MCPS DEM SUSTAINABILITY & COMPLIANCE

School / Facility Radon Testing Report Form

School Year: **24-25**

Facility:	Roscoe Nix Elementary School
Address:	1100 Corliss Street
	Silver Spring, MS 20903
Reason for Testing:	Scheduled Re-Testing - ☒ 2-year or ☐ 5-year schedule ☐ Clearance Testing (Post-Mitigation) ☐ Building Envelope or HVAC Upgrades ☐ New Construction – Addition or Facility
Current Radon Status:	☒ Active Mitigation (2-year regular schedule) ☐ No Active Mitigation (5-year regular schedule) ☐ Not Previously Tested (New Facility)
Round of Testing:	☒ Initial Testing **-or-** ☐ Follow-up Testing
Testing Status:	☒ No Further Testing Needed **-or-** ☐ Follow-Up Testing Required

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

Mitigation -	**Facility Radon Status:**		
☒ Not Required ☐ Required (≥4.0-pCi/L) Rooms:	☒ No Change in Status ☐ Active Mitigation (2-year regular schedule) ☐ No Active Mitigation (5-year regular schedule)		
Number of Rooms Tested	45	Lowest Value (pCi/L)	< 0.3
Number of Rooms (≥4.0-pCi/L)	0	Highest Value (pCi/L)	0.8

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

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

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

Attachment 2 – Laboratory Report(s)

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

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Detector and Deployment

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
Tyler McCleaf, CSP – Cert. #111004-RMP	KCI Technologies, Inc.
If noncertified individuals, the qualified measurement professional providing oversight -	

Testing

☒ Short-Term ☐ Long-Term	Length of Test (days):	3	Date of Deployment and Retrieval (mm/dd/yy):	12/16/2024 12/19/2024
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
Round of Testing	Initial	Follow-Up	Initial	Follow-Up	
Test Locations[1]	43	0	2	0	45
Duplicates[2]	5	0	0	0	5
Field Blanks[3]	2	0	0	0	2
				Grand Total	52

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.

	QA/QC Samples		Total
Round of Testing	Initial	Follow-Up	
Spikes[1]	Not applicable		3
Trip Blanks[2]	1	0	1
Office Blanks[3, 4]	1	0	1
			5

1 - 3% of EIC detectors; and 3% from each LOT of CAD and ATD detectors; a maximum of 6-spiked measurements per month for both EIC detectors and each LOT of CAD and ATD detectors.
2 – One per shipping container from start of detector deployment
3 – One per facility tested as devices are removed/allocated from the storage location for deployment;
4 - One additional blank, analyzed prior to deployment, for storage locations that have not been evaluated or monitored, for detectors that have been stored for more than 30-day durations.

Quality Assurance / Quality Control (continued)

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

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

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

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

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

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

MCPS DEM SUSTAINABILITY & COMPLIANCE

School / Facility Radon Testing Report Form

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

	Ground-Contact		Upper-Level(s)		Total
Round of Testing	**Initial**	**Follow-Up**	**Initial**	**Follow-Up**	
Number of test locations:	43	0	2	0	45
Number of locations ≥8.0-pCi/L:	0	0	0	0	0
Number of locations ≥4.0 and ≤8-pCi/L:	0	0	0	0	0
Number of locations ≥2.7 and <4-pCi/L:	0	0	0	0	0
Number of locations ≥2.0 and <2.7-pCi/L:	0	0	0	0	0
Number of missing required test locations[3]:	0	0	0	0	0
Number of failed duplicate control locations:	0	0	0	0	0
Percentage of missing test locations for the facility[4,5]:	0%	0%	0%	0%	0%

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

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

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

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

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

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

Round of Testing	Initial	Follow-Up
Were test devices deployed in all occupied and intended to be occupied rooms in contact with the ground, and, if applicable, 10% of upper floor rooms?	☒ Yes ☐ No	☐ 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	☐ 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 sufficient valid measurements obtained?[1,2] ***If Yes,*** *then -* ***'No Further Testing Needed'*** *complete Conclusion section on first page.* ***If No****, then -* ***'Follow-up Testing Required'*** *continue below.*	☐ Yes ☐ No ☒ NA	☐ 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.

Follow-Up Testing

Required –

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

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

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

Attachment 1:

Summary Data Tables

Table 1- Radon Testing Results		
Roscoe Nix Elementary School		
Test Period: 12/16/2024 - 12/20/2024		
Kit Number	Room / Area	Result
11907350	1	< 0.3
11907356	1	< 0.3
11907349	2	< 0.3
11907355	2	< 0.3
11907357	3	< 0.3
11907364	4	< 0.3
11907365	5	< 0.3
11907366	6	< 0.3
11907374	7	< 0.3
11907367	8	< 0.3
11907369	8	< 0.3
11907192	9	< 0.3
11907372	9	< 0.3
11907370	10	< 0.3
11907371	11	< 0.3
11907377	11	< 0.3
11907375	12	< 0.3
11907191	14	< 0.3
11907382	18	< 0.3
11907387	23	< 0.3
11907397	102	< 0.3
11907395	104	< 0.3
11907302	106	< 0.3
11907390	108	< 0.3
11907394	108	< 0.3
11907386	110	< 0.3
11907389	122	< 0.3
11907393	132	< 0.3
11907381	140	< 0.3
11907363	163	< 0.3
11907383	182	< 0.3
11907197	184	< 0.3
11907198	188	< 0.3
11907396	100B	< 0.3
11907398	100C	< 0.3
11907379	100E	< 0.3
11907303	100G	< 0.3

Table 1- Radon Testing Results		
Roscoe Nix Elementary School		
Test Period: 12/16/2024 - 12/20/2024		
Kit Number	Room / Area	Result
11907347	102E	< 0.3
11907373	10A	< 0.3
11907385	110A	< 0.3
11907388	114A	< 0.3
11907358	163B	< 0.3
11907378	APR	0.6
11907380	APR	< 0.3
11907399	GYM	< 0.3
11907400	GYM	< 0.3
11907392	GYM OFFICE	0.8
11907348	MAIN OFFICE	< 0.3
11907200	MEDIA	< 0.3
11907376	MEDIA	< 0.3
11893107	MEDIA OFFICE	0.6
11907391	MEDIA OFFICE	< 0.3

Table 2 - Summary Testing Results ≥2.0 pCi/L							
Roscoe Nix Elementary School							
Test Period: 12/16/2024 - 12/19/2024							
≥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			
Roscoe Nix Elementary School			
Test Period: 12/16/2024 - 12/19/2024			
Kit Number	**QC Type**	**Room / Area**	**Result**
11907356	FB	1	< 0.3
11907355	D	2	< 0.3
11907367	D	8	< 0.3
11907192	D	9	< 0.3
11907377	FB	11	< 0.3
11907390	D	108	< 0.3
11907391	D	Media Office	< 0.3
11482799	OB	OFFICE BLANK	< 0.3
11482800	TB	TRAVEL BLANK	< 0.3

Table 3a - Duplicate Worksheet / Data Validation

Roscoe Nix Elementary School

Test Period: 12/16/2024 - 12/19/2024

Sample ID			Duplicate Concentrations (pCi/L) and QC Checks							
Kit Numbers		Room / Area	Higher	Lower	Check #1 (Pass/Fail)	2x the Lower	Check #2 (Pass/Fail)	Average	Relative Percent Difference (RPD)	Check #3
11907394	11907390	108	0.3	0.3	✓	0.6	PASS	0.3	<1-pCi/L	✓
11907372	11907192	9	0.3	0.3	✓	0.6	PASS	0.3	<1-pCi/L	✓
11907369	11907367	8	0.3	0.3	✓	0.6	PASS	0.3	<1-pCi/L	✓
11907349	11907355	2	0.3	0.3	✓	0.6	PASS	0.3	<1-pCi/L	✓
11893107	11907391	Media Office	0.6	0.3	✓	0.6	PASS	0.5	<1-pCi/L	✓

NOTES:

QC Check #1 - Data Entry

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

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

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

Average (pCi/L)	Warning Level	Control Level
< 2.0	1-pCi/L	NA
Between 2.0 and 3.9	50% RPD	67% RPD
≥ 4.0	28% RPD	36% RPD

Table 4 - Summary of Invalid Measurement Locations		
Roscoe Nix Elementary School		
Test Period: 12/16/24 - 12/19/24		
Kit Number	**Room/Area**	**Reason**
N/A	N/A	N/A

Attachment 2:

Laboratory Reports

December 23, 2024 **** LABORATORY ANALYSIS REPORT ****

Radon test result report for:
ROSCOE NIX ES
MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11907356	1	2024-12-16 @ 11:00 am	2024-12-19 @ 10:00 am	< 0.3	2024-12-23
11907350	1	2024-12-16 @ 11:00 am	2024-12-19 @ 10:00 am	< 0.3	2024-12-23
11907370	10	2024-12-16 @ 11:00 am	2024-12-19 @ 10:00 am	< 0.3	2024-12-23
11907396	100B	2024-12-16 @ 11:00 am	2024-12-19 @ 10:00 am	< 0.3	2024-12-23
11907398	100C	2024-12-16 @ 11:00 am	2024-12-19 @ 10:00 am	< 0.3	2024-12-23
11907379	100E	2024-12-16 @ 11:00 am	2024-12-19 @ 10:00 am	< 0.3	2024-12-23
11907303	100G	2024-12-16 @ 11:00 am	2024-12-19 @ 10:00 am	< 0.3	2024-12-23
11907397	102	2024-12-16 @ 11:00 am	2024-12-19 @ 10:00 am	< 0.3	2024-12-23
11907347	102E	2024-12-16 @ 11:00 am	2024-12-19 @ 10:00 am	< 0.3	2024-12-23
11907395	104	2024-12-16 @ 11:00 am	2024-12-19 @ 10:00 am	< 0.3	2024-12-23
11907302	106	2024-12-16 @ 11:00 am	2024-12-19 @ 10:00 am	< 0.3	2024-12-23
11907394	108	2024-12-16 @ 11:00 am	2024-12-19 @ 10:00 am	< 0.3	2024-12-23
11907390	108	2024-12-16 @ 11:00 am	2024-12-19 @ 10:00 am	< 0.3	2024-12-23
11907373	10A	2024-12-16 @ 11:00 am	2024-12-19 @ 10:00 am	< 0.3	2024-12-23
11907377	11	2024-12-16 @ 11:00 am	2024-12-19 @ 10:00 am	< 0.3	2024-12-23
11907371	11	2024-12-16 @ 11:00 am	2024-12-19 @ 10:00 am	< 0.3	2024-12-23
11907386	110	2024-12-16 @ 11:00 am	2024-12-19 @ 10:00 am	< 0.3	2024-12-23
11907385	110A	2024-12-16 @ 11:00 am	2024-12-19 @ 11:00 am	< 0.3	2024-12-23
11907388	114A	2024-12-16 @ 11:00 am	2024-12-19 @ 10:00 am	< 0.3	2024-12-23
11907375	12	2024-12-16 @ 11:00 am	2024-12-19 @ 10:00 am	< 0.3	2024-12-23
11907389	122	2024-12-16 @ 11:00 am	2024-12-19 @ 11:00 am	< 0.3	2024-12-23
11907393	132	2024-12-16 @ 11:00 am	2024-12-19 @ 10:00 am	< 0.3	2024-12-23
11907191	14	2024-12-16 @ 11:00 am	2024-12-19 @ 10:00 am	< 0.3	2024-12-23
11907381	140	2024-12-16 @ 11:00 am	2024-12-19 @ 10:00 am	< 0.3	2024-12-23
11907363	163	2024-12-16 @ 11:00 am	2024-12-19 @ 10:00 am	< 0.3	2024-12-23
11907358	163B	2024-12-16 @ 11:00 am	2024-12-19 @ 10:00 am	< 0.3	2024-12-23
11907382	18	2024-12-16 @ 11:00 am	2024-12-19 @ 10:00 am	< 0.3	2024-12-23
11907383	182	2024-12-16 @ 12:00 pm	2024-12-19 @ 11:00 am	< 0.3	2024-12-23
11907197	184	2024-12-16 @ 12:00 pm	2024-12-19 @ 11:00 am	< 0.3	2024-12-23
11907198	188	2024-12-16 @ 12:00 pm	2024-12-19 @ 11:00 am	< 0.3	2024-12-23
11907355	2	2024-12-16 @ 11:00 am	2024-12-19 @ 10:00 am	< 0.3	2024-12-23
11907349	2	2024-12-16 @ 11:00 am	2024-12-19 @ 10:00 am	< 0.3	2024-12-23
11907387	23	2024-12-16 @ 11:00 am	2024-12-19 @ 10:00 am	< 0.3	2024-12-23
11907357	3	2024-12-16 @ 11:00 am	2024-12-19 @ 10:00 am	< 0.3	2024-12-23
11907364	4	2024-12-16 @ 11:00 am	2024-12-19 @ 10:00 am	< 0.3	2024-12-23
11907365	5	2024-12-16 @ 11:00 am	2024-12-19 @ 10:00 am	< 0.3	2024-12-23
11907366	6	2024-12-16 @ 11:00 am	2024-12-19 @ 10:00 am	< 0.3	2024-12-23

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

December 23, 2024 **** LABORATORY ANALYSIS REPORT ****

Radon test result report for:
ROSCOE NIX ES
MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11907374	7	2024-12-16 @ 11:00 am	2024-12-19 @ 10:00 am	< 0.3	2024-12-23
11907369	8	2024-12-16 @ 11:00 am	2024-12-19 @ 10:00 am	< 0.3	2024-12-23
11907367	8	2024-12-16 @ 11:00 am	2024-12-19 @ 10:00 am	< 0.3	2024-12-23
11907372	9	2024-12-16 @ 11:00 am	2024-12-19 @ 10:00 am	< 0.3	2024-12-23
11907192	9	2024-12-16 @ 11:00 am	2024-12-19 @ 10:00 am	< 0.3	2024-12-23
11907380	APR	2024-12-16 @ 11:00 am	2024-12-19 @ 10:00 am	< 0.3	2024-12-23
11907378	APR	2024-12-16 @ 11:00 am	2024-12-19 @ 10:00 am	0.6 ± 0.3	2024-12-23
11907399	GYM	2024-12-16 @ 11:00 am	2024-12-19 @ 10:00 am	< 0.3	2024-12-23
11907400	GYM	2024-12-16 @ 11:00 am	2024-12-19 @ 10:00 am	< 0.3	2024-12-23
11907392	GYM OFFICE	2024-12-16 @ 11:00 am	2024-12-19 @ 10:00 am	0.8 ± 0.4	2024-12-23
11907348	MAIN OFFICE	2024-12-16 @ 11:00 am	2024-12-19 @ 10:00 am	< 0.3	2024-12-23
11907200	MEDIA	2024-12-16 @ 12:00 pm	2024-12-19 @ 11:00 am	< 0.3	2024-12-23
11907376	MEDIA	2024-12-16 @ 12:00 pm	2024-12-19 @ 11:00 am	< 0.3	2024-12-23
11893107	MEDIA OFFICE	2024-12-16 @ 12:00 pm	2024-12-19 @ 11:00 am	0.6 ± 0.3	2024-12-23
11907391	MEDIA OFFICE	2024-12-16 @ 12:00 pm	2024-12-19 @ 11:00 am	< 0.3	2024-12-23

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December 23, 2024 **** LABORATORY ANALYSIS REPORT ****

Radon test result report for:
OFFICE
MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11482799	O	2024-12-16 @ 10:00 am	2024-12-19 @ 1:00 pm	< 0.3	2024-12-23
11907208	O	2024-12-17 @ 10:00 am	2024-12-20 @ 1:00 pm	< 0.3	2024-12-23

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

December 23, 2024 **** LABORATORY ANALYSIS REPORT ****

Radon test result report for:
TRAVEL
MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11482800	T	2024-12-16 @ 10:00 am	2024-12-19 @ 1:00 pm	< 0.3	2024-12-23
11907209	T	2024-12-17 @ 10:00 am	2024-12-20 @ 1:00 pm	< 0.3	2024-12-23

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 20001560

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

Date Start: 12/14/24 Date Stop: 12/17/24	Date Start: _____ Date Stop: _____
Time Start: 0815 Time Stop: 0815	Time Start: _____ Time Stop: _____
Device No.'s: (3) CHAR BAGS	Device No.'s: _____
11477880, 11477883, 11477896	_____
_____	_____
B4 Right	_____
Date Start: _____ Date Stop: _____	Date Start: _____ Date Stop: _____
Time Start: _____ Time Stop: _____	Time Start: _____ Time Stop: _____
Device No.'s: _____	Device No.'s: _____
_____	_____
_____	_____
_____	_____
Date Start: _____ Date Stop: _____	Date Start: _____ Date Stop: _____
Time Start: _____ Time Stop: _____	Time Start: _____ Time Stop: _____
Device No.'s: _____	Device No.'s: _____
_____	_____
_____	_____
_____	_____

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

December 23, 2024 **** LABORATORY ANALYSIS REPORT ****

Radon test result report for:
SK
MAIN

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

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 – Testing December 16th – December 19th, 2024

Name of Schools:

1. Roscoe R. Nix ES
2. Pine Crest ES
3. Randolph Maintenance Facility
4. Rock View ES

	Date	Initials
Radon Test Kits Deployed	12/16/2024	BMM
Radon Test Kits Collected	12/19/2024	BMM
Radon Test Kits Shipped to Lab*	12/19/2024	BMM
Radon Test Kits Received by Lab*	12/23/2024	BMM

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

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MCPS RADON TESTING – EXECUTIVE SUMMARY

Site Name	Roscoe Nix Elementary School
Date of Test Report	05/27/2022
Round of Testing	Initial Follow-up Post Remediation 2 Year Testing 5 Year Testing HVAC Upgrade Window Replacement New Addition New Facility
# Rooms Tested	1
# Rooms ≥ 4.0 pCi/L	0
Lowest Value	<0.3 pCi/L
Highest Value	0.7 pCi/L

Project Status

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

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May 27, 2022

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

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

Location: Roscoe Nix Elementary School
1100 Corliss St.
Silver Spring, MD 20903

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 Roscoe Nix Elementary School, located at 1100 Corliss St. Silver Spring, MD 20903 (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 March 29, 2022 and deployed four (4) activated charcoal (AC) radon test kits. KCI deployed radon test kits in all frequently-occupied ground contact rooms, and other areas, (if applicable) in accordance with AARST guidance.

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

1. Rooms with missing test kits from the Radon 2022 testing period (i.e. test kit was deployed but not recovered),
2. Rooms with invalidated test kits from the Radon 2022 testing period (e.g. an open window in the room or disturbed test kit),
3. Rooms which were locked/inaccessible during the Radon 2022 testing period,
4. Rooms with elevated radon results (i.e. ≥3.5 piC/L),
5. Rooms previously tested for radon but not tested in Radon 2022, and
6. Additional rooms that require testing (if applicable.)

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 April 01, 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 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 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 mid 20°Fs and high temperatures ranged from the low 50°Fs to the mid 70°Fs. Maximum sustained winds ranged from 0-33 miles per hour. Average humidity was around 47% with 0.23 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		
Roscoe Nix ES RT		
Test Period: 03/29/2022 - 04/01/2022		
Kit Number	Room / Area	Result
11139942	GYM	< 0.3
11139949	GYM	0.7
11139957	GYM	0.6
11139958	GYM	< 0.3

Table 2- Radon Testing Results			
Roscoe Nix ES RT			
Test Period: 03/29/2022 - 04/01/2022			
Kit Number	QC Type	Room / Area	Result
11139957	D	Gym	0.6
11139942	FB	Gym	< 0.3
11139883	OB	OFFICE BLANK	< 0.3
11139841	TB	TRAVEL BLANK	< 0.3

Summary of Missed Locations		
Roscoe Nix ES RT		
Test Period: 03/29/22 - 04/01/22		
Kit Number	Room/Area	Result
	NA	

Summary of Missing, Compromised and >/= 4 piC/L Tests		
Roscoe Nix ES RT		
Test Period: 03/29/22 - 04/01/22		
Kit Number	Room/Area	Result
	NA	

Table Note:

* Missing or Compromised Sample

ATTACHMENT C

Laboratory Analytical Results

April 4, 2022

** LABORATORY ANALYSIS REPORT **

Radon test result report for:

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11139942	GYM	2022-03-29 @ 10:00 am	2022-04-01 @ 12:00 pm	< 0.3	2022-04-04
11139949	GYM	2022-03-29 @ 10:00 am	2022-04-01 @ 12:00 pm	0.7 ± 0.3	2022-04-04
11139957	GYM	2022-03-29 @ 10:00 am	2022-04-01 @ 12:00 pm	0.6 ± 0.3	2022-04-04
11139958	GYM	2022-03-29 @ 10:00 am	2022-04-01 @ 12:00 pm	< 0.3	2022-04-04

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

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Radon Test Kit Chain of Custody

Project Name: MCPS Radon – March 2022 Schools – Retesting

Name of Schools:

1. Watkins Mill HS
2. Cresthaven ES
3. East Silver Spring ES
4. Fairland Center
5. Francis Scott Key MS
6. Greencastle ES
7. Roscoe Nix ES
8. West Farm Transportation Depot
9. Wheaton HS
10. White Oak MS
11. William Tyler Page ES
12. Bel Pre ES
13. Fairland ES
14. Highland ES
15. Rolling Terrace ES
16. Takoma Park MS
17. Viers Mill ES
18. Poolesville ES

	Date	Initials
Radon Test Kits Deployed	03/29/2022	BMM
Radon Test Kits Collected	04/01/2022	BMM
Radon Test Kits Shipped to Lab*	04/01/2022	BMM
Radon Test Kits Received by Lab*	04/04/2022	BMM

*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	Roscoe Nix Elementary School
Date of Test Report	4/29/2022
Round of Testing	Initial Follow-up Post Remediation 2 Year Testing 5 Year Testing HVAC Upgrade Window Replacement New Addition New Facility
# Rooms Tested	49
# Rooms ≥ 4.0 pCi/L	0
Lowest Value	<0.3 pCi/L
Highest Value	1.0 pCi/L

Project Status:
Initial testing completed; Missing or compromised samples need re-sampling

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April 29, 2022

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

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

Location: Roscoe Nix Elementary School
1100 Corliss St.
Silver Spring, MD 20903

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 Roscoe Nix Elementary School, located at 1100 Corliss St. Silver Spring, MD 20903 (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 March 7, 2022 and deployed fifty-six (56) 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 10, 2022 to retrieve the radon sampling test kits. KCI shipped all radon tests via overnight delivery to Airchek, Inc. for analysis by gamma-ray spectroscopy. Airchek, Inc. is a

NRSB certified analytical laboratory for radon analysis (certification # ARL1402) located at 1936 Butler Bridge Road, Mills River, North Carolina.

Evaluation of Testing Conditions:

These tests represent:

- Follow-up to post-mitigation biennial testing.

These tests were conducted to:

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

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

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

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

KCI also compiled weather data for the testing period and conducted observations of relevant field conditions. During the test period, weather records indicate low temperatures were in the mid 20s and high temperatures ranged from the high 70s to the low 50s Fahrenheit. Maximum sustained winds ranged from 0-32 miles per hour. Average humidity was around 65% with 1.09 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		
Roscoe Nix ES		
Test Period: 03/07/2022 - 03/10/2022		
Kit Number	Room / Area	Result
11130515	104	< 0.3
11130503	106	< 0.3
11130508	106	< 0.3
11130502	108	< 0.3
11130531	110	< 0.3
11130530	130	< 0.3
11130507	132	< 0.3
11130528	140	< 0.3
11130549	142	< 0.3
11130556	146	< 0.3
11130542	147	< 0.3
11130548	148	< 0.3
11130550	148	< 0.3
11130541	151	< 0.3
11130540	152	< 0.3
11130539	155	< 0.3
11130536	156	< 0.3
11130534	159	< 0.3
11130532	160	< 0.3
11130533	162	< 0.3
11130506	163	< 0.3
11130513	163	< 0.3
11130544	165	< 0.3
11130543	166	< 0.3
11130535	170	< 0.3
11130560	182	< 0.3
11130567	182	< 0.3
11130566	184	< 0.3
11130558	188	< 0.3
11130563	211	< 0.3
11130555	234	< 0.3
11130568	239	< 0.3
11130553	100B	< 0.3
11130501	100C	< 0.3
11130509	100E	< 0.3
11130510	100G	< 0.3
11130517	102 HEALTH	< 0.3
11130511	102E	< 0.3
11130516	102G	< 0.3
11130525	110A	< 0.3
11130524	112 APR	1.0
11130526	112 APR	0.9

Table 1- Radon Testing Results		
Roscoe Nix ES		
Test Period: 03/07/2022 - 03/10/2022		
Kit Number	Room / Area	Result
11130514	114A KITCHEN OFFICE	0.8
11130523	122 BS	< 0.3
11130527	122 BS	< 0.3
11130505	163B	< 0.3
11130551	163B	< 0.3
11130529	190B	< 0.3
11130522	GYM	0.6
11130521	GYM OFFICE	< 0.3
11130512	MAIN OFFICE	< 0.3
11130557	MEDIA CENTER	< 0.3
11130565	MEDIA CENTER	< 0.3
11130559	MEDIA CENTER OFFICE	< 0.3
11130518	STAGE	0.8
11130519	STAGE	0.9

Table 2- Radon Testing Results			
Roscoe Nix ES			
Test Period: 03/07/2022 - 03/10/2022			
Kit Number	QC Type	Room / Area	Result
11130503	D	106	< 0.3
11130519	D	Stage	0.9
11130527	FB	122 BS	< 0.3
11130548	D	148	< 0.3
11130506	D	163	< 0.3
11130505	FB	163B	< 0.3
11130567	D	182	< 0.3
11131662	OB	OFFICE BLANK	< 0.3
11131691	TB	TRAVEL BLANK	< 0.3

Summary of Missed Locations		
Roscoe Nix ES		
Test Period: 03/07/22 - 03/10/22		
Kit Number	Room/Area	Result
	NA	

Summary of Missing, Compromised and >/= 4 piC/L Tests		
Roscoe Nix ES		
Test Period: 03/07/22 - 03/10/22		
Kit Number	Room/Area	Result
11130520	Gym	Missing

Table Note:

* Missing or Compromised Sample

ATTACHMENT C

Laboratory Analytical Results

March 15, 2022 **** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

ROSCOE NIX ES

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11130553	100B	2022-03-07 @ 9:00 am	2022-03-10 @ 8:00 am	< 0.3	2022-03-14
11130501	100C	2022-03-07 @ 8:00 am	2022-03-10 @ 8:00 am	< 0.3	2022-03-14
11130509	100E	2022-03-07 @ 8:00 am	2022-03-10 @ 8:00 am	< 0.3	2022-03-14
11130510	100G	2022-03-07 @ 8:00 am	2022-03-10 @ 8:00 am	< 0.3	2022-03-14
11130517	102 HEALTH	2022-03-07 @ 8:00 am	2022-03-10 @ 8:00 am	< 0.3	2022-03-14
11130511	102E	2022-03-07 @ 8:00 am	2022-03-10 @ 8:00 am	< 0.3	2022-03-14
11130516	102G	2022-03-07 @ 8:00 am	2022-03-10 @ 8:00 am	< 0.3	2022-03-14
11130515	104	2022-03-07 @ 8:00 am	2022-03-10 @ 8:00 am	< 0.3	2022-03-14
11130503	106	2022-03-07 @ 8:00 am	2022-03-10 @ 8:00 am	< 0.3	2022-03-14
11130508	106	2022-03-07 @ 8:00 am	2022-03-10 @ 8:00 am	< 0.3	2022-03-14
11130502	108	2022-03-07 @ 8:00 am	2022-03-10 @ 9:00 am	< 0.3	2022-03-14
11130531	110	2022-03-07 @ 8:00 am	2022-03-10 @ 9:00 am	< 0.3	2022-03-14
11130525	110A	2022-03-07 @ 8:00 am	2022-03-10 @ 9:00 am	< 0.3	2022-03-14
11130524	112 APR	2022-03-07 @ 8:00 am	2022-03-10 @ 9:00 am	1.0 ± 0.3	2022-03-14
11130526	112 APR	2022-03-07 @ 8:00 am	2022-03-10 @ 9:00 am	0.9 ± 0.3	2022-03-14
11130514	114A KITCHEN OFFICE	2022-03-07 @ 8:00 am	2022-03-10 @ 9:00 am	0.8 ± 0.3	2022-03-14
11130523	122 BS	2022-03-07 @ 8:00 am	2022-03-10 @ 9:00 am	< 0.3	2022-03-14
11130527	122 BS	2022-03-07 @ 8:00 am	2022-03-10 @ 9:00 am	< 0.3	2022-03-14
11130530	130	2022-03-07 @ 8:00 am	2022-03-10 @ 9:00 am	< 0.3	2022-03-14
11130507	132	2022-03-07 @ 8:00 am	2022-03-10 @ 9:00 am	< 0.3	2022-03-14
11130528	140	2022-03-07 @ 8:00 am	2022-03-10 @ 8:00 am	< 0.3	2022-03-14
11130549	142	2022-03-07 @ 8:00 am	2022-03-10 @ 8:00 am	< 0.3	2022-03-14
11130556	146	2022-03-07 @ 8:00 am	2022-03-10 @ 8:00 am	< 0.3	2022-03-14
11130542	147	2022-03-07 @ 8:00 am	2022-03-10 @ 8:00 am	< 0.3	2022-03-14
11130550	148	2022-03-07 @ 8:00 am	2022-03-10 @ 8:00 am	< 0.3	2022-03-14
11130548	148	2022-03-07 @ 8:00 am	2022-03-10 @ 8:00 am	< 0.3	2022-03-14
11130541	151	2022-03-07 @ 8:00 am	2022-03-10 @ 8:00 am	< 0.3	2022-03-14
11130540	152	2022-03-07 @ 9:00 am	2022-03-10 @ 8:00 am	< 0.3	2022-03-14
11130539	155	2022-03-07 @ 9:00 am	2022-03-10 @ 8:00 am	< 0.3	2022-03-14
11130536	156	2022-03-07 @ 9:00 am	2022-03-10 @ 8:00 am	< 0.3	2022-03-14
11130534	159	2022-03-07 @ 9:00 am	2022-03-10 @ 8:00 am	< 0.3	2022-03-14
11130532	160	2022-03-07 @ 9:00 am	2022-03-10 @ 8:00 am	< 0.3	2022-03-14
11130533	162	2022-03-07 @ 9:00 am	2022-03-10 @ 8:00 am	< 0.3	2022-03-14
11130513	163	2022-03-07 @ 9:00 am	2022-03-10 @ 8:00 am	< 0.3	2022-03-14
11130505	163B	2022-03-07 @ 9:00 am	2022-03-10 @ 8:00 am	< 0.3	2022-03-14
11130551	163B	2022-03-07 @ 9:00 am	2022-03-10 @ 8:00 am	< 0.3	2022-03-14
11130544	165	2022-03-07 @ 9:00 am	2022-03-10 @ 8:00 am	< 0.3	2022-03-14

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

March 15, 2022 **** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

ROSCOE NIX ES

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11130543	166	2022-03-07 @ 9:00 am	2022-03-10 @ 8:00 am	< 0.3	2022-03-14
11130535	170	2022-03-07 @ 9:00 am	2022-03-10 @ 8:00 am	< 0.3	2022-03-14
11130567	182	2022-03-07 @ 9:00 am	2022-03-10 @ 8:00 am	< 0.3	2022-03-14
11130560	182	2022-03-07 @ 9:00 am	2022-03-10 @ 8:00 am	< 0.3	2022-03-14
11130566	184	2022-03-07 @ 9:00 am	2022-03-10 @ 8:00 am	< 0.3	2022-03-14
11130558	188	2022-03-07 @ 9:00 am	2022-03-10 @ 8:00 am	< 0.3	2022-03-14
11130529	190B	2022-03-07 @ 9:00 am	2022-03-10 @ 8:00 am	< 0.3	2022-03-14
11130563	211	2022-03-07 @ 9:00 am	2022-03-10 @ 8:00 am	< 0.3	2022-03-14
11130555	234	2022-03-07 @ 9:00 am	2022-03-10 @ 8:00 am	< 0.3	2022-03-14
11130568	239	2022-03-07 @ 9:00 am	2022-03-10 @ 8:00 am	< 0.3	2022-03-14
11130522	GYM	2022-03-07 @ 8:00 am	2022-03-10 @ 9:00 am	0.6 ± 0.3	2022-03-14
11130521	GYM OFFICE	2022-03-07 @ 8:00 am	2022-03-10 @ 9:00 am	< 0.3	2022-03-14
11130512	MAIN OFFICE	2022-03-07 @ 8:00 am	2022-03-10 @ 8:00 am	< 0.3	2022-03-14
11130565	MEDIA CENTER	2022-03-07 @ 9:00 am	2022-03-10 @ 8:00 am	< 0.3	2022-03-14
11130557	MEDIA CENTER	2022-03-07 @ 9:00 am	2022-03-10 @ 8:00 am	< 0.3	2022-03-14
11130559	MEDIA CENTER OFFICE	2022-03-07 @ 9:00 am	2022-03-10 @ 8:00 am	< 0.3	2022-03-14
11130518	STAGE	2022-03-07 @ 8:00 am	2022-03-10 @ 9:00 am	0.8 ± 0.3	2022-03-14
11130519	STAGE	2022-03-07 @ 8:00 am	2022-03-10 @ 9:00 am	0.9 ± 0.3	2022-03-14

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March 15, 2022

** LABORATORY ANALYSIS REPORT **

Radon test result report for:

ROSCOE NIX ES

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11130506	163	2022-03-07 @ 9:00 am	2022-03-10 @ 8:00 am	< 0.3	2022-03-14

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

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 – March 2022 Schools

Name of Schools:

1. Cresthaven ES
2. Key, Francis Scott MS
3. Nix, Roscoe ES
4. Greencastle ES
5. Jackson Road
6. Page, William Tyler ES
7. West Farm Transportation Depot
8. Westover ES
9. White Oak MS

	Date	Initials
Radon Test Kits Deployed	03/07/2022	BMM
Radon Test Kits Collected	03/10/2022	BMM
Radon Test Kits Shipped to Lab*	03/10/2022	BMM
Radon Test Kits Received by Lab*	03/13/2022	BMM

*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	Roscoe Nix Elementary School
Date of Report	2/21/2020
Round of Testing	Initial Follow-up Post Remediation **2 year testing** 5 year testing HVAC Upgrade Window Replacement New Addition New Facility
# of Rooms Tested	45
# Rooms ≥4.0 pCi/L	0
Lowest Value	<0.3 pCi/L
Highest Value	2.0 pCi/L

Project Status

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

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2/21/2020

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

Re: Radon Testing Services

KCI Job #12146341126

Location: Roscoe Nix Elementary School
1100Corliss Street
Silver Spring, Maryland 20903

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 Roscoe Nix Elementary School, located at 1100Corliss Street in Silver Spring, Maryland 20903 (subject site).

SCOPE OF SERVICES

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

KCI visited the site on 1/7/2020 and deployed fifty-four (54) activated charcoal (AC) radon test kits. KCI deployed radon test kits in frequently-occupied ground contact rooms, and other areas, (if applicable) in accordance with AARST guidance.

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

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

KCI returned to the site on 1/10/2020 to retrieve the radon sampling test kits. KCI shipped all radon tests via overnight delivery to Aircheck, Inc. for analysis by gamma-ray spectroscopy. Aircheck, Inc. is a National Radon Safety Board (NRSB) radon measurement provider and is a certified analytical laboratory for radon analysis (certification #ARL1402) located at 1936 Butler Bridge Road, Mills River, North Carolina.

EVALUATION OF TESTING CONDITIONS

These tests represent:

- Follow-up to initial testing.

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-20s and high temperatures were in the mid-50s. Maximum sustained winds ranged from 10-23 miles per hour. Average humidity was around 64%. 0.32 inches of precipitation (rain) was recorded during the testing period.

RESULTS

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

The results of the radon test analysis indicated the following:

Radon Concentration	Room	Result
≥4.0 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		
Roscoe Nix Elementary School		
Test Period: 1/7/2020-1/10/2020		
Kit Number	Room / Area	Result
9340164	108	< 0.3
9340165	165	< 0.3
9340166	160	< 0.3
9340169	151	< 0.3
9340170	152	< 0.3
9340177	155	< 0.3
9340178	156	< 0.3
9340185	159	< 0.3
9340186	148	0.5
9340187	184	0.7
9340188	122	< 0.3
9340191	130	< 0.3
9340192	130	< 0.3
9340193	130	< 0.3
9347596	132	< 0.3
9347598	134A	0.8
9347701	100B	< 0.3
9347702	100	< 0.3
9347703	188	< 0.3
9347704	102E	< 0.3
9347705	102	< 0.3
9347706	106	< 0.3
9347707	182	< 0.3
9347708	165	< 0.3
9347709	163	< 0.3
9347710	166	< 0.3
9347711	170	< 0.3
9347712	165	< 0.3
9347713	148	< 0.3
9347714	162	< 0.3
9347715	147	< 0.3
9347716	142	< 0.3
9347717	190A	< 0.3
9347718	146	< 0.3
9347719	100C	< 0.3
9347720	104	< 0.3
9347721	163B	< 0.3
9347722	190	< 0.3
9347723	140	< 0.3
9347724	134	1.1
9347725	134	0.8
9347726	190	< 0.3

9347727	100G	< 0.3
9347728	100E	< 0.3
9347730	112B	1.3
9347731	203D	< 0.3
9347732	235	< 0.3
9347733	240	< 0.3
9347735	112	2
9347736	112	1.4
9347737	110A	< 0.3
9347738	110	< 0.3
9347739	212	< 0.3
9347740	122	< 0.3
9348304	OFFICE BLANK	< 0.3

Table 2- Radon Testing Results			
Roscoe Nix Elementary School			
Test Period: 1/7/2020-1/10/2020			
Kit Number	QC Type	Room / Area	Result
9347726	D	190	<0.3
9340165	D	165	<0.3
9347712	FB	165	<0.3
9340186	D	148	0.5
9340192	D	130	<0.3
9340193	FB	130	<0.3
9347740	D	122	<0.3
9348319	TRANSIT BLANK	NA	<0.3
9348320	TRANSIT BLANK	NA	<0.3
9348313	TRANSIT BLANK	NA	<0.3

Summary of Missed Locations		
Roscoe Nix Elementary School		
Test Period: 01/07/2020 - 01/10/2020		
Kit Number	Room/Area	Result
-	N/A	-

Summary of Missing, Compromised and >/= 4 piC/L Tests		
Roscoe Nix Elementary School		
Test Period: 01/07/2020 - 01/10/2020		
Kit Number	Room/Area	Result
-	N/A	-

Table Note:
* Missing or Compromised Sample

ATTACHMENT C

Laboratory Analytical Results

January 3, 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
9340067	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	25.1 ± 2.4 D	2020-01-03
9340035	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	22.5 ± 2.3 D	2020-01-03
9340003	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	25.2 ± 2.4 D	2020-01-03
9340089	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	23.3 ± 2.3 D	2020-01-03
9340072	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	18.3 ± 2.0 D	2020-01-03
9340040	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	27.3 ± 2.6 D	2020-01-03
9340008	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	24.8 ± 2.5 D	2020-01-03
9340094	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	24.7 ± 2.5 D	2020-01-03
9340099	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	27.5 ± 2.6 D	2020-01-03
9340077	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	25.2 ± 2.5 D	2020-01-03
9340045	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	24.7 ± 2.4 D	2020-01-03
9340013	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	25.9 ± 2.6 D	2020-01-03
9340018	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	29.1 ± 2.8 D	2020-01-03
9341704	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	25.1 ± 2.4 D	2020-01-03
9340050	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	27.2 ± 2.6 D	2020-01-03
9340023	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	28.2 ± 2.7 D	2020-01-03
9341709	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	25.5 ± 2.4 D	2020-01-03
9340055	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	27.8 ± 2.6 D	2020-01-03
9340060	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	27.3 ± 2.5 D	2020-01-03
9340028	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	23.9 ± 2.3 D	2020-01-03
9341714	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	28.3 ± 2.7 D	2020-01-03
9340082	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	26.4 ± 2.6 D	2020-01-03
9340065	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	24.2 ± 2.4 D	2020-01-03
9340033	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	26.2 ± 2.5 D	2020-01-03
9341719	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	26.7 ± 2.5 D	2020-01-03
9340001	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	26.3 ± 2.5 D	2020-01-03
9340087	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	24.8 ± 2.4 D	2020-01-03
9340070	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	19.5 ± 2.4 D	2020-01-03
9340038	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	24.7 ± 2.3 D	2020-01-03
9340006	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	25.2 ± 2.4 D	2020-01-03
9340092	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	31.4 ± 2.8 D	2020-01-03
9340097	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	26.7 ± 2.5 D	2020-01-03
9340075	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	29.6 ± 2.6 D	2020-01-03
9340043	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	28.1 ± 2.6 D	2020-01-03
9340011	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	26.8 ± 2.5 D	2020-01-03
9340016	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	23.2 ± 2.4 D	2020-01-03
9341702	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	26.8 ± 2.5 D	2020-01-03

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

January 3, 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
9340048	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	25.5 ± 2.4 D	2020-01-03
9340021	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	26.7 ± 2.6 D	2020-01-03
9341707	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	25.8 ± 2.4 D	2020-01-03
9340053	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	25.8 ± 2.5 D	2020-01-03
9340058	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	28.5 ± 2.7 D	2020-01-03
9340026	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	25.9 ± 2.4 D	2020-01-03
9341712	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	24.3 ± 2.4 D	2020-01-03
9340080	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	25.1 ± 2.4 D	2020-01-03
9340063	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	25.8 ± 2.5 D	2020-01-03
9340031	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	24.9 ± 2.4 D	2020-01-03
9341717	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	25.7 ± 2.4 D	2020-01-03
9340085	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	26.9 ± 2.5 D	2020-01-03
9340068	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	26.2 ± 2.5 D	2020-01-03
9340036	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	23.6 ± 2.3 D	2020-01-03
9340004	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	26.9 ± 2.6 D	2020-01-03
9340090	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	26.3 ± 2.5 D	2020-01-03
9340073	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	26.8 ± 2.5 D	2020-01-03
9340041	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	25.6 ± 2.4 D	2020-01-03
9340009	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	24.1 ± 2.4 D	2020-01-03
9340095	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	25.2 ± 2.5 D	2020-01-03
9340100	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	24.5 ± 2.4 D	2020-01-03
9340078	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	25.0 ± 2.4 D	2020-01-03
9340046	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	28.0 ± 2.6 D	2020-01-03
9340014	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	21.8 ± 2.8 D	2020-01-03
9340019	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	26.0 ± 2.5 D	2020-01-03
9341705	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	27.8 ± 2.6 D	2020-01-03
9340051	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	25.5 ± 2.4 D	2020-01-03
9340056	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	27.7 ± 2.6 D	2020-01-03
9340024	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	28.3 ± 2.5 D	2020-01-03
9341710	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	24.2 ± 2.3 D	2020-01-03
9340061	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	28.9 ± 2.6 D	2020-01-03
9340029	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	23.0 ± 2.3 D	2020-01-03
9341715	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	27.0 ± 2.5 D	2020-01-03
9340083	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	24.9 ± 2.4 D	2020-01-03
9340066	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	25.1 ± 2.4 D	2020-01-03
9340034	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	26.4 ± 2.5 D	2020-01-03
9341720	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	25.3 ± 2.5 D	2020-01-03

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

January 3, 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
9340002	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	25.7 ± 2.5 D	2020-01-03
9340088	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	26.4 ± 2.5 D	2020-01-03
9340071	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	24.9 ± 2.4 D	2020-01-03
9340039	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	26.9 ± 2.5 D	2020-01-03
9340007	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	26.9 ± 2.4 D	2020-01-03
9340093	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	25.1 ± 2.5 D	2020-01-03
9340098	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	26.8 ± 2.5 D	2020-01-03
9340076	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	25.1 ± 2.5 D	2020-01-03
9340044	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	25.2 ± 2.5 D	2020-01-03
9340012	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	22.5 ± 2.2 D	2020-01-03
9340017	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	25.3 ± 2.5 D	2020-01-03
9341703	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	26.0 ± 2.5 D	2020-01-03
9340049	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	26.0 ± 2.5 D	2020-01-03
9340022	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	28.6 ± 2.6 D	2020-01-03
9341708	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	28.8 ± 2.8 D	2020-01-03
9340054	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	26.8 ± 2.5 D	2020-01-03
9340059	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	26.5 ± 2.6 D	2020-01-03
9340027	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	26.6 ± 2.5 D	2020-01-03
9341713	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	26.5 ± 2.5 D	2020-01-03
9340081	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	18.4 ± 2.1 D	2020-01-03
9340064	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	26.5 ± 2.5 D	2020-01-03
9340032	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	26.1 ± 2.4 D	2020-01-03
9341718	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	23.7 ± 2.4 D	2020-01-03
9340086	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	26.9 ± 2.6 D	2020-01-03
9340069	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	25.6 ± 2.5 D	2020-01-03
9340037	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	28.4 ± 2.6 D	2020-01-03
9340005	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	???? DIF1	2020-01-03
9340091	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	26.5 ± 2.5 D	2020-01-03
9340096	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	26.2 ± 2.5 D	2020-01-03
9340074	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	27.7 ± 2.5 D	2020-01-03
9340042	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	26.6 ± 2.5 D	2020-01-03
9340010	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	27.5 ± 2.5 D	2020-01-03
9341701	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	22.9 ± 2.3 D	2020-01-03
9340047	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	26.7 ± 2.5 D	2020-01-03
9340015	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	25.4 ± 2.5 D	2020-01-03
9340020	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	24.1 ± 2.4 D	2020-01-03
9341706	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	31.0 ± 2.7 D	2020-01-03

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January 3, 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
9340052	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	27.4 ± 2.6 D	2020-01-03
9340057	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	27.3 ± 2.5 D	2020-01-03
9340025	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	25.1 ± 2.4 D	2020-01-03
9341711	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	22.5 ± 2.2 D	2020-01-03
9340079	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	26.9 ± 2.5 D	2020-01-03
9340062	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	25.6 ± 2.5 D	2020-01-03
9340030	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	25.0 ± 2.4 D	2020-01-03
9341716	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	25.1 ± 2.4 D	2020-01-03
9340084	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	24.5 ± 2.3 D	2020-01-03

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EXPOSURE IN BOWSER-MORNER RADON CHAMBER

CLIENT KCI Technologies Inc Job Number 193598

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

Date Start: 12/21/19 Date Stop: 12/23/19

Time Start: 0830 Time Stop: 0830

(Group 4)
Device No.'s: (20) Char. Bags -

9340061 thru 9340080

52

Avg pCi/L 35.5 RH % 50.1 Temp °F 70.0

Date Start: 12/21/19 Date Stop: 12/23/19

Time Start: 0835 Time Stop: 0835

(Group 5)
Device No.'s: (20) Char. Bags -

9340081 thru 9340100

Q5

Avg pCi/L 35.5 RH % 50.1 Temp °F 70.0

Date Start: 12/21/19 Date Stop: 12/23/19

Time Start: 0840 Time Stop: 0840

(Group 6)
Device No.'s: (20) Char. Bags -

9341701 thru 9341720

R5

Avg pCi/L 35.5 RH % 50.1 Temp °F 70.0

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

January 14, 2020 **** LABORATORY ANALYSIS REPORT ****

Radon test result report for:
ROSCOE NIX ES
307

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
9347702	100	2020-01-07 @ 8:00 am	2020-01-10 @ 9:00 am	< 0.3	2020-01-14
9347701	100B	2020-01-07 @ 8:00 am	2020-01-10 @ 9:00 am	< 0.3	2020-01-14
9347719	100C	2020-01-07 @ 8:00 am	2020-01-10 @ 9:00 am	< 0.3	2020-01-14
9347728	100E	2020-01-07 @ 8:00 am	2020-01-10 @ 9:00 am	< 0.3	2020-01-14
9347727	100G	2020-01-07 @ 8:00 am	2020-01-10 @ 9:00 am	< 0.3	2020-01-14
9347705	102	2020-01-07 @ 8:00 am	2020-01-10 @ 9:00 am	< 0.3	2020-01-14
9347704	102E	2020-01-07 @ 8:00 am	2020-01-10 @ 9:00 am	< 0.3	2020-01-14
9347720	104	2020-01-07 @ 8:00 am	2020-01-10 @ 9:00 am	< 0.3	2020-01-14
9347706	106	2020-01-07 @ 8:00 am	2020-01-10 @ 9:00 am	< 0.3	2020-01-14
9340164	108	2020-01-07 @ 9:00 am	2020-01-10 @ 9:00 am	< 0.3	2020-01-14
9347738	110	2020-01-07 @ 10:00 am	2020-01-10 @ 9:00 am	< 0.3	2020-01-14
9347737	110A	2020-01-07 @ 10:00 am	2020-01-10 @ 9:00 am	< 0.3	2020-01-14
9347735	112	2020-01-07 @ 10:00 am	2020-01-10 @ 9:00 am	2.0 ± 0.4	2020-01-14
9347736	112	2020-01-07 @ 10:00 am	2020-01-10 @ 9:00 am	1.4 ± 0.4	2020-01-14
9347730	112B	2020-01-07 @ 10:00 am	2020-01-10 @ 10:00 am	1.3 ± 0.4	2020-01-14
9347740	122	2020-01-07 @ 10:00 am	2020-01-10 @ 10:00 am	< 0.3	2020-01-14
9340188	122	2020-01-07 @ 10:00 am	2020-01-10 @ 10:00 am	< 0.3	2020-01-14
9340193	130	2020-01-07 @ 9:00 am	2020-01-10 @ 9:00 am	< 0.3	2020-01-14
9340191	130	2020-01-07 @ 9:00 am	2020-01-10 @ 9:00 am	< 0.3	2020-01-14
9340192	130	2020-01-07 @ 9:00 am	2020-01-10 @ 9:00 am	< 0.3	2020-01-14
9347596	132	2020-01-07 @ 9:00 am	2020-01-10 @ 9:00 am	< 0.3	2020-01-14
9347725	134	2020-01-07 @ 9:00 am	2020-01-10 @ 10:00 am	0.8 ± 0.4	2020-01-14
9347724	134	2020-01-07 @ 9:00 am	2020-01-10 @ 10:00 am	1.1 ± 0.3	2020-01-14
9347598	134A	2020-01-07 @ 9:00 am	2020-01-10 @ 10:00 am	0.8 ± 0.3	2020-01-14
9347723	140	2020-01-07 @ 9:00 am	2020-01-10 @ 10:00 am	< 0.3	2020-01-14
9347716	142	2020-01-07 @ 9:00 am	2020-01-10 @ 10:00 am	< 0.3	2020-01-14
9347718	146	2020-01-07 @ 9:00 am	2020-01-10 @ 10:00 am	< 0.3	2020-01-14
9347715	147	2020-01-07 @ 9:00 am	2020-01-10 @ 10:00 am	< 0.3	2020-01-14
9340186	148	2020-01-07 @ 9:00 am	2020-01-10 @ 10:00 am	0.5 ± 0.3	2020-01-14
9347713	148	2020-01-07 @ 9:00 am	2020-01-10 @ 10:00 am	< 0.3	2020-01-14
9340169	151	2020-01-07 @ 9:00 am	2020-01-10 @ 10:00 am	< 0.3	2020-01-14
9340170	152	2020-01-07 @ 9:00 am	2020-01-10 @ 10:00 am	< 0.3	2020-01-14
9340177	155	2020-01-07 @ 9:00 am	2020-01-10 @ 10:00 am	< 0.3	2020-01-14
9340178	156	2020-01-07 @ 9:00 am	2020-01-10 @ 10:00 am	< 0.3	2020-01-14
9340185	159	2020-01-07 @ 9:00 am	2020-01-10 @ 10:00 am	< 0.3	2020-01-14
9340166	160	2020-01-07 @ 9:00 am	2020-01-10 @ 10:00 am	< 0.3	2020-01-14
9347714	162	2020-01-07 @ 8:00 am	2020-01-10 @ 10:00 am	< 0.3	2020-01-14

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January 14, 2020 **** LABORATORY ANALYSIS REPORT ****

Radon test result report for:
ROSCOE NIX ES
307

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
9347709	163	2020-01-07 @ 8:00 am	2020-01-10 @ 10:00 am	< 0.3	2020-01-14
9347721	163B	2020-01-07 @ 8:00 am	2020-01-10 @ 10:00 am	< 0.3	2020-01-14
9347708	165	2020-01-07 @ 9:00 am	2020-01-10 @ 10:00 am	< 0.3	2020-01-14
9340165	165	2020-01-07 @ 9:00 am	2020-01-10 @ 10:00 am	< 0.3	2020-01-14
9347712	165	2020-01-07 @ 9:00 am	2020-01-10 @ 10:00 am	< 0.3	2020-01-14
9347710	166	2020-01-07 @ 8:00 am	2020-01-10 @ 10:00 am	< 0.3	2020-01-14
9347711	170	2020-01-07 @ 8:00 am	2020-01-10 @ 10:00 am	< 0.3	2020-01-14
9347707	182	2020-01-07 @ 8:00 am	2020-01-10 @ 10:00 am	< 0.3	2020-01-14
9340187	184	2020-01-07 @ 9:00 am	2020-01-10 @ 10:00 am	0.7 ± 0.3	2020-01-14
9347703	188	2020-01-07 @ 8:00 am	2020-01-10 @ 10:00 am	< 0.3	2020-01-14
9347726	190	2020-01-07 @ 8:00 am	2020-01-10 @ 10:00 am	< 0.3	2020-01-14
9347722	190	2020-01-07 @ 8:00 am	2020-01-10 @ 10:00 am	< 0.3	2020-01-14
9347717	190A	2020-01-07 @ 8:00 am	2020-01-10 @ 10:00 am	< 0.3	2020-01-14
9347731	203D	2020-01-07 @ 10:00 am	2020-01-10 @ 9:00 am	< 0.3	2020-01-14
9347739	212	2020-01-07 @ 10:00 am	2020-01-10 @ 9:00 am	< 0.3	2020-01-14
9347732	235	2020-01-07 @ 10:00 am	2020-01-10 @ 9:00 am	< 0.3	2020-01-14
9347733	240	2020-01-07 @ 10:00 am	2020-01-10 @ 9:00 am	< 0.3	2020-01-14

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 3

Name of Schools:

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

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

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

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

MCPS RADON TESTING - EXECUTIVE SUMMARY

Site Name	Roscoe Nix Elementary School
Date of Report	March 13, 2018
Round of Testing	Initial **Follow-up** Post Remediation 2 year testing 5 year testing HVAC Upgrade Window Replacement New Addition New Facility
# of Rooms Tested	15
# Rooms ≥4.0 pCi/L	0
Lowest Value	<0.3 pCi/L
Highest Value	1.0 pCi/L

Project Status

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

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March 13, 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: Roscoe Nix Elementary School
1100 Corliss St.
Silver Spring , Maryland 20903

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 Roscoe Nix Elementary School, located at 1100 Corliss St. in Silver Spring , Maryland 20903 (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 seventeen (17) 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		
Roscoe Nix Elementary School		
Test Period: 02/13/18-02/16/18		
Kit Number	**Room / Area**	**Result**
7986819	108	< 0.3
7986822	159	< 0.3
7986826	170	< 0.3
7986816	181	< 0.3
7986809	182	< 0.3
7986824	184	< 0.3
7986814	188	< 0.3
7986812	200	< 0.3
7986813	207	< 0.3
7986815	230	< 0.3
7986817	236	< 0.3
7986821	134A	1.0
7986825	KITCHEN	< 0.3
7986818	KITCHEN OFFICE	< 0.3
7986827	STAGE	0.6

Table Note:
* Missing or Compromised Sample

Table 2 - Radon Testing Results		
Roscoe Nix Elementary School		
Test Period: 02/13/18-02/16/18		
Kit Number	**QC Type**	**Result**
7986820	D (108)	< 0.3
7986823	FB (236)	< 0.3

Table Note:
* Missing or Compromised Sample

ATTACHMENT C

Laboratory Analytical Results

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

Radon test result report for:
ROSCOE NIX ELEMENTARY SCHOOL
MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7986819	108	2018-02-13 @ 8:00 am	2018-02-16 @ 8:00 am	< 0.3	2018-02-20
7986820	108	2018-02-13 @ 8:00 am	2018-02-16 @ 8:00 am	< 0.3	2018-02-20
7986821	134A	2018-02-13 @ 8:00 am	2018-02-16 @ 8:00 am	1.0 ± 0.3	2018-02-20
7986822	159	2018-02-13 @ 8:00 am	2018-02-16 @ 8:00 am	< 0.3	2018-02-20
7986826	170	2018-02-13 @ 8:00 am	2018-02-16 @ 8:00 am	< 0.3	2018-02-20
7986816	181	2018-02-13 @ 8:00 am	2018-02-16 @ 8:00 am	< 0.3	2018-02-20
7986809	182	2018-02-13 @ 8:00 am	2018-02-16 @ 8:00 am	< 0.3	2018-02-20
7986824	184	2018-02-13 @ 8:00 am	2018-02-16 @ 8:00 am	< 0.3	2018-02-20
7986814	188	2018-02-13 @ 8:00 am	2018-02-16 @ 8:00 am	< 0.3	2018-02-20
7986812	200	2018-02-13 @ 8:00 am	2018-02-16 @ 8:00 am	< 0.3	2018-02-20
7986813	207	2018-02-13 @ 8:00 am	2018-02-16 @ 8:00 am	< 0.3	2018-02-20
7986815	230	2018-02-13 @ 8:00 am	2018-02-16 @ 8:00 am	< 0.3	2018-02-20
7986817	236	2018-02-13 @ 8:00 am	2018-02-16 @ 8:00 am	< 0.3	2018-02-20
7986823	236	2018-02-13 @ 8:00 am	2018-02-16 @ 8:00 am	< 0.3	2018-02-20
7986825	KITCHEN	2018-02-13 @ 8:00 am	2018-02-16 @ 8:00 am	< 0.3	2018-02-20
7986818	KITCHEN OFFICE	2018-02-13 @ 8:00 am	2018-02-16 @ 8:00 am	< 0.3	2018-02-20
7986827	STAGE	2018-02-13 @ 8:00 am	2018-02-16 @ 8:00 am	0.6 ± 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

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

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

KCI TECHNOLOGIES
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MCPS RADON TESTING - EXECUTIVE SUMMARY

Site Name	Roscoe Nix Elementary School
Date of Report	January 30, 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	44
# Rooms ≥4.0 pCi/L	0
Lowest Value	< 0.3 pCi/L
Highest Value	1.6 pCi/L

Project Status

Current Project Status at this time: Results satisfactory to date; missed locations and missing/ compromised tests to be sampled.

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January 30, 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: Roscoe Nix Elementary School
1100 Corliss St.
Silver Spring , Maryland 20903

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 Roscoe Nix Elementary School, located at 1100 Corliss St. in Silver Spring , Maryland 20903 (subject site).

SCOPE OF SERVICES

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

KCI visited the site on November 27, 2017 and deployed fifty-five (55) 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 November 30, 2017 to retrieve the radon sampling test kits. KCI shipped all radon tests via overnight delivery to Aircheck, Inc. for analysis by gamma-ray spectroscopy. Aircheck, Inc. is a NRSB certified analytical laboratory for radon analysis (certification #ARL1402) located at 1936 Butler Bridge Road, Mills River, North Carolina.

EVALUATION OF TESTING CONDITIONS

These tests represent:

- Post-mitigation biennial testing.

These tests were conducted to:

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

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

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

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

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

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

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

RESULTS

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

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,

Unknown User
Radon Measurement Specialist
KCI Technologies, Inc.

Attachments:

B - Tables 1-3, Radon Test Summary Spreadsheets

C- Laboratory Analytical Results

ATTACHMENT B

Radon Test Summary Spreadsheet

Table Notes:

AC- Activated Charcoal

ACI- Air Chek, Inc.

D- Duplicate

FB- Field Blank

KCI- KCI Technologies, Inc.

OB- Office Blank

PM- Project Manager

QC- Quality Control

Radon Testing Results		
Roscoe Nix Elementary School		
Test Period: 11/27/17-11/30/17		
Kit Number	**Room / Area**	**Result**
7977399	100	< 0.3
7977385	102	< 0.3
7977383	104	0.6
7977384	106	< 0.3
7976668	110	< 0.3
7976680	112	1.2
7976681	112	1.6
7976671	122	1.1
7976678	130	< 0.3
7976687	132	< 0.3
7976697	132	< 0.3
7976686	134	1.0
7976692	134	0.9
7976691	140	0.8
7976685	142	0.8
7976679	146	0.5
7976689	147	0.7
7976690	148	< 0.3
7976682	151	< 0.3
7976683	152	< 0.3
7976699	155	< 0.3
7976698	156	< 0.3
7976664	160	< 0.3
7976700	162	< 0.3
7976666	163	0.6
7976660	165	< 0.3
7976694	166	< 0.3
7976695	170	< 0.3
7977391	186	0.6
7977394	190	< 0.3
7977395	190	< 0.3
7976672	231	< 0.3
7977397	234	0.5
7977360	235	< 0.3
7977382	100B	< 0.3
7977366	100C	< 0.3
7977378	100E	< 0.3
7977381	100G	< 0.3
7977400	102E	< 0.3
7977389	102G	0.6
7976693	* 108 (Missing)	-
7976667	110A	0.9
7976696	* 159 (Void by Lab -Damaged Kit)	-
7977386	163B	< 0.3
7977392	* 181 (Missing)	-
7977387	* 182 (Tampered)	< 0.3

Table Note:
* Missing or Compromised Sample

Radon Testing Results		
Roscoe Nix Elementary School		
Test Period: 11/27/17-11/30/17		
Kit Number	**Room / Area**	**Result**
7977390	* 184 (Missing)	-
7976673	190A	0.6

Table Note:
* Missing or Compromised Sample

Radon Testing Results		
Roscoe Nix Elementary School		
Test Period: 11/27/17-11/30/17		
Kit Number	**QC Type**	**Result**
7977388	D (102G)	< 0.3
7976684	D (152)	< 0.3
7976665	D (162)	< 0.3
7976674	D (234)	< 0.3
7976688	FB (147)	< 0.3
7976675	FB (235)	< 0.3
7975630	OB (OB)	< 0.3

Table Note:
* Missing or Compromised Sample

Summary of Missed Locations		
Roscoe Nix Elementary School		
Test Period: 11/27/17-11/30/17		
Kit Number	**Room / Area**	**Result**
-	159 (Missed location)	-
-	200 (Missed location)	-
-	207 (Missed location)	-
-	236 (Missed location)	-
-	114A (Missed location)	-
-	134A (Missed location)	-
-	170 (Missed location)	-
-	230 (Missed location)	-
-	Stage (Missed location)	-
-	Kitchen (Missed location)	-
-	Kitchen Office (Missed location)	-
-	188 (Missed location)	-

Summary of Missing, Compromised and ≥4 piC/L Tests			
Roscoe Nix Elementary School			
Test Period: 11/27/17-11/30/17			
Kit Number		**Room / Area**	**Result**
7976693	*	108 (Missing)	-
7976696	*	159 (Void by Lab -Damaged Kit)	-
7977392	*	181 (Missing)	-
7977387	*	182 (Tampered)	< 0.3
7977390	*	184 (Missing)	-

Table Note:
* Missing or Compromised Sample

ATTACHMENT C

Laboratory Analytical Results

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

Radon test result report for:
ROSCOE NIX ES
MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7977399	100	2017-11-27 @ 3:00 pm	2017-11-30 @ 12:00 pm	< 0.3	2017-12-04
7977382	100B	2017-11-27 @ 3:00 pm	2017-11-30 @ 12:00 pm	< 0.3	2017-12-04
7977366	100C	2017-11-27 @ 3:00 pm	2017-11-30 @ 12:00 pm	< 0.3	2017-12-05
7977378	100E	2017-11-27 @ 3:00 pm	2017-11-30 @ 12:00 pm	< 0.3	2017-12-04
7977381	100G	2017-11-27 @ 3:00 pm	2017-11-30 @ 12:00 pm	< 0.3	2017-12-04
7977385	102	2017-11-27 @ 3:00 pm	2017-11-30 @ 12:00 pm	< 0.3	2017-12-04
7977400	102E	2017-11-27 @ 3:00 pm	2017-11-30 @ 12:00 pm	< 0.3	2017-12-04
7977388	102G	2017-11-27 @ 3:00 pm	2017-11-30 @ 12:00 pm	< 0.3	2017-12-04
7977389	102G	2017-11-27 @ 3:00 pm	2017-11-30 @ 12:00 pm	0.6 ± 0.3	2017-12-04
7977383	104	2017-11-27 @ 3:00 pm	2017-11-30 @ 12:00 pm	0.6 ± 0.3	2017-12-04
7977384	106	2017-11-27 @ 3:00 pm	2017-11-30 @ 12:00 pm	< 0.3	2017-12-04
7976668	110	2017-11-27 @ 4:00 pm	2017-11-30 @ 12:00 pm	< 0.3	2017-12-04
7976667	110A	2017-11-27 @ 4:00 pm	2017-11-30 @ 12:00 pm	0.9 ± 0.4	2017-12-04
7976680	112	2017-11-27 @ 4:00 pm	2017-11-30 @ 12:00 pm	1.2 ± 0.3	2017-12-04
7976681	112	2017-11-27 @ 4:00 pm	2017-11-30 @ 12:00 pm	1.6 ± 0.4	2017-12-05
7976671	122	2017-11-27 @ 4:00 pm	2017-11-30 @ 12:00 pm	1.1 ± 0.4	2017-12-04
7976678	130	2017-11-27 @ 4:00 pm	2017-11-30 @ 12:00 pm	< 0.3	2017-12-05
7976697	132	2017-11-27 @ 4:00 pm	2017-11-30 @ 12:00 pm	< 0.3	2017-12-04
7976687	132	2017-11-27 @ 4:00 pm	2017-11-30 @ 12:00 pm	< 0.3	2017-12-04
7976686	134	2017-11-27 @ 3:00 pm	2017-11-30 @ 12:00 pm	1.0 ± 0.4	2017-12-04
7976692	134	2017-11-27 @ 4:00 pm	2017-11-30 @ 12:00 pm	0.9 ± 0.3	2017-12-04
7976691	140	2017-11-27 @ 4:00 pm	2017-11-30 @ 12:00 pm	0.8 ± 0.3	2017-12-04
7976685	142	2017-11-27 @ 12:00 pm	2017-11-30 @ 12:00 pm	0.8 ± 0.3	2017-12-04
7976679	146	2017-11-27 @ 4:00 pm	2017-11-30 @ 12:00 pm	0.5 ± 0.3	2017-12-04
7976688	147	2017-11-27 @ 4:00 pm	2017-11-30 @ 12:00 pm	< 0.3	2017-12-04
7976689	147	2017-11-27 @ 4:00 pm	2017-11-30 @ 12:00 pm	0.7 ± 0.3	2017-12-04
7976690	148	2017-11-27 @ 4:00 pm	2017-11-30 @ 12:00 pm	< 0.3	2017-12-04
7976682	151	2017-11-27 @ 4:00 pm	2017-11-30 @ 12:00 pm	< 0.3	2017-12-04
7976683	152	2017-11-27 @ 4:00 pm	2017-11-30 @ 12:00 pm	< 0.3	2017-12-04
7976684	152	2017-11-27 @ 4:00 pm	2017-11-30 @ 12:00 pm	< 0.3	2017-12-04
7976699	155	2017-11-27 @ 4:00 pm	2017-11-30 @ 12:00 pm	< 0.3	2017-12-04
7976698	156	2017-11-27 @ 4:00 pm	2017-11-30 @ 12:00 pm	< 0.3	2017-12-04
7976696	159	2017-11-27 @ 4:00 pm	2017-11-30 @ 1:00 pm	???? IF2	2017-12-04
7976664	160	2017-11-27 @ 4:00 pm	2017-11-30 @ 12:00 pm	< 0.3	2017-12-04
7976665	162	2017-11-27 @ 4:00 pm	2017-11-30 @ 1:00 pm	< 0.3	2017-12-04
7976700	162	2017-11-27 @ 4:00 pm	2017-11-30 @ 1:00 pm	< 0.3	2017-12-04
7976666	163	2017-11-27 @ 3:00 pm	2017-11-30 @ 1:00 pm	0.6 ± 0.4	2017-12-05

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

Radon test result report for:
ROSCOE NIX ES
MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7977386	163B	2017-11-27 @ 3:00 pm	2017-11-30 @ 1:00 pm	< 0.3	2017-12-04
7976660	165	2017-11-27 @ 4:00 pm	2017-11-30 @ 1:00 pm	< 0.3	2017-12-05
7976694	166	2017-11-27 @ 4:00 pm	2017-11-30 @ 1:00 pm	< 0.3	2017-12-04
7976695	170	2017-11-27 @ 4:00 pm	2017-11-30 @ 1:00 pm	< 0.3	2017-12-04
7977387	182	2017-11-27 @ 3:00 pm	2017-11-30 @ 1:00 pm	< 0.3	2017-12-04
7977391	186	2017-11-27 @ 3:00 pm	2017-11-30 @ 1:00 pm	0.6 ± 0.3	2017-12-04
7977394	190	2017-11-27 @ 3:00 pm	2017-11-30 @ 1:00 pm	< 0.3	2017-12-04
7977395	190	2017-11-27 @ 3:00 pm	2017-11-30 @ 1:00 pm	< 0.3	2017-12-04
7976673	190A	2017-11-27 @ 4:00 pm	2017-11-30 @ 1:00 pm	0.6 ± 0.3	2017-12-04
7976672	231	2017-11-27 @ 4:00 pm	2017-11-30 @ 1:00 pm	< 0.3	2017-12-04
7976674	234	2017-11-27 @ 4:00 pm	2017-11-30 @ 1:00 pm	< 0.3	2017-12-04
7977397	234	2017-11-27 @ 4:00 pm	2017-11-30 @ 1:00 pm	0.5 ± 0.3	2017-12-04
7976675	235	2017-11-27 @ 4:00 pm	2017-11-30 @ 1:00 pm	< 0.3	2017-12-04
7977360	235	2017-11-27 @ 4:00 pm	2017-11-30 @ 1:00 pm	< 0.3	2017-12-04
7975630	OB	2017-11-27 @ 1:00 pm	2017-11-30 @ 1:00 pm	< 0.3	2017-12-04

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December 21, 2017 **** LABORATORY ANALYSIS REPORT ****

Radon test result report for:
ROSCOE NIX ES
MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7976693	108	@	@		
7977392	181	@	@		
7977390	184	@	@		

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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

Names of Schools:

1. Montgomery Knolls Elementary School
2. New Hampshire Estates Elementary School
3. Montgomery Blair High School
4. Silver Creek Middle School
5. Sligo Creek Elementary School
6. East Silver Spring Elementary School
7. Silver Spring International Middle School
8. Woodlin Elementary School
9. Northwood High School
10. Spring Mill Center
11. Westbrook Elementary School
12. Westland Middle School
13. Cloverly Elementary School
14. Flora Singer Elementary School
15. Sligo Middle School
16. Mario Loiederman Middle School
17. Roscoe Nix Elementary School
18. Sargent Shriver Elementary School
19.
20.
21.
22.
23.
24.
25.
26.

	Date	Initials
Radon Test Kits Deployed	11/27/17	JM
Radon Test Kits Collected	11/30/17	JM
Radon Test Kits Shipped to Lab*	11/30/17	JM
Radon Test Kits Received by Lab*	12/04/17	JM

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

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

Radon test result report for:
TRANSIT 1
NONE

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

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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

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EXPOSURE IN BOWSER-MORNER RADON CHAMBER

CLIENT KCI Technologies Inc. Job Number 182393

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

Date Start: 12/1/17 Date Stop: 12/4/17	Date Start: _____ Date Stop: _____
Time Start: 1049 Time Stop: 1049	Time Start: _____ Time Stop: _____
Device No.'s: (6) Chan. Bags.	Device No.'s: _____
7975075, 7975064, 7975063,	_____
7975065, 7975069, 7975070	_____
F4 Right	_____
Date Start: _____ Date Stop: _____	Date Start: _____ Date Stop: _____
Time Start: _____ Time Stop: _____	Time Start: _____ Time Stop: _____
Device No.'s: _____	Device No.'s: _____
_____	_____
_____	_____
_____	_____
Date Start: _____ Date Stop: _____	Date Start: _____ Date Stop: _____
Time Start: _____ Time Stop: _____	Time Start: _____ Time Stop: _____
Device No.'s: _____	Device No.'s: _____
_____	_____
_____	_____
_____	_____

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

KCI TECHNOLOGIES

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MCPS RADON TESTING

Executive Summary: Roscoe Nix Elementary School

Date of Test Report:	10/20/2016
Round of Testing:	Initial Follow-up Post Remediation
# Rooms Tested:	31
# Rooms ≥ 4.0 pCi/L:	0
Low Value:	< 0.3
High Value:	0.8

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

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October 20, 2016

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

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

Location: Roscoe Nix Elementary School
1100 Corlis Street
Silver Spring, MD 20903

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 Roscoe Nix Elementary School, located at 1100 Corlis Street in Silver Spring, Maryland 20903 (subject site).

Scope of Services:

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

KCI visited the site on September 26, 2016 and deployed thirty-six (36) activated charcoal (AC) radon test kits. KCI deployed radon test kits in frequently-occupied ground contact rooms, and other areas, (if applicable) in accordance with AARST guidance. A floor plan map of the building with the test locations is included as Attachment A of this report.

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

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

Evaluation of Testing Conditions:

These tests represent:

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

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

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

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

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

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

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

Results:

The results of the radon test analysis indicated the following:

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

Notes:
D- Duplicate sample

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

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

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

Sincerely,

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

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

ATTACHMENT A

Floor Plan With Test Locations

ATTACHMENT B

Radon Test Summary Spreadsheet

Radon Testing Results		
Roscoe R Nix Elementary School		
Test Period: 09/26/16-09/29/16		
Kit Number	**Room / Area**	**Result**
7802829	100	< 0.3
7802824	102	< 0.3
7802819	104	< 0.3
7802817	106	0.5
7802812	108	< 0.3
7802826	110	< 0.3
7802816	112	0.6
7802822	112	0.6
7802815	132	< 0.3
7802801	134	0.5
7802830	134	0.5
7802813	142	< 0.3
7801875	146	< 0.3
7801876	162	< 0.3
7801877	163	0.6
7802803	165	< 0.3
7802808	166	< 0.3
7801879	182	0.7
7801878	184	0.6
7801880	186	< 0.3
7802827	100A	< 0.3
7802825	100B	< 0.3
7802823	100C	0.5
7802820	100E	< 0.3
7802818	100G	< 0.3
7802811	110A	< 0.3
7802821	112C	0.8
7802810	112D	0.5
7802809	134A	< 0.3
7801873	142A	< 0.3
7801874	146A	< 0.3
7802802	163B	< 0.3
7802804	165A	< 0.3

Table Note:
* Missing or Compromised Sample

Radon Testing Results		
Roscoe R Nix Elementary School		
Test Period: 09/26/16-09/29/16		
Kit Number	**QC Type**	**Result**
7802828	D (100)	< 0.3
7802814	D (134A)	0.6
7802807	D (166)	0.5

Table Note:
* Missing or Compromised Sample

ATTACHMENT C

Laboratory Analytical Results

October 7, 2016 **** LABORATORY ANALYSIS REPORT ****

Radon test result report for:
ROSCOE R NIX ELEMENTARY SCHOOL
MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7802828	100	2016-09-26 @ 1:00 pm	2016-09-29 @ 11:00 am	< 0.3	2016-10-03
7802829	100	2016-09-26 @ 1:00 pm	2016-09-29 @ 11:00 am	< 0.3	2016-10-03
7802827	100A	2016-09-26 @ 1:00 pm	2016-09-29 @ 12:00 pm	< 0.3	2016-10-03
7802825	100B	2016-09-26 @ 1:00 pm	2016-09-29 @ 12:00 pm	< 0.3	2016-10-03
7802823	100C	2016-09-26 @ 1:00 pm	2016-09-29 @ 12:00 pm	0.5 ± 0.3	2016-10-03
7802820	100E	2016-09-26 @ 1:00 pm	2016-09-29 @ 12:00 pm	< 0.3	2016-10-03
7802818	100G	2016-09-26 @ 1:00 pm	2016-09-29 @ 12:00 pm	< 0.3	2016-10-03
7802824	102	2016-09-26 @ 1:00 pm	2016-09-29 @ 12:00 pm	< 0.3	2016-10-03
7802819	104	2016-09-26 @ 1:00 pm	2016-09-29 @ 12:00 pm	< 0.3	2016-10-03
7802817	106	2016-09-26 @ 1:00 pm	2016-09-29 @ 12:00 pm	0.5 ± 0.3	2016-10-03
7802812	108	2016-09-26 @ 1:00 pm	2016-09-29 @ 12:00 pm	< 0.3	2016-10-03
7802826	110	2016-09-26 @ 1:00 pm	2016-09-29 @ 12:00 pm	< 0.3	2016-10-03
7802811	110A	2016-09-26 @ 1:00 pm	2016-09-29 @ 12:00 pm	< 0.3	2016-10-03
7802816	112	2016-09-26 @ 1:00 pm	2016-09-29 @ 12:00 pm	0.6 ± 0.3	2016-10-03
7802822	112	2016-09-26 @ 1:00 pm	2016-09-29 @ 12:00 pm	0.6 ± 0.3	2016-10-03
7802821	112C	2016-09-26 @ 2:00 pm	2016-09-29 @ 12:00 pm	0.8 ± 0.3	2016-10-03
7802810	112D	2016-09-26 @ 2:00 pm	2016-09-29 @ 12:00 pm	0.5 ± 0.3	2016-10-03
7802815	132	2016-09-26 @ 1:00 pm	2016-09-29 @ 12:00 pm	< 0.3	2016-10-03
7802801	134	2016-09-26 @ 2:00 pm	2016-09-29 @ 12:00 pm	0.5 ± 0.3	2016-10-03
7802830	134	2016-09-26 @ 2:00 pm	2016-09-29 @ 12:00 pm	0.5 ± 0.3	2016-10-03
7802814	134A	2016-09-26 @ 2:00 pm	2016-09-29 @ 12:00 pm	0.6 ± 0.3	2016-10-03
7802809	134A	2016-09-26 @ 2:00 pm	2016-09-29 @ 12:00 pm	< 0.3	2016-10-03
7802813	142	2016-09-26 @ 2:00 pm	2016-09-29 @ 12:00 pm	< 0.3	2016-10-03
7801873	142A	2016-09-26 @ 2:00 pm	2016-09-29 @ 12:00 pm	< 0.3	2016-10-03
7801875	146	2016-09-26 @ 2:00 pm	2016-09-29 @ 12:00 pm	< 0.3	2016-10-03
7801874	146A	2016-09-26 @ 2:00 pm	2016-09-29 @ 12:00 pm	< 0.3	2016-10-03
7801876	162	2016-09-26 @ 2:00 pm	2016-09-29 @ 12:00 pm	< 0.3	2016-10-03
7801877	163	2016-09-26 @ 2:00 pm	2016-09-29 @ 12:00 pm	0.6 ± 0.3	2016-10-03
7802802	163B	2016-09-26 @ 2:00 pm	2016-09-29 @ 12:00 pm	< 0.3	2016-10-03
7802803	165	2016-09-26 @ 2:00 pm	2016-09-29 @ 12:00 pm	< 0.3	2016-10-03
7802804	165A	2016-09-26 @ 2:00 pm	2016-09-29 @ 12:00 pm	< 0.3	2016-10-03
7802807	166	2016-09-26 @ 2:00 pm	2016-09-29 @ 12:00 pm	0.5 ± 0.3	2016-10-03
7802808	166	2016-09-26 @ 2:00 pm	2016-09-29 @ 12:00 pm	< 0.3	2016-10-03
7801879	182	2016-09-26 @ 2:00 pm	2016-09-29 @ 12:00 pm	0.7 ± 0.3	2016-10-03
7801878	184	2016-09-26 @ 2:00 pm	2016-09-29 @ 12:00 pm	0.6 ± 0.3	2016-10-03
7801880	186	2016-09-26 @ 2:00 pm	2016-09-29 @ 12:00 pm	< 0.3	2016-10-03

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October 7, 2016 **** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

MCPS Radon
Phase 18 Office Blanks

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

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October 7, 2016 **** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

MCPS Radon
Phase 18 Transit Blanks

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

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

October 12, 2016 **** LABORATORY ANALYSIS REPORT ****

Radon test result report for:
MCPS Radon
Spike Sample Results

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

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

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

EXPOSURE IN BOWSER-MORNER RADON CHAMBER

CLIENT KCI Technologies Inc. Job Number 176788

NOMINAL Conditions: Radon Conc 26.1 pCi/L Rel. Hum 49.6 % Temp. 79.0 F

Date Start: 9/24/16 Date Stop: 9/26/16	Date Start: _____ Date Stop: _____
Time Start: 0758 Time Stop: 0758	Time Start: _____ Time Stop: _____
Device No.'s: (6) Char. Bags -	Device No.'s: _____
7769899, 7769884, 7769885,	_____
7769889, 7769890, 7769891	_____
F3 Left	_____
Date Start: _____ Date Stop: _____	Date Start: _____ Date Stop: _____
Time Start: _____ Time Stop: _____	Time Start: _____ Time Stop: _____
Device No.'s: _____	Device No.'s: _____
_____	_____
_____	_____
_____	_____
Date Start: _____ Date Stop: _____	Date Start: _____ Date Stop: _____
Time Start: _____ Time Stop: _____	Time Start: _____ Time Stop: _____
Device No.'s: _____	Device No.'s: _____
_____	_____
_____	_____
_____	_____

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

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 18

Name of Schools:

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

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

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

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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 18

Name of Schools:

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

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

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

RADON SCREENING SURVEY – FOLLOW-UP ROSCOE NIX ELEMENTARY SCHOOL

1100 Corlis Street, Silver Spring, Maryland 20903

EXECUTIVE SUMMARY

Date of Test Report:	3/23/16 Follow-Up
Round of Testing:	Initial Follow-up Post Remediation
# Rooms Tested	15
# Rooms ≥ 4.0 pCi/L:	2
Low Value:	1.1
High Value:	6.0
Confirmed Rooms ≥ 4.0 pCi/L US EPA Action Level	5

Summary of Sampling Events ≥ 4.0 pCi/L

Room	Result (pCi/L) 2/19/16 Initial	Result (pCi/L) 3/23/16 Follow-Up	Average Result (pCi/L)
108	11.4	6.0	8.7
110A	10.0	No access	10.0
134A	5.2	3.3	4.3
100	4.6	2.8	3.7
100C	4.6	3.1	3.9
110	4.5	3.9	4.2
182	4.3	2.7	3.5
112	--- Missing	2.3	2.3
170	2.9 Tampered	1.1	2.0
230	--- Missing	1.1	1.1
100E	3.6	3.7	3.7
112	3.6	2.2	2.9
142	3.7	2.1	2.9
162	3.8	1.8	2.8
165	3.6	1.5	2.6
132	3.6	2.8	3.2
100A	Not sampled	4.6	4.6

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MCPS RADON TESTING

Executive Summary: Roscoe Nix Elementary School

Date of Test Report:	3/23/2016
Round of Testing:	Initial Follow-up Post Remediation
# Rooms Tested:	15
# Rooms ≥ 4.0 pCi/L:	2
Low Value:	1.1
High Value:	6.0

Rooms with results ≥ 4.0 pCi/L:
108 (6.0 pCi/L), 100A (4.6 pCi/L)

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

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March 23, 2016

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

Re: **Radon Testing Services**
KCI Job # 12146341.30

Location: Roscoe Nix Elementary School
1100 Corlis Street
Silver Spring, MD 20903

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 Roscoe Nix Elementary School, located at 1100 Corlis Street in Silver Spring, Maryland 20903 (subject site).

Scope of Services:

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

KCI visited the site on February 29, 2016 and deployed eighteen (18) activated charcoal (AC) radon test kits. KCI deployed radon test kits in frequently-occupied ground contact rooms, and other areas, (if applicable) in accordance with AARST guidance. A floor plan map of the building with the test locations is included as Attachment A of this report.

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

KCI returned to the site on March 3, 2016 to retrieve the radon sampling test kits. KCI shipped all radon tests via overnight delivery to Airchek, Inc. for analysis by gamma-ray spectroscopy. Airchek, Inc. is a NRSB certified analytical laboratory for radon analysis (certification # ARL1402) located at 1936 Butler

Bridge Road, Mills River, North Carolina.

Evaluation of Testing Conditions:

The operating condition that represents the greatest amount of significantly occupied time for this building is; heating active, with outdoor temperature averages ≤ 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	108	6.0
	100A	4.6
<4.0 piC/L	See Attachment B	

Notes:
D- Duplicate sample

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

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

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

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 10 testing. Office blanks were not submitted under each school individually.

Radon Testing Results		
Roscoe Nix Elementary School		
Test Period: 02/29/16-03/03/16		
Kit Number	**Room / Area**	**Result**
7730686	100	2.8
7730675	108	6.0
7730685	110	3.9
7730689	112	2.3
7729766	132	2.8
7730684	142	2.1
7729787	162	1.8
7730677	165	1.5
7729771	170	1.1
7730676	182	2.7
7729774	230	1.1
7730680	100A	4.6
7730678	100C	3.1
7730700	100E	3.7
7729763	134A	3.3

Table Note:
* Missing or Compromised Sample

Radon Testing Results		
Roscoe Nix Elementary School		
Test Period: 02/29/16-03/03/16		
Kit Number	**QC Type**	**Result**
7730682	D (112)	2.2
7730681	D (165)	1.5
7730200	FB (134A)	< 0.3

Table Note:
* Missing or Compromised Sample

ATTACHMENT C

Laboratory Analytical Results

March 16, 2016

** LABORATORY ANALYSIS REPORT **

Radon test result report for:

ROSCOE NIX ELEMENTARY SCHOOL
MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7730686	100	2016-02-29 @ 3:00 pm	2016-03-03 @ 12:00 pm	2.8 ± 0.5	2016-03-07
7730680	100A	2016-02-29 @ 4:00 pm	2016-03-03 @ 12:00 pm	4.6 ± 0.6	2016-03-07
7730678	100C	2016-02-29 @ 4:00 pm	2016-03-03 @ 12:00 pm	3.1 ± 0.5	2016-03-07
7730700	100E	2016-02-29 @ 4:00 pm	2016-03-03 @ 12:00 pm	3.7 ± 0.5	2016-03-07
7730675	108	2016-02-29 @ 4:00 pm	2016-03-03 @ 12:00 pm	6.0 ± 0.6	2016-03-07
7730685	110	2016-02-29 @ 4:00 pm	2016-03-03 @ 12:00 pm	3.9 ± 0.5	2016-03-07
7730682	112	2016-02-29 @ 4:00 pm	2016-03-03 @ 12:00 pm	2.2 ± 0.4	2016-03-07
7730689	112	2016-02-29 @ 4:00 pm	2016-03-03 @ 12:00 pm	2.3 ± 0.4	2016-03-07
7729766	132	2016-02-29 @ 4:00 pm	2016-03-03 @ 12:00 pm	2.8 ± 0.4	2016-03-07
7729763	134A	2016-02-29 @ 4:00 pm	2016-03-03 @ 12:00 pm	3.3 ± 0.5	2016-03-07
7730200	134A	2016-02-29 @ 4:00 pm	2016-03-03 @ 12:00 pm	< 0.3	2016-03-07
7730684	142	2016-02-29 @ 4:00 pm	2016-03-03 @ 12:00 pm	2.1 ± 0.4	2016-03-07
7729787	162	2016-02-29 @ 4:00 pm	2016-03-03 @ 12:00 pm	1.8 ± 0.4	2016-03-07
7730677	165	2016-02-29 @ 4:00 pm	2016-03-03 @ 12:00 pm	1.5 ± 0.4	2016-03-07
7730681	165	2016-02-29 @ 4:00 pm	2016-03-03 @ 12:00 pm	1.5 ± 0.4	2016-03-07
7729771	170	2016-02-29 @ 4:00 pm	2016-03-03 @ 12:00 pm	1.1 ± 0.4	2016-03-07
7730676	182	2016-02-29 @ 4:00 pm	2016-03-03 @ 12:00 pm	2.7 ± 0.5	2016-03-07
7729774	230	2016-02-29 @ 4:00 pm	2016-03-03 @ 12:00 pm	1.1 ± 0.3	2016-03-07

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

March 16, 2016

** LABORATORY ANALYSIS REPORT **

Radon test result report for:

MCPS Radon
Phase 10 Office Blanks

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

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

March 22, 2016

** LABORATORY ANALYSIS REPORT **

Radon test result report for:

TRANSIT - PHASE 10 & 11
MAIN

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

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

February 15, 2016

** LABORATORY ANALYSIS REPORT **

Spike Sample Laboratory Results

Radon test result report for:

MCPS

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

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

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

EXPOSURE IN BOWSER-MORNER RADON CHAMBER

CLIENT KCF Technologies Inc. Job Number 173704

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

Date Start: 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

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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 10

Name of Schools:

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

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

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

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MCPS RADON TESTING

Executive Summary: Roscoe Nix Elementary School

Date of Test Report:	2/19/2016
Round of Testing:	Initial Follow-up Post Remediation
# Rooms Tested:	50
# Rooms ≥ 4.0 pCi/L:	7
Low Value:	< 0.3
High Value:	11.4

Rooms with results ≥ 4.0 pCi/L:
Room 108 (11.4 pCi/L), Room 110A (10.0 pCi/L), Room 134A (5.2 pCi/L), Room 100 (4.6 pCi/L), Room 100C (4.6 pCi/L), Room 110 (4.5 pCi/L), Room 182 (4.3 pCi/L)

Project Status:
Initial testing completed; re-test needed for results ≥ 4.0 pCi/L.
Initial testing completed; missing or compromised samples need re-test.

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February 19, 2016

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

Re: **Radon Testing Services**
KCI Job # 12146341.25

Location: Roscoe Nix Elementary School
1100 Corlis Street
Silver Spring, MD 20903

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 Roscoe Nix Elementary School, located at 1100 Corlis Street in Silver Spring, Maryland 20903 (subject site).

Scope of Services:

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

KCI visited the site on January 19, 2016 and deployed fifty-eight (58) activated charcoal (AC) radon test kits. KCI deployed radon test kits in frequently-occupied ground contact rooms, and other areas, (if applicable) in accordance with AARST guidance. A floor plan map of the building with the test locations is included as Attachment A of this report.

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

KCI returned to the site on January 22, 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	108	11.4
	110A	10.0
	134A	5.2
	100	4.6, 4.3(D)
	100C	4.6
	110	4.5
	182	4.3
<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		
Roscoe Nix Elementary School		
Test Period: 01/19/16-01/22/16		
Kit Number	**Room / Area**	**Result**
7726720	100	4.6
7726718	102	1.7
7726713	104	3.1
7726725	106	2.5
7726726	108	11.4
7726707	110	4.5
7726712	112	3.6
7726710	122	0.8
7726706	130	0.8
7726730	132	3.6
7726722	134	1.4
7726728	134	1.5
7726733	140	2.1
7726715	142	3.7
7726716	146	3
7726743	147	1.9
7726742	148	2.4
7726737	151	1.8
7726744	152	1.7
7726740	155	1.9
7726750	156	2.4
7726749	159	1.7
7726748	160	3.2
7726741	162	3.8
7726764	163	1.7
7726738	165	3.6
7726754	166	3.3
7726756	182	4.3
7726735	184	2
7726736	186	3.1
7726729	188	2.3
7726746	190	2.3
7726761	190	2.9
7726751	200	2.6
7726752	207	2.5
7726753	236	2.9
7726704	100 B	2.3
7726711	100 E	3.6
7726724	100 G	3.3
7726721	100C	4.6
7726708	102 E	2.5
7726714	102 G	2
7726709	110 A	10
7726732	* 112 (missing)	0
7726727	114 A	1.5
7726734	134A	5.2

Table Note:
* Missing or Compromised Sample

Radon Testing Results		
Roscoe Nix Elementary School		
Test Period: 01/19/16-01/22/16		
Kit Number	**Room / Area**	**Result**
7726755	163 B	3.1
7726760	* 170 (tampered)	2.9
7726762	190 A	1.7
7726758	* 230 (missing)	0

Table Note:
* Missing or Compromised Sample

Radon Testing Results		
Roscoe Nix Elementary School		
Test Period: 01/19/16-01/22/16		
Kit Number	**QC Type**	**Result**
7726719	D (100)	4.3
7726731	D (132)	3.6
7726723	D (142)	3
7726745	D (166)	3
7726757	D (207)	2.3
7726701	FB (100)	< 0.3
7726739	FB (166)	< 0.3
7721443	OB (0)	< 0.3

Table Note:
* Missing or Compromised Sample

ATTACHMENT C

Laboratory Analytical Results

February 11, 2016

** LABORATORY ANALYSIS REPORT **

Radon test result report for:

ROSCOE NIX ELEMENTARY SCHOOL

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7721443	0	2016-01-19 @ 3:00 pm	2016-01-22 @ 11:00 am	< 0.3	2016-01-27

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

February 11, 2016

** LABORATORY ANALYSIS REPORT **

Radon test result report for:

ROSCOE NIX ELEMENTARY SCHOOL
MAIN FL

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7726701	100	2016-01-19 @ 12:00 pm	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7726719	100	2016-01-19 @ 12:00 pm	2016-01-22 @ 8:00 am	4.3 ± 0.5	2016-01-27
7726720	100	2016-01-19 @ 12:00 pm	2016-01-22 @ 8:00 am	4.6 ± 0.6	2016-01-27
7726704	100 B	2016-01-19 @ 12:00 pm	2016-01-22 @ 9:00 am	2.3 ± 0.4	2016-01-26
7726711	100 E	2016-01-19 @ 12:00 pm	2016-01-22 @ 9:00 am	3.6 ± 0.5	2016-01-27
7726724	100 G	2016-01-19 @ 12:00 pm	2016-01-22 @ 8:00 am	3.3 ± 0.5	2016-01-27
7726721	100C	2016-01-19 @ 12:00 pm	2016-01-22 @ 9:00 am	4.6 ± 0.6	2016-01-27
7726718	102	2016-01-19 @ 12:00 pm	2016-01-22 @ 8:00 am	1.7 ± 0.3	2016-01-26
7726708	102 E	2016-01-19 @ 12:00 pm	2016-01-22 @ 8:00 am	2.5 ± 0.5	2016-01-27
7726714	102 G	2016-01-19 @ 12:00 pm	2016-01-22 @ 8:00 am	2.0 ± 0.3	2016-01-26
7726713	104	2016-01-19 @ 12:00 pm	2016-01-22 @ 9:00 am	3.1 ± 0.5	2016-01-27
7726725	106	2016-01-19 @ 12:00 pm	2016-01-22 @ 9:00 am	2.5 ± 0.4	2016-01-27
7726726	108	2016-01-19 @ 12:00 pm	2016-01-22 @ 9:00 am	11.4 ± 0.9	2016-01-27
7726707	110	2016-01-19 @ 12:00 pm	2016-01-22 @ 9:00 am	4.5 ± 0.5	2016-01-27
7726709	110 A	2016-01-19 @ 12:00 pm	2016-01-22 @ 9:00 am	10.0 ± 0.8	2016-01-27
7726732	112	@	@		
7726712	112	2016-01-19 @ 12:00 pm	2016-01-22 @ 9:00 am	3.6 ± 0.5	2016-01-27
7726727	114 A	2016-01-19 @ 12:00 pm	2016-01-22 @ 9:00 am	1.5 ± 0.4	2016-01-27
7726710	122	2016-01-19 @ 12:00 pm	2016-01-22 @ 9:00 am	0.8 ± 0.3	2016-01-27
7726706	130	2016-01-19 @ 12:00 pm	2016-01-22 @ 9:00 am	0.8 ± 0.3	2016-01-27
7726730	132	2016-01-19 @ 12:00 pm	2016-01-22 @ 9:00 am	3.6 ± 0.5	2016-01-27
7726731	132	2016-01-19 @ 12:00 pm	2016-01-22 @ 9:00 am	3.6 ± 0.5	2016-01-27
7726722	134	2016-01-19 @ 1:00 pm	2016-01-22 @ 9:00 am	1.4 ± 0.3	2016-01-27
7726728	134	2016-01-19 @ 1:00 pm	2016-01-22 @ 9:00 am	1.5 ± 0.4	2016-01-27
7726734	134A	2016-01-19 @ 1:00 pm	2016-01-22 @ 9:00 am	5.2 ± 0.6	2016-01-27
7726733	140	2016-01-19 @ 1:00 pm	2016-01-22 @ 9:00 am	2.1 ± 0.4	2016-01-27
7726715	142	2016-01-19 @ 1:00 pm	2016-01-22 @ 9:00 am	3.7 ± 0.5	2016-01-27
7726723	142	2016-01-19 @ 1:00 pm	2016-01-22 @ 9:00 am	3.0 ± 0.5	2016-01-27
7726716	146	2016-01-19 @ 1:00 pm	2016-01-22 @ 9:00 am	3.0 ± 0.4	2016-01-27
7726743	147	2016-01-19 @ 1:00 pm	2016-01-22 @ 9:00 am	1.9 ± 0.4	2016-01-27
7726742	148	2016-01-19 @ 1:00 pm	2016-01-22 @ 9:00 am	2.4 ± 0.4	2016-01-27
7726737	151	2016-01-19 @ 1:00 pm	2016-01-22 @ 9:00 am	1.8 ± 0.4	2016-01-27
7726744	152	2016-01-19 @ 1:00 pm	2016-01-22 @ 9:00 am	1.7 ± 0.4	2016-01-27
7726740	155	2016-01-19 @ 1:00 pm	2016-01-22 @ 9:00 am	1.9 ± 0.4	2016-01-27
7726750	156	2016-01-19 @ 1:00 pm	2016-01-22 @ 9:00 am	2.4 ± 0.4	2016-01-27
7726749	159	2016-01-19 @ 1:00 pm	2016-01-22 @ 9:00 am	1.7 ± 0.4	2016-01-27
7726748	160	2016-01-19 @ 1:00 pm	2016-01-22 @ 9:00 am	3.2 ± 0.5	2016-01-27

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February 11, 2016

** LABORATORY ANALYSIS REPORT **

Radon test result report for:

ROSCOE NIX ELEMENTARY SCHOOL
MAIN FL

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7726741	162	2016-01-19 @ 1:00 pm	2016-01-22 @ 9:00 am	3.8 ± 0.5	2016-01-27
7726764	163	2016-01-19 @ 2:00 pm	2016-01-22 @ 9:00 am	1.7 ± 0.4	2016-01-27
7726755	163 B	2016-01-19 @ 1:00 pm	2016-01-22 @ 9:00 am	3.1 ± 0.5	2016-01-27
7726738	165	2016-01-19 @ 1:00 pm	2016-01-22 @ 9:00 am	3.6 ± 0.5	2016-01-27
7726739	166	2016-01-19 @ 1:00 pm	2016-01-22 @ 9:00 am	< 0.3	2016-01-27
7726745	166	2016-01-19 @ 1:00 pm	2016-01-22 @ 9:00 am	3.0 ± 0.5	2016-01-27
7726754	166	2016-01-19 @ 1:00 pm	2016-01-22 @ 9:00 am	3.3 ± 0.5	2016-01-27
7726760	170	2016-01-19 @ 1:00 pm	2016-01-22 @ 9:00 am	2.9 ± 0.4	2016-01-27
7726756	182	2016-01-19 @ 1:00 pm	2016-01-22 @ 9:00 am	4.3 ± 0.5	2016-01-27
7726735	184	2016-01-19 @ 1:00 pm	2016-01-22 @ 10:00 am	2.0 ± 0.4	2016-01-27
7726736	186	2016-01-19 @ 1:00 pm	2016-01-22 @ 10:00 am	3.1 ± 0.5	2016-01-27
7726729	188	2016-01-19 @ 1:00 pm	2016-01-22 @ 9:00 am	2.3 ± 0.4	2016-01-27
7726746	190	2016-01-19 @ 1:00 pm	2016-01-22 @ 10:00 am	2.3 ± 0.4	2016-01-27
7726761	190	2016-01-19 @ 1:00 pm	2016-01-22 @ 10:00 am	2.9 ± 0.4	2016-01-27
7726762	190 A	2016-01-19 @ 1:00 pm	2016-01-22 @ 10:00 am	1.7 ± 0.4	2016-01-27
7726751	200	2016-01-19 @ 2:00 pm	2016-01-22 @ 9:00 am	2.6 ± 0.4	2016-01-27

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February 11, 2016

** LABORATORY ANALYSIS REPORT **

Radon test result report for:

ROSCOE NIX ELEMENTARY SCHOOL
UPPER FL

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7726752	207	2016-01-19 @ 2:00 pm	2016-01-22 @ 9:00 am	2.5 ± 0.4	2016-01-27
7726757	207	2016-01-19 @ 2:00 pm	2016-01-22 @ 9:00 am	2.3 ± 0.4	2016-01-27
7726758	230	@	@		
7726753	236	2016-01-19 @ 2:00 pm	2016-01-22 @ 9:00 am	2.9 ± 0.5	2016-01-27

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February 2, 2016

** LABORATORY ANALYSIS REPORT **

Radon test result report for:

MCPS PHASE 5 & 6
TRANSIT BLANKS

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

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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

Chain of Custody

Project Name: MCPS Radon Phase VI

Name of Schools:

1. Francis Scott Key MS
2. Gaithersburg ES
3. Gaithersburg MS
4. Galway ES
5. Great Seneca Creek ES
6. Harmony Hills ES
7. John Poole MS
8. Judith A. Resnik ES
9. Kemp Mill ES
10. Kingsview MS
11. Lakelands Park MS
12. Little Bennett ES
13. Loiderman MS
14. Longview ES
15. Meadow Hall ES
16. Neelsville MS
17. New Hampshire Estates ES
18. North Bethesda MS
19. Northwest HS
20. Pine Crest ES
21. Radnor Center
22. Ritchie Park ES
23. Rolling Terrace ES
24. Roscoe Nix ES
25. Sally K. Ride ES
26. Spark Matsunaga ES
27. Tacoma Park ES
28. Thomas Pyle MS
29. Wayside ES
30. Westbrook ES (retest)
31. Westland MS (retest)
32. William B. Gibbs ES
33. William Tyler Page ES

	Date	Initials
Radon Test Kits Deployed	1/19/16	JM
Radon Test Kits Sampled	1/22/16	JM
Radon Test Kits Shipped to Lab*	1/22/16	JM
Radon Test Kits Received by Lab*	1/26/16	JM

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