



MCPS RADON TESTING – EXECUTIVE SUMMARY

Site Name	John Poole Middle School
Date of Test Report	1/04/2023
Round of Testing	Initial Follow-up Post Remediation 2 Year Testing 5 Year Testing HVAC Upgrade Window Replacement New Addition New Facility
# Rooms Tested	65
# Rooms \geq 4.0 pCi/L	0
Lowest Value	<0.3 pCi/L
Highest Value	2.1 pCi/L

Project Status:

1. 5-Year retesting completed



January 4, 2023

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

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

Location: John Poole Middle School
17014 Tom Fox Avenue
Poolesville, MD 20837

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 John Poole Middle School, located at 17014 Tom Fox Ave. Poolesville, MD 20837 (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 December 6, 2022 and deployed seventy-three (73) 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 December 9, 2022 to retrieve the radon sampling test kits. KCI shipped all radon tests via overnight delivery to Airchek, Inc. for analysis by gamma-ray spectroscopy. Airchek, Inc.

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

Evaluation of Testing Conditions:

These tests represent:

- Follow-up to initial testing.

These tests were conducted to:

- Evaluate radon 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 low temperatures were in the 20s°F and high temperatures ranged to the mid-50s°F. Maximum sustained winds ranged from 0-12 miles per hour. Average humidity was around 75% with .04 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		
John Poole MS		
Test Period: 12/06/2022 - 12/09/2022		
Kit Number	Room / Area	Result
11287485	101	1.1
11287477	102	0.8
11287484	104	1.0
11287489	105	0.5
11287478	107	0.7
11287479	108	< 0.3
11287464	110	0.8
11287482	110	< 0.3
11287483	110	1.0
11287481	200	0.6
11287456	201	< 0.3
11287444	202	1.0
11287459	203	0.8
11287460	204	< 0.3
11287461	204	< 0.3
11287463	204	< 0.3
11287469	205	< 0.3
11287465	207	< 0.3
11287462	208	< 0.3
11287458	209	0.8
11287466	210	0.8
11287455	300	< 0.3
11287454	301	1.1
11287453	302	< 0.3
11287442	303	< 0.3
11287440	306	0.6
11287443	307	0.7
11287448	308	0.6
11287419	309	1.3
11287441	310	0.9
11287452	310	0.7
11287423	405	0.7
11287407	406	0.7
11287415	406	0.7
11287417	406	0.6
11287412	407	< 0.3
11287438	501	< 0.3
11287416	502	0.8
11287418	504	< 0.3
11287402	100A	0.5
11287435	100B	1.0
11287445	100C	0.8

Table 1- Radon Testing Results		
John Poole MS		
Test Period: 12/06/2022 - 12/09/2022		
Kit Number	Room / Area	Result
11287408	100D	0.7
11287409	100E	2.1
11287457	211 IDA	< 0.3
11287446	501 A	0.7
11287449	AUXILIARY GYM 404	< 0.3
11287450	AUXILIARY GYM 404	0.7
11287410	CAFETERIA 500	< 0.3
11287436	CAFETERIA 500	1.0
11287491	COUNSELING CONFERENCE ROOM	0.9
11287492	COUNSELING OFFICE	< 0.3
11287490	COUNSELOR OFFICE A	0.5
11287487	COUNSELOR OFFICE B	0.6
11287411	GIRLS LOCKER ROOM 403	0.6
11287480	HEALTH ROOM	1.1
11287486	HEALTH ROOM	1.2
11287493	HEALTH ROOM OFFICE	0.8
11287413	KITCHEN OFFICE	0.6
11287420	KITCHEN OFFICE	< 0.3
11287414	MAIN GYM	< 0.3
11287447	MAIN GYM	0.6
11287437	MAIN OFFICE	0.8
11287401	MAIN OFFICE WORK ROOM	1.0
11287472	MEDIA CENTER	1.0
11287474	MEDIA CENTER	0.6
11287470	MEDIA CENTER OFFICE	1.0
11287475	MEDIA CENTER OFFICE	0.8
11287471	MEDIA SPECIALIST OFFICE	0.7
11287476	MEDIA STORAGE OFFICE	1.0
11287468	PARAS OFFICE	0.5
11287467	SDT OFFICE	1.0
11287473	SPED OFFICE	0.7

Table 2- Radon Testing Results			
John Poole MS			
Test Period: 12/06/22 - 12/09/22			
Kit Number	QC Type	Room / Area	Result
11287483	D	110	1.0
11287482	FB	110	< 0.3
11287461	D	204	< 0.3
11287417	D	406	0.6
11287415	FB	406	0.7
11287486	D	Health Room	1.2
11287420	D	Kitchen Office	< 0.3
11287470	D	Media Center Office	1.0
11287676	OB	OFFICE BLANK	< 0.3
11287288	TB	TRAVEL BLANK	< 0.3

ATTACHMENT C

Laboratory Analytical Results

Radon test result report for:**MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11287402	100A	2022-12-06 @ 9:00 am	2022-12-09 @ 9:00 am	0.5 ± 0.3	2022-12-13
11287435	100B	2022-12-06 @ 9:00 am	2022-12-09 @ 9:00 am	1.0 ± 0.3	2022-12-13
11287445	100C	2022-12-06 @ 9:00 am	2022-12-09 @ 9:00 am	0.8 ± 0.3	2022-12-13
11287408	100D	2022-12-06 @ 9:00 am	2022-12-09 @ 9:00 am	0.7 ± 0.3	2022-12-13
11287409	100E	2022-12-06 @ 9:00 am	2022-12-09 @ 9:00 am	2.1 ± 0.4	2022-12-13
11287485	101	2022-12-06 @ 12:00 pm	2022-12-09 @ 11:00 am	1.1 ± 0.3	2022-12-13
11287477	102	2022-12-06 @ 12:00 pm	2022-12-09 @ 11:00 am	0.8 ± 0.3	2022-12-13
11287484	104	2022-12-06 @ 12:00 pm	2022-12-09 @ 11:00 am	1.0 ± 0.3	2022-12-13
11287489	105	2022-12-06 @ 12:00 pm	2022-12-09 @ 11:00 am	0.5 ± 0.3	2022-12-13
11287478	107	2022-12-06 @ 12:00 pm	2022-12-09 @ 11:00 am	0.7 ± 0.3	2022-12-13
11287479	108	2022-12-06 @ 12:00 pm	2022-12-09 @ 11:00 am	< 0.3	2022-12-13
11287482	110	2022-12-06 @ 12:00 pm	2022-12-09 @ 11:00 am	< 0.3	2022-12-13
11287483	110	2022-12-06 @ 12:00 pm	2022-12-09 @ 11:00 am	1.0 ± 0.3	2022-12-13
11287464	110	2022-12-06 @ 12:00 pm	2022-12-09 @ 11:00 am	0.8 ± 0.3	2022-12-13
11287481	200	2022-12-06 @ 12:00 pm	2022-12-09 @ 10:00 am	0.6 ± 0.3	2022-12-13
11287456	201	2022-12-06 @ 11:00 am	2022-12-09 @ 10:00 am	< 0.3	2022-12-13
11287444	202	2022-12-06 @ 11:00 am	2022-12-09 @ 10:00 am	1.0 ± 0.3	2022-12-13
11287459	203	2022-12-06 @ 11:00 am	2022-12-09 @ 10:00 am	0.8 ± 0.3	2022-12-13
11287463	204	2022-12-06 @ 11:00 am	2022-12-09 @ 10:00 am	< 0.3	2022-12-13
11287460	204	2022-12-06 @ 11:00 am	2022-12-09 @ 10:00 am	< 0.3	2022-12-13
11287461	204	2022-12-06 @ 11:00 am	2022-12-09 @ 10:00 am	< 0.3	2022-12-13
11287469	205	2022-12-06 @ 11:00 am	2022-12-09 @ 10:00 am	< 0.3	2022-12-13
11287465	207	2022-12-06 @ 11:00 am	2022-12-09 @ 10:00 am	< 0.3	2022-12-13
11287462	208	2022-12-06 @ 11:00 am	2022-12-09 @ 10:00 am	< 0.3	2022-12-13
11287458	209	2022-12-06 @ 11:00 am	2022-12-09 @ 10:00 am	0.8 ± 0.3	2022-12-13
11287466	210	2022-12-06 @ 11:00 am	2022-12-09 @ 10:00 am	0.8 ± 0.3	2022-12-13
11287457	211 IDA	2022-12-06 @ 11:00 am	2022-12-09 @ 10:00 am	< 0.3	2022-12-13
11287455	300	2022-12-06 @ 11:00 am	2022-12-09 @ 10:00 am	< 0.3	2022-12-13
11287454	301	2022-12-06 @ 10:00 am	2022-12-09 @ 10:00 am	1.1 ± 0.3	2022-12-13
11287453	302	2022-12-06 @ 10:00 am	2022-12-09 @ 10:00 am	< 0.3	2022-12-13
11287442	303	2022-12-06 @ 10:00 am	2022-12-09 @ 10:00 am	< 0.3	2022-12-13
11287440	306	2022-12-06 @ 10:00 am	2022-12-09 @ 10:00 am	0.6 ± 0.3	2022-12-13
11287443	307	2022-12-06 @ 11:00 am	2022-12-09 @ 10:00 am	0.7 ± 0.3	2022-12-13
11287448	308	2022-12-06 @ 10:00 am	2022-12-09 @ 10:00 am	0.6 ± 0.3	2022-12-13
11287419	309	2022-12-06 @ 10:00 am	2022-12-09 @ 10:00 am	1.3 ± 0.3	2022-12-13
11287452	310	2022-12-06 @ 10:00 am	2022-12-09 @ 10:00 am	0.7 ± 0.3	2022-12-13
11287441	310	2022-12-06 @ 10:00 am	2022-12-09 @ 10:00 am	0.9 ± 0.3	2022-12-13

Radon test result report for:**MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11287423	405	2022-12-06 @ 10:00 am	2022-12-09 @ 10:00 am	0.7 ± 0.3	2022-12-13
11287417	406	2022-12-06 @ 10:00 am	2022-12-09 @ 10:00 am	0.6 ± 0.3	2022-12-13
11287407	406	2022-12-06 @ 10:00 am	2022-12-09 @ 10:00 am	0.7 ± 0.4	2022-12-13
11287415	406	2022-12-06 @ 10:00 am	2022-12-09 @ 10:00 am	0.7 ± 0.3	2022-12-13
11287412	407	2022-12-06 @ 10:00 am	2022-12-09 @ 10:00 am	< 0.3	2022-12-13
11287438	501	2022-12-06 @ 10:00 am	2022-12-09 @ 10:00 am	< 0.3	2022-12-13
11287446	501 A	2022-12-06 @ 10:00 am	2022-12-09 @ 10:00 am	0.7 ± 0.3	2022-12-13
11287416	502	2022-12-06 @ 10:00 am	2022-12-09 @ 10:00 am	0.8 ± 0.4	2022-12-13
11287418	504	2022-12-06 @ 9:00 am	2022-12-09 @ 10:00 am	< 0.3	2022-12-13
11287449	AUXILIARY GYM 404	2022-12-06 @ 10:00 am	2022-12-09 @ 10:00 am	< 0.3	2022-12-13
11287450	AUXILIARY GYM 404	2022-12-06 @ 10:00 am	2022-12-09 @ 10:00 am	0.7 ± 0.3	2022-12-13
11287436	CAFETERIA 500	2022-12-06 @ 9:00 am	2022-12-09 @ 9:00 am	1.0 ± 0.4	2022-12-13
11287410	CAFETERIA 500	2022-12-06 @ 9:00 am	2022-12-09 @ 9:00 am	< 0.3	2022-12-13
11287491	COUNSELING CONFERENCE ROOM	2022-12-06 @ 12:00 pm	2022-12-09 @ 11:00 am	0.9 ± 0.3	2022-12-13
11287492	COUNSELING OFFICE	2022-12-06 @ 12:00 pm	2022-12-09 @ 11:00 am	< 0.3	2022-12-13
11287490	COUNSELOR OFFICE A	2022-12-06 @ 12:00 pm	2022-12-09 @ 11:00 am	0.5 ± 0.3	2022-12-13
11287487	COUNSELOR OFFICE B	2022-12-06 @ 12:00 pm	2022-12-09 @ 11:00 am	0.6 ± 0.3	2022-12-13
11287411	GIRLS LOCKER ROOM 403	2022-12-06 @ 10:00 am	2022-12-09 @ 10:00 am	0.6 ± 0.3	2022-12-13
11287486	HEALTH ROOM	2022-12-06 @ 12:00 pm	2022-12-09 @ 11:00 am	1.2 ± 0.4	2022-12-13
11287480	HEALTH ROOM	2022-12-06 @ 12:00 pm	2022-12-09 @ 11:00 am	1.1 ± 0.3	2022-12-13
11287493	HEALTH ROOM OFFICE	2022-12-06 @ 12:00 pm	2022-12-09 @ 11:00 am	0.8 ± 0.3	2022-12-13
11287413	KITCHEN OFFICE	2022-12-06 @ 9:00 am	2022-12-09 @ 9:00 am	0.6 ± 0.3	2022-12-13
11287420	KITCHEN OFFICE	2022-12-06 @ 9:00 am	2022-12-09 @ 9:00 am	< 0.3	2022-12-13
11287414	MAIN GYM	2022-12-06 @ 10:00 am	2022-12-09 @ 10:00 am	< 0.3	2022-12-13
11287447	MAIN GYM	2022-12-06 @ 10:00 am	2022-12-09 @ 10:00 am	0.6 ± 0.3	2022-12-13
11287437	MAIN OFFICE	2022-12-06 @ 9:00 am	2022-12-09 @ 9:00 am	0.8 ± 0.3	2022-12-13
11287401	MAIN OFFICE WORK ROOM	2022-12-06 @ 9:00 am	2022-12-09 @ 9:00 am	1.0 ± 0.4	2022-12-13
11287472	MEDIA CENTER	2022-12-06 @ 11:00 am	2022-12-09 @ 10:00 am	1.0 ± 0.3	2022-12-13
11287474	MEDIA CENTER	2022-12-06 @ 11:00 am	2022-12-09 @ 10:00 am	0.6 ± 0.3	2022-12-13
11287475	MEDIA CENTER OFFICE	2022-12-06 @ 11:00 am	2022-12-09 @ 10:00 am	0.8 ± 0.4	2022-12-13
11287470	MEDIA CENTER OFFICE	2022-12-06 @ 11:00 am	2022-12-09 @ 10:00 am	1.0 ± 0.4	2022-12-13
11287471	MEDIA SPECIALIST OFFICE	2022-12-06 @ 11:00 am	2022-12-09 @ 10:00 am	0.7 ± 0.3	2022-12-13
11287476	MEDIA STORAGE OFFICE	2022-12-06 @ 11:00 am	2022-12-09 @ 10:00 am	1.0 ± 0.4	2022-12-13
11287468	PARAS OFFICE	2022-12-06 @ 12:00 pm	2022-12-09 @ 10:00 am	0.5 ± 0.3	2022-12-13
11287467	SDT OFFICE	2022-12-06 @ 12:00 pm	2022-12-09 @ 11:00 am	1.0 ± 0.3	2022-12-13
11287473	SPED OFFICE	2022-12-06 @ 12:00 pm	2022-12-09 @ 11:00 am	0.7 ± 0.3	2022-12-13

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

MA MCPS - Spike Sample Lab Results. Measured values are satisfactory, i.e., within $\pm 25\%$ of the chamber's reference value (34.7 pCi/L).

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

Name of Schools:

1. Olney ES
2. Greenwood ES
3. John Poole MS
4. Monocacy ES
5. Beall ES
6. Fallsmead ES
7. Lakewood ES

	Date	Initials
Radon Test Kits Deployed	12/06/2022	BMM
Radon Test Kits Collected	12/09/2022	BMM
Radon Test Kits Shipped to Lab*	12/09/2022	BMM
Radon Test Kits Received by Lab*	12/13/2022	BMM

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



MONTGOMERY COUNTY PUBLIC SCHOOLS RADON TESTING

Executive Summary:
John Poole Middle School
17014 Tom Fox Avenue,
Poolesville, MD 20837

Date of Test Report:	3/15/2019
Round of Testing:	Initial Follow-up Post Remediation 2 Year Testing 5 Year Testing HVAC Upgrade Window Replacement New Addition New Facility
# of Rooms Tested:	2
# of 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.



March 15, 2019

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

Re: Radon Testing Services

Location: John Poole Middle School
17014 Tom Fox Avenue,
Poolesville, MD 20837

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 John Poole Middle School, located at 17014 Tom Fox Avenue, Poolesville, MD 20837 (subject site).

Scope of Services:

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

PSI visited the site on February 25, 2019 and deployed two (2) activated charcoal (AC) radon test kit. PSI deployed radon test kits in frequently-occupied ground contact rooms, and other areas, (if applicable) in accordance with AARST guidance. PSI returned to the site on February 28, 2019 to retrieve the radon sampling test kit. A floor plan map of the building with the test location is included as Attachment A of this report.

PSI shipped all radon tests via overnight delivery to AccuStar Labs for analysis by gamma-ray spectroscopy. Accustar Labs is a NRSB certified analytical laboratory for radon analysis located at 929 Mount Zion Road, Lebanon, Pennsylvania (certification # ARLO007).

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.

ATTACHMENT B

Radon Test Summary Spreadsheet

Radon Testing Results		
John Poole Middle School		
Testing period: 2/25/19 - 2/28/19		
Kit Number	Room / Area	Result (pCi/L)
3923363	300A- Tech Office	0.4
3923362	308A-Office	<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

Laboratory Report for:

Property Tested: Project # 04481387-1

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

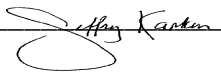
MCPS Radon Survey John Poole MS
17014 Tom Fox Avenue
Poolesville MD 20837


Log Number	Device Number	Test Exposure Duration:	Area Tested	Result pCi/L
3220600	3923362	02/25/2019 12:37 pm - 02/28/2019 12:37 pm	Floor Main Floor Room 308A- Office	< 0.4
3220601	3923363	02/25/2019 12:43 pm - 02/28/2019 12:43 pm	Floor Main Floor Room 300A-Tech Office	0.4

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

Distributed by: Intertek-PSI (VA)

Date Received: 03/04/2019 Date Logged: 03/04/2019 Date Analyzed: 03/05/2019 Date Reported: 03/06/2019

Report Reviewed By: 

Report Approved By: 

Disclaimer:

Shawn Price, Director of Laboratory Operations, AccuStar Labs

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MONTGOMERY COUNTY PUBLIC SCHOOLS RADON TESTING

Executive Summary:
John Poole Middle School
17014 Tom Fox Avenue,
Poolesville, MD 20837

Date of Test Report:	1/8/2019
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:	68
# of Rooms \geq 4.0 pCi/L:	0
Low Value:	< 0.4
High Value:	2.5

Project Status

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



January 8, 2019

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

Re: Radon Testing Services

Location: John Poole Middle School
17014 Tom Fox Avenue,
Poolesville, MD 20837

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 John Poole Middle School, located at 17014 Tom Fox Avenue, Poolesville, MD 20837 (subject site).

Scope of Services:

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

PSI visited the site on December 3, 2018 and deployed eighty-four (84) activated charcoal (AC) radon test kits. PSI deployed radon test kits in frequently-occupied ground contact rooms, and other areas, (if applicable) in accordance with AARST guidance. PSI returned to the site on December 6, 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 fluid and cursive.

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		
John Poole Middle School		
Testing period: 12/3/18 - 12/6/18		
Kit Number	Room / Area	Result (pCi/L)
3919016	101	<0.4
3919018	103	<0.4
3918984	104	0.4
3919019	105	<0.4
3918981	107	<0.4
3918983	108	<0.4
3918982	110	<0.4
3918986	200	<0.4
3918987	201	<0.4
3918957	202	<0.4
3918965	204	<0.4
3918989	205	<0.4
3918961	207	<0.4
3918964	208	<0.4
3918962	209	<0.4
3918963	210	0.8
3918958	300	0.5
3918973	301	<0.4
3919132	302	0.69
3919131	303	<0.4
3918978	306	0.7
3918974	307	0.4
3918977	308	<0.4
3918975	309	0.5
3918976	310	0.8
3919021	404	<0.4
3919022	404	0.5
3919138	405	<0.4
3919139	406	<0.4
3919136	501	2.5
3919133	502	0.5
3919025	504	<0.4
3919122	100A	<0.4
3919124	100B	<0.4
3919125	100C	<0.4
3919126	100D	<0.4
3919127	100E	1.0
3919017	101 Office	<0.4
3918985	102/100	0.9
3918988	202/203	0.4
3918966	204 Office	<0.4
3918959	300 Office 1	<0.4
3918979	308 Office	Unable to Report

Radon Testing Results		
John Poole Middle School		
Testing period: 12/3/18 - 12/6/18		
Kit Number	Room / Area	Result (pCi/L)
3919137	501A	1.2
3919029	APR	0.8
3919135	Copy Room	<0.4
3919012	Counseling Conference Room	<0.4
3919013	Counseling Conference Room	<0.4
3919014	Counseling Office 1	<0.4
3919015	Counseling Office 2	<0.4
3919023	Gym	<0.4
3919024	Gym	0.4
3919011	Health Office	<0.4
3919129	Health Room	<0.4
3918972	IDA	<0.4
3919027	Kitchen	1.0
3919028	Kitchen Office	<0.4
3919121	Main Office	0.8
3918968	Media Center	<0.4
3918967	Media Center	0.4
3918955	Media Center Copy Room	0.9
3918951	Media Center Office 1	<0.4
3918954	Media Center Office 2	0.8
3918969	Media Center Work Room	<0.4
3919128	Office	0.4
3919134	Pride Store	<0.4
3918971	Reading SPEC	0.5
3918953	SDT	0.4
3918952	SPED	0.4
3918956	TV Studio	0.5
3888460	Weight Room	0.7
3919123	Work Room	<0.4

Radon Testing Results		
John Poole Middle School		
Testing period: 12/3/18 - 12/6/18		
Kit Number	QC Type	Result (pCi/L)
3919020	105	<0.4
3918990	205	<0.4
3919140	406	<0.4
3918960	301 Office 1	0.6
3918980	308 Office	<0.4
3923171	Field Blank	<0.4
3923172	Field Blank	<0.4
3919130	Health Room	0.5
3919026	Kitchen	0.7
3918970	Media Center Work Room	1.1
3922997	Office Blank	<0.4
3922998	Trip Blank	<0.4

Table Notes:

D – Duplicate

FB – Field Blank

OB – Office Blank

TB – Transit Blank

QC – Quality Control

ATTACHMENT C

Laboratory Analytical Results

NELAC NY 11769
NRPP 103216 AL
NRSB ARL0017

Laboratory Report for:

Property Tested: Project # 04481387-1

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


MCPS Radon Survey
John Poole Middle School
MD 20837 USA


Log Number	Device Number	Test Exposure Duration:		Area Tested	Result pCi/L
2404363	3919121	12/03/2018 6:22 am	12/06/2018 6:13 am	Bldg John Poole Middle School Flr 1 Rm Main Off	0.8
2404364	3919122	12/03/2018 6:22 am	12/06/2018 7:19 am	Bldg John Poole Middle School Floor 1 Room 100	< 0.4
2404365	3919123	12/03/2018 6:23 am	12/06/2018 6:13 am	Bldg John Poole Middle School Flr 1 Rm Work R	< 0.4
2404366	3919124	12/03/2018 6:24 am	12/06/2018 7:19 am	Bldg John Poole Middle School Floor 1 Room 100	< 0.4
2404367	3919125	12/03/2018 6:25 am	12/06/2018 6:15 am	Bldg John Poole Middle School Floor 1 Room 100	< 0.4
2404368	3919126	12/03/2018 6:26 am	12/06/2018 6:15 am	Bldg John Poole Middle School Floor 1 Room 100	< 0.4
2404369	3919127	12/03/2018 6:27 am	12/06/2018 6:15 am	Bldg John Poole Middle School Floor 1 Room 100	1.0
2404370	3919128	12/03/2018 6:29 am	12/06/2018 6:17 am	Bldg John Poole Middle School Flr 1 Rm Office	0.4
2404371	3919129	12/03/2018 6:30 am	12/06/2018 6:20 am	Bldg John Poole Middle School Flr 1 Rm Health R	< 0.4
2404372	3919130	12/03/2018 6:30 am	12/06/2018 6:21 am	Bldg John Poole Middle School Flr 1 Rm Health R	0.5
2404373	3919011	12/03/2018 6:31 am	12/06/2018 6:21 am	Bldg John Poole Middle School Flr 1 Rm Health O	< 0.4

Comment: A copy of this report was emailed to Intertek-PSI (VA). Unable to report a result for device 3918979.

Distributed by: Intertek-PSI (VA)

Date Received: 12/08/2018 Date Logged: Date Analyzed: 12/09/2018 Date Reported: 12/21/2018

Report Reviewed By: 

Report Approved By: 

Shawn Price, Director of Laboratory Operations, AccuStar Labs

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NELAC NY 11769
NRPP 103216 AL
NRSB ARL0017

Laboratory Report for:

Property Tested: Project # 04481387-1

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


MCPS Radon Survey
John Poole Middle School
MD 20837 USA


Log Number	Device Number	Test Exposure Duration:		Area Tested	Result pCi/L
2404374	3919012	12/03/2018 6:32 am	12/06/2018 6:19 am	Bldg John Poole Middle School Flr 1 Rm Counseli	< 0.4
2404375	3919013	12/03/2018 6:33 am	12/06/2018 6:20 am	Bldg John Poole Middle School Flr 1 Rm Counseli	< 0.4
2404376	3919014	12/03/2018 6:34 am	12/06/2018 6:21 am	Bldg John Poole Middle School Flr 1 Rm Counseli	< 0.4
2404377	3919015	12/03/2018 6:36 am	12/06/2018 6:21 am	Bldg John Poole Middle School Flr 1 Rm Counseli	< 0.4
2404378	3919016	12/03/2018 6:36 am	12/06/2018 6:23 am	Bldg John Poole Middle School Floor 1 Room 101	< 0.4
2404379	3919017	12/03/2018 6:37 am	12/06/2018 6:25 am	Bldg John Poole Middle School Flr 1 Rm 101 Offi	< 0.4
2404380	3919018	12/03/2018 6:38 am	12/06/2018 6:35 am	Bldg John Poole Middle School Floor 1 Room 103	< 0.4
2404381	3919019	12/03/2018 6:35 am	12/06/2018 6:35 am	Bldg John Poole Middle School Floor 1 Room 105	< 0.4
2404382	3919020	12/03/2018 6:39 am	12/06/2018 6:35 am	Bldg John Poole Middle School Floor 1 Room 105	< 0.4
2404383	3918981	12/03/2018 6:40 am	12/06/2018 6:26 am	Bldg John Poole Middle School Floor 1 Room 107	< 0.4
2404384	3918982	12/03/2018 6:41 am	12/06/2018 6:26 am	Bldg John Poole Middle School Floor 1 Room 110	< 0.4

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Report Approved By: 

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NELAC NY 11769
NRPP 103216 AL
NRSB ARL0017

Laboratory Report for:

Property Tested: Project # 04481387-1

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


MCPS Radon Survey
John Poole Middle School
MD 20837 USA


Log Number	Device Number	Test Exposure Duration:		Area Tested	Result pCi/L
2404385	3918983	12/03/2018 6:42 am	12/06/2018 6:21 am	Bldg John Poole Middle School Floor 1 Room 108	< 0.4
2404386	3918984	12/03/2018 6:43 am	12/06/2018 6:21 am	Bldg John Poole Middle School Floor 1 Room 104	0.4
2404387	3918985	12/03/2018 6:44 am	12/06/2018 6:36 am	Bldg John Poole Middle School Flr 1 Rm +102/10	0.9
2404388	3918986	12/03/2018 6:45 am	12/06/2018 6:37 am	Bldg John Poole Middle School Floor 1 Room 200	< 0.4
2404389	3918987	12/03/2018 6:46 am	12/06/2018 6:37 am	Bldg John Poole Middle School Floor 1 Room 250	< 0.4
2404390	3918988	12/03/2018 6:47 am	12/06/2018 6:41 am	Bldg John Poole Middle School Flr 1 Rm 202/203	0.4
2404391	3918989	12/03/2018 6:47 am	12/06/2018 6:41 am	Bldg John Poole Middle School Floor 1 Room 205	< 0.4
2404392	3918990	12/03/2018 6:48 am	12/06/2018 6:41 am	Bldg John Poole Middle School Floor 1 Room 205	< 0.4
2404393	3918961	12/03/2018 6:49 am	12/06/2018 9:39 am	Bldg John Poole Middle School Floor 1 Room 207	< 0.4
2404394	3918962	12/03/2018 6:00 am	12/06/2018 9:39 am	Bldg John Poole Middle School Floor 1 Room 209	< 0.4
2404395	3918963	12/03/2018 6:50 am	12/06/2018 6:40 am	Bldg John Poole Middle School Floor 1 Room 210	0.8

Comment: A copy of this report was emailed to Intertek-PSI (VA). Unable to report a result for device 3918979.

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Report Reviewed By: 

Report Approved By: 

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NELAC NY 11769
NRPP 103216 AL
NRSB ARL0017

Laboratory Report for:

Property Tested: Project # 04481387-1

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


MCPS Radon Survey
John Poole Middle School
MD 20837 USA


Log Number	Device Number	Test Exposure Duration:	Area Tested	Result pCi/L
2404396	3918964	12/03/2018 6:50 am - 12/06/2018 6:40 am	Bldg John Poole Middle School Floor 1 Room 208	< 0.4
2404397	3918965	12/03/2018 6:51 am - 12/06/2018 6:38 am	Bldg John Poole Middle School Floor 1 Room 204	< 0.4
2404398	3918966	12/03/2018 6:52 am - 12/06/2018 6:38 am	Bldg John Poole Middle School Flr 1 Rm 204 Offi	< 0.4
2404399	3918967	12/03/2018 6:52 am - 12/06/2018 6:42 am	Bldg John Poole Middle School Flr 1 Rm Media C	0.4
2404400	3918968	12/03/2018 6:53 am - 12/06/2018 6:42 am	Bldg John Poole Middle School Flr 1 Rm Media C	< 0.4
2404401	3918969	12/03/2018 6:53 am - 12/06/2018 6:43 am	Bldg John Poole Middle School Flr 1 Rm Media C	< 0.4
2404402	3918970	12/03/2018 6:54 am - 12/06/2018 6:43 am	Bldg John Poole Middle School Flr 1 Rm Media C	1.1
2404403	3918951	12/03/2018 6:55 am - 12/06/2018 6:44 am	Bldg John Poole Middle School Flr 1 Rm Media C	< 0.4
2404404	3918952	12/03/2018 6:55 am - 12/06/2018 6:44 am	Bldg John Poole Middle School Floor 1 Room SP	0.4
2404405	3918953	12/03/2018 6:56 am - 12/06/2018 6:45 am	Bldg John Poole Middle School Floor 1 Room SD	0.4
2404406	3918954	12/03/2018 6:57 am - 12/06/2018 6:46 am	Bldg John Poole Middle School Flr 1 Rm Media C	0.8

Comment: A copy of this report was emailed to Intertek-PSI (VA). Unable to report a result for device 3918979.

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Report Reviewed By: 

Report Approved By: 

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NELAC NY 11769
NRPP 103216 AL
NRSB ARL0017

Laboratory Report for:

Property Tested: Project # 04481387-1

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


MCPS Radon Survey
John Poole Middle School
MD 20837 USA


Log Number	Device Number	Test Exposure Duration:				Area Tested	Result pCi/L
2404407	3918955	12/03/2018	6:57 am	12/06/2018	6:50 am	Bldg John Poole Middle School Flr 1 Rm Media C	0.9
2404408	3918956	12/03/2018	6:58 am	12/06/2018	6:51 am	Bldg John Poole Middle School Flr 1 Rm TV Studi	0.5
2404409	3918957	12/03/2018	7:00 am	12/06/2018	6:51 am	Bldg John Poole Middle School Floor 1 Room 202	< 0.4
2404410	3918958	12/03/2018	7:01 am	12/06/2018	6:52 am	Bldg John Poole Middle School Floor 1 Room 300	0.5
2404411	3918959	12/03/2018	7:01 am	12/06/2018	6:53 am	Bldg John Poole Middle School Flr 1 Rm 300 Offi	< 0.4
2404412	3918960	12/03/2018	7:02 am	12/06/2018	6:53 am	Bldg John Poole Middle School Flr 1 Rm 301 Offi	0.6
2404413	3918971	12/03/2018	7:03 am	12/06/2018	6:54 am	Bldg John Poole Middle School Flr 1 Rm Reading	0.5
2404414	3918972	12/03/2018	7:05 am	12/06/2018	6:55 am	Bldg John Poole Middle School Floor 1 Room IDA	< 0.4
2404415	3918973	12/03/2018	7:05 am	12/06/2018	6:56 am	Bldg John Poole Middle School Floor 1 Room 301	< 0.4
2404416	3918974	12/03/2018	7:06 am	12/06/2018	7:00 am	Bldg John Poole Middle School Floor 1 Room 307	0.4
2404417	3918975	12/03/2018	7:07 am	12/06/2018	7:00 am	Bldg John Poole Middle School Floor 1 Room 309	0.5

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Distributed by: Intertek-PSI (VA)

Date Received: 12/08/2018 Date Logged: Date Analyzed: 12/09/2018 Date Reported: 12/21/2018

Report Reviewed By: 

Report Approved By: 

Shawn Price, Director of Laboratory Operations, AccuStar Labs

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NELAC NY 11769
NRPP 103216 AL
NRSB ARL0017

Laboratory Report for:

Property Tested: Project # 04481387-1

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


MCPS Radon Survey
John Poole Middle School
MD 20837 USA


Log Number	Device Number	Test Exposure Duration:		Area Tested	Result pCi/L
2404418	3918976	12/03/2018 7:07 am	12/06/2018 7:00 am	Bldg John Poole Middle School Floor 1 Room 310	0.8
2404419	3918977	12/03/2018 7:08 am	12/06/2018 6:58 am	Bldg John Poole Middle School Floor 1 Room 308	< 0.4
2404420	3918978	12/03/2018 7:09 am	12/06/2018 6:08 am	Bldg John Poole Middle School Floor 1 Room 306	0.7
2404421	3918979	12/03/2018 7:09 am	12/06/2018 7:00 am	Bldg John Poole Middle School Flr 1 Rm 308 Offi	
2404422	3918980	12/03/2018 7:09 am	12/06/2018 7:00 am	Bldg John Poole Middle School Flr 1 Rm 308 Offi	< 0.4
2404423	3919131	12/03/2018 7:10 am	12/06/2018 6:56 am	Bldg John Poole Middle School Floor 1 Room 303	< 0.4
2404424	3919132	12/03/2018 7:11 am	12/06/2018 6:58 am	Bldg John Poole Middle School Floor 1 Room 302	0.6
2404425	3919133	12/03/2018 7:12 am	12/06/2018 7:03 am	Bldg John Poole Middle School Floor 1 Room 502	0.5
2404426	3919134	12/03/2018 7:12 am	12/06/2018 7:18 am	Bldg John Poole Middle School Flr 1 Rm Pride St	< 0.4
2404427	3919135	12/03/2018 7:13 am	12/06/2018 7:04 am	Bldg John Poole Middle School Flr 1 Rm Copy R	< 0.4
2404428	3919136	12/03/2018 7:16 am	12/06/2018 7:05 am	Bldg John Poole Middle School Floor 1 Room 501	2.5

Comment: A copy of this report was emailed to Intertek-PSI (VA). Unable to report a result for device 3918979.

Distributed by: Intertek-PSI (VA)

Date Received: 12/08/2018 Date Logged: Date Analyzed: 12/09/2018 Date Reported: 12/21/2018

Report Reviewed By: 

Report Approved By: 

Shawn Price, Director of Laboratory Operations, AccuStar Labs

Disclaimer:

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

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NELAC NY 11769
NRPP 103216 AL
NRSB ARL0017

Laboratory Report for:

Property Tested: Project # 04481387-1

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


MCPS Radon Survey
John Poole Middle School
MD 20837 USA


Log Number	Device Number	Test Exposure Duration:		Area Tested	Result pCi/L
2404429	3919137	12/03/2018 7:17 am	12/06/2018 7:05 am	Bldg John Poole Middle School Floor 1 Room 501	1.2
2404430	3919138	12/03/2018 7:19 am	12/06/2018 7:08 am	Bldg John Poole Middle School Floor 1 Room 405	< 0.4
2404431	3919139	12/03/2018 7:20 am	12/06/2018 7:09 am	Bldg John Poole Middle School Floor 1 Room 406	< 0.4
2404432	3919140	12/03/2018 7:20 am	12/06/2018 7:09 am	Bldg John Poole Middle School Floor 1 Room 406	< 0.4
2404433	3919021	12/03/2018 7:21 am	12/06/2018 7:08 am	Bldg John Poole Middle School Floor 1 Room 404	< 0.4
2404434	3919022	12/03/2018 7:28 am	12/06/2018 7:10 am	Bldg John Poole Middle School Floor 1 Room 404	0.5
2404435	3919023	12/03/2018 7:27 am	12/06/2018 7:10 am	Bldg John Poole Middle School Floor 1 Room Gy	< 0.4
2404436	3919024	12/03/2018 7:27 am	12/06/2018 7:12 am	Bldg John Poole Middle School Floor 1 Room Gy	0.4
2404437	3919025	12/03/2018 7:30 am	12/06/2018 7:17 am	Bldg John Poole Middle School Floor 1 Room 504	< 0.4
2404438	3919026	12/03/2018 7:33 am	12/06/2018 7:18 am	Bldg John Poole Middle School Flr 1 Rm Kitchen	0.7
2404439	3919027	12/03/2018 7:34 am	12/06/2018 7:12 am	Bldg John Poole Middle School Flr 1 Rm Kitchen	1.0

Comment: A copy of this report was emailed to Intertek-PSI (VA). Unable to report a result for device 3918979.

Distributed by: Intertek-PSI (VA)

Date Received: 12/08/2018 Date Logged: Date Analyzed: 12/09/2018 Date Reported: 12/21/2018

Report Reviewed By: 

Report Approved By: 

Shawn Price, Director of Laboratory Operations, AccuStar Labs

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NELAC NY 11769
NRPP 103216 AL
NRSB ARL0017

Laboratory Report for:

Property Tested: Project # 04481387-1

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


MCPS Radon Survey
John Poole Middle School
MD 20837 USA


Log Number	Device Number	Test Exposure Duration:	Area Tested	Result pCi/L
2404440	3919028	12/03/2018 7:34 am - 12/06/2018 7:15 am	Bldg John Poole Middle School Flr 1 Rm Kitchen	< 0.4
2404441	3919029	12/03/2018 7:35 am - 12/06/2018 7:15 am	Bldg John Poole Middle School Floor 1 Room AP	0.8
2404442	3923171	12/03/2018 6:22 am - 12/06/2018 7:19 am	Bldg John Poole Middle School	< 0.4
2404443	3923172	12/03/2018 6:22 am - 12/06/2018 7:19 am	Bldg John Poole Middle School	< 0.4
2404444	3922997	12/03/2018 6:00 am - 12/06/2018 7:19 am	Bldg John Poole Middle School	< 0.4
2404445	3922998	12/03/2018 6:00 am - 12/06/2018 7:19 am	Bldg John Poole Middle School	< 0.4

Comment: A copy of this report was emailed to Intertek-PSI (VA). Unable to report a result for device 3918979.

Distributed by: Intertek-PSI (VA)

Date Received: 12/08/2018 Date Logged: Date Analyzed: 12/09/2018 Date Reported: 12/21/2018

Report Reviewed By: 

Report Approved By: 

Shawn Price, Director of Laboratory Operations, AccuStar Labs

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NELAC NY 11769
NRPP 103216 AL
NRSB ARL0017

Laboratory Report for:

Property Tested: Project # 04481387-1

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


MCPS Radon Survey
John Poole Middle School
MD 20837 USA


Log Number	Device Number	Test	Exposure	Duration:	Area Tested	Result
2404446	3888460	12/03/2018	7:29 am	12/06/2018 7:16 am	Bldg John Poole Middle School Flr 1 Rm Weight	0.7 pCi/L

Comment: A copy of this report was emailed to Intertek-PSI (VA).

Distributed by: Intertek-PSI (VA)

Date Received: 12/08/2018 Date Logged: Date Analyzed: 12/10/2018 Date Reported: 01/02/2019

Report Reviewed By: 

Report Approved By: 

Shawn Price, Director of Laboratory Operations, AccuStar Labs

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:

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Shawn Price, Director of Laboratory Operations, AccuStar Labs

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EXPOSURE IN BOWSER-MORNER RADON CHAMBER

CLIENT Intertek - PSI

Job Number 187732

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

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

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. Ewing Center | 13. Garrett Park ES Annex |
| 2. Department of Food & Nutrition Services | 14. Goshen ES |
| 3. Damascus HS | 15. Kingsley Wilderness Center |
| 4. Edison HS | 16. Kensington Parkwood ES |
| 5. Emory Grove Center | 17. Monocacy ES |
| 6. John Poole MS | 18. Lakewood ES |
| 7. Lakelands Park MS | 19. Little Bennett ES |
| 8. Laytonsville ES | 20. Lois P. Rockwell ES |
| 9. Gaithersburg HS | 21. Olney ES |
| 10. Neelsville MS | 22. North Chevy Chase ES |
| 11. Sequoyah ES | 23. Woodfield ES |
| 12. Clarksburg ES Annex | 24. Wootton HS |

	Date	Initials
Radon Test Kits Deployed	12/03/2018	ML
Radon Test Kits Sampled	12/06/2018	ML
Radon Test Kits Shipped to Lab*	12/06/2018	ML
Radon Test Kits Received by Lab*	12/07/2018; 12/08/2018	ML

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



MCPS RADON TESTING

Executive Summary: John Poole Middle School

Date of Test Report:	3/9/2016 (Rev 1)
Round of Testing:	Initial Follow-up Post Remediation
# Rooms Tested:	56
# Rooms \geq 4.0 pCi/L:	0
Low Value:	< 0.3
High Value:	1.7

Project Status:

Initial testing completed; no further action at this time.



March 9, 2016 (Rev 1)

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: John Poole Middle School
17014 Tom Fox Avenue
Poolesville, MD 20837

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 John Poole Middle School, located at 17014 Tom Fox Avenue in Poolesville, Maryland 20837 (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 seventy (70) 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

Note that one test kit was missing in the gym and one other test kit was missing from the cafeteria. The gym and cafeteria are greater than 2,000 square feet in size and, in accordance with AARST protocols for sampling large rooms, KCI deployed multiple test kits in these rooms. The results obtained for the gym and cafeteria were all ≤ 1.0 pCi/L. Based on these results, MCPS has requested no additional testing (i.e. resampling of locations with missing test kits) for the gym and cafeteria.

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		
John Poole Middle School		
Test Period: 01/19/16-01/22/16		
Kit Number	Room / Area	Result
7717837	101	< 0.3
7717868	102	< 0.3
7717848	103	< 0.3
7717855	104	< 0.3
7717867	105	< 0.3
7717879	107	< 0.3
7717883	108	< 0.3
7717862	110	< 0.3
7717856	200	< 0.3
7717880	202	< 0.3
7717815	204	< 0.3
7717849	205	< 0.3
7717884	207	< 0.3
7717846	208	< 0.3
7717875	209	< 0.3
7717871	210	0.8
7717820	300	< 0.3
7717873	300	1.0
7717853	301	0.6
7717854	302	< 0.3
7717851	303	0.6
7717869	306	0.5
7717822	307	< 0.3
7717858	308	0.5
7717860	309	1.0
7717859	310	0.7
7717824	501	0.8
7717865	504	< 0.3
7717818	300 OFFICE	1.1
7717857	308 OFFICE	< 0.3
7717839	ASSISTANT PRINCI	0.6
7717823	AUX GYM	0.5
7717866	AUX GYM	< 0.3
7717827	CAFE	0.9
7717874	* CAFE (missing)	0.0
7717816	COMM	0.7
7717836	CONFERENCE ROOM	1.7
7717842	FIN SEC	0.6
7717829	G1	0.6
7717828	G2	< 0.3
7717830	G3	0.6
7717844	GEN OFFICE	0.7
7717826	GUIDANCE	< 0.3
7717861	GYM	1.0
7717872	* GYM (missing)	0.0
7717825	HEALTH	0.6

Table Note:

* Missing or Compromised Sample

Radon Testing Results		
John Poole Middle School		
Test Period: 01/19/16-01/22/16		
Kit Number	Room / Area	Result
7717878	HEALTH OFFICE	< 0.3
7717831	IMC	0.9
7717838	IMC	0.7
7717870	IMC1	< 0.3
7717833	IMC2	< 0.3
7717835	IMC3	0.8
7717841	IMC4	0.9
7717876	KITCHEN OFFICE	< 0.3
7717805	MAIL ROOM	0.7
7717850	OFFICE 1	0.7
7717817	OFFICE 2	0.7
7717806	PRIN SEC	< 0.3
7717843	PRINCIPAL OFFICE	< 0.3
7717834	SR1	< 0.3
7717886	STAFF LOUNGE	1.0

Table Note:

* Missing or Compromised Sample

Radon Testing Results		
John Poole Middle School		
Test Period: 01/19/16-01/22/16		
Kit Number	QC Type	Result
7717819	D (205)	< 0.3
7717852	D (COMM)	0.6
7717840	D (GEN OFFICE)	0.6
7717863	D (GYM)	0.9
7717832	D (IMC2)	0.5
7717821	D (STAFF LOUNGE)	1.1
7717864	FB (GYM)	< 0.3
7717803	FB (MAIL ROOM)	< 0.3
7721440	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:
**JOHN POOLE MIDDLE SCHOOL
 MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7717837	101	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7717868	102	2016-01-19 @ 9:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7717848	103	2016-01-19 @ 9:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7717855	104	2016-01-19 @ 9:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7717867	105	2016-01-19 @ 9:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7717879	107	2016-01-19 @ 9:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7717883	108	2016-01-19 @ 9:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7717862	110	2016-01-19 @ 9:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7717856	200	2016-01-19 @ 9:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7717880	202	2016-01-19 @ 9:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7717815	204	2016-01-19 @ 9:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7717849	205	2016-01-19 @ 9:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7717819	205	2016-01-19 @ 9:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7717884	207	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7717846	208	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7717875	209	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7717871	210	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	0.8 ± 0.3	2016-01-26
7717820	300	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7717873	300	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	1.0 ± 0.3	2016-01-27
7717818	300 OFFICE	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	1.1 ± 0.3	2016-01-26
7717853	301	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	0.6 ± 0.3	2016-01-26
7717854	302	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7717851	303	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	0.6 ± 0.3	2016-01-26
7717869	306	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	0.5 ± 0.3	2016-01-26
7717822	307	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7717858	308	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	0.5 ± 0.3	2016-01-26
7717857	308 OFFICE	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7717860	309	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	1.0 ± 0.3	2016-01-27
7717859	310	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	0.7 ± 0.3	2016-01-26
7717824	501	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	0.8 ± 0.3	2016-01-26
7717865	504	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7717839	ASSISTANT PRINCI	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	0.6 ± 0.3	2016-01-26
7717866	AUX GYM	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7717823	AUX GYM	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	0.5 ± 0.3	2016-01-26
7717874	CAFE	@	@		
7717827	CAFE	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	0.9 ± 0.3	2016-01-26
7717852	COMM	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	0.6 ± 0.3	2016-01-26

February 11, 2016
LABORATORY ANALYSIS REPORT **

Radon test result report for:
**JOHN POOLE MIDDLE SCHOOL
 MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7717816	COMM	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	0.7 ± 0.3	2016-01-26
7717836	CONFERENCE ROOM	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	1.7 ± 0.4	2016-01-26
7717842	FIN SEC	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	0.6 ± 0.3	2016-01-26
7717829	G1	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	0.6 ± 0.3	2016-01-26
7717828	G2	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7717830	G3	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	0.6 ± 0.3	2016-01-27
7717840	GEN OFFICE	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	0.6 ± 0.3	2016-01-26
7717844	GEN OFFICE	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	0.7 ± 0.3	2016-01-26
7717826	GUIDANCE	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7717872	GYM	@	@		
7717863	GYM	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	0.9 ± 0.3	2016-01-26
7717861	GYM	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	1.0 ± 0.3	2016-01-27
7717864	GYM	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7717825	HEALTH	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	0.6 ± 0.3	2016-01-26
7717878	HEALTH OFFICE	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7717831	IMC	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	0.9 ± 0.3	2016-01-26
7717838	IMC	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	0.7 ± 0.3	2016-01-26
7717870	IMC1	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7717832	IMC2	2016-01-19 @ 10:00 am	2016-01-22 @ 9:00 am	0.5 ± 0.3	2016-01-26
7717833	IMC2	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7717835	IMC3	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	0.8 ± 0.3	2016-01-27
7717841	IMC4	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	0.9 ± 0.3	2016-01-27
7717876	KITCHEN OFFICE	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7717803	MAIL ROOM	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7717805	MAIL ROOM	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	0.7 ± 0.3	2016-01-26
7717850	OFFICE 1	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	0.7 ± 0.3	2016-01-26
7717817	OFFICE 2	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	0.7 ± 0.3	2016-01-26
7717806	PRIN SEC	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7717843	PRINCIPAL OFFICE	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7717834	SR1	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7717821	STAFF LOUNGE	2016-01-19 @ 10:00 am	2016-01-22 @ 9:00 am	1.1 ± 0.3	2016-01-26
7717886	STAFF LOUNGE	2016-01-19 @ 10:00 am	2016-01-22 @ 9:00 am	1.0 ± 0.3	2016-01-26

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

Radon test result report for:
JOHN POOLE MIDDLE SCHOOL
OFFICE BLANK

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7721440	0	2016-01-19 @ 3:00 pm	2016-01-22 @ 1:00 pm	< 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

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**LABORATORY ANALYSIS
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Radon test result report for:
**MCPS PHASE 5 & 6
TRANSIT BLANKS**

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

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**** 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

M. A. CECIL & ASSOCIATES, INC.

4475 Shannon Way, Port Republic, Maryland 20676 (301) 855-7710
INDUSTRIAL HYGIENE AND ENVIRONMENTAL HEALTH

March 16, 2011

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

Re: Radon Evaluation - John Poole Middle School

Dear Mr. Yarup:

Environmental radon testing has been completed at John Poole Middle School.

Charcoal canisters were placed in thirty-two locations on the lowest level of the school. The canisters were placed on March 4, 2011 and retrieved on March 7, 2011. The results and sampling locations are summarized in the following.

The detected radon concentrations for all 32 sampling locations were below the EPA recommended level of 4.0 pico curies per liter (pCi/l) of air.

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

Sincerely,

Kim Fowler
Industrial Hygienist

Michael A. Cecil, CIH

**John Poole Middle School
Environmental Radon Results
March 7, 2011**

Location	Detected Radon Concentration (pCi/l)
Room 105	< 0.5
Room 107	< 0.5
Counseling	< 0.5
Room 110	< 0.5
Room 200	< 0.5
Health Room	1.2
Room 108	< 0.5
Room 101	< 0.5
Media Center	0.8
Room 209	1.2
Room 300	< 0.5
Staff Lounge	0.8
Room 207	< 0.5
Room 307	< 0.5
Room 203	0.7
Main Gym	1.1
Room 208	< 0.5
Room 303	< 0.5
Room 210	0.8
Room 302	< 0.5
Room 308	< 0.5
Kitchen	0.8
Girl's Locker Room	< 0.5
Room 501	3.4
Cafeteria	1.1
Boy's Locker Room	< 0.5
Room 301	< 0.5
Main Office	0.8
Room 204	< 0.5
Room 309	1.5
Room 310	< 0.5
Auxiliary Gym	0.9