



MCPS RADON TESTING – EXECUTIVE SUMMARY

Site Name	JoAnn Leleck Elementary School @ Broad Acres
Date of Test Report	2/17/2023
Round of Testing	Initial Follow-up Post Remediation 2 Year Testing 5 Year Testing HVAC Upgrade Window Replacement New Addition New Facility
# Rooms Tested	93
# Rooms \geq 4.0 pCi/L	0
Lowest Value	<0.3 pCi/L
Highest Value	1.7 pCi/L

Project Status:

1. 5-Year retesting completed.



February 17, 2023

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

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

Location: JoAnn Leleck Elementary School
710 Beacon Road
Silver Spring, MD 20903

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 JoAnn Leleck Elementary School at Broad Acres, located at 710 Beacon Rd. Silver Spring, MD 20903 (subject site).

Scope of Services:

KCI conducted radon testing at the subject site to evaluate indoor radon levels relative to the USEPA's recommended action level of 4.0 picocuries per Liter (pCi/L) - the level at which EPA recommends that schools take action to reduce the level. KCI conducted the radon testing in accordance with American Association of Radon Scientists and Technologists (AARST) *Protocol for Conducting Measurements of Radon and Radon Decay Products in Schools and Large Buildings*. A National Radon Proficiency Program (NRPP) Radon Measurement Specialist (certification #111004 RT) supervised the testing. Additional information on radon management and the health effects of radon exposure is available from <https://www.montgomeryschoolsmd.org> or www.epa.gov/radon.

KCI visited the site on January 23, 2023 and deployed one hundred eight (108) activated charcoal (AC) radon test kits. KCI deployed radon test kits in all frequently-occupied ground contact rooms, and other areas, (if applicable) in accordance with AARST guidance.

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

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

KCI returned to the site on January 26, 2023 to retrieve the radon sampling test kits. KCI shipped all radon tests via overnight delivery to Accustar Labs - MA. for analysis by gamma-ray spectroscopy.

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

Evaluation of Testing Conditions:

These tests represent:

- Follow up to initial testing.

These tests were conducted to:

- Evaluate radon concentration levels at the facility.

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

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

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

KCI also compiled weather data for the testing period and conducted observations of relevant field conditions. During the test period, weather records indicate temperatures ranged from the 31°F to 52°F. Maximum sustained winds ranged from 5-25 miles per hour. Average humidity was around 60% with .32 inches of precipitation (rain) was recorded during testing period.

Results:

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

The results of the radon test analysis indicated the following:

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

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

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

Sincerely,



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

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

ATTACHMENT A

Floor Plan With Test Locations

ATTACHMENT B

Radon Test Summary Spreadsheet

Table Notes:

AC- Activated Charcoal

ACI- Air Check, Inc.

D- Duplicate

FB- Field Blank

KCI- KCI Technologies, Inc.

OB- Office Blank

PM- Project Manager

OC- Quality Control

Table 1- Radon Testing Results		
JoAnn Leleck ES @ Broad Acres		
Test Period: 01/23/2023 - 01/26/2023		
Kit Number	Room / Area	Result
11634705	100	0.6
11634714	101	0.8
11634722	102	1.0
11634704	104	< 0.3
11634721	106	< 0.3
11634762	107	0.6
11634748	109	< 0.3
11286875	110	< 0.3
11634743	111	< 0.3
11634744	111	0.8
11634730	113	0.8
11634733	113	0.6
11634741	114	0.8
11634726	115	0.9
11634753	116	0.8
11634800	203	< 0.3
11634796	205	< 0.3
11634789	207	< 0.3
11634790	207	< 0.3
11634799	208	< 0.3
11634798	210	< 0.3
11634782	212	0.9
11634754	300	1.5
11634771	301	0.9
11634734	302	0.8
11634755	302	0.9
11634756	303	< 0.3
11634742	304	< 0.3
11634761	305	< 0.3
11634770	306	0.5
11285481	307	< 0.3
11634701	308	< 0.3
11634779	308	< 0.3
11634781	308	< 0.3
11634769	309	0.5
11634792	310	0.6
11634772	311	0.5
11634764	312	1.5
11634749	314	< 0.3
11634750	316	< 0.3
11634760	316	< 0.3
11634751	318	< 0.3

Table 1- Radon Testing Results		
JoAnn Leleck ES @ Broad Acres		
Test Period: 01/23/2023 - 01/26/2023		
Kit Number	Room / Area	Result
11634752	318	< 0.3
11634758	320	< 0.3
11634765	321	1.0
11634768	322	< 0.3
11634757	323	< 0.3
11634763	324	< 0.3
11634777	324	< 0.3
11634786	325	0.8
11634778	326	< 0.3
11634766	327	0.5
11634783	328	< 0.3
11634773	329	< 0.3
11634784	330	< 0.3
11634775	331	0.6
11634776	333	< 0.3
11634785	335	0.8
11634797	400	0.7
11634729	401	0.6
11634715	404	< 0.3
11634716	404	< 0.3
11634724	406	< 0.3
11634709	408	0.7
11634738	410	0.6
11634723	411	1.3
11634736	412	< 0.3
11285480	413	< 0.3
11634737	414	< 0.3
11634745	415	1.1
11634735	416	1.2
11634702	417	0.6
11634725	418	0.7
11634711	100F	0.5
11285487	100G	< 0.3
11634712	100H	0.9
11634713	100I	0.9
11285184	112B	< 0.3
11634767	320A	0.6
11634774	APR	< 0.3
11634788	APR	< 0.3
11140266	BUILDING SERVICES	< 0.3
11140280	BUILDING SERVICES	< 0.3
11634794	BUILDING SERVICES	1.7

Table 1- Radon Testing Results		
JoAnn Leleck ES @ Broad Acres		
Test Period: 01/23/2023 - 01/26/2023		
Kit Number	Room / Area	Result
11634780	GYM	0.5
11634791	GYM	< 0.3
11634759	GYM OFFICE	< 0.3
11634717	HEALTH	< 0.3
11634720	HEALTH CENTER	< 0.3
11634719	HEALTH OFFICE 1	< 0.3
11634718	HEALTH OFFICE 2	< 0.3
11634728	HEALTH OFFICE 3	< 0.3
11634707	HEALTH OFFICE 4	< 0.3
11634708	HEALTH OFFICE 4	< 0.3
11634787	KITCHEN OFFICE	1.0
11634739	L101	< 0.3
11634706	L103	< 0.3
11634746	L103	< 0.3
11634703	L104	< 0.3
11634710	L105	< 0.3
11634727	L106	< 0.3
11634747	L107	< 0.3
11634740	L108	< 0.3
11634731	L109	< 0.3
11634732	L109	< 0.3
11285456	L110	< 0.3
11634793	MC	1.1
11634795	MC	1.1

Table 2- Radon Testing Results			
JoAnn Leleck ES @ Broad Acres			
Test Period: 01/23/23 - 01/26/23			
Kit Number	QC Type	Room / Area	Result
11634743	FB	111	< 0.3
11634730	D	113	0.8
11634790	D	207	< 0.3
11634755	D	302	0.9
11634779	D	308	< 0.3
11634781	FB	308	< 0.3
11634750	D	316	< 0.3
11634751	FB	318	< 0.3
11634777	D	324	< 0.3
11634716	D	404	< 0.3
11140266	D	Building services	< 0.3
11140280	FB	Building services	< 0.3
11634707	D	Health office 4	< 0.3
11634706	FB	L103	< 0.3
11634731	D	L109	< 0.3
11633990	OB	OFFICE BLANK	< 0.3
11633992	TB	TRAVEL BLANK	< 0.3

ATTACHMENT C

Laboratory Analytical Results

Radon test result report for:
JOANNE LELECK ES
MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11634705	100	2023-01-23 @ 9:00 am	2023-01-26 @ 3:00 pm	0.6 ± 0.3	2023-01-30
11634711	100F	2023-01-23 @ 9:00 am	2023-01-26 @ 3:00 pm	0.5 ± 0.3	2023-01-30
11285487	100G	2023-01-23 @ 12:00 pm	2023-01-26 @ 3:00 pm	< 0.3	2023-01-30
11634712	100H	2023-01-23 @ 10:00 am	2023-01-26 @ 3:00 pm	0.9 ± 0.3	2023-01-30
11634713	100I	2023-01-23 @ 10:00 am	2023-01-26 @ 3:00 pm	0.9 ± 0.3	2023-01-30
11634714	101	2023-01-23 @ 10:00 am	2023-01-26 @ 3:00 pm	0.8 ± 0.3	2023-01-30
11634722	102	2023-01-23 @ 10:00 am	2023-01-26 @ 3:00 pm	1.0 ± 0.3	2023-01-30
11634704	104	2023-01-23 @ 10:00 am	2023-01-26 @ 3:00 pm	< 0.3	2023-01-30
11634721	106	2023-01-23 @ 10:00 am	2023-01-26 @ 3:00 pm	< 0.3	2023-01-30
11634762	107	2023-01-23 @ 11:00 am	2023-01-26 @ 3:00 pm	0.6 ± 0.3	2023-01-30
11634748	109	2023-01-23 @ 11:00 am	2023-01-26 @ 3:00 pm	< 0.3	2023-01-30
11286875	110	2023-01-23 @ 12:00 pm	2023-01-26 @ 3:00 pm	< 0.3	2023-01-30
11634744	111	2023-01-23 @ 11:00 am	2023-01-26 @ 3:00 pm	0.8 ± 0.3	2023-01-30
11634743	111	2023-01-23 @ 11:00 am	2023-01-26 @ 3:00 pm	< 0.3	2023-01-30
11285184	112B	2023-01-23 @ 12:00 pm	2023-01-26 @ 3:00 pm	< 0.3	2023-01-30
11634730	113	2023-01-23 @ 11:00 am	2023-01-26 @ 3:00 pm	0.8 ± 0.3	2023-01-30
11634733	113	2023-01-23 @ 11:00 am	2023-01-26 @ 3:00 pm	0.6 ± 0.3	2023-01-30
11634741	114	2023-01-23 @ 11:00 am	2023-01-26 @ 3:00 pm	0.8 ± 0.3	2023-01-30
11634726	115	2023-01-23 @ 10:00 am	2023-01-26 @ 3:00 pm	0.9 ± 0.3	2023-01-30
11634753	116	2023-01-23 @ 11:00 am	2023-01-26 @ 3:00 pm	0.8 ± 0.3	2023-01-30
11634800	203	2023-01-23 @ 12:00 pm	2023-01-26 @ 3:00 pm	< 0.3	2023-01-30
11634796	205	2023-01-23 @ 12:00 pm	2023-01-26 @ 3:00 pm	< 0.3	2023-01-30
11634790	207	2023-01-23 @ 12:00 pm	2023-01-26 @ 3:00 pm	< 0.3	2023-01-30
11634789	207	2023-01-23 @ 12:00 pm	2023-01-26 @ 3:00 pm	< 0.3	2023-01-30
11634799	208	2023-01-23 @ 12:00 pm	2023-01-26 @ 3:00 pm	< 0.3	2023-01-30
11634798	210	2023-01-23 @ 12:00 pm	2023-01-26 @ 3:00 pm	< 0.3	2023-01-30
11634782	212	2023-01-23 @ 12:00 pm	2023-01-26 @ 3:00 pm	0.9 ± 0.3	2023-01-30
11634754	300	2023-01-23 @ 11:00 am	2023-01-26 @ 3:00 pm	1.5 ± 0.4	2023-01-30
11634771	301	2023-01-23 @ 11:00 am	2023-01-26 @ 3:00 pm	0.9 ± 0.3	2023-01-30
11634734	302	2023-01-23 @ 11:00 am	2023-01-26 @ 3:00 pm	0.8 ± 0.3	2023-01-30
11634755	302	2023-01-23 @ 11:00 am	2023-01-26 @ 3:00 pm	0.9 ± 0.3	2023-01-30
11634756	303	2023-01-23 @ 11:00 am	2023-01-26 @ 3:00 pm	< 0.3	2023-01-30
11634742	304	2023-01-23 @ 11:00 am	2023-01-26 @ 3:00 pm	< 0.3	2023-01-30
11634761	305	2023-01-23 @ 11:00 am	2023-01-26 @ 3:00 pm	< 0.3	2023-01-30
11634770	306	2023-01-23 @ 11:00 am	2023-01-26 @ 3:00 pm	0.5 ± 0.3	2023-01-30
11285481	307	2023-01-23 @ 12:00 pm	2023-01-26 @ 3:00 pm	< 0.3	2023-01-30
11634701	308	2023-01-23 @ 12:00 pm	2023-01-26 @ 3:00 pm	< 0.3	2023-01-30

Radon test result report for:
JOANNE LELECK ES
MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11634779	308	2023-01-23 @ 12:00 pm	2023-01-26 @ 3:00 pm	< 0.3	2023-01-30
11634781	308	2023-01-23 @ 12:00 pm	2023-01-26 @ 3:00 pm	< 0.3	2023-01-30
11634769	309	2023-01-23 @ 11:00 am	2023-01-26 @ 3:00 pm	0.5 ± 0.3	2023-01-30
11634792	310	2023-01-23 @ 12:00 pm	2023-01-26 @ 3:00 pm	0.6 ± 0.3	2023-01-30
11634772	311	2023-01-23 @ 11:00 am	2023-01-26 @ 3:00 pm	0.5 ± 0.3	2023-01-30
11634764	312	2023-01-23 @ 11:00 am	2023-01-26 @ 3:00 pm	1.5 ± 0.4	2023-01-30
11634749	314	2023-01-23 @ 11:00 am	2023-01-26 @ 3:00 pm	< 0.3	2023-01-30
11634750	316	2023-01-23 @ 11:00 am	2023-01-26 @ 3:00 pm	< 0.3	2023-01-30
11634760	316	2023-01-23 @ 11:00 am	2023-01-26 @ 3:00 pm	< 0.3	2023-01-30
11634752	318	2023-01-23 @ 11:00 am	2023-01-26 @ 3:00 pm	< 0.3	2023-01-30
11634751	318	2023-01-23 @ 11:00 am	2023-01-26 @ 3:00 pm	< 0.3	2023-01-30
11634758	320	2023-01-23 @ 11:00 am	2023-01-26 @ 3:00 pm	< 0.3	2023-01-30
11634767	320A	2023-01-23 @ 11:00 am	2023-01-26 @ 3:00 pm	0.6 ± 0.3	2023-01-30
11634765	321	2023-01-23 @ 11:00 am	2023-01-26 @ 3:00 pm	1.0 ± 0.3	2023-01-30
11634768	322	2023-01-23 @ 11:00 am	2023-01-26 @ 3:00 pm	< 0.3	2023-01-30
11634757	323	2023-01-23 @ 11:00 am	2023-01-26 @ 3:00 pm	< 0.3	2023-01-30
11634777	324	2023-01-23 @ 11:00 am	2023-01-26 @ 3:00 pm	< 0.3	2023-01-30
11634763	324	2023-01-23 @ 11:00 am	2023-01-26 @ 3:00 pm	< 0.3	2023-01-30
11634786	325	2023-01-23 @ 12:00 pm	2023-01-26 @ 3:00 pm	0.8 ± 0.3	2023-01-30
11634778	326	2023-01-23 @ 11:00 am	2023-01-26 @ 3:00 pm	< 0.3	2023-01-30
11634766	327	2023-01-23 @ 11:00 am	2023-01-26 @ 3:00 pm	0.5 ± 0.3	2023-01-30
11634783	328	2023-01-23 @ 11:00 am	2023-01-26 @ 3:00 pm	< 0.3	2023-01-30
11634773	329	2023-01-23 @ 12:00 pm	2023-01-26 @ 3:00 pm	< 0.3	2023-01-30
11634784	330	2023-01-23 @ 11:00 am	2023-01-26 @ 3:00 pm	< 0.3	2023-01-30
11634775	331	2023-01-23 @ 11:00 am	2023-01-26 @ 3:00 pm	0.6 ± 0.3	2023-01-30
11634776	333	2023-01-23 @ 11:00 am	2023-01-26 @ 3:00 pm	< 0.3	2023-01-30
11634785	335	2023-01-23 @ 11:00 am	2023-01-26 @ 3:00 pm	0.8 ± 0.3	2023-01-30
11634797	400	2023-01-23 @ 12:00 pm	2023-01-26 @ 3:00 pm	0.7 ± 0.3	2023-01-30
11634729	401	2023-01-23 @ 10:00 am	2023-01-26 @ 3:00 pm	0.6 ± 0.3	2023-01-30
11634716	404	2023-01-23 @ 10:00 am	2023-01-26 @ 3:00 pm	< 0.3	2023-01-30
11634715	404	2023-01-23 @ 10:00 am	2023-01-26 @ 3:00 pm	< 0.3	2023-01-30
11634724	406	2023-01-23 @ 10:00 am	2023-01-26 @ 3:00 pm	< 0.3	2023-01-30
11634709	408	2023-01-23 @ 10:00 am	2023-01-26 @ 3:00 pm	0.7 ± 0.3	2023-01-30
11634738	410	2023-01-23 @ 10:00 am	2023-01-26 @ 3:00 pm	0.6 ± 0.3	2023-01-30
11634723	411	2023-01-23 @ 10:00 am	2023-01-26 @ 3:00 pm	1.3 ± 0.3	2023-01-30
11634736	412	2023-01-23 @ 10:00 am	2023-01-26 @ 3:00 pm	< 0.3	2023-01-30
11285480	413	2023-01-23 @ 12:00 pm	2023-01-26 @ 3:00 pm	< 0.3	2023-01-30

Radon test result report for:
JOANNE LELECK ES
MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11634737	414	2023-01-23 @ 10:00 am	2023-01-26 @ 3:00 pm	< 0.3	2023-01-30
11634745	415	2023-01-23 @ 10:00 am	2023-01-26 @ 3:00 pm	1.1 ± 0.3	2023-01-30
11634735	416	2023-01-23 @ 10:00 am	2023-01-26 @ 3:00 pm	1.2 ± 0.3	2023-01-30
11634702	417	2023-01-23 @ 10:00 am	2023-01-26 @ 3:00 pm	0.6 ± 0.3	2023-01-30
11634725	418	2023-01-23 @ 10:00 am	2023-01-26 @ 3:00 pm	0.7 ± 0.3	2023-01-30
11634774	APR	2023-01-23 @ 12:00 pm	2023-01-26 @ 3:00 pm	< 0.3	2023-01-30
11634788	APR	2023-01-23 @ 12:00 pm	2023-01-26 @ 3:00 pm	< 0.3	2023-01-30
11634794	BUILDING SERVICES	2023-01-23 @ 12:00 pm	2023-01-26 @ 3:00 pm	1.7 ± 0.4	2023-01-30
11140280	BUILDING SERVICES	2023-01-23 @ 12:00 pm	2023-01-26 @ 3:00 pm	< 0.3	2023-01-30
11140266	BUILDING SERVICES	2023-01-23 @ 12:00 pm	2023-01-26 @ 3:00 pm	< 0.3	2023-01-30
11634780	GYM	2023-01-23 @ 12:00 pm	2023-01-26 @ 3:00 pm	0.5 ± 0.3	2023-01-30
11634791	GYM	2023-01-23 @ 12:00 pm	2023-01-26 @ 3:00 pm	< 0.3	2023-01-30
11634759	GYM OFFICE	2023-01-23 @ 12:00 pm	2023-01-26 @ 3:00 pm	< 0.3	2023-01-30
11634717	HEALTH	2023-01-23 @ 10:00 am	2023-01-26 @ 3:00 pm	< 0.3	2023-01-30
11634720	HEALTH CENTER	2023-01-23 @ 10:00 am	2023-01-26 @ 3:00 pm	< 0.3	2023-01-30
11634719	HEALTH OFFICE 1	2023-01-23 @ 10:00 am	2023-01-26 @ 3:00 pm	< 0.3	2023-01-30
11634718	HEALTH OFFICE 2	2023-01-23 @ 10:00 am	2023-01-26 @ 3:00 pm	< 0.3	2023-01-30
11634728	HEALTH OFFICE 3	2023-01-23 @ 10:00 am	2023-01-26 @ 3:00 pm	< 0.3	2023-01-30
11634708	HEALTH OFFICE 4	2023-01-23 @ 10:00 am	2023-01-26 @ 3:00 pm	< 0.3	2023-01-30
11634707	HEALTH OFFICE 4	2023-01-23 @ 10:00 am	2023-01-26 @ 3:00 pm	< 0.3	2023-01-30
11634787	KITCHEN OFFICE	2023-01-23 @ 12:00 pm	2023-01-26 @ 3:00 pm	1.0 ± 0.3	2023-01-30
11634739	L101	2023-01-23 @ 10:00 am	2023-01-26 @ 3:00 pm	< 0.3	2023-01-30
11634746	L103	2023-01-23 @ 10:00 am	2023-01-26 @ 3:00 pm	< 0.3	2023-01-30
11634706	L103	2023-01-23 @ 10:00 am	2023-01-26 @ 3:00 pm	< 0.3	2023-01-30
11634703	L104	2023-01-23 @ 10:00 am	2023-01-26 @ 3:00 pm	< 0.3	2023-01-30
11634710	L105	2023-01-23 @ 10:00 am	2023-01-26 @ 3:00 pm	< 0.3	2023-01-30
11634727	L106	2023-01-23 @ 10:00 am	2023-01-26 @ 3:00 pm	< 0.3	2023-01-30
11634747	L107	2023-01-23 @ 10:00 am	2023-01-26 @ 3:00 pm	< 0.3	2023-01-30
11634740	L108	2023-01-23 @ 10:00 am	2023-01-26 @ 3:00 pm	< 0.3	2023-01-30
11634732	L109	2023-01-23 @ 10:00 am	2023-01-26 @ 3:00 pm	< 0.3	2023-01-30
11634731	L109	2023-01-23 @ 10:00 am	2023-01-26 @ 3:00 pm	< 0.3	2023-01-30
11285456	L110	2023-01-23 @ 12:00 pm	2023-01-26 @ 3:00 pm	< 0.3	2023-01-30
11634793	MC	2023-01-23 @ 12:00 pm	2023-01-26 @ 3:00 pm	1.1 ± 0.3	2023-01-30
11634795	MC	2023-01-23 @ 12:00 pm	2023-01-26 @ 3:00 pm	1.1 ± 0.3	2023-01-30

EXPOSURE IN BOWSER-MORNER RADON CHAMBER

CLIENT KC1 TECHNOLOGIES, INC Job Number 208343

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

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

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

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

11285109, 11285110, 11285101

THRU 11285103

BY LEFT

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

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

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

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

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

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

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

December 29, 2022

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

OFFICE

MAIN

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

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



Radon Test Kit Chain of Custody

Project Name: MCPS Radon – Week 2 January Schools

Name of Schools:

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

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

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



MONTGOMERY COUNTY PUBLIC SCHOOLS RADON TESTING

Executive Summary:

JoAnn Leleck Elementary School at Broad Acres

710 Beacon Road,
Silver Spring, MD 20903

Date of Test Report:	3/20/2019
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:	3
# of Rooms \geq 4.0 pCi/L:	0
Low Value:	< 0.4
High Value:	0.6

Project Status

Retesting completed: No further action at this time.



March 20, 2019

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

Re: Radon Testing Services

Location: JoAnn Leleck Elementary School at Broad Acres
710 Beacon Road,
Silver Spring, MD 20903

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 JoAnn Leleck Elementary School at Broad, located at 710 Beacon Road, Silver Spring, MD 20903 (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 three (3) 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 March 1, 2019 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.

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	N/A
≤ 4.0 pCi/L	See Attachment B	

Notes:
D -Duplicate Sample

The office blank and lab transit blanks had test results of less than the laboratory detection limit of 0.4 pCi/L. Review of the duplicate sample analysis indicates that adequate laboratory measurement precision was achieved. The Spike sample analysis results indicate the laboratory is operating within statistical control limits.

The sampling locations, field observations, and analytical results are listed on Table 1 (Attachment B). The laboratory analytical results are also attached (Attachment C).

Laboratory results and exposure data for the spike samples are also included in Attachment C. Our professional services have been performed in accordance with customary principles and practices in the field of industrial hygiene and engineering. If you have any questions or comments regarding this report, please feel free to contact me at (703) 698-9300.



Respectfully Submitted,

INTERTEK-PSI

A handwritten signature in black ink that reads "Nand Kaushik". The signature is written in a cursive 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		
Broad Acres Elementary School		
Testing period: 2/26/19 - 3/1/19		
Kit Number	Room / Area	Result (pCi/L)
3923528	101	0.6
3923530	102	< 0.4
3923526	321	0.6

Table Notes:

D – Duplicate

FB – Field Blank

OB – Office Blank

TB – Transit Blank

QC – Quality Control

ATTACHMENT C

Laboratory Analytical Results

NRPP 105011 AL
NRSB ARL0007

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

Laboratory Report for:

Property Tested: Project # 04481387-1

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

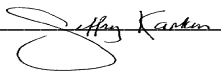
MCPS Radon Survey Broad Acres ES
710 Beacon Road
Silver Spring MD 20903

Log Number	Device Number	Test Date	Exposure Start	Exposure End	Duration	Area Tested	Result pCi/L
3220636	3923528	02/26/2019	7:20 am	03/01/2019	7:00 am	Floor Main Room 321	0.6
3220637	3923530	02/26/2019	7:24 am	03/01/2019	7:01 am	Floor Main Room 102	< 0.4
3220638	3923526	02/26/2019	7:27 am	03/01/2019	7:02 am	Floor Main Room 101	0.6

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

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.



MONTGOMERY COUNTY PUBLIC SCHOOLS RADON TESTING

Executive Summary:

JoAnn Leleck Elementary School at Broad Acres

710 Beacon Road,
Silver Spring, MD 20903

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:	78
# of Rooms \geq 4.0 pCi/L:	0
Low Value:	< 0.4
High Value:	2.2

Project Status

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



February 21, 2019

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

Re: Radon Testing Services

Location: JoAnn Leleck Elementary School at Broad Acres
710 Beacon Road,
Silver Spring, MD 20903

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 JoAnn Leleck Elementary School at Broad, located at 710 Beacon Road, Silver Spring, MD 20903 (subject site).

Scope of Services:

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

PSI visited the site on November 27, 2018 and deployed ninety-six (96) activated charcoal (AC) radon test kits. PSI deployed radon test kits in frequently-occupied ground contact rooms, and other areas, (if applicable) in accordance with AARST guidance. PSI returned to the site on November 30, 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	N/A
≤ 4.0 pCi/L	See Attachment B	

Notes:
D -Duplicate Sample

The office blank and lab transit blanks had test results of less than the laboratory detection limit of 0.4 pCi/L. Review of the duplicate sample analysis indicates that adequate laboratory measurement precision was achieved. The Spike sample analysis results indicate the laboratory is operating within statistical control limits.

The sampling locations, field observations, and analytical results are listed on Table 1 (Attachment B). The laboratory analytical results are also attached (Attachment C).

Laboratory results and exposure data for the spike samples are also included in Attachment C. Our professional services have been performed in accordance with customary principles and practices in the field of industrial hygiene and engineering. If you have any questions or comments regarding this report, please feel free to contact me at (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		
Broad Acres Elementary School		
Testing period: 11/27/18 - 11/30/18		
Kit Number	Room / Area	Result (pCi/L)
3917924	100	0.4
3917925	100E	<0.4
3915640	100G	<0.4
3915637	100H	<0.4
3915634	100I	<0.4
3915635	101	<0.4
3915638	102 (MISSING)	--
3915631	104	<0.4
3915632	106	<0.4
3915553	107	<0.4
3917839	109	2.1
3917911	111	<0.4
3917920	112	0.6
3917916	112	1.9
3917915	112A Office	<0.4
3917914	113	1.1
3917913	114	1.2
3917482	115	0.8
3917912	116	0.4
3917419	203	0.8
3915483	205	<0.4
3917418	207 (207A/B)	<0.4
3915630	208	<0.4
3915546	210	<0.4
3917927	212	<0.4
3917855	300	0.4
3917854	301	1.1
3917851	302	<0.4
3917416	303	<0.4
3917857	304	0.4
3917852	305	<0.4
3917856	306	<0.4
3917858	307	<0.4
3917859	308	<0.4
3917860	309	<0.4
3917481	310	<0.4
3917926	311	<0.4
3917413	312	1.0
3917930	314	0.5
3917808	316	<0.4
3915822	318	<0.4
3917918	320	<0.4
3917919	320A	<0.4

Radon Testing Results		
Broad Acres Elementary School		
Testing period: 11/27/18 - 11/30/18		
Kit Number	Room / Area	Result (pCi/L)
--	321 (MISSED)	--
3917248	322	<0.4
3917483	323	0.9
3917417	324	<0.4
3915547	325	0.5
3917842	326	<0.4
3917411	327	<0.4
3917247	328	<0.4
3917249	329	<0.4
3917246	330	<0.4
3917250	331	0.4
3917244	333	1.1
3915477	335	<0.4
3915962	400	<0.4
3915681	401	<0.4
3915687	404	0.5
3915682	406	<0.4
3915690	408	<0.4
3915684	410	<0.4
3915683	411	1.8
3915685	412	<0.4
3915516	413	<0.4
3915520	414	<0.4
3915519	415	2.1
3915517	416	2.2
3915513	417	1.5
3032015	418	0.5
3917243	Cafeteria	<0.4
3917809	Cafeteria	<0.4
3917971	Exam#1	<0.4
3915515	Exam#2	<0.4
3915482	Gym	<0.4
3915471	Gym	<0.4
3915961	Gym Office (215)	<0.4
3915512	LLHC MAIN	<0.4
3915688	LLHC#1	<0.4
3915686	LLHC#2	<0.4
3917420	LLHC#3	<0.4
3917867	LLHC#4	<0.4
3915636	LLHC#5	<0.4

Radon Testing Results		
Broad Acres Elementary School		
Testing period: 11/27/18 - 11/30/18		
Kit Number	QC Type	Result (pCi/L)
3915639	100E (D)	<0.4
3915633	101 (D) (MISSING)	--
3917493	115 (D)	<0.4
3917917	212 (D)	0.4
3917853	300 (D)	0.5
3915689	406 (D)	0.8
3915518	415 (D)	1.8
3915514	LLHC MAIN (D)	0.8
3917844	Field Blank	0.4
3917446	Field Blank	<0.4
3917841	Field Blank	<0.4
3917492	Field Blank	<0.4
3917484	Office Blank	<0.4
3917846	Transit 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:

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

Property Tested: Project # 04481387-1


MCPS Radon Survey
JoAnn Leleck Elementary School at Broad Acres
710 Beacon Road
Silver Spring MD 20903

Log Number	Device Number	Test Exposure Duration:	Area Tested	Result pCi/L
2400672	3917924	11/27/2018 10:30 am 11/30/2018 8:28 am	Broad Acres ES Floor First Room 100	0.4
2400673	3917925	11/27/2018 10:31 am 11/30/2018 8:29 am	Broad Acres ES Floor First Room 100E	< 0.4
2400674	3915639	11/27/2018 10:31 am 11/30/2018 8:29 am	Broad Acres ES Flr First Rm 100E Duplicate	< 0.4
2400675	3915640	11/27/2018 10:35 am 11/30/2018 8:30 am	Broad Acres ES Floor First Room 100G	< 0.4
2400676	3915637	11/27/2018 10:36 am 11/30/2018 8:31 am	Broad Acres ES Floor First Room 100H	< 0.4
2400677	3915634	11/27/2018 10:38 am 11/30/2018 8:32 am	Broad Acres ES Floor First Room 100I	< 0.4
2400678	3915635	11/27/2018 10:40 am 11/30/2018 8:33 am	Broad Acres ES Floor First Room 101	< 0.4
2400681	3915631	11/27/2018 10:44 am 11/30/2018 8:38 am	Broad Acres ES Floor First Room 104	< 0.4
2400682	3915632	11/27/2018 10:46 am 11/30/2018 8:40 am	Broad Acres ES Floor First Room 106	< 0.4
2400683	3915962	11/27/2018 10:50 am 11/30/2018 8:41 am	Broad Acres ES Floor First Room 400	< 0.4
2400684	3915687	11/27/2018 10:56 am 11/30/2018 8:43 am	Broad Acres ES Floor First Room 404	0.5

Comment: Device numbers 3915633 and 3915638 were not analyzed. A copy of this report was emailed to Intertek-PSI (VA).

Distributed by: Intertek-PSI (VA)

Date Received: 12/03/2018 Date Logged: 12/03/2018 Date Analyzed: 12/05/2018 Date Reported: 01/30/2019

Report Reviewed By: 

Report Approved By: 

Shawn Price, Director of Laboratory Operations, AccuStar Labs

Disclaimer:

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

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

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

Laboratory Report for:

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

Property Tested: Project # 04481387-1


MCPS Radon Survey
JoAnn Leleck Elementary School at Broad Acres
710 Beacon Road
Silver Spring MD 20903

Log Number	Device Number	Test Exposure Duration:				Area Tested	Result pCi/L
2400685	3915682	11/27/2018	10:58 am	11/30/2018	8:45 am	Broad Acres ES Floor First Room 406	< 0.4
2400686	3915689	11/27/2018	10:58 am	11/30/2018	8:45 am	Broad Acres ES Flr First Rm 406 Duplicate	0.8
2400687	3915683	11/27/2018	11:00 am	11/30/2018	8:46 am	Broad Acres ES Floor First Room 411	1.8
2400688	3915685	11/27/2018	11:02 am	11/30/2018	8:48 am	Broad Acres ES Floor First Room 412	< 0.4
2400689	3915684	11/27/2018	11:04 am	11/30/2018	8:49 am	Broad Acres ES Floor First Room 410	< 0.4
2400690	3915690	11/27/2018	11:05 am	11/30/2018	8:49 am	Broad Acres ES Floor First Room 408	< 0.4
2400691	3915688	11/27/2018	10:10 am	11/30/2018	8:50 am	Broad Acres ES Floor First Room LLHC#1	< 0.4
2400692	3915686	11/27/2018	11:15 am	11/30/2018	8:51 am	Broad Acres ES Floor First Room LLHC#2	< 0.4
2400693	3917420	11/27/2018	11:16 am	11/30/2018	8:51 am	Broad Acres ES Floor First Room LLHC#3	< 0.4
2400694	3917867	11/27/2018	11:18 am	11/30/2018	8:52 am	Broad Acres ES Floor First Room LLHC#4	< 0.4
2400695	3915636	11/27/2018	11:20 am	11/30/2018	8:52 am	Broad Acres ES Floor First Room LLHC#5	< 0.4

Comment: Device numbers 3915633 and 3915638 were not analyzed. A copy of this report was emailed to Intertek-PSI (VA).

Distributed by: Intertek-PSI (VA)

Date Received: 12/03/2018 Date Logged: 12/03/2018 Date Analyzed: 12/05/2018 Date Reported: 01/30/2019

Report Reviewed By: 

Report Approved By: 

Shawn Price, Director of Laboratory Operations, AccuStar Labs

Disclaimer:

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

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NELAC NY 11769
NRPP 103216 AL
NRSB ARL0017

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

Laboratory Report for:

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

Property Tested: Project # 04481387-1


MCPS Radon Survey
JoAnn Leleck Elementary School at Broad Acres
710 Beacon Road
Silver Spring MD 20903

Log Number	Device Number	Test Exposure Duration:	Area Tested	Result pCi/L
2400696	3917971	11/27/2018 11:21 am 11/30/2018 8:53 am	Broad Acres ES Floor First Room Exam#1	< 0.4
2400697	3915515	11/27/2018 11:21 am 11/30/2018 8:53 am	Broad Acres ES Floor First Room Exam#2	< 0.4
2400698	3915512	11/27/2018 11:22 am 11/30/2018 8:54 am	Broad Acres ES Floor First Room LLHC MAIN	< 0.4
2400699	3915514	11/27/2018 11:22 am 11/30/2018 8:54 am	Broad Acres ES Flr First Rm LLHC MAIN Duplicat	0.8
2400700	3915516	11/27/2018 11:24 am 11/30/2018 8:55 am	Broad Acres ES Floor First Room 413	< 0.4
2400701	3915520	11/27/2018 11:26 am 11/30/2018 8:56 am	Broad Acres ES Floor First Room 414	< 0.4
2400702	3915519	11/27/2018 11:28 am 11/30/2018 8:57 am	Broad Acres ES Floor First Room 415	2.1
2400703	3915518	11/27/2018 11:28 am 11/30/2018 8:57 am	Broad Acres ES Flr First Rm 415 Duplicate	1.8
2400704	3915517	11/27/2018 11:32 am 11/30/2018 8:58 am	Broad Acres ES Floor First Room 416	2.2
2400705	3915513	11/27/2018 11:34 am 11/30/2018 8:59 am	Broad Acres ES Floor First Room 417	1.5
2400706	3032015	11/27/2018 11:35 am 11/30/2018 9:00 am	Broad Acres ES Floor First Room 418	0.5

Comment: Device numbers 3915633 and 3915638 were not analyzed. A copy of this report was emailed to Intertek-PSI (VA).

Distributed by: Intertek-PSI (VA)

Date Received: 12/03/2018 Date Logged: 12/03/2018 Date Analyzed: 12/05/2018 Date Reported: 01/30/2019

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:

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

Property Tested: Project # 04481387-1


MCPS Radon Survey
JoAnn Leleck Elementary School at Broad Acres
710 Beacon Road
Silver Spring MD 20903

Log Number	Device Number	Test Exposure Duration:	Area Tested	Result pCi/L
2400707	3917482	11/27/2018 11:38 am 11/30/2018 9:01 am	Broad Acres ES Floor First Room 115	0.8
2400708	3917493	11/27/2018 11:38 am 11/30/2018 9:01 am	Broad Acres ES Flr First Rm 115 Duplicate	< 0.4
2400709	3917914	11/27/2018 11:40 am 11/30/2018 9:02 am	Broad Acres ES Floor First Room 113	1.1
2400710	3917911	11/27/2018 11:42 am 11/30/2018 9:02 am	Broad Acres ES Floor First Room 111	< 0.4
2400711	3917839	11/27/2018 11:44 am 11/30/2018 9:03 am	Broad Acres ES Floor First Room 109	2.1
2400712	3915553	11/27/2018 11:46 am 11/30/2018 9:03 am	Broad Acres ES Floor First Room 107	< 0.4
2400713	3917912	11/27/2018 11:47 am 11/30/2018 9:04 am	Broad Acres ES Floor First Room 116	0.4
2400714	3917913	11/27/2018 11:48 am 11/30/2018 9:05 am	Broad Acres ES Floor First Room 114	1.2
2400715	3917916	11/27/2018 11:50 am 11/30/2018 9:05 am	Broad Acres ES Floor First Room 112	1.9
2400716	3917920	11/27/2018 11:52 am 11/30/2018 9:06 am	Broad Acres ES Floor First Room 112	0.6
2400717	3917915	11/27/2018 11:55 am 11/30/2018 9:06 am	Broad Acres ES Floor First Room 112A Off	< 0.4

Comment: Device numbers 3915633 and 3915638 were not analyzed. A copy of this report was emailed to Intertek-PSI (VA).

Distributed by: Intertek-PSI (VA)

Date Received: 12/03/2018 Date Logged: 12/03/2018 Date Analyzed: 12/05/2018 Date Reported: 01/30/2019

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:

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

Property Tested: Project # 04481387-1


MCPS Radon Survey
JoAnn Leleck Elementary School at Broad Acres
710 Beacon Road
Silver Spring MD 20903

Log Number	Device Number	Test Exposure Duration:	Area Tested	Result pCi/L
2400718	3917855	11/27/2018 11:55 am 11/30/2018 9:06 am	Broad Acres ES Floor First Room 300	0.4
2400719	3917853	11/27/2018 11:56 am 11/30/2018 9:07 am	Broad Acres ES Flr First Rm 300 Duplicate	0.5
2400720	3917854	11/27/2018 11:58 am 11/30/2018 9:07 am	Broad Acres ES Floor First Room 301	1.1
2400721	3917851	11/27/2018 12:00 pm 11/30/2018 9:08 am	Broad Acres ES Floor First Room 302	< 0.4
2400722	3917416	11/27/2018 12:02 pm 11/30/2018 9:08 am	Broad Acres ES Floor First Room 303	< 0.4
2400723	3917852	11/27/2018 12:04 pm 11/30/2018 9:08 am	Broad Acres ES Floor First Room 305	< 0.4
2400724	3917857	11/27/2018 12:06 pm 11/30/2018 9:09 am	Broad Acres ES Floor First Room 304	0.4
2400725	3917858	11/27/2018 12:08 pm 11/30/2018 9:10 am	Broad Acres ES Floor First Room 307	< 0.4
2400726	3917856	11/27/2018 12:10 pm 11/30/2018 9:10 am	Broad Acres ES Floor First Room 306	< 0.4
2400727	3917859	11/27/2018 12:14 pm 11/30/2018 9:11 am	Broad Acres ES Floor First Room 308	< 0.4
2400728	3917860	11/27/2018 12:16 pm 11/30/2018 9:11 am	Broad Acres ES Floor First Room 309	< 0.4

Comment: Device numbers 3915633 and 3915638 were not analyzed. A copy of this report was emailed to Intertek-PSI (VA).

Distributed by: Intertek-PSI (VA)

Date Received: 12/03/2018 Date Logged: 12/03/2018 Date Analyzed: 12/05/2018 Date Reported: 01/30/2019

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:

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

Property Tested: Project # 04481387-1


MCPS Radon Survey
JoAnn Leleck Elementary School at Broad Acres
710 Beacon Road
Silver Spring MD 20903

Log Number	Device Number	Test Exposure Duration:	Area Tested	Result pCi/L
2400729	3917481	11/27/2018 12:18 pm 11/30/2018 9:12 am	Broad Acres ES Floor First Room 310	< 0.4
2400730	3917926	11/27/2018 12:20 pm 11/30/2018 9:13 am	Broad Acres ES Floor First Room 311	< 0.4
2400731	3917413	11/27/2018 12:22 pm 11/30/2018 9:14 am	Broad Acres ES Floor First Room 312	1.0
2400732	3917930	11/27/2018 12:24 pm 11/30/2018 9:15 am	Broad Acres ES Floor First Room 314	0.5
2400733	3917808	11/27/2018 12:26 pm 11/30/2018 9:15 am	Broad Acres ES Floor First Room 316	< 0.4
2400734	3915822	11/27/2018 12:28 pm 11/30/2018 9:16 am	Broad Acres ES Floor First Room 318	< 0.4
2400735	3917483	11/27/2018 12:30 pm 11/30/2018 9:16 am	Broad Acres ES Floor First Room 323	0.9
2400736	3915547	11/27/2018 12:35 pm 11/30/2018 12:00 am	Broad Acres ES Floor First Room 325	0.5
2400737	3917411	11/27/2018 12:38 pm 11/30/2018 9:18 am	Broad Acres ES Floor First Room 327	< 0.4
2400738	3917918	11/27/2018 12:40 pm 11/30/2018 9:18 am	Broad Acres ES Floor First Room 320	< 0.4
2400739	3917919	11/27/2018 12:43 pm 11/30/2018 9:19 am	Broad Acres ES Floor First Room 320A	< 0.4

Comment: Device numbers 3915633 and 3915638 were not analyzed. A copy of this report was emailed to Intertek-PSI (VA).

Distributed by: Intertek-PSI (VA)

Date Received: 12/03/2018 Date Logged: 12/03/2018 Date Analyzed: 12/05/2018 Date Reported: 01/30/2019

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:

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

Property Tested: Project # 04481387-1


MCPS Radon Survey
JoAnn Leleck Elementary School at Broad Acres
710 Beacon Road
Silver Spring MD 20903

Log Number	Device Number	Test Exposure Duration:		Area Tested	Result pCi/L
2400740	3917248	11/27/2018 12:44 pm	11/30/2018 9:19 am	Broad Acres ES Floor First Room 322	< 0.4
2400741	3917249	11/27/2018 12:45 pm	11/30/2018 9:20 am	Broad Acres ES Floor First Room 329	< 0.4
2400742	3917417	11/27/2018 12:47 pm	11/30/2018 9:20 am	Broad Acres ES Floor First Room 324	< 0.4
2400743	3917842	11/27/2018 12:49 pm	11/30/2018 9:21 am	Broad Acres ES Floor First Room 326	< 0.4
2400744	3917250	11/27/2018 12:50 pm	11/30/2018 9:22 am	Broad Acres ES Floor First Room 331	0.4
2400745	3917247	11/27/2018 12:52 pm	11/30/2018 9:22 am	Broad Acres ES Floor First Room 328	< 0.4
2400746	3917244	11/27/2018 12:54 pm	11/30/2018 9:23 am	Broad Acres ES Floor First Room 333	1.1
2400747	3917246	11/27/2018 1:00 pm	11/30/2018 9:23 am	Broad Acres ES Floor First Room 330	< 0.4
2400748	3915477	11/27/2018 1:03 pm	11/30/2018 9:24 am	Broad Acres ES Floor First Room 335	< 0.4
2400749	3915482	11/27/2018 1:07 pm	11/30/2018 9:25 am	Broad Acres ES Floor First Room Gym	< 0.4
2400750	3915471	11/27/2018 1:07 pm	11/30/2018 9:25 am	Broad Acres ES Floor First Room Gym	< 0.4

Comment: Device numbers 3915633 and 3915638 were not analyzed. A copy of this report was emailed to Intertek-PSI (VA).

Distributed by: Intertek-PSI (VA)

Date Received: 12/03/2018 Date Logged: 12/03/2018 Date Analyzed: 12/05/2018 Date Reported: 01/30/2019

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:

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

Property Tested: Project # 04481387-1


MCPS Radon Survey
JoAnn Leleck Elementary School at Broad Acres
710 Beacon Road
Silver Spring MD 20903

Log Number	Device Number	Test Exposure Duration:	Area Tested	Result pCi/L
2400751	3915961	11/27/2018 1:10 pm 11/30/2018 9:26 am	Broad Acres ES Flr First Rm Gym Off 215	< 0.4
2400752	3917243	11/27/2018 1:12 pm 11/30/2018 9:27 am	Broad Acres ES Floor First Room Café	< 0.4
2400753	3917809	11/27/2018 1:14 pm 11/30/2018 9:27 am	Broad Acres ES Floor First Room Café	< 0.4
2400754	3917927	11/27/2018 1:18 pm 11/30/2018 9:28 am	Broad Acres ES Floor First Room 212	< 0.4
2400755	3917917	11/27/2018 1:18 pm 11/30/2018 9:28 am	Broad Acres ES Flr First Rm 212 Duplicate	0.4
2400756	3917418	11/27/2018 1:19 pm 11/30/2018 9:29 am	Broad Acres ES Floor First Room 207	< 0.4
2400757	3915546	11/27/2018 1:20 pm 11/30/2018 9:30 am	Broad Acres ES Floor First Room 210	< 0.4
2400758	3915483	11/27/2018 1:22 pm 11/30/2018 9:31 am	Broad Acres ES Floor First Room 205	< 0.4
2400759	3915630	11/27/2018 1:23 pm 11/30/2018 9:32 am	Broad Acres ES Floor First Room 208	< 0.4
2400760	3917419	11/27/2018 1:25 pm 11/30/2018 9:35 am	Broad Acres ES Floor First Room 203	0.8
2400761	3917844	11/27/2018 10:30 am 11/30/2018 9:35 am	Broad Acres ES Floor x Room x Field Blank	0.4

Comment: Device numbers 3915633 and 3915638 were not analyzed. A copy of this report was emailed to Intertek-PSI (VA).

Distributed by: Intertek-PSI (VA)

Date Received: 12/03/2018 Date Logged: 12/03/2018 Date Analyzed: 12/05/2018 Date Reported: 01/30/2019

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:

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

Property Tested: Project # 04481387-1


MCPS Radon Survey
JoAnn Leleck Elementary School at Broad Acres
710 Beacon Road
Silver Spring MD 20903

Log Number	Device Number	Test	Exposure	Duration:	Area Tested	Result pCi/L
2400762	3917446	11/27/2018	10:30 am	11/30/2018 9:35 am	Broad Acres ES Floor x Room x Field Blank	< 0.4
2400763	3917841	11/27/2018	10:30 am	11/30/2018 9:35 am	Broad Acres ES Floor x Room x Field Blank	< 0.4
2400764	3917492	11/27/2018	10:30 am	11/30/2018 9:35 am	Broad Acres ES Floor x Room x Field Blank	< 0.4
2400765	3917846	11/27/2018	10:30 am	11/30/2018 9:35 am	Broad Acres ES Flr x Rm x Transit Blank	< 0.4
2400766	3917484	11/27/2018	6:00 am	11/30/2018 6:00 pm	Broad Acres ES Floor x Room x Office Blank	< 0.4

Comment: Device numbers 3915633 and 3915638 were not analyzed. A copy of this report was emailed to Intertek-PSI (VA).

Distributed by: Intertek-PSI (VA)

Date Received: 12/03/2018 Date Logged: 12/03/2018 Date Analyzed: 12/05/2018 Date Reported: 01/30/2019

Report Reviewed By: 

Report Approved By: 

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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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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. Ashburton ES
2. Carderock Springs ES
3. Diamond ES
4. Fox Chapel ES
5. Baker MS
6. Damascus ES
7. Clemente MS
8. Clopper Mill ES
9. Broad Acres ES
10. Greencastle ES
11. Harmony Hills ES
12. Silver Spring International MS
13. Gaithersburg MS
14. Garrett Park ES
15. New Hampshire Estates ES
16. Georgian Forest ES

	Date	Initials
Radon Test Kits Deployed	11/27/2018	NL
Radon Test Kits Sampled	11/30/2018	NL
Radon Test Kits Shipped to Lab*	11/30/2018	NL
Radon Test Kits Received by Lab*	12/01/2018; 12/02/2018; 12/03/2018	NL

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

RADON SCREENING SURVEY – FOLLOW-UP BROAD ACRES ELEMENTARY SCHOOL

1901 Rainbow Drive, Silver Spring, Maryland 20905

EXECUTIVE SUMMARY

Date of Test Report:	3/10/16
Round of Testing:	Initial Follow-up Post Remediation
# Rooms Tested	12
# Rooms \geq 4.0 pCi/L:	0
Low Value:	<0.3
High Value:	2.6
Confirmed Rooms \geq 4.0 pCi/L US EPA Action Level	0

Summary of Sampling Events \geq 4.0 pCi/L

Room	Result (pCi/L) 3/2/16 (Rev. 1)	Result (pCi/L) 3/10/16	Average Result (pCi/L)
100E	--- Missing	<0.3	<0.3
100F	--- Missing	0.5	0.5
100I	0.7 Tampered	0.7	0.7
107	--- Missing	2.3	2.3
321	2.2 Tampered	2.6	2.4
404	0.8 Tampered	<0.3	0.6
408	0.9 Tampered	<0.3	0.6
410	<0.3 Tampered	0.6	0.5
412	<0.3 Tampered	0.5	0.4
413	1.2 Tampered	0.7	1.0
CAFÉ	0.6 Window Open	0.6	0.6
CAFÉ	<0.3 Window Open	<0.3	<0.3
CAFÉ	0.7 Window Open	Not sampled	0.7
415	3.5	1.8	2.7



MCPS RADON TESTING

Executive Summary: JoAnn Leleck Elementary School at Broad Acres

Date of Test Report:	3/10/2016
Round of Testing:	Initial Follow-up Post Remediation
# Rooms Tested:	12
# Rooms \geq 4.0 pCi/L:	0
Low Value:	< 0.3
High Value:	2.6

Project Status:

Retesting completed; no further action at this time.



March 10, 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 # 12146341.29

Location: JoAnn Leleck Elementary School at Broad Acres
710 Beacon Street
Silver Spring, MD 20903

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 JoAnn Leleck Elementary School at Broad Acres, located at 710 Beacon Street in Silver Spring, Maryland 20903 (subject site).

Scope of Services:

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

KCI visited the site on February 22, 2016 and deployed sixteen (16) 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 February 25, 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. Note that strong storms and heavy rainfall were recorded during the test period. The unusual weather conditions may have resulted in atypical radon test results for this facility.

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

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

Results:

The results of the radon test analysis indicated the following:

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

Notes:

D- Duplicate sample

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

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

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

Sincerely,



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

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

ATTACHMENT A

Floor Plan With Test Locations

ATTACHMENT B

Radon Test Summary Spreadsheet

Table Notes:

AC- Activated Charcoal

ACI- Air Chek, Inc.

D- Duplicate

FB- Field Blank

KCI- KCI Technologies, Inc.

OB- Office Blank*

PM- Project Manager

QC- Quality Control

*Office blanks were submitted at a rate of 1% for all samples deployed in Phase 9 testing. Office blanks were not submitted under each school individually.

Radon Testing Results		
Broad Acres Elementary School		
Test Period: 02/22/16-02/25/16		
Kit Number	Room / Area	Result
7731495	107	2.3
7731477	321	2.3
7731468	404	< 0.3
7731467	408	< 0.3
7731471	410	0.6
7731494	412	0.5
7731466	413	0.7
7731486	415	1.8
7731485	100E	< 0.3
7731484	100F	0.5
7731488	100I	0.5
7731470	CAFE	0.6
7731469	CAFE	< 0.3

Table Note:

* Missing or Compromised Sample

Radon Testing Results		
Broad Acres Elementary School		
Test Period: 02/22/16-02/25/16		
Kit Number	QC Type	Result
7731475	D (100I)	0.7
7731478	D (321)	2.6
7731483	FB (100E)	< 0.3

Table Note:

* Missing or Compromised Sample

ATTACHMENT C

Laboratory Analytical Results

March 8, 2016
** LABORATORY ANALYSIS
REPORT **

Radon test result report for:
**BROAD ACRES ELEMENTARY SCHOOL
MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7731483	100E	2016-02-22 @ 1:00 pm	2016-02-25 @ 10:00 am	< 0.3	2016-02-29
7731485	100E	2016-02-22 @ 1:00 pm	2016-02-25 @ 10:00 am	< 0.3	2016-02-29
7731484	100F	2016-02-22 @ 1:00 pm	2016-02-25 @ 10:00 am	0.5 ± 0.3	2016-02-29
7731475	100I	2016-02-22 @ 1:00 pm	2016-02-25 @ 11:00 am	0.7 ± 0.3	2016-02-29
7731488	100I	2016-02-22 @ 1:00 pm	2016-02-25 @ 10:00 am	0.5 ± 0.3	2016-02-29
7731495	107	2016-02-22 @ 1:00 pm	2016-02-25 @ 10:00 am	2.3 ± 0.4	2016-02-29
7731477	321	2016-02-22 @ 1:00 pm	2016-02-25 @ 11:00 am	2.3 ± 0.4	2016-02-29
7731478	321	2016-02-22 @ 1:00 pm	2016-02-25 @ 11:00 am	2.6 ± 0.4	2016-02-29
7731468	404	2016-02-22 @ 1:00 pm	2016-02-25 @ 10:00 am	< 0.3	2016-02-29
7731467	408	2016-02-22 @ 1:00 pm	2016-02-25 @ 10:00 am	< 0.3	2016-02-29
7731471	410	2016-02-22 @ 1:00 pm	2016-02-25 @ 10:00 am	0.6 ± 0.3	2016-02-29
7731494	412	2016-02-22 @ 1:00 pm	2016-02-25 @ 10:00 am	0.5 ± 0.3	2016-02-29
7731466	413	2016-02-22 @ 1:00 pm	2016-02-25 @ 10:00 am	0.7 ± 0.3	2016-02-29
7731486	415	2016-02-22 @ 1:00 pm	2016-02-25 @ 10:00 am	1.8 ± 0.3	2016-02-29
7731469	CAFE	2016-02-22 @ 1:00 pm	2016-02-25 @ 10:00 am	< 0.3	2016-02-29
7731470	CAFE	2016-02-22 @ 1:00 pm	2016-02-25 @ 10:00 am	0.6 ± 0.3	2016-02-29

March 9, 2016 **** LABORATORY ANALYSIS REPORT ****

Radon test result report for:
MCPS
Phase 9 Office Blanks

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7712568	0	2016-02-22 @ 6:00 pm	2016-02-25 @ 3:00 pm	< 0.3	2016-02-29
7712584	0	2016-02-22 @ 6:00 pm	2016-02-25 @ 3:00 pm	< 0.3	2016-02-29
7719460	0	2016-02-22 @ 6:00 pm	2016-02-25 @ 3:00 pm	< 0.3	2016-02-29
7719481	0	2016-02-22 @ 6:00 pm	2016-02-25 @ 3:00 pm	< 0.3	2016-02-29
7719497	0	2016-02-22 @ 6:00 pm	2016-02-25 @ 3:00 pm	< 0.3	2016-02-29
7719498	0	2016-02-22 @ 6:00 pm	2016-02-25 @ 3:00 pm	< 0.3	2016-02-29

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

March 9, 2016 **** LABORATORY ANALYSIS REPORT ****

Radon test result report for:
MCPS
Phase 9 Office Blanks

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7731626	0	2016-02-23 @ 2:00 pm	2016-02-26 @ 3:00 pm	< 0.3	2016-03-01
7731633	0	2016-02-23 @ 2:00 pm	2016-02-26 @ 3:00 pm	< 0.3	2016-03-01
7735204	0	2016-02-23 @ 2:00 pm	2016-02-26 @ 3:00 pm	< 0.3	2016-03-01

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

February 23, 2016 **LABORATORY ANALYSIS REPORT** **

Radon test result report for:
TRANSIT- PHASE 7, 8, 9
NONE

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7734937	1	2016-02-19 @ 3:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23
7734946	10	2016-02-19 @ 4:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23
7734955	11	2016-02-19 @ 4:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23
7734956	12	2016-02-19 @ 4:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23
7734959	13	2016-02-19 @ 4:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23
7734930	14	2016-02-19 @ 4:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23
7734953	15	2016-02-19 @ 4:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23
7734954	16	2016-02-19 @ 4:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23
7734940	17	2016-02-19 @ 4:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23
7734949	18	2016-02-19 @ 4:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23
7734948	19	2016-02-19 @ 4:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23
7734939	2	2016-02-19 @ 3:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23
7734942	20	2016-02-19 @ 4:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23
7734929	21	2016-02-19 @ 4:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23
7734933	22	2016-02-19 @ 4:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23
7734934	23	2016-02-19 @ 4:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23
7734936	24	2016-02-19 @ 4:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23
7734943	25	2016-02-19 @ 4:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23
7734944	26	2016-02-19 @ 4:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23
7734935	27	2016-02-19 @ 4:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23
7734928	28	2016-02-19 @ 4:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23
7734952	29	2016-02-19 @ 4:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23
7734947	3	2016-02-19 @ 3:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23
7734931	30	2016-02-19 @ 4:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23
7734932	31	2016-02-19 @ 4:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23
7718520	32	2016-02-19 @ 4:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23
7718523	33	2016-02-19 @ 4:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23
7718522	34	2016-02-19 @ 4:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23
7718521	35	2016-02-19 @ 4:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23
7734945	4	2016-02-19 @ 3:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23
7734960	5	2016-02-19 @ 4:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23
7734958	6	2016-02-19 @ 4:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23
7734951	7	2016-02-19 @ 4:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23
7734957	8	2016-02-19 @ 4:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23
7734938	9	2016-02-19 @ 4:00 pm	2016-02-22 @ 11:00 am	< 0.3	2016-02-23

February
15,
2016

**LABORATORY ANALYSIS
REPORT ****

Spike Sample Laboratory Results

Radon test result report for:
MCPS

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

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

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

EXPOSURE IN BOWSER-MORNER RADON CHAMBER

CLIENT KCF Technologies Inc. Job Number 173704

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

Date Start: 1/30/16 Date Stop: 2/1/16 Date Start: _____ Date Stop: _____

Time Start: 0926 Time Stop: 0926 Time Start: _____ Time Stop: _____

Device No.'s: (6) Char. Bags - Device No.'s: _____

7718281, 7718282, 7718291, _____

7718288, 7718289, 7718273 _____

ε3 Left

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

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

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

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

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

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

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



Radon Test Kit Chain of Custody

Project Name: MCPS Radon Phase 9

Name of Schools:

- | | | |
|--------------------------|---------------------------|------------------------|
| 1. Rocking Horse Road ES | 16. Broad Acres ES | 31. Rosa Parks MS |
| 2. Rockwell ES | 17. Belmont ES | 32. Rosemary Hills ES |
| 3. Oakland Terrace ES | 18. Emory Grove Center | 33. Sequoyah ES |
| 4. Rosemont ES | 19. Forest Knolls ES | 34. Damascus HS |
| 5. Beall ES | 20. Baker MS | 35. Einstein ES |
| 6. Cresthaven ES | 21. MLK MS | 36. Forest Oak MS |
| 7. Quince Orchard HS | 22. Richard Montgomery HS | 37. Hoover MS |
| 8. Smith Center | 23. Sherwood HS | 38. Julius West MS |
| 9. Ashburton ES | 24. Walter Johnson HS | 39. John F. Kennedy HS |
| 10. Bannockburn ES | 25. Diamond ES | 40. Travilah ES |
| 11. Bradley Hills ES | 26. Newport Mill MS | 41. Watkins Mill HS |
| 12. Cannon Road ES | 27. Drew ES | 42. Northwood HS |
| 13. Flora M. Singer ES | 28. Monocacy ES | 43. Lincoln Center |
| 14. Clarksburg HS | 29. Potomac ES | |
| 15. Briggs Chaney MS | 30. Rock Terrace School | |

	Date	Initials
Radon Test Kits Deployed	2/22/16	JM
Radon Test Kits Collected	2/25/16	JM
Radon Test Kits Shipped to Lab*	2/25/16	JM
Radon Test Kits Received by Lab*	2/29/16	JM

*All samples sent to Air Check, Inc., 1936 Butler Bridge Rd, Mills River, NC 28759



Radon Test Kit Chain of Custody

Project Name: MCPS Radon Phase 9

Name of Schools:

- | | |
|----------------------------|-------------------------|
| 1. Banneker MS | 10. Maryvale ES |
| 2. Bethesda-Chevy Chase HS | 11. Montgomery Blair HS |
| 3. Burtonsville ES | 12. Poolesville HS |
| 4. Chevy Chase ES | 13. Rachel Carson ES |
| 5. Clopper Mill ES | 14. Stedwick ES |
| 6. Edison HS | 15. Watkins Mill ES |
| 7. Flower Hill ES | 16. Laytonsville ES |
| 8. Flower Valley ES | 17. Lincoln Center |
| 9. Greencastle ES | |

	Date	Initials
Radon Test Kits Deployed	2/23/16	JM
Radon Test Kits Collected	2/26/16	JM
Radon Test Kits Shipped to Lab*	2/26/16	JM
Radon Test Kits Received by Lab*	3/01/16	JM

*All samples sent to Air Check, Inc., 1936 Butler Bridge Rd, Mills River, NC 28759



MCPS RADON TESTING

Executive Summary: JoAnn Leleck Elementary School at Broad Acres

Date of Test Report:	3/2/2016 (Rev 1)
Round of Testing:	Initial Follow-up Post Remediation
# Rooms Tested:	82
# Rooms \geq 4.0 pCi/L:	0
Low Value:	< 0.3
High Value:	3.5

Project Status:

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



March 2, 2016 (Rev 1)

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

Re: **Radon Testing Services**
KCI Job # 12146341.20

Location: JoAnn Leleck Elementary School at Broad Acres
710 Beacon Road
Silver Spring, MD 20903

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 JoAnn Leleck Elementary School at Broad Acres, located at 710 Beacon Road in Silver Spring, Maryland 20903 (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 December 21, 2015 and deployed one hundred fifty-one (151) 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. Prior to sampling, KCI returned 1% of the test batch to the laboratory for analysis as lab transit blanks. 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 December 24, 2015 to retrieve the radon sampling test kits. KCI shipped all radon tests via overnight delivery to Airchek, Inc. for analysis by gamma-ray spectroscopy. Airchek, Inc.

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

Evaluation of Testing Conditions:

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

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

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

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

Results:

The results of the radon test analysis indicated the following:

Radon Concentration	Room	Result
≥ 4.0 pCi/L	None	n/a
< 4.0 pCi/L	See Attachment B	

Notes:
D- Duplicate sample

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

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

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

Sincerely,



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

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

ATTACHMENT A

Floor Plan With Test Locations

ATTACHMENT B

Radon Test Summary Spreadsheet

Table Notes:

AC- Activated Charcoal

ACI- Air Chek, Inc.

D- Duplicate

FB- Field Blank

KCI- KCI Technologies, Inc.

OB- Office Blank

PM- Project Manager

QC- Quality Control

Radon Testing Results		
Joann Leleck Elementary School		
Test Period: 12/21/15-12/24/15		
Kit Number	Room / Area	Result
7712701	100	0.7
7712707	101	< 0.3
7712711	102	1.3
7712712	102	1.0
7712709	104	0.8
7712710	104	0.9
7712708	106	0.8
7712753	107	1.4
7712750	109	0.7
7712752	109	0.8
7712748	111	0.7
7712749	111	0.5
7712760	112	1.3
7712761	112	1.0
7712762	112	1.0
7712763	112	1.5
7712746	113	1.3
7712747	113	1.0
7712758	114	0.9
7712759	114	0.8
7712744	115	0.8
7712745	115	1.3
7712756	116	< 0.3
7712757	116	< 0.3
7712601	203	< 0.3
7712602	203	< 0.3
7712606	205	< 0.3
7712607	205	< 0.3
7712603	208	< 0.3
7712604	210	< 0.3
7712605	210	< 0.3
7712608	212	< 0.3
7712609	212	0.6
7712616	215	< 0.3
7712767	300	0.9
7712769	300	0.8
7712765	301	< 0.3
7712766	301	0.7
7712772	302	1.8
7712773	302	1.8
7712770	303	0.7
7712771	303	0.7
7712774	304	1.1
7712775	304	0.8
7712776	305	< 0.3
7712777	305	0.7

Table Note:

* Missing or Compromised Sample

Radon Testing Results		
Joann Leleck Elementary School		
Test Period: 12/21/15-12/24/15		
Kit Number	Room / Area	Result
7712782	306	< 0.3
7712778	307	0.8
7712781	308	0.6
7712780	309	< 0.3
7712783	310	1.0
7712784	311	0.5
7712785	311	0.7
7712786	312	0.9
7712787	314	1.1
7712788	314	1.3
7712790	316	< 0.3
7712792	316	< 0.3
7712793	318	< 0.3
7712794	318	< 0.3
7712799	320	0.7
7712633	322	0.7
7712796	323	1.2
7712632	324	0.7
7712798	325	1.4
7712626	326	< 0.3
7712628	326	0.7
7712797	327	1.0
7712624	328	< 0.3
7712625	328	< 0.3
7712631	329	< 0.3
7712617	330	< 0.3
7712619	330	< 0.3
7712629	331	0.7
7712630	331	0.8
7712622	333	< 0.3
7712623	333	< 0.3
7712620	335	< 0.3
7712621	335	< 0.3
7712715	400	1.3
7712714	401	0.8
7712716	404	1.2
7712720	406	1.1
7712721	406	1.2
7712722	408	0.6
7712726	410	< 0.3
7712718	411	1.6
7712719	411	1.1
7712727	412	< 0.3
7712731	413	1.0
7712732	414	< 0.3
7712733	414	< 0.3
7712734	415	1.8
7712736	415	3.5
7712737	416	2.3
7712739	416	1.9

Table Note:

* Missing or Compromised Sample

Radon Testing Results		
Joann Leleck Elementary School		
Test Period: 12/21/15-12/24/15		
Kit Number	Room / Area	Result
7712740	417	0.6
7712741	417	1.1
7712742	418	0.6
7712743	418	0.7
7712706	100C	0.8
7712702	* 100E (missing)	-
7712645	* 100F (missing)	-
7712704	100H	< 0.3
7712705	* 100I (tampered)	0.7
7712755	* 107 (missing)	-
7712613	207A	< 0.3
7712614	207B	0.5
7712795	* 321 (tampered)	2.2
7712717	* 404 (tampered)	0.8
7712723	* 408 (tampered)	0.9
7712724	* 410 (tampered)	< 0.3
7712728	* 412 (tampered)	< 0.3
7712729	* 413 (tampered)	1.2
7712634	* CAFE (open window/doors)	0.6
7712635	* CAFE (open window/doors)	< 0.3
7712636	* CAFE (open window/doors)	0.7
7712703	CONFERENCE	0.7
7712610	GYM	0.6
7712611	GYM	< 0.3
7712612	GYM	0.7
7712764	MEDIA CENTER STO	1.4
7712641	PORT 1	< 0.3
7712640	PORT 2	< 0.3
7712639	PORT 3	< 0.3
7712638	PORT 4	< 0.3
7712643	PORT 5	< 0.3
7712642	PORT 6	< 0.3
7712637	PORT 7	< 0.3
7712644	PORT 8	< 0.3

Table Note:

* Missing or Compromised Sample

Radon Testing Results		
Joann Leleck Elementary School		
Test Period: 12/21/15-12/24/15		
Kit Number	QC Type	Result
7712649	D (100)	< 0.3
7712647	D (100H)	0.6
7712648	D (100I)	0.8
7712713	D (102)	1.2
7712751	D (109)	< 0.3
7712615	D (207B)	0.8
7712768	D (300)	0.7
7712779	D (307)	1.2
7712791	D (316)	< 0.3
7712800	D (320)	0.8
7712627	D (326)	< 0.3
7712725	D (410)	< 0.3
7712735	D (415)	1.5
7712738	D (416)	2.2
7712646	* FB (100F:missing)	-
7712754	FB (107)	< 0.3
7712789	FB (314)	< 0.3
7712618	FB (330)	< 0.3
7712730	* FB (413:tampered)	< 0.3
7712651	OB (0)	< 0.3
7712652	OB (0)	< 0.3

Table Note:

* Missing or Compromised Sample

ATTACHMENT C

Laboratory Analytical Results

Radon test result report for:
**JOANN LELECK ELEMENTARY SCHOOL
 MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7712651	0	2015-12-21 @ 4:00 pm	2015-12-24 @ 12:00 pm	< 0.3	2015-12-29
7712652	0	2015-12-21 @ 4:00 pm	2015-12-24 @ 12:00 pm	< 0.3	2015-12-29
7712649	100	2015-12-21 @ 3:00 pm	2015-12-24 @ 8:00 am	< 0.3	2015-12-28
7712701	100	2015-12-21 @ 10:00 am	2015-12-24 @ 8:00 am	0.7 ± 0.3	2015-12-28
7712706	100C	2015-12-21 @ 10:00 am	2015-12-24 @ 8:00 am	0.8 ± 0.3	2015-12-28
7712702	100E	@	@		
7712645	100F	@	@		
7712646	100F	@	@		
7712647	100H	2015-12-21 @ 3:00 pm	2015-12-24 @ 8:00 am	0.6 ± 0.3	2015-12-28
7712704	100H	2015-12-21 @ 10:00 am	2015-12-24 @ 8:00 am	< 0.3	2015-12-28
7712648	100I	2015-12-21 @ 3:00 pm	2015-12-24 @ 8:00 am	0.8 ± 0.3	2015-12-28
7712705	100I	2015-12-21 @ 10:00 am	2015-12-24 @ 8:00 am	0.7 ± 0.3	2015-12-28
7712707	101	2015-12-21 @ 10:00 am	2015-12-24 @ 8:00 am	< 0.3	2015-12-28
7712711	102	2015-12-21 @ 10:00 am	2015-12-24 @ 8:00 am	1.3 ± 0.3	2015-12-28
7712712	102	2015-12-21 @ 10:00 am	2015-12-24 @ 8:00 am	1.0 ± 0.3	2015-12-28
7712713	102	2015-12-21 @ 10:00 am	2015-12-24 @ 8:00 am	1.2 ± 0.3	2015-12-28
7712709	104	2015-12-21 @ 10:00 am	2015-12-24 @ 8:00 am	0.8 ± 0.3	2015-12-28
7712710	104	2015-12-21 @ 10:00 am	2015-12-24 @ 8:00 am	0.9 ± 0.3	2015-12-28
7712708	106	2015-12-21 @ 10:00 am	2015-12-24 @ 8:00 am	0.8 ± 0.3	2015-12-28
7712755	107	@	@		
7712753	107	2015-12-21 @ 12:00 pm	2015-12-24 @ 9:00 am	1.4 ± 0.4	2015-12-28
7712754	107	2015-12-21 @ 12:00 pm	2015-12-24 @ 9:00 am	< 0.3	2015-12-28
7712750	109	2015-12-21 @ 12:00 pm	2015-12-24 @ 9:00 am	0.7 ± 0.3	2015-12-28
7712751	109	2015-12-21 @ 12:00 pm	2015-12-24 @ 9:00 am	< 0.3	2015-12-28
7712752	109	2015-12-21 @ 12:00 pm	2015-12-24 @ 9:00 am	0.8 ± 0.3	2015-12-28
7712748	111	2015-12-21 @ 12:00 pm	2015-12-24 @ 9:00 am	0.7 ± 0.3	2015-12-28
7712749	111	2015-12-21 @ 12:00 pm	2015-12-24 @ 9:00 am	0.5 ± 0.3	2015-12-28
7712760	112	2015-12-21 @ 12:00 pm	2015-12-24 @ 9:00 am	1.3 ± 0.3	2015-12-28
7712761	112	2015-12-21 @ 12:00 pm	2015-12-24 @ 9:00 am	1.0 ± 0.3	2015-12-28
7712762	112	2015-12-21 @ 12:00 pm	2015-12-24 @ 9:00 am	1.0 ± 0.3	2015-12-28
7712763	112	2015-12-21 @ 12:00 pm	2015-12-24 @ 9:00 am	1.5 ± 0.4	2015-12-28
7712746	113	2015-12-21 @ 12:00 pm	2015-12-24 @ 9:00 am	1.3 ± 0.4	2015-12-28
7712747	113	2015-12-21 @ 12:00 pm	2015-12-24 @ 9:00 am	1.0 ± 0.3	2015-12-28
7712758	114	2015-12-21 @ 12:00 pm	2015-12-24 @ 9:00 am	0.9 ± 0.3	2015-12-28
7712759	114	2015-12-21 @ 12:00 pm	2015-12-24 @ 9:00 am	0.8 ± 0.3	2015-12-28
7712744	115	2015-12-21 @ 12:00 pm	2015-12-24 @ 9:00 am	0.8 ± 0.3	2015-12-28
7712745	115	2015-12-21 @ 12:00 pm	2015-12-24 @ 9:00 am	1.3 ± 0.3	2015-12-28

January 12, 2016
LABORATORY ANALYSIS REPORT

Radon test result report for:
**JOANN LELECK ELEMENTARY SCHOOL
 MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7712756	116	2015-12-21 @ 12:00 pm	2015-12-24 @ 9:00 am	< 0.3	2015-12-28
7712757	116	2015-12-21 @ 12:00 pm	2015-12-24 @ 9:00 am	< 0.3	2015-12-28
7712601	203	2015-12-21 @ 1:00 pm	2015-12-24 @ 11:00 am	< 0.3	2015-12-28
7712602	203	2015-12-21 @ 1:00 pm	2015-12-24 @ 11:00 am	< 0.3	2015-12-28
7712606	205	2015-12-21 @ 1:00 pm	2015-12-24 @ 11:00 am	< 0.3	2015-12-28
7712607	205	2015-12-21 @ 1:00 pm	2015-12-24 @ 11:00 am	< 0.3	2015-12-28
7712613	207A	2015-12-21 @ 2:00 pm	2015-12-24 @ 11:00 am	< 0.3	2015-12-28
7712614	207B	2015-12-21 @ 2:00 pm	2015-12-24 @ 11:00 am	0.5 ± 0.3	2015-12-28
7712615	207B	2015-12-21 @ 2:00 pm	2015-12-24 @ 11:00 am	0.8 ± 0.3	2015-12-28
7712603	208	2015-12-21 @ 1:00 pm	2015-12-24 @ 11:00 am	< 0.3	2015-12-28
7712604	210	2015-12-21 @ 1:00 pm	2015-12-24 @ 11:00 am	< 0.3	2015-12-28
7712605	210	2015-12-21 @ 1:00 pm	2015-12-24 @ 11:00 am	< 0.3	2015-12-28
7712608	212	2015-12-21 @ 2:00 pm	2015-12-24 @ 11:00 am	< 0.3	2015-12-28
7712609	212	2015-12-21 @ 2:00 pm	2015-12-24 @ 11:00 am	0.6 ± 0.3	2015-12-28
7712616	215	2015-12-21 @ 2:00 pm	2015-12-24 @ 10:00 am	< 0.3	2015-12-28
7712767	300	2015-12-21 @ 12:00 pm	2015-12-24 @ 9:00 am	0.9 ± 0.3	2015-12-28
7712768	300	2015-12-21 @ 12:00 pm	2015-12-24 @ 9:00 am	0.7 ± 0.3	2015-12-28
7712769	300	2015-12-21 @ 12:00 pm	2015-12-24 @ 9:00 am	0.8 ± 0.3	2015-12-28
7712765	301	2015-12-21 @ 12:00 pm	2015-12-24 @ 9:00 am	< 0.3	2015-12-28
7712766	301	2015-12-21 @ 12:00 pm	2015-12-24 @ 9:00 am	0.7 ± 0.3	2015-12-28
7712772	302	2015-12-21 @ 12:00 pm	2015-12-24 @ 9:00 am	1.8 ± 0.4	2015-12-28
7712773	302	2015-12-21 @ 12:00 pm	2015-12-24 @ 9:00 am	1.8 ± 0.4	2015-12-28
7712770	303	2015-12-21 @ 12:00 pm	2015-12-24 @ 9:00 am	0.7 ± 0.3	2015-12-28
7712771	303	2015-12-21 @ 12:00 pm	2015-12-24 @ 9:00 am	0.7 ± 0.3	2015-12-28
7712774	304	2015-12-21 @ 12:00 pm	2015-12-24 @ 9:00 am	1.1 ± 0.4	2015-12-28
7712775	304	2015-12-21 @ 12:00 pm	2015-12-24 @ 9:00 am	0.8 ± 0.3	2015-12-28
7712776	305	2015-12-21 @ 12:00 pm	2015-12-24 @ 9:00 am	< 0.3	2015-12-28
7712777	305	2015-12-21 @ 1:00 pm	2015-12-24 @ 9:00 am	0.7 ± 0.3	2015-12-28
7712782	306	2015-12-21 @ 1:00 pm	2015-12-24 @ 10:00 am	< 0.3	2015-12-28
7712778	307	2015-12-21 @ 1:00 pm	2015-12-24 @ 10:00 am	0.8 ± 0.3	2015-12-28
7712779	307	2015-12-21 @ 1:00 pm	2015-12-24 @ 10:00 am	1.2 ± 0.4	2015-12-28
7712781	308	2015-12-21 @ 1:00 pm	2015-12-24 @ 10:00 am	0.6 ± 0.3	2015-12-28
7712780	309	2015-12-21 @ 1:00 pm	2015-12-24 @ 10:00 am	< 0.3	2015-12-28
7712783	310	2015-12-21 @ 1:00 pm	2015-12-24 @ 10:00 am	1.0 ± 0.3	2015-12-28
7712784	311	2015-12-21 @ 1:00 pm	2015-12-24 @ 10:00 am	0.5 ± 0.3	2015-12-28
7712785	311	2015-12-21 @ 1:00 pm	2015-12-24 @ 10:00 am	0.7 ± 0.3	2015-12-28
7712786	312	2015-12-21 @ 1:00 pm	2015-12-24 @ 10:00 am	0.9 ± 0.3	2015-12-28

January 12, 2016
** LABORATORY ANALYSIS REPORT **

Radon test result report for:
**JOANN LELECK ELEMENTARY SCHOOL
MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7712787	314	2015-12-21 @ 1:00 pm	2015-12-24 @ 10:00 am	1.1 ± 0.3	2015-12-28
7712788	314	2015-12-21 @ 1:00 pm	2015-12-24 @ 10:00 am	1.3 ± 0.3	2015-12-28
7712789	314	2015-12-21 @ 1:00 pm	2015-12-24 @ 10:00 am	< 0.3	2015-12-28
7712790	316	2015-12-21 @ 1:00 pm	2015-12-24 @ 10:00 am	< 0.3	2015-12-28
7712791	316	2015-12-21 @ 1:00 pm	2015-12-24 @ 10:00 am	< 0.3	2015-12-28
7712792	316	2015-12-21 @ 1:00 pm	2015-12-24 @ 10:00 am	< 0.3	2015-12-28
7712793	318	2015-12-21 @ 1:00 pm	2015-12-24 @ 10:00 am	< 0.3	2015-12-28
7712794	318	2015-12-21 @ 1:00 pm	2015-12-24 @ 10:00 am	< 0.3	2015-12-28
7712799	320	2015-12-21 @ 1:00 pm	2015-12-24 @ 10:00 am	0.7 ± 0.3	2015-12-28
7712800	320	2015-12-21 @ 1:00 pm	2015-12-24 @ 10:00 am	0.8 ± 0.3	2015-12-28
7712795	321	2015-12-21 @ 1:00 pm	2015-12-24 @ 10:00 am	2.2 ± 0.4	2015-12-28
7712633	322	2015-12-21 @ 2:00 pm	2015-12-24 @ 10:00 am	0.7 ± 0.3	2015-12-28
7712796	323	2015-12-21 @ 1:00 pm	2015-12-24 @ 10:00 am	1.2 ± 0.3	2015-12-28
7712632	324	2015-12-21 @ 2:00 pm	2015-12-24 @ 10:00 am	0.7 ± 0.3	2015-12-28
7712798	325	2015-12-21 @ 1:00 pm	2015-12-24 @ 10:00 am	1.4 ± 0.3	2015-12-28
7712626	326	2015-12-21 @ 2:00 pm	2015-12-24 @ 10:00 am	< 0.3	2015-12-28
7712627	326	2015-12-21 @ 2:00 pm	2015-12-24 @ 10:00 am	< 0.3	2015-12-28
7712628	326	2015-12-21 @ 2:00 pm	2015-12-24 @ 10:00 am	0.7 ± 0.3	2015-12-28
7712797	327	2015-12-21 @ 1:00 pm	2015-12-24 @ 10:00 am	1.0 ± 0.3	2015-12-28
7712624	328	2015-12-21 @ 2:00 pm	2015-12-24 @ 10:00 am	< 0.3	2015-12-28
7712625	328	2015-12-21 @ 2:00 pm	2015-12-24 @ 10:00 am	< 0.3	2015-12-28
7712631	329	2015-12-21 @ 2:00 pm	2015-12-24 @ 10:00 am	< 0.3	2015-12-28
7712617	330	2015-12-21 @ 2:00 pm	2015-12-24 @ 10:00 am	< 0.3	2015-12-28
7712618	330	2015-12-21 @ 2:00 pm	2015-12-24 @ 10:00 am	< 0.3	2015-12-28
7712619	330	2015-12-21 @ 2:00 pm	2015-12-24 @ 10:00 am	< 0.3	2015-12-28
7712629	331	2015-12-21 @ 2:00 pm	2015-12-24 @ 10:00 am	0.7 ± 0.3	2015-12-28
7712630	331	2015-12-21 @ 2:00 pm	2015-12-24 @ 10:00 am	0.8 ± 0.3	2015-12-28
7712622	333	2015-12-21 @ 2:00 pm	2015-12-24 @ 10:00 am	< 0.3	2015-12-28
7712623	333	2015-12-21 @ 2:00 pm	2015-12-24 @ 10:00 am	< 0.3	2015-12-28
7712620	335	2015-12-21 @ 2:00 pm	2015-12-24 @ 10:00 am	< 0.3	2015-12-28
7712621	335	2015-12-21 @ 2:00 pm	2015-12-24 @ 10:00 am	< 0.3	2015-12-28
7712715	400	2015-12-21 @ 10:00 am	2015-12-24 @ 8:00 am	1.3 ± 0.3	2015-12-28
7712714	401	2015-12-21 @ 10:00 am	2015-12-24 @ 8:00 am	0.8 ± 0.3	2015-12-28
7712716	404	2015-12-21 @ 10:00 am	2015-12-24 @ 8:00 am	1.2 ± 0.3	2015-12-28
7712717	404	2015-12-21 @ 11:00 am	2015-12-24 @ 8:00 am	0.8 ± 0.3	2015-12-28
7712720	406	2015-12-21 @ 11:00 am	2015-12-24 @ 8:00 am	1.1 ± 0.4	2015-12-28
7712721	406	2015-12-21 @ 11:00 am	2015-12-24 @ 8:00 am	1.2 ± 0.4	2015-12-28

January 12, 2016 **LABORATORY ANALYSIS REPORT ****

Radon test result report for:
**JOANN LELECK ELEMENTARY SCHOOL
 MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7712723	408	2015-12-21 @ 11:00 am	2015-12-24 @ 8:00 am	0.9 ± 0.3	2015-12-28
7712722	408	2015-12-21 @ 11:00 am	2015-12-24 @ 8:00 am	0.6 ± 0.3	2015-12-28
7712724	410	2015-12-21 @ 11:00 am	2015-12-24 @ 8:00 am	< 0.3	2015-12-28
7712725	410	2015-12-21 @ 11:00 am	2015-12-24 @ 8:00 am	< 0.3	2015-12-28
7712726	410	2015-12-21 @ 11:00 am	2015-12-24 @ 8:00 am	< 0.3	2015-12-28
7712718	411	2015-12-21 @ 11:00 am	2015-12-24 @ 8:00 am	1.6 ± 0.3	2015-12-28
7712719	411	2015-12-21 @ 11:00 am	2015-12-24 @ 8:00 am	1.1 ± 0.3	2015-12-28
7712727	412	2015-12-21 @ 11:00 am	2015-12-24 @ 9:00 am	< 0.3	2015-12-28
7712728	412	2015-12-21 @ 11:00 am	2015-12-24 @ 9:00 am	< 0.3	2015-12-28
7712729	413	2015-12-21 @ 11:00 am	2015-12-24 @ 9:00 am	1.2 ± 0.3	2015-12-28
7712730	413	2015-12-21 @ 11:00 am	2015-12-24 @ 9:00 am	< 0.3	2015-12-28
7712731	413	2015-12-21 @ 11:00 am	2015-12-24 @ 9:00 am	1.0 ± 0.3	2015-12-28
7712732	414	2015-12-21 @ 11:00 am	2015-12-24 @ 9:00 am	< 0.3	2015-12-28
7712733	414	2015-12-21 @ 11:00 am	2015-12-24 @ 9:00 am	< 0.3	2015-12-28
7712734	415	2015-12-21 @ 11:00 am	2015-12-24 @ 9:00 am	1.8 ± 0.4	2015-12-28
7712735	415	2015-12-21 @ 11:00 am	2015-12-24 @ 9:00 am	1.5 ± 0.4	2015-12-28
7712736	415	2015-12-21 @ 11:00 am	2015-12-24 @ 9:00 am	3.5 ± 0.4	2015-12-28
7712737	416	2015-12-21 @ 11:00 am	2015-12-24 @ 11:00 am	2.3 ± 0.4	2015-12-28
7712738	416	2015-12-21 @ 11:00 am	2015-12-24 @ 9:00 am	2.2 ± 0.4	2015-12-28
7712739	416	2015-12-21 @ 11:00 am	2015-12-24 @ 9:00 am	1.9 ± 0.4	2015-12-28
7712740	417	2015-12-21 @ 11:00 am	2015-12-24 @ 9:00 am	0.6 ± 0.3	2015-12-28
7712741	417	2015-12-21 @ 11:00 am	2015-12-24 @ 9:00 am	1.1 ± 0.3	2015-12-28
7712742	418	2015-12-21 @ 12:00 pm	2015-12-24 @ 9:00 am	0.6 ± 0.3	2015-12-28
7712743	418	2015-12-21 @ 12:00 pm	2015-12-24 @ 9:00 am	0.7 ± 0.3	2015-12-28
7712634	CAFE	2015-12-21 @ 2:00 pm	2015-12-24 @ 11:00 am	0.6 ± 0.3	2015-12-28
7712635	CAFE	2015-12-21 @ 2:00 pm	2015-12-24 @ 11:00 am	< 0.3	2015-12-28
7712636	CAFE	2015-12-21 @ 2:00 pm	2015-12-24 @ 11:00 am	0.7 ± 0.3	2015-12-28
7712703	CONFERENCE	2015-12-21 @ 10:00 am	2015-12-24 @ 8:00 am	0.7 ± 0.3	2015-12-28
7712610	GYM	2015-12-21 @ 2:00 pm	2015-12-24 @ 10:00 am	0.6 ± 0.3	2015-12-28
7712611	GYM	2015-12-21 @ 2:00 pm	2015-12-24 @ 10:00 am	< 0.3	2015-12-28
7712612	GYM	2015-12-21 @ 2:00 pm	2015-12-24 @ 10:00 am	0.7 ± 0.3	2015-12-28
7712764	MEDIA CENTER STO	2015-12-21 @ 12:00 pm	2015-12-24 @ 9:00 am	1.4 ± 0.3	2015-12-28
7712641	PORT 1	2015-12-21 @ 2:00 pm	2015-12-24 @ 11:00 am	< 0.3	2015-12-28
7712640	PORT 2	2015-12-21 @ 2:00 pm	2015-12-24 @ 11:00 am	< 0.3	2015-12-28
7712639	PORT 3	2015-12-21 @ 2:00 pm	2015-12-24 @ 11:00 am	< 0.3	2015-12-28
7712638	PORT 4	2015-12-21 @ 2:00 pm	2015-12-24 @ 11:00 am	< 0.3	2015-12-28
7712643	PORT 5	2015-12-21 @ 3:00 pm	2015-12-24 @ 11:00 am	< 0.3	2015-12-28

January 12, 2016
**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:
**JOANN LELECK ELEMENTARY SCHOOL
MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7712642	PORT 6	2015-12-21 @ 3:00 pm	2015-12-24 @ 11:00 am	< 0.3	2015-12-28
7712637	PORT 7	2015-12-21 @ 2:00 pm	2015-12-24 @ 11:00 am	< 0.3	2015-12-28
7712644	PORT 8	2015-12-21 @ 3:00 pm	2015-12-24 @ 11:00 am	< 0.3	2015-12-28

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

December
29,
2015

****LABORATORY ANALYSIS
REPORT ****

Radon test result report for:
TRANSIT DEC 14 2015
NONE

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7704395	TRANSIT 1	2015-12-13 @ 10:00 am	2015-12-15 @ 10:00 am	< 0.3	2015-12-16
7706508	TRANSIT 10	2015-12-13 @ 10:00 am	2015-12-15 @ 10:00 am	< 0.3	2015-12-16
7706510	TRANSIT 11	2015-12-13 @ 10:00 am	2015-12-15 @ 10:00 am	< 0.3	2015-12-16
7706511	TRANSIT 12	2015-12-13 @ 10:00 am	2015-12-15 @ 10:00 am	< 0.3	2015-12-16
7706505	TRANSIT 13	2015-12-13 @ 10:00 am	2015-12-15 @ 10:00 am	< 0.3	2015-12-16
7704371	TRANSIT 14	2015-12-13 @ 10:00 am	2015-12-15 @ 10:00 am	< 0.3	2015-12-16
7706506	TRANSIT 15	2015-12-13 @ 10:00 am	2015-12-15 @ 10:00 am	< 0.3	2015-12-16
7704381	TRANSIT 16	2015-12-13 @ 10:00 am	2015-12-15 @ 10:00 am	< 0.3	2015-12-16
7704399	TRANSIT 17	2015-12-13 @ 10:00 am	2015-12-15 @ 10:00 am	< 0.3	2015-12-16
7704390	TRANSIT 18	2015-12-13 @ 10:00 am	2015-12-15 @ 10:00 am	< 0.3	2015-12-16
7704396	TRANSIT 2	2015-12-13 @ 10:00 am	2015-12-15 @ 10:00 am	< 0.3	2015-12-16
7704364	TRANSIT 3	2015-12-13 @ 10:00 am	2015-12-15 @ 10:00 am	< 0.3	2015-12-16
7704370	TRANSIT 4	2015-12-13 @ 10:00 am	2015-12-15 @ 10:00 am	< 0.3	2015-12-16
7704368	TRANSIT 5	2015-12-13 @ 10:00 am	2015-12-15 @ 10:00 am	< 0.3	2015-12-16
7706524	TRANSIT 6	2015-12-13 @ 10:00 am	2015-12-15 @ 10:00 am	< 0.3	2015-12-16
7706526	TRANSIT 7	2015-12-13 @ 10:00 am	2015-12-15 @ 10:00 am	< 0.3	2015-12-16
7706518	TRANSIT 8	2015-12-13 @ 10:00 am	2015-12-15 @ 10:00 am	< 0.3	2015-12-16
7706516	TRANSIT 9	2015-12-13 @ 10:00 am	2015-12-15 @ 10:00 am	< 0.3	2015-12-16

December
23,
2015

**LABORATORY ANALYSIS
REPORT ****

Spike Sample Laboratory Results

Radon test result report for:
MCPS

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7706380	101	2015-12-18 @ 9:00 am	2015-12-21 @ 9:00 am	25.2	2015-12-23
7706381	102	2015-12-18 @ 9:00 am	2015-12-21 @ 9:00 am	26.5	2015-12-23
7706208	103	2015-12-18 @ 9:00 am	2015-12-21 @ 9:00 am	27.7	2015-12-23
7705132	104	2015-12-18 @ 9:00 am	2015-12-21 @ 9:00 am	28.6	2015-12-23
7706366	105	2015-12-18 @ 9:00 am	2015-12-21 @ 9:00 am	26.5	2015-12-23
7706211	106	2015-12-18 @ 9:00 am	2015-12-21 @ 9:00 am	26.1	2015-12-23

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

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

EXPOSURE IN BOWSER-MORNER RADON CHAMBER

CLIENT KCI Technologies Inc. Job Number 173224

NOMINAL Conditions: Radon Conc 26.9 pCi/L Rel. Hum 49.6 % Temp. 69.9 F

Date Start: 12/18/15 Date Stop: 12/21/15 Date Start: _____ Date Stop: _____

Time Start: 0929 Time Stop: 0929 Time Start: _____ Time Stop: _____

Device No.'s: 7705132, 7706208, Device No.'s: _____

7706211, 7706366, _____

7706380, 7706381 _____

F3 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 II

School Names:

- | | | |
|---------------------------|-----------------------------|---------------------------|
| 1. Bannockburn ES | 11. Sherwood HS | 21. Fairland ES |
| 2. Walt Whitman HS | 12. Hadley Farms | 22. Cannon Road ES |
| 3. Walter Johnson HS | 13. S. Christa McAuliffe ES | 23. Richard Montgomery HS |
| 4. North Chevy Chase ES | 14. Ronald A. McNair ES | 24. Brooke Grove ES |
| 5. Piney Branch ES | 15. MLK MS | 25. Belmont ES |
| 6. Forest Knolls ES | 16. Ashburton ES | 26. Emory Grove |
| 7. Newport Mill MS | 17. Bradley Hills ES | 27. Clarksburg HS |
| 8. Broad Acres ES | 18. Flora M. Singer ES | 28. Clarksburg ES |
| 9. Briggs Chaney MS | 19. Woodlin ES | 29. John T. Baker MS |
| 10. Blair G. Ewing Center | 20. Montgomery Knolls ES | |

	Date	Initials
Radon Test Kits Deployed	12/21/2015	JM
Radon Test Kits Collected	12/24/2015	JM
Radon Test Kits Shipped to Lab*	12/24/2015	JM
Radon Test Kits Received by Lab*	12/28/2015	JM

*All samples sent to Air Check, Inc., 1936 Butler Bridge Road, Mills River, NC 28758