



MCPS RADON TESTING – EXECUTIVE SUMMARY

Site Name	Galway Elementary School
Date of Test Report	2/17/2023
Round of Testing	Initial Follow-up Post Remediation 2 Year Testing 5 Year Testing HVAC Upgrade Window Replacement New Addition New Facility
# Rooms Tested	60
# Rooms \geq 4.0 pCi/L	0
Lowest Value	<0.3 pCi/L
Highest Value	1.8 pCi/L

Project Status:

1. 5-Year retesting completed.



February 17, 2023

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

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

Location: Galway Elementary School
12612 Galway Drive
Silver Spring, MD 20904

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 Galway Elementary School, located at 12612 Galway Dr. Silver Spring, MD 20904 (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 23, 2023 and deployed sixty-nine (69) 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 January 26, 2023 to retrieve the radon sampling test kits. KCI shipped all radon tests via overnight delivery to Accustar Labs - MA. for analysis by gamma-ray spectroscopy.

Accustar Labs - MA is a NRSB certified analytical laboratory for radon analysis (certification #ARL0017) located at 2 Saber Way, Ward Hill, MA 01835.

Evaluation of Testing Conditions:

These tests represent:

- Follow up to initial testing.

These tests were conducted to:

- Evaluate radon concentration levels 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 temperatures ranged from the 31°F to 52°F. Maximum sustained winds ranged from 5-25 miles per hour. Average humidity was around 60% with .32 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	None	N/A
<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		
Galway ES		
Test Period: 01/23/2023 - 01/26/2023		
Kit Number	Room / Area	Result
11285190	7	< 0.3
11285175	8	0.8
11285177	8	0.9
11285189	8	< 0.3
11140297	11	< 0.3
11286872	13	< 0.3
11140275	16	< 0.3
11285466	17	< 0.3
11140296	18	< 0.3
11285474	19	< 0.3
11285473	22	< 0.3
11140295	23	< 0.3
11140288	24	< 0.3
11140281	28	< 0.3
11140282	28	< 0.3
11140265	30	< 0.3
11140289	31	< 0.3
11285170	35	< 0.3
11286873	37	0.6
11140257	38	< 0.3
11285486	41	1.8
11140274	44	0.8
11285483	45	1.3
11285464	46	1.3
11140273	47	< 0.3
11285484	51	< 0.3
11140283	53	< 0.3
11285178	53	< 0.3
11140284	57	< 0.3
11140290	57	< 0.3
11285198	100	0.7
11286886	101	0.7
11285191	102	0.8
11285185	103	< 0.3
11285186	103	< 0.3
11286878	107	0.6
11286883	107	< 0.3
11286885	109	0.6
11285199	115	0.7
11286894	116	0.8
11286877	119	0.6
11285183	122	0.8

Table 1- Radon Testing Results		
Galway ES		
Test Period: 01/23/2023 - 01/26/2023		
Kit Number	Room / Area	Result
11286870	123	1.0
11140300	124	1.2
11286895	124	1.2
11286892	125	< 0.3
11140292	128	1.1
11140291	132	0.7
11285181	136	0.9
11286881	139	< 0.3
11286882	150	< 0.3
11286884	166	< 0.3
11286891	166	0.6
11286889	178	< 0.3
11140299	186	< 0.3
11285176	001A	0.7
11285197	100A	< 0.3
11285194	100B	0.8
11285193	100C	1.0
11285187	100D	0.5
11285188	100I	< 0.3
11285192	102B	0.7
11285168	102C	0.5
11285200	122 OFFICE	0.8
11140293	CAFETERIA	0.5
11140298	CAFETERIA	< 0.3
11285169	KITCHEN OFFICE	0.5
11285195	MC	0.6
11285196	MC	0.6

Table 2- Radon Testing Results			
Galway ES			
Test Period: 01/23/23 - 01/26/23			
Kit Number	QC Type	Room / Area	Result
11285175	D	8	0.8
11285189	FB	8	< 0.3
11140282	D	28	< 0.3
11285178	D	53	< 0.3
11140290	FB	57	< 0.3
11285185	D	103	< 0.3
11286883	FB	107	< 0.3
11286895	D	124	1.2
11286891	D	166	0.6
11633990	OB	OFFICE BLANK	< 0.3
11633992	TB	TRAVEL BLANK	< 0.3

ATTACHMENT C

Laboratory Analytical Results

Radon test result report for:**GALWAY ES****1**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11285176	001A	2023-01-23 @ 8:00 am	2023-01-26 @ 2:00 pm	0.7 ± 0.3	2023-01-30
11285190	007	2023-01-23 @ 8:00 am	2023-01-26 @ 2:00 pm	< 0.3	2023-01-30
11285177	008	2023-01-23 @ 8:00 am	2023-01-26 @ 2:00 pm	0.9 ± 0.3	2023-01-30
11285189	008	2023-01-23 @ 8:00 am	2023-01-26 @ 2:00 pm	< 0.3	2023-01-30
11285175	008	2023-01-23 @ 8:00 am	2023-01-26 @ 2:00 pm	0.8 ± 0.3	2023-01-30
11140297	011	2023-01-23 @ 9:00 am	2023-01-26 @ 2:00 pm	< 0.3	2023-01-30
11286872	013	2023-01-23 @ 8:00 am	2023-01-26 @ 2:00 pm	< 0.3	2023-01-30
11140275	016	2023-01-23 @ 9:00 am	2023-01-26 @ 2:00 pm	< 0.3	2023-01-30
11285466	017	2023-01-23 @ 8:00 am	2023-01-26 @ 2:00 pm	< 0.3	2023-01-30
11140296	018	2023-01-23 @ 8:00 am	2023-01-26 @ 2:00 pm	< 0.3	2023-01-30
11285474	019	2023-01-23 @ 8:00 am	2023-01-26 @ 2:00 pm	< 0.3	2023-01-30
11285473	022	2023-01-23 @ 8:00 am	2023-01-26 @ 2:00 pm	< 0.3	2023-01-30
11140295	023	2023-01-23 @ 8:00 am	2023-01-26 @ 2:00 pm	< 0.3	2023-01-30
11140288	024	2023-01-23 @ 8:00 am	2023-01-26 @ 2:00 pm	< 0.3	2023-01-30
11140281	028	2023-01-23 @ 8:00 am	2023-01-26 @ 2:00 pm	< 0.3	2023-01-30
11140282	028	2023-01-23 @ 8:00 am	2023-01-26 @ 2:00 pm	< 0.3	2023-01-30
11140265	030	2023-01-23 @ 8:00 am	2023-01-26 @ 2:00 pm	< 0.3	2023-01-30
11140289	031	2023-01-23 @ 8:00 am	2023-01-26 @ 2:00 pm	< 0.3	2023-01-30
11285170	035	2023-01-23 @ 8:00 am	2023-01-26 @ 2:00 pm	< 0.3	2023-01-30
11286873	037	2023-01-23 @ 8:00 am	2023-01-26 @ 2:00 pm	0.6 ± 0.3	2023-01-30
11140257	038	2023-01-23 @ 8:00 am	2023-01-26 @ 2:00 pm	< 0.3	2023-01-30
11285486	041	2023-01-23 @ 9:00 am	2023-01-26 @ 2:00 pm	1.8 ± 0.4	2023-01-30
11140274	044	2023-01-23 @ 9:00 am	2023-01-26 @ 2:00 pm	0.8 ± 0.3	2023-01-30
11285483	045	2023-01-23 @ 9:00 am	2023-01-26 @ 2:00 pm	1.3 ± 0.3	2023-01-30
11285464	046	2023-01-23 @ 9:00 am	2023-01-26 @ 2:00 pm	1.3 ± 0.3	2023-01-30
11140273	047	2023-01-23 @ 9:00 am	2023-01-26 @ 2:00 pm	< 0.3	2023-01-30
11285484	051	2023-01-23 @ 9:00 am	2023-01-26 @ 2:00 pm	< 0.3	2023-01-30
11140283	053	2023-01-23 @ 9:00 am	2023-01-26 @ 2:00 pm	< 0.3	2023-01-30
11285178	053	2023-01-23 @ 9:00 am	2023-01-26 @ 2:00 pm	< 0.3	2023-01-30
11140284	057	2023-01-23 @ 9:00 am	2023-01-26 @ 2:00 pm	< 0.3	2023-01-30
11140290	057	2023-01-23 @ 9:00 am	2023-01-26 @ 2:00 pm	< 0.3	2023-01-30
11285198	100	2023-01-23 @ 7:00 am	2023-01-26 @ 2:00 pm	0.7 ± 0.3	2023-01-30
11285197	100A	2023-01-23 @ 7:00 am	2023-01-26 @ 2:00 pm	< 0.3	2023-01-30
11285194	100B	2023-01-23 @ 7:00 am	2023-01-26 @ 2:00 pm	0.8 ± 0.3	2023-01-30
11285193	100C	2023-01-23 @ 7:00 am	2023-01-26 @ 2:00 pm	1.0 ± 0.3	2023-01-30
11285187	100D	2023-01-23 @ 7:00 am	2023-01-26 @ 2:00 pm	0.5 ± 0.3	2023-01-30
11285188	100I	2023-01-23 @ 7:00 am	2023-01-26 @ 2:00 pm	< 0.3	2023-01-30

Radon test result report for:**GALWAY ES****1**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11286886	101	2023-01-23 @ 8:00 am	2023-01-26 @ 2:00 pm	0.7 ± 0.3	2023-01-30
11285191	102	2023-01-23 @ 7:00 am	2023-01-26 @ 2:00 pm	0.8 ± 0.3	2023-01-30
11285192	102B	2023-01-23 @ 7:00 am	2023-01-26 @ 2:00 pm	0.7 ± 0.3	2023-01-30
11285168	102C	2023-01-23 @ 7:00 am	2023-01-26 @ 2:00 pm	0.5 ± 0.3	2023-01-30
11285186	103	2023-01-23 @ 8:00 am	2023-01-26 @ 2:00 pm	< 0.3	2023-01-30
11285185	103	2023-01-23 @ 8:00 am	2023-01-26 @ 2:00 pm	< 0.3	2023-01-30
11286878	107	2023-01-23 @ 8:00 am	2023-01-26 @ 2:00 pm	0.6 ± 0.3	2023-01-30
11286883	107	2023-01-23 @ 8:00 am	2023-01-26 @ 2:00 pm	< 0.3	2023-01-30
11286885	109	2023-01-23 @ 8:00 am	2023-01-26 @ 2:00 pm	0.6 ± 0.3	2023-01-30
11285199	115	2023-01-23 @ 8:00 am	2023-01-26 @ 2:00 pm	0.7 ± 0.3	2023-01-30
11286894	116	2023-01-23 @ 8:00 am	2023-01-26 @ 2:00 pm	0.8 ± 0.3	2023-01-30
11286877	119	2023-01-23 @ 8:00 am	2023-01-26 @ 2:00 pm	0.6 ± 0.3	2023-01-30
11285183	122	2023-01-23 @ 8:00 am	2023-01-26 @ 2:00 pm	0.8 ± 0.3	2023-01-30
11285200	122 OFFICE	2023-01-23 @ 8:00 am	2023-01-26 @ 2:00 pm	0.8 ± 0.3	2023-01-30
11286870	123	2023-01-23 @ 8:00 am	2023-01-26 @ 2:00 pm	1.0 ± 0.3	2023-01-30
11140300	124	2023-01-23 @ 8:00 am	2023-01-26 @ 2:00 pm	1.2 ± 0.3	2023-01-30
11286895	124	2023-01-23 @ 8:00 am	2023-01-26 @ 2:00 pm	1.2 ± 0.3	2023-01-30
11286892	125	2023-01-23 @ 7:00 am	2023-01-26 @ 2:00 pm	< 0.3	2023-01-30
11140292	128	2023-01-23 @ 8:00 am	2023-01-26 @ 2:00 pm	1.1 ± 0.3	2023-01-30
11140291	132	2023-01-23 @ 8:00 am	2023-01-26 @ 2:00 pm	0.7 ± 0.3	2023-01-30
11285181	136	2023-01-23 @ 8:00 am	2023-01-26 @ 2:00 pm	0.9 ± 0.3	2023-01-30
11286881	139	2023-01-23 @ 7:00 am	2023-01-26 @ 2:00 pm	< 0.3	2023-01-30
11286882	150	2023-01-23 @ 7:00 am	2023-01-26 @ 2:00 pm	< 0.3	2023-01-30
11286884	166	2023-01-23 @ 7:00 am	2023-01-26 @ 2:00 pm	< 0.3	2023-01-30
11286891	166	2023-01-23 @ 7:00 am	2023-01-26 @ 2:00 pm	0.6 ± 0.3	2023-01-30
11286889	178	2023-01-23 @ 7:00 am	2023-01-26 @ 2:00 pm	< 0.3	2023-01-30
11140299	186	2023-01-23 @ 7:00 am	2023-01-26 @ 2:00 pm	< 0.3	2023-01-30
11140293	CAFETERIA	2023-01-23 @ 7:00 am	2023-01-26 @ 2:00 pm	0.5 ± 0.3	2023-01-30
11140298	CAFETERIA	2023-01-23 @ 7:00 am	2023-01-26 @ 2:00 pm	< 0.3	2023-01-30
11285169	KITCHEN OFFICE	2023-01-23 @ 7:00 am	2023-01-26 @ 2:00 pm	0.5 ± 0.3	2023-01-30
11285196	MC	2023-01-23 @ 8:00 am	2023-01-26 @ 2:00 pm	0.6 ± 0.3	2023-01-30
11285195	MC	2023-01-23 @ 8:00 am	2023-01-26 @ 2:00 pm	0.6 ± 0.3	2023-01-30

EXPOSURE IN BOWSER-MORNER RADON CHAMBER

CLIENT KC1 TECHNOLOGIES, INC Job Number 208343

NOMINAL Conditions: Radon Conc 34.7 pCi/L Rel. Hum 49.4 % Temp. 69.6 F

Date Start: 12/24/22 Date Stop: 12/27/22 Date Start: _____ Date Stop: _____

Time Start: 0810 Time Stop: 0810 Time Start: _____ Time Stop: _____

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

11285109, 11285110, 11285101

THRU 11285103

BY 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

December 29, 2022

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

OFFICE

MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11285110	SK1	2022-12-24 @ 8:00 am	2022-12-27 @ 8:00 am	31.7 ± 2.5	2022-12-29
11285101	SK2	2022-12-24 @ 8:00 am	2022-12-27 @ 8:00 am	30.1 ± 2.4	2022-12-29
11285103	SK3	2022-12-24 @ 8:00 am	2022-12-27 @ 8:00 am	34.0 ± 2.7	2022-12-29
11285102	SK4	2022-12-24 @ 8:00 am	2022-12-27 @ 8:00 am	30.9 ± 2.5	2022-12-29
11285109	SK5	2022-12-24 @ 8:00 am	2022-12-27 @ 8:00 am	32.0 ± 2.6	2022-12-29

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. Glen Haven ES
2. Kemp Mill ES
3. John F. Kennedy HS
4. Oakland Terrace ES
5. Odessa Shannon MS
6. JoAnn Leleck ES @ Broad Acres
7. New Hampshire Estates ES
8. Cannon Road ES
9. Galway ES
- 10.A. Mario Loiederman MS

	Date	Initials
Radon Test Kits Deployed	01/23/2023	BMM
Radon Test Kits Collected	01/26/2023	BMM
Radon Test Kits Shipped to Lab*	01/26/2023	BMM
Radon Test Kits Received by Lab*	01/31/2023	BMM

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



**MONTGOMERY COUNTY PUBLIC SCHOOLS
RADON TESTING**

Executive Summary:
Galway Elementary School
12612 Galway Drive,
Silver Spring, MD 20904

Date of Test Report:	2/2/2019
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:	66
# of Rooms \geq 4.0 pCi/L:	0
Low Value:	< 0.4
High Value:	0.9

Project Status

Initial testing complete: No further action at this time.



February 2, 2019

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

Re: Radon Testing Services

Location: Galway Elementary School
12612 Galway Drive,
Silver Spring, MD 20904

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 Galway Elementary School, located at 12612 Galway Drive, Silver Spring, MD 20904 (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 November 13, 2018 and deployed eighty-one (81) 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 November 16, 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 $\leq 65^{\circ}\text{F}$.

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

A handwritten signature in black ink that reads "Nand Kaushik". The signature is written in a cursive, flowing style.

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		
Galway Elementary School		
Testing period: 11/13/18 - 11/16/18		
Kit Number	Room / Area	Result (pCi/L)
3917448	1	0.5
3917447	1	< 0.4
3917443	7	< 0.4
3917444	8	0.6
3917388	11	<0.4
3917452	13	<0.4
3917459	16	<0.4
3917390	17	<0.4
3917454	18	<0.4
3917457	19	<0.4
3917381	22	<0.4
3917456	23	<0.4
3917386	24	<0.4
3917387	28	<0.4
3917384	30	<0.4
3917389	31	<0.4
3917385	35	<0.4
3917487	37	0.4
3917490	38	0.8
3917449	41	0.7
3817430	44	0.4
3917422	45	< 0.4
3917429	47	< 0.4
3917458	51	< 0.4
3917382	53	<0.4
3917460	57	<0.4
3917465	100A	0.6
3917471	100B	0.5
3917474	100C	0.4
3917478	100D	0.4
3917466	101	< 0.4
3917391	102	< 0.4
3917479	102B	< 0.4
3917476	102C	0.4
3917464	103	< 0.4
3917473	104	< 0.4
3917468	106	< 0.4
3917472	107	< 0.4
3917480	108A	0.5
3917421	109	< 0.4
3917477	117	< 0.4
3917423	119	< 0.4
3917463	122	< 0.4

Radon Testing Results		
Galway Elementary School		
Testing period: 11/13/18 - 11/16/18		
Kit Number	Room / Area	Result (pCi/L)
3915877	122A	< 0.4
3917475	123	< 0.4
3917470	124	< 0.4
3917425	128	< 0.4
3917467	132	< 0.4
3917426	136	< 0.4
3917427	137	< 0.4
3917398	150	< 0.4
3917445	153	< 0.4
3917441	162	< 0.4
3917400	165	< 0.4
3917461	166	< 0.4
3917396	167	0.4
3817397	175	< 0.4
3917428	176	< 0.4
3917469	178	< 0.4
3917424	180	< 0.4
3917393	185	< 0.4
3917392	186	< 0.4
3917450	001A	< 0.4
3881245	Cafeteria	< 0.4
3881206	Gym	0.4
3881216	Gym	< 0.4
3917395	Kitchen Office	< 0.4
3917394	Kitchen Office	< 0.4
3917462	Main Office	0.9

Radon Testing Results		
Galway Elementary School		
Testing period: 11/13/18 - 11/16/18		
Kit Number	QC Type	Result (pCi/L)
3917455	17 (D)	<0.4
3917383	31 (D)	<0.4
3917488	35 (D)	0.5
3917489	37 (D)	<0.4
3917451	41 (D)	0.4
3917453	47 (D)	<0.4
3917399	102 (D)	0.4
3917442	Main Office (D)	0.6
3917379	Field Blank	< 0.4
3917377	Field Blank	< 0.4
3917378	Transit Blank	< 0.4
3917380	Office Blank	< 0.4

Table Notes:

D – Duplicate

FB – Field Blank

OB – Office Blank

TB – Transit Blank

QC – Quality Control

ATTACHMENT C

Laboratory Analytical Results

NRPP 105011 AL
NRSB ARL0007

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

Laboratory Report for:

Property Tested: Project # 04481387-1

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

MCPS Radon Survey Galway Elementary School
12612 Galway Drive
Silver Spring MD 20904

Log Number	Device Number	Test Exposure Duration:	Area Tested	Result pCi/L
3196976	3917397	11/13/2018 12:03 pm 11/16/2018 10:38 am	Flr Upper Level Rm 175	<0.4
3196977	3917465	11/13/2018 11:28 am 11/16/2018 10:10 am	Upper Level Rm 100A	0.6
3196978	3917471	11/13/2018 11:29 am 11/16/2018 10:11 am	Upper Level Rm 100B Duplicate	0.5
3196979	3917430	11/13/2018 12:15 pm 11/16/2018 10:45 am	Flr Upper Level Rm 044	0.4
3196980	3917474	11/13/2018 11:30 am 11/16/2018 10:12 am	Flr Upper Level Rm 100C	0.4
3196981	3917478	11/13/2018 11:30 am 11/16/2018 10:13 am	Flr Upper Level Rm 100D	0.4
3196982	3917462	11/13/2018 11:31 am 11/16/2018 10:14 am	Flr Upper Level Rm Main off	0.9
3196983	3917391	11/13/2018 11:32 am 11/16/2018 10:15 am	Flr Upper Level Rm 102	< 0.4
3196984	3917479	11/13/2018 11:33 am 11/16/2018 10:16 am	Flr Upper Level Rm 102B	< 0.4
3196985	3917476	11/13/2018 11:34 am 11/16/2018 10:16 am	Flr Upper Level Rm 102C	0.4
3196986	3917461	11/13/2018 11:39 am 11/16/2018 10:17 am	Flr Upper Level Rm 166	< 0.4

Comment: AMENDED REPORT on 1-8-19 to add missing start times for multiple devices.

Test Performed By: Not Indicated

Distributed by: Intertek-PSI (VA)

Date Received: 11/20/2018 Date Logged: 11/21/2018 Date Analyzed: 11/20/2018 Date Reported: 11/28/2018

Report Reviewed By: 

Report Approved By: 

Disclaimer:

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Shawn Price, Director of Laboratory Operations, AccuStar Labs

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NRPP 105011 AL
NRSB ARL0007

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

Laboratory Report for:

Property Tested: Project # 04481387-1

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

MCPS Radon Survey Galway Elementary School
12612 Galway Drive
Silver Spring MD 20904

Log Number	Device Number	Test Exposure Duration:				Area Tested	Result pCi/L
3196987	3917464	11/13/2018	11:40 am	11/16/2018	10:18 am	Flr Upper Level Rm 103	< 0.4
3196988	3917468	11/13/2018	11:40 am	11/16/2018	10:18 am	Flr Upper Level Rm 106	< 0.4
3196989	3917473	11/13/2018	11:41 am	11/16/2018	10:19 am	Flr Upper Level Rm 104	< 0.4
3196990	3917472	11/13/2018	11:42 am	11/16/2018	10:19 am	Flr Upper Level Rm 107	< 0.4
3196991	3917466	11/13/2018	11:43 am	11/16/2018	10:20 am	Flr Upper Level Rm 101	< 0.4
3196992	3917421	11/13/2018	11:44 am	11/16/2018	10:21 am	Flr Upper Level Rm 109	< 0.4
3196993	3917475	11/13/2018	11:45 am	11/16/2018	10:22 am	Flr Upper Level Rm 123	< 0.4
3196994	3917477	11/13/2018	11:45 am	11/16/2018	10:23 am	Flr Upper Level Rm 117	< 0.4
3196995	3915877	11/13/2018	11:46 am	11/16/2018	10:24 am	Flr Upper Level Rm 122A	< 0.4
3196996	3917463	11/13/2018	11:46 am	11/16/2018	10:24 am	Flr Upper Level Rm 122	< 0.4
3196997	3917470	11/13/2018	11:47 am	11/16/2018	10:25 am	Flr Upper Level Rm 124	< 0.4

Comment: AMENDED REPORT on 1-8-19 to add missing start times for multiple devices.

Test Performed By: Not Indicated

Distributed by: Intertek-PSI (VA)

Date Received: 11/20/2018 Date Logged: 11/21/2018 Date Analyzed: 11/20/2018 Date Reported: 11/28/2018

Report Reviewed By: 

Report Approved By: 

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NRPP 105011 AL
NRSB ARL0007

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

Laboratory Report for:

Property Tested: Project # 04481387-1

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

MCPS Radon Survey Galway Elementary School
12612 Galway Drive
Silver Spring MD 20904

Log Number	Device Number	Test Exposure	Duration:	Area Tested	Result pCi/L
3196998	3917425	11/13/2018 11:47 am	11/16/2018 10:25 am	Flr Upper Level Rm 128	< 0.4
3196999	3917423	11/13/2018 11:48 am	11/16/2018 10:26 am	Flr Upper Level Rm 119	< 0.4
3197000	3917467	11/13/2018 11:48 am	11/16/2018 10:26 am	Flr Upper Level Rm 132	< 0.4
3197001	3917426	11/13/2018 11:49 am	11/16/2018 10:26 am	Flr Upper Level Rm 136	< 0.4
3197002	3917480	11/13/2018 11:51 am	11/16/2018 10:27 am	Flr Upper Level Rm 108A	0.5
3197003	3917469	11/13/2018 11:54 am	11/16/2018 10:29 am	Flr Upper Level Rm 178	< 0.4
3197004	3917428	11/13/2018 11:56 am	11/16/2018 10:30 am	Flr Upper Level Rm 176	< 0.4
3197005	3917424	11/13/2018 11:57 am	11/16/2018 10:31 am	Flr Upper Level Rm 180	< 0.4
3197006	3917396	11/13/2018 11:59 am	11/16/2018 10:23 am	Flr Upper Level Rm 167	0.4
3197007	3917400	11/13/2018 12:00 pm	11/16/2018 10:30 am	Flr Upper Level Rm 165	< 0.4
3197008	3917395	11/13/2018 12:01 pm	11/16/2018 10:35 am	Flr Upper Level Kitch Off	< 0.4

Comment: AMENDED REPORT on 1-8-19 to add missing start times for multiple devices.

Test Performed By: Not Indicated

Distributed by: Intertek-PSI (VA)

Date Received: 11/20/2018 Date Logged: 11/21/2018 Date Analyzed: 11/20/2018 Date Reported: 11/28/2018

Report Reviewed By: 

Report Approved By: 

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NRPP 105011 AL
NRSB ARL0007

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

Laboratory Report for:

Property Tested: Project # 04481387-1

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

MCPS Radon Survey Galway Elementary School
12612 Galway Drive
Silver Spring MD 20904

Log Number	Device Number	Test Exposure Duration:	Area Tested	Result pCi/L
3197009	3917394	11/13/2018 12:01 pm 11/16/2018 10:35 am	Flr Upper Level Kitch Off	< 0.4
3197010	3917398	11/13/2018 12:02 pm 11/16/2018 10:36 am	Flr Upper Level Rm 150	< 0.4
3197011	3917392	11/13/2018 12:02 pm 11/16/2018 10:37 am	Flr Upper Level Rm 186	< 0.4
3197012	3917393	11/13/2018 12:04 pm 11/16/2018 10:38 am	Flr Upper Level Rm 185	< 0.4
3197013	3917427	11/13/2018 12:04 pm 11/16/2018 10:39 am	Flr Upper Level Rm 137	< 0.4
3197014	3917445	11/13/2018 12:05 pm 11/16/2018 10:39 am	Flr Upper Level Rm 153	< 0.4
3197015	3917441	11/13/2018 12:05 pm 11/16/2018 10:40 am	Flr Upper Level Rm 162	< 0.4
3197016	3917442	11/13/2018 11:31 am 11/16/2018 10:41 am	Flr Upper Level Main off Duplicate	0.6
3197017	3917399	11/13/2018 11:32 am 11/16/2018 10:42 am	Flr Upper Level Rm 102 Duplicate	0.4
3197018	3917444	11/13/2018 12:11 pm 11/16/2018 10:42 am	Flr Lower Level Rm 008	0.6
3197019	3917448	11/13/2018 12:12 pm 11/16/2018 10:43 am	Flr Lower Level Rm 001	0.5

Comment: AMENDED REPORT on 1-8-19 to add missing start times for multiple devices.

Test Performed By: Not Indicated

Distributed by: Intertek-PSI (VA)

Date Received: 11/20/2018 Date Logged: 11/21/2018 Date Analyzed: 11/20/2018 Date Reported: 11/28/2018

Report Reviewed By: 

Report Approved By: 

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NRPP 105011 AL
NRSB ARL0007

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

Laboratory Report for:

Property Tested: Project # 04481387-1

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

MCPS Radon Survey Galway Elementary School
12612 Galway Drive
Silver Spring MD 20904

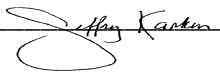
Log Number	Device Number	Test Exposure Duration:	Area Tested	Result pCi/L
3197020	3917447	11/13/2018 12:13 pm 11/16/2018 10:43 am	Flr Lower Level Rm 001	< 0.4
3197021	3917450	11/13/2018 12:13 pm 11/16/2018 10:44 am	Flr Lower Level Rm 001A	< 0.4
3197022	3917443	11/13/2018 12:14 pm 11/16/2018 10:44 am	Flr Lower Level Rm 007	< 0.4
3197023	3917449	11/13/2018 12:15 pm 11/16/2018 10:48 am	Flr Lower Level Rm 041	0.7
3197024	3917422	11/13/2018 12:16 pm 11/16/2018 10:52 am	Flr Lower Level Rm 045	< 0.4
3197025	3917429	11/13/2018 12:16 pm 11/16/2018 10:56 am	Flr Lower Level Rm 047	< 0.4
3197026	3917458	11/13/2018 12:17 pm 11/16/2018 10:58 am	Flr Lower Level Rm 051	< 0.4
3197027	3917451	11/13/2018 12:17 pm 11/16/2018 11:02 am	Flr Lower Level Rm 041 Duplicate	0.4
3197028	3917453	11/13/2018 12:18 pm 11/16/2018 12:17 pm	Flr Lower Level Rm 047 Duplicate	< 0.4
3197029	3917382	11/13/2018 12:18 pm 11/16/2018 12:18 pm	Flr Lower Level Rm 053	< 0.4
3197030	3917460	11/13/2018 12:19 pm 11/16/2018 12:19 pm	Flr Lower Level Rm 057	< 0.4

Comment: AMENDED REPORT on 1-8-19 to add missing start times for multiple devices.

Test Performed By: Not Indicated

Distributed by: Intertek-PSI (VA)

Date Received: 11/20/2018 Date Logged: 11/21/2018 Date Analyzed: 11/20/2018 Date Reported: 11/28/2018

Report Reviewed By: 

Report Approved By: 

Disclaimer:

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NRPP 105011 AL
NRSB ARL0007

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

Laboratory Report for:

Property Tested: Project # 04481387-1

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

MCPS Radon Survey Galway Elementary School
12612 Galway Drive
Silver Spring MD 20904

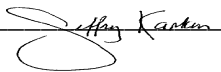
Log Number	Device Number	Test Exposure Duration:	Area Tested	Result pCi/L
3197031	3917388	11/13/2018 12:20 pm 11/16/2018 12:20 pm	Flr Lower Level Rm 011	< 0.4
3197032	3917452	11/13/2018 12:21 pm 11/16/2018 12:21 pm	Flr Lower Level Rm 013	< 0.4
3197033	3917454	11/13/2018 12:23 pm 11/16/2018 12:23 pm	Flr Lower Level Rm 018	< 0.4
3197034	3917390	11/13/2018 12:24 pm 11/16/2018 12:24 pm	Flr Lower Level Rm 017	< 0.4
3197035	3917455	11/13/2018 12:24 pm 11/16/2018 12:24 pm	Flr Lower Level Rm 017 Duplicate	< 0.4
3197036	3917457	11/13/2018 12:25 pm 11/16/2018 12:25 pm	Flr Lower Level Rm 019	< 0.4
3197037	3917381	11/13/2018 12:25 pm 11/16/2018 12:25 pm	Flr Lower Level Rm 022	< 0.4
3197038	3917386	11/13/2018 12:26 pm 11/16/2018 12:26 pm	Flr Lower Level Rm 024	< 0.4
3197039	3917456	11/13/2018 12:26 pm 11/16/2018 12:26 pm	Flr Lower Level Rm 023	< 0.4
3197040	3917387	11/13/2018 12:27 pm 11/16/2018 12:27 pm	Flr Lower Level Rm 028	< 0.4
3197041	3917389	11/13/2018 12:27 pm 11/16/2018 12:28 pm	Flr Lower Level Rm 031	< 0.4

Comment: AMENDED REPORT on 1-8-19 to add missing start times for multiple devices.

Test Performed By: Not Indicated

Distributed by: Intertek-PSI (VA)

Date Received: 11/20/2018 Date Logged: 11/21/2018 Date Analyzed: 11/20/2018 Date Reported: 11/28/2018

Report Reviewed By: 

Report Approved By: 

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NRPP 105011 AL
NRSB ARL0007

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

Laboratory Report for:

Property Tested: Project # 04481387-1

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

MCPS Radon Survey Galway Elementary School
12612 Galway Drive
Silver Spring MD 20904

Log Number	Device Number	Test Exposure Duration:	Area Tested	Result pCi/L
3197042	3917383	11/13/2018 12:28 pm 11/16/2018 12:28 pm	Flr Lower Level Rm 031 Duplicate	< 0.4
3197043	3917384	11/13/2018 12:29 pm 11/16/2018 12:29 pm	Flr Lower Level Rm 030	< 0.4
3197044	3917385	11/13/2018 12:29 pm 11/16/2018 12:30 pm	Flr Lower Level Rm 035 Duplicate	< 0.4
3197045	3917488	11/13/2018 12:30 pm 11/16/2018 12:30 pm	Flr Lower Level Rm 035	0.5
3197046	3917487	11/13/2018 12:31 pm 11/16/2018 12:31 pm	Flr Lower Level Rm 037	0.4
3197047	3917489	11/13/2018 12:31 pm 11/16/2018 12:31 pm	Flr Lower Level Rm 037 Duplicate	< 0.4
3197048	3917490	11/13/2018 12:32 pm 11/16/2018 12:32 pm	Flr Lower Level Rm 038	0.8
3197049	3917379	11/13/2018 6:27 pm 11/16/2018 12:32 pm	School Field Blank	< 0.4
3197050	3917377	11/13/2018 6:27 pm 11/16/2018 12:32 pm	School Field Blank	< 0.4
3197051	3917378	11/13/2018 6:27 pm 11/16/2018 12:32 pm	School Transit Blank	< 0.4
3197052	3917380	11/13/2018 6:00 am 11/16/2018 6:00 pm	School Office Blank	< 0.4

Comment: AMENDED REPORT on 1-8-19 to add missing start times for multiple devices.

Test Performed By: Not Indicated

Distributed by: Intertek-PSI (VA)

Date Received: 11/20/2018 Date Logged: 11/21/2018 Date Analyzed: 11/20/2018 Date Reported: 11/28/2018

Report Reviewed By: 

Report Approved By: 

Disclaimer:

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NELAC NY 11769
NRPP 103216 AL
NRSB ARL0017

EPA Method #402-R-92-004
Liquid Scintillation
NRPP Device Code 8088
NRSB Device Code 12193

Laboratory Report for:

Property Tested:

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


MCPS Radon Survey
Galway Elementary School
Silver Spring AA 20904


Log Number	Device Number	Test Date	Exposure Start	Exposure End	Duration	Area Tested	Result pCi/L
2393129	3881206	11/13/2018	11:52 am	11/16/2018	10:28 am	Galway Elementary School Flr Upper Level Rm Gy	0.4
2393130	3881216	11/13/2018	11:53 am	11/16/2018	10:29 am	Galway Elementary School Flr Upper Level Rm Gy	< 0.4
2393133	3881245	11/13/2018	12:00 pm	11/16/2018	10:31 am	Galway Elementary School Flr Upper Level Rm Caf	< 0.4

Comment: AMENDED REPORT 2/1/2019 to update results. A copy of this report was emailed to Intertek-PSI (VA).

Distributed by: Intertek-PSI (VA)

Date Received: 11/19/2018 Date Logged: 11/19/2018 Date Analyzed: 11/20/2018 Date Reported: 01/02/2019

Report Reviewed By: 

Report Approved By: 

Disclaimer:

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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:

Property Tested:

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

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: 

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.

Shawn Price, Director of Laboratory Operations, AccuStar Labs

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.

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 Date Start: _____ Date Stop: _____

Time Start: 0947 Time Stop: 0947 Time Start: _____ Time Stop: _____

Device No.'s: (10) Char. Cans- Device No.'s: _____

3926831 thru 3926840 _____

G2 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



Chain of Custody

Project Name: MCPS Radon Survey 2018

Name of Schools:

- | | | |
|---------------------|----------------------|--------------------|
| 1. Highland View ES | 6. EB Lee MS | 11. Cannon Rd ES |
| 2. Kemp Mill ES | 7. Forest Knolls ES | 12. Cloverly ES |
| 3. Sligo Creek ES | 8. Galway ES | 13. Springbrook HS |
| 4. Highland ES | 9. Wheaton HS | |
| 5. Kennedy HS | 10. Briggs Chaney MS | |

	Date	Initials
Radon Test Kits Deployed	11/13/2018	NL
Radon Test Kits Sampled	11/16/2018	NL
Radon Test Kits Shipped to Lab*	11/16/2018	NL
Radon Test Kits Received by Lab*	11/17/2018; 11/18/2018; 11/20/2018	NL

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

RADON SCREENING SURVEY – FOLLOW-UP GALWAY ELEMENTARY SCHOOL

12612 Galway Drive, Silver Spring, Maryland 20904

EXECUTIVE SUMMARY

Date of Test Report:	4/8/16 Follow-Up
Round of Testing:	Initial Follow-up Post Remediation
# Rooms Tested	3
# Rooms \geq 4.0 pCi/L:	0
Low Value:	<0.4
High Value:	<0.4
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) 2/15/16 Initial	Result (pCi/L) 4/8/16 Follow-Up	Average Result (pCi/L)
107	No Access	<0.4	<0.4
153	<0.3 Tampered	<0.4	<0.4
170	--- Missing	<0.4	<0.4



MCPS RADON TESTING

Executive Summary: Galway Elementary School

Date of Test Report:	4/8/2016
Round of Testing:	Initial Follow-up Post Remediation
# Rooms Tested:	3
# Rooms \geq 4.0 pCi/L:	0
Low Value:	< 0.4
High Value:	< 0.4

Project Status:

Retesting completed; no further action at this time.



April 8, 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: Galway Elementary School
12612 Galway Drive
Silver Spring, Maryland 20904

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 Galway Elementary School, located at 12612 Galway Drive in Silver Spring, Maryland 20904 (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 21, 2016 and deployed four (4) 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 TCS Industries Inc. as spike samples. The spiked tests were exposed to a known radon concentration by TCS prior to being returned to the laboratory for analysis.

KCI returned to the site on March 24, 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 pCi/L	none	n/a
< 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 (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 11 testing. Office blanks were not submitted under each school individually.

Radon Testing Results		
Galway Elementary School		
Test Period: 03/21/16-03/24/16		
Kit Number	Room / Area	Result
3029270	107	<0.4
3029266	170	<0.4
3029251	153	<0.4

Table Note:

* Missing or Compromised Sample

Radon Testing Results		
Galway Elementary School		
Test Period: 03/21/16-03/24/16		
Kit Number	QC Type	Result
3029268	* D (153:Missing)	-

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


Galway E S
12612 Galway Dr
Silver Spring MD 20904


Log Number	Device Number	Test Exposure Duration:		Area Tested	Result (pCi/L)
3018363	3029270	03/21/2016 7:55 am	03/24/2016 9:00 am	Unit 107	<0.4
3018364	3029251	03/21/2016 8:07 am	03/24/2016 9:03 am	Unit 153	<0.4
3018365	3029266	03/21/2016 8:10 am	03/24/2016 9:05 am	Unit 170	<0.4

Comment: Device# 3029268 was not received with this datasheet. A copy of this report was emailed to tehsin@kci.com.

Distributed by: KCI Technologies, Inc.

Date Received: 03/28/2016 Date Logged: 03/28/2016 Date Analyzed: 03/28/2016 Date Reported: 03/29/2016

Report Reviewed By: 

Report Approved By: 

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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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 11 (re-testing) Office Blank

Log Number	Device Number	Test Exposure Duration:	Area Tested	Result (pCi/L)
3018362	3029232	03/21/2016 8:00 am 03/24/2016 8:00 am	Unit O First Floor Main Room	<0.4

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

Distributed by: KCI Technologies, Inc.

Date Received: 03/28/2016 Date Logged: 03/28/2016 Date Analyzed: 03/28/2016 Date Reported: 03/29/2016

Report Reviewed By: Grace Heubling

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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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.mouldsdales@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

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	Wgt. Gain	pCi/L
3028953	Transit	1	1/19/16	approx: 00pm 1/23/16		9:30am		<0.4
8955	Transit	1	1/19/16					<0.4
8954	Transit	1	1/19/16					<0.4
8997	Transit	1	1/19/16					<0.4

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
 Owner waives confidentiality by signing here _____ Date 1/27/16
 Attention: James Mouldale

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

TCS INDUSTRIES, INC.

(717) 657-7032

RADON GAS DETECTION

www.radondetek.com

4326 Crestview Road, Harrisburg, PA 17112

James Mouldale
KCI
936 Ridgebrook Rd.
Sparks, MD 21152

April 04, 2016

Dear Mr. Mouldale:

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 71F
Avg. RH was 51%
Elevation was 490 feet above sea level

Sincerely,



Carl H. Distenfeld, CHP

TCS Radon Chamber NRSB CHM 0002

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)
3020102	3029166	04/04/2016 11:10 am 04/06/2016 11:13 am	Not Indicated	11.9
3020103	3029214	04/04/2016 11:10 am 04/06/2016 11:13 am	Not Indicated	11.5
3020104	3029217	04/04/2016 11:10 am 04/06/2016 11:13 am	Not Indicated	10.7
3020105	3029218	04/04/2016 11:10 am 04/06/2016 11:13 am	Not Indicated	11.3
3020106	3029219	04/04/2016 11:10 am 04/06/2016 11:13 am	Not Indicated	11.0
3020107	3029220	04/04/2016 11:10 am 04/06/2016 11:13 am	Not Indicated	10.5

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

Distributed by: KCI Technologies, 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 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.

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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MCPS RADON TESTING

Executive Summary: Galway Elementary School

Date of Test Report:	2/15/2016
Round of Testing:	Initial Follow-up Post Remediation
# Rooms Tested:	70
# Rooms \geq 4.0 pCi/L:	0
Low Value:	< 0.3
High Value:	2.1

Project Status:

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



February 15, 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: Galway Elementary School
12612 Galway Drive
Silver Spring, MD 20904

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 Galway Elementary School, located at 12612 Galway Drive in Silver Spring, Maryland 20904 (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 eighty-seven (87) 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	none	n/a
< 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		
Galway Elementary School		
Test Period: 01/19/16-01/22/16		
Kit Number	Room / Area	Result
7719287	1	< 0.3
7719290	1	< 0.3
7714575	7	0.7
7714579	8	1.3
7721790	11	< 0.3
7714566	13	< 0.3
7721797	16	0.7
7719094	17	< 0.3
7721784	18	< 0.3
7721787	19	< 0.3
7719083	22	0.9
7719093	23	< 0.3
7720186	24	< 0.3
7721779	28	< 0.3
7721782	30	< 0.3
7714570	31	< 0.3
7721793	35	< 0.3
7721794	37	< 0.3
7721786	38	0.7
7719292	41	2.1
7719095	44	0.6
7721778	45	1
7719291	46	0.9
7720200	47	0.6
7714586	51	0.6
7719294	53	0.6
7721791	57	< 0.3
7720197	100	0.7
7714594	101	< 0.3
7719097	102	< 0.3
7720199	103	0.6
7719397	108	< 0.3
7721798	108	< 0.3
7719284	109	0.7
7721785	117	< 0.3
7721789	119	< 0.3
7719395	122	0.5
7714595	123	0.7
7719394	124	1.7
7719391	128	0.7
7721777	130	0.6
7719099	132	1.1
7714600	136	1.1
7721780	139	< 0.3
7719398	156	< 0.3
7720176	165	< 0.3

Table Note:

* Missing or Compromised Sample

Radon Testing Results		
Galway Elementary School		
Test Period: 01/19/16-01/22/16		
Kit Number	Room / Area	Result
7719096	166	< 0.3
7719296	167	0.6
7714591	174	0.6
7719390	174	< 0.3
7720180	174	< 0.3
7721760	174	< 0.3
7719098	176	< 0.3
7714593	178	< 0.3
7714589	180	< 0.3
7719399	181	< 0.3
7720198	185	< 0.3
7719286	186	< 0.3
7719548	001A	< 0.3
7719289	001B	1.5
7719300	100A	0.8
7721783	100B	1.2
7719298	100C	0.8
7720194	100D	< 0.3
7720196	101A	< 0.3
7720182	102B	0.5
7719400	102C	< 0.3
7721774	107	< 0.3
7719396	122A	0.6
7721799	* 153 (tampered)	< 0.3
7721776	* 170 (missing)	0
7720190	174D	< 0.3
7719513	174D1	< 0.3
7714571	ML 990	< 0.3
7721792	ML 996	< 0.3

Table Note:

* Missing or Compromised Sample

Radon Testing Results		
Galway Elementary School		
Test Period: 01/19/16-01/22/16		
Kit Number	QC Type	Result
7719288	D (1)	0.6
7719081	D (101)	< 0.3
7714599	D (123)	< 0.3
7719082	D (166)	0.6
7719297	D (167)	1
7719091	D (22)	0.8
7719100	D (23)	< 0.3
7719293	D (38)	0.8
7719299	FB (100)	< 0.3
7719295	FB (181)	< 0.3
7721788	FB (31)	< 0.3
7721781	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:
**GALWAY ELEMENTARY SCHOOL
 MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7721781	0	2016-01-19 @ 1:00 pm	2016-01-22 @ 11:00 am	< 0.3	2016-01-27
7719548	001A	2016-01-19 @ 9:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7719289	001B	2016-01-19 @ 9:00 am	2016-01-22 @ 8:00 am	1.5 ± 0.4	2016-01-27
7719287	1	2016-01-19 @ 9:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7719288	1	2016-01-19 @ 9:00 am	2016-01-22 @ 7:00 am	0.6 ± 0.3	2016-01-27
7719290	1	2016-01-19 @ 9:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-27
7719299	100	2016-01-19 @ 12:00 pm	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7720197	100	2016-01-19 @ 12:00 pm	2016-01-22 @ 8:00 am	0.7 ± 0.3	2016-01-27
7719300	100A	2016-01-19 @ 12:00 pm	2016-01-22 @ 8:00 am	0.8 ± 0.3	2016-01-26
7721783	100B	2016-01-19 @ 12:00 pm	2016-01-22 @ 8:00 am	1.2 ± 0.3	2016-01-27
7719298	100C	2016-01-19 @ 12:00 pm	2016-01-22 @ 8:00 am	0.8 ± 0.3	2016-01-27
7720194	100D	2016-01-19 @ 12:00 pm	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7714594	101	2016-01-19 @ 12:00 pm	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7719081	101	2016-01-19 @ 12:00 pm	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7720196	101A	2016-01-19 @ 12:00 pm	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7719097	102	2016-01-19 @ 12:00 pm	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7720182	102B	2016-01-19 @ 12:00 pm	2016-01-22 @ 8:00 am	0.5 ± 0.3	2016-01-26
7719400	102C	2016-01-19 @ 12:00 pm	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7720199	103	2016-01-19 @ 12:00 pm	2016-01-22 @ 8:00 am	0.6 ± 0.3	2016-01-27
7721774	107	2016-01-19 @ 1:00 pm	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7719397	108	2016-01-19 @ 1:00 pm	2016-01-22 @ 9:00 am	< 0.3	2016-01-26
7721798	108	2016-01-19 @ 1:00 pm	2016-01-22 @ 9:00 am	< 0.3	2016-01-27
7719284	109	2016-01-19 @ 12:00 pm	2016-01-22 @ 8:00 am	0.7 ± 0.3	2016-01-27
7721790	11	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7721785	117	2016-01-19 @ 1:00 pm	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7721789	119	2016-01-19 @ 1:00 pm	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7719395	122	2016-01-19 @ 1:00 pm	2016-01-22 @ 8:00 am	0.5 ± 0.3	2016-01-26
7719396	122A	2016-01-19 @ 1:00 pm	2016-01-22 @ 8:00 am	0.6 ± 0.3	2016-01-27
7714595	123	2016-01-19 @ 1:00 pm	2016-01-22 @ 8:00 am	0.7 ± 0.3	2016-01-27
7714599	123	2016-01-19 @ 1:00 pm	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7719394	124	2016-01-19 @ 1:00 pm	2016-01-22 @ 8:00 am	1.7 ± 0.4	2016-01-26
7719391	128	2016-01-19 @ 1:00 pm	2016-01-22 @ 8:00 am	0.7 ± 0.3	2016-01-26
7714566	13	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-27
7721777	130	2016-01-19 @ 1:00 pm	2016-01-22 @ 8:00 am	0.6 ± 0.3	2016-01-27
7719099	132	2016-01-19 @ 1:00 pm	2016-01-22 @ 8:00 am	1.1 ± 0.3	2016-01-27
7714600	136	2016-01-19 @ 1:00 pm	2016-01-22 @ 8:00 am	1.1 ± 0.3	2016-01-27
7721780	139	2016-01-19 @ 1:00 pm	2016-01-22 @ 8:00 am	< 0.3	2016-01-27

February 11, 2016 **LABORATORY ANALYSIS REPORT** **

Radon test result report for:
**GALWAY ELEMENTARY SCHOOL
 MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7721799	153	2016-01-19 @ 1:00 pm	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7719398	156	2016-01-19 @ 1:00 pm	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7721797	16	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	0.7 ± 0.3	2016-01-26
7720176	165	2016-01-19 @ 11:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7719096	166	2016-01-19 @ 12:00 pm	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7719082	166	2016-01-19 @ 12:00 pm	2016-01-22 @ 8:00 am	0.6 ± 0.3	2016-01-27
7719296	167	2016-01-19 @ 11:00 am	2016-01-22 @ 8:00 am	0.6 ± 0.3	2016-01-26
7719297	167	2016-01-19 @ 11:00 am	2016-01-22 @ 8:00 am	1.0 ± 0.3	2016-01-27
7719094	17	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-27
7721776	170	@	@		
7719390	174	2016-01-19 @ 11:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7714591	174	2016-01-19 @ 11:00 am	2016-01-22 @ 8:00 am	0.6 ± 0.3	2016-01-27
7720180	174	2016-01-19 @ 11:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7721760	174	2016-01-19 @ 11:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7720190	174D	2016-01-19 @ 12:00 pm	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7719513	174D1	2016-01-19 @ 12:00 pm	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7719098	176	2016-01-19 @ 11:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7714593	178	2016-01-19 @ 11:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7721784	18	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-27
7714589	180	2016-01-19 @ 11:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7719295	181	2016-01-19 @ 11:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7719399	181	2016-01-19 @ 11:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7720198	185	2016-01-19 @ 11:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7719286	186	2016-01-19 @ 11:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7721787	19	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-27
7719083	22	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	0.9 ± 0.3	2016-01-27
7719091	22	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	0.8 ± 0.3	2016-01-27
7719093	23	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7719100	23	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7720186	24	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7721779	28	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-27
7721782	30	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7721788	31	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-27
7714570	31	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-27
7721793	35	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-27
7721794	37	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-27
7721786	38	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	0.7 ± 0.3	2016-01-27

February 11, 2016 **** LABORATORY ANALYSIS REPORT ****

Radon test result report for:
**GALWAY ELEMENTARY SCHOOL
MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7719293	38	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	0.8 ± 0.3	2016-01-27
7719292	41	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	2.1 ± 0.4	2016-01-26
7719095	44	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	0.6 ± 0.3	2016-01-27
7721778	45	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	1.0 ± 0.3	2016-01-27
7719291	46	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	0.9 ± 0.3	2016-01-26
7720200	47	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	0.6 ± 0.3	2016-01-27
7714586	51	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	0.6 ± 0.3	2016-01-27
7719294	53	2016-01-19 @ 11:00 am	2016-01-22 @ 7:00 am	0.6 ± 0.3	2016-01-27
7721791	57	2016-01-19 @ 11:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7714575	7	2016-01-19 @ 9:00 am	2016-01-22 @ 7:00 am	0.7 ± 0.3	2016-01-27
7714579	8	2016-01-19 @ 9:00 am	2016-01-22 @ 7:00 am	1.3 ± 0.4	2016-01-27

February 11, 2016
**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:
**GALWAY ELEMENTARY SCHOOL
PORTABLE**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7714571	ML 990	2016-01-19 @ 9:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-27
7721792	ML 996	2016-01-19 @ 9:00 am	2016-01-22 @ 7:00 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 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: 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 _____

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