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:	Watkins Mill Elementary School
Address:	19001 Watkins Mill Road
	Montgomery Village, MD 20886

Reason for Testing:	☒ Scheduled Re-Testing (2 or 5-year schedule) ☐ Clearance Testing (Post-Mitigation) ☐ System(s) Performance Testing (Post-Mitigation) ☐ New Construction/Facility
Facility Current Radon Status:	☒ Active Mitigation (2-year regular schedule) ☐ No Active Mitigation (5-year regular schedule) ☐ Not Previously Tested
Round of Testing:	☒ Initial Testing **-or-** ☐ Follow-up Testing
Testing Status:	☒ No Further Testing Needed **-or-** ☐ Follow-Up Testing Required

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

Mitigation -	**Facility Radon Status:**
☒ Not Required or Considered ☐ Required (>8.0-pCi/L) ☐ Required (≥4.0-pCi/L) ☐ Consider (≥2.0 & <4.0-pCi/L)	☒ No Change in Status ☐ Active Mitigation (2-year regular schedule) ☐ No Active Mitigation (5-year regular schedule)

Detector and Deployment

MCPS DEM SUSTAINABILITY & COMPLIANCE

School / Facility Radon Testing Report Form

Detector/Device Type:	☒ Passive ☐ Continuous	☒ Charcoal Absorption (CAD) ☐ Alpha Track (ATD) ☐ Other ☐ Electret ion Chamber (EIC) ☐ Electronic Integration (EID)
	Other–Specify here:	
Detector/Device Name:	Air Chek – Radon Test Kits	
Manufacturer:	Radon Lab	

Person(s) Deploying or Retrieving Test Devices and certification number	Organization/Company
Evy Rahmey	KCI Technologies, Inc.
If noncertified individuals, the qualified measurement professional providing oversight -	
Tyler McCleaf, CSP – Cert. #111004-RMP	KCI Technologies, Inc.

Testing

☒ Short-Term ☐ Long-Term	Length of Test (days):	3	Date of Deployment and Retrieval (mm/dd/yy):	02/06/2024 02/09/2024
Does the test period include weekends, school breaks or holidays?				☐ Yes ☒ No
*If "**Yes**" please explain/detail in the space below:*				
Was HVAC operating under occupied conditions?				☒ Yes ☐ No
*If "**No**" please explain/detail in the space below:*				

Testing (continued)

	Detectors Deployed		
	Ground-Contact	**Upper-Level(s)**	**Total**
Test Locations[1]	59	1	60
Duplicates[2]	6	0	6
Field Blanks[3]	3	0	3
		Grand Total	69

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]	1	Office Blank(s)[3,4]	1

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.	☒ Yes ☐ No
Quality Control measurements comply with QA/QC requirements in the QA plan previously submitted?	☒ Yes ☐ No

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

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

Summary of Test Results[1] and Determination of Valid Measurements[2]

	Ground-Contact	Upper-Level(s)	Total
Number of test locations:	59	1	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]:	1	0	1
Percentage of missing test locations for the facility[4,5]:	1.6%	0	1.6%

1 – for locations with multiple test results, report consistent with Section 7.2(When Two Test Results Disagree) and 8.1.2 (Averaging) of ANSI/AARST MA-MFLB 2023 – Conducting Measurements of Radon in Multifamily, School, Commercial and Mix-Use Buildings;
2 - the allowance is to be calculated individually for Ground-Contact and Upper-Level(s) Test Locations;
3 – includes missed or inaccessible locations upon deployment or retrieval, damaged (not able to analyze) and missing detectors upon retrieval;
4 – if all valid measurements are <4.0-pCi/L and the total number of test locations are ≥18, there is an allowance of ≤33%. If less than 18 test locations please review section 6.2 of the ANSI/AARST MA-MFLB 2023;
5 – if any valid measurements are ≥4.0-pCi/L and the total number of test locations are ≥20, there is an allowance of ≤25% of the total locations tested. If less than 20 test locations please review section 6.2 of the ANSI/AARST MA-MFLB 2023.

Summary of Test Results[1] and Determination of Valid Measurements[2] (continued)

Were test devices deployed in all occupied and intended to be occupied rooms in contact with the ground, and, if applicable, 10% of upper floor rooms?	☐ Yes ☒ No
Were valid measurements obtained in all occupied and intended to be occupied rooms in contact with the ground, and, if applicable, 10% of upper floor rooms?	☒ Yes ☐ No
***If Yes to both above** – then Testing Status – **'No Further Testing Needed'** mark 'NA' below and complete Conclusions section*	
If No to either above, were all results obtained under 4.0-pCi/L **and** were there sufficient valid measurements obtained?[1,2] ***If Yes** – then Testing Status - '**No Further Testing Needed**' complete Conclusion section* ***If No**, then Testing Status - '**Follow-up Testing Required**' continue below*	☒ Yes ☐ No ☐ NA

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

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

Follow-Up Testing (if required)

Required if –

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

Follow-up Testing:

1- If an insufficient number of valid measurements obtained during initial round:
   - 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		
Watkins Mill Elementary School		
Test Period: 02/06/2024 - 02/09/2024		
Kit Number	Room / Area	Result
11469636	2	< 0.3
11469666	4	< 0.3
11469661	5	0.6
11469682	6	< 0.3
11469683	7	< 0.3
11469655	11	0.5
11469639	12	0.6
11469688	13	0.5
11469686	14	0.6
11469699	14	0.6
11469687	16	< 0.3
11469625	17	< 0.3
11469626	17	< 0.3
11469628	17	< 0.3
11469627	18	< 0.3
11469633	19	< 0.3
11469635	20	< 0.3
11469634	21	< 0.3
11469638	22	< 0.3
11469640	23	0.6
11469648	23	< 0.3
11469649	25	< 0.3
11469650	27	< 0.3
11469646	29	< 0.3
11469642	30	< 0.3
11469647	32	< 0.3
11469654	33	< 0.3
11469653	35	< 0.3
11469672	45	0.6
11469689	47	< 0.3
11469690	47	< 0.3
11469667	54	< 0.3
11469680	56	< 0.3
11469668	59	< 0.3
11469663	61	< 0.3
11469658	63	< 0.3
11469657	65	< 0.3
11469652	66	< 0.3

Table 1- Radon Testing Results		
Watkins Mill Elementary School		
Test Period: 02/06/2024 - 02/09/2024		
Kit Number	Room / Area	Result
11469664	66	< 0.3
11469671	66	< 0.3
11469651	68	< 0.3
11469659	70	< 0.3
11469693	100	< 0.3
11469692	101	< 0.3
11469684	115	< 0.3
11469700	100C	0.5
11469694	100D	< 0.3
11469695	100F	< 0.3
11469698	100G	0.7
11469678	100H	< 0.3
11469696	101B	< 0.3
11469685	101D	< 0.3
11469677	ALL PURPOSE	0.6
11469679	ALL PURPOSE	0.5
11469675	COUNSELING (CROSS)	< 0.3
11469673	COUNSELING (YORE)	0.6
11469660	GYM	< 0.3
11469665	GYM	0.6
11469681	K1	0.9
11469674	K2	1.0
11469676	KITCHEN OFFICE	< 0.3
11469644	PORTABLE 1	< 0.3
11469643	PORTABLE 2	< 0.3
11469645	PORTABLE 3	< 0.3
11469641	PORTABLE 4	< 0.3
11469662	R	< 0.3
11469670	R	0.6
11469691	R	0.8
11469669	STAFF LOUNGE	< 0.3

Table 2 - Summary Testing Results ≥2.0 pCi/L							
Watkins Mill Elementary School							
Test Period: 02/6/2024 - 02/9/2024							
≥2.0 and <2.7 pCi/L		≥2.7 and <4.0 pCi/L		≥4.0 and <8.0 pCi/l		≥8.0 pCi/L	
Room / Area	Result	Room / Area	Result	Room / Area	Result	Room / Area	Result
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Table 3 - QC Radon Testing Results			
Watkins Mill Elementary School			
Test Period: 02/06/2024 - 02/09/2024			
Kit Number	**QC Type**	**Room / Area**	**Result**
11469699	D	14	0.6
11469625	D	17	<0.3
11469628	FB	17	<0.3
11469640	D	23	0.6
11469690	D	47	<0.3
11469652	FB	66	<0.3
11469671	D	66	<0.3
11469662	FB	R	<0.3
11469691	D	R	0.8
11478304	OB	OFFICE BLANK	< 0.3
11478309	TB	TRAVEL BLANK	< 0.3

Table 4 - Summary of Invalid Measurement Locations		
Watkins Mill Elementary School		
Test Period: 02/6/24 - 02/9/24		
Kit Number	**Room/Area**	**Result**
N/A	Mothers Room	Missed Location

Attachment 2:

Laboratory Reports

February 12, 2024

** LABORATORY ANALYSIS REPORT **

Radon test result report for:

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11469693	100	2024-02-06 @ 8:00 am	2024-02-09 @ 9:00 am	< 0.3	2024-02-12
11469700	100C	2024-02-06 @ 8:00 am	2024-02-09 @ 9:00 am	0.5 ± 0.3	2024-02-12
11469694	100D	2024-02-06 @ 8:00 am	2024-02-09 @ 9:00 am	< 0.3	2024-02-12
11469695	100F	2024-02-06 @ 8:00 am	2024-02-09 @ 9:00 am	< 0.3	2024-02-12
11469698	100G	2024-02-06 @ 8:00 am	2024-02-09 @ 9:00 am	0.7 ± 0.3	2024-02-12
11469678	100H	2024-02-06 @ 8:00 am	2024-02-09 @ 9:00 am	< 0.3	2024-02-12
11469692	101	2024-02-06 @ 8:00 am	2024-02-09 @ 9:00 am	< 0.3	2024-02-12
11469696	101B	2024-02-06 @ 8:00 am	2024-02-09 @ 9:00 am	< 0.3	2024-02-12
11469685	101D	2024-02-06 @ 8:00 am	2024-02-09 @ 9:00 am	< 0.3	2024-02-12
11469655	11	2024-02-06 @ 10:00 am	2024-02-09 @ 9:00 am	0.5 ± 0.3	2024-02-12
11469684	115	2024-02-06 @ 9:00 am	2024-02-09 @ 8:00 am	< 0.3	2024-02-12
11469639	12	2024-02-06 @ 10:00 am	2024-02-09 @ 9:00 am	0.6 ± 0.3	2024-02-12
11469688	13	2024-02-06 @ 8:00 am	2024-02-09 @ 9:00 am	0.5 ± 0.3	2024-02-12
11469686	14	2024-02-06 @ 8:00 am	2024-02-09 @ 8:00 am	0.6 ± 0.3	2024-02-12
11469699	14	2024-02-06 @ 8:00 am	2024-02-09 @ 8:00 am	0.6 ± 0.3	2024-02-12
11469687	16	2024-02-06 @ 8:00 am	2024-02-09 @ 8:00 am	< 0.3	2024-02-12
11469625	17	2024-02-06 @ 11:00 am	2024-02-09 @ 9:00 am	< 0.3	2024-02-12
11469628	17	2024-02-06 @ 11:00 am	2024-02-09 @ 9:00 am	< 0.3	2024-02-12
11469626	17	2024-02-06 @ 10:00 am	2024-02-09 @ 9:00 am	< 0.3	2024-02-12
11469627	18	2024-02-06 @ 11:00 am	2024-02-09 @ 9:00 am	< 0.3	2024-02-12
11469633	19	2024-02-06 @ 11:00 am	2024-02-09 @ 9:00 am	< 0.3	2024-02-12
11469636	2	2024-02-06 @ 10:00 am	2024-02-09 @ 9:00 am	< 0.3	2024-02-12
11469635	20	2024-02-06 @ 11:00 am	2024-02-09 @ 9:00 am	< 0.3	2024-02-12
11469634	21	2024-02-06 @ 11:00 am	2024-02-09 @ 9:00 am	< 0.3	2024-02-12
11469638	22	2024-02-06 @ 11:00 am	2024-02-09 @ 9:00 am	< 0.3	2024-02-12
11469648	23	2024-02-06 @ 10:00 am	2024-02-09 @ 9:00 am	< 0.3	2024-02-12
11469640	23	2024-02-06 @ 10:00 am	2024-02-09 @ 9:00 am	0.6 ± 0.3	2024-02-12
11469649	25	2024-02-06 @ 10:00 am	2024-02-09 @ 9:00 am	< 0.3	2024-02-12
11469650	27	2024-02-06 @ 10:00 am	2024-02-09 @ 9:00 am	< 0.3	2024-02-12
11469646	29	2024-02-06 @ 10:00 am	2024-02-09 @ 9:00 am	< 0.3	2024-02-12
11469642	30	2024-02-06 @ 10:00 am	2024-02-09 @ 9:00 am	< 0.3	2024-02-12
11469647	32	2024-02-06 @ 10:00 am	2024-02-09 @ 9:00 am	< 0.3	2024-02-12
11469654	33	2024-02-06 @ 10:00 am	2024-02-09 @ 9:00 am	< 0.3	2024-02-12
11469653	35	2024-02-06 @ 10:00 am	2024-02-09 @ 9:00 am	< 0.3	2024-02-12
11469666	4	2024-02-06 @ 9:00 am	2024-02-09 @ 8:00 am	< 0.3	2024-02-12
11469672	45	2024-02-06 @ 9:00 am	2024-02-09 @ 9:00 am	0.6 ± 0.3	2024-02-12
11469690	47	2024-02-06 @ 9:00 am	2024-02-09 @ 9:00 am	< 0.3	2024-02-12

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

February 12, 2024 **** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11469689	47	2024-02-06 @ 9:00 am	2024-02-09 @ 9:00 am	< 0.3	2024-02-12
11469661	5	2024-02-06 @ 10:00 am	2024-02-09 @ 9:00 am	0.6 ± 0.3	2024-02-12
11469667	54	2024-02-06 @ 9:00 am	2024-02-09 @ 9:00 am	< 0.3	2024-02-12
11469680	56	2024-02-06 @ 9:00 am	2024-02-09 @ 9:00 am	< 0.3	2024-02-12
11469668	59	2024-02-06 @ 10:00 am	2024-02-09 @ 9:00 am	< 0.3	2024-02-12
11469682	6	2024-02-06 @ 9:00 am	2024-02-09 @ 8:00 am	< 0.3	2024-02-12
11469663	61	2024-02-06 @ 10:00 am	2024-02-09 @ 9:00 am	< 0.3	2024-02-12
11469658	63	2024-02-06 @ 10:00 am	2024-02-09 @ 9:00 am	< 0.3	2024-02-12
11469657	65	2024-02-06 @ 10:00 am	2024-02-09 @ 9:00 am	< 0.3	2024-02-12
11469664	66	2024-02-06 @ 10:00 am	2024-02-09 @ 9:00 am	< 0.3	2024-02-12
11469671	66	2024-02-06 @ 10:00 am	2024-02-09 @ 9:00 am	< 0.3	2024-02-12
11469652	66	2024-02-06 @ 10:00 am	2024-02-09 @ 9:00 am	< 0.3	2024-02-12
11469651	68	2024-02-06 @ 10:00 am	2024-02-09 @ 9:00 am	< 0.3	2024-02-12
11469683	7	2024-02-06 @ 9:00 am	2024-02-09 @ 9:00 am	< 0.3	2024-02-12
11469659	70	2024-02-06 @ 10:00 am	2024-02-09 @ 9:00 am	< 0.3	2024-02-12
11469677	ALL PURPOSE	2024-02-06 @ 9:00 am	2024-02-09 @ 8:00 am	0.6 ± 0.3	2024-02-12
11469679	ALL PURPOSE	2024-02-06 @ 9:00 am	2024-02-09 @ 8:00 am	0.5 ± 0.3	2024-02-12
11469675	COUNSELING (CROSS)	2024-02-06 @ 9:00 am	2024-02-09 @ 8:00 am	< 0.3	2024-02-12
11469673	COUNSELING (YORE)	2024-02-06 @ 9:00 am	2024-02-09 @ 8:00 am	0.6 ± 0.3	2024-02-12
11469660	GYM	2024-02-06 @ 9:00 am	2024-02-09 @ 9:00 am	< 0.3	2024-02-12
11469665	GYM	2024-02-06 @ 9:00 am	2024-02-09 @ 9:00 am	0.6 ± 0.3	2024-02-12
11469681	K1	2024-02-06 @ 9:00 am	2024-02-09 @ 8:00 am	0.9 ± 0.3	2024-02-12
11469674	K2	2024-02-06 @ 9:00 am	2024-02-09 @ 8:00 am	1.0 ± 0.3	2024-02-12
11469676	KITCHEN OFFICE	2024-02-06 @ 9:00 am	2024-02-09 @ 9:00 am	< 0.3	2024-02-12
11469644	PORTABLE 1	2024-02-06 @ 11:00 am	2024-02-09 @ 9:00 am	< 0.3	2024-02-12
11469643	PORTABLE 2	2024-02-06 @ 11:00 am	2024-02-09 @ 9:00 am	< 0.3	2024-02-12
11469645	PORTABLE 3	2024-02-06 @ 11:00 am	2024-02-09 @ 9:00 am	< 0.3	2024-02-12
11469641	PORTABLE 4	2024-02-06 @ 11:00 am	2024-02-09 @ 9:00 am	< 0.3	2024-02-12
11469670	R	2024-02-06 @ 9:00 am	2024-02-09 @ 9:00 am	0.6 ± 0.3	2024-02-12
11469691	R	2024-02-06 @ 9:00 am	2024-02-09 @ 9:00 am	0.8 ± 0.3	2024-02-12
11469662	R	2024-02-06 @ 9:00 am	2024-02-09 @ 9:00 am	< 0.3	2024-02-12
11469669	STAFF LOUNGE	2024-02-06 @ 9:00 am	2024-02-09 @ 8:00 am	< 0.3	2024-02-12

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

February 13, 2024 **** LABORATORY ANALYSIS REPORT ****

Radon test result report for:
KCI
MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11470089	OB	2024-02-05 @ 8:00 am	2024-02-08 @ 12:00 pm	< 0.3	2024-02-12
11478304	OB	2024-02-06 @ 8:00 am	2024-02-09 @ 12:00 pm	< 0.3	2024-02-12
11470096	TB	2024-02-05 @ 8:00 am	2024-02-08 @ 12:00 pm	< 0.3	2024-02-12
11478309	TB	2024-02-06 @ 8:00 am	2024-02-09 @ 12:00 pm	< 0.3	2024-02-12

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 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

Time Start: 0812 Time Stop: 0812

Device No.'s: (6) CHAR BAGS

11478400, 11477842, 11477845,

11477852, 11477996, 11477999

E3 Left

Date Start: _____ Date Stop: _____

Time Start: _____ Time Stop: _____

Device No.'s: _____

Date Start: _____ Date Stop: _____

Time Start: _____ Time Stop: _____

Device No.'s: _____

Date Start: _____ Date Stop: _____

Time Start: _____ Time Stop: _____

Device No.'s: _____

Date Start: _____ Date Stop: _____

Time Start: _____ Time Stop: _____

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

KCI TECHNOLOGIES

ENGINEERS • PLANNERS • SCIENTISTS • CONSTRUCTION MANAGERS

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

Radon Test Kit Chain of Custody

Project Name: MCPS Radon – Testing February 6th to February 9th 2024

Name of Schools:

1. English Manor
2. MacDonald Knolls ECC
3. Watkins Mill ES
4. Wilson Wims ES

	Date	Initials
Radon Test Kits Deployed	02/06/2024	
Radon Test Kits Collected	02/09/2024	
Radon Test Kits Shipped to Lab*	02/09/2024	
Radon Test Kits Received by Lab*	02/13/2024	

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

Attachment 3:

Sampling Location Map

KCI TECHNOLOGIES

ENGINEERS • PLANNERS • SCIENTISTS • CONSTRUCTION MANAGERS

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

MCPS RADON TESTING – EXECUTIVE SUMMARY

Site Name	Watkins Mill Elementary School
Date of Test Report	4/26/2022
Round of Testing	Initial Follow-up Post Remediation 2 Year Testing 5 Year Testing HVAC Upgrade Window Replacement New Addition New Facility
# Rooms Tested	48
# Rooms ≥ 4.0 pCi/L	0
Lowest Value	<0.3 pCi/L
Highest Value	2.1 pCi/L

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

KCI TECHNOLOGIES

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April 26, 2022

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

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

Location: Watkins Mill Elementary School
19001 Watkins Mill Rd.
Montgomery Village, MD 20886

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 Watkins Mill ES, located at 19001 Watkins Mill Rd. Montgomery Village, MD 20886 (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 28, 2022 and deployed fifty five (55) 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 March 3, 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 biennial post-mitigation testing.

These tests were conducted to:

- Confirm the success of 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 50s to the low 60s Fahrenheit. Maximum sustained winds ranged from 9-17 miles per hour. Average humidity was around 40% with 0 inches of precipitation (rain) was recorded during testing period.

Results:

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

The results of the radon test analysis indicated the following:

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

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

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

Sincerely,

Tyler McCleaf

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

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

ATTACHMENT A

Floor Plan With Test Locations

ATTACHMENT B

Radon Test Summary Spreadsheet

Table Notes:

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

Table 1- Radon Testing Results		
Watkins Mill ES		
Test Period: 02/28/2022 - 03/03/2022		
Kit Number	Room / Area	Result
11134157	5	0.9
11134154	6	2.1
11134156	7	< 0.3
11134161	7	< 0.3
11134162	7	0.9
11134181	11	0.9
11134178	12	0.6
11134197	13	1.0
11134187	14	0.9
11134198	15	0.7
11134196	16	< 0.3
11134172	17	< 0.3
11134173	18	< 0.3
11134177	18	0.6
11134192	18	0.9
11134174	19	0.6
11134188	20	< 0.3
11134171	21	< 0.3
11134180	22	0.7
11134184	23	0.9
11134183	25	1.2
11134170	27	1.2
11134194	27	0.8
11134163	29	1.3
11134182	30	1.1
11134191	32	1.3
11134189	33	1.1
11134190	35	1.2
11134155	47	1.7
11134169	59	1.1
11134165	48C	1.1
11123199	AP	< 0.3
11134139	APR	1.1
11134159	APR	1.2
11134149	BSM	1.4
11134168	CONFERENCE	0.7
11134179	CONFERENCE	0.5
11134193	CONFERENCE	0.7
11134147	COU	1.1
11134164	CT4	1.0
11134158	GYM	0.8
11134166	GYM	0.7

Table 1- Radon Testing Results		
Watkins Mill ES		
Test Period: 02/28/2022 - 03/03/2022		
Kit Number	Room / Area	Result
11123198	HR	< 0.3
11134146	HR	< 0.3
11134153	K1	1.6
11134148	K2	1.1
11134160	KITCHEN OFFICE	0.9
11134167	KITCHEN OFFICE	0.8
11123200	MAIN OFFICE	0.6
11134186	OT	1.0
11107393	PR	0.9
11134185	SPEECH	1.1
11134150	STG	1.5
11134175	TRIAGE	0.7
11134195	WR	< 0.3

Table 2- Radon Testing Results			
Watkins Mill ES			
Test Period: 02/28/2022 - 03/03/2022			
Kit Number	QC Type	Room / Area	Result
11134193	D	Conference	0.7
11134192	D	18	0.9
11134173	FB	18	< 0.3
11134194	D	27	0.8
11134162	D	7	0.9
11134156	FB	7	< 0.3
11134167	D	Kitchen office	0.8
11130811	OB	OFFICE BLANK	< 0.3
11130816	TB	TRAVEL BLANK	< 0.3

Summary of Missed Locations		
Watkins Mill ES		
Test Period: 02/28/2022 - 03/03/2022		
Kit Number	Room/Area	Result
	NA	

Summary of Missing, Compromised and >/= 4 piC/L Tests		
Watkins Mill ES		
Test Period: 02/28/2022 - 03/03/2022		
Kit Number	Room/Area	Result
	NA	

Table Note:

* Missing or Compromised Sample

ATTACHMENT C

Laboratory Analytical Results

March 8, 2022

** LABORATORY ANALYSIS REPORT **

Radon test result report for:
WATKINS MILL ES
MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11134181	11	2022-02-28 @ 12:00 pm	2022-03-03 @ 9:00 am	0.9 ± 0.3	2022-03-07
11134178	12	2022-02-28 @ 12:00 pm	2022-03-03 @ 9:00 am	0.6 ± 0.3	2022-03-07
11134197	13	2022-02-28 @ 12:00 pm	2022-03-03 @ 9:00 am	1.0 ± 0.4	2022-03-08
11134187	14	2022-02-28 @ 12:00 pm	2022-03-03 @ 9:00 am	0.9 ± 0.4	2022-03-08
11134198	15	2022-02-28 @ 12:00 pm	2022-03-03 @ 9:00 am	0.7 ± 0.4	2022-03-07
11134196	16	2022-02-28 @ 12:00 pm	2022-03-03 @ 9:00 am	< 0.3	2022-03-08
11134172	17	2022-02-28 @ 12:00 pm	2022-03-03 @ 9:00 am	< 0.3	2022-03-07
11134192	18	2022-02-28 @ 12:00 pm	2022-03-03 @ 9:00 am	0.9 ± 0.3	2022-03-07
11134173	18	2022-02-28 @ 12:00 pm	2022-03-03 @ 9:00 am	< 0.3	2022-03-07
11134177	18	2022-02-28 @ 12:00 pm	2022-03-03 @ 9:00 am	0.6 ± 0.4	2022-03-08
11134174	19	2022-02-28 @ 12:00 pm	2022-03-03 @ 9:00 am	0.6 ± 0.3	2022-03-07
11134188	20	2022-02-28 @ 12:00 pm	2022-03-03 @ 9:00 am	< 0.3	2022-03-07
11134171	21	2022-02-28 @ 12:00 pm	2022-03-03 @ 9:00 am	< 0.3	2022-03-07
11134180	22	2022-02-28 @ 12:00 pm	2022-03-03 @ 9:00 am	0.7 ± 0.3	2022-03-07
11134184	23	2022-02-28 @ 12:00 pm	2022-03-03 @ 9:00 am	0.9 ± 0.3	2022-03-07
11134183	25	2022-02-28 @ 12:00 pm	2022-03-03 @ 9:00 am	1.2 ± 0.3	2022-03-07
11134170	27	2022-02-28 @ 12:00 pm	2022-03-03 @ 9:00 am	1.2 ± 0.4	2022-03-08
11134194	27	2022-02-28 @ 12:00 pm	2022-03-03 @ 9:00 am	0.8 ± 0.4	2022-03-08
11134163	29	2022-02-28 @ 12:00 pm	2022-03-03 @ 9:00 am	1.3 ± 0.4	2022-03-08
11134182	30	2022-02-28 @ 12:00 pm	2022-03-03 @ 9:00 am	1.1 ± 0.4	2022-03-07
11134191	32	2022-02-28 @ 12:00 pm	2022-03-03 @ 9:00 am	1.3 ± 0.4	2022-03-07
11134189	33	2022-02-28 @ 12:00 pm	2022-03-03 @ 9:00 am	1.1 ± 0.3	2022-03-07
11134190	35	2022-02-28 @ 12:00 pm	2022-03-03 @ 9:00 am	1.2 ± 0.4	2022-03-07
11134155	47	2022-02-28 @ 12:00 pm	2022-03-03 @ 9:00 am	1.7 ± 0.4	2022-03-08
11134165	48C	2022-02-28 @ 12:00 pm	2022-03-03 @ 9:00 am	1.1 ± 0.4	2022-03-08
11134157	5	2022-02-28 @ 1:00 pm	2022-03-03 @ 9:00 am	0.9 ± 0.4	2022-03-08
11134169	59	2022-02-28 @ 12:00 pm	2022-03-03 @ 9:00 am	1.1 ± 0.4	2022-03-08
11134154	6	2022-02-28 @ 12:00 pm	2022-03-03 @ 9:00 am	2.1 ± 0.4	2022-03-08
11134162	7	2022-02-28 @ 1:00 pm	2022-03-03 @ 9:00 am	0.9 ± 0.3	2022-03-07
11134156	7	2022-02-28 @ 1:00 pm	2022-03-03 @ 9:00 am	< 0.3	2022-03-08
11134161	7	2022-02-28 @ 1:00 pm	2022-03-03 @ 9:00 am	< 0.3	2022-03-08
11123199	AP	2022-02-28 @ 11:00 am	2022-03-03 @ 9:00 am	< 0.3	2022-03-07
11134139	APR	2022-02-28 @ 1:00 pm	2022-03-03 @ 9:00 am	1.1 ± 0.3	2022-03-07
11134159	APR	2022-02-28 @ 1:00 pm	2022-03-03 @ 9:00 am	1.2 ± 0.4	2022-03-08
11134149	BSM	2022-02-28 @ 1:00 pm	2022-03-03 @ 9:00 am	1.4 ± 0.4	2022-03-07
11134179	CONFERENCE	2022-02-28 @ 12:00 pm	2022-03-03 @ 9:00 am	0.5 ± 0.3	2022-03-07
11134168	CONFERENCE	2022-02-28 @ 1:00 pm	2022-03-03 @ 9:00 am	0.7 ± 0.4	2022-03-08

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

March 8, 2022

** LABORATORY ANALYSIS REPORT **

Radon test result report for:
WATKINS MILL ES
MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11134193	CONFERENCE	2022-02-28 @ 12:00 pm	2022-03-03 @ 9:00 am	0.7 ± 0.4	2022-03-08
11134147	COU	2022-02-28 @ 1:00 pm	2022-03-03 @ 9:00 am	1.1 ± 0.4	2022-03-08
11134164	CT4	2022-02-28 @ 12:00 pm	2022-03-03 @ 9:00 am	1.0 ± 0.4	2022-03-08
11134158	GYM	2022-02-28 @ 1:00 pm	2022-03-03 @ 9:00 am	0.8 ± 0.3	2022-03-08
11134166	GYM	2022-02-28 @ 1:00 pm	2022-03-03 @ 9:00 am	0.7 ± 0.4	2022-03-08
11123198	HR	2022-02-28 @ 11:00 am	2022-03-03 @ 9:00 am	< 0.3	2022-03-07
11134146	HR	2022-02-28 @ 1:00 pm	2022-03-03 @ 9:00 am	< 0.3	2022-03-08
11134153	K1	2022-02-28 @ 1:00 pm	2022-03-03 @ 9:00 am	1.6 ± 0.4	2022-03-07
11134148	K2	2022-02-28 @ 1:00 pm	2022-03-03 @ 9:00 am	1.1 ± 0.4	2022-03-08
11134160	KITCHEN OFFICE	2022-02-28 @ 1:00 pm	2022-03-03 @ 9:00 am	0.9 ± 0.4	2022-03-07
11134167	KITCHEN OFFICE	2022-02-28 @ 1:00 pm	2022-03-03 @ 9:00 am	0.8 ± 0.4	2022-03-08
11123200	MAIN OFFICE	2022-02-28 @ 11:00 am	2022-03-03 @ 9:00 am	0.6 ± 0.3	2022-03-07
11134186	OT	2022-02-28 @ 12:00 pm	2022-03-03 @ 9:00 am	1.0 ± 0.4	2022-03-07
11107393	PR	2022-02-28 @ 11:00 am	2022-03-03 @ 9:00 am	0.9 ± 0.4	2022-03-07
11134185	SPEECH	2022-02-28 @ 12:00 pm	2022-03-03 @ 9:00 am	1.1 ± 0.4	2022-03-07
11134150	STG	2022-02-28 @ 1:00 pm	2022-03-03 @ 9:00 am	1.5 ± 0.4	2022-03-07
11134175	TRIAGE	2022-02-28 @ 1:00 pm	2022-03-03 @ 9:00 am	0.7 ± 0.4	2022-03-07
11134195	WR	2022-02-28 @ 11:00 am	2022-03-03 @ 9:00 am	< 0.3	2022-03-07

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 204620

NOMINAL Conditions: Radon Conc 27.0 pCi/L Rel. Hum 50.1 % Temp. 70.0 F

Date Start: 3/18/22 Date Stop: 3/21/22	Date Start: _____ Date Stop: _____
Time Start: 0705 Time Stop: 0705	Time Start: _____ Time Stop: _____
Device No.'s: (5) Char Bags -	Device No.'s: _____
11139367, 11139368, 11139371,	_____
11139710, 11139717	_____
E3 Eight	_____
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 30, 2022

** LABORATORY ANALYSIS REPORT **

Radon test result report for:

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

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11139367	SK1	2022-03-18 @ 7:00 am	2022-03-21 @ 7:00 am	25.9 ± 2.1	2022-03-30
11139368	SK2	2022-03-18 @ 7:00 am	2022-03-21 @ 7:00 am	23.9 ± 2.0	2022-03-30
11139371	SK3	2022-03-18 @ 7:00 am	2022-03-21 @ 7:00 am	25.7 ± 2.1	2022-03-30
11139710	SK4	2022-03-18 @ 7:00 am	2022-03-21 @ 7:00 am	26.4 ± 2.1	2022-03-30
11139717	SK5	2022-03-18 @ 7:00 am	2022-03-21 @ 7:00 am	24.6 ± 2.0	2022-03-30

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

March 30, 2022

** LABORATORY ANALYSIS REPORT **

Radon test result report for:
RSH
MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11139726	BASEMENT	2022-03-20 @ 8:00 am	2022-03-23 @ 7:00 am	0.9 ± 0.5	2022-03-30
11139725	DINING	2022-03-20 @ 8:00 am	2022-03-23 @ 7:00 am	< 0.3	2022-03-30

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

KCI TECHNOLOGIES

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

Radon Test Kit Chain of Custody

Project Name: MCPS Radon – March 2022 Schools

Name of Schools:

1. Marshall, Thurgood ES
2. Ridgeview MS
3. Travilah ES
4. Flower Hill ES
5. Resnik, Judith A. ES
6. Strawberry Knolls ES
7. Whetstone ES
8. Laytonsville ES
9. Stedwick ES
10. Watkins Mill ES
11. Watkins Mill HS
12. Einstein, Albert E. HS

	Date	Initials
Radon Test Kits Deployed	02/28/2022	
Radon Test Kits Collected	03/03/2022	
Radon Test Kits Shipped to Lab*	03/3/2022	
Radon Test Kits Received by Lab*	03/5/2022	

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

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MCPS RADON TESTING - EXECUTIVE SUMMARY

Site Name	Watkins Mill 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	2
# Rooms ≥4.0 pCi/L	0
Lowest Value	<0.3 pCi/L
Highest Value	0.8 pCi/L

Project Status

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

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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: Watkins Mill Elementary School
19001 Watkins Mill Road
Montgomery Village, Maryland 20886

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 Watkins Mill Elementary School, located at 19001 Watkins Mill Road in Montgomery Village, Maryland 20886 (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 six (6) activated charcoal (AC) radon test kits. KCI deployed radon test kits in frequently-occupied ground contact rooms, and other areas, (if applicable) in accordance with AARST guidance.

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

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

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

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

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

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

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

Sincerely,

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

Attachments:

A- Floor Plan with Test Locations

B - Tables 1-3, Radon Test Summary Spreadsheets

C- Laboratory Analytical Results

ATTACHMENT A

Floor Plan With Test Locations

Floor Plan Legend
X-Sample Location (in red)
X- Previous Sample Location
1- Not Samled; No Ground Contact
2- Not Samled; Unoccupied (e.g. Storage, Mechanical)
3- Not Samled; High Humidity/Moisture
4- Not Samled; Bathroom/Hallway

ATTACHMENT B

Radon Test Summary Spreadsheet

Table Notes:

AC- Activated Charcoal

ACI- Air Chek, Inc.

D- Duplicate

FB- Field Blank

KCI- KCI Technologies, Inc.

OB- Office Blank

PM- Project Manager

QC- Quality Control

Table 1- Radon Testing Results		
Watkins Mill Elementary School		
Test Period: 02/04/20-02/07/20		
Kit Number	Room / Area	Result
9339936	K-2	0.8
9339935	WR	0.8
9339939	WR	<0.3
9339950	WR	<0.3
9334909	OFFICE BLANK	<0.3
9334910	OFFICE BLANK	<0.3

Table 2- Radon Testing Results			
Watkins Mill Elementary School			
Test Period: 02/04/20-02/07/20			
Kit Number	QC Type	Room / Area	Result
9339939	D	WR	<0.3
9339950	FB	WR	<0.3
9334902	TRANSIT BLANK	NA	<0.3

ATTACHMENT C

Laboratory Analytical Results

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

Radon test result report for:

MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
9339936	K-2	2020-02-04 @ 12:00 pm	2020-02-07 @ 9:00 am	0.8 ± 0.3	2020-02-11
9339939	WR	2020-02-04 @ 12:00 pm	2020-02-07 @ 9:00 am	< 0.3	2020-02-11
9339935	WR	2020-02-04 @ 12:00 pm	2020-02-07 @ 9:00 am	0.8 ± 0.4	2020-02-11
9339950	WR	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 - 9341725 thru 9341733	Device No.'s: _____
52 Ccpt	
Date Start: _____ Date Stop: _____	Date Start: _____ Date Stop: _____
Time Start: _____ Time Stop: _____	Time Start: _____ Time Stop: _____
Device No.'s: _____	Device No.'s: _____
Date Start: _____ Date Stop: _____	Date Start: _____ Date Stop: _____
Time Start: _____ Time Stop: _____	Time Start: _____ Time Stop: _____
Device No.'s: _____	Device No.'s: _____

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

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

Radon test result report for:

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

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

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

KCI TECHNOLOGIES

ENGINEERS • PLANNERS • SCIENTISTS • CONSTRUCTION MANAGERS

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

Radon Test Kit Chain of Custody

Project Name: MCPS Radon 2019 Week 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

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

MCPS RADON TESTING - EXECUTIVE SUMMARY

Site Name	Watkins Mill 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	32
# Rooms ≥4.0 pCi/L	0
Lowest Value	<0.3 pCi/L
Highest Value	2 pCi/L

Project Status

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

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

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: Watkins Mill Elementary School
19001 Watkins Mill Road
Montgomery Village, Maryland 20886

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 Watkins Mill Elementary School, located at 19001 Watkins Mill Road in Montgomery Village, Maryland 20886 (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 12/10/2019 and deployed forty-three (43) activated charcoal (AC) radon test kits. KCI deployed radon test kits in frequently-occupied ground contact rooms, and other areas, (if applicable) in accordance with AARST guidance.

A floor plan map of the building with the test locations is included as 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 12/13/2019 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 piC/L	None	N/A
≤4.0 piC/L	See Attachment B	See Attachment B

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

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

Sincerely,

Mr. Tyler P. McCleaf
Radon Measurement Provider
111004 RT

KCI Technologies, Inc.

Attachments:

A- Floor Plan with Test Locations

B - Tables 1-3, Radon Test Summary Spreadsheets

C- Laboratory Analytical Results

ATTACHMENT A

Floor Plan With Test Locations

ATTACHMENT B

Radon Test Summary Spreadsheet

Table Notes:

AC- Activated Charcoal

ACI- Air Chek, Inc.

D- Duplicate

FB- Field Blank

KCI- KCI Technologies, Inc.

OB- Office Blank

PM- Project Manager

QC- Quality Control

Table 1- Radon Testing Results		
Watkins Mill Elementary School		
Test Period: 12/10/2019-12/13/2019		
Kit Number	Room / Area	Result
9334094	CR13	0.6
9334095	CR14	< 0.3
9334096	CR-16	< 0.3
9334097	CR16	0.5
9334098	CR15	< 0.3
9334099	R	< 0.3
9334100	R	1
9334915	OFFICE BLANK	< 0.3
9335414	MPR	1
9335415	WR	< 0.3
9335416	WR	MISSING
9335417	MAIN	< 0.3
9335422	MAIN	< 0.3
9335423	CR 22	1
9335424	GR1 HU6	2
9335425	ASN PRIN	0.8
9335426	MPR	0.9
9335427	CR 35	1
9335428	K-2	MISSING
9335429	K-2	1.1
9335430	STA	1.3
9335431	STO NO 2	0.6
9335432	HE	0.7
9335433	CR 45	1.8
9335434	K-1	1.5
9335435	CR47	2
9335436	C54	0.7
9335437	CR 23	0.5
9335438	CR 30	0.8
9335439	CR 21	< 0.3
9335440	48	0.6
9335441	48	< 0.3
9335442	CR 33	1
9335443	CR 29	0.7
9335444	CR 27	< 0.3
9335445	CR 33	0.8
9335446	CR 18	0.9
9335447	CR 19	< 0.3
9335448	CR 20	< 0.3
9335449	CR 32	0.9
9335450	CR 25	1.1
9335451	CR 17	< 0.3
9335452	CR 19	< 0.3
9335453	CR 7	< 0.3
9335454	CR 27	< 0.3
9335455	PRIN	0.5
9335456	COUNSELOR	0.9
9335457	CRB38	< 0.3
9335459	SPEECH	0.6
9335460	CR 6	< 0.3

Table 2- Radon Testing Results			
Watkins Mill Elementary School			
Test Period: 12/10/2019-12/13/2019			
Kit Number	QC Type	Room / Area	Result
9335417	D	MAIN	<0.3
9335415	FB	WR	<0.3
9335429	D	K-2	1.1
9335442	D	CR 33	1
9335454	FB	CR 27	<0.3
9335452	D	CR 19	<0.3
9334096	D	CR 16	<0.3
9334099	FB	R	<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

Summary of Missed Locations		
Watkins Mill Elementary School		
Test Period: 12/10/2019 - 12/13/2019		
Kit Number	Room/Area	Result
	NA	

Summary of Missing, Compromised and >/= 4 piC/L Tests		
Watkins Mill Elementary School		
Test Period: 12/10/2019-12/13/2019		
Kit Number	Room/Area	Result
9335416	*WR	NA
9335428	*K-2	NA

Table Note:

* Missing or Compromised Sample

ATTACHMENT C

Laboratory Analytical Results

December 17, 2019 **** LABORATORY ANALYSIS REPORT ****

Radon test result report for:
WATKINS MILL ES
MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
9335440	48	2019-12-10 @ 4:00 pm	2019-12-13 @ 10:00 am	0.6 ± 0.3	2019-12-17
9335441	48	2019-12-10 @ 4:00 pm	2019-12-13 @ 10:00 am	< 0.3	2019-12-17
9335425	ASN PRIN	2019-12-10 @ 3:00 pm	2019-12-13 @ 10:00 am	0.8 ± 0.4	2019-12-17
9335436	C54	2019-12-10 @ 4:00 pm	2019-12-13 @ 10:00 am	0.7 ± 0.3	2019-12-17
9335456	COUNSELOR	2019-12-10 @ 5:00 pm	2019-12-13 @ 10:00 am	0.9 ± 0.3	2019-12-17
9335451	CR 17	2019-12-10 @ 4:00 pm	2019-12-13 @ 10:00 am	< 0.3	2019-12-17
9335446	CR 18	2019-12-10 @ 4:00 pm	2019-12-13 @ 10:00 am	0.9 ± 0.3	2019-12-17
9335447	CR 19	2019-12-10 @ 4:00 pm	2019-12-13 @ 10:00 am	< 0.3	2019-12-17
9335452	CR 19	2019-12-10 @ 4:00 pm	2019-12-13 @ 10:00 am	< 0.3	2019-12-17
9335448	CR 20	2019-12-10 @ 4:00 pm	2019-12-13 @ 10:00 am	< 0.3	2019-12-17
9335439	CR 21	2019-12-10 @ 4:00 pm	2019-12-13 @ 10:00 am	< 0.3	2019-12-17
9335437	CR 23	2019-12-10 @ 4:00 pm	2019-12-13 @ 10:00 am	0.5 ± 0.3	2019-12-17
9335450	CR 25	2019-12-10 @ 4:00 pm	2019-12-13 @ 10:00 am	1.1 ± 0.3	2019-12-17
9335444	CR 27	2019-12-10 @ 4:00 pm	2019-12-13 @ 10:00 am	< 0.3	2019-12-17
9335454	CR 27	2019-12-10 @ 4:00 pm	2019-12-13 @ 10:00 am	< 0.3	2019-12-17
9335443	CR 29	2019-12-10 @ 4:00 pm	2019-12-13 @ 10:00 am	0.7 ± 0.3	2019-12-17
9335438	CR 30	2019-12-10 @ 4:00 pm	2019-12-13 @ 10:00 am	0.8 ± 0.3	2019-12-17
9335449	CR 32	2019-12-10 @ 4:00 pm	2019-12-13 @ 10:00 am	0.9 ± 0.3	2019-12-17
9335442	CR 33	2019-12-10 @ 4:00 pm	2019-12-13 @ 10:00 am	1.0 ± 0.3	2019-12-17
9335445	CR 33	2019-12-10 @ 4:00 pm	2019-12-13 @ 10:00 am	0.8 ± 0.3	2019-12-17
9335427	CR 35	2019-12-10 @ 4:00 pm	2019-12-13 @ 10:00 am	1.0 ± 0.4	2019-12-17
9335433	CR 45	2019-12-10 @ 3:00 pm	2019-12-13 @ 10:00 am	1.8 ± 0.3	2019-12-17
9335453	CR 7	2019-12-10 @ 5:00 pm	2019-12-13 @ 10:00 am	< 0.3	2019-12-17
9334096	CR-16	2019-12-10 @ 6:00 pm	2019-12-13 @ 10:00 am	< 0.3	2019-12-17
9334094	CR13	2019-12-10 @ 6:00 pm	2019-12-13 @ 10:00 am	0.6 ± 0.3	2019-12-17
9334095	CR14	2019-12-10 @ 6:00 pm	2019-12-13 @ 10:00 am	< 0.3	2019-12-17
9334098	CR15	2019-12-10 @ 6:00 pm	2019-12-13 @ 10:00 am	< 0.3	2019-12-17
9334097	CR16	2019-12-10 @ 6:00 pm	2019-12-13 @ 10:00 am	0.5 ± 0.3	2019-12-17
9335435	CR47	2019-12-10 @ 3:00 pm	2019-12-13 @ 10:00 am	2.0 ± 0.3	2019-12-17
9335457	CRB38	2019-12-10 @ 5:00 pm	2019-12-13 @ 10:00 am	< 0.3	2019-12-17
9335424	GR1 HU6	2019-12-10 @ 4:00 pm	2019-12-13 @ 10:00 am	2.0 ± 0.4	2019-12-17
9335432	HE	2019-12-10 @ 3:00 pm	2019-12-13 @ 10:00 am	0.7 ± 0.3	2019-12-17
9335434	K-1	2019-12-10 @ 3:00 pm	2019-12-13 @ 10:00 am	1.5 ± 0.3	2019-12-17
9335429	K-2	2019-12-10 @ 3:00 pm	2019-12-13 @ 10:00 am	1.1 ± 0.3	2019-12-17
9335417	MAIN	2019-12-10 @ 3:00 pm	2019-12-13 @ 10:00 am	< 0.3	2019-12-17
9335422	MAIN	2019-12-10 @ 3:00 pm	2019-12-13 @ 10:00 am	< 0.3	2019-12-17
9335414	MPR	2019-12-10 @ 3:00 pm	2019-12-13 @ 10:00 am	1.0 ± 0.3	2019-12-17

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

December 17, 2019 **** LABORATORY ANALYSIS REPORT ****

Radon test result report for:
WATKINS MILL ES
MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
9335426	MPR	2019-12-10 @ 3:00 pm	2019-12-13 @ 10:00 am	0.9 ± 0.3	2019-12-17
9335455	PRIN	2019-12-10 @ 3:00 pm	2019-12-13 @ 10:00 am	0.5 ± 0.3	2019-12-17
9334100	R	2019-12-10 @ 6:00 pm	2019-12-13 @ 11:00 am	1.0 ± 0.3	2019-12-17
9334099	R	2019-12-10 @ 6:00 pm	2019-12-13 @ 11:00 am	< 0.3	2019-12-17
9335459	SPEECH	2019-12-10 @ 5:00 pm	2019-12-13 @ 10:00 am	0.6 ± 0.3	2019-12-17
9335430	STA	2019-12-10 @ 3:00 pm	2019-12-13 @ 11:00 am	1.3 ± 0.3	2019-12-17
9335431	STO NO 2	2019-12-10 @ 4:00 pm	2019-12-13 @ 10:00 am	0.6 ± 0.3	2019-12-17
9335415	WR	2019-12-10 @ 3:00 pm	2019-12-13 @ 10:00 am	< 0.3	2019-12-17

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 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, ~~9334518~~ acm, 9334519 9334522 thru 9334528

B4

Date Start: 12/13/19 Date Stop: 12/16/19 | Date Start: _____ Date Stop: _____

Time Start: ~~0800~~ acm Time Stop: 0811 | Time Start: _____ Time Stop: _____

0811

(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 µR/h Elevation = 820 ft

December 18, 2019 **** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

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

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

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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

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December 18, 2019 **** LABORATORY ANALYSIS REPORT ****

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

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Radon Test Kit Chain of Custody

Project Name: MCPS Radon 2019 Week 1

Name of Schools:

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

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

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

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MCPS RADON TESTING - EXECUTIVE SUMMARY

Site Name	Watkins Mill Elementary School
Date of Report	March 14, 2018
Round of Testing	Initial **Follow-up** Post Remediation 2 year testing 5 year testing HVAC Upgrade Window Replacement New Addition New Facility
# of Rooms Tested	15
# Rooms ≥4.0 pCi/L	0
Lowest Value	<0.3 pCi/L
Highest Value	2.1 pCi/L

Project Status

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

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March 14, 2018

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

Re: Radon Testing Services

KCI Job #1214634188

Location: Watkins Mill Elementary School
19001 Watkins Mill Rd.
Silver Spring, Maryland 20886

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 Watkins Mill Elementary School, located at 19001 Watkins Mill Rd. in Silver Spring, Maryland 20886 (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 13, 2018 and deployed nineteen (19) activated charcoal (AC) radon test kits. KCI deployed radon test kits in frequently-occupied ground contact rooms, and other areas, (if applicable) in accordance with AARST guidance.

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 piC/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 16, 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 10-18 miles per hour. Average humidity was around 73%. 0.30 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 piC/L	None	N/A
≤4.0 piC/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		
Watkins Mill Elementary School		
Test Period: 02/13/18-02/16/18		
Kit Number	**Room / Area**	**Result**
7986904	4	0.9
7986905	6	2.1
7986901	7	< 0.3
7986918	35	0.8
7986902	47	1.5
7986906	48	< 0.3
7986921	19 STORAGE	< 0.3
7986903	* 48 (Missing)	-
7986909	BLDG SERVICE	1.0
7986911	COU	1.1
7986915	CR5	0.8
7986908	KITCHEN	0.6
7986917	R	1.0
7986912	RESOURCE	1.2
7986914	SPEECH	1.2
7986910	STAFF LOUNGE	1.1

Table Note:
* Missing or Compromised Sample

Table 2 - Radon Testing Results		
Watkins Mill Elementary School		
Test Period: 02/13/18-02/16/18		
Kit Number	**QC Type**	**Result**
7986916	D (19 STORAGE)	0.8
7986907	D (7)	< 0.3
7986913	FB (KITCHEN)	< 0.3

Table Note:
* Missing or Compromised Sample

ATTACHMENT C

Laboratory Analytical Results

February 28, 2018 **** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

WATKINS MILL ELEMENTARY SCHOOL

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7986916	19 STORAGE	2018-02-13 @ 9:00 am	2018-02-16 @ 9:00 am	0.8 ± 0.3	2018-02-20
7986921	19 STORAGE	2018-02-13 @ 9:00 am	2018-02-16 @ 9:00 am	< 0.3	2018-02-20
7986918	35	2018-02-13 @ 9:00 am	2018-02-16 @ 8:00 am	0.8 ± 0.3	2018-02-20
7986904	4	2018-02-13 @ 9:00 am	2018-02-16 @ 8:00 am	0.9 ± 0.3	2018-02-20
7986903	48	@	@		
7986906	48	2018-02-13 @ 8:00 am	2018-02-16 @ 8:00 am	< 0.3	2018-02-20
7986905	6	2018-02-13 @ 9:00 am	2018-02-16 @ 8:00 am	2.1 ± 0.4	2018-02-20
7986901	7	2018-02-13 @ 9:00 am	2018-02-16 @ 8:00 am	< 0.3	2018-02-20
7986907	7	2018-02-13 @ 9:00 am	2018-02-16 @ 8:00 am	< 0.3	2018-02-20
7986909	BLDG SERVICE	2018-02-13 @ 9:00 am	2018-02-16 @ 8:00 am	1.0 ± 0.3	2018-02-20
7986911	COUNSELOR	2018-02-13 @ 9:00 am	2018-02-16 @ 8:00 am	1.1 ± 0.3	2018-02-20
7986915	CR5	2018-02-13 @ 9:00 am	2018-02-16 @ 8:00 am	0.8 ± 0.3	2018-02-20
7986913	KITCHEN	2018-02-13 @ 9:00 am	2018-02-16 @ 8:00 am	< 0.3	2018-02-20
7986908	KITCHEN	2018-02-13 @ 9:00 am	2018-02-16 @ 8:00 am	0.6 ± 0.3	2018-02-20
7986917	R	2018-02-13 @ 9:00 am	2018-02-16 @ 8:00 am	1.0 ± 0.3	2018-02-20
7986912	RESOURCE	2018-02-13 @ 9:00 am	2018-02-16 @ 8:00 am	1.2 ± 0.3	2018-02-20
7986914	SPEECH	2018-02-13 @ 9:00 am	2018-02-16 @ 8:00 am	1.2 ± 0.3	2018-02-20
7986910	STAFF LOUNGE	2018-02-13 @ 9:00 am	2018-02-16 @ 8:00 am	1.1 ± 0.3	2018-02-20
7986902	47	2018-02-13 @ 8:00 am	2018-02-16 @ 8:00 am	1.5 ± 0.3	2018-02-20

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

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

Radon Test Kit Chain of Custody

Project Name: MCPS Radon Phase

Names of Schools:

1. Westbrook Elementary School
2. Westland Middle School
3. Walt Whitman High School
4. Cloverly Elementary School
5. Sligo Middle School
6. Flora Singer Elementary School
7. Albert Einstein High School
8. Roscoe Nix Elementary School
9. Mario Loiederman Middle School
10. Sargent Shriver Elementary School
11. Whetstone Elementary School
12. Brooke Grove Elementary School
13. Clearspring Elementary School
14. Beall Elementary School
15. Maryvale Elementary School
16. Lathrop E. Smith Center
17. Laytonsville Elementary School
18. Germantown Elementary School
19. Spring Mill Center
20. Northwood High School
21. E. Silver Spring Elementary School
22. Silver Spring Int. Middle School
23. Clarksburg High School
24. Rosa Parks Middle School
25. Greenwood Elementary School
26. Montgomery Knolls Elem. School
27. Watkins Mill Elementary School
28. Gaithersburg Elementary School
29. Viers Mill Elementary School
30. Rock View Elementary School

	Date	Initials
Radon Test Kits Deployed	2/13/18	JM
Radon Test Kits Collected	2/16/18	JM
Radon Test Kits Shipped to Lab*	2/16/18	JM
Radon Test Kits Received by Lab*	2/20/18	JM

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

February 27, 2018 **** LABORATORY ANALYSIS REPORT ****

Radon test result report for:
OFFICE BLANKS

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

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February 27, 2018 **** LABORATORY ANALYSIS REPORT ****

Radon test result report for:
TRANSIT BLANKS

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

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

February 28, 2018 **** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

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

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

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

EXPOSURE IN BOWSER-MORNER RADON CHAMBER

CLIENT KCI Technologies Inc. Job Number 183530

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

Date Start: 2/16/18 Date Stop: 2/19/18	Date Start: _____ Date Stop: _____
Time Start: 1052 Time Stop: 1052	Time Start: _____ Time Stop: _____
Device No.'s: (6) Char. Bags-	Device No.'s: _____
7984181, 7986621, 7985683,	_____
7984168, 7986618, 7984169	_____
G3 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 µR/h Elevation = 820 ft

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MCPS RADON TESTING - EXECUTIVE SUMMARY

Site Name	Watkins Mill Elementary School
Date of Report	February 2, 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	33
# Rooms ≥4.0 pCi/L	0
Lowest Value	< 0.3 pCi/L
Highest Value	2.0 pCi/L

Current Project Status at this time: Results satisfactory to date; missed locations to be sampled.

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February 2, 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: Watkins Mill Elementary School
19001 Watkins Mill Rd.
Montgomery Village, Maryland 20886

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 Watkins Mill Elementary School, located at 19001 Watkins Mill Rd. in Montgomery Village, Maryland 20886 (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 5, 2017 and deployed 41 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 8, 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 low-30s to mid-40s and high temperatures ranged from the upper-30s to mid-50s. Maximum sustained winds ranged from 4-17 miles per hour. Average humidity was around 60%. 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 (Appendix B). The laboratory analytical results are also attached (Appendix C). Laboratory results and exposure data for the spike samples are also included in Appendix C.

The results of the radon test analysis indicated the following:

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

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

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 Moulsdale, CHMM
Radon Measurement Specialist
KCI Technologies, Inc.

Attachments:

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		
Watkins Mill Elementary School		
Test Period: 12/05/17-12/08/17		
Kit Number	**Room / Area**	**Result**
7979012	10	1.0
7979019	11	0.6
7979017	12	< 0.3
7979038	13	< 0.3
7979036	14	< 0.3
7979039	15	0.7
7979044	16	0.5
7979094	17	< 0.3
7979096	18	0.6
7979002	19	0.7
7979003	20	< 0.3
7979004	21	0.5
7979011	22	0.7
7979093	23	1.0
7979330	25	1.5
7979374	27	1.2
7979329	29	0.8
7979091	30	0.6
7979328	32	0.7
7979085	33	0.8
7979025	45	2.0
7979020	* 47 (Open Door)	1.8
7979035	APR	1.2
7979028	APR	1.0
7979070	ASSISTANT PRINCI	0.9
7979048	CONF ROOM 3	1.0
7979092	E5	0.9
7979026	HEALTH ROOM	0.8
7979027	K1	1.7
7979069	K2	1.6
7979047	MAIN OFFICE	0.9
7979042	PRINCIPALS OFFIC	1.1
7979009	SPEECH	0.8
7979010	STG RM 2	0.9

Table Note:
* Missing or Compromised Sample

Radon Testing Results		
Watkins Mill Elementary School		
Test Period: 12/05/17-12/08/17		
Kit Number	**QC Type**	**Result**
7979018	D (12)	0.6
7979040	D (15)	0.6
7979095	D (17)	< 0.3
7979359	D (30)	1.2
7979043	FB (15)	< 0.3
7979355	FB (30)	< 0.3
7193835	OB (OFFICE BLANK)	< 0.3

Table Note:
* Missing or Compromised Sample

Summary of Missed Locations		
Watkins Mill Elementary School		
Test Period: 12/05/17-12/08/17		
Kit Number	**Room / Area**	**Result**
-	ESOL GROUND (Missed location)	-
-	35 (Missed location)	-

Summary of Missing, Compromised and ≥4 piC/L Tests		
Watkins Mill Elementary School		
Test Period: 12/05/17-12/08/17		
Kit Number	**Room / Area**	**Result**
7979020	* 47 (Open Door)	1.8

Table Note:
* Missing or Compromised Sample

ATTACHMENT C

Laboratory Analytical Results

December 29, 2017 **** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

WATKINS MILL ELEMENTARY SCHOOL
MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7979012	10	2017-12-05 @ 12:00 pm	2017-12-08 @ 10:00 am	1.0 ± 0.3	2017-12-12
7979019	11	2017-12-05 @ 12:00 pm	2017-12-08 @ 10:00 am	0.6 ± 0.3	2017-12-12
7979017	12	2017-12-05 @ 12:00 pm	2017-12-08 @ 10:00 am	< 0.3	2017-12-11
7979018	12	2017-12-05 @ 12:00 pm	2017-12-08 @ 10:00 am	0.6 ± 0.3	2017-12-11
7979038	13	2017-12-05 @ 12:00 pm	2017-12-08 @ 10:00 am	< 0.3	2017-12-11
7979036	14	2017-12-05 @ 12:00 pm	2017-12-08 @ 10:00 am	< 0.3	2017-12-11
7979039	15	2017-12-05 @ 12:00 pm	2017-12-08 @ 10:00 am	0.7 ± 0.3	2017-12-11
7979040	15	2017-12-05 @ 12:00 pm	2017-12-08 @ 10:00 am	0.6 ± 0.3	2017-12-11
7979043	15	2017-12-05 @ 12:00 pm	2017-12-08 @ 10:00 am	< 0.3	2017-12-12
7979044	16	2017-12-05 @ 12:00 pm	2017-12-08 @ 10:00 am	0.5 ± 0.3	2017-12-11
7979094	17	2017-12-05 @ 12:00 pm	2017-12-08 @ 10:00 am	< 0.3	2017-12-11
7979095	17	2017-12-05 @ 12:00 pm	2017-12-08 @ 10:00 am	< 0.3	2017-12-12
7979096	18	2017-12-05 @ 12:00 pm	2017-12-08 @ 10:00 am	0.6 ± 0.3	2017-12-12
7979002	19	2017-12-05 @ 12:00 pm	2017-12-08 @ 10:00 am	0.7 ± 0.3	2017-12-12
7979003	20	2017-12-05 @ 12:00 pm	2017-12-08 @ 10:00 am	< 0.3	2017-12-12
7979004	21	2017-12-05 @ 12:00 pm	2017-12-08 @ 10:00 am	0.5 ± 0.3	2017-12-11
7979011	22	2017-12-05 @ 12:00 pm	2017-12-08 @ 10:00 am	0.7 ± 0.3	2017-12-12
7979093	23	2017-12-05 @ 12:00 pm	2017-12-08 @ 10:00 am	1.0 ± 0.3	2017-12-12
7979330	25	2017-12-05 @ 12:00 pm	2017-12-08 @ 10:00 am	1.5 ± 0.3	2017-12-12
7979374	27	2017-12-05 @ 12:00 pm	2017-12-08 @ 10:00 am	1.2 ± 0.3	2017-12-12
7979329	29	2017-12-05 @ 12:00 pm	2017-12-08 @ 10:00 am	0.8 ± 0.3	2017-12-11
7979355	30	2017-12-05 @ 11:00 am	2017-12-08 @ 10:00 am	< 0.3	2017-12-11
7979091	30	2017-12-05 @ 12:00 pm	2017-12-08 @ 10:00 am	0.6 ± 0.3	2017-12-11
7979359	30	2017-12-05 @ 11:00 am	2017-12-08 @ 10:00 am	1.2 ± 0.3	2017-12-12
7979328	32	2017-12-05 @ 11:00 am	2017-12-08 @ 10:00 am	0.7 ± 0.3	2017-12-11
7979085	33	2017-12-05 @ 12:00 pm	2017-12-08 @ 10:00 am	0.8 ± 0.3	2017-12-12
7979025	45	2017-12-05 @ 12:00 pm	2017-12-08 @ 10:00 am	2.0 ± 0.3	2017-12-12
7979020	47	2017-12-05 @ 12:00 pm	2017-12-08 @ 10:00 am	1.8 ± 0.3	2017-12-12
7979028	APR	2017-12-05 @ 12:00 pm	2017-12-08 @ 10:00 am	1.0 ± 0.3	2017-12-11
7979035	APR	2017-12-05 @ 12:00 pm	2017-12-08 @ 10:00 am	1.2 ± 0.3	2017-12-12
7979070	ASSISTANT PRINCI	2017-12-05 @ 1:00 pm	2017-12-08 @ 10:00 am	0.9 ± 0.3	2017-12-12
7979048	CONF ROOM 3	2017-12-05 @ 12:00 pm	2017-12-08 @ 10:00 am	1.0 ± 0.3	2017-12-12
7979092	E5	2017-12-05 @ 12:00 pm	2017-12-08 @ 10:00 am	0.9 ± 0.3	2017-12-11
7979026	HEALTH ROOM	2017-12-05 @ 12:00 pm	2017-12-08 @ 10:00 am	0.8 ± 0.3	2017-12-11
7979027	K1	2017-12-05 @ 12:00 pm	2017-12-08 @ 10:00 am	1.7 ± 0.3	2017-12-12
7979069	K2	2017-12-05 @ 12:00 pm	2017-12-08 @ 10:00 am	1.6 ± 0.3	2017-12-12
7979047	MAIN OFFICE	2017-12-05 @ 12:00 pm	2017-12-08 @ 10:00 am	0.9 ± 0.3	2017-12-11

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

December 29, 2017 **** LABORATORY ANALYSIS REPORT ****

Radon test result report for:
WATKINS MILL ELEMENTARY SCHOOL
MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7193835	OFFICE BLANK	2017-12-05 @ 12:00 pm	2017-12-08 @ 12:00 pm	< 0.3	2017-12-11
7979042	PRINCIPALS OFFIC	2017-12-05 @ 12:00 pm	2017-12-08 @ 10:00 am	1.1 ± 0.3	2017-12-11
7979009	SPEECH	2017-12-05 @ 12:00 pm	2017-12-08 @ 10:00 am	0.8 ± 0.3	2017-12-12
7979010	STG RM 2	2017-12-05 @ 12:00 pm	2017-12-08 @ 10:00 am	0.9 ± 0.3	2017-12-12

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

Radon Test Kit Chain of Custody

Project Name: MCPS Radon Phase

Names of Schools:

1. John T. Baker Middle School
2. Cedar Grove Elementary School
3. Clarksburg Elementary School
4. Clarksburg Elementary School Annex
5. Clarksburg High School
6. Clearspring Elementary School
7. Damascus Elementary School
8. Damascus High School
9. Dr. Charles R. Drew Elementary School
10. Facilities Maintenance Depot - Shop
11. Lake Seneca Elementary School
12. Laytonsville Elementary School
13. Watkins Mill Elementary School
14. Watkins Mill High School
15. Whetstone Elementary School

	Date	Initials
Radon Test Kits Deployed	12/05/17	JM
Radon Test Kits Collected	12/08/17	JM
Radon Test Kits Shipped to Lab*	12/08/17	JM
Radon Test Kits Received by Lab*	12/13/17	JM

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

December 29, 2017 **** LABORATORY ANALYSIS REPORT ****

Radon test result report for:
TRANSIT 2
MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7193838	TRANSIT 1	2017-12-05 @ 2:00 pm	2017-12-08 @ 2:00 pm	< 0.3	2017-12-13
7979384	TRANSIT 10	2017-12-05 @ 2:00 pm	2017-12-08 @ 2:00 pm	< 0.3	2017-12-13
7979385	TRANSIT 11	2017-12-05 @ 2:00 pm	2017-12-08 @ 2:00 pm	< 0.3	2017-12-13
7984056	TRANSIT 12	2017-12-05 @ 2:00 pm	2017-12-08 @ 2:00 pm	< 0.3	2017-12-13
7983834	TRANSIT 13	2017-12-05 @ 2:00 pm	2017-12-08 @ 2:00 pm	< 0.3	2017-12-13
7194097	TRANSIT 14	2017-12-05 @ 2:00 pm	2017-12-08 @ 2:00 pm	< 0.3	2017-12-13
7194092	TRANSIT 15	2017-12-05 @ 2:00 pm	2017-12-08 @ 2:00 pm	< 0.3	2017-12-13
7193840	TRANSIT 16	2017-12-05 @ 2:00 pm	2017-12-08 @ 2:00 pm	< 0.3	2017-12-13
7979072	TRANSIT 17	2017-12-05 @ 2:00 pm	2017-12-08 @ 2:00 pm	< 0.3	2017-12-13
7979071	TRANSIT 18	2017-12-05 @ 2:00 pm	2017-12-08 @ 2:00 pm	< 0.3	2017-12-13
7979065	TRANSIT 19	2017-12-05 @ 2:00 pm	2017-12-08 @ 2:00 pm	0.6 ± 0.4	2017-12-13
7978194	TRANSIT 2	2017-12-05 @ 2:00 pm	2017-12-08 @ 2:00 pm	< 0.3	2017-12-13
7985660	TRANSIT 20	2017-12-05 @ 2:00 pm	2017-12-08 @ 2:00 pm	< 0.3	2017-12-13
7985661	TRANSIT 21	2017-12-05 @ 2:00 pm	2017-12-08 @ 2:00 pm	0.7 ± 0.4	2017-12-13
7193843	TRANSIT 22	2017-12-05 @ 2:00 pm	2017-12-08 @ 2:00 pm	< 0.3	2017-12-13
7984055	TRANSIT 23	2017-12-05 @ 2:00 pm	2017-12-08 @ 2:00 pm	< 0.3	2017-12-13
7983813	TRANSIT 24	2017-12-05 @ 2:00 pm	2017-12-08 @ 2:00 pm	< 0.3	2017-12-13
7983827	TRANSIT 25	2017-12-05 @ 2:00 pm	2017-12-08 @ 2:00 pm	< 0.3	2017-12-13
7978193	TRANSIT 3	2017-12-05 @ 2:00 pm	2017-12-08 @ 2:00 pm	< 0.3	2017-12-13
7978189	TRANSIT 4	2017-12-05 @ 2:00 pm	2017-12-08 @ 2:00 pm	0.5 ± 0.4	2017-12-13
7986187	TRANSIT 5	2017-12-05 @ 2:00 pm	2017-12-08 @ 2:00 pm	< 0.3	2017-12-13
7986188	TRANSIT 6	2017-12-05 @ 2:00 pm	2017-12-08 @ 2:00 pm	< 0.3	2017-12-13
7986177	TRANSIT 7	2017-12-05 @ 2:00 pm	2017-12-08 @ 2:00 pm	< 0.3	2017-12-13
7979077	TRANSIT 8	2017-12-05 @ 2:00 pm	2017-12-08 @ 2:00 pm	< 0.3	2017-12-13
7979386	TRANSIT 9	2017-12-05 @ 2:00 pm	2017-12-08 @ 2:00 pm	< 0.3	2017-12-13

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

December 19, 2017 **** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

MCPS - Spike Sample Laboratory Results. Measured values are satisfactory, i.e. within ±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 ± 0.7	2017-12-07
7975064	S2	2017-12-01 @ 11:00 am	2017-12-04 @ 11:00 am	27.4 ± 0.8	2017-12-07
7975063	S3	2017-12-01 @ 11:00 am	2017-12-04 @ 11:00 am	26.3 ± 0.7	2017-12-07
7975065	S4	2017-12-01 @ 11:00 am	2017-12-04 @ 11:00 am	23.0 ± 0.7	2017-12-07
7975069	S5	2017-12-01 @ 11:00 am	2017-12-04 @ 11:00 am	25.6 ± 0.7	2017-12-07
7975070	S6	2017-12-01 @ 11:00 am	2017-12-04 @ 11:00 am	23.0 ± 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

Time Start: 1049 Time Stop: 1049

Device No.'s: (6) Chan. Bags.

7975075, 7975064, 7975063,

7975065, 7975069, 7975070

F4 Right

Date Start: _____ Date Stop: _____

Time Start: _____ Time Stop: _____

Device No.'s: _____

Date Start: _____ Date Stop: _____

Time Start: _____ Time Stop: _____

Device No.'s: _____

Date Start: _____ Date Stop: _____

Time Start: _____ Time Stop: _____

Device No.'s: _____

Date Start: _____ Date Stop: _____

Time Start: _____ Time Stop: _____

Device No.'s: _____

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

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MCPS RADON TESTING

Executive Summary: Watkins Mill Elementary School

Date of Test Report:	3/11/2016
Round of Testing:	Initial Follow-up Post Remediation
# Rooms Tested:	40
# Rooms ≥ 4.0 pCi/L:	0
Low Value:	< 0.3
High Value:	2.0

Project Status:
Post-remediation testing completed; no further action at this time

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March 11, 2016

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

Re: **Radon Testing Services**
KCI Job # 12146341.29

Location: Watkins Mill Elementary School
19001 Watkins Mill Road
Montgomery Village, Maryland 20886

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 Watkins Mill Elementary School, located at 19001 Watkins Mill Road in Montgomery Village, Maryland 20886 (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 23, 2016 and deployed forty-seven (47) activated charcoal (AC) radon test kits. KCI deployed radon test kits in frequently-occupied ground contact rooms, and other areas, (if applicable) in accordance with AARST guidance. A floor plan map of the building with the test locations is included as Attachment A of this report.

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

KCI returned to the site on February 26, 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 ≤ 65° F.

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

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

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

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

Results:

The results of the radon test analysis indicated the following:

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

Notes:
D- Duplicate sample

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

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

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

Sincerely,

James M. Moulsdale
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 9 testing. Office blanks were not submitted under each school individually.

Radon Testing Results		
Watkins Mill Elementary School		
Test Period: 02/23/16-02/26/16		
Kit Number	**Room / Area**	**Result**
7731779	10	< 0.3
7730092	11	< 0.3
7732497	12	1.2
7718592	13	< 0.3
7731788	15	< 0.3
7731787	16	< 0.3
7731791	17	< 0.3
7731780	18	< 0.3
7731786	19	< 0.3
7731785	20	0.5
7731792	21	0.7
7731784	22	< 0.3
7732499	23	0.6
7732491	25	< 0.3
7732496	27	0.9
7731782	29	0.6
7731790	30	0.7
7731783	32	0.6
7731795	33	0.7
7731789	35	0.5
7718596	45	1.4
7732495	47	1.6
7731778	56	1.0
7718582	68	< 0.3
7732480	APR	0.9
7732489	APR	0.8
7718589	ASSIST PRIN	0.8
7732481	BUILDING SERVICE	1.1
7732490	ESOL	0.7
7718597	HEALTH	1.1
7718575	IMC	< 0.3
7732493	K1	1.0
7732494	K2	1.0
7718593	LOUNGE	0.9
7718588	OFFICE	1.0
7731794	PRIN	0.8
7718583	RESOURCE	0.9
7718586	SBLC	1.8
7731781	STORAGE	< 0.3
7731793	STORAGE NO 2	2.0
7718590	WORK ROOM	1.1

Table Note:
* Missing or Compromised Sample

Radon Testing Results		
Watkins Mill Elementary School		
Test Period: 02/23/16-02/26/16		
Kit Number	**QC Type**	**Result**
7732498	D (23)	0.8
7732487	D (33)	1.0
7718591	D (68)	0.7
7718584	D (OFFICE)	1.0
7732492	FB (33)	< 0.3
7732488	FB (68)	< 0.3

Table Note:
* Missing or Compromised Sample

ATTACHMENT C

Laboratory Analytical Results

March 8, 2016

** LABORATORY ANALYSIS REPORT **

Radon test result report for:

WATKINS MILL ELEMENTARY SCHOOL
MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7731779	10	2016-02-23 @ 3:00 pm	2016-02-26 @ 10:00 am	< 0.3	2016-03-01
7730092	11	2016-02-23 @ 3:00 pm	2016-02-26 @ 10:00 am	< 0.3	2016-03-01
7732497	12	2016-02-23 @ 3:00 pm	2016-02-26 @ 10:00 am	1.2 ± 0.3	2016-03-01
7718592	13	2016-02-23 @ 2:00 pm	2016-02-26 @ 10:00 am	< 0.3	2016-03-01
7731788	15	2016-02-23 @ 2:00 pm	2016-02-26 @ 10:00 am	< 0.3	2016-03-01
7731787	16	2016-02-23 @ 2:00 pm	2016-02-26 @ 10:00 am	< 0.3	2016-03-01
7731791	17	2016-02-23 @ 1:00 pm	2016-02-26 @ 10:00 am	< 0.3	2016-03-01
7731780	18	2016-02-23 @ 1:00 pm	2016-02-26 @ 10:00 am	< 0.3	2016-03-01
7731786	19	2016-02-23 @ 1:00 pm	2016-02-26 @ 10:00 am	< 0.3	2016-03-01
7731785	20	2016-02-23 @ 1:00 pm	2016-02-26 @ 10:00 am	0.5 ± 0.3	2016-03-01
7731792	21	2016-02-23 @ 1:00 pm	2016-02-26 @ 10:00 am	0.7 ± 0.3	2016-03-01
7731784	22	2016-02-23 @ 1:00 pm	2016-02-26 @ 10:00 am	< 0.3	2016-03-01
7732498	23	2016-02-23 @ 1:00 pm	2016-02-26 @ 10:00 am	0.8 ± 0.3	2016-03-01
7732499	23	2016-02-23 @ 1:00 pm	2016-02-26 @ 10:00 am	0.6 ± 0.3	2016-03-01
7732491	25	2016-02-23 @ 1:00 pm	2016-02-26 @ 10:00 am	< 0.3	2016-03-01
7732496	27	2016-02-23 @ 1:00 pm	2016-02-26 @ 10:00 am	0.9 ± 0.3	2016-03-01
7731782	29	2016-02-23 @ 2:00 pm	2016-02-26 @ 10:00 am	0.6 ± 0.3	2016-03-01
7731790	30	2016-02-23 @ 2:00 pm	2016-02-26 @ 10:00 am	0.7 ± 0.3	2016-03-01
7731783	32	2016-02-23 @ 2:00 pm	2016-02-26 @ 10:00 am	0.6 ± 0.3	2016-03-01
7732487	33	2016-02-23 @ 2:00 pm	2016-02-26 @ 10:00 am	1.0 ± 0.3	2016-03-01
7732492	33	2016-02-23 @ 2:00 pm	2016-02-26 @ 10:00 am	< 0.3	2016-03-01
7731795	33	2016-02-23 @ 2:00 pm	2016-02-26 @ 10:00 am	0.7 ± 0.3	2016-03-01
7731789	35	2016-02-23 @ 2:00 pm	2016-02-26 @ 10:00 am	0.5 ± 0.3	2016-03-01
7718596	45	2016-02-23 @ 2:00 pm	2016-02-26 @ 10:00 am	1.4 ± 0.3	2016-03-01
7732495	47	2016-02-23 @ 2:00 pm	2016-02-26 @ 10:00 am	1.6 ± 0.3	2016-03-01
7731778	56	2016-02-23 @ 3:00 pm	2016-02-26 @ 11:00 am	1.0 ± 0.3	2016-03-01
7732488	68	2016-02-23 @ 3:00 pm	2016-02-26 @ 11:00 am	< 0.3	2016-03-01
7718582	68	2016-02-23 @ 3:00 pm	2016-02-26 @ 11:00 am	< 0.3	2016-03-01
7718591	68	2016-02-23 @ 3:00 pm	2016-02-26 @ 11:00 am	0.7 ± 0.3	2016-03-01
7732489	APR	2016-02-23 @ 2:00 pm	2016-02-26 @ 10:00 am	0.8 ± 0.3	2016-03-01
7732480	APR	2016-02-23 @ 2:00 pm	2016-02-26 @ 10:00 am	0.9 ± 0.3	2016-03-01
7718589	ASSIST PRIN	2016-02-23 @ 3:00 pm	2016-02-26 @ 10:00 am	0.8 ± 0.3	2016-03-01
7732481	BUILDING SERVICE	2016-02-23 @ 2:00 pm	2016-02-26 @ 10:00 am	1.1 ± 0.3	2016-03-01
7732490	ESOL	2016-02-23 @ 1:00 pm	2016-02-26 @ 10:00 am	0.7 ± 0.3	2016-03-01
7718597	HEALTH	2016-02-23 @ 3:00 pm	2016-02-26 @ 10:00 am	1.1 ± 0.3	2016-03-01
7718575	IMC	2016-02-23 @ 3:00 pm	2016-02-26 @ 10:00 am	< 0.3	2016-03-01
7732493	K1	2016-02-23 @ 2:00 pm	2016-02-26 @ 10:00 am	1.0 ± 0.3	2016-03-01

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

March 8, 2016

** LABORATORY ANALYSIS REPORT **

Radon test result report for:

WATKINS MILL ELEMENTARY SCHOOL
MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7732494	K2	2016-02-23 @ 2:00 pm	2016-02-26 @ 10:00 am	1.0 ± 0.3	2016-03-01
7718593	LOUNGE	2016-02-23 @ 3:00 pm	2016-02-26 @ 11:00 am	0.9 ± 0.3	2016-03-01
7718584	OFFICE	2016-02-23 @ 3:00 pm	2016-02-26 @ 9:00 am	1.0 ± 0.3	2016-03-01
7718588	OFFICE	2016-02-23 @ 3:00 pm	2016-02-26 @ 10:00 am	1.0 ± 0.3	2016-03-01
7731794	PRIN	2016-02-23 @ 3:00 pm	2016-02-26 @ 10:00 am	0.8 ± 0.3	2016-03-01
7718583	RESOURCE	2016-02-23 @ 3:00 pm	2016-02-26 @ 11:00 am	0.9 ± 0.3	2016-03-01
7718586	SBLC	2016-02-23 @ 3:00 pm	2016-02-26 @ 10:00 am	1.8 ± 0.4	2016-03-01
7731781	STORAGE	2016-02-23 @ 1:00 pm	2016-02-26 @ 10:00 am	< 0.3	2016-03-01
7731793	STORAGE NO 2	2016-02-23 @ 1:00 pm	2016-02-26 @ 10:00 am	2.0 ± 0.4	2016-03-01
7718590	WORK ROOM	2016-02-23 @ 3:00 pm	2016-02-26 @ 10:00 am	1.1 ± 0.3	2016-03-01

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

March 9, 2016

** LABORATORY ANALYSIS REPORT **

Radon test result report for:

MCPS
Phase 9 Office Blanks

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

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

March 9, 2016

** LABORATORY ANALYSIS REPORT **

Radon test result report for:

MCPS
Phase 9 Office Blanks

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

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

February 23, 2016

** LABORATORY ANALYSIS REPORT **

Radon test result report for:

TRANSIT- PHASE 7, 8, 9
NONE

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

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: 1/30/16 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	_____
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

KCI TECHNOLOGIES

ENGINEERS • PLANNERS • SCIENTISTS • CONSTRUCTION MANAGERS

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

Radon Test Kit Chain of Custody

Project Name: MCPS Radon Phase 9

Name of Schools:

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

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

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

KCI TECHNOLOGIES

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

Radon Test Kit Chain of Custody

Project Name: MCPS Radon Phase 9

Name of Schools:

1. Banneker MS
2. Bethesda-Chevy Chase HS
3. Burtonsville ES
4. Chevy Chase ES
5. Clopper Mill ES
6. Edison HS
7. Flower Hill ES
8. Flower Valley ES
9. Greencastle ES
10. Maryvale ES
11. Montgomery Blair HS
12. Poolesville HS
13. Rachel Carson ES
14. Stedwick ES
15. Watkins Mill ES
16. Laytonsville ES
17. Lincoln Center

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

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

KCI TECHNOLOGIES

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

MCPS RADON TESTING

Executive Summary: Watkins Mill Elementary School

Date of Test Report:	3/1/2016 (Rev 2)
Round of Testing:	Initial Follow-up Post Remediation
# Rooms Tested:	33
# Rooms ≥ 4.0 pCi/L:	2
Low Value:	< 0.3
High Value:	20.0

Rooms with results ≥ 4.0 pCi/L:
Storage Room 2 (20.0 pCi/L), ESOL Ground (17.5 pCi/L)

Project Status:
Initial testing completed; re-test needed for results ≥ 4.0 pCi/L.

KCI TECHNOLOGIES

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

March 1, 2016 (Rev 2)

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

Re: **Radon Testing Services**
KCI Job # 12146341.19

Location: Watkins Mill Elementary School
19001 Watkins Mill Road
Montgomery Village, MD 20886

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 Watkins Mill Elementary School, located at 19001 Watkins Mill Road in Montgomery Village, Maryland 20886 (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 15, 2016 and deployed forty-three (43) activated charcoal (AC) radon test kits. KCI deployed radon test kits in frequently-occupied ground contact rooms, and other areas, (if applicable) in accordance with AARST guidance. A floor plan map of the building with the test locations is included as Attachment A of this report.

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

KCI returned to the site on December 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:

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

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

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

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

Results:

The results of the radon test analysis indicated the following:

Radon Concentration	Room	Result
≥4.0 piC/L	Storage Room 2	20.0
	ESOL Ground	17.5
<4.0 piC/L	See Attachment B	

Notes:
D- Duplicate sample

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

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

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

Sincerely,

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

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

ATTACHMENT A

Floor Plan With Test Locations

ATTACHMENT B

Radon Test Summary Spreadsheet

Table Notes:

AC- Activated Charcoal

ACI- Air Chek, Inc.

D- Duplicate

FB- Field Blank

KCI- KCI Technologies, Inc.

OB- Office Blank

PM- Project Manager

QC- Quality Control

Radon Testing Results		
Watkins Mill E.S.		
Test Period: 12/15/15-12/18/15		
Kit Number	**Room / Area**	**Result**
7708609	10	0.8
7708625	11	2.0
7708619	12	1.8
7706720	13	1.3
7708621	14	1.8
7706718	15	1.0
7708638	16	0.8
7708627	17	1.9
7708628	18	0.7
7708614	19	0.8
7708633	20	1.4
7708635	21	1.4
7706714	22	1.1
7708603	23	1.0
7708623	25	0.8
7708617	27	1.1
7708618	29	< 0.3
7708606	30	1.0
7708641	32	0.7
7708607	33	0.9
7708613	35	0.8
7708605	45	1.6
7708604	47	1.3
7706710	ALL PURP RM	1.1
7706708	ALL PURP RM	1.5
7708612	ASSIST PRIN OFF	2.2
7708630	CONF ROOM 3	2.3
7708629	ESOL GROUND	17.5
7708639	HEALTH ROOM	1.4
7706736	KINDER 1	1.4
7706711	KINDER 2	1.3
7708626	MAIN OFFICE	2.1
7708631	PRINCIPLES OFF	1.3
7708634	STG RM 2	20.0

Table Note:
* Missing or Compromised Sample

Radon Testing Results		
Watkins Mill E.S.		
Test Period: 12/15/15-12/18/15		
Kit Number	**QC Type**	**Result**
7708622	D (14)	1.4
7708632	D (22)	0.9
7708624	D (23)	1.0
7708601	D (30)	1.2
7706730	D (KINDER 1)	1.7
7706717	FB (22)	< 0.3
7708610	FB (30)	< 0.3
7708602	FB (45)	< 0.3
7708203	OB (OFFICE BLANK)	< 0.3

Table Note:
* Missing or Compromised Sample

ATTACHMENT C

Laboratory Analytical Results

December 30, 2015

** LABORATORY ANALYSIS REPORT **

Radon test result report for:

WATKINS MILL E.S.
MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7708609	10	2015-12-15 @ 4:00 pm	2015-12-18 @ 12:00 pm	0.8 ± 0.3	2015-12-22
7708625	11	2015-12-15 @ 4:00 pm	2015-12-18 @ 12:00 pm	2.0 ± 0.3	2015-12-22
7708619	12	2015-12-15 @ 4:00 pm	2015-12-18 @ 12:00 pm	1.8 ± 0.3	2015-12-22
7706720	13	2015-12-15 @ 4:00 pm	2015-12-18 @ 11:00 am	1.3 ± 0.3	2015-12-22
7708621	14	2015-12-15 @ 4:00 pm	2015-12-18 @ 11:00 am	1.8 ± 0.3	2015-12-22
7708622	14	2015-12-15 @ 4:00 pm	2015-12-18 @ 11:00 am	1.4 ± 0.3	2015-12-22
7706718	15	2015-12-15 @ 4:00 pm	2015-12-18 @ 12:00 pm	1.0 ± 0.3	2015-12-22
7708638	16	2015-12-15 @ 4:00 pm	2015-12-18 @ 11:00 am	0.8 ± 0.3	2015-12-22
7708627	17	2015-12-15 @ 3:00 pm	2015-12-18 @ 11:00 am	1.9 ± 0.3	2015-12-22
7708628	18	2015-12-15 @ 3:00 pm	2015-12-18 @ 11:00 am	0.7 ± 0.3	2015-12-22
7708614	19	2015-12-15 @ 3:00 pm	2015-12-18 @ 11:00 am	0.8 ± 0.3	2015-12-22
7708633	20	2015-12-15 @ 3:00 pm	2015-12-18 @ 11:00 am	1.4 ± 0.3	2015-12-22
7708635	21	2015-12-15 @ 4:00 pm	2015-12-18 @ 11:00 am	1.4 ± 0.3	2015-12-22
7706714	22	2015-12-15 @ 4:00 pm	2015-12-18 @ 11:00 am	1.1 ± 0.3	2015-12-22
7706717	22	2015-12-15 @ 4:00 pm	2015-12-18 @ 11:00 am	< 0.3	2015-12-22
7708632	22	2015-12-15 @ 4:00 pm	2015-12-18 @ 11:00 am	0.9 ± 0.3	2015-12-22
7708603	23	2015-12-15 @ 3:00 pm	2015-12-18 @ 11:00 am	1.0 ± 0.3	2015-12-22
7708624	23	2015-12-15 @ 3:00 pm	2015-12-18 @ 11:00 am	1.0 ± 0.3	2015-12-22
7708623	25	2015-12-15 @ 3:00 pm	2015-12-18 @ 11:00 am	0.8 ± 0.3	2015-12-22
7708617	27	2015-12-15 @ 3:00 pm	2015-12-18 @ 11:00 am	1.1 ± 0.3	2015-12-22
7708618	29	2015-12-15 @ 3:00 pm	2015-12-18 @ 11:00 am	< 0.3	2015-12-22
7708601	30	2015-12-15 @ 3:00 pm	2015-12-18 @ 11:00 am	1.2 ± 0.3	2015-12-22
7708606	30	2015-12-15 @ 3:00 pm	2015-12-18 @ 11:00 am	1.0 ± 0.3	2015-12-22
7708610	30	2015-12-15 @ 3:00 pm	2015-12-18 @ 11:00 am	< 0.3	2015-12-22
7708641	32	2015-12-15 @ 3:00 pm	2015-12-18 @ 11:00 am	0.7 ± 0.3	2015-12-22
7708607	33	2015-12-15 @ 3:00 pm	2015-12-18 @ 11:00 am	0.9 ± 0.3	2015-12-22
7708613	35	2015-12-15 @ 3:00 pm	2015-12-18 @ 11:00 am	0.8 ± 0.3	2015-12-22
7708602	45	2015-12-15 @ 4:00 pm	2015-12-18 @ 12:00 pm	< 0.3	2015-12-22
7708605	45	2015-12-15 @ 4:00 pm	2015-12-18 @ 12:00 pm	1.6 ± 0.3	2015-12-22
7708604	47	2015-12-15 @ 4:00 pm	2015-12-18 @ 12:00 pm	1.3 ± 0.3	2015-12-22
7706710	ALL PURP RM NRTH	2015-12-15 @ 4:00 pm	2015-12-18 @ 12:00 pm	1.1 ± 0.3	2015-12-22
7706708	ALL PURP RM STH	2015-12-15 @ 4:00 pm	2015-12-18 @ 12:00 pm	1.5 ± 0.3	2015-12-22
7708612	ASSIST PRIN OFF	2015-12-15 @ 4:00 pm	2015-12-18 @ 11:00 am	2.2 ± 0.3	2015-12-22
7708630	CONF ROOM 3	2015-12-15 @ 4:00 pm	2015-12-18 @ 12:00 pm	2.3 ± 0.3	2015-12-22
7708629	ESOL GROUND	2015-12-15 @ 3:00 pm	2015-12-18 @ 11:00 am	17.5 ± 0.7	2015-12-22
7708639	HEALTH ROOM	2015-12-15 @ 4:00 pm	2015-12-18 @ 11:00 am	1.4 ± 0.3	2015-12-22
7706730	KINDER 1	2015-12-15 @ 4:00 pm	2015-12-18 @ 12:00 pm	1.7 ± 0.3	2015-12-22

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

December 30, 2015

** LABORATORY ANALYSIS REPORT **

Radon test result report for:

WATKINS MILL E.S.
MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7706736	KINDER 1	2015-12-15 @ 4:00 pm	2015-12-18 @ 12:00 pm	1.4 ± 0.3	2015-12-22
7706711	KINDER 2	2015-12-15 @ 4:00 pm	2015-12-18 @ 12:00 pm	1.3 ± 0.3	2015-12-22
7708626	MAIN OFFICE	2015-12-15 @ 4:00 pm	2015-12-18 @ 11:00 am	2.1 ± 0.3	2015-12-22
7708631	PRINCIPLES OFF	2015-12-15 @ 4:00 pm	2015-12-18 @ 11:00 am	1.3 ± 0.3	2015-12-22
7708634	STG RM 2	2015-12-15 @ 4:00 pm	2015-12-18 @ 11:00 am	20.0 ± 0.7	2015-12-22

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December 30, 2015

** LABORATORY ANALYSIS REPORT **

Radon test result report for:

WATKINS MILL E.S.
OFFICE BLANK

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7708203	OFFICE BLANK	2015-12-15 @ 3:00 pm	2015-12-18 @ 3:00 pm	< 0.3	2015-12-22

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

December 29, 2015

** LABORATORY ANALYSIS REPORT **

Radon test result report for:

TRANSIT DEC 14 2015
NONE

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7704395	TRANSIT 1	2015-12-13 @ 10:00 am	2015-12-15 @ 10:00 am	< 0.3	2015-12-16
7706508	TRANSIT 10	2015-12-13 @ 10:00 am	2015-12-15 @ 10:00 am	< 0.3	2015-12-16
7706510	TRANSIT 11	2015-12-13 @ 10:00 am	2015-12-15 @ 10:00 am	< 0.3	2015-12-16
7706511	TRANSIT 12	2015-12-13 @ 10:00 am	2015-12-15 @ 10:00 am	< 0.3	2015-12-16
7706505	TRANSIT 13	2015-12-13 @ 10:00 am	2015-12-15 @ 10:00 am	< 0.3	2015-12-16
7704371	TRANSIT 14	2015-12-13 @ 10:00 am	2015-12-15 @ 10:00 am	< 0.3	2015-12-16
7706506	TRANSIT 15	2015-12-13 @ 10:00 am	2015-12-15 @ 10:00 am	< 0.3	2015-12-16
7704381	TRANSIT 16	2015-12-13 @ 10:00 am	2015-12-15 @ 10:00 am	< 0.3	2015-12-16
7704399	TRANSIT 17	2015-12-13 @ 10:00 am	2015-12-15 @ 10:00 am	< 0.3	2015-12-16
7704390	TRANSIT 18	2015-12-13 @ 10:00 am	2015-12-15 @ 10:00 am	< 0.3	2015-12-16
7704396	TRANSIT 2	2015-12-13 @ 10:00 am	2015-12-15 @ 10:00 am	< 0.3	2015-12-16
7704364	TRANSIT 3	2015-12-13 @ 10:00 am	2015-12-15 @ 10:00 am	< 0.3	2015-12-16
7704370	TRANSIT 4	2015-12-13 @ 10:00 am	2015-12-15 @ 10:00 am	< 0.3	2015-12-16
7704368	TRANSIT 5	2015-12-13 @ 10:00 am	2015-12-15 @ 10:00 am	< 0.3	2015-12-16
7706524	TRANSIT 6	2015-12-13 @ 10:00 am	2015-12-15 @ 10:00 am	< 0.3	2015-12-16
7706526	TRANSIT 7	2015-12-13 @ 10:00 am	2015-12-15 @ 10:00 am	< 0.3	2015-12-16
7706518	TRANSIT 8	2015-12-13 @ 10:00 am	2015-12-15 @ 10:00 am	< 0.3	2015-12-16
7706516	TRANSIT 9	2015-12-13 @ 10:00 am	2015-12-15 @ 10:00 am	< 0.3	2015-12-16

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

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

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

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

EXPOSURE IN BOWSER-MORNER RADON CHAMBER

CLIENT KCI Technologies Inc. Job Number 173224

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, 7706211, 7706366, 7706380, 7706381 F3 Left	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: _____
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

KCI TECHNOLOGIES

ENGINEERS • PLANNERS • SCIENTISTS • CONSTRUCTION MANAGERS

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

Radon Test Kit Chain of Custody

Project Name: MCPS Radon Phase I

Name of Schools:

1. Westland M.S.
2. East Silver Spring E.S.
3. Oakland Terrace E.S.
4. Rocking Horse Road E.S.
5. Beall E.S.
6. South Lake E.S.
7. Jones Lane E.S.
8. Quince Orchard H.S.
9. Damascus E.S.
10. Westbrooke E.S.
11. Highland View E.S.
12. Cresthaven E.S.
13. Viers Mill E.S.
14. Smith Center
15. Rosemont E.S.
16. Ridgeview M.S.
17. Rockwell E.S.
18. Oak View E.S.
19. Jackson Road E.S.
20. Highland E.S.
21. Watkins Mill E.S.

	Date	Initials
Radon Test Kits Deployed	12/15/15	KM
Radon Test Kits Collected	12/18/15	KM
Radon Test Kits Shipped to Lab*	12/18/15	KM
Radon Test Kits Received by Lab*	12/22/15	KM

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