 10:00 am	2016-01-14 @ 9:00 am	0.6 ± 0.3	2016-01-19
7714440	123	2016-01-11 @ 10:00 am	2016-01-14 @ 9:00 am	1.4 ± 0.4	2016-01-19
7714413	124	2016-01-11 @ 10:00 am	2016-01-14 @ 9:00 am	1.7 ± 0.4	2016-01-19
7711583	125	2016-01-11 @ 10:00 am	2016-01-14 @ 10:00 am	3.6 ± 0.5	2016-01-19
7714439	125	2016-01-11 @ 10:00 am	2016-01-14 @ 10:00 am	3.3 ± 0.5	2016-01-19
7714422	126	2016-01-11 @ 10:00 am	2016-01-14 @ 10:00 am	9.2 ± 0.8	2016-01-19

February 4, 2016
LABORATORY ANALYSIS REPORT **

Radon test result report for:
**FIELDS ROAD ELEMENTARY SCHOOL
MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7719303	128	2016-01-11 @ 11:00 am	2016-01-14 @ 10:00 am	4.5 ± 0.5	2016-01-19
7719302	129	2016-01-11 @ 11:00 am	2016-01-14 @ 10:00 am	4.6 ± 0.5	2016-01-19
7719309	130	2016-01-11 @ 11:00 am	2016-01-14 @ 10:00 am	2.2 ± 0.4	2016-01-19
7714419	130	2016-01-11 @ 11:00 am	2016-01-14 @ 10:00 am	2.4 ± 0.4	2016-01-19
7719315	131	2016-01-11 @ 11:00 am	2016-01-14 @ 10:00 am	7.7 ± 0.7	2016-01-19
7719316	133	2016-01-11 @ 11:00 am	2016-01-14 @ 10:00 am	10.8 ± 0.9	2016-01-19
7719306	135	2016-01-11 @ 11:00 am	2016-01-14 @ 10:00 am	12.9 ± 1.0	2016-01-19
7719311	135	2016-01-11 @ 11:00 am	2016-01-14 @ 10:00 am	11.0 ± 0.9	2016-01-19
7714441	139	2016-01-11 @ 11:00 am	2016-01-14 @ 10:00 am	4.6 ± 0.5	2016-01-19
7714424	140	2016-01-11 @ 11:00 am	2016-01-14 @ 10:00 am	2.3 ± 0.4	2016-01-19
7714443	141	2016-01-11 @ 11:00 am	2016-01-14 @ 10:00 am	3.8 ± 0.5	2016-01-19
7714416	143	2016-01-11 @ 11:00 am	2016-01-14 @ 10:00 am	3.2 ± 0.4	2016-01-19
7714410	149	2016-01-11 @ 11:00 am	2016-01-14 @ 10:00 am	3.1 ± 0.5	2016-01-19
7714421	151	2016-01-11 @ 11:00 am	2016-01-14 @ 10:00 am	1.9 ± 0.4	2016-01-19
7714445	151	2016-01-11 @ 10:00 am	2016-01-14 @ 10:00 am	1.9 ± 0.4	2016-01-19
7711606	153	2016-01-11 @ 10:00 am	2016-01-14 @ 10:00 am	2.0 ± 0.4	2016-01-19
7711624	155	2016-01-11 @ 10:00 am	2016-01-14 @ 10:00 am	3.0 ± 0.5	2016-01-19
7714420	157	2016-01-11 @ 10:00 am	2016-01-14 @ 10:00 am	1.9 ± 0.4	2016-01-19
7711613	159	2016-01-11 @ 10:00 am	2016-01-14 @ 10:00 am	2.9 ± 0.4	2016-01-19
7714438	160	2016-01-11 @ 10:00 am	2016-01-14 @ 10:00 am	1.7 ± 0.3	2016-01-18
7714968	161	2016-01-11 @ 10:00 am	2016-01-14 @ 10:00 am	2.3 ± 0.4	2016-01-19
7714451	162	2016-01-11 @ 10:00 am	2016-01-14 @ 10:00 am	1.7 ± 0.4	2016-01-19
7714449	164	2016-01-11 @ 10:00 am	2016-01-14 @ 10:00 am	1.4 ± 0.3	2016-01-19
7714442	168	@	@		
7714407	169	2016-01-11 @ 10:00 am	2016-01-14 @ 10:00 am	1.8 ± 0.4	2016-01-19
7714450	172	2016-01-11 @ 10:00 am	2016-01-14 @ 10:00 am	1.0 ± 0.3	2016-01-19
7714434	172	2016-01-11 @ 10:00 am	2016-01-14 @ 10:00 am	1.7 ± 0.4	2016-01-19
7714444	174	2016-01-11 @ 10:00 am	2016-01-14 @ 10:00 am	2.7 ± 0.4	2016-01-19
7714448	6	2016-01-11 @ 10:00 am	2016-01-14 @ 10:00 am	7.5 ± 0.8	2016-01-19
7714412	6	2016-01-11 @ 10:00 am	2016-01-14 @ 10:00 am	7.5 ± 0.7	2016-01-19
7714408	8	2016-01-11 @ 10:00 am	2016-01-14 @ 10:00 am	8.7 ± 0.8	2016-01-19

February 4, 2016 **** LABORATORY ANALYSIS REPORT ****

Radon test result report for:
**FIELDS ROAD ELEMENTARY SCHOOL
PORTABLE**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7719314	1046	2016-01-11 @ 11:00 am	2016-01-14 @ 10:00 am	< 0.3	2016-01-19
7719301	1047	2016-01-11 @ 11:00 am	2016-01-14 @ 10:00 am	< 0.3	2016-01-18
7719307	1047	2016-01-11 @ 11:00 am	2016-01-14 @ 10:00 am	< 0.3	2016-01-19
7719318	1048	2016-01-11 @ 11:00 am	2016-01-14 @ 10:00 am	< 0.3	2016-01-19
7719317	1078	2016-01-11 @ 11:00 am	2016-01-14 @ 10:00 am	< 0.3	2016-01-19

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

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LABORATORY ANALYSIS REPORT

Radon test result report for:
MCPS PHASE 5 & 6 TRANSIT BLANKS

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7722194	1	2016-01-19 @ 12:00 pm	2016-01-22 @ 12:00 pm	< 0.3	2016-01-27
7718494	10	2016-01-19 @ 12:00 pm	2016-01-22 @ 12:00 pm	< 0.3	2016-01-27
7718475	11	2016-01-19 @ 12:00 pm	2016-01-22 @ 12:00 pm	< 0.3	2016-01-27
7718495	12	2016-01-19 @ 12:00 pm	2016-01-22 @ 12:00 pm	< 0.3	2016-01-27
7718496	13	2016-01-19 @ 12:00 pm	2016-01-22 @ 12:00 pm	< 0.3	2016-01-27
7718497	14	2016-01-19 @ 12:00 pm	2016-01-22 @ 12:00 pm	< 0.3	2016-01-27
7718498	15	2016-01-19 @ 12:00 pm	2016-01-22 @ 12:00 pm	< 0.3	2016-01-27
7718499	16	2016-01-19 @ 12:00 pm	2016-01-22 @ 12:00 pm	< 0.3	2016-01-27
7718500	17	2016-01-19 @ 12:00 pm	2016-01-22 @ 12:00 pm	< 0.3	2016-01-27
7718296	18	2016-01-19 @ 12:00 pm	2016-01-22 @ 12:00 pm	< 0.3	2016-01-27
7718295	19	2016-01-19 @ 12:00 pm	2016-01-22 @ 12:00 pm	< 0.3	2016-01-27
7722195	2	2016-01-19 @ 12:00 pm	2016-01-22 @ 12:00 pm	< 0.3	2016-01-27
7716789	20	2016-01-19 @ 12:00 pm	2016-01-22 @ 12:00 pm	< 0.3	2016-01-27
7716785	21	2016-01-19 @ 12:00 pm	2016-01-22 @ 12:00 pm	< 0.3	2016-01-26
7716791	22	2016-01-19 @ 12:00 pm	2016-01-22 @ 12:00 pm	< 0.3	2016-01-27
7716786	23	2016-01-19 @ 12:00 pm	2016-01-22 @ 12:00 pm	< 0.3	2016-01-27
7716793	24	2016-01-19 @ 12:00 pm	2016-01-22 @ 12:00 pm	< 0.3	2016-01-27
7718274	25	2016-01-19 @ 12:00 pm	2016-01-22 @ 12:00 pm	< 0.3	2016-01-27
7716792	26	2016-01-19 @ 12:00 pm	2016-01-22 @ 12:00 pm	< 0.3	2016-01-27
7718294	27	2016-01-19 @ 12:00 pm	2016-01-22 @ 12:00 pm	< 0.3	2016-01-27
7718293	28	2016-01-19 @ 12:00 pm	2016-01-22 @ 12:00 pm	< 0.3	2016-01-27
7718292	29	2016-01-19 @ 12:00 pm	2016-01-22 @ 12:00 pm	< 0.3	2016-01-27
7722197	3	2016-01-19 @ 12:00 pm	2016-01-22 @ 12:00 pm	< 0.3	2016-01-27
7718290	30	2016-01-19 @ 12:00 pm	2016-01-22 @ 12:00 pm	< 0.3	2016-01-27
7722198	4	2016-01-19 @ 12:00 pm	2016-01-22 @ 12:00 pm	< 0.3	2016-01-27
7722199	5	2016-01-19 @ 12:00 pm	2016-01-22 @ 12:00 pm	< 0.3	2016-01-27
7722211	6	2016-01-19 @ 12:00 pm	2016-01-22 @ 12:00 pm	< 0.3	2016-01-27
7718491	7	2016-01-19 @ 12:00 pm	2016-01-22 @ 12:00 pm	< 0.3	2016-01-27
7718476	8	2016-01-19 @ 12:00 pm	2016-01-22 @ 12:00 pm	< 0.3	2016-01-26
7718479	9	2016-01-19 @ 12:00 pm	2016-01-22 @ 12:00 pm	< 0.3	2016-01-27

December
23,
2015

**LABORATORY ANALYSIS
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

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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

NOMINAL Conditions: Radon Conc 26.9 pCi/L Rel. Hum 49.6 % Temp. 69.9 F

Date Start: 12/18/15 Date Stop: 12/21/15 Date Start: _____ Date Stop: _____

Time Start: 0929 Time Stop: 0929 Time Start: _____ Time Stop: _____

Device No.'s: 7705132, 7706208, 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: _____

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

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

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

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



Chain of Custody

Project Name: MCPS Radon Phase V

Name of Schools:

- | | | |
|-------------------------|---------------------------|-------------------------|
| 1. Arcola ES | 11. Clopper Mill ES | 21. Parkland Magnet MS |
| 2. Argyle ES | 12. College Gardens ES | 22. Rachel Carson ES |
| 3. Bells Mill ES | 13. Eastern MS | 23. Roberto Clemente MS |
| 4. Bethesda ES | 14. Fallsmead ES | 24. Rock Creek ES |
| 5. Brookhaven ES | 15. Fields Road ES | 25. Rockview ES |
| 6. Burning Tree ES | 16. Flower Hill ES | 26. Rockville HS |
| 7. Capt. James Daly ES | 17. Flower Valley ES | 27. Rocky Hill MS |
| 8. Carderock Springs ES | 18. Fox Chapel ES | 28. Seneca Valley HS |
| 9. Cashell ES | 19. Glen Haven ES | 29. Westover ES |
| 10. Clearspring ES | 20. James Hubert Blake HS | 30. William Farquar MS |

	Date	Initials
Radon Test Kits Deployed	1/11/16	JM
Radon Test Kits Sampled	1/14/16	JM
Radon Test Kits Shipped to Lab*	1/15/16	JM
Radon Test Kits Received by Lab*	1/18/16	JM

*All samples sent to Air Check, Inc., 1936 Butler Bridge Road, Mills River, NC 28758