6311 Wilson Lane, Bethesda, Maryland 20817

Date of Test Report:	3/29/16 Follow-Up
Round of Testing:	Initial
	Follow-up
	Post Remediation
# Rooms Tested	5
# Rooms <u>≥</u> 4.0 pCi/L:	0
Low Value:	<0.4
High Value:	0.6
Confirmed Rooms ≥ 4.0 pCi/L US EPA	0
Action Level	

EXECUTIVE SUMMARY

Summary of Sampling Events ≥ 4.0 pCi/L

Room	Result (pCi/L) 2/18/16 (Rev 1 Initial)	Result (pCi/L) 3/29/16 Follow-Up	Average Result (pCi/L)
111A	0.5 Tampered	No Access	0.5
117	<0.3 Tampered	0.5	0.4
122	Missing	<0.4	<0.4
126	<0.3 Tampered	0.6	0.5
135	Missing	0.4	0.4
140A	Missing	<0.4	<0.4



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

MCPS RADON TESTING

Executive Summary: Thomas W. Pyle Middle School

Date of Test Report:	3/29/2016
Round of Testing:	Initial
(Follow-up
	Post Remediation
# Rooms Tested:	5
# Rooms \geq 4.0 pCi/L:	0
Low Value:	< 0.4
High Value:	0.6

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



ENGINEERS • PLANNERS • SCIENTISTS • CONSTRUCTION MANAGERS

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

March 29, 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 # 12146341.31
Location:	Thomas W. Pyle Middle School
	6311 Wilson Lane
	Bethesda, MD 20817

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 Thomas W. Pyle Middle School, located at 6311 Wilson Lane in Bethesda, Maryland 20817 (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 March 8, 2016 and deployed eleven (11) 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 11, 2016 to retrieve the radon sampling test kits. KCI 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 (certification # ARL0007) located at 929 Mount

Zion Road, Lebanon, Pennsylvania.

Evaluation of Testing Conditions:

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

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

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

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

Results:

The results of the radon test analysis indicated the following:

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

Notes: D- Duplicate sample

The field blank, office blanks, 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 (410) 316-7800.

Mr. Richard Cox March 29, 2016 Page 4

Sincerely,

James Makler

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

	Radon Testing Results		
Thomas W. Pyle MS			
	Test Period: 03/08/16-03/11/16		
Kit Number	Room / Area	Result	
3028958	117	0.5	
3028869	122	<0.4	
3028957	122	<0.4	
3028870	126	<0.4	
3028960	126	<0.4	
3028868	126	0.6	
3028993	126	<0.4	
3029116	135	0.4	
3028959	140A	<0.4	

	Radon Testing Results	
	Thomas W. Pyle MS	
	Test Period: 03/08/16-03/11/16	
Kit Number	QC Type	Result
3029117	D (135)	<0.4
3029118	FB (135)	<0.4

ATTACHMENT C

Laboratory Analytical Results



NRPP 10511AL NRSB ARL0007

Laboratory Report for:

KCI Technologies

936 Ridgebrook Rd

Sparks MD 21152

Radon in Air

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

Property Tested: Project # 12146341

Thomas W. Pyle Middle School 6311 Wilson Lane Bethesda MD 20817

Log Number	Device Number	Test Exposu	e Duration:	Area Tested	Result (pCi/L)
3016742	3028958	03/08/2016 10:10 am	03/11/2016 9:51 am	Unit 117 Weight Room First Floor	0.5
3016743	3028957	03/08/2016 10:15 am	03/11/2016 9:54 am	Unit 122 Cafeteria First Floor	<0.4
3016744	3028869	03/08/2016 10:17 am	03/11/2016 9:55 am	Unit 122 Cafeteria First Floor	<0.4
3016745	3028960	03/08/2016 10:25 am	03/11/2016 9:50 am	Unit 126 Gym First Floor	<0.4
3016746	3028870	03/08/2016 10:26 am	03/11/2016 9:50 am	Unit 126 Gym First Floor	<0.4
3016747	3028868	03/08/2016 10:29 am	03/11/2016 9:49 am	Unit 126 Gym First Floor	0.6
3016748	3028993	03/08/2016 10:31 am	03/11/2016 9:49 am	Unit 126 Gym First Floor	<0.4
3016749	3029116	03/08/2016 10:42 am	03/11/2016 9:42 am	Unit 135 First Floor	0.4
3016750	3029117	03/08/2016 10:43 am	03/11/2016 9:42 am	Unit 135 First Floor	<0.4
3016751	3029118	03/08/2016 10:44 am	03/11/2016 9:42 am	Unit 135 First Floor	<0.4

Comment: A copy of this report was emailed to tehsin@kci.com.

Distributed by: KCI Technologies, Inc.

Date Received: 03/15/2016 Date Logged:

aged: 03/15/2016

Date Analyzed: 03/16/2016 Date

Date Reported: 03/16/2016

Disclaimer:

Report Reviewed By: ___ Anten Carton

Report Approved By: ______ Report Approved By: ______ Carolyn D. Koke, President, AccuStar Labs

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.



Radon in Air

NRPP 10511AL NRSB ARL0007	EPA Method #402-R-92-004 Charcoal Canister NRPP Device Code 6048 NRSB Device Code 10317
Laboratory Report for:	Property Tested: Project # 12146341
KCI Technologies	Thomas W. Pyle Middle School
936 Ridgebrook Rd	6311 Wilson Lane
Sparks MD 21152	Bethesda MD 20817

Log Number	Device Number	Test Exposur	e Duration:	Area Tested	Result (pCi/L)
3016752	3028959	03/08/2016 10:50 am	03/11/2016 9:39 am	Unit 140A First Floor	<0.4

Comment: A copy of this report was emailed to tehsin@kci.com.

Distributed by: KCI Technologies, Inc.

Date Received: 03/15/2016 Date Logged:

ogged: 03/15/2016

Date Analyzed: 03/16/2016 D

Date Reported: 03/16/2016

Disclaimer:

Report Reviewed By: ___

_____ Karten Report Approved By: _____ Couly A Kishe Carolyn D. Koke, President, AccuStar Labs

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PO BOX 990 Jonestown PA 17038 717-274-8310

Professional Radion Laboratory Survivors Since 1984 Medway MA 02053

Radon Device Type Open Face Canister 888-480-8812 www.accustarlabs.com

Send Written Report To:

Send Written F	Report To:	Site Tested:	
Name	KCI Technologies, Inc	Site Name	Thread
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Address		Address	
City / Town	Sparks	City / Town	Betherd
State/Province	Postal Code MD 21152	State/Province	Postal Code
Report Country	Baltimore County	Test Country	Montgome
Email Address	tehsin@kci.com	Project Numbe	r 12146341

Thomas W. Pyle Middle School 70806 6311 Wilson Lane Montgomery County e Postal Code MD Bethesda

Contact Information:

Contact	Tehsin Aurangabadwala
Telephone	410-891-1726
Technician	
Cert. Number	
Signature	

Lab Use	Only											1 of 1
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Start Date	mm/dd/yyyy	03/07/2016	03/07/2016	03/07/2016	03/07/2016	03/07/2016	03/07/2016	03/08/2016	03/07/2016	03/07/2016	03/08/2016	3 8 2016
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Lab Use Only												Rev E1512

1 of 1



Laboratory Report for:

NRPP 10511AL

NRSB ARL0007

Radon in Air

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

Property Tested: Project # 12146341

MCPS Radon Phase 11 Office Blank

KCI Technologies 936 Ridgebrook Rd Sparks MD 21152

Log Number	Device Number	Test Exposur	e Duration:		Area Tested	Resul	t (pCi/L)
3016739	3029191	03/08/2016 10:00 am	03/11/2016	10:00 am	Office Blank		<0.4

Comment: A copy of this report was emailed to tehsin@kci.com.

Distributed by: KCI Technologies, Inc.

Date Received: 03/15/2016 Date Logged:

ogged: 03/15/2016

Date Analyzed: 03/15/2016 Date Reporte

Date Reported: 03/16/2016

Disclaimer:

Report Reviewed By: ___ effry Cartin

Report Approved By: ______ Report Approved By: ______ Carolyn D. Koke, President, AccuStar Labs

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Test must start before the expiration date shown on your device or test results will be invalid

Rev E1512

1 of 1



Radon in Air

				EPA Method #402-R-92-004
NRPP 10	0511AL			Charcoal Canister
NRSB A	RL0007			NRPP Device Code 6048
				NRSB Device Code 10317
Labora	atory Report	for:	Property Tested:	
		!	MODO	
ł		ogies	MCPS	
ę	936 Ridgebro	ook Rd	Transit Blanks	
5	Sparks MD	21152		
Log Number	Device Number	Test Exposure Duration:	Area Tested	Result (pCi/L)
3010588	3028053	01/10/2016 1.00 pm $01/22/2016$ 9.30	am 1	< 0.4

Turnbol	Tambol				
3010588	3028953	01/19/2016 1:00 pm	01/22/2016 9:30 am	1	< (
3010589	3028955	01/19/2016 1:00 pm	01/22/2016 9:30 am	2	< (
3010590	3028954	01/19/2016 1:00 pm	01/22/2016 9:30 am	3	<
3010591	3028997	01/19/2016 1:00 pm	01/22/2016 9:30 am	4	<

Comment: AMENDED REPORT for 3028953-8955, 3028997 on 2/22/16 to add all missing information from the blank datasheet. A copy of this report was emailed to james.moulsdale@kci.com.

Distributed by: KCI Technologies, Inc. Date Received: 01/27/2016 Date Logged: 01/27/2016 Date Analyzed: 01/28/2016 Date Reported: 01/28/2016 Report Reviewed By: Cruese Bates Report Approved By: Cruely D. Koke

Disclaimer:

Carolyn D. Koke, President, AccuStar Labs 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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Return canisters for analysis to: AccuStar Labs 929 Mt. Zion Rd., Lebanon, PA 17046 RECEIVED JA 800-523-4964	Accus N 2NFØRMAT	Star Lab ION FO rojects	s – Lebanc RM - Large Apartmer	on, PA Buildings - its	Instr Read Disc	uctions on bac l instructions o repancies will	ck of fo carefull invalid	rm y ate tests	
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6-42

TCS INDUSTRIES, INC.

(717) 657-7032

RADON GAS DETECTION

www.radondetek.com

4326 Crestview Road, Harrisburg, PA 17112

James Moulsdale KCI 936 Ridgebrook Rd. Sparks, MD 21152 April 04, 2016

Dear Mr. Moulsdale:

The spike exposure data were:

Start 04/04/16 @ 1110 hrs EDT End 04/06/16 @ 1113 hrs EDT

AC 3029218, 3029219, 3029220, 3029217, 3029214, 3029217, and 3029166

Average radon concentration was 10.6 pCi/L +/- 5%

Avg, Temp. was 71FAvg. RHwas 51%Elevationwas 490 feet above sea level

Sincerely,

Cut

Carl H. Distenfeld, CHP



NRPP 10511AL NRSB ARL0007

Laboratory Report for:

KCI Technologies

936 Ridgebrook Rd Sparks MD 21152 EPA Method #402-R-92-004 Charcoal Canister NRPP Device Code 6048 NRSB Device Code 10317

Property Tested:

MCPS Radon Spike Sample Laboratory Results

Log Number	Number	Test Exposur	e Duration:	Area Tested	Result (pCi/L)
3020102	3029166	04/04/2016 11:10 am	04/06/2016 11:1	3 am Not Indicated	11.9
3020103	3029214	04/04/2016 11:10 am	04/06/2016 11:1	3 am Not Indicated	11.5
3020104	3029217	04/04/2016 11:10 am	04/06/2016 11:1	3 am Not Indicated	10.7
3020105	3029218	04/04/2016 11:10 am	04/06/2016 11:1	3 am Not Indicated	11.3
3020106	3029219	04/04/2016 11:10 am	04/06/2016 11:1	3 am Not Indicated	11.0
3020107	3029220	04/04/2016 11:10 am	04/06/2016 11:1	3 am Not Indicated	10.5

Comment: A copy of this report was emailed to james.moulsdale@kci.com.

Distributed by: KCI Technolo	gies, Inc.					
Date Received: 04/07/2016	Date Logged:	04/07/2016	Date Analyzed:	04/07/2016	Date Reported:	04/08/2016
Note: Spike samples are test canisters t They provide a quality control measur tested.	hat are deliberately exp e in the testing process	osed to a controlled h and do NOT reflect ra	igh level of radon in a lat Idon levels in the buildin	boratory. g being		
Report Review Disclaimer: The uncertainty of this radon measu concentrations, sample collection ter	red By:	Factors contributing	Report Approv	ed By: Carolyn statistical variatio ditions may influ	D. Koke, President, Ad ns, daily and seasonal ence the test results.	ccuStar Labs variations in radon

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PO BOX 990 Jonestown PA 17038 717-274-8310

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Test must start before the expiration date shown on your device or test results will be invalid

1 of 1

Rev E1512



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

MCPS RADON TESTING

Executive Summary: Thomas W. Pyle Middle School

Date of Test Report:	2/18/2016 (Rev 1)
Round of Testing:	Initial
	Follow-up
	Post Remediation
# Rooms Tested:	84
# Rooms \geq 4.0 pCi/L:	0
Low Value:	< 0.3
High Value:	3.2

Project Status: Initial testing completed; missing or compromised samples need re-test.



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

February 18, 2016 (Rev 1)

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

Re:	<u>Radon Testing Services</u>
	KCI Job # 12146341.25
Location:	Thomas W. Pyle Middle School
	6311 Wilson Lane
	Bethesda, MD 20817

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 Thomas W. Pyle Middle School, located at 6311 Wilson Lane in Bethesda, Maryland 20817 (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 one hundred (100) 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 $\leq 65^{\circ}$ F.

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

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

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

Results:

The results of the radon test analysis indicated the following:

Radon Concentration	Room	Result
≥4.0 piC/L	none	n/a
<4.0 piC/L	See Attachn	nent 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.

Mr. Richard Cox February 18, 2016 Page 4

Sincerely,

James Makler

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						
	Thomas Pyle Middle School					
Test Period: 01/19/16-01/22/16						
Kit Number						
Kit Number	Room / Area	Result				
7722444	36	< 0.3				
7722445	39	0.6				
7722446	40	< 0.3				
7722448	41	< 0.3				
7722449	42	0.7				
7722451	43	0.7				
7722452	44	1.5				
7722453	45	3.2				
7722401	100	< 0.3				
7722491	102	< 0.3				
7722490	110	< 0.3				
7722488	111	< 0.3				
7722484	112	< 0.3				
7722485	113	< 0.3				
7722483	114	< 0.3				
7722482	115	< 0.3				
7722481	116	< 0.3				
7722469	119	< 0.3				
7722468	121	< 0.3				
7722479	122	< 0.3				
7722465	123	< 0.3				
7722464	125	< 0.3				
7722477	126	< 0.3				
7722460	127	< 0.3				
7722461	128	< 0.3				
7722458	129	< 0.3				
7722459	130	< 0.3				
7722457	131	< 0.3				
7722421	132	0.9				
7722455	133	< 0.3				
7722416	134	< 0.3				
7722439	137	< 0.3				
7722422	138	< 0.3				
7722438	139	< 0.3				
7722423	140	1				
7722437	141	< 0.3				
7722425	142	0.7				
7722426	142	0.7				
7722436	143	< 0.3				
7722435	145	0.6				
7722429	146	< 0.3				
7722430	148	0.7				
7722431	150	< 0.3				
7722434	151	< 0.3				
7722432	152	< 0.3				
7722433	153	< 0.3				

	Radon Testing Results						
	Thomas Pyle Middle School						
	Test Period: 01/19/16-01/22/16						
Kit Number	Kit Number Room / Area Result						
7702410	200						
7722410	200	< 0.3					
7722411	209	< 0.3					
7722413	214	< 0.3					
7722413	1004	< 0.3					
7722405	1008	< 0.3					
7722406	1000	< 0.3					
7722408	1005	0.7					
7722400	100G	0.6					
7722403	1000	< 0.0					
7722402	1024	< 0.3					
7722492	102/1	< 0.3					
7722494	102B	< 0.3					
7722495	102E	< 0.3					
7722496	102G	< 0.3					
7722497	1020	< 0.3					
7722487	110A	< 0.3					
7722489	* 111A (tampered)	0.5					
7722474	* 117 (tampered)	< 0.3					
7722473	118A	< 0.3					
7722471	118B	< 0.3					
7722470	118D	< 0.3					
7722475	120B	< 0.3					
7722480	* 122 (missing)	0					
7722466	123A	< 0.3					
7722467	123B	< 0.3					
7722462	125A	< 0.3					
7722476	* 126 (tampered)	< 0.3					
7722478	126B	0.8					
7722456	132A	0.6					
7722420	134C	< 0.3					
7722419	134D	< 0.3					
7722498	* 135 (missing)	0					
7722424	* 140A (missing)	0					
7722427	144A	0.7					
7722428	144B	0.7					
7722414	218A	< 0.3					
7722442	36A	< 0.3					
7722443	36C	< 0.3					
7722447	41A	< 0.3					
7722450	43C	0.6					

Radon Testing Results				
Thomas Pyle Middle School				
	Test Period: 01/19/16-01/22/16	-		
Kit Number	QC Type	Result		
7722402	D (100)	< 0.3		
7722486	D (113)	< 0.3		
7722472	D (118B)	< 0.3		
7722463	D (125A)	0.6		
7722417	D (134)	0.7		
7722499	* D (135:missing)	0		
7722440	D (137)	< 0.3		
7722412	D (209)	< 0.3		
7722454	D (45)	3.1		
7722403	FB (100)	< 0.3		
7722418	FB (134)	< 0.3		
7722441	FB (137)	< 0.3		
7719452	OB (0)	< 0.3		

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

ATTACHMENT C

Laboratory Analytical Results

February LABORATORY ANALYSIS 11, REPORT **

Radon test result report for: THOMAS PYLE MIDDLE SCHOOL MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7719452	0	2016-01-19 @ 4:00 pm	2016-01-22 @ 10:00 am	< 0.3	2016-01-27
7722401	100	2016-01-19 @ 9:00 am	2016-01-22 @ 6:00 am	< 0.3	2016-01-26
7722402	100	2016-01-19 @ 9:00 am	2016-01-22 @ 6:00 am	< 0.3	2016-01-26
7722403	100	2016-01-19 @ 9:00 am	2016-01-22 @ 6:00 am	< 0.3	2016-01-26
7722404	100A	2016-01-19 @ 9:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7722405	100B	2016-01-19 @ 9:00 am	2016-01-22 @ 6:00 am	< 0.3	2016-01-26
7722406	100C	2016-01-19 @ 9:00 am	2016-01-22 @ 6:00 am	< 0.3	2016-01-26
7722408	100E	2016-01-19 @ 9:00 am	2016-01-22 @ 6:00 am	0.7 ± 0.3	2016-01-26
7722409	100G	2016-01-19 @ 9:00 am	2016-01-22 @ 6:00 am	0.6 ± 0.3	2016-01-26
7722407	100H	2016-01-19 @ 9:00 am	2016-01-22 @ 6:00 am	< 0.3	2016-01-26
7722491	102	2016-01-19 @ 11:00 am	2016-01-22 @ 6:00 am	< 0.3	2016-01-26
7722492	102A	2016-01-19 @ 11:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7722493	102D	2016-01-19 @ 11:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7722494	102E	2016-01-19 @ 11:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7722495	102F	2016-01-19 @ 11:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7722496	102G	2016-01-19 @ 11:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7722497	102H	2016-01-19 @ 11:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7722490	110	2016-01-19 @ 11:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7722487	110A	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7722488	111	2016-01-19 @ 11:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7722489	111A	2016-01-19 @ 11:00 am	2016-01-22 @ 7:00 am	0.5 ± 0.3	2016-01-26
7722484	112	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7722485	113	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7722486	113	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7722483	114	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7722482	115	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7722481	116	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7722474	117	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7722473	118A	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7722471	118B	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7722472	118B	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7722470	118D	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7722469	119	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7722475	120B	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7722468	121	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7722480	122	@	@		
7722479	122	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-26

February LABORATORY ANALYSIS 11, REPORT **

Radon test result report for: THOMAS PYLE MIDDLE SCHOOL MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7722465	123	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7722466	123A	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7722467	123B	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7722464	125	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7722462	125A	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7722463	125A	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	0.6 ± 0.3	2016-01-26
7722476	126	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7722477	126	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7722478	126B	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	0.8 ± 0.3	2016-01-26
7722460	127	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7722461	128	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7722458	129	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7722459	130	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7722457	131	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7722421	132	2016-01-19 @ 9:00 am	2016-01-22 @ 7:00 am	0.9 ± 0.3	2016-01-26
7722456	132A	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	0.6 ± 0.3	2016-01-26
7722455	133	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7722416	134	2016-01-19 @ 9:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7722417	134	2016-01-19 @ 9:00 am	2016-01-22 @ 7:00 am	0.7 ± 0.3	2016-01-26
7722418	134	2016-01-19 @ 9:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7722420	134C	2016-01-19 @ 9:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7722419	134D	2016-01-19 @ 9:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7722498	135	@	@		
7722499	135	@	@		
7722439	137	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7722440	137	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7722441	137	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7722422	138	2016-01-19 @ 9:00 am	2016-01-22 @ 6:00 am	< 0.3	2016-01-26
7722438	139	2016-01-19 @ 10:00 am	2016-01-22 @ 6:00 am	< 0.3	2016-01-26
7722423	140	2016-01-19 @ 9:00 am	2016-01-22 @ 6:00 am	1.0 ± 0.3	2016-01-26
7722424	140A	@	@		
7722437	141	2016-01-19 @ 10:00 am	2016-01-22 @ 6:00 am	< 0.3	2016-01-26
7722425	142	2016-01-19 @ 9:00 am	2016-01-22 @ 6:00 am	0.7 ± 0.3	2016-01-26
7722426	142	2016-01-19 @ 9:00 am	2016-01-22 @ 6:00 am	0.7 ± 0.3	2016-01-26
7722436	143	2016-01-19 @ 10:00 am	2016-01-22 @ 6:00 am	< 0.3	2016-01-26
7722427	144A	2016-01-19 @ 9:00 am	2016-01-22 @ 6:00 am	0.7 ± 0.3	2016-01-26
7722428	144B	2016-01-19 @ 9:00 am	2016-01-22 @ 6:00 am	0.7 ± 0.3	2016-01-26

February LABORATORY ANALYSIS 11, REPORT **

Radon test result report for: THOMAS PYLE MIDDLE SCHOOL MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7722435	145	2016-01-19 @ 10:00 am	2016-01-22 @ 6:00 am	0.6 ± 0.3	2016-01-26
7722429	146	2016-01-19 @ 9:00 am	2016-01-22 @ 6:00 am	< 0.3	2016-01-26
7722430	148	2016-01-19 @ 10:00 am	2016-01-22 @ 6:00 am	0.7 ± 0.3	2016-01-26
7722431	150	2016-01-19 @ 10:00 am	2016-01-22 @ 6:00 am	< 0.3	2016-01-26
7722434	151	2016-01-19 @ 10:00 am	2016-01-22 @ 6:00 am	< 0.3	2016-01-26
7722432	152	2016-01-19 @ 10:00 am	2016-01-22 @ 6:00 am	< 0.3	2016-01-26
7722433	153	2016-01-19 @ 10:00 am	2016-01-22 @ 6:00 am	< 0.3	2016-01-26
7722410	208	2016-01-19 @ 9:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7722411	209	2016-01-19 @ 9:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7722412	209	2016-01-19 @ 9:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7722415	214	2016-01-19 @ 9:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7722413	218	2016-01-19 @ 9:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7722414	218A	2016-01-19 @ 9:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7722444	36	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7722442	36A	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7722443	36C	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7722445	39	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	0.6 ± 0.3	2016-01-26
7722446	40	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7722448	41	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7722447	41A	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7722449	42	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	0.7 ± 0.3	2016-01-26
7722451	43	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	0.7 ± 0.3	2016-01-26
7722450	43C	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	0.6 ± 0.3	2016-01-26
7722452	44	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	1.5 ± 0.3	2016-01-26
7722453	45	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	3.2 ± 0.4	2016-01-26
7722454	45	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	3.1 ± 0.5	2016-01-26

February LABORATORY ANALYSIS 2, 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

February LABORATORY ANALYSIS 15, REPORT **

Spike Sample Laboratory Results

Radon test result report for: MCPS

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7718273	101A	2016-01-30 @ 9:00 am	2016-02-01 @ 9:00 am	6.5 ± 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 Technologie	5 Inc. Job Number 173704
NOMINAL Conditions: Radon Conc 5.9	pCi/L Rel. Hum <u>45.9</u> % Temp. <u>79.0</u> F
Date Start: 1/30/16 Date Stop: 2/1/16	Date Start: Date Stop:
Time Start: <u>9926</u> Time Stop: <u>9926</u>	Time Start: Time Stop:
Device No.'s: (6) Char. Bago-	Device No.'s:
, ופבצורר, הוצבצורר ווצבצורר	
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



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

13. Loiderman MS

12. Little Bennett ES

- 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