



MCPS RADON TESTING – EXECUTIVE SUMMARY

Site Name	Radnor Center
Date of Test Report	2/21/2023
Round of Testing	Initial Follow-up Post Remediation 2 Year Testing 5 Year Testing HVAC Upgrade Window Replacement New Addition New Facility
# Rooms Tested	32
# Rooms ≥ 4.0 pCi/L	4
Lowest Value	<0.3 pCi/L
Highest Value	5.3 pCi/L

Project Status:

1. Testing completed;
2. Mitigate Rooms 4, 17, 9, Office 1, and Kitchen Office
3. 5 - Year Testing Complete



February 21, 2023

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

Re: **Radon Testing Services**
KCI Job # 122210551

Location: Radnor Center
7000 Radnor Road
Bethesda, MD 20817

Dear Mr. Croyle:

KCI Technologies, Inc. (KCI) is pleased to submit the following report to Montgomery County Public Schools (MCPS) pursuant to completing a “short-term” 3 day radon test for the Radnor Center, located at 7000 Radnor Road 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 Proficiency Program (NRPP) Radon Measurement Specialist (certification #111004 RT) supervised the testing. Additional information on radon management and the health effects of radon exposure is available from <https://www.montgomeryschoolsmd.org> or www.epa.gov/radon.

KCI visited the site on January 31, 2023 and deployed thirty-eight (38) activated charcoal (AC) radon test kits. KCI deployed radon test kits in all frequently-occupied ground contact rooms, and other areas, (if applicable) in accordance with AARST guidance.

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

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

KCI returned to the site on February 3, 2023 to retrieve the radon sampling test kits. KCI shipped all radon tests via overnight delivery to Airchek, Inc. for analysis by gamma-ray spectroscopy. Airchek, Inc.

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

Evaluation of Testing Conditions:

These tests represent:

- Follow up to initial testing.

These tests were conducted to:

- Evaluated radon concentrations at the facility.

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

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

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

KCI also compiled weather data for the testing period and conducted observations of relevant field conditions. During the test period, weather records indicate low temperatures were in the mid-20s°F and high temperatures ranged to the low 40s°F. Maximum sustained winds ranged from 0-21 miles per hour. Average humidity was around 70% with .18 inches of precipitation (rain) was recorded during testing period.

Results:

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

The results of the radon test analysis indicated the following:

Radon Concentration	Room	Result
≥4.0 pCi/L	4	3.5
	17	5.3
	9 Office 1	3.7
	Kitchen Office	3.7
<4.0 pCi/L	See Attachment B	

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

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

Sincerely,



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

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

ATTACHMENT A

Floor Plan With Test Locations

ATTACHMENT B

Radon Test Summary Spreadsheet

Table Notes:

AC- Activated Charcoal

ACI- Air Check, Inc.

D- Duplicate

FB- Field Blank

KCI- KCI Technologies, Inc.

OB- Office Blank

PM- Project Manager

OC- Quality Control

Table 1- Radon Testing Results		
Radnor Center		
Test Period: 01/31/2023 - 02/03/2023		
Kit Number	Room / Area	Result
11634022	1	2.6
11634023	2	2.4
11634024	3	2.5
11634016	4	3.5
11634021	5	2.9
11634031	5	2.6
11634015	6	3.2
11634014	7	2.7
11634013	8	2.5
11634047	9	2.2
11634049	10	2.1
11634039	11	2.0
11634040	11	1.7
11634042	12	1.7
11634034	13	1.4
11634041	14	1.7
11634008	15	2.1
11634002	16	1.9
11634001	17	5.3
11634056	18	2.0
11634048	9 OFFICE 1	3.7
11634027	9 OFFICE 2	2.5
11634011	APR	3.0
11634012	APR	2.5
11634033	FRONT SIDE OFFICE	2.4
11634009	HEALTH ROOM	1.8
11634032	HEALTH ROOM. OFFICE	2.4
11634029	IMC	2.1
11634030	IMC	1.7
11634026	K	2.7
11634025	KITCHEN OFFICE	3.7
11634005	MAIN OFFICE	2.1
11634006	MAIN OFFICE 1	2.4
11634007	OFFICE 2	1.8
11634004	STAFF WORK ROOM	1.6
11634010	STAFF WORKROOM	1.3
11634017	TV STUDIO	< 0.3
11634018	TV STUDIO	1.4

Table 2- Radon Testing Results			
Radnor Center			
Test Period: 01/31/23 - 02/03/23			
Kit Number	QC Type	Room / Area	Result
11634031	D	5	2.6
11634040	D	11	1.7
11634010	D	Staff work room	1.3
11634017	FB	Tv studio	< 0.3
11634990	OB	OFFICE BLANK	< 0.3
11634991	TB	TRAVEL BLANK	< 0.3

Summary of Missed Locations		
Radnor Center		
Test Period: 01/31/23 - 02/03/23		
Kit Number	Room/Area	Result
	N/A	

Summary of Missing, Compromised and >= 4 piC/L Tests		
Radnor Center		
Test Period: 01/31/23 - 02/03/23		
Kit Number	Room/Area	Result
11634016	4	3.5
11634001	17	5.3
11634048	9 OFFICE 1	3.7
11634025	KITCHEN OFFICE	3.7

Table Note:
 * Missing or Compromised Sample

ATTACHMENT C

Laboratory Analytical Results

Radon test result report for:
RADNOR CENTER
MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11634022	1	2023-01-31 @ 9:00 am	2023-02-03 @ 8:00 am	2.6 ± 0.4	2023-02-07
11634049	10	2023-01-31 @ 9:00 am	2023-02-03 @ 8:00 am	2.1 ± 0.4	2023-02-07
11634040	11	2023-01-31 @ 9:00 am	2023-02-03 @ 8:00 am	1.7 ± 0.4	2023-02-07
11634039	11	2023-01-31 @ 9:00 am	2023-02-03 @ 8:00 am	2.0 ± 0.4	2023-02-07
11634042	12	2023-01-31 @ 9:00 am	2023-02-03 @ 8:00 am	1.7 ± 0.4	2023-02-07
11634034	13	2023-01-31 @ 9:00 am	2023-02-03 @ 8:00 am	1.4 ± 0.4	2023-02-07
11634041	14	2023-01-31 @ 9:00 am	2023-02-03 @ 8:00 am	1.7 ± 0.4	2023-02-07
11634008	15	2023-01-31 @ 8:00 am	2023-02-03 @ 8:00 am	2.1 ± 0.4	2023-02-07
11634002	16	2023-01-31 @ 8:00 am	2023-02-03 @ 8:00 am	1.9 ± 0.4	2023-02-07
11634001	17	2023-01-31 @ 8:00 am	2023-02-03 @ 8:00 am	5.3 ± 0.5	2023-02-07
11634056	18	2023-01-31 @ 9:00 am	2023-02-03 @ 8:00 am	2.0 ± 0.4	2023-02-07
11634023	2	2023-01-31 @ 9:00 am	2023-02-03 @ 9:00 am	2.4 ± 0.4	2023-02-07
11634024	3	2023-01-31 @ 9:00 am	2023-02-03 @ 8:00 am	2.5 ± 0.4	2023-02-07
11634016	4	2023-01-31 @ 9:00 am	2023-02-03 @ 9:00 am	3.5 ± 0.4	2023-02-07
11634031	5	2023-01-31 @ 9:00 am	2023-02-03 @ 8:00 am	2.6 ± 0.4	2023-02-07
11634021	5	2023-01-31 @ 9:00 am	2023-02-03 @ 8:00 am	2.9 ± 0.4	2023-02-07
11634015	6	2023-01-31 @ 9:00 am	2023-02-03 @ 8:00 am	3.2 ± 0.4	2023-02-07
11634014	7	2023-01-31 @ 9:00 am	2023-02-03 @ 8:00 am	2.7 ± 0.4	2023-02-07
11634013	8	2023-01-31 @ 8:00 am	2023-02-03 @ 8:00 am	2.5 ± 0.4	2023-02-07
11634047	9	2023-01-31 @ 9:00 am	2023-02-03 @ 8:00 am	2.2 ± 0.4	2023-02-07
11634048	9 OFFICE 1	2023-01-31 @ 9:00 am	2023-02-03 @ 8:00 am	3.7 ± 0.4	2023-02-07
11634027	9 OFFICE 2	2023-01-31 @ 9:00 am	2023-02-03 @ 8:00 am	2.5 ± 0.4	2023-02-07
11634012	APR	2023-01-31 @ 9:00 am	2023-02-03 @ 9:00 am	2.5 ± 0.4	2023-02-07
11634011	APR	2023-01-31 @ 9:00 am	2023-02-03 @ 8:00 am	3.0 ± 0.4	2023-02-07
11634033	FRONT SIDE OFFICE	2023-01-31 @ 9:00 am	2023-02-03 @ 8:00 am	2.4 ± 0.4	2023-02-07
11634009	HEALTH ROOM	2023-01-31 @ 9:00 am	2023-02-03 @ 9:00 am	1.8 ± 0.4	2023-02-07
11634032	HEALTH ROOM. OFFICE	2023-01-31 @ 9:00 am	2023-02-03 @ 9:00 am	2.4 ± 0.4	2023-02-07
11634029	IMC	2023-01-31 @ 9:00 am	2023-02-03 @ 8:00 am	2.1 ± 0.4	2023-02-07
11634030	IMC	2023-01-31 @ 9:00 am	2023-02-03 @ 8:00 am	1.7 ± 0.4	2023-02-07
11634026	K	2023-01-31 @ 9:00 am	2023-02-03 @ 8:00 am	2.7 ± 0.4	2023-02-07
11634025	KITCHEN OFFICE	2023-01-31 @ 9:00 am	2023-02-03 @ 8:00 am	3.7 ± 0.4	2023-02-07
11634005	MAIN OFFICE	2023-01-31 @ 8:00 am	2023-02-03 @ 8:00 am	2.1 ± 0.4	2023-02-07
11634006	MAIN OFFICE 1	2023-01-31 @ 8:00 am	2023-02-03 @ 8:00 am	2.4 ± 0.4	2023-02-07
11634007	OFFICE 2	2023-01-31 @ 8:00 am	2023-02-03 @ 8:00 am	1.8 ± 0.4	2023-02-07
11634004	STAFF WORK ROOM	2023-01-31 @ 9:00 am	2023-02-03 @ 8:00 am	1.6 ± 0.4	2023-02-07
11634010	STAFF WORKROOM	2023-01-31 @ 9:00 am	2023-02-03 @ 8:00 am	1.3 ± 0.4	2023-02-07
11634018	TV STUDIO	2023-01-31 @ 9:00 am	2023-02-03 @ 8:00 am	1.4 ± 0.4	2023-02-07

February 7, 2023

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:
RADNOR CENTER
MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11634017	TV STUDIO	2023-01-31 @ 9:00 am	2023-02-03 @ 8:00 am	< 0.3	2023-02-07

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

EXPOSURE IN BOWSER-MORNER RADON CHAMBER

CLIENT KCI TECHNOLOGIES, INC Job Number 208802

NOMINAL Conditions: Radon Conc 24.4 pCi/L Rel. Hum 48.6 % Temp. 79.3 F

Date Start: 1/27/23 Date Stop: 1/30/23 Date Start: _____ Date Stop: _____

Time Start: 0816 Time Stop: 0816 Time Start: _____ Time Stop: _____

Device No.'s: (5) CHAR BAGS Device No.'s: _____

11633682, 11633687, 11633688 _____

11633695, 11633696 _____

P3 left

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

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

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

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

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

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

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

February 3, 2023

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

OFFICE

MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11633696	SK10	2023-01-27 @ 8:00 am	2023-01-30 @ 8:00 am	24.2 ± 1.9	2023-02-03
11633682	SK6	2023-01-27 @ 8:00 am	2023-01-30 @ 8:00 am	26.9 ± 2.1	2023-02-03
11633687	SK7	2023-01-27 @ 8:00 am	2023-01-30 @ 8:00 am	23.8 ± 1.9	2023-02-03
11633688	SK8	2023-01-27 @ 8:00 am	2023-01-30 @ 8:00 am	25.9 ± 2.1	2023-02-03
11633695	SK9	2023-01-27 @ 8:00 am	2023-01-30 @ 8:00 am	27.0 ± 2.2	2023-02-03

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



Radon Test Kit Chain of Custody

Project Name: MCPS Radon – Week 2 January Schools

Name of Schools:

1. Beall ES
2. Gaithersburg HS
3. Kingsview MS
4. Lucy V. Barnsley ES
5. Martin Luther King Jr. MS
6. Mill Creek Towne ES
7. North Bethesda MS
8. Radnor Center
9. Winston Churchill HS

	Date	Initials
Radon Test Kits Deployed	01/31/2023	DM
Radon Test Kits Collected	02/03/2023	DM
Radon Test Kits Shipped to Lab*	02/03/2023	DM
Radon Test Kits Received by Lab*	02/06/2023	DM

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

RADON SCREENING SURVEY – FOLLOW-UP RADNOR CENTER

7000 Radnor Road, Bethesda, Maryland 20817

EXECUTIVE SUMMARY

Date of Test Report:	3/25/16 Follow-Up
Round of Testing:	Initial Follow-up Post Remediation
# Rooms Tested	6
# Rooms \geq 4.0 pCi/L:	0
Low Value:	1.0
High Value:	2.6
Confirmed Rooms \geq 4.0 pCi/L US EPA Action Level	0

Summary of Sampling Events \geq 4.0 pCi/L

Room	Result (pCi/L) 2/18/16 Initial	Result (pCi/L) 3/25/16 Follow-Up	Average Result (pCi/L)
Mail Room	5.4	2.1	3.8
APR	5.0	2.6	3.8
18	4.7	1.6	3.2
K Office	--- Missing	1.1	1.1
17	3.9	1.1	2.5
Prin Office	3.4	1.1	2.3



MCPS RADON TESTING

Executive Summary: Radnor Center

Date of Test Report:	3/25/2016
Round of Testing:	Initial Follow-up Post Remediation
# Rooms Tested:	6
# Rooms \geq 4.0 pCi/L:	0
Low Value:	1.0
High Value:	2.6

Project Status:

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



March 25, 2016

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

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

Location: Radnor Center
7000 Radnor Road
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 Radnor Center, located at 7000 Radnor Road 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 February 29, 2016 and deployed nine (9) activated charcoal (AC) radon test kits. KCI deployed radon test kits in frequently-occupied ground contact rooms, and other areas, (if applicable) in accordance with AARST guidance. A floor plan map of the building with the test locations is included as Attachment A of this report.

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

KCI returned to the site on March 3, 2016 to retrieve the radon sampling test kits. KCI shipped all radon tests 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 pCi/L	none	n/a
< 4.0 pCi/L	See Attachment B	

Notes:
D- Duplicate sample

The field blank, 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. Mouldale
Radon Measurement Specialist
KCI Technologies, Inc.

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

ATTACHMENT A

Floor Plan With Test Locations

ATTACHMENT B

Radon Test Summary Spreadsheet

Table Notes:

AC- Activated Charcoal

ACI- Air Chek, Inc.

D- Duplicate

FB- Field Blank

KCI- KCI Technologies, Inc.

OB- Office Blank*

PM- Project Manager

QC- Quality Control

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

Radon Testing Results		
Radnor Center		
Test Period: 02/29/16-03/03/16		
Kit Number	Room / Area	Result
3028894	17	1.0
3028897	18	1.6
3028891	APR	2.5
3028895	APR	2.6
3028899	K Office	1.1
3028893	Mail Room	2.1
3028892	Principle	1.1

Table Note:

* Missing or Compromised Sample

Radon Testing Results		
Radnor Center		
Test Period: 02/29/16-03/03/16		
Kit Number	QC Type	Result
3028896	D (17)	1.1
3028898	FB (18)	<0.4

Table Note:

* Missing or Compromised Sample

ATTACHMENT C

Laboratory Analytical Results

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
936 Ridgebrook Rd
Sparks MD 21152

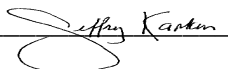
Radnor Center
7000 Radnor Rd
Bethesda MD 20817


Log Number	Device Number	Test Exposure Duration:		Area Tested	Result (pCi/L)
3015334	3028892	02/29/2016 8:35 am	03/03/2016 10:05 am	Principle	1.1
3015335	3028893	02/29/2016 8:37 am	03/03/2016 10:06 am	Mail Room	2.1
3015336	3028895	02/29/2016 8:44 am	03/03/2016 10:07 am	APR	2.6
3015337	3028891	02/29/2016 8:44 am	03/03/2016 10:07 am	APR	2.5
3015338	3028896	02/29/2016 8:51 am	03/03/2016 10:15 am	Room 17	1.1
3015339	3028894	02/29/2016 8:51 am	03/03/2016 10:15 am	Room 17	1.0
3015340	3028898	02/29/2016 9:00 am	03/03/2016 10:18 am	Room 18	<0.4
3015341	3028897	02/29/2016 9:00 am	03/03/2016 10:18 am	Room 18	1.6
3015342	3028899	02/29/2016 9:05 am	03/03/2016 10:11 am	K Office	1.1

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

Distributed by: KCI Technologies, Inc.

Date Received: 03/07/2016 Date Logged: 03/07/2016 Date Analyzed: 03/08/2016 Date Reported: 03/08/2016

Report Reviewed By: 

Report Approved By: 
Carolyn D. Koke, President, 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.

Radon Device Type Open Face Canister

Send Written Report To:

Name: KCI Technologies, Inc
 Address: 936 Ridgebrook Road
 Address:
 City / Town: Sparks
 State/Province Postal Code: MD 21152
 Report Country: Baltimore County
 Email Address: tehsin@kci.com

Site Tested:

Site Name: Radnor Center
 Address: 7000 RADNOR RD.
 Address:
 City / Town: BETHESDA
 State/Province Postal Code: MD 20817
 Test Country: Montgomery County
 Project Number: 12146341

Contact Information:

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

Lab Use Only	Device Number	Building Number	Unit Number	Floor	Name of Room	Start Date mm/dd/yyyy	Start Time hh:mm am / pm	Stop Date mm/dd/yyyy	Stop Time hh:mm am / pm	Lab Use Only
	3028892				Principle 70	02/29/2016	8:35 AM	03/03/2016	10:05 AM	
	3028893				Mail Room	02/29/2016	8:37 AM	03/03/2016	10:06 AM	
	3028895				APR	02/29/2016	8:44 AM	03/03/2016	10:07 AM	
	3028891				APR	02/29/2016	8:44 AM	03/03/2016	10:07 AM	
	3028896		17		17	02/29/2016	8:51 AM	03/03/2016	10:15 AM	
	3028894		17		17	02/29/2016	8:51 AM	03/03/2016	10:15 AM	
	3028898		18		18	02/29/2016	9:00 AM	03/03/2016	10:18 AM	
	3028897		18		18	02/29/2016	9:00 AM	03/03/2016	10:18 AM	
	3028899		K office		K office	02/29/2016	9:05 AM	03/03/2016	10:11 AM	
						02/29/2016		03/03/2016		

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
936 Ridgebrook Rd
Sparks MD 21152

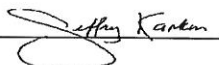
MCPS Radon Phase 10 Office Blank

Log Number	Device Number	Test Exposure Duration:	Area Tested	Result (pCi/L)
3015360	3028828	02/29/2016 9:30 am 03/03/2016 9:30 am	Office Blank	<0.4

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

Distributed by: KCI Technologies, Inc.

Date Received: 03/07/2016 Date Logged: 03/07/2016 Date Analyzed: 03/08/2016 Date Reported: 03/08/2016

Report Reviewed By: 

Report Approved By: 
Carolyn D. Koke, President, 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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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:

KCI Technologies
936 Ridgebrook Rd
Sparks MD 21152

MCPS
Transit Blanks

Log Number	Device Number	Test Exposure Duration:		Area Tested	Result (pCi/L)
3010588	3028953	01/19/2016 1:00 pm	01/22/2016 9:30 am	1	< 0.4
3010589	3028955	01/19/2016 1:00 pm	01/22/2016 9:30 am	2	< 0.4
3010590	3028954	01/19/2016 1:00 pm	01/22/2016 9:30 am	3	< 0.4
3010591	3028997	01/19/2016 1:00 pm	01/22/2016 9:30 am	4	< 0.4

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.mouldsdale@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: Christie Bates

Report Approved By: Carolyn D. Koke

Carolyn D. Koke, President, 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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Return canisters for analysis to:
AccuStar Labs
 929 Mt. Zion Rd., Lebanon, PA 17046
 800-523-4964

AccuStar Labs - Lebanon, PA
INFORMATION FORM - Large Buildings -
 Projects - Apartments

Instructions on back of form
 Read instructions carefully
 Discrepancies will invalidate tests

Test Site Info

Name of Building/Project or Owner: Transit
 Site Address: Transit
 City: _____ State: _____ Zip: _____ County: _____
 Projects Contact Name: Don Coale Phone: _____ Email: _____

Do not use this form in
 New Jersey or Florida
 Call for correct forms.

Multi-Page Report Y-N

LAB USE ONLY	
Wgt. Gain	pCi/L
	LOF
	LOF
	LOF
	LOF

Detector Serial#	ROOM NAME & NUMBER - LOCATION OF DETECTOR IN ROOM (indicate duplicates and blanks)	Floor	Start Date	Start Time Include AM/PM	Stop Date	Stop Time Include AM/PM
3028953	Transit	1	1/19/16	approx: 00pm 1/23/16		9:30am
8955	Transit	1	1/19/16			
8954	Transit	1	1/19/16			
8997	Transit	1	1/19/16			

1/27/2016

KCI Technologies, Inc.

3010588 3028953 ACPC275B EXP12/31/2018

Structure Type: (circle one or more) Basement - Crawlspace - Slab on Grade - Other
Test Purpose: (Circle all that apply) Initial Screening - Follow Up Test - Post Mitigation - Real Estate - Other
Building Type: (Circle One) Residential - Non Residential Private Day Care - Private School Day Care in Public School - Public School

Both Placed by and Retrieved by signatures are required
 Canisters placed by _____ # _____
 Canisters retrieved by _____ # _____

Send Results To:
 Company Name: KCI Tech
 Address: 936 Ridgebrook
 City: Sparks State: MD Zip: 21152
 Phone: 410-599-3826
 EMAIL Results to: James.Mouldale@kci.com

Were general operating conditions maintained?
 Yes - No explain if NO
 Were closed building conditions maintained?
 Yes - No explain if NO
 Normal Temp. Yes - No
 Normal Humidity Yes - No
 Windy Y-N Rainy Y-N

Make sure information is complete and correct.
 If a recalculation is requested there is a \$10.00 recalc fee PER Canister.

Mailing: PO Box 990 Jonestown, PA 17038
 Shipping: 929 Mt Zion Road, Lebanon, PA 17046
 800-523-4964 fax 717-274-5662
 NEHA 10511AL NRSB ARL 0007

EXPOSURE IN BOWSER-MORNER RADON CHAMBER

CLIENT KCF Technologies Inc. Job Number 173618

NOMINAL Conditions: Radon Conc 25.2 pCi/L Rel. Hum 49.1 % Temp. 72.0 F

Date Start: 1/23/16 Date Stop: 1/25/16 Date Start: _____ Date Stop: _____

Time Start: 0821 Time Stop: 0821 Time Start: _____ Time Stop: _____

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

3028985 thru 3028990

E2 left

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

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

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

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

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

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

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

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:

KCI Technologies
936 Ridgebrook Rd
Sparks MD 21152

MCPS
Radon Spike Sample Laboratory Results

Log Number	Device Number	Test Exposure Duration:		Area Tested	Result (pCi/L)
3010551	3028985	01/23/2016 8:20 am	01/25/2016 8:20 am	1 First Floor	24.2
3010552	3028986	01/23/2016 8:20 am	01/25/2016 8:20 am	2 First Floor	25.7
3010553	3028987	01/23/2016 8:20 am	01/25/2016 8:20 am	3 First Floor	23.8
3010554	3028988	01/23/2016 8:20 am	01/25/2016 8:20 am	4 First Floor	23.3
3010555	3028989	01/23/2016 8:20 am	01/25/2016 8:20 am	5 First Floor	24.0
3010556	3028990	01/23/2016 8:20 am	01/25/2016 8:20 am	6 First Floor	24.4

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.

Comment: A copy of this report was emailed to james.mouldsdale@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: Christie Bates

Report Approved By: Carolyn 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
 800-523-4964

AccuStar Labs - Lebanon, PA
INFORMATION FORM - Large Buildings -
Projects - Apartments

Instructions on back of form
 Read instructions carefully
 Discrepancies will invalidate tests

RECEIVED JAN 27 2016

Test Site Info

Name of Building/Project or Owner MCPS

Site Address: 750 Hungerford Dr

City: Rockville MD

State MD Zip 20850

County Montgomery

Projects Contact Name: James Mowlsdale Phone: 410-891-1842 Email: James.Mowlsdale@kci.com

Do not use this form in
 New Jersey or Florida
 Call for correct forms.

Multi-Page Report Y-N

Detector Serial#	ROOM NAME & NUMBER - LOCATION OF DETECTOR IN ROOM (indicate duplicates and blanks)	Floor	Start Date	Start Time Include AM/PM	Stop Date	Stop Time Include AM/PM	LAB USE ONLY	
							Wgt. Gain	pCi/L
3028985	1 3010551	1	1/23/16	08:20	1/25/16	08:20		0.1A
3028986	2 3010552	1						
3028987	3 3010553	1						
3028988	4 3010554	1						
3028989	5 3010555	1						
3028990	6 3010556	1						

Structure Type: (circle one or more) Basement - Crawlspace - Slab on Grade - Other
Test Purpose: (Circle all that apply) Initial Screening - Follow Up Test -
 Post Mitigation - Real Estate - Other
Building Type: (Circle One) Residential - Non Residential
 Private Day Care - Private School
 Day Care in Public School - Public School

Both Placed by and Retrieved by signatures are required
 Canisters placed by James Mowlsdale

Canisters retrieved by James Mowlsdale

Owner waives confidentiality
 by signing here

Send Results To:

Company Name: KCI technologies Inc

Address: 936 Ridgebrook Rd

City: Sparks MD 21152

Phone: 410-891-1842

EMAIL Results to: James.Mowlsdale@kci.com

State: 7in

Fax:

1/27/2016

KCI Technologies, Inc.

Mailing: PO Box 990 Jonestown
 Shipping: 929 Mt Zion Road, Le
 800-523-4964 fax 717-2

3010551 **3028985** ACPC275B EXP12/31/2018

Were general operating conditions maintained? Yes - No explain if NO
 Were closed building conditions maintained? Yes - No explain if NO
 Normal Temp. Yes - No
 Normal Humidity Yes - No
 Windy YN Rainy YN



MCPS RADON TESTING

Executive Summary: Radnor Center

Date of Test Report:	2/18/2016
Round of Testing:	Initial Follow-up Post Remediation
# Rooms Tested:	54
# Rooms \geq 4.0 pCi/L:	3
Low Value:	< 0.3
High Value:	5.4

Rooms with results \geq 4.0 pCi/L:
Mail Room (5.4 pCi/L), APR (5.0 pCi/L), Room 18 (4.7 pCi/L)

Project Status:

Initial testing completed; re-test needed for results \geq 4.0 pCi/L.
Initial testing completed; missing or compromised samples need re-test.



February 18, 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: Radnor Center
7000 Radnor Road
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 Radnor Center, located at 7000 Radnor Road 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 sixty-two (62) 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 pCi/L	Mail	5.4
	APR	5.0
	18	4.7
< 4.0 pCi/L	See Attachment B	

Notes:

D- Duplicate sample

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

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

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

Sincerely,



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

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

ATTACHMENT A

Floor Plan With Test Locations

ATTACHMENT B

Radon Test Summary Spreadsheet

Table Notes:

AC- Activated Charcoal

ACI- Air Chek, Inc.

D- Duplicate

FB- Field Blank

KCI- KCI Technologies, Inc.

OB- Office Blank

PM- Project Manager

QC- Quality Control

Radon Testing Results		
Radnor Center (Wood Acres ES)		
Test Period: 01/19/16-01/22/16		
Kit Number	Room / Area	Result
7719103	00	1.6
7719160	2	1.8
7719142	3	1.1
7719141	4	2.1
7719138	5	3.1
7719137	6	2.4
7719136	7	1.8
7719135	8	2.1
7719154	9	1.9
7719153	10	1.9
7719157	11	1
7719156	12	0.8
7719159	13	1.7
7719158	14	0.8
7719105	15	1.5
7719106	16	0.9
7719107	17	3.9
7719108	18	4.7
7719155	9A	2
7719151	APR	5
7719146	CONF	1.1
7722500	FRONT OFFICE	2.3
7719145	I	2.1
7719149	IMC	1.4
7719150	IMCO	1.5
7719152	K	2.1
7719148	* K OFFICE (missing)	0
7719143	L	0.6
7719144	L1	< 0.3
7719147	MAIL	5.4
7719109	ML1075	< 0.3
7719114	ML1079	0.8
7719111	ML1080	< 0.3
7719119	ML572	< 0.3
7719118	ML706	< 0.3
7719120	ML766	< 0.3
7719121	ML767	< 0.3
7719133	ML901	< 0.3
7719132	ML906	< 0.3
7719110	ML907	< 0.3
7719124	MO027	0.7
7719127	MO028	< 0.3
7719117	MO035	< 0.3
7719123	MO046	< 0.3
7719122	MO047	< 0.3
7719128	MO048	< 0.3

Table Note:

* Missing or Compromised Sample

Radon Testing Results		
Radnor Center (Wood Acres ES)		
Test Period: 01/19/16-01/22/16		
Kit Number	Room / Area	Result
7719129	MO119	< 0.3
7719126	MO129	< 0.3
7719116	MO130	< 0.3
7719125	MO148	< 0.3
7719134	MO149	< 0.3
7719130	MO169	< 0.3
7719131	MO170	< 0.3
7719104	PRIN OFFICE	3.4

Table Note:

* Missing or Compromised Sample

Radon Testing Results		
Radnor Center (Wood Acres ES)		
Test Period: 01/19/16-01/22/16		
Kit Number	QC Type	Result
7719139	D (5)	2.9
7719101	D (FRONT OFFICE)	2.5
7719115	D (ML1079)	< 0.3
7719112	D (ML1080)	< 0.3
7719140	FB (5)	< 0.3
7719102	FB (FRONT OFFICE)	< 0.3
7719113	FB (ML1080)	< 0.3
7719451	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:
RADNOR CENTER (WOOD ACRES ES)
MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7719103	00	2016-01-19 @ 11:00 am	2016-01-22 @ 8:00 am	1.6 ± 0.4	2016-01-26
7719451	0	2016-01-19 @ 4:00 pm	2016-01-22 @ 9:00 am	< 0.3	2016-01-27
7719153	10	2016-01-19 @ 12:00 pm	2016-01-22 @ 9:00 am	1.9 ± 0.4	2016-01-26
7719157	11	2016-01-19 @ 12:00 pm	2016-01-22 @ 9:00 am	1.0 ± 0.3	2016-01-26
7719156	12	2016-01-19 @ 12:00 pm	2016-01-22 @ 9:00 am	0.8 ± 0.3	2016-01-26
7719159	13	2016-01-19 @ 12:00 pm	2016-01-22 @ 9:00 am	1.7 ± 0.4	2016-01-26
7719158	14	2016-01-19 @ 12:00 pm	2016-01-22 @ 9:00 am	0.8 ± 0.3	2016-01-26
7719105	15	2016-01-19 @ 11:00 am	2016-01-22 @ 8:00 am	1.5 ± 0.4	2016-01-26
7719106	16	2016-01-19 @ 11:00 am	2016-01-22 @ 8:00 am	0.9 ± 0.3	2016-01-26
7719107	17	2016-01-19 @ 11:00 am	2016-01-22 @ 8:00 am	3.9 ± 0.5	2016-01-26
7719108	18	2016-01-19 @ 11:00 am	2016-01-22 @ 8:00 am	4.7 ± 0.5	2016-01-26
7719160	2	2016-01-19 @ 12:00 pm	2016-01-22 @ 9:00 am	1.8 ± 0.4	2016-01-26
7719142	3	2016-01-19 @ 12:00 pm	2016-01-22 @ 9:00 am	1.1 ± 0.3	2016-01-26
7719141	4	2016-01-19 @ 12:00 pm	2016-01-22 @ 9:00 am	2.1 ± 0.4	2016-01-26
7719138	5	2016-01-19 @ 12:00 pm	2016-01-22 @ 9:00 am	3.1 ± 0.5	2016-01-26
7719139	5	2016-01-19 @ 12:00 pm	2016-01-22 @ 9:00 am	2.9 ± 0.4	2016-01-26
7719140	5	2016-01-19 @ 12:00 pm	2016-01-22 @ 9:00 am	< 0.3	2016-01-26
7719137	6	2016-01-19 @ 12:00 pm	2016-01-22 @ 9:00 am	2.4 ± 0.4	2016-01-26
7719136	7	2016-01-19 @ 12:00 pm	2016-01-22 @ 9:00 am	1.8 ± 0.4	2016-01-26
7719135	8	2016-01-19 @ 12:00 pm	2016-01-22 @ 9:00 am	2.1 ± 0.4	2016-01-26
7719154	9	2016-01-19 @ 12:00 pm	2016-01-22 @ 9:00 am	1.9 ± 0.4	2016-01-26
7719155	9A	2016-01-19 @ 12:00 pm	2016-01-22 @ 9:00 am	2.0 ± 0.4	2016-01-26
7719151	APR	2016-01-19 @ 12:00 pm	2016-01-22 @ 8:00 am	5.0 ± 0.6	2016-01-26
7719146	CONF	2016-01-19 @ 12:00 pm	2016-01-22 @ 8:00 am	1.1 ± 0.3	2016-01-26
7719101	FRONT OFFICE	2016-01-19 @ 11:00 am	2016-01-22 @ 8:00 am	2.5 ± 0.4	2016-01-26
7719102	FRONT OFFICE	2016-01-19 @ 11:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7722500	FRONT OFFICE	2016-01-19 @ 11:00 am	2016-01-22 @ 8:00 am	2.3 ± 0.4	2016-01-26
7719145	I	2016-01-19 @ 12:00 pm	2016-01-22 @ 9:00 am	2.1 ± 0.4	2016-01-26
7719149	IMC	2016-01-19 @ 12:00 pm	2016-01-22 @ 9:00 am	1.4 ± 0.3	2016-01-26
7719150	IMCO	2016-01-19 @ 12:00 pm	2016-01-22 @ 9:00 am	1.5 ± 0.4	2016-01-26
7719152	K	2016-01-19 @ 12:00 pm	2016-01-22 @ 9:00 am	2.1 ± 0.4	2016-01-26
7719148	K OFFICE	@	@		
7719143	L	2016-01-19 @ 12:00 pm	2016-01-22 @ 9:00 am	0.6 ± 0.3	2016-01-26
7719144	L1	2016-01-19 @ 12:00 pm	2016-01-22 @ 9:00 am	< 0.3	2016-01-26
7719147	MAIL	2016-01-19 @ 12:00 pm	2016-01-22 @ 8:00 am	5.4 ± 0.6	2016-01-26
7719104	PRIN OFFICE	2016-01-19 @ 11:00 am	2016-01-22 @ 8:00 am	3.4 ± 0.5	2016-01-26

February 11, 2016
LABORATORY ANALYSIS REPORT

Radon test result report for:
RADNOR CENTER (WOOD ACRES ES)
PORTABLE

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7719109	ML1075	2016-01-19 @ 11:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7719114	ML1079	2016-01-19 @ 11:00 am	2016-01-22 @ 9:00 am	0.8 ± 0.3	2016-01-26
7719115	ML1079	2016-01-19 @ 11:00 am	2016-01-22 @ 9:00 am	< 0.3	2016-01-26
7719111	ML1080	2016-01-19 @ 11:00 am	2016-01-22 @ 9:00 am	< 0.3	2016-01-26
7719112	ML1080	2016-01-19 @ 11:00 am	2016-01-22 @ 9:00 am	< 0.3	2016-01-26
7719113	ML1080	2016-01-19 @ 11:00 am	2016-01-22 @ 9:00 am	< 0.3	2016-01-26
7719119	ML572	2016-01-19 @ 11:00 am	2016-01-22 @ 9:00 am	< 0.3	2016-01-26
7719118	ML706	2016-01-19 @ 11:00 am	2016-01-22 @ 9:00 am	< 0.3	2016-01-26
7719120	ML766	2016-01-19 @ 11:00 am	2016-01-22 @ 9:00 am	< 0.3	2016-01-26
7719121	ML767	2016-01-19 @ 11:00 am	2016-01-22 @ 9:00 am	< 0.3	2016-01-26
7719133	ML901	2016-01-19 @ 12:00 pm	2016-01-22 @ 9:00 am	< 0.3	2016-01-26
7719132	ML906	2016-01-19 @ 12:00 pm	2016-01-22 @ 9:00 am	< 0.3	2016-01-26
7719110	ML907	2016-01-19 @ 11:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7719124	MO027	2016-01-19 @ 11:00 am	2016-01-22 @ 9:00 am	0.7 ± 0.3	2016-01-26
7719127	MO028	2016-01-19 @ 12:00 pm	2016-01-22 @ 9:00 am	< 0.3	2016-01-26
7719117	MO035	2016-01-19 @ 11:00 am	2016-01-22 @ 9:00 am	< 0.3	2016-01-26
7719123	MO046	2016-01-19 @ 11:00 am	2016-01-22 @ 9:00 am	< 0.3	2016-01-26
7719122	MO047	2016-01-19 @ 11:00 am	2016-01-22 @ 9:00 am	< 0.3	2016-01-26
7719128	MO048	2016-01-19 @ 12:00 pm	2016-01-22 @ 9:00 am	< 0.3	2016-01-26
7719129	MO119	2016-01-19 @ 12:00 pm	2016-01-22 @ 9:00 am	< 0.3	2016-01-26
7719126	MO129	2016-01-19 @ 11:00 am	2016-01-22 @ 9:00 am	< 0.3	2016-01-26
7719116	MO130	2016-01-19 @ 11:00 am	2016-01-22 @ 9:00 am	< 0.3	2016-01-26
7719125	MO148	2016-01-19 @ 11:00 am	2016-01-22 @ 9:00 am	< 0.3	2016-01-26
7719134	MO149	2016-01-19 @ 12:00 pm	2016-01-22 @ 9:00 am	< 0.3	2016-01-26
7719130	MO169	2016-01-19 @ 12:00 pm	2016-01-22 @ 9:00 am	< 0.3	2016-01-26
7719131	MO170	2016-01-19 @ 12:00 pm	2016-01-22 @ 9:00 am	< 0.3	2016-01-26

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

February
15,
2016

****LABORATORY ANALYSIS
REPORT****

Spike Sample Laboratory Results

Radon test result report for:
MCPS

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

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

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

EXPOSURE IN BOWSER-MORNER RADON CHAMBER

CLIENT KCF Technologies Inc. Job Number 173704

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

Date Start: 11/30/16 Date Stop: 2/1/16 Date Start: _____ Date Stop: _____
Time Start: 0926 Time Stop: 0926 Time Start: _____ Time Stop: _____
Device No.'s: (6) Char. Bags - Device No.'s: _____
7718281, 7718282, 7718291, _____
7718288, 7718289, 7718273 _____
ε3 Left

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

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

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



Chain of Custody

Project Name: MCPS Radon Phase VI

Name of Schools:

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