School / Facility Radon Testing Report Form

School Year: **24-25**

Facility:	William B. Gibbs, Jr. Elementary School
Address:	12615 Royal Crown Dr.
	Germantown, MD 20876
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	51	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.

MCPS DEM SUSTAINABILITY & COMPLIANCE

School / Facility Radon Testing Report Form

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 Labs	

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):	2/25/2025 2/28/2025
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]	48	0	3	0	51
Duplicates[2]	5	0	0	0	4
Field Blanks[3]	2	0	0	0	2
				Grand Total	58

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		10
Trip Blanks[2]	1	0	1
Office Blanks[3, 4]	1	0	1
			12

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:	49	0	3	0	52
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		
William B. Gibbs Jr. Elementary School		
Test Period: 2/25/2025 - 2/28/2025		
Kit Number	Room / Area	Result
11926903	113	0.6
11926944	121	< 0.3
11926950	122	< 0.3
11926949	124	< 0.3
11926942	125	0.5
11926948	126	< 0.3
11926953	127	< 0.3
11926943	128	< 0.3
11926946	128	< 0.3
11926923	133	< 0.3
11926945	134	< 0.3
11926916	135	< 0.3
11926915	139	< 0.3
11926940	139	< 0.3
11926941	140	0.7
11926960	146	0.8
11926938	150	< 0.3
11926908	151	0.6
11926937	154	< 0.3
11926936	158	< 0.3
11926954	158	< 0.3
11926931	160	< 0.3
11926932	160	< 0.3
11926961	164	< 0.3
11926952	168	0.5
11926951	172	0.8
11926907	174	0.9
11926939	178	< 0.3
11926959	180	0.8
11926902	186	< 0.3
11926934	188	< 0.3
11926904	190	< 0.3
11926930	190	< 0.3
11926901	192	< 0.3
11926914	192	< 0.3
11926963	212	< 0.3
11926947	231	< 0.3

Table 1- Radon Testing Results		
William B. Gibbs Jr. Elementary School		
Test Period: 2/25/2025 - 2/28/2025		
Kit Number	Room / Area	Result
11926962	232	< 0.3
11926926	100C	< 0.3
11926925	100D	0.8
11926917	100F	< 0.3
11926909	BSO	< 0.3
11926911	CAFE	< 0.3
11926912	CAFE	< 0.3
11926918	CONFERENCE	0.8
11926905	GYM	< 0.3
11926913	GYM	????
11926906	GYM OFFICE	< 0.3
11926928	HEALTH	< 0.3
11926927	HEALTH OFFICE	0.5
11926910	KITCHEN OFFICE	< 0.3
11926919	LOUNGE	< 0.3
11926933	MAIN OFFICE	0.5
11926922	MEDIA	< 0.3
11926929	MEDIA	< 0.3
11926920	MEDIA OFFICE	< 0.3
11926921	MEDIA OFFICE	< 0.3
11926924	MEDIA WORK ROOM	< 0.3

Table 2 - Summary Testing Results ≥2.0 pCi/L							
William B. Gibbs Jr. Elementary School							
Test Period: 2/25/2025 - 2/28/2025							
≥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			
William B. Gibbs Jr. Elementary School			
Test Period: 2/25/2025 - 2/28/2025			
Kit Number	**QC Type**	**Room / Area**	**Result**
11926943	D	128	< 0.3
11926915	D	139	< 0.3
11926954	FB	158	< 0.3
11926931	D	160	< 0.3
11926930	FB	190	< 0.3
11926914	D	192	<0.3
11926921	D	MEDIA OFFICE	< 0.3
11926885	OB	OFFICE BLANK	< 0.3
11926889	TB	TRAVEL BLANK	< 0.3

Table 3a - Duplicate Worksheet / Data Validation

William B. Gibbs Jr. Elementary School

Test Period: 2/25/2025 - 2/28/2025

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
11926943	11926946	128	0.3	0.3	✓	0.6	PASS	0.3	<1-pCi/L	✓
11926915	11926940	139	0.3	0.3	✓	0.6	PASS	0.3	<1-pCi/L	✓
11926931	11926932	160	0.3	0.3	✓	0.6	PASS	0.3	<1-pCi/L	✓
11926914	11926930	192	0.3	0.3	✓	0.6	PASS	0.3	<1-pCi/L	✓
11926920	11926921	Media Office	0.3	0.3	✓	0.6	PASS	0.3	<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		
William B. Gibbs Jr. Elementary School		
Test Period: 2/25/25 - 2/28/25		
Kit Number	**Room/Area**	**Reason**
N/A	N/A	N/A

Attachment 2:

Laboratory Reports

March 4, 2025

** LABORATORY ANALYSIS REPORT **

Radon test result report for:

WILLIAM GIBBS ES
MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11926926	100C	2025-02-25 @ 10:00 am	2025-02-28 @ 10:00 am	< 0.3	2025-03-04
11926925	100D	2025-02-25 @ 10:00 am	2025-02-28 @ 10:00 am	0.8 ± 0.3	2025-03-04
11926917	100F	2025-02-25 @ 10:00 am	2025-02-28 @ 10:00 am	< 0.3	2025-03-04
11926903	113	2025-02-25 @ 10:00 am	2025-02-28 @ 10:00 am	0.6 ± 0.3	2025-03-04
11926944	121	2025-02-25 @ 10:00 am	2025-02-28 @ 10:00 am	< 0.3	2025-03-04
11926950	122	2025-02-25 @ 10:00 am	2025-02-28 @ 10:00 am	< 0.3	2025-03-04
11926949	124	2025-02-25 @ 10:00 am	2025-02-28 @ 10:00 am	< 0.3	2025-03-04
11926942	125	2025-02-25 @ 10:00 am	2025-02-28 @ 10:00 am	0.5 ± 0.3	2025-03-04
11926948	126	2025-02-25 @ 10:00 am	2025-02-28 @ 10:00 am	< 0.3	2025-03-04
11926953	127	2025-02-25 @ 10:00 am	2025-02-28 @ 10:00 am	< 0.3	2025-03-04
11926946	128	2025-02-25 @ 10:00 am	2025-02-28 @ 10:00 am	< 0.3	2025-03-04
11926943	128	2025-02-25 @ 10:00 am	2025-02-28 @ 10:00 am	< 0.3	2025-03-04
11926923	133	2025-02-25 @ 10:00 am	2025-02-28 @ 10:00 am	< 0.3	2025-03-04
11926945	134	2025-02-25 @ 10:00 am	2025-02-28 @ 10:00 am	< 0.3	2025-03-04
11926916	135	2025-02-25 @ 10:00 am	2025-02-28 @ 10:00 am	< 0.3	2025-03-04
11926940	139	2025-02-25 @ 10:00 am	2025-02-28 @ 10:00 am	< 0.3	2025-03-04
11926915	139	2025-02-25 @ 10:00 am	2025-02-28 @ 10:00 am	< 0.3	2025-03-04
11926941	140	2025-02-25 @ 10:00 am	2025-02-28 @ 10:00 am	0.7 ± 0.3	2025-03-04
11926960	146	2025-02-25 @ 10:00 am	2025-02-28 @ 10:00 am	0.8 ± 0.4	2025-03-04
11926938	150	2025-02-25 @ 10:00 am	2025-02-28 @ 10:00 am	< 0.3	2025-03-04
11926908	151	2025-02-25 @ 10:00 am	2025-02-28 @ 10:00 am	0.6 ± 0.4	2025-03-04
11926937	154	2025-02-25 @ 10:00 am	2025-02-28 @ 10:00 am	< 0.3	2025-03-04
11926954	158	2025-02-25 @ 10:00 am	2025-02-28 @ 10:00 am	< 0.3	2025-03-04
11926936	158	2025-02-25 @ 10:00 am	2025-02-28 @ 10:00 am	< 0.3	2025-03-04
11926931	160	2025-02-25 @ 10:00 am	2025-02-28 @ 10:00 am	< 0.3	2025-03-04
11926932	160	2025-02-25 @ 10:00 am	2025-02-28 @ 10:00 am	< 0.3	2025-03-04
11926961	164	2025-02-25 @ 10:00 am	2025-02-28 @ 10:00 am	< 0.3	2025-03-04
11926952	168	2025-02-25 @ 10:00 am	2025-02-28 @ 10:00 am	0.5 ± 0.3	2025-03-04
11926951	172	2025-02-25 @ 10:00 am	2025-02-28 @ 10:00 am	0.8 ± 0.3	2025-03-04
11926907	174	2025-02-25 @ 10:00 am	2025-02-28 @ 10:00 am	0.9 ± 0.4	2025-03-04
11926939	178	2025-02-25 @ 10:00 am	2025-02-28 @ 10:00 am	< 0.3	2025-03-04
11926959	180	2025-02-25 @ 10:00 am	2025-02-28 @ 10:00 am	0.8 ± 0.4	2025-03-04
11926902	186	2025-02-25 @ 10:00 am	2025-02-28 @ 10:00 am	< 0.3	2025-03-04
11926934	188	2025-02-25 @ 10:00 am	2025-02-28 @ 10:00 am	< 0.3	2025-03-04
11926930	190	2025-02-25 @ 10:00 am	2025-02-28 @ 10:00 am	< 0.3	2025-03-04
11926904	190	2025-02-25 @ 10:00 am	2025-02-28 @ 10:00 am	< 0.3	2025-03-04
11926901	192	2025-02-25 @ 10:00 am	2025-02-28 @ 10:00 am	< 0.3	2025-03-04

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

March 4, 2025

** LABORATORY ANALYSIS REPORT **

Radon test result report for:

WILLIAM GIBBS ES
MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11926914	192	2025-02-25 @ 10:00 am	2025-02-28 @ 10:00 am	< 0.3	2025-03-04
11926963	212	2025-02-25 @ 10:00 am	2025-02-28 @ 10:00 am	< 0.3	2025-03-04
11926947	231	2025-02-25 @ 10:00 am	2025-02-28 @ 10:00 am	< 0.3	2025-03-04
11926962	232	2025-02-25 @ 10:00 am	2025-02-28 @ 10:00 am	< 0.3	2025-03-04
11926909	BSO	2025-02-25 @ 10:00 am	2025-02-28 @ 10:00 am	< 0.3	2025-03-04
11926911	CAFE	2025-02-25 @ 10:00 am	2025-02-28 @ 10:00 am	< 0.3	2025-03-04
11926912	CAFE	2025-02-25 @ 10:00 am	2025-02-28 @ 10:00 am	< 0.3	2025-03-04
11926918	CONFERENCE	2025-02-25 @ 10:00 am	2025-02-28 @ 10:00 am	0.8 ± 0.4	2025-03-04
11926905	GYM	2025-02-25 @ 10:00 am	2025-02-28 @ 10:00 am	< 0.3	2025-03-04
11926913	GYM	2025-02-25 @ 10:00 am	2025-02-28 @ 10:00 am	???? FI	2025-03-04
11926906	GYM OFFICE	2025-02-25 @ 10:00 am	2025-02-28 @ 10:00 am	< 0.3	2025-03-04
11926928	HEALTH	2025-02-25 @ 10:00 am	2025-02-28 @ 10:00 am	< 0.3	2025-03-04
11926927	HEALTH OFFICE	2025-02-25 @ 10:00 am	2025-02-28 @ 10:00 am	0.5 ± 0.3	2025-03-04
11926910	KITCHEN OFFICE	2025-02-25 @ 10:00 am	2025-02-28 @ 10:00 am	< 0.3	2025-03-04
11926919	LOUNGE	2025-02-25 @ 10:00 am	2025-02-28 @ 10:00 am	< 0.3	2025-03-04
11926933	MAIN OFFICE	2025-02-25 @ 10:00 am	2025-02-28 @ 10:00 am	0.5 ± 0.3	2025-03-04
11926922	MEDIA	2025-02-25 @ 10:00 am	2025-02-28 @ 10:00 am	< 0.3	2025-03-04
11926929	MEDIA	2025-02-25 @ 10:00 am	2025-02-28 @ 10:00 am	< 0.3	2025-03-04
11926920	MEDIA OFFICE	2025-02-25 @ 10:00 am	2025-02-28 @ 10:00 am	< 0.3	2025-03-04
11926921	MEDIA OFFICE	2025-02-25 @ 10:00 am	2025-02-28 @ 10:00 am	< 0.3	2025-03-04
11926924	MEDIA WORK ROOM	2025-02-25 @ 10:00 am	2025-02-28 @ 10:00 am	< 0.3	2025-03-04

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

March 4, 2025 **** LABORATORY ANALYSIS REPORT ****

Radon test result report for:
OFFICE
MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11926885	OB	2025-02-25 @ 11:00 am	2025-02-28 @ 11:00 am	< 0.3	2025-03-04

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

March 4, 2025 **** LABORATORY ANALYSIS REPORT ****

Radon test result report for:
TRAVEL
MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11926889	TB	2025-02-25 @ 11:00 am	2025-02-28 @ 11:00 am	< 0.3	2025-03-04

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 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

EXPOSURE IN BOWSER-MORNER RADON CHAMBER

CLIENT KCI TECHNOLOGIES, INC Job Number 20002919

NOMINAL Conditions: Radon Conc 7.0 pCi/L Rel. Hum 51.4 % Temp. 70.7 F

Date Start: 3/7/25 Date Stop: 3/10/25	Date Start: _____ Date Stop: _____
Time Start: 0832 Time Stop: 0832	Time Start: _____ Time Stop: _____
Device No.'s: (7) CHAR BAGS	Device No.'s: _____
11886401 thru 11886406,	
11886410	
G3 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

March 19, 2025 **** LABORATORY ANALYSIS REPORT ****

Radon test result report for:
QC
MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11886401	SK1	2025-03-07 @ 9:00 am	2025-03-10 @ 9:00 am	7.8 ± 1.1	2025-03-19
11886405	SK2	2025-03-07 @ 9:00 am	2025-03-10 @ 9:00 am	7.1 ± 1.1	2025-03-19
11886406	SK3	2025-03-07 @ 9:00 am	2025-03-10 @ 9:00 am	7.7 ± 1.1	2025-03-19
11886403	SK4	2025-03-07 @ 9:00 am	2025-03-10 @ 9:00 am	7.9 ± 1.2	2025-03-19
11886404	SK5	2025-03-07 @ 9:00 am	2025-03-10 @ 9:00 am	7.6 ± 1.2	2025-03-19
11886410	SK6	2025-03-07 @ 9:00 am	2025-03-10 @ 9:00 am	7.0 ± 1.1	2025-03-19
11886402	SK7	2025-03-07 @ 9:00 am	2025-03-10 @ 9:00 am	8.6 ± 1.2	2025-03-19

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

KCI TECHNOLOGIES

ENGINEERS • PLANNERS • SCIENTISTS • CONSTRUCTION MANAGERS

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

Radon Test Kit Chain of Custody

Project Name: MCPS Radon – Testing February 25th – February 28th, 2025

Name of Schools:

1. Gaithersburg MS
2. Germantown ES
3. William B Gibbs ES
4. Goshen ES
5. Great Seneca Creek ES
6. Jones Lane ES
7. MLK Jr. MS
8. Lake Seneca ES
9. Laytonsville ES

	Date	Initials
Radon Test Kits Deployed	2/25/2025	
Radon Test Kits Collected	2/28/2025	
Radon Test Kits Shipped to Lab*	2/28/2025	
Radon Test Kits Received by Lab*	3/3/2025	

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

MONTGOMERY COUNTY PUBLIC SCHOOLS
RADON TESTING

Executive Summary:
William B. Gibbs, Jr. Elementary School

12615 Royal Crown Drive,
Germantown, MD 20876

Date of Test Report:	3/15/2019
Round of Testing:	Initial **Follow-up** Post Remediation 2 Year Testing 5 Year Testing HVAC Upgrade Window Replacement New Addition New Facility
# of Rooms Tested:	1
# of Rooms ≥ 4.0 pCi/L:	0
Low Value:	<0.4
High Value:	<0.4

Project Status

Retesting completed: No further action at this time.

March 15, 2019

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

Re: Radon Testing Services

Location: William B. Gibbs, Jr. Elementary School
12615 Royal Crown Drive,
Germantown, MD 20876

Dear Mr. Cox:

Intertek-PSI (PSI) is pleased to submit the following report to the Montgomery County Public Schools (MCPS) for completion of a "short-term" 3-day radon test for William B. Gibbs, Jr. Elementary School, located at 12615 Royal Crown Drive, Germantown, MD 20876 (subject site).

Scope of Services:

PSI conducted radon testing at the subject site to evaluate indoor radon levels relative to the USEPA's recommended action level of 4.0 picocuries per Liter (pCi/L) - the level at which EPA recommends that schools take action to reduce the level. PSI conducted the radon testing in accordance with American Association of Radon Scientists and Technologists (AARST) Protocol for Conducting Measurements of Radon and Radon Decay Products in Schools and Large Buildings. A National Radon Safety Board (NRSB) Radon Measurement Specialist (certification #14SS007) supervised the testing. Additional information on radon management and the health effects of radon exposure is available from www.montgomerycountymd.gov/dep/air/radon or www.epa.gov/radon.

PSI visited the site on February 25, 2019 and deployed one (1) activated charcoal (AC) radon test kit. PSI deployed radon test kits in frequently-occupied ground contact rooms, and other areas, (if applicable) in accordance with AARST guidance. PSI returned to the site on February 28, 2019 to retrieve the radon sampling test kit. A floor plan map of the building with the test location is included as Attachment A of this report.

PSI shipped all radon tests via overnight delivery to AccuStar Labs for analysis by gamma-ray spectroscopy. Accustar Labs is a NRSB certified analytical laboratory for radon analysis located at 929 Mount Zion Road, Lebanon, Pennsylvania (certification # ARL0007).

Evaluation of Testing Conditions:

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

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

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

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

Results:

The results of the radon test analysis indicated the following:

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

Notes:
D -Duplicate Sample

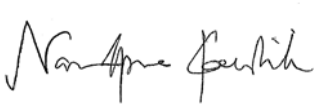
The office blank and lab transit blanks had test results of less than the laboratory detection limit of 0.4 pCi/L. Review of the duplicate sample analysis indicates that adequate laboratory measurement precision was achieved. The Spike sample analysis results indicate the laboratory is operating within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

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

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

Respectfully Submitted,

INTERTEK - PSI



Nand Kaushik, P.E.
Department Manager, Environmental Services
Nand.Kaushik@intertek.com

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

ATTACHMENT B

Radon Test Summary Spreadsheet

Radon Testing Results		
William B. Gibbs Jr. Elementary School		
Testing period: 2/25/19 - 2/28/19		
Kit Number	**Room / Area**	**Result (pCi/L)**
3923467	100E- Conference Room	<0.4

Table Notes:

D – Duplicate

FB – Field Blank

OB – Office Blank

TB – Transit Blank

QC – Quality Control

ATTACHMENT C

Laboratory Analytical Results

AccuStar
Professional Radon Laboratory Services Since 1984

Radon in Air

NRPP 105011 AL
NRSB ARL0007

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

Laboratory Report for:

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

Property Tested: Project # 04481387-1

MCPS Radon Survey Gibbs ES
12615 Royal Crown Drive
Germantown MD 20876

Log Number	Device Number	Test Exposure Duration:		Area Tested	Result pCi/L
3220706	3923467	02/25/2019 8:15 am	02/28/2019 8:01 am	Floor Main 100E (Conference Room)	< 0.4

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

Distributed by: Intertek-PSI (VA)

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

Report Reviewed By: _____ Report Approved By: _____

Shawn Price, Director of Laboratory Operations, AccuStar Labs

Disclaimer:

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

This report may only be transferred to a third party in its entirety. Analytical results relate to the samples AS RECEIVED BY THE LABORATORY. Results shown on this report represent levels of radon gas measured between the dates shown in the room or area of the site identified above as "Property Tested". Incorrect information will affect results. The results may not be construed as either predictive or supportive of measurements conducted in any area of this structure at any other time. AccuStar Labs, its employees and agents are not responsible for the consequences of any action taken or not taken based upon the results reported or any verbal or written interpretation of the results.

MONTGOMERY COUNTY PUBLIC SCHOOLS
RADON TESTING

Executive Summary:
William B. Gibbs, Jr. Elementary School

12615 Royal Crown Drive,
Germantown, MD 20876

Date of Test Report:	2/13/2019
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:	53
# of Rooms ≥ 4.0 pCi/L:	0
Low Value:	< 0.4
High Value:	0.9

Project Status

Initial testing complete: Missing or compromised samples need re-test.

February 13, 2019

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

Re: Radon Testing Services

Location: William B. Gibbs, Jr. Elementary School
12615 Royal Crown Drive,
Germantown, MD 20876

Dear Mr. Cox:

Intertek-PSI (PSI) is pleased to submit the following report to the Montgomery County Public Schools (MCPS) for completion of a "short-term" 3-day radon test for William B. Gibbs, Jr. Elementary School, located at 12615 Royal Crown Drive, Germantown, MD 20876 (subject site).

Scope of Services:

PSI conducted radon testing at the subject site to evaluate indoor radon levels relative to the USEPA's recommended action level of 4.0 picocuries per Liter (pCi/L) - the level at which EPA recommends that schools take action to reduce the level. PSI conducted the radon testing in accordance with American Association of Radon Scientists and Technologists (AARST) Protocol for Conducting Measurements of Radon and Radon Decay Products in Schools and Large Buildings. A National Radon Safety Board (NRSB) Radon Measurement Specialist (certification #14SS007) supervised the testing. Additional information on radon management and the health effects of radon exposure is available from www.montgomerycountymd.gov/dep/air/radon or www.epa.gov/radon.

PSI visited the site on December 4, 2018 and deployed sixty-seven (67) activated charcoal (AC) radon test kits. PSI deployed radon test kits in frequently-occupied ground contact rooms, and other areas, (if applicable) in accordance with AARST guidance. PSI returned to the site on December 7, 2018 to retrieve the radon sampling test kits. A floor plan map of the building with the test locations is included as Attachment A of this report.

As a quality control measure, PSI included duplicate samples, field blanks, lab transit blanks, and office blanks in accordance with AARST recommendations. In addition, PSI submitted ten (10) test kits to Bowser-Morner Inc. as spike samples. The spiked tests were exposed to a known radon concentration by Bowser-Morner Inc. prior to being returned to the laboratory for analysis.

PSI shipped all radon tests via overnight delivery to AccuStar Labs for analysis by gamma-ray spectroscopy. Accustar Labs is a NRSB certified analytical laboratory for radon analysis located at 929 Mount Zion Road, Lebanon, Pennsylvania (certification # ARL0007) and 2 Saber Way, Haverhill, Massachusetts (certification # ARL0017).

Evaluation of Testing Conditions:

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

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

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

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

Results:

The results of the radon test analysis indicated the following:

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

Notes:
D -Duplicate Sample

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

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

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

Respectfully Submitted,

INTERTEK-PSI

Nand Kaushik, P.E.
Department Manager, Environmental Services
Nand.Kaushik@intertek.com

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

ATTACHMENT B

Radon Test Summary Spreadsheet

Radon Testing Results		
William B. Gibbs Jr. Elementary School		
Testing period: 12/4/18 - 12/7/18		
Kit Number	**Room / Area**	**Result (pCi/L)**
3928452	100 (Main Office)	0.7
3928456	100C	0.6
3928454	100D	<0.4
--	100E (MISSED)	--
3928459	100F	0.8
3927062	102	0.5
3927063	102C	0.4
3927061	106	0.7
3928427	107 (IMC)	0.5
3928426	107 (IMC)	<0.4
3928425	107A	<0.4
3928458	108H	0.4
3927065	110B	0.5
3928424	111	<0.4
3928436	113	0.4
3928471	121	<0.4
3928437	122	0.8
3928438	124	0.4
3928473	125	<0.4
3928439	126	<0.4
3928474	127	<0.4
3928440	128	<0.4
3928497	133	<0.4
3928472	134	<0.4
3928499	135	<0.4
3928421	139	0.4
3928475	140	<0.4
3928428	145A	0.7
3928476	146	<0.4
3928477	150	<0.4
3928423	151	0.7
3928479	154	0.4
3928491	158	0.4
3928492	160	0.4
3928493	164	<0.4
3928494	168	<0.4
3928495	172	<0.4
3928498	174	<0.4
3928500	178	<0.4
3928422	180	0.9
3928435	186	0.6
3928434	188	<0.4
3926886	190	0.4

Radon Testing Results		
William B. Gibbs Jr. Elementary School		
Testing period: 12/4/18 - 12/7/18		
Kit Number	**Room / Area**	**Result (pCi/L)**
3928432	192	<0.4
3927069	216	<0.4
3927070	219	<0.4
3926882	224	0.5
3926883	232	<0.4
3926884	244	<0.4
3926885	254	<0.4
3927067	APR	<0.4
3927068	APR	<0.4
3927066	APR Stage	<0.4
3928430	Gym	0.5
3928429	Gym	0.6
3928451	Gym Office	<0.4
3927064	Kitchen	0.8

Radon Testing Results		
William B. Gibbs Jr. Elementary School		
Testing period: 12/4/18 - 12/7/18		
Kit Number	**QC Type**	**Result (pCi/L)**
3928457	100C (D)	0.7
3928455	100D (D)	<0.4
3928478	150 (D)	0.4
3928480	154 (D)	<0.4
3928496	172 (D)	0.6
3928433	192 (D)	<0.4
3928583	Field Blank	<0.4
3928584	Field Blank	<0.4
3928453	Main Office (D)	0.6
3928581	Office Blank	<0.4
3928582	Transit Blank	<0.4

Table Notes:

D – Duplicate

FB – Field Blank

OB – Office Blank

TB – Transit Blank

QC – Quality Control

ATTACHMENT C

Laboratory Analytical Results

AccuStar
Professional Radon Laboratory Services Since 1984

Radon in Air

NELAC NY 11769
NRPP 103216 AL
NRSB ARL0017

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

Laboratory Report for:

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

Property Tested: Project # 04481387-1

MCPS Radon Survey
William B. Gibbs ES
Germantown MD 20876

Log Number	Device Number	Test Exposure Duration:				Area Tested	Result pCi/L
2405574	3928432	12/04/2018	11:20 am	12/07/2018	9:30 am	Floor First Room 192	< 0.4
2405575	3928433	12/04/2018	11:20 am	12/07/2018	9:30 am	Floor First Room 192	< 0.4
2405576	3928434	12/04/2018	11:22 am	12/07/2018	9:31 am	Floor First Room 188	< 0.4
2405577	3928435	12/04/2018	11:24 am	12/07/2018	9:32 am	Floor First Room 186	0.6
2405578	3928436	12/04/2018	11:26 am	12/07/2018	9:33 am	Floor First Room 113	0.4
2405579	3928437	12/04/2018	11:28 am	12/07/2018	9:34 am	Floor First Room 122	0.8
2405580	3928438	12/04/2018	11:30 am	12/07/2018	9:35 am	Floor First Room 124	0.4
2405581	3928439	12/04/2018	11:32 am	12/07/2018	9:36 am	Floor First Room 126	< 0.4
2405582	3928440	12/04/2018	11:34 am	12/07/2018	9:37 am	Floor First Room 128	< 0.4
2405583	3928471	12/04/2018	11:36 am	12/07/2018	9:38 am	Floor First Room 121	< 0.4
2405584	3928472	12/04/2018	11:38 am	12/07/2018	9:39 am	Floor First Room 134	< 0.4

Comment: Per ANSI/AARST MAH 2014, requirements for test locations within a room were not met for device 3927064 (Kitchen). Your test is for informational purposes only. A copy of this report was emailed to Intertek-PSI (VA).

Distributed by: Intertek-PSI (VA)

Date Received: 12/09/2018 Date Logged: 12/09/2018 Date Analyzed: 12/11/2018 Date Reported: 01/29/2019

Report Reviewed By: _____ Report Approved By: _____

Shawn Price, Director of Laboratory Operations, AccuStar Labs

Disclaimer:

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

This report may only be transferred to a third party in its entirety. Analytical results relate to the samples AS RECEIVED BY THE LABORATORY. Results shown on this report represent levels of radon gas measured between the dates shown in the room or area of the site identified above as "Property Tested". Incorrect information will affect results. The results may not be construed as either predictive or supportive of measurements conducted in any area of this structure at any other time. AccuStar Labs, its employees and agents are not responsible for the consequences of any action taken or not taken based upon the results reported or any verbal or written interpretation of the results.

NELAC NY 11769
NRPP 103216 AL
NRSB ARL0017

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

Laboratory Report for:

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

Property Tested: Project # 04481387-1

MCPS Radon Survey
William B. Gibbs ES
Germantown MD 20876

Log Number	Device Number	Test Exposure Duration:				Area Tested	Result pCi/L
2405585	3928473	12/04/2018	11:40 am	12/07/2018	9:40 am	Floor First Room 125	< 0.4
2405586	3928474	12/04/2018	11:42 am	12/07/2018	9:41 am	Floor First Room 127	< 0.4
2405587	3928475	12/04/2018	11:44 am	12/07/2018	9:42 am	Floor First Room 140	< 0.4
2405588	3928476	12/04/2018	11:46 am	12/07/2018	9:43 am	Floor First Room 146	< 0.4
2405589	3928477	12/04/2018	11:50 am	12/07/2018	9:45 am	Floor First Room 150	< 0.4
2405590	3928478	12/04/2018	11:50 am	12/07/2018	9:45 am	Floor First Room 150	0.4
2405591	3928479	12/04/2018	11:54 am	12/07/2018	9:47 am	Floor First Room 154	0.4
2405592	3928480	12/04/2018	11:54 am	12/07/2018	9:47 am	Floor First Room 154	< 0.4
2405593	3928491	12/04/2018	11:56 am	12/07/2018	9:48 am	Floor First Room 158	0.4
2405594	3928492	12/04/2018	11:58 am	12/07/2018	9:49 am	Floor First Room 160	0.4
2405595	3928493	12/04/2018	12:00 pm	12/07/2018	9:50 am	Floor First Room 164	< 0.4

Comment: Per ANSI/AARST MAH 2014, requirements for test locations within a room were not met for device 3927064 (Kitchen). Your test is for informational purposes only. A copy of this report was emailed to Intertek-PSI (VA).

Distributed by: Intertek-PSI (VA)

Date Received: 12/09/2018 Date Logged: 12/09/2018 Date Analyzed: 12/11/2018 Date Reported: 01/29/2019

Report Reviewed By: 

Report Approved By: 

Shawn Price, Director of Laboratory Operations, AccuStar Labs

Disclaimer:

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

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NELAC NY 11769
NRPP 103216 AL
NRSB ARL0017

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

Laboratory Report for:

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

Property Tested: Project # 04481387-1

MCPS Radon Survey
William B. Gibbs ES
Germantown MD 20876

Log Number	Device Number	Test Exposure Duration:				Area Tested	Result pCi/L
2405596	3928494	12/04/2018	12:02 pm	12/07/2018	9:51 am	Floor First Room 168	< 0.4
2405597	3928495	12/04/2018	12:06 pm	12/07/2018	9:53 am	Floor First Room 172	< 0.4
2405598	3928496	12/04/2018	12:06 pm	12/07/2018	9:53 am	Floor First Room 172	0.6
2405599	3928497	12/04/2018	12:08 pm	12/07/2018	9:54 am	Floor First Room 133	< 0.4
2405600	3928498	12/04/2018	12:10 pm	12/07/2018	9:55 am	Floor First Room 174	< 0.4
2405601	3928499	12/04/2018	12:12 pm	12/07/2018	9:56 am	Floor First Room 135	< 0.4
2405602	3928500	12/04/2018	12:14 pm	12/07/2018	9:57 am	Floor First Room 178	< 0.4
2405603	3928421	12/04/2018	12:16 pm	12/07/2018	9:58 am	Floor First Room 139	0.4
2405604	3928422	12/04/2018	12:18 pm	12/07/2018	9:59 am	Floor First Room 180	0.9
2405605	3928423	12/04/2018	12:20 pm	12/07/2018	10:00 am	Floor First Room 151	0.7
2405606	3928424	12/04/2018	12:22 pm	12/07/2018	10:01 am	Floor First Room 111	< 0.4

Comment: Per ANSI/AARST MAH 2014, requirements for test locations within a room were not met for device 3927064 (Kitchen). Your test is for informational purposes only. A copy of this report was emailed to Intertek-PSI (VA).

Distributed by: Intertek-PSI (VA)

Date Received: 12/09/2018 Date Logged: 12/09/2018 Date Analyzed: 12/11/2018 Date Reported: 01/29/2019

Report Reviewed By: 

Report Approved By: 

Shawn Price, Director of Laboratory Operations, AccuStar Labs

Disclaimer:

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NELAC NY 11769
NRPP 103216 AL
NRSB ARL0017

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

Laboratory Report for:

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

Property Tested: Project # 04481387-1

MCPS Radon Survey
William B. Gibbs ES
Germantown MD 20876

Log Number	Device Number	Test Exposure Duration:				Area Tested	Result pCi/L
2405607	3928425	12/04/2018	12:24 pm	12/07/2018	10:02 am	Floor First Room 107A	< 0.4
2405608	3928426	12/04/2018	12:26 pm	12/07/2018	10:03 am	Floor First Room IMC	< 0.4
2405609	3928427	12/04/2018	12:28 pm	12/07/2018	10:04 am	Floor First Room IMC	0.5
2405610	3928428	12/04/2018	12:30 pm	12/07/2018	10:05 am	Floor First Room 145A	0.7
2405611	3928429	12/04/2018	12:32 pm	12/07/2018	10:06 am	Floor First Room Gym	0.6
2405612	3928430	12/04/2018	12:34 pm	12/07/2018	10:07 am	Floor First Room Gym	0.5
2405613	3928451	12/04/2018	12:36 pm	12/07/2018	10:08 am	Floor First Room Gym Office	< 0.4
2405614	3928452	12/04/2018	12:40 pm	12/07/2018	10:10 am	Floor First Room Main Office	0.7
2405615	3928453	12/04/2018	12:40 pm	12/07/2018	10:10 am	Floor First Room Main Office	0.6
2405616	3928454	12/04/2018	12:44 pm	12/07/2018	10:12 am	Floor First Room 100D	< 0.4
2405617	3928455	12/04/2018	12:44 pm	12/07/2018	10:12 am	Floor First Room 100D	< 0.4

Comment: Per ANSI/AARST MAH 2014, requirements for test locations within a room were not met for device 3927064 (Kitchen). Your test is for informational purposes only. A copy of this report was emailed to Intertek-PSI (VA).

Distributed by: Intertek-PSI (VA)

Date Received: 12/09/2018 Date Logged: 12/09/2018 Date Analyzed: 12/11/2018 Date Reported: 01/29/2019

Report Reviewed By: 

Report Approved By: 

Shawn Price, Director of Laboratory Operations, AccuStar Labs

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NELAC NY 11769
NRPP 103216 AL
NRSB ARL0017

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

Laboratory Report for:

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

Property Tested: Project # 04481387-1

MCPS Radon Survey
William B. Gibbs ES
Germantown MD 20876

Log Number	Device Number	Test Exposure Duration:				Area Tested	Result pCi/L
2405618	3928456	12/04/2018	12:48 pm	12/07/2018	10:14 am	Floor First Room 100C	0.6
2405619	3928457	12/04/2018	12:48 pm	12/07/2018	10:14 am	Floor First Room 100C	0.7
2405620	3928459	12/04/2018	12:50 pm	12/07/2018	10:15 am	Floor First Room 106F	0.8
2405621	3928458	12/04/2018	12:52 pm	12/07/2018	10:16 am	Floor First Room 108H	0.4
2405622	3927061	12/04/2018	12:54 pm	12/07/2018	10:17 am	Floor First Room 106	0.7
2405623	3927062	12/04/2018	12:56 pm	12/07/2018	10:18 am	Floor First Room 102	0.5
2405624	3927063	12/04/2018	12:58 pm	12/07/2018	10:19 am	Floor First Room 102C	0.4
2405625	3927064	12/04/2018	1:00 pm	12/07/2018	10:20 am	Floor First Room Kitchen	0.8
2405626	3927065	12/04/2018	1:02 pm	12/07/2018	10:21 am	Floor First Room 110B	0.5
2405627	3927066	12/04/2018	1:04 pm	12/07/2018	10:22 am	Floor First Room APR Stage	< 0.4
2405628	3927067	12/04/2018	1:06 pm	12/07/2018	10:23 am	Floor First Room APR	< 0.4

Comment: Per ANSI/AARST MAH 2014, requirements for test locations within a room were not met for device 3927064 (Kitchen). Your test is for informational purposes only. A copy of this report was emailed to Intertek-PSI (VA).

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Report Reviewed By: _____ Report Approved By: _____

Shawn Price, Director of Laboratory Operations, AccuStar Labs

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NELAC NY 11769
NRPP 103216 AL
NRSB ARL0017

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

Laboratory Report for:

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

Property Tested: Project # 04481387-1

MCPS Radon Survey
William B. Gibbs ES
Germantown MD 20876

Log Number	Device Number	Test Exposure Duration:				Area Tested	Result pCi/L
2405629	3927068	12/04/2018	1:08 pm	12/07/2018	10:24 am	Floor First Room APR	< 0.4
2405630	3927069	12/04/2018	1:10 pm	12/07/2018	10:25 am	Floor Second Room 216	< 0.4
2405631	3927070	12/04/2018	1:12 pm	12/07/2018	10:26 am	Floor Second Room 219	< 0.4
2405632	3926882	12/04/2018	1:14 pm	12/07/2018	10:27 am	Floor Second Room 224	0.5
2405633	3926883	12/04/2018	1:16 pm	12/07/2018	10:28 am	Floor Second Room 232	< 0.4
2405634	3926884	12/04/2018	1:18 pm	12/07/2018	10:29 am	Floor Second Room 244	< 0.4
2405635	3926885	12/04/2018	1:20 pm	12/07/2018	10:30 am	Floor Second Room 254	< 0.4
2405636	3926886	12/04/2018	1:22 pm	12/07/2018	10:31 am	Floor Second Room 190	0.4
2405637	3928581	12/04/2018	6:00 am	12/07/2018	6:00 pm	Office Blank	< 0.4
2405638	3928582	12/04/2018	6:00 am	12/07/2018	6:00 pm	Transit Blank	< 0.4
2405639	3928583	12/04/2018	11:20 am	12/07/2018	10:31 am	Field Blank	< 0.4

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Distributed by: Intertek-PSI (VA)

Date Received: 12/09/2018 Date Logged: 12/09/2018 Date Analyzed: 12/11/2018 Date Reported: 01/29/2019

Report Reviewed By: 

Report Approved By: 

Shawn Price, Director of Laboratory Operations, AccuStar Labs

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NELAC NY 11769
NRPP 103216 AL
NRSB ARL0017

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

Laboratory Report for:

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

Property Tested: Project # 04481387-1

MCPS Radon Survey
William B. Gibbs ES
Germantown MD 20876

Log Number	Device Number	Test Exposure Duration:		Area Tested	Result pCi/L
2405640	3928584	12/04/2018 11:20 am	12/07/2018 10:31 am	Field Blank	< 0.4

Comment: Per ANSI/AARST MAH 2014, requirements for test locations within a room were not met for device 3927064 (Kitchen). Your test is for informational purposes only. A copy of this report was emailed to Intertek-PSI (VA).

Distributed by: Intertek-PSI (VA)

Date Received: 12/09/2018 Date Logged: 12/09/2018 Date Analyzed: 12/11/2018 Date Reported: 01/29/2019

Report Reviewed By: _____ Report Approved By: _____

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AccuStar
Professional Radon Laboratory Services Since 1984

Radon in Air

NRPP 105011 AL
NRSB ARL0007
Ohio RL41

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

Laboratory Report for:

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

Property Tested:

MCPS Radon Survey
4514 Taylorsville Road
Dayton OH 45424

Log Number	Device Number	Test Exposure Duration:				Area Tested	Result pCi/L
3204125	3926831	12/07/2018	9:47 am	12/10/2018	9:47 am	Spike	36.1
3204126	3926832	12/07/2018	9:47 am	12/10/2018	9:47 am	Spike	34.8
3204127	3926833	12/07/2018	9:47 am	12/10/2018	9:47 am	Spike	33.7
3204128	3926834	12/07/2018	9:47 am	12/10/2018	9:47 am	Spike	35.8
3204129	3926835	12/07/2018	9:47 am	12/10/2018	9:47 am	Spike	35.0
3204130	3926836	12/07/2018	9:47 am	12/10/2018	9:47 am	Spike	34.5
3204131	3926837	12/07/2018	9:47 am	12/10/2018	9:47 am	Spike	34.6
3204132	3926838	12/07/2018	9:47 am	12/10/2018	9:47 am	Spike	34.3
3204133	3926839	12/07/2018	9:47 am	12/10/2018	9:47 am	Spike	33.2
3204134	3926840	12/07/2018	9:47 am	12/10/2018	9:47 am	Spike	34.0

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

Test Performed By: Unknown

Distributed by: Intertek-PSI (VA)

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

Report Reviewed By: _____ Report Approved By: _____

Shawn Price, Director of Laboratory Operations, AccuStar Labs

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EXPOSURE IN BOWSER-MORNER RADON CHAMBER

CLIENT Intertek - PSI Job Number 187732

NOMINAL Conditions: Radon Conc 32.6 pCi/L Rel. Hum 49.1 % Temp. 70.1 F

Date Start: 12/7/18 Date Stop: 12/10/18

Time Start: 0947 Time Stop: 0947

Device No.'s: (10) Char. Cans- 3926831 thru 3926840

G2 Left

Date Start: ____ Date Stop: ____

Time Start: ____ Time Stop: ____

Device No.'s: ____

Date Start: ____ Date Stop: ____

Time Start: ____ Time Stop: ____

Device No.'s: ____

Date Start: ____ Date Stop: ____

Time Start: ____ Time Stop: ____

Device No.'s: ____

Date Start: ____ Date Stop: ____

Time Start: ____ Time Stop: ____

Device No.'s: ____

Date Start: ____ Date Stop: ____

Time Start: ____ Time Stop: ____

Device No.'s: ____

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

intertek
psi

Chain of Custody

Project Name: MCPS Radon Survey 2018

Name of Schools:

1. Grosvenor Center (Luxmanor ES)
2. Montrose Center
3. Gibbs ES
4. Westbrook ES
5. Hadley Farms (Resnik ES)
6. Kingsview MS
7. Longview School
8. Lynnbrook Center
9. Magruder HS
10. McAuliffe ES
11. McNair ES
12. Mill Creek Towne ES
13. Martin Luther King MS
14. Montgomery Village MS
15. Great Seneca Creek ES
16. Quince Orchard HS
17. Redland MS
18. North Bethesda MS
19. Spark Matsunaga ES
20. Whetstone ES
21. Wood Acres ES

	Date	Initials
Radon Test Kits Deployed	12/04/2018	NL
Radon Test Kits Sampled	12/07/2018	NL
Radon Test Kits Shipped to Lab*	12/07/2018	NL
Radon Test Kits Received by Lab*	12/08/2018; 12/09/2018	NL

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

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: William B. Gibbs Elementary School

Date of Test Report:	2/19/2016
Round of Testing:	Initial Follow-up Post Remediation
# Rooms Tested:	46
# Rooms ≥ 4.0 pCi/L:	0
Low Value:	< 0.3
High Value:	1.2

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

KCI TECHNOLOGIES

ENGINEERS • PLANNERS • SCIENTISTS • CONSTRUCTION MANAGERS

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

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: William B. Gibbs Elementary School
12615 Royal Crown Drive
Germantown, MD 20876

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 William B. Gibbs Elementary School, located at 12615 Royal Crown Drive in Germantown, Maryland 20876 (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-six (56) 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	none	n/a
<4.0 piC/L	See Attachment B	

Notes:
D- Duplicate sample

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

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

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

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

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		
William B Gibbs Elementary School		
Test Period: 01/19/16-01/22/16		
Kit Number	**Room / Area**	**Result**
7722521	100	0.7
7722516	102	< 0.3
7722551	104	0.8
7722556	104	0.6
7722595	106	< 0.3
7722522	107	0.7
7722540	111	0.6
7722553	113	0.6
7722564	121	< 0.3
7722539	122	< 0.3
7722514	124	< 0.3
7722535	125	< 0.3
7722568	127	0.6
7722567	133	< 0.3
7722526	134	< 0.3
7722562	135	< 0.3
7722570	139	< 0.3
7722536	140	< 0.3
7722524	146	< 0.3
7722565	150	0.6
7722538	151	< 0.3
7722566	154	< 0.3
7722569	158	< 0.3
7722525	160	< 0.3
7722533	164	< 0.3
7722542	168	< 0.3
7722546	172	0.8
7722573	174	< 0.3
7722572	178	< 0.3
7722534	180	1.1
7722549	186	< 0.3
7722541	187	0.8
7722543	187	< 0.3
7722547	188	0.7
7722545	190	< 0.3
7722519	192	< 0.3
7722523	247	< 0.3
7722581	249	< 0.3
7722515	254	0.7
7722548	100C	0.9
7722552	100D	0.8
7722529	100E	1.2
7722530	100F	0.9
7722513	102C	< 0.3
7722517	102D	< 0.3
7722518	107A	< 0.3

Table Note:
* Missing or Compromised Sample

Radon Testing Results		
William B Gibbs Elementary School		
Test Period: 01/19/16-01/22/16		
Kit Number	**Room / Area**	**Result**
7722571	108H	< 0.3
7722554	187A	< 0.3

Table Note:
* Missing or Compromised Sample

Radon Testing Results		
William B Gibbs Elementary School		
Test Period: 01/19/16-01/22/16		
Kit Number	**QC Type**	**Result**
7722563	D (100E)	0.9
7722555	D (104)	< 0.3
7722550	D (133)	< 0.3
7722577	D (151)	< 0.3
7722544	D (187)	< 0.3
7722520	FB (100)	< 0.3
7722584	FB (249)	< 0.3
7722575	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:

WILLIAM B GIBBS ES MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7722575	0	2016-01-19 @ 3:00 pm	2016-01-22 @ 11:00 am	< 0.3	2016-01-27
7722520	100	2016-01-19 @ 9:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-27
7722521	100	2016-01-19 @ 9:00 am	2016-01-22 @ 7:00 am	0.7 ± 0.3	2016-01-27
7722548	100C	2016-01-19 @ 9:00 am	2016-01-22 @ 7:00 am	0.9 ± 0.3	2016-01-27
7722552	100D	2016-01-19 @ 9:00 am	2016-01-22 @ 7:00 am	0.8 ± 0.3	2016-01-27
7722563	100E	2016-01-19 @ 9:00 am	2016-01-22 @ 7:00 am	0.9 ± 0.3	2016-01-27
7722529	100E	2016-01-19 @ 9:00 am	2016-01-22 @ 7:00 am	1.2 ± 0.4	2016-01-27
7722530	100F	2016-01-19 @ 9:00 am	2016-01-22 @ 7:00 am	0.9 ± 0.3	2016-01-27
7722516	102	2016-01-19 @ 9:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7722513	102C	2016-01-19 @ 9:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7722517	102D	2016-01-19 @ 9:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7722556	104	2016-01-19 @ 9:00 am	2016-01-22 @ 7:00 am	0.6 ± 0.3	2016-01-26
7722551	104	2016-01-19 @ 9:00 am	2016-01-22 @ 7:00 am	0.8 ± 0.3	2016-01-27
7722555	104	2016-01-19 @ 9:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-27
7722595	106	2016-01-19 @ 9:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-27
7722522	107	2016-01-19 @ 9:00 am	2016-01-22 @ 7:00 am	0.7 ± 0.3	2016-01-26
7722518	107A	2016-01-19 @ 9:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7722571	108H	2016-01-19 @ 9:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7722540	111	2016-01-19 @ 9:00 am	2016-01-22 @ 7:00 am	0.6 ± 0.2	2016-01-26
7722553	113	2016-01-19 @ 9:00 am	2016-01-22 @ 7:00 am	0.6 ± 0.3	2016-01-26
7722564	121	2016-01-19 @ 9:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7722539	122	2016-01-19 @ 9:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7722514	124	2016-01-19 @ 9:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7722535	125	2016-01-19 @ 9:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7722568	127	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	0.6 ± 0.3	2016-01-26
7722567	133	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7722550	133	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7722526	134	2016-01-19 @ 9:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7722562	135	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7722570	139	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7722536	140	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7722524	146	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7722565	150	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	0.6 ± 0.3	2016-01-27
7722577	151	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7722538	151	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7722566	154	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7722569	158	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-26

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:

WILLIAM B GIBBS ES MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7722525	160	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7722533	164	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7722542	168	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7722546	172	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	0.8 ± 0.3	2016-01-26
7722573	174	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7722572	178	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7722534	180	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	1.1 ± 0.4	2016-01-27
7722549	186	2016-01-19 @ 9:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-27
7722543	187	2016-01-19 @ 9:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7722544	187	2016-01-19 @ 9:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7722541	187	2016-01-19 @ 9:00 am	2016-01-22 @ 7:00 am	0.8 ± 0.3	2016-01-27
7722554	187A	2016-01-19 @ 9:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-27
7722547	188	2016-01-19 @ 9:00 am	2016-01-22 @ 7:00 am	0.7 ± 0.3	2016-01-27
7722545	190	2016-01-19 @ 9:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7722519	192	2016-01-19 @ 9:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7722523	247	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7722584	249	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7722581	249	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7722515	254	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	0.7 ± 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 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

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

February 15, 2016

** LABORATORY ANALYSIS REPORT **

Spike Sample Laboratory Results

Radon test result report for:

MCPS

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

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

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

EXPOSURE IN BOWSER-MORNER RADON CHAMBER

CLIENT KCF Technologies Inc. Job Number 173704

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

Date Start: 1/30/16 Date Stop: 2/1/16	Date Start: _____ Date Stop: _____
Time Start: 0926 Time Stop: 0926	Time Start: _____ Time Stop: _____
Device No.'s: (6) Char. Bags -	Device No.'s: _____
7718281, 7718282, 7718291,	_____
7718288, 7718289, 7718273	_____
E3 Left	_____
Date Start: _____ Date Stop: _____	Date Start: _____ Date Stop: _____
Time Start: _____ Time Stop: _____	Time Start: _____ Time Stop: _____
Device No.'s: _____	Device No.'s: _____
_____	_____
_____	_____
_____	_____
Date Start: _____ Date Stop: _____	Date Start: _____ Date Stop: _____
Time Start: _____ Time Stop: _____	Time Start: _____ Time Stop: _____
Device No.'s: _____	Device No.'s: _____
_____	_____
_____	_____
_____	_____

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

KCI TECHNOLOGIES

ENGINEERS • PLANNERS • SCIENTISTS • CONSTRUCTION MANAGERS

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

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

M. A. CECIL & ASSOCIATES, INC.
4475 Shannon Way, Port Republic, Maryland 20676 (301) 855-7710
INDUSTRIAL HYGIENE AND ENVIRONMENTAL HEALTH

July 25, 2011

Mr. Sean Yarup
Montgomery County Public Schools
16651 Crabbs Branch Way
Rockville, Maryland 20855

Re: Radon Evaluation- Gibbs Elementary School

Dear Mr. Yarup:

Environmental radon testing has been completed at Gibbs Elementary School.

Charcoal canisters were placed in twenty-seven locations on the first floor of the school. The canisters were placed on July 8, 2011 and retrieved on July 11, 2011. The results and sampling locations are summarized in the attached table.

The detected radon concentrations for all 27 sampling locations were below the EPA recommended level of 4.0 pico curies per liter (pCi/l) of air.

Should you have any questions concerning this report please do not hesitate to contact us.

Sincerely,

Kim Fowler
Industrial Hygienist

Michael A. Cecil, CIH

Environmental Radon Test Results
Gibbs Elementary School
July 11, 2011

Location	Detected Radon Concentration (pCi/l)
Main Office	1.8
Room 178	1.4
Room 139	0.9
Room 174	1.2
Room 135	1.5
Room 172	1.4
Room 168	1.5
Room 164	1.4
Room 160	0.6
Room 158	0.9
Room 154	0.7
Room 150	1.2
Room 146	1.0
Room 140	0.7
Room 125	1.2
Room 134	1.3
Room 121	1.5
Room 186	1.3
Room 188	1.3
Room 190	1.0
Room 192	0.7
Gym	1.2
Room 113	1.6
IMC	1.5
Multi-Purpose Room	1.2
Staff Lounge	2.0
Room 180	1.7