



MCPS RADON TESTING – EXECUTIVE SUMMARY

Site Name	North Bethesda Middle School
Date of Test Report	12/27/2022
Round of Testing	Initial Follow-up Post Remediation 2 Year Testing 5 Year Testing HVAC Upgrade Window Replacement New Addition New Facility
# Rooms Tested	103
# Room Re-tested	2
# Rooms \geq 4.0 pCi/L	0
Lowest Value	<0.3 pCi/L
Highest Value	1.4 pCi/L

Project Status:

1. Initial testing completed;
2. Missing or compromised samples need re-test.
3. Retesting Completed 1/31/23 – 2/3/23.
4. 5-Year Testing Completed.



February 21, 2023

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

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

Location: North Bethesda Middle School
8935 Bradmoor Dr.
Bethesda, MD 20817

Dear Mr. Croyle:

KCI Technologies, Inc. (KCI) is pleased to submit the following report to Montgomery County Public Schools (MCPS) pursuant to completing a “short-term” 3 day radon test for the Beall Elementary School, located at 451 Beall Avenue in Rockville, Maryland 20850 (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 initially on December 5, 2022 and deployed sixty-six (66) 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.

KCI returned to the site on December 8, 2022 to retrieve initial testing 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.

KCI re-visited the site on January 31, 2023 to deploy five (5) activated charcoal (AC) radon test kits for testing of missed rooms or compromised test kits during initial testing.

KCI returned to the site on February 3, 2023 to retrieve the radon re-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.

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.

Evaluation of Testing Conditions:

These tests represent:

- Follow up to initial testing.

These tests were conducted to:

- Evaluated radon concentrations at the facility.

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

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

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

KCI also compiled weather data for the testing period and conducted observations of relevant field conditions. During the initial 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.

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

Results:

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

The results of the radon test analysis indicated the following:

Radon Concentration	Room	Result
≥4.0 pCi/L	None	N/A
<4.0 pCi/L	See Attachment B	

The results of the radon re-testing 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		
North Bethesda MS		
Test Period: 12/05/2022 - 12/08/2022		
Kit Number	Room / Area	Result
11287309	101	< 0.3
11287322	102	< 0.3
11287373	103	0.8
11287363	104	< 0.3
11287329	114	< 0.3
11287330	115	0.8
11287318	116	< 0.3
11287328	119	< 0.3
11287335	120	< 0.3
11287336	121	< 0.3
11287316	125	0.6
11287333	126	0.8
11287331	127	< 0.3
11287315	129	1.1
11287303	130	< 0.3
11287386	221	0.6
11287406	222	< 0.3
11287393	224	1.4
11287385	225	0.9
11287395	225	0.9
11287310	100A	0.8
11287311	100B	0.8
11287365	100C	< 0.3
11287301	100D	< 0.3
11287312	100E	< 0.3
11287313	100F	< 0.3
11287314	100G	0.7
11287317	101A	1.1
11287305	101B	< 0.3
11287306	101B	< 0.3
11287368	101C	< 0.3
11287320	101D	1.0
11287361	101E	1.0
11287362	101E	< 0.3
11287367	101E	< 0.3
11287319	101F	1.1
11287366	102A	< 0.3
11287369	102B	< 0.3
11287374	103 OFFICE	< 0.3
11287375	104A	< 0.3
11287376	104A	< 0.3
11287321	114A	< 0.3

Table 1- Radon Testing Results		
North Bethesda MS		
Test Period: 12/05/2022 - 12/08/2022		
Kit Number	Room / Area	Result
11287325	119A	< 0.3
11287326	119A	< 0.3
11287327	119A	1.1
11287323	128A	< 0.3
11287304	130A	< 0.3
11287307	130A	< 0.3
11287388	200A	0.7
11287424	201A	0.8
11287387	208A	< 0.3
11287398	225 OFFICE	< 0.3
11287370	A100	< 0.3
11287364	A101	< 0.3
11287356	A102	< 0.3
11287371	A104	0.8
11287372	A106	< 0.3
11287377	A107	< 0.3
11287378	A113	1.0
11287421	A200	< 0.3
11287439	A204	0.6
11287430	A207	< 0.3
11287383	B101	< 0.3
11287384	B101	< 0.3
11287389	B101	0.9
11287381	B102	< 0.3
11287392	B103	< 0.3
11287379	B104	< 0.3
11287380	B105	0.8
11287382	B106	< 0.3
11287390	B107	< 0.3
11287391	B108	< 0.3
11287324	B-124	0.7
11287400	B202	< 0.3
11287429	B202	< 0.3
11287433	B202	< 0.3
11287426	B203	< 0.3
11287432	B204	< 0.3
11287332	C103	< 0.3
11287334	C103	< 0.3
11287337	C103	< 0.3
11287341	C104	0.7
11287342	C105	< 0.3
11287338	C106	< 0.3

Table 1- Radon Testing Results		
North Bethesda MS		
Test Period: 12/05/2022 - 12/08/2022		
Kit Number	Room / Area	Result
11287343	C107	< 0.3
11287339	C108	< 0.3
11287340	C109	0.9
11287434	C203	< 0.3
11287425	C204	< 0.3
11287427	C204	< 0.3
11287403	C207	< 0.3
11287428	C208	< 0.3
11287346	D100	1.2
11287347	D103	1.0
11287345	D104	< 0.3
11287349	D107	1.0
11287348	D111	0.9
11287353	D112	< 0.3
11287344	D114	1.0
11287350	D114	< 0.3
11287357	D115	< 0.3
11287352	D116	1.3
11287351	D117	0.8
11287358	D118	< 0.3
11287359	D120	< 0.3
11287360	D121	< 0.3
11287355	D125	0.7
11287405	D200	0.7
11287431	D209	< 0.3
11287422	D216	< 0.3
11287404	D223	< 0.3
11287397	DINING ROOM 219	0.7
11287399	DINING ROOM 219	< 0.3
11287394	GYM 214	< 0.3
11287396	GYM 214	0.8
11287302	MAIN OFFICE 100	< 0.3

Table 2- Radon Testing Results			
North Bethesda MS			
Test Period: 12/05/22 - 12/08/22			
Kit Number	QC Type	Room / Area	Result
11287385	D	225	0.9
11287306	D	101B	< 0.3
11287361	D	101E	1.0
11287367	FB	101E	< 0.3
11287375	D	104A	< 0.3
11287325	D	119A	< 0.3
11287327	FB	119A	1.1
11287304	D	130A	< 0.3
11287389	D	B101	0.9
11287429	D	B202	< 0.3
11287433	FB	B202	< 0.3
11287337	D	C103	< 0.3
11287332	FB	C103	< 0.3
11287425	D	C204	< 0.3
11287350	D	D114	< 0.3
11133716	OB	OFFICE BLANK	< 0.3
11140129	TB	TRAVEL BLANK	< 0.3

Summary of Missed Locations North Bethesda MS Test Period: 12/05/22 - 12/08/22		
Kit Number	Room/Area	Result
	N/A	

Summary of Missing, Compromised and >= 4 piC/L Tests North Bethesda MS Test Period: 12/05/22 - 12/08/22		
Kit Number	Room/Area	Result
11287354	Gym (D125)	Missing
11287308	Boys Locker Room (128)	Missing

Table Note:
* Missing or Compromised Sample

Table 1- Radon Testing Results		
North Bethesda MS RT		
Test Period: 01/31/2023 - 02/03/2023		
Kit Number	Room / Area	Result
11634043	BOYS LR	< 0.3
11634028	D125	0.6
11634035	D125	< 0.3
11634036	D125	0.7
11634037	D125	< 0.3

Table 2- Radon Testing Results			
North Bethesda MS RT			
Test Period: 01/31/23 - 02/03/23			
Kit Number	QC Type	Room / Area	Result
11634035	D	D125	< 0.3
11634037	FB	D125	< 0.3
11634990	OB	OFFICE BLANK	< 0.3
11634991	TB	TRAVEL BLANK	< 0.3

ATTACHMENT C

Laboratory Analytical Results

December 14, 2022

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11287365	100C	2022-12-05 @ 12:00 pm	2022-12-08 @ 9:00 am	< 0.3	2022-12-14
11287368	101C	2022-12-05 @ 12:00 pm	2022-12-08 @ 9:00 am	< 0.3	2022-12-14

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

Radon test result report for:
**NORTH BETHESDA MS
 MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11287310	100A	2022-12-05 @ 10:00 am	2022-12-08 @ 9:00 am	0.8 ± 0.4	2022-12-14
11287311	100B	2022-12-05 @ 10:00 am	2022-12-08 @ 9:00 am	0.8 ± 0.5	2022-12-14
11287301	100D	2022-12-05 @ 10:00 am	2022-12-08 @ 9:00 am	< 0.3	2022-12-14
11287312	100E	2022-12-05 @ 10:00 am	2022-12-08 @ 9:00 am	< 0.3	2022-12-14
11287313	100F	2022-12-05 @ 10:00 am	2022-12-08 @ 9:00 am	< 0.3	2022-12-14
11287314	100G	2022-12-05 @ 10:00 am	2022-12-08 @ 9:00 am	0.7 ± 0.5	2022-12-14
11287309	101	2022-12-05 @ 10:00 am	2022-12-08 @ 9:00 am	< 0.3	2022-12-14
11287317	101A	2022-12-05 @ 10:00 am	2022-12-08 @ 9:00 am	1.1 ± 0.5	2022-12-14
11287306	101B	2022-12-05 @ 10:00 am	2022-12-08 @ 9:00 am	< 0.3	2022-12-14
11287305	101B	2022-12-05 @ 10:00 am	2022-12-08 @ 9:00 am	< 0.3	2022-12-14
11287320	101D	2022-12-05 @ 10:00 am	2022-12-08 @ 9:00 am	1.0 ± 0.5	2022-12-14
11287361	101E	2022-12-05 @ 12:00 pm	2022-12-08 @ 9:00 am	1.0 ± 0.5	2022-12-14
11287367	101E	2022-12-05 @ 12:00 pm	2022-12-08 @ 9:00 am	< 0.3	2022-12-14
11287362	101E	2022-12-05 @ 12:00 pm	2022-12-08 @ 9:00 am	< 0.3	2022-12-14
11287319	101F	2022-12-05 @ 10:00 am	2022-12-08 @ 9:00 am	1.1 ± 0.5	2022-12-14
11287322	102	2022-12-05 @ 10:00 am	2022-12-08 @ 9:00 am	< 0.3	2022-12-14
11287366	102A	2022-12-05 @ 12:00 pm	2022-12-08 @ 9:00 am	< 0.3	2022-12-14
11287369	102B	2022-12-05 @ 12:00 pm	2022-12-08 @ 9:00 am	< 0.3	2022-12-14
11287373	103	2022-12-05 @ 1:00 pm	2022-12-08 @ 9:00 am	0.8 ± 0.5	2022-12-14
11287374	103 OFFICE	2022-12-05 @ 1:00 pm	2022-12-08 @ 9:00 am	< 0.3	2022-12-14
11287363	104	2022-12-05 @ 1:00 pm	2022-12-08 @ 9:00 am	< 0.3	2022-12-14
11287376	104A	2022-12-05 @ 1:00 pm	2022-12-08 @ 9:00 am	< 0.3	2022-12-14
11287375	104A	2022-12-05 @ 1:00 pm	2022-12-08 @ 9:00 am	< 0.3	2022-12-14
11287329	114	2022-12-05 @ 10:00 am	2022-12-08 @ 11:00 am	< 0.3	2022-12-14
11287321	114A	2022-12-05 @ 10:00 am	2022-12-08 @ 9:00 am	< 0.3	2022-12-14
11287330	115	2022-12-05 @ 10:00 am	2022-12-08 @ 12:00 pm	0.8 ± 0.5	2022-12-14
11287318	116	2022-12-05 @ 10:00 am	2022-12-08 @ 9:00 am	< 0.3	2022-12-14
11287328	119	2022-12-05 @ 11:00 am	2022-12-08 @ 11:00 am	< 0.3	2022-12-14
11287325	119A	2022-12-05 @ 11:00 am	2022-12-08 @ 11:00 am	< 0.3	2022-12-14
11287326	119A	2022-12-05 @ 11:00 am	2022-12-08 @ 11:00 am	< 0.3	2022-12-14
11287327	119A	2022-12-05 @ 11:00 am	2022-12-08 @ 11:00 am	1.1 ± 0.5	2022-12-14
11287335	120	2022-12-05 @ 11:00 am	2022-12-08 @ 10:00 am	< 0.3	2022-12-14
11287336	121	2022-12-05 @ 11:00 am	2022-12-08 @ 10:00 am	< 0.3	2022-12-14
11287316	125	2022-12-05 @ 11:00 am	2022-12-08 @ 10:00 am	0.6 ± 0.4	2022-12-14
11287333	126	2022-12-05 @ 11:00 am	2022-12-08 @ 10:00 am	0.8 ± 0.5	2022-12-14
11287331	127	2022-12-05 @ 11:00 am	2022-12-08 @ 10:00 am	< 0.3	2022-12-14
11287323	128A	2022-12-05 @ 11:00 am	2022-12-08 @ 10:00 am	< 0.3	2022-12-14

Radon test result report for:
**NORTH BETHESDA MS
 MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11287315	129	2022-12-05 @ 11:00 am	2022-12-08 @ 10:00 am	1.1 ± 0.5	2022-12-14
11287303	130	2022-12-05 @ 11:00 am	2022-12-08 @ 11:00 am	< 0.3	2022-12-14
11287307	130A	2022-12-05 @ 11:00 am	2022-12-08 @ 11:00 am	< 0.3	2022-12-14
11287304	130A	2022-12-05 @ 11:00 am	2022-12-08 @ 11:00 am	< 0.3	2022-12-14
11287386	221	2022-12-05 @ 2:00 pm	2022-12-08 @ 12:00 pm	0.6 ± 0.5	2022-12-14
11287393	224	2022-12-05 @ 2:00 pm	2022-12-08 @ 12:00 pm	1.4 ± 0.5	2022-12-14
11287395	225	2022-12-05 @ 2:00 pm	2022-12-08 @ 12:00 pm	0.9 ± 0.5	2022-12-14
11287385	225	2022-12-05 @ 2:00 pm	2022-12-08 @ 12:00 pm	0.9 ± 0.5	2022-12-14
11287398	225 OFFICE	2022-12-05 @ 2:00 pm	2022-12-08 @ 12:00 pm	< 0.3	2022-12-14
11287370	A100	2022-12-05 @ 1:00 pm	2022-12-08 @ 11:00 am	< 0.3	2022-12-14
11287364	A101	2022-12-05 @ 1:00 pm	2022-12-08 @ 11:00 am	< 0.3	2022-12-14
11287356	A102	2022-12-05 @ 1:00 pm	2022-12-08 @ 11:00 am	< 0.3	2022-12-14
11287371	A104	2022-12-05 @ 1:00 pm	2022-12-08 @ 11:00 am	0.8 ± 0.5	2022-12-14
11287372	A106	2022-12-05 @ 1:00 pm	2022-12-08 @ 11:00 am	< 0.3	2022-12-14
11287377	A107	2022-12-05 @ 1:00 pm	2022-12-08 @ 11:00 am	< 0.3	2022-12-14
11287378	A113	2022-12-05 @ 1:00 pm	2022-12-08 @ 11:00 am	1.0 ± 0.5	2022-12-14
11287324	B-124	2022-12-05 @ 11:00 am	2022-12-08 @ 10:00 am	0.7 ± 0.5	2022-12-14
11287383	B101	2022-12-05 @ 1:00 pm	2022-12-08 @ 10:00 am	< 0.3	2022-12-14
11287389	B101	2022-12-05 @ 1:00 pm	2022-12-08 @ 10:00 am	0.9 ± 0.5	2022-12-14
11287384	B101	2022-12-05 @ 1:00 pm	2022-12-08 @ 10:00 am	< 0.3	2022-12-14
11287381	B102	2022-12-05 @ 1:00 pm	2022-12-08 @ 10:00 am	< 0.3	2022-12-14
11287392	B103	2022-12-05 @ 1:00 pm	2022-12-08 @ 10:00 am	< 0.3	2022-12-14
11287379	B104	2022-12-05 @ 1:00 pm	2022-12-08 @ 10:00 am	< 0.3	2022-12-14
11287380	B105	2022-12-05 @ 1:00 pm	2022-12-08 @ 10:00 am	0.8 ± 0.4	2022-12-14
11287382	B106	2022-12-05 @ 1:00 pm	2022-12-08 @ 10:00 am	< 0.3	2022-12-14
11287390	B107	2022-12-05 @ 1:00 pm	2022-12-08 @ 10:00 am	< 0.3	2022-12-14
11287391	B108	2022-12-05 @ 1:00 pm	2022-12-08 @ 10:00 am	< 0.3	2022-12-14
11287334	C103	2022-12-05 @ 11:00 am	2022-12-08 @ 10:00 am	< 0.3	2022-12-14
11287337	C103	2022-12-05 @ 11:00 am	2022-12-08 @ 10:00 am	< 0.3	2022-12-14
11287332	C103	2022-12-05 @ 11:00 am	2022-12-08 @ 10:00 am	< 0.3	2022-12-14
11287341	C104	2022-12-05 @ 11:00 am	2022-12-08 @ 10:00 am	0.7 ± 0.5	2022-12-14
11287342	C105	2022-12-05 @ 11:00 am	2022-12-08 @ 10:00 am	< 0.3	2022-12-14
11287338	C106	2022-12-05 @ 11:00 am	2022-12-08 @ 10:00 am	< 0.3	2022-12-14
11287343	C107	2022-12-05 @ 11:00 am	2022-12-08 @ 10:00 am	< 0.3	2022-12-14
11287339	C108	2022-12-05 @ 11:00 am	2022-12-08 @ 10:00 am	< 0.3	2022-12-14
11287340	C109	2022-12-05 @ 12:00 pm	2022-12-08 @ 10:00 am	0.9 ± 0.5	2022-12-14
11287346	D100	2022-12-05 @ 12:00 pm	2022-12-08 @ 10:00 am	1.2 ± 0.5	2022-12-14

Radon test result report for:
**NORTH BETHESDA MS
 MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11287347	D103	2022-12-05 @ 12:00 pm	2022-12-08 @ 10:00 am	1.0 ± 0.5	2022-12-14
11287345	D104	2022-12-05 @ 12:00 pm	2022-12-08 @ 10:00 am	< 0.3	2022-12-14
11287349	D107	2022-12-05 @ 12:00 pm	2022-12-08 @ 10:00 am	1.0 ± 0.5	2022-12-14
11287348	D111	2022-12-05 @ 12:00 pm	2022-12-08 @ 10:00 am	0.9 ± 0.5	2022-12-14
11287353	D112	2022-12-05 @ 12:00 pm	2022-12-08 @ 10:00 am	< 0.3	2022-12-14
11287344	D114	2022-12-05 @ 12:00 pm	2022-12-08 @ 10:00 am	1.0 ± 0.5	2022-12-14
11287350	D114	2022-12-05 @ 12:00 pm	2022-12-08 @ 10:00 am	< 0.3	2022-12-14
11287357	D115	2022-12-05 @ 12:00 pm	2022-12-08 @ 10:00 am	< 0.3	2022-12-14
11287352	D116	2022-12-05 @ 12:00 pm	2022-12-08 @ 10:00 am	1.3 ± 0.5	2022-12-14
11287351	D117	2022-12-05 @ 12:00 pm	2022-12-08 @ 10:00 am	0.8 ± 0.5	2022-12-14
11287358	D118	2022-12-05 @ 12:00 pm	2022-12-08 @ 10:00 am	< 0.3	2022-12-14
11287359	D120	2022-12-05 @ 12:00 pm	2022-12-08 @ 10:00 am	< 0.3	2022-12-14
11287360	D121	2022-12-05 @ 12:00 pm	2022-12-08 @ 10:00 am	< 0.3	2022-12-14
11287355	D125	2022-12-05 @ 12:00 pm	2022-12-08 @ 10:00 am	0.7 ± 0.4	2022-12-14
11287399	DINING ROOM 219	2022-12-05 @ 2:00 pm	2022-12-08 @ 12:00 pm	< 0.3	2022-12-14
11287397	DINING ROOM 219	2022-12-05 @ 2:00 pm	2022-12-08 @ 12:00 pm	0.7 ± 0.5	2022-12-14
11287396	GYM 214	2022-12-05 @ 2:00 pm	2022-12-08 @ 11:00 am	0.8 ± 0.5	2022-12-14
11287394	GYM 214	2022-12-05 @ 2:00 pm	2022-12-08 @ 11:00 am	< 0.3	2022-12-14
11287302	MAIN OFFICE 100	2022-12-05 @ 10:00 am	2022-12-08 @ 9:00 am	< 0.3	2022-12-14

Radon test result report for:
**NORTH BETHESDA MS
 MAIN1**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11287388	200A	2022-12-05 @ 2:00 pm	2022-12-08 @ 12:00 pm	0.7 ± 0.5	2022-12-14
11287424	201A	2022-12-05 @ 3:00 pm	2022-12-08 @ 11:00 am	0.8 ± 0.5	2022-12-14
11287387	208A	2022-12-05 @ 2:00 pm	2022-12-08 @ 12:00 pm	< 0.3	2022-12-14
11287406	222	2022-12-05 @ 3:00 pm	2022-12-08 @ 12:00 pm	< 0.3	2022-12-14
11287421	A200	2022-12-05 @ 3:00 pm	2022-12-08 @ 11:00 am	< 0.3	2022-12-14
11287439	A204	2022-12-05 @ 3:00 pm	2022-12-08 @ 11:00 am	0.6 ± 0.4	2022-12-14
11287430	A207	2022-12-05 @ 3:00 pm	2022-12-08 @ 11:00 am	< 0.3	2022-12-14
11287433	B202	2022-12-05 @ 2:00 pm	2022-12-08 @ 11:00 am	< 0.3	2022-12-14
11287429	B202	2022-12-05 @ 2:00 pm	2022-12-08 @ 11:00 am	< 0.3	2022-12-14
11287400	B202	2022-12-05 @ 2:00 pm	2022-12-08 @ 11:00 am	< 0.3	2022-12-14
11287426	B203	2022-12-05 @ 3:00 pm	2022-12-08 @ 11:00 am	< 0.3	2022-12-14
11287432	B204	2022-12-05 @ 3:00 pm	2022-12-08 @ 11:00 am	< 0.3	2022-12-14
11287434	C203	2022-12-05 @ 3:00 pm	2022-12-08 @ 11:00 am	< 0.3	2022-12-14
11287425	C204	2022-12-05 @ 3:00 pm	2022-12-08 @ 11:00 am	< 0.3	2022-12-14
11287427	C204	2022-12-05 @ 3:00 pm	2022-12-08 @ 11:00 am	< 0.3	2022-12-14
11287403	C207	2022-12-05 @ 3:00 pm	2022-12-08 @ 11:00 am	< 0.3	2022-12-14
11287428	C208	2022-12-05 @ 3:00 pm	2022-12-08 @ 11:00 am	< 0.3	2022-12-14
11287405	D200	2022-12-05 @ 3:00 pm	2022-12-08 @ 11:00 am	0.7 ± 0.4	2022-12-14
11287431	D209	2022-12-05 @ 3:00 pm	2022-12-08 @ 11:00 am	< 0.3	2022-12-14
11287422	D216	2022-12-05 @ 3:00 pm	2022-12-08 @ 11:00 am	< 0.3	2022-12-14
11287404	D223	2022-12-05 @ 3:00 pm	2022-12-08 @ 11:00 am	< 0.3	2022-12-14

February 7, 2023

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:
**NORTH BETHESDA MS
MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11634043	BOYS LR	2023-01-31 @ 10:00 am	2023-02-03 @ 9:00 am	< 0.3	2023-02-07
11634028	D125	2023-01-31 @ 10:00 am	2023-02-03 @ 9:00 am	0.6 ± 0.3	2023-02-07
11634035	D125	2023-01-31 @ 10:00 am	2023-02-03 @ 9:00 am	< 0.3	2023-02-07
11634036	D125	2023-01-31 @ 10:00 am	2023-02-03 @ 9:00 am	0.7 ± 0.3	2023-02-07
11634037	D125	2023-01-31 @ 10:00 am	2023-02-03 @ 9:00 am	< 0.3	2023-02-07

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

EXPOSURE IN BOWSER-MORNER RADON CHAMBER

CLIENT KCI TECHNOLOGIES, INC Job Number 208802

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

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

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

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

11633682, 11633687, 11633688 _____

11633695, 11633696 _____

P3 left

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

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

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

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

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

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

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

February 3, 2023

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

OFFICE

MAIN

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

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



Radon Test Kit Chain of Custody

Project Name: MCPS Radon – Week 2 January Schools

Name of Schools:

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

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

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



MONTGOMERY COUNTY PUBLIC SCHOOLS RADON TESTING

Executive Summary: North Bethesda Middle School

8935 Bradmoor Drive,
Bethesda, MD 20817

Date of Test Report:	3/15/2019
Round of Testing:	Initial Follow-up Post Remediation 2 Year Testing 5 Year Testing HVAC Upgrade Window Replacement New Addition New Facility
# of Rooms Tested:	1
# of Rooms \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: North Bethesda Middle School
8935 Bradmoor Drive,
Bethesda, MD 20817

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 North Bethesda Middle School, located at 8935 Bradmoor Drive, Bethesda, MD 20817 (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 26, 2019 and deployed one (1) activated charcoal (AC) radon test kit. PSI deployed radon test kits in frequently-occupied ground contact rooms, and other areas, (if applicable) in accordance with AARST guidance. PSI returned to the site on March 01, 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		
North Bethesda Middle School		
Testing period: 2/26/19 - 3/01/19		
Kit Number	Room / Area	Result (pCi/L)
3923305	129	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 # 04418387-1

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

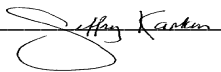
MCPS Radon Survey North Bethesda MS
8935 Bradmoor Dr
Bethesda MD 20817

Log Number	Device Number	Test Exposure Duration:	Area Tested	Result pCi/L
3220658	3923305	02/26/2019 1:45 pm 03/01/2019 11:16 am	First Floor Room 129	0.4

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

Distributed by: Intertek-PSI (VA)

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

Report Reviewed By: 

Report Approved By: 

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

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NELAC NY 11769
NRPP 103216 AL
NRSB ARL0017

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

Laboratory Report for:

Property Tested: Project # 04481387-1

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


MCPS Radon Survey
North Bethesda Middle School
Bethesda MD 20817


Log Number	Device Number	Test Exposure Duration:		Area Tested	Result pCi/L
2405514	3922885	12/04/2018 7:13 am	12/07/2018 6:43 am	North Bethesda Middle School Flr 1 Rm D120	0.9
2405515	3922886	12/04/2018 7:14 am	12/07/2018 6:44 am	North Bethesda Middle School Flr 1 Rm D121	< 0.4
2405516	3922887	12/04/2018 7:15 am	12/07/2018 6:45 am	North Bethesda Middle School Flr 1 Rm D120A	< 0.4
2405517	3922888	12/04/2018 7:15 am	12/07/2018 6:47 am	North Bethesda Middle School Flr 1 Rm D125	0.5
2405518	3922889	12/04/2018 7:16 am	12/07/2018 6:47 am	North Bethesda Middle School Flr 1 Rm D125	1.0
2405519	3922890	12/04/2018 7:19 am	12/07/2018 6:50 am	North Bethesda Middle School Flr 1 Rm 124	< 0.4
2405520	3922801	12/04/2018 7:19 am	12/07/2018 6:50 am	North Bethesda Middle School Flr 1 Rm 124	< 0.4
2405521	3922802	12/04/2018 7:20 am	12/07/2018 6:53 am	North Bethesda Middle School Flr 1 Rm 125	< 0.4
2405522	3922803	12/04/2018 7:22 am	12/07/2018 6:53 am	North Bethesda Middle School Flr 1 Rm 128A	< 0.4
2405523	3922804	12/04/2018 7:23 am	12/07/2018 6:54 am	North Bethesda Middle School Flr 1 Rm PE Office	< 0.4
2405524	3922805	12/04/2018 7:23 am	12/07/2018 6:54 am	North Bethesda Middle School Flr 1 Rm 130A	< 0.4

Comment: AMENDED REPORT 2/4/2019 Updated report to include additional test results. A copy of this report was emailed to Intertek-PSI (VA).

Distributed by: Intertek-PSI (VA)

Date Received: 12/09/2018 Date Logged: 12/09/2019 Date Analyzed: 12/11/2018 Date Reported: 12/21/2018

Report Reviewed By: 

Report Approved By: 

Shawn Price, Director of Laboratory Operations, AccuStar Labs

Disclaimer:

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NELAC NY 11769
NRPP 103216 AL
NRSB ARL0017

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

Laboratory Report for:

Property Tested: Project # 04481387-1

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


MCPS Radon Survey
North Bethesda Middle School
Bethesda MD 20817


Log Number	Device Number	Test Exposure Duration:		Area Tested	Result pCi/L
2405525	3922806	12/04/2018 7:29 am	12/07/2018 7:41 am	North Bethesda Middle School Flr 1 Rm 121	< 0.4
2405526	3922807	12/04/2018 7:31 am	12/07/2018 6:58 am	North Bethesda Middle School Flr 1 Rm 120	< 0.4
2405527	3922808	12/04/2018 7:33 am	12/07/2018 6:58 am	North Bethesda Middle School Flr 1 Rm 119	< 0.4
2405528	3922809	12/04/2018 7:34 am	12/07/2018 6:08 am	North Bethesda Middle School Flr 1 Rm Nurse's	< 0.4
2405529	3922810	12/04/2018 7:34 am	12/07/2018 6:08 am	North Bethesda Middle School Flr 1 Rm Nurse's	0.5
2405530	3922771	12/04/2018 7:36 am	12/07/2018 6:59 am	North Bethesda Middle School Flr 1 Rm 115	< 0.4
2405531	3922772	12/04/2018 7:36 am	12/07/2018 4:00 am	North Bethesda Middle School Flr 1 Rm 114	< 0.4
2405532	3922773	12/04/2018 7:38 am	12/07/2018 7:01 am	North Bethesda Middle School Flr 1 Rm Office 1	< 0.4
2405533	3922774	12/04/2018 7:39 am	12/07/2018 7:02 am	North Bethesda Middle School Flr 1 Rm 101	< 0.4
2405534	3922775	12/04/2018 7:40 am	12/07/2018 7:02 am	North Bethesda Middle School Flr 1 Rm 101A	< 0.4
2405535	3922776	12/04/2018 7:40 am	12/07/2018 7:02 am	North Bethesda Middle School Flr 1 Rm 101B	< 0.4

Comment: AMENDED REPORT 2/4/2019 Updated report to include additional test results. A copy of this report was emailed to Intertek-PSI (VA).

Distributed by: Intertek-PSI (VA)

Date Received: 12/09/2018 Date Logged: 12/09/2019 Date Analyzed: 12/11/2018 Date Reported: 12/21/2018

Report Reviewed By: 

Report Approved By: 

Shawn Price, Director of Laboratory Operations, AccuStar Labs

Disclaimer:

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NELAC NY 11769
NRPP 103216 AL
NRSB ARL0017

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

Laboratory Report for:

Property Tested: Project # 04481387-1

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


MCPS Radon Survey
North Bethesda Middle School
Bethesda MD 20817


Log Number	Device Number	Test Exposure Duration:				Area Tested	Result pCi/L
2405536	3922777	12/04/2018	7:41 am	12/07/2018	7:03 am	North Bethesda Middle School Flr 1 Rm 101C	0.5
2405537	3922778	12/04/2018	7:41 am	12/07/2018	7:03 am	North Bethesda Middle School Flr 1 Rm 101D	< 0.4
2405538	3922779	12/04/2018	7:42 am	12/07/2018	7:03 am	North Bethesda Middle School Flr 1 Rm 101D	< 0.4
2405539	3922780	12/04/2018	7:42 am	12/07/2018	7:04 am	North Bethesda Middle School Flr 1 Rm 101E	< 0.4
2405540	3922781	12/04/2018	7:43 am	12/07/2018	7:04 am	North Bethesda Middle School Flr 1 Rm 101F	< 0.4
2405541	3922782	12/04/2018	7:43 am	12/07/2018	7:05 am	North Bethesda Middle School Flr 1 Rm 116	< 0.4
2405542	3922783	12/04/2018	7:44 am	12/07/2018	7:05 am	North Bethesda Middle School Flr 1 Rm 100	< 0.4
2405543	3922784	12/04/2018	7:45 am	12/07/2018	7:40 am	North Bethesda Middle School Flr 1 Rm 100F	< 0.4
2405544	3922785	12/04/2018	7:45 am	12/07/2018	7:05 am	North Bethesda Middle School Flr 1 Rm 100 Offic	< 0.4
2405545	3922786	12/04/2018	7:46 am	12/07/2018	7:06 am	North Bethesda Middle School Flr 1 Rm 100A	< 0.4
2405546	3922787	12/04/2018	7:46 am	12/07/2018	7:06 am	North Bethesda Middle School Flr 1 Rm 100B	0.5

Comment: AMENDED REPORT 2/4/2019 Updated report to include additional test results. A copy of this report was emailed to Intertek-PSI (VA).

Distributed by: Intertek-PSI (VA)

Date Received: 12/09/2018 Date Logged: 12/09/2019 Date Analyzed: 12/11/2018 Date Reported: 12/21/2018

Report Reviewed By: 

Report Approved By: 

Shawn Price, Director of Laboratory Operations, AccuStar Labs

Disclaimer:

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NELAC NY 11769
NRPP 103216 AL
NRSB ARL0017

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

Laboratory Report for:

Property Tested: Project # 04481387-1

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


MCPS Radon Survey
North Bethesda Middle School
Bethesda MD 20817


Log Number	Device Number	Test Exposure Duration:		Area Tested	Result pCi/L
2405547	3922788	12/04/2018 7:47 am	12/07/2018 7:07 am	North Bethesda Middle School Flr 1 Rm 100C	< 0.4
2405548	3922789	12/04/2018 7:48 am	12/07/2018 7:08 am	North Bethesda Middle School Flr 1 Rm 100D	0.6
2405549	3922790	12/04/2018 7:49 am	12/07/2018 7:08 am	North Bethesda Middle School Flr 1 Rm 100E	< 0.4
2405550	3922791	12/04/2018 7:49 am	12/07/2018 7:10 am	North Bethesda Middle School Flr 1 Rm 100E	< 0.4
2405551	3922792	12/04/2018 7:51 am	12/07/2018 7:10 am	North Bethesda Middle School Flr 1 Rm 102	< 0.4
2405552	3922793	12/04/2018 7:52 am	12/07/2018 7:10 am	North Bethesda Middle School Flr 1 Rm 102A	< 0.4
2405553	3922794	12/04/2018 7:52 am	12/07/2018 7:10 am	North Bethesda Middle School Flr 1 Rm 102 Office	< 0.4
2405554	3922795	12/04/2018 8:00 am	12/07/2018 7:10 am	North Bethesda Middle School Flr 2 Rm 225	1.1
2405555	3922796	12/04/2018 8:01 am	12/07/2018 7:40 am	North Bethesda Middle School Flr 2 Rm 225 Office	0.7
2405556	3922797	12/04/2018 8:02 am	12/07/2018 7:20 am	North Bethesda Middle School Flr 2 Rm 224	0.9
2405557	3922798	12/04/2018 8:02 am	12/07/2018 7:20 am	North Bethesda Middle School Flr 2 Rm 224	0.4

Comment: AMENDED REPORT 2/4/2019 Updated report to include additional test results. A copy of this report was emailed to Intertek-PSI (VA).

Distributed by: Intertek-PSI (VA)

Date Received: 12/09/2018 Date Logged: 12/09/2019 Date Analyzed: 12/11/2018 Date Reported: 12/21/2018

Report Reviewed By: 

Report Approved By: 

Shawn Price, Director of Laboratory Operations, AccuStar Labs

Disclaimer:

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NELAC NY 11769
NRPP 103216 AL
NRSB ARL0017

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

Laboratory Report for:

Property Tested: Project # 04481387-1

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


MCPS Radon Survey
North Bethesda Middle School
Bethesda MD 20817


Log Number	Device Number	Test Exposure Duration:		Area Tested	Result pCi/L
2405558	3922799	12/04/2018 8:05 am	12/07/2018 7:20 am	North Bethesda Middle School Flr 2 Rm 224 Offic	< 0.4
2405559	3922800	12/04/2018 8:05 am	12/07/2018 7:20 am	North Bethesda Middle School Flr 2 Rm 222	0.4
2405560	3922681	12/04/2018 8:06 am	12/07/2018 7:20 am	North Bethesda Middle School Flr 2 Rm 222 Offic	1.2
2405561	3922682	12/04/2018 8:07 am	12/07/2018 7:25 am	North Bethesda Middle School Flr 2 Rm 221	0.4
2405562	3922683	12/04/2018 8:13 am	12/07/2018 7:28 am	North Bethesda Middle School Flr 2 Rm Kitchen	< 0.4
2405563	3922684	12/04/2018 8:13 am	12/07/2018 7:28 am	North Bethesda Middle School Flr 2 Rm Kitchen	< 0.4
2405564	3922685	12/04/2018 8:17 am	12/07/2018 7:30 am	North Bethesda Middle School Flr 2 Rm 200B	< 0.4
2405565	3922686	12/04/2018 8:20 am	12/07/2018 7:32 am	North Bethesda Middle School Flr 2 Rm A204	< 0.4
2405566	3922687	12/04/2018 8:22 am	12/07/2018 7:33 am	North Bethesda Middle School Flr 2 Rm B203	< 0.4
2405567	3922688	12/04/2018 8:24 am	12/07/2018 7:35 am	North Bethesda Middle School Flr 2 Rm C206	< 0.4
2405568	3922689	12/04/2018 8:26 am	12/07/2018 7:36 am	North Bethesda Middle School Flr 2 Rm D217	0.5

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Distributed by: Intertek-PSI (VA)

Date Received: 12/09/2018 Date Logged: 12/09/2019 Date Analyzed: 12/11/2018 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

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
North Bethesda Middle School
Bethesda MD 20817

Log Number	Device Number	Test Exposure Duration:		Area Tested	Result pCi/L
2405569	3922690	12/04/2018 8:26 am	12/07/2018 7:38 am	North Bethesda Middle School Flr 2 Rm D217	< 0.4
2405570	3922999	12/04/2018 6:33 am	12/07/2018 7:40 am	North Bethesda Middle School Flr NA Rm NA	< 0.4
2405571	3923000	12/04/2018 6:33 am	12/07/2018 7:40 am	North Bethesda Middle School Flr NA Rm NA	< 0.4
2405572	3923169	12/04/2018 6:00 am	12/07/2018 7:40 am	North Bethesda Middle School Flr NA Rm NA	< 0.4
2405573	3923170	12/04/2018 6:00 am	12/07/2018 7:40 am	North Bethesda Middle School Flr NA Rm NA	< 0.4

Comment: AMENDED REPORT 2/4/2019 Updated report to include additional test results. A copy of this report was emailed to Intertek-PSI (VA).

Distributed by: Intertek-PSI (VA)

Date Received: 12/09/2018 Date Logged: 12/09/2019 Date Analyzed: 12/11/2018 Date Reported: 12/21/2018

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
North Bethesda Middle School
Maryland 20817 USA


Log Number	Device Number	Test Exposure Duration:		Area Tested	Result pCi/L
2405389	3888436	12/04/2018 7:29 am	12/07/2018 6:55 am	Bldg North Bethesda Middle School Flr 1 Rm 126	0.4
2405390	3888455	12/04/2018 7:29 am	12/07/2018 6:55 am	Bldg North Bethesda Middle School Flr 1 Rm 127	< 0.4
2405391	3888450	12/04/2018 8:11 am	12/07/2018 7:23 am	Bldg North Bethesda Middle School Flr 2 Rm Caf	0.5
2405392	3888452	12/04/2018 8:11 am	12/07/2018 7:23 am	Bldg North Bethesda Middle School Flr 2 Rm Caf	< 0.4

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: 12/21/2018

Report Reviewed By: 

Report Approved By: 

Disclaimer:

Shawn Price, Director of Laboratory Operations, AccuStar Labs

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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

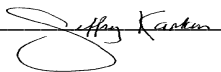
Log Number	Device Number	Test Exposure Duration:	Area Tested	Result pCi/L
3204125	3926831	12/07/2018 9:47 am - 12/10/2018 9:47 am	Spike	36.1
3204126	3926832	12/07/2018 9:47 am - 12/10/2018 9:47 am	Spike	34.8
3204127	3926833	12/07/2018 9:47 am - 12/10/2018 9:47 am	Spike	33.7
3204128	3926834	12/07/2018 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. Grosvenor Center (Luxmanor ES)
2. Montrose Center
3. Gibbs ES
4. Westbrook ES
5. Hadley Farms (Resnik ES)
6. Kingsview MS
7. Longview School
8. Lynnbrook Center
9. Magruder HS
10. McAuliffe ES
11. McNair ES
12. Mill Creek Towne ES
13. Martin Luther King MS
14. Montgomery Village MS
15. Great Seneca Creek ES
16. Quince Orchard HS
17. Redland MS
18. North Bethesda MS
19. Spark Matsunaga ES
20. Whetstone ES
21. Wood Acres ES

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

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



**MONTGOMERY COUNTY PUBLIC SCHOOLS
RADON TESTING**

**Executive Summary:
North Bethesda Middle School**

8935 Bradmoor Drive,
Bethesda, MD 20817

Date of Test Report:	02/21/2019
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:	92
# of Rooms \geq 4.0 pCi/L:	0
Low Value:	< 0.4
High Value:	1.2

Project Status

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



February 21, 2018

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

Re: Radon Testing Services

North Bethesda Middle School
8935 Bradmoor Drive,
Bethesda, MD 20817

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 North Bethesda Middle School, located at 8935 Bradmoor Drive, Bethesda, MD 20817 (subject site).

Scope of Services:

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

PSI visited the site on December 4, 2018 and deployed one hundred and eight (108) activated charcoal (AC) radon test kits. PSI deployed radon test kits in frequently-occupied ground contact rooms, and other areas, (if applicable) in accordance with AARST guidance. PSI returned to the site on December 7, 2018 to retrieve the radon sampling test kits. A floor plan map of the building with the test locations is included as Attachment A of this report.

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

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



Evaluation of Testing Conditions:

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

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		
North Bethesda Middle School		
Testing period: 12/4/18 - 12/7/18		
Kit Number	Room / Area	Result (pCi/L)
3922783	100	<0.4
3922785	100 Office	<0.4
3922786	100A	<0.4
3922787	100B	0.5
3922788	100C	<0.4
3922789	100D	0.6
3922791	100E	<0.4
3922784	100F	<0.4
3922774	101	<0.4
3922775	101A	<0.4
3922776	101B	<0.4
3922777	101C	0.5
3922778	101D	<0.4
3922780	101E	<0.4
3922781	101F	<0.4
3922792	102	<0.4
3922794	102 Office	<0.4
3922793	102A	<0.4
3922853	103	<0.4
3922854	103A	<0.4
3922849	104	<0.4
3922851	104A	0.4
3922852	104B	<0.4
3922848	105	<0.4
3922772	114	<0.4
3922771	115	<0.4
3922782	116	<0.4
3922808	119	<0.4
3922809	119A	<0.4
3922807	120	<0.4
3922806	121	<0.4
3922801	124	<0.4
3922802	125	<0.4
3888436	126	0.4
3888455	127	<0.4
3922803	128A	<0.4
--	129 (MISSED)	--
3922805	130A	<0.4
3922685	200B	<0.4
3922682	221	0.4
3922800	222	0.4
3922681	222 Office	1.2
3922797	224	0.9

Radon Testing Results		
North Bethesda Middle School		
Testing period: 12/4/18 - 12/7/18		
Kit Number	Room / Area	Result (pCi/L)
3922799	224 Office	<0.4
3922795	225	1.1
3922796	225 Office	0.7
3922847	A100	<0.4
3922846	A101	<0.4
3922845	A102	<0.4
3922844	A104	<0.4
3922843	A106	<0.4
3922842	A107	0.4
3922841	A113	<0.4
3922686	A204	<0.4
3922855	B100	<0.4
3922856	B101	<0.4
3922857	B102	<0.4
3922858	B103	<0.4
3922859	B104	<0.4
3922861	B105	<0.4
3922862	B106	<0.4
3922863	B107	<0.4
3922864	B108	<0.4
3922687	B203	<0.4
3922865	C103	<0.4
3922866	C104	<0.4
3922867	C105	<0.4
3922868	C106	<0.4
3922869	C107	<0.4
3922871	C108	<0.4
3922872	C109	<0.4
3922688	C206	<0.4
3888450	Cafeteria	0.5
3888452	Cafeteria	<0.4
3922873	D100	0.7
3922874	D103	0.6
3922875	D104	<0.4
3922876	D107	0.7
3922877	D111	0.6
3922878	D112	0.6
3922879	D114	<0.4
3922881	D115	<0.4
3922882	D116	0.5
3922883	D117	<0.4
3922884	D118	0.5
3922885	D120	0.9

Radon Testing Results		
North Bethesda Middle School		
Testing period: 12/4/18 - 12/7/18		
Kit Number	Room / Area	Result (pCi/L)
3922887	D120A	<0.4
3922886	D121	<0.4
3922888	D125	0.5
3922889	D125	1.0
3922689	D217	0.5
3922683	Kitchen	<0.4
3922684	Kitchen Office	<0.4
3922773	Office 1	<0.4
3922804	PE Office	<0.4

Radon Testing Results		
North Bethesda Middle School		
Testing period: 12/4/18 - 12/7/18		
Kit Number	QC Type	Result (pCi/L)
3922790	100E (D)	<0.4
3922779	101D (D)	<0.4
3922850	104 (D)	0.4
3922810	119A (D)	0.5
3922890	124 (D)	<0.4
3922798	224 (D)	0.4
3922860	B104 (D)	<0.4
3922870	C107 (D)	<0.4
3922880	D114 (D)	<0.4
3922690	D217 (D)	<0.4
3922999	Field Blank	<0.4
3923000	Field Blank	<0.4
3923170	Office Blank	<0.4
3923169	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

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
North Bethesda Middle School
Bethesda MD 20817


Log Number	Device Number	Test Exposure Duration:		Area Tested	Result pCi/L
2405470	3922841	12/04/2018 6:33 am	12/07/2018 6:10 am	North Bethesda Middle School Flr 1 Rm A113	< 0.4
2405471	3922842	12/04/2018 6:34 am	12/07/2018 6:11 am	North Bethesda Middle School Flr 1 Rm A107	0.4
2405472	3922843	12/04/2018 6:35 am	12/07/2018 6:12 am	North Bethesda Middle School Flr 1 Rm A106	< 0.4
2405473	3922844	12/04/2018 6:35 am	12/07/2018 6:13 am	North Bethesda Middle School Flr 1 Rm A104	< 0.4
2405474	3922845	12/04/2018 6:35 am	12/07/2018 6:14 am	North Bethesda Middle School Flr 1 Rm A102	< 0.4
2405475	3922846	12/04/2018 6:36 am	12/07/2018 6:15 am	North Bethesda Middle School Flr 1 Rm A101	< 0.4
2405476	3922847	12/04/2018 6:37 am	12/07/2018 6:16 am	North Bethesda Middle School Flr 1 Rm A100	< 0.4
2405477	3922848	12/04/2018 6:39 am	12/07/2018 7:40 am	North Bethesda Middle School Flr 1 Rm 105	< 0.4
2405478	3922849	12/04/2018 6:42 am	12/07/2018 6:18 am	North Bethesda Middle School Flr 1 Rm 104	< 0.4
2405479	3922850	12/04/2018 6:42 am	12/07/2018 6:19 am	North Bethesda Middle School Flr 1 Rm 104	0.4
2405480	3922851	12/04/2018 6:43 am	12/07/2018 6:20 am	North Bethesda Middle School Flr 1 Rm 104A	0.4

Comment: AMENDED REPORT 2/4/2019 Updated report to include additional test results. A copy of this report was emailed to Intertek-PSI (VA).

Distributed by: Intertek-PSI (VA)

Date Received: 12/09/2018 Date Logged: 12/09/2019 Date Analyzed: 12/11/2018 Date Reported: 12/21/2018

Report Reviewed By: 

Report Approved By: 

Shawn Price, Director of Laboratory Operations, AccuStar Labs

Disclaimer:

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NRPP 103216 AL
NRSB ARL0017

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
North Bethesda Middle School
Bethesda MD 20817


Log Number	Device Number	Test Exposure Duration:		Area Tested	Result pCi/L
2405481	3922852	12/04/2018 6:43 am	12/07/2018 6:21 am	North Bethesda Middle School Flr 1 Rm 104 Offic	< 0.4
2405482	3922853	12/04/2018 6:44 am	12/07/2018 6:22 am	North Bethesda Middle School Flr 1 Rm 103	< 0.4
2405483	3922854	12/04/2018 6:45 am	12/07/2018 6:22 am	North Bethesda Middle School Flr 1 Rm 103 Offic	< 0.4
2405484	3922855	12/04/2018 6:46 am	12/07/2018 6:23 am	North Bethesda Middle School Flr 1 Rm B100	< 0.4
2405485	3922856	12/04/2018 6:47 am	12/07/2018 6:23 am	North Bethesda Middle School Flr 1 Rm B101	< 0.4
2405486	3922857	12/04/2018 6:48 am	12/07/2018 6:24 am	North Bethesda Middle School Flr 1 Rm B102	< 0.4
2405487	3922858	12/04/2018 6:49 am	12/07/2018 6:24 am	North Bethesda Middle School Flr 1 Rm B103	< 0.4
2405488	3922859	12/04/2018 6:50 am	12/07/2018 6:25 am	North Bethesda Middle School Flr 1 Rm B104	< 0.4
2405489	3922860	12/04/2018 6:50 am	12/07/2018 6:25 am	North Bethesda Middle School Flr 1 Rm B104	< 0.4
2405490	3922861	12/04/2018 6:51 am	12/07/2018 6:26 am	North Bethesda Middle School Flr 1 Rm B105	< 0.4
2405491	3922862	12/04/2018 6:52 am	12/07/2018 6:26 am	North Bethesda Middle School Flr 1 Rm B106	< 0.4

Comment: AMENDED REPORT 2/4/2019 Updated report to include additional test results. A copy of this report was emailed to Intertek-PSI (VA).

Distributed by: Intertek-PSI (VA)

Date Received: 12/09/2018 Date Logged: 12/09/2019 Date Analyzed: 12/11/2018 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

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
North Bethesda Middle School
Bethesda MD 20817


Log Number	Device Number	Test Exposure Duration:		Area Tested	Result pCi/L
2405492	3922863	12/04/2018 6:53 am	12/07/2018 6:26 am	North Bethesda Middle School Flr 1 Rm B107	< 0.4
2405493	3922864	12/04/2018 6:54 am	12/07/2018 6:27 am	North Bethesda Middle School Flr 1 Rm B108	< 0.4
2405494	3922865	12/04/2018 6:56 am	12/07/2018 6:28 am	North Bethesda Middle School Flr 1 Rm C103	< 0.4
2405495	3922866	12/04/2018 6:57 am	12/07/2018 6:28 am	North Bethesda Middle School Flr 1 Rm C104	< 0.4
2405496	3922867	12/04/2018 6:57 am	12/07/2018 6:28 am	North Bethesda Middle School Flr 1 Rm C105	< 0.4
2405497	3922868	12/04/2018 6:58 am	12/07/2018 6:29 am	North Bethesda Middle School Flr 1 Rm C106	< 0.4
2405498	3922869	12/04/2018 6:59 am	12/07/2018 6:30 am	North Bethesda Middle School Flr 1 Rm C107	< 0.4
2405499	3922870	12/04/2018 6:59 am	12/07/2018 6:30 am	North Bethesda Middle School Flr 1 Rm C107	< 0.4
2405500	3922871	12/04/2018 6:59 am	12/07/2018 6:31 am	North Bethesda Middle School Flr 1 Rm C108	< 0.4
2405501	3922872	12/04/2018 7:02 am	12/07/2018 6:31 am	North Bethesda Middle School Flr 1 Rm C109	< 0.4
2405502	3922873	12/04/2018 7:03 am	12/07/2018 6:33 am	North Bethesda Middle School Flr 1 Rm D100	0.7

Comment: AMENDED REPORT 2/4/2019 Updated report to include additional test results. A copy of this report was emailed to Intertek-PSI (VA).

Distributed by: Intertek-PSI (VA)

Date Received: 12/09/2018 Date Logged: 12/09/2019 Date Analyzed: 12/11/2018 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

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
North Bethesda Middle School
Bethesda MD 20817


Log Number	Device Number	Test Exposure Duration:		Area Tested	Result pCi/L
2405503	3922874	12/04/2018 7:04 am	12/07/2018 6:34 am	North Bethesda Middle School Flr 1 Rm D103	0.6
2405504	3922875	12/04/2018 7:05 am	12/07/2018 6:35 am	North Bethesda Middle School Flr 1 Rm D104	< 0.4
2405505	3922876	12/04/2018 7:07 am	12/07/2018 6:39 am	North Bethesda Middle School Flr 1 Rm D107	0.7
2405506	3922877	12/04/2018 7:08 am	12/07/2018 6:37 am	North Bethesda Middle School Flr 1 Rm D111	0.6
2405507	3922878	12/04/2018 7:08 am	12/07/2018 6:38 am	North Bethesda Middle School Flr 1 Rm D112	0.6
2405508	3922879	12/04/2018 7:09 am	12/07/2018 6:39 am	North Bethesda Middle School Flr 1 Rm D114	< 0.4
2405509	3922880	12/04/2018 7:09 am	12/07/2018 6:40 am	North Bethesda Middle School Flr 1 Rm D114	< 0.4
2405510	3922881	12/04/2018 7:10 am	12/07/2018 6:37 am	North Bethesda Middle School Flr 1 Rm D115	< 0.4
2405511	3922882	12/04/2018 7:11 am	12/07/2018 6:37 am	North Bethesda Middle School Flr 1 Rm D116	0.5
2405512	3922883	12/04/2018 7:12 am	12/07/2018 6:41 am	North Bethesda Middle School Flr 1 Rm D117	< 0.4
2405513	3922884	12/04/2018 7:12 am	12/07/2018 6:42 am	North Bethesda Middle School Flr 1 Rm D118	0.5

Comment: AMENDED REPORT 2/4/2019 Updated report to include additional test results. A copy of this report was emailed to Intertek-PSI (VA).

Distributed by: Intertek-PSI (VA)

Date Received: 12/09/2018 Date Logged: 12/09/2019 Date Analyzed: 12/11/2018 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

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
North Bethesda Middle School
Bethesda MD 20817


Log Number	Device Number	Test Exposure Duration:		Area Tested	Result pCi/L
2405514	3922885	12/04/2018 7:13 am	12/07/2018 6:43 am	North Bethesda Middle School Flr 1 Rm D120	0.9
2405515	3922886	12/04/2018 7:14 am	12/07/2018 6:44 am	North Bethesda Middle School Flr 1 Rm D121	< 0.4
2405516	3922887	12/04/2018 7:15 am	12/07/2018 6:45 am	North Bethesda Middle School Flr 1 Rm D120A	< 0.4
2405517	3922888	12/04/2018 7:15 am	12/07/2018 6:47 am	North Bethesda Middle School Flr 1 Rm D125	0.5
2405518	3922889	12/04/2018 7:16 am	12/07/2018 6:47 am	North Bethesda Middle School Flr 1 Rm D125	1.0
2405519	3922890	12/04/2018 7:19 am	12/07/2018 6:50 am	North Bethesda Middle School Flr 1 Rm 124	< 0.4
2405520	3922801	12/04/2018 7:19 am	12/07/2018 6:50 am	North Bethesda Middle School Flr 1 Rm 124	< 0.4
2405521	3922802	12/04/2018 7:20 am	12/07/2018 6:53 am	North Bethesda Middle School Flr 1 Rm 125	< 0.4
2405522	3922803	12/04/2018 7:22 am	12/07/2018 6:53 am	North Bethesda Middle School Flr 1 Rm 128A	< 0.4
2405523	3922804	12/04/2018 7:23 am	12/07/2018 6:54 am	North Bethesda Middle School Flr 1 Rm PE Office	< 0.4
2405524	3922805	12/04/2018 7:23 am	12/07/2018 6:54 am	North Bethesda Middle School Flr 1 Rm 130A	< 0.4

Comment: AMENDED REPORT 2/4/2019 Updated report to include additional test results. A copy of this report was emailed to Intertek-PSI (VA).

Distributed by: Intertek-PSI (VA)

Date Received: 12/09/2018 Date Logged: 12/09/2019 Date Analyzed: 12/11/2018 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

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
North Bethesda Middle School
Bethesda MD 20817


Log Number	Device Number	Test Exposure Duration:		Area Tested	Result pCi/L
2405525	3922806	12/04/2018 7:29 am	12/07/2018 7:41 am	North Bethesda Middle School Flr 1 Rm 121	< 0.4
2405526	3922807	12/04/2018 7:31 am	12/07/2018 6:58 am	North Bethesda Middle School Flr 1 Rm 120	< 0.4
2405527	3922808	12/04/2018 7:33 am	12/07/2018 6:58 am	North Bethesda Middle School Flr 1 Rm 119	< 0.4
2405528	3922809	12/04/2018 7:34 am	12/07/2018 6:08 am	North Bethesda Middle School Flr 1 Rm Nurse's	< 0.4
2405529	3922810	12/04/2018 7:34 am	12/07/2018 6:08 am	North Bethesda Middle School Flr 1 Rm Nurse's	0.5
2405530	3922771	12/04/2018 7:36 am	12/07/2018 6:59 am	North Bethesda Middle School Flr 1 Rm 115	< 0.4
2405531	3922772	12/04/2018 7:36 am	12/07/2018 4:00 am	North Bethesda Middle School Flr 1 Rm 114	< 0.4
2405532	3922773	12/04/2018 7:38 am	12/07/2018 7:01 am	North Bethesda Middle School Flr 1 Rm Office 1	< 0.4
2405533	3922774	12/04/2018 7:39 am	12/07/2018 7:02 am	North Bethesda Middle School Flr 1 Rm 101	< 0.4
2405534	3922775	12/04/2018 7:40 am	12/07/2018 7:02 am	North Bethesda Middle School Flr 1 Rm 101A	< 0.4
2405535	3922776	12/04/2018 7:40 am	12/07/2018 7:02 am	North Bethesda Middle School Flr 1 Rm 101B	< 0.4

Comment: AMENDED REPORT 2/4/2019 Updated report to include additional test results. A copy of this report was emailed to Intertek-PSI (VA).

Distributed by: Intertek-PSI (VA)

Date Received: 12/09/2018 Date Logged: 12/09/2019 Date Analyzed: 12/11/2018 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

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
North Bethesda Middle School
Bethesda MD 20817


Log Number	Device Number	Test Exposure Duration:				Area Tested	Result pCi/L
2405536	3922777	12/04/2018	7:41 am	12/07/2018	7:03 am	North Bethesda Middle School Flr 1 Rm 101C	0.5
2405537	3922778	12/04/2018	7:41 am	12/07/2018	7:03 am	North Bethesda Middle School Flr 1 Rm 101D	< 0.4
2405538	3922779	12/04/2018	7:42 am	12/07/2018	7:03 am	North Bethesda Middle School Flr 1 Rm 101D	< 0.4
2405539	3922780	12/04/2018	7:42 am	12/07/2018	7:04 am	North Bethesda Middle School Flr 1 Rm 101E	< 0.4
2405540	3922781	12/04/2018	7:43 am	12/07/2018	7:04 am	North Bethesda Middle School Flr 1 Rm 101F	< 0.4
2405541	3922782	12/04/2018	7:43 am	12/07/2018	7:05 am	North Bethesda Middle School Flr 1 Rm 116	< 0.4
2405542	3922783	12/04/2018	7:44 am	12/07/2018	7:05 am	North Bethesda Middle School Flr 1 Rm 100	< 0.4
2405543	3922784	12/04/2018	7:45 am	12/07/2018	7:40 am	North Bethesda Middle School Flr 1 Rm 100F	< 0.4
2405544	3922785	12/04/2018	7:45 am	12/07/2018	7:05 am	North Bethesda Middle School Flr 1 Rm 100 Offic	< 0.4
2405545	3922786	12/04/2018	7:46 am	12/07/2018	7:06 am	North Bethesda Middle School Flr 1 Rm 100A	< 0.4
2405546	3922787	12/04/2018	7:46 am	12/07/2018	7:06 am	North Bethesda Middle School Flr 1 Rm 100B	0.5

Comment: AMENDED REPORT 2/4/2019 Updated report to include additional test results. A copy of this report was emailed to Intertek-PSI (VA).

Distributed by: Intertek-PSI (VA)

Date Received: 12/09/2018 Date Logged: 12/09/2019 Date Analyzed: 12/11/2018 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

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
North Bethesda Middle School
Bethesda MD 20817


Log Number	Device Number	Test Exposure Duration:		Area Tested	Result pCi/L
2405547	3922788	12/04/2018 7:47 am	12/07/2018 7:07 am	North Bethesda Middle School Flr 1 Rm 100C	< 0.4
2405548	3922789	12/04/2018 7:48 am	12/07/2018 7:08 am	North Bethesda Middle School Flr 1 Rm 100D	0.6
2405549	3922790	12/04/2018 7:49 am	12/07/2018 7:08 am	North Bethesda Middle School Flr 1 Rm 100E	< 0.4
2405550	3922791	12/04/2018 7:49 am	12/07/2018 7:10 am	North Bethesda Middle School Flr 1 Rm 100E	< 0.4
2405551	3922792	12/04/2018 7:51 am	12/07/2018 7:10 am	North Bethesda Middle School Flr 1 Rm 102	< 0.4
2405552	3922793	12/04/2018 7:52 am	12/07/2018 7:10 am	North Bethesda Middle School Flr 1 Rm 102A	< 0.4
2405553	3922794	12/04/2018 7:52 am	12/07/2018 7:10 am	North Bethesda Middle School Flr 1 Rm 102 Office	< 0.4
2405554	3922795	12/04/2018 8:00 am	12/07/2018 7:10 am	North Bethesda Middle School Flr 2 Rm 225	1.1
2405555	3922796	12/04/2018 8:01 am	12/07/2018 7:40 am	North Bethesda Middle School Flr 2 Rm 225 Office	0.7
2405556	3922797	12/04/2018 8:02 am	12/07/2018 7:20 am	North Bethesda Middle School Flr 2 Rm 224	0.9
2405557	3922798	12/04/2018 8:02 am	12/07/2018 7:20 am	North Bethesda Middle School Flr 2 Rm 224	0.4

Comment: AMENDED REPORT 2/4/2019 Updated report to include additional test results. A copy of this report was emailed to Intertek-PSI (VA).

Distributed by: Intertek-PSI (VA)

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Report Reviewed By: 

Report Approved By: 

Shawn Price, Director of Laboratory Operations, AccuStar Labs

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NRPP 103216 AL
NRSB ARL0017

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Charcoal Canister
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Laboratory Report for:

Property Tested: Project # 04481387-1

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


MCPS Radon Survey
North Bethesda Middle School
Bethesda MD 20817


Log Number	Device Number	Test Exposure Duration:		Area Tested	Result pCi/L
2405558	3922799	12/04/2018 8:05 am	12/07/2018 7:20 am	North Bethesda Middle School Flr 2 Rm 224 Offic	< 0.4
2405559	3922800	12/04/2018 8:05 am	12/07/2018 7:20 am	North Bethesda Middle School Flr 2 Rm 222	0.4
2405560	3922681	12/04/2018 8:06 am	12/07/2018 7:20 am	North Bethesda Middle School Flr 2 Rm 222 Offic	1.2
2405561	3922682	12/04/2018 8:07 am	12/07/2018 7:25 am	North Bethesda Middle School Flr 2 Rm 221	0.4
2405562	3922683	12/04/2018 8:13 am	12/07/2018 7:28 am	North Bethesda Middle School Flr 2 Rm Kitchen	< 0.4
2405563	3922684	12/04/2018 8:13 am	12/07/2018 7:28 am	North Bethesda Middle School Flr 2 Rm Kitchen	< 0.4
2405564	3922685	12/04/2018 8:17 am	12/07/2018 7:30 am	North Bethesda Middle School Flr 2 Rm 200B	< 0.4
2405565	3922686	12/04/2018 8:20 am	12/07/2018 7:32 am	North Bethesda Middle School Flr 2 Rm A204	< 0.4
2405566	3922687	12/04/2018 8:22 am	12/07/2018 7:33 am	North Bethesda Middle School Flr 2 Rm B203	< 0.4
2405567	3922688	12/04/2018 8:24 am	12/07/2018 7:35 am	North Bethesda Middle School Flr 2 Rm C206	< 0.4
2405568	3922689	12/04/2018 8:26 am	12/07/2018 7:36 am	North Bethesda Middle School Flr 2 Rm D217	0.5

Comment: AMENDED REPORT 2/4/2019 Updated report to include additional test results. A copy of this report was emailed to Intertek-PSI (VA).

Distributed by: Intertek-PSI (VA)

Date Received: 12/09/2018 Date Logged: 12/09/2019 Date Analyzed: 12/11/2018 Date Reported: 12/21/2018

Report Reviewed By: 

Report Approved By: 

Shawn Price, Director of Laboratory Operations, AccuStar Labs

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NRSB ARL0017

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
North Bethesda Middle School
Bethesda MD 20817

Log Number	Device Number	Test Exposure Duration:		Area Tested	Result pCi/L
2405569	3922690	12/04/2018 8:26 am	12/07/2018 7:38 am	North Bethesda Middle School Flr 2 Rm D217	< 0.4
2405570	3922999	12/04/2018 6:33 am	12/07/2018 7:40 am	North Bethesda Middle School Flr NA Rm NA	< 0.4
2405571	3923000	12/04/2018 6:33 am	12/07/2018 7:40 am	North Bethesda Middle School Flr NA Rm NA	< 0.4
2405572	3923169	12/04/2018 6:00 am	12/07/2018 7:40 am	North Bethesda Middle School Flr NA Rm NA	< 0.4
2405573	3923170	12/04/2018 6:00 am	12/07/2018 7:40 am	North Bethesda Middle School Flr NA Rm NA	< 0.4

Comment: AMENDED REPORT 2/4/2019 Updated report to include additional test results. A copy of this report was emailed to Intertek-PSI (VA).

Distributed by: Intertek-PSI (VA)

Date Received: 12/09/2018 Date Logged: 12/09/2019 Date Analyzed: 12/11/2018 Date Reported: 12/21/2018

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.

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
North Bethesda Middle School
Maryland 20817 USA


Log Number	Device Number	Test	Exposure	Duration:	Area Tested	Result pCi/L
2405389	3888436	12/04/2018	7:29 am	12/07/2018 6:55 am	Bldg North Bethesda Middle School Flr 1 Rm 126	0.4
2405390	3888455	12/04/2018	7:29 am	12/07/2018 6:55 am	Bldg North Bethesda Middle School Flr 1 Rm 127	< 0.4
2405391	3888450	12/04/2018	8:11 am	12/07/2018 7:23 am	Bldg North Bethesda Middle School Flr 2 Rm Caf	0.5
2405392	3888452	12/04/2018	8:11 am	12/07/2018 7:23 am	Bldg North Bethesda Middle School Flr 2 Rm Caf	< 0.4

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: 12/21/2018

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

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

	Date	Initials
Radon Test Kits Deployed	12/04/2018	ML
Radon Test Kits Sampled	12/07/2018	ML
Radon Test Kits Shipped to Lab*	12/07/2018	ML
Radon Test Kits Received by Lab*	12/08/2018; 12/09/2018	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: North Bethesda Middle School

Date of Test Report:	2/18/2016
Round of Testing:	Initial Follow-up Post Remediation
# Rooms Tested:	68
# Rooms \geq 4.0 pCi/L:	0
Low Value:	< 0.3
High Value:	1.4

Project Status:

Initial testing completed; no further action at this time.



February 18, 2016

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

Re: **Radon Testing Services**
KCI Job # 12146341.25

Location: North Bethesda Middle School
8935 Bradmoor Drive
Bethesda, MD 20817

Dear Mr. Cox:

KCI Technologies, Inc. (KCI) is pleased to submit the following report to the Montgomery County Public Schools (MCPS) pursuant to completing a “short-term” 3 day radon test for the North Bethesda Middle School, located at 8935 Bradmoor Drive in Bethesda, Maryland 20817 (subject site).

Scope of Services:

KCI conducted radon testing at the subject site to evaluate indoor radon levels relative to the USEPA's recommended action level of 4.0 picocuries per Liter (pCi/L) - the level at which EPA recommends that schools take action to reduce the level. KCI conducted the radon testing in accordance with American Association of Radon Scientists and Technologists (AARST) *Protocol for Conducting Measurements of Radon and Radon Decay Products in Schools and Large Buildings*. A National Radon Safety Board (NRSB) Radon Measurement Specialist (certification #14SS056) supervised the testing. Additional information on radon management and the health effects of radon exposure is available from www.montgomerycountymd.gov/dep/air/radon or www.epa.gov/radon.

KCI visited the site on January 19, 2016 and deployed eighty (80) 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

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

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

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

Sincerely,



James M. 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		
North Bethesda Middle School		
Test Period: 01/19/16-01/22/16		
Kit Number	Room / Area	Result
7717301	100	< 0.3
7717342	101	< 0.3
7717338	102	< 0.3
7717379	103	< 0.3
7717374	104	< 0.3
7717377	105	1.1
7717350	114	< 0.3
7717349	115	< 0.3
7717351	119	0.6
7717354	120	< 0.3
7717309	121	< 0.3
7717355	124	< 0.3
7717356	125	< 0.3
7717357	126	< 0.3
7717358	127	< 0.3
7717359	129	0.7
7717313	221	< 0.3
7717317	222	< 0.3
7717319	224	1.4
7717320	225	0.6
7717335	100A	< 0.3
7717336	100B	< 0.3
7717339	100C	0.5
7717337	100E	< 0.3
7717304	100F	< 0.3
7717344	101B	0.6
7717345	101C	< 0.3
7717347	101D	< 0.3
7717346	101E	< 0.3
7717348	101F	0.7
7717341	102A	0.7
7717340	102B	0.8
7717378	103A	< 0.3
7717376	104A	< 0.3
7717375	104B	< 0.3
7717353	119A	< 0.3
7717360	128A	< 0.3
7717361	130A	< 0.3
7717312	201A	< 0.3
7717316	222A	< 0.3
7717318	224A	0.6
7717322	A100	< 0.3
7717325	A101	< 0.3
7717324	A102	< 0.3
7717326	A104	< 0.3
7717329	A106	< 0.3

Table Note:

* Missing or Compromised Sample

Radon Testing Results		
North Bethesda Middle School		
Test Period: 01/19/16-01/22/16		
Kit Number	Room / Area	Result
7717330	A107	< 0.3
7717331	A113	< 0.3
7717373	B101	< 0.3
7717372	B102	0.6
7717371	B103	< 0.3
7717305	B104	< 0.3
7717370	B105	< 0.3
7717306	B106	< 0.3
7717369	B107	< 0.3
7717367	B108	< 0.3
7717321	B200	< 0.3
7717362	C103	< 0.3
7717307	C104	< 0.3
7717363	C105	< 0.3
7717364	C106	< 0.3
7717308	C107	< 0.3
7717365	C108	< 0.3
7717366	C109	< 0.3
7717310	MC	< 0.3
7717311	MC	< 0.3
7717334	ML1062	< 0.3
7717333	ML1063	< 0.3
7717332	ML976	< 0.3

Table Note:

* Missing or Compromised Sample

Radon Testing Results		
North Bethesda Middle School		
Test Period: 01/19/16-01/22/16		
Kit Number	QC Type	Result
7717302	D (100)	< 0.3
7717343	D (101)	< 0.3
7717352	D (119)	< 0.3
7717314	* D (221:tampered)	< 0.3
7717323	D (A100)	< 0.3
7717327	D (A104)	< 0.3
7717368	D (B108)	< 0.3
7717303	FB (100)	< 0.3
7717315	FB (221)	< 0.3
7717328	FB (A104)	< 0.3
7719453	OB (0)	< 0.3

Table Note:

* Missing or Compromised Sample

ATTACHMENT C

Laboratory Analytical Results

Radon test result report for:
**NORTH BETHESDA MIDDLE SCHOOL
 MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7719453	0	2016-01-19 @ 4:00 pm	2016-01-22 @ 10:00 am	< 0.3	2016-01-27
7717301	100	2016-01-19 @ 12:00 pm	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7717302	100	2016-01-19 @ 12:00 pm	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7717303	100	2016-01-19 @ 12:00 pm	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7717335	100A	2016-01-19 @ 1:00 pm	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7717336	100B	2016-01-19 @ 1:00 pm	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7717339	100C	2016-01-19 @ 1:00 pm	2016-01-22 @ 7:00 am	0.5 ± 0.3	2016-01-26
7717337	100E	2016-01-19 @ 1:00 pm	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7717304	100F	2016-01-19 @ 12:00 pm	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7717342	101	2016-01-19 @ 1:00 pm	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7717343	101	2016-01-19 @ 1:00 pm	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7717344	101B	2016-01-19 @ 1:00 pm	2016-01-22 @ 7:00 am	0.6 ± 0.3	2016-01-26
7717345	101C	2016-01-19 @ 1:00 pm	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7717347	101D	2016-01-19 @ 1:00 pm	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7717346	101E	2016-01-19 @ 1:00 pm	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7717348	101F	2016-01-19 @ 1:00 pm	2016-01-22 @ 7:00 am	0.7 ± 0.3	2016-01-26
7717338	102	2016-01-19 @ 1:00 pm	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7717341	102A	2016-01-19 @ 1:00 pm	2016-01-22 @ 7:00 am	0.7 ± 0.3	2016-01-26
7717340	102B	2016-01-19 @ 1:00 pm	2016-01-22 @ 7:00 am	0.8 ± 0.3	2016-01-26
7717379	103	2016-01-19 @ 2:00 pm	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7717378	103A	2016-01-19 @ 2:00 pm	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7717374	104	2016-01-19 @ 2:00 pm	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7717376	104A	2016-01-19 @ 2:00 pm	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7717375	104B	2016-01-19 @ 2:00 pm	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7717377	105	2016-01-19 @ 2:00 pm	2016-01-22 @ 8:00 am	1.1 ± 0.3	2016-01-26
7717350	114	2016-01-19 @ 1:00 pm	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7717349	115	2016-01-19 @ 1:00 pm	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7717351	119	2016-01-19 @ 1:00 pm	2016-01-22 @ 8:00 am	0.6 ± 0.3	2016-01-26
7717352	119	2016-01-19 @ 1:00 pm	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7717353	119A	2016-01-19 @ 1:00 pm	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7717354	120	2016-01-19 @ 1:00 pm	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7717309	121	2016-01-19 @ 1:00 pm	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7717355	124	2016-01-19 @ 2:00 pm	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7717356	125	2016-01-19 @ 2:00 pm	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7717357	126	2016-01-19 @ 2:00 pm	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7717358	127	2016-01-19 @ 2:00 pm	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7717360	128A	2016-01-19 @ 2:00 pm	2016-01-22 @ 8:00 am	< 0.3	2016-01-26

February 11, 2016
LABORATORY ANALYSIS REPORT

Radon test result report for:
**NORTH BETHESDA MIDDLE SCHOOL
MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7717359	129	2016-01-19 @ 2:00 pm	2016-01-22 @ 8:00 am	0.7 ± 0.3	2016-01-26
7717361	130A	2016-01-19 @ 2:00 pm	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7717312	201A	2016-01-19 @ 1:00 pm	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7717313	221	2016-01-19 @ 1:00 pm	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7717314	221	2016-01-19 @ 1:00 pm	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7717315	221	2016-01-19 @ 1:00 pm	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7717317	222	2016-01-19 @ 1:00 pm	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7717316	222A	2016-01-19 @ 1:00 pm	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7717319	224	2016-01-19 @ 1:00 pm	2016-01-22 @ 7:00 am	1.4 ± 0.3	2016-01-26
7717318	224A	2016-01-19 @ 1:00 pm	2016-01-22 @ 7:00 am	0.6 ± 0.3	2016-01-26
7717320	225	2016-01-19 @ 1:00 pm	2016-01-22 @ 7:00 am	0.6 ± 0.3	2016-01-26
7717322	A100	2016-01-19 @ 1:00 pm	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7717323	A100	2016-01-19 @ 1:00 pm	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7717325	A101	2016-01-19 @ 1:00 pm	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7717324	A102	2016-01-19 @ 1:00 pm	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7717328	A104	2016-01-19 @ 1:00 pm	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7717326	A104	2016-01-19 @ 1:00 pm	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7717327	A104	2016-01-19 @ 1:00 pm	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7717329	A106	2016-01-19 @ 1:00 pm	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7717330	A107	2016-01-19 @ 1:00 pm	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7717331	A113	2016-01-19 @ 1:00 pm	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7717373	B101	2016-01-19 @ 2:00 pm	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7717372	B102	2016-01-19 @ 2:00 pm	2016-01-22 @ 8:00 am	0.6 ± 0.3	2016-01-26
7717371	B103	2016-01-19 @ 2:00 pm	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7717305	B104	2016-01-19 @ 1:00 pm	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7717370	B105	2016-01-19 @ 2:00 pm	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7717306	B106	2016-01-19 @ 1:00 pm	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7717369	B107	2016-01-19 @ 2:00 pm	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7717367	B108	2016-01-19 @ 2:00 pm	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7717368	B108	2016-01-19 @ 2:00 pm	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7717321	B200	2016-01-19 @ 1:00 pm	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7717362	C103	2016-01-19 @ 2:00 pm	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7717307	C104	2016-01-19 @ 1:00 pm	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7717363	C105	2016-01-19 @ 2:00 pm	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7717364	C106	2016-01-19 @ 2:00 pm	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7717308	C107	2016-01-19 @ 1:00 pm	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7717365	C108	2016-01-19 @ 2:00 pm	2016-01-22 @ 8:00 am	< 0.3	2016-01-26

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

Radon test result report for:
**NORTH BETHESDA MIDDLE SCHOOL
MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7717366	C109	2016-01-19 @ 2:00 pm	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7717310	MC	2016-01-19 @ 1:00 pm	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7717311	MC	2016-01-19 @ 1:00 pm	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 11, 2016 **** LABORATORY ANALYSIS REPORT ****

Radon test result report for:
NORTH BETHESDA MIDDLE SCHOOL
PORTABLE

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7717334	ML1062	2016-01-19 @ 1:00 pm	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7717333	ML1063	2016-01-19 @ 1:00 pm	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7717332	ML976	2016-01-19 @ 1:00 pm	2016-01-22 @ 8:00 am	< 0.3	2016-01-26

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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

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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 μ R/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

August 26, 2010

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

Re: Radon Evaluation- North Bethesda Middle

Dear Mr. Yarup:

Environmental radon testing was completed at North Bethesda Middle School.

Charcoal canisters were placed in thirty-two locations on the first floor of the school. The canisters were placed on August 11, 2010 and retrieved on August 13, 2010. The results, expressed as pico Curies per liter (pCi/l) of air, and the sampling locations are summarized in the attached table.

The detected radon concentrations were below the EPA recommended level of 4.0 pico curries per liter of air.

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

Sincerely,

Kim Fowler
Industrial Hygienist

Michael A. Cecil, CIH

Environmental Radon Testing Results
North Bethesda Middle School
August 13, 2010

Location	Detected Radon Concentration (pCi/l)
Room 101	0.6
Room 119 – Health	1.0
Room 120	<0.5
Room 121	<0.5
Room 128 – Boys locker room	<0.5
Room 130 – Girls locker room	1.0
Aux Gym	0.5
Room C103	0.6
Room C105	<0.5
Room C104	0.8
Room C106	<0.5
Room C107	<0.5
Room C108	<0.5
Room C109	0.9
Room B106	<0.5
Room B107	0.8
Room B104	0.5
Room B105	<0.5
Room B103	0.5
Room B102	<0.5
Room B101	0.8
Room 104 – Woodshop	<0.5
Room 104	<0.5
Room 103	<0.5
Room A102	0.8
Room A101	1.1
Room A104	<0.5
Room A106	<0.5
Room A107	<0.5
Room A113	<0.5
Main office	<0.5
Principal's office	<0.5