

936 RIDGEBROOK ROAD • SPARKS, MD 21152 • 410-316-7800 • (FAX) 410-316-7935

Site Name	Lakelands Park
	Middle School
Date of Test Report	3/2/2023
Round of Testing	Initial
	Follow-up
	Post Remediation
	2 Year Testing
	5 Year Testing
	HVAC Upgrade
	Window Replacement
	New Addition
	New Facility
# Rooms Tested	82
# Rooms Re-tested	3
# Rooms \geq 4.0 pCi/L	0
Lowest Value	<0.3 pCi/L
Highest Value	1.1 pCi/L

MCPS RADON TESTING – EXECUTIVE SUMMARY

Project Status:

1. Initial testing completed;

- 2. Missing or compromised samples need re-test.
 - 3. Retesting Completed 2/14/23 2/17/23.
 - 4. 5-Year Testing Completed.



ENGINEERS • PLANNERS • SCIENTISTS • CONSTRUCTION MANAGERS

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March 3, 2023

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

Re:	Radon Testing Services	
	KCI Job # 122210551	
Location:	Lakelands Park Middle School	
	1200 Main Street	
	Gaithersburg, MD 20878	

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 Lakelands Park Middle School, located at 1200 Main Street, Gaithersburg, MD 20878 (subject site).

Scope of Services:

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

KCI visited the site initially on January 23, 2023 and deployed ninety-five (95) activated charcoal (AC) radon test kits. KCI deployed radon test kits in all frequently-occupied ground contact rooms, and other areas, (if applicable) in accordance with AARST guidance.

KCI returned to the site on 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.

KCI re-visited the site on February 14, 2023 to deploy six (6) activated charcoal (AC) radon test kits for testing of missed rooms or compromised test kits during initial testing.

KCI returned to the site on February 17, 2023 to retrieve the radon re-sampling test kits. KCI shipped all radon tests via overnight delivery to Accustar Labs – MA for analysis by gamma-ray spectroscopy. Accustar Labs – MA is a NRSB certified analytical laboratory for radon analysis (certification #ARL0017) located at 2 Saber Way, Ward Hill, MA 01835.

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

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

Evaluation of Testing Conditions:

These tests represent:

- Follow up to initial testing.
- These tests were conducted to:
- 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.

During the re-testing period, weather records indicate low temperatures were in the mid-20s°F and high temperatures ranged to the 70s°F. Maximum sustained winds ranged from 0-33 miles per hour. Average humidity was around 62% with 1.01 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 piC/L	None	N/A
<4.0 piC/L	See Attachn	nent B

The results of the radon re-testing analysis indicated the following:

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

Quality Control Samples		
Results of Blank Canisters: The office blanks, and lab transit blanks had test resul		
	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 laborato		
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 McCleaf

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		
Lakelands Park MS			
Test Period: 01/09/2023 - 01/12/2023			
Kit Number	Room / Area	Result	
11285918	101	< 0.3	
11285913	101	< 0.3	
11285925	102	0.6	
11285910	103	0.8	
11285906	105	< 0.3	
11285937	109	< 0.3	
11285966	114	0.9	
11285930	120	< 0.3	
11285935	122	N/A	
11285929	122	< 0.3	
11285922	124	< 0.3	
11285934	124	0.6	
11285928	124	< 0.3	
11285914	124	< 0.3	
11285908	125	0.9	
11285927	130	< 0.3	
11285921	132	N/A	
11285969	140	0.6	
11285939	142	< 0.3	
11285924	143	0.7	
11285931	145	0.6	
11285967	149	< 0.3	
11285975	150	0.6	
11285963	151	< 0.3	
11285971	151	N/A	
11285976	152	< 0.3	
11285973	155	0.7	
11285970	156	< 0.3	
11285982	157	0.6	
11285983	158	0.5	
11285984	158	< 0.3	
11285977	160	0.6	
11285981	162	0.8	
11285989	164	< 0.3	
11285978	166	0.9	
11285974	167	0.7	
11285985	168	< 0.3	
11285948	173	< 0.3	
11285991	176	< 0.3	
11285986	178	< 0.3	
11285980	180	0.5	
11285992	180	0.5	

	Table 1- Radon Testing Results		
Lakelands Park MS			
Test Period: 01/09/2023 - 01/12/2023			
Kit Number	Room / Area	Result	
11285993	180	< 0.3	
11285947	190	0.8	
11285972	191	1.0	
11285956	193	1.1	
11286000	251	< 0.3	
11285999	259	0.6	
11285994	278	< 0.3	
11285955	351	0.7	
11285938	100A	0.7	
11285950	100B	< 0.3	
11285945	100C	0.6	
11285933	100D	0.6	
11285943	100E	< 0.3	
11285951	100F	0.6	
11285916	100G	0.6	
11285923	100G	0.6	
11285915	100H	< 0.3	
11285901	101C2	< 0.3	
11285926	101D	0.7	
11285909	1011	< 0.3	
11285942	102A	< 0.3	
11285917	102A	< 0.3	
11285911	103A	1.1	
11285905	103B	< 0.3	
11285904	103C	0.6	
11285903	103D	0.6	
11285912	105A	0.8	
11285960	114A	0.5	
11285954	114B	0.7	
11285949	114D	< 0.3	
11285946	114E	0.6	
11285953	114F	1.0	
11285941	114H	0.8	
11285958	114H	0.8	
11285959	114H	< 0.3	
11285936	122b	0.7	
11285964	140A	< 0.3	
11285965	140A	< 0.3	
11285962	140A	< 0.3	
11285968	142A	0.8	
11285961	143A	< 0.3	
11285932	145A	< 0.3	

Table 1- Radon Testing Results		
Lakelands Park MS		
Tes	t Period: 01/09/2023 - 01/12/202	3
Kit Number	Room / Area	Result
11285990	160A	< 0.3
11285940	178A	< 0.3
11285952	Counselor	< 0.3
11285902	Gym	N/A
11285907	Gym	< 0.3
11285944	Main office	< 0.3
11285998	Media Center	< 0.3
11285997	Media Center	0.6
11285987	Media Center	< 0.3
11285920	Stage	0.8
11285919	Stage	0.7

Table 2- Radon Testing Results			
Lakeland Park MS			
	Test Period:	01/09/23 - 01/12/23	
Kit Number	QC Type	Room / Area	Result
11285934	D	124	< 0.3
11285928	FB	124	< 0.3
11285984	D	158	< 0.3
11285992	D	180	0.5
11285993	FB	180	< 0.3
11285923	D	100G	0.6
11285917	D	102A	< 0.3
11285958	D	114H	0.8
11285959	FB	114H	< 0.3
11285965	D	140A	< 0.3
11285962	FB	140A	< 0.3
11285987	D	Media Center	< 0.3
11285919	D	Stage	0.7
11285160	OB	OFFICE BLANK	< 0.3
11285167	ТВ	TRAVEL BLANK	< 0.3

Summary of Missed Locations		
Lakelands Park MS		
Test Period: 01/09/23 - 01/12/23		
Kit Number	Room/Area	Result
	N/A	

Summary of Missing, Compromised and >/= 4 piC/L Tests		
Lakelands Park MS		
	Test Period: 01/09/23 - 01/12/23	
Kit Number	Room/Area	Result
11285902	Gym	Missing
11285921	132	Missing
11285971	151	Missing
11285935	122	Missing

Table Note:

* Missing or Compromised Sample

Table 1- Radon Testing Results		
	Lakelands Park MS RT	
Tes	t Period: 02/14/2023 - 02/17/2023	3
Kit Number	Room / Area	Result
11634680	132	0.5
11634379	151	0.6
11634380	151	< 0.3
11634683	151	< 0.3
11634372	GYM	< 0.3
11634378	GYM	< 0.3

Table 2- Radon Testing Results			
	Lakelan	ds Paark MS RT	
	Test Period: (02/14/23 - 02/17/23	
Kit Number	QC Type	Room / Area	Result
11634379	D	151	0.6
11634380	FB	151	< 0.3
11634060	OB	OFFICE BLANK	< 0.3
11634067	ТВ	TRAVEL BALNK	< 0.3

Summary of Missed Locations			
Lakelands Park MS RT			
Т	est Period: 02/14/23 - 02/17/23		
Kit Number	Room/Area	Result	
	N/A		

Summary of Missing, Compromised and >/= 4 piC/L Tests					
Lakelands Park MS RT					
	Test Period: 02/14/23 - 02/17/23				
Kit Number	Room/Area	Result			
	N/A				

Table Note:

* Missing or Compromised Sample

ATTACHMENT C

Laboratory Analytical Results

Radon test result report for:

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11285938	100A	2023-01-09 @ 10:00 am	2023-01-12 @ 9:00 am	0.7 ± 0.4	2023-01-16
11285950	100B	2023-01-09 @ 11:00 am	2023-01-12 @ 9:00 am	< 0.3	2023-01-16
11285945	100C	2023-01-09 @ 11:00 am	2023-01-12 @ 11:00 am	0.6 ± 0.4	2023-01-16
11285933	100D	2023-01-09 @ 11:00 am	2023-01-12 @ 9:00 am	0.6 ± 0.3	2023-01-16
11285943	100E	2023-01-09 @ 10:00 am	2023-01-12 @ 9:00 am	< 0.3	2023-01-16
11285951	100F	2023-01-09 @ 11:00 am	2023-01-12 @ 9:00 am	0.6 ± 0.4	2023-01-16
11285923	100G	2023-01-09 @ 11:00 am	2023-01-12 @ 10:00 am	0.6 ± 0.4	2023-01-16
11285916	100G	2023-01-09 @ 11:00 am	2023-01-12 @ 10:00 am	0.6 ± 0.3	2023-01-16
11285915	100H	2023-01-09 @ 11:00 am	2023-01-12 @ 11:00 am	< 0.3	2023-01-16
11285913	101	2023-01-09 @ 10:00 am	2023-01-12 @ 10:00 am	< 0.3	2023-01-16
11285918	101	2023-01-09 @ 10:00 am	2023-01-12 @ 10:00 am	< 0.3	2023-01-16
11285901	101C2	2023-01-09 @ 10:00 am	2023-01-12 @ 10:00 am	< 0.3	2023-01-16
11285926	101D	2023-01-09 @ 10:00 am	2023-01-12 @ 10:00 am	0.7 ± 0.4	2023-01-16
11285909	101I	2023-01-09 @ 10:00 am	2023-01-12 @ 10:00 am	< 0.3	2023-01-16
11285925	102	2023-01-09 @ 10:00 am	2023-01-12 @ 10:00 am	0.6 ± 0.4	2023-01-16
11285910	103	2023-01-09 @ 9:00 am	2023-01-12 @ 11:00 am	0.8 ± 0.4	2023-01-16
11285911	103A	2023-01-09 @ 9:00 am	2023-01-12 @ 10:00 am	1.1 ± 0.4	2023-01-16
11285905	103B	2023-01-09 @ 10:00 am	2023-01-12 @ 10:00 am	< 0.3	2023-01-16
11285904	103C	2023-01-09 @ 10:00 am	2023-01-12 @ 10:00 am	0.6 ± 0.4	2023-01-16
11285903	103D	2023-01-09 @ 10:00 am	2023-01-12 @ 10:00 am	0.6 ± 0.4	2023-01-16
11285906	105	2023-01-09 @ 10:00 am	2023-01-12 @ 11:00 am	< 0.3	2023-01-16
11285912	105A	2023-01-09 @ 10:00 am	2023-01-12 @ 11:00 am	0.8 ± 0.4	2023-01-16
11285937	109	2023-01-09 @ 10:00 am	2023-01-12 @ 10:00 am	< 0.3	2023-01-16
11285966	114	2023-01-09 @ 11:00 am	2023-01-12 @ 9:00 am	0.9 ± 0.4	2023-01-16
11285960	114A	2023-01-09 @ 11:00 am	2023-01-12 @ 11:00 am	0.5 ± 0.4	2023-01-16
11285954	114 B	2023-01-09 @ 11:00 am	2023-01-12 @ 9:00 am	0.7 ± 0.4	2023-01-16
11285949	114D	2023-01-09 @ 11:00 am	2023-01-12 @ 9:00 am	< 0.3	2023-01-16
11285946	114E	2023-01-09 @ 11:00 am	2023-01-12 @ 9:00 am	0.6 ± 0.4	2023-01-16
11285953	114F	2023-01-09 @ 11:00 am	2023-01-12 @ 9:00 am	1.0 ± 0.4	2023-01-16
11285959	114H	2023-01-09 @ 11:00 am	2023-01-12 @ 9:00 am	< 0.3	2023-01-16
11285958	114H	2023-01-09 @ 11:00 am	2023-01-12 @ 9:00 am	0.8 ± 0.4	2023-01-16
11285941	114H	2023-01-09 @ 11:00 am	2023-01-12 @ 9:00 am	0.8 ± 0.4	2023-01-16
11285930	120	2023-01-09 @ 10:00 am	2023-01-12 @ 11:00 am	< 0.3	2023-01-16
11285929	122	2023-01-09 @ 10:00 am	2023-01-12 @ 11:00 am	< 0.3	2023-01-16
11285936	122B	2023-01-09 @ 10:00 am	2023-01-12 @ 11:00 am	0.7 ± 0.4	2023-01-16
11285922	124	2023-01-09 @ 10:00 am	2023-01-12 @ 11:00 am	0.6 ± 0.4	2023-01-16
11285928	124	2023-01-09 @ 10:00 am	2023-01-12 @ 11:00 am	< 0.3	2023-01-16

Radon test result report for:

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11285914	124	2023-01-09 @ 10:00 am	2023-01-12 @ 11:00 am	< 0.3	2023-01-16
11285934	124	2023-01-09 @ 10:00 am	2023-01-12 @ 11:00 am	< 0.3	2023-01-16
11285908	125	2023-01-09 @ 10:00 am	2023-01-12 @ 11:00 am	0.9 ± 0.4	2023-01-16
11285927	130	2023-01-09 @ 10:00 am	2023-01-12 @ 11:00 am	< 0.3	2023-01-16
11285969	140	2023-01-09 @ 11:00 am	2023-01-12 @ 10:00 am	0.6 ± 0.4	2023-01-16
11285965	140A	2023-01-09 @ 11:00 am	2023-01-12 @ 11:00 am	< 0.3	2023-01-16
11285964	140A	2023-01-09 @ 11:00 am	2023-01-12 @ 11:00 am	< 0.3	2023-01-16
11285962	140A	2023-01-09 @ 11:00 am	2023-01-12 @ 11:00 am	< 0.3	2023-01-16
11285939	142	2023-01-09 @ 11:00 am	2023-01-12 @ 10:00 am	< 0.3	2023-01-16
11285968	142A	2023-01-09 @ 11:00 am	2023-01-12 @ 10:00 am	0.8 ± 0.4	2023-01-16
11285924	143	2023-01-09 @ 11:00 am	2023-01-12 @ 10:00 am	0.7 ± 0.4	2023-01-16
11285961	143A	2023-01-09 @ 11:00 am	2023-01-12 @ 10:00 am	< 0.3	2023-01-16
11285931	145	2023-01-09 @ 11:00 am	2023-01-12 @ 10:00 am	0.6 ± 0.4	2023-01-16
11285932	145A	2023-01-09 @ 11:00 am	2023-01-12 @ 10:00 am	< 0.3	2023-01-16
11285967	149	2023-01-09 @ 11:00 am	2023-01-12 @ 11:00 am	< 0.3	2023-01-16
11285975	150	2023-01-09 @ 11:00 am	2023-01-12 @ 10:00 am	0.6 ± 0.4	2023-01-16
11285963	151	2023-01-09 @ 11:00 am	2023-01-12 @ 10:00 am	< 0.3	2023-01-16
11285976	152	2023-01-09 @ 11:00 am	2023-01-12 @ 10:00 am	< 0.3	2023-01-16
11285973	155	2023-01-09 @ 11:00 am	2023-01-12 @ 10:00 am	0.7 ± 0.4	2023-01-16
11285970	156	2023-01-09 @ 11:00 am	2023-01-12 @ 10:00 am	< 0.3	2023-01-16
11285982	157	2023-01-09 @ 11:00 am	2023-01-12 @ 10:00 am	0.6 ± 0.4	2023-01-16
11285983	158	2023-01-09 @ 11:00 am	2023-01-12 @ 10:00 am	0.5 ± 0.4	2023-01-16
11285984	158	2023-01-09 @ 11:00 am	2023-01-12 @ 10:00 am	< 0.3	2023-01-16
11285977	160	2023-01-09 @ 11:00 am	2023-01-12 @ 10:00 am	0.6 ± 0.4	2023-01-16
11285990	160A	2023-01-09 @ 12:00 pm	2023-01-12 @ 10:00 am	< 0.3	2023-01-16
11285981	162	2023-01-09 @ 12:00 pm	2023-01-12 @ 10:00 am	0.8 ± 0.4	2023-01-16
11285989	164	2023-01-09 @ 12:00 pm	2023-01-12 @ 10:00 am	< 0.3	2023-01-16
11285978	166	2023-01-09 @ 12:00 pm	2023-01-12 @ 10:00 am	0.9 ± 0.4	2023-01-16
11285974	167	2023-01-09 @ 11:00 am	2023-01-12 @ 10:00 am	0.7 ± 0.4	2023-01-16
11285985	168	2023-01-09 @ 12:00 pm	2023-01-12 @ 10:00 am	< 0.3	2023-01-16
11285948	173	2023-01-09 @ 12:00 pm	2023-01-12 @ 11:00 am	< 0.3	2023-01-16
11285991	176	2023-01-09 @ 12:00 pm	2023-01-12 @ 10:00 am	< 0.3	2023-01-16
11285986	178	2023-01-09 @ 12:00 pm	2023-01-12 @ 10:00 am	< 0.3	2023-01-16
11285940	178A	2023-01-09 @ 12:00 pm	2023-01-12 @ 10:00 am	< 0.3	2023-01-16
11285980	180	2023-01-09 @ 12:00 pm	2023-01-12 @ 10:00 am	0.5 ± 0.4	2023-01-16
11285992	180	2023-01-09 @ 12:00 pm	2023-01-12 @ 10:00 am	0.5 ± 0.4	2023-01-16
11285993	180	2023-01-09 @ 12:00 pm	2023-01-12 @ 10:00 am	< 0.3	2023-01-16

January 16, 2023

Radon test result report for:

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11285947	190	2023-01-09 @ 12	2:00 pm 2023-01-12 @ 10:00 am	0.8 ± 0.4	2023-01-16
11285972	191	2023-01-09 @ 12	2:00 pm 2023-01-12 @ 10:00 am	1.0 ± 0.4	2023-01-16
11285956	193	2023-01-09 @ 12	2:00 pm 2023-01-12 @ 10:00 am	1.1 ± 0.4	2023-01-16
11286000	251	2023-01-09 @ 12	2:00 pm 2023-01-12 @ 11:00 am	< 0.3	2023-01-16
11285999	259	2023-01-09 @ 12	2:00 pm 2023-01-12 @ 11:00 am	0.6 ± 0.3	2023-01-16
11285994	278	2023-01-09 @ 12	2:00 pm 2023-01-12 @ 11:00 am	< 0.3	2023-01-16
11285955	351	2023-01-09 @ 12	2:00 pm 2023-01-12 @ 11:00 am	0.7 ± 0.4	2023-01-16
11285952	COUNSELOR	2023-01-09 @ 11	:00 am 2023-01-12 @ 9:00 am	< 0.3	2023-01-16
11285907	GYM	2023-01-09 @ 10	0:00 am 2023-01-12 @ 11:00 am	< 0.3	2023-01-16
11285944	MAIN OFFICE	2023-01-09 @ 10	2023-01-12 @ 9:00 am	< 0.3	2023-01-16
11285998	MEDIA CENTER	2023-01-09 @ 12	2:00 pm 2023-01-12 @ 11:00 am	< 0.3	2023-01-16
11285997	MEDIA CENTER	2023-01-09 @ 12	2:00 pm 2023-01-12 @ 11:00 am	0.6 ± 0.3	2023-01-16
11285987	MEDIA CENTER	2023-01-09 @ 12	2:00 pm 2023-01-12 @ 11:00 am	< 0.3	2023-01-16
11285920	STAGE	2023-01-09 @ 10	0:00 am 2023-01-12 @ 10:00 am	0.7 ± 0.4	2023-01-16
11285919	STAGE	2023-01-09 @ 10	0:00 am 2023-01-12 @ 10:00 am	0.8 ± 0.4	2023-01-16

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for: LAKELANDS PARK MS MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11285917	102A	2023-01-09 @ 12:00 pm	2023-01-12 @ 11:00 am	< 0.3	2023-01-16
11285942	102A	2023-01-09 @ 12:00 pm	2023-01-12 @ 11:00 am	< 0.3	2023-01-16

February 20, 2023

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11634680	132	2023-02-14 @ 11:00 am	2023-02-17 @ 10:00 am	0.5 ± 0.3	2023-02-20
11634379	151	2023-02-14 @ 11:00 am	2023-02-17 @ 10:00 am	0.6 ± 0.3	2023-02-20
11634380	151	2023-02-14 @ 11:00 am	2023-02-17 @ 10:00 am	< 0.3	2023-02-20
11634683	151	2023-02-14 @ 11:00 am	2023-02-17 @ 10:00 am	< 0.3	2023-02-20
11634372	GYM	2023-02-14 @ 11:00 am	2023-02-17 @ 10:00 am	< 0.3	2023-02-20
11634378	GYM	2023-02-14 @ 11:00 am	2023-02-17 @ 10:00 am	< 0.3	2023-02-20

EXPOSURE IN BOWSER-MORNER RADON CHAMBER

CLIENT KCI TECHNOLOGI	ES, INC	Job Number ZOSSO	2
NOMINAL Conditions: Radon Conc 24,4	_pCi/L Rel. Hum	48.6 % Temp. 79.3	F
Date Start: 1/27/23 Date Stop: 1/30/	3 Date Start:	Date Stop:	
Time Start: 0816 Time Stop: 0816	Time Start:	Time Stop:	
Device No.'s: (5) CHAR BAGS .	Device No.'s:_		
11633682,11633687,11633688			
11633695, 11633696			
F3 Celt			
Date Start: Date Stop:	Date Start:	Date Stop:	
Time Start: Time Stop:	Time Start:	Time Stop:	
Device No.'s:	Device No.'s:		
Date Start: Date Stop:	Date Start:	Date Stop:	
Time Start: Time Stop:	Time Start:	Time Stop:	
Device No.'s:	Device No.'s:		

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

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for: OFFICE MAIN

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



ENGINEERS • PLANNERS • SCIENTISTS • CONSTRUCTION MANAGERS Corporate Office: 936 Ridgebrook road • Sparks, Maryland 21152 • 410-316-7800 • (Fax) 410-316-7935

Radon Test Kit Chain of Custody

Project Name: MCPS Radon – Week 2 Retesting January Schools

Name of Schools:

- 1. A. Mario Loiederman MS
- 2. Cannon Road ES
- 3. Forest Knolls ES
- 4. Glen Haven ES
- 5. Goshen ES
- 6. Highland View ES
- 7. John F. Kennedy HS
- 8. Lakelands Park MS
- 9. Montgomery Village MS
- 10.Poolesville HS
- 11.Springbrook HS

	Date	Initials
Radon Test Kits Deployed	02/14/2023	BMU
Radon Test Kits Collected	02/17/2023	BMM
Radon Test Kits Shipped to Lab*	02/17/2023	pen
Radon Test Kits Received by Lab*	02/20/2023	Bann,

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



MONTGOMERY COUNTY PUBLIC SCHOOLS RADON TESTING

Executive Summary: Lakelands Park Middle School 1200 Main Street Gaithersburg, MD 20878

Date of Test Report:	3/15/2019
Round of Testing:	Initial
	Follow-up
	Post Remediation
	2 Year Testing
	5 Year Testing
	HVAC Upgrade
	Window Replacement
	New Addition
	New Facility
# of Rooms Tested:	3
# of Rooms ≥ 4.0 pCi/L:	0
Low Value:	<0.4
High Value:	0.7

Project Status

Retesting completed: No further action at this time.



March 15, 2019

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

Re: Radon Testing Services

Location: Lakelands Park Middle School 1200 Main Street Gaithersburg, MD 20878

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 Lakelands Park Middle School, located at 1200 Main Street, Gaithersburg, MD 20878 (subject site).

Scope of Services:

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

PSI visited the site on February 25, 2019 and deployed three (3) activated charcoal (AC) radon test kit. PSI deployed radon test kits in frequently-occupied ground contact rooms, and other areas, (if applicable) in accordance with AARST guidance. PSI returned to the site on February 28, 2019 to retrieve the radon sampling test kit. A floor plan map of the building with the test location is included as Attachment A of this report.

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

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.

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



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

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

Results:

The results of the radon test analysis indicated the following:

Radon Concentration	Room	Result	
≥ 4.0 pCi/L	None	NA	
≤ 4.0 pCi/L	See Attachment B		

Notes:

D -Duplicate Sample

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

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

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

Respectfully Submitted,

INTERTEK - PSI

Non-April Jourth

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			
Lakelands Park Middle School			
Testing period: 2/25/19 - 2/28/19			
Kit Number	Room / Area	Result (pCi/L)	
3923366	143 Office	0.7	
3923365	178	<0.4	
3923364	180	0.7	

Table Notes:

- D Duplicate
- FB Field Blank
- OB Office Blank
- TB Transit Blank
- QC Quality Control

ATTACHMENT C

Laboratory Analytical Results



Radon in Air

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

NRPP 105011 AL NRSB ARL0007

Laboratory Report for:

Property Tested:

Intertek-PSI (VA)	MCPS Radon Survey Lakelands Park MS
2930 Eskridge Road	1200 Main Street
Fairfax VA 22031	Gaithersburg MD 20878

Log Number	Device Number		Test Expos	sure Duratio	n:	Area Tested	Result pCi/L
3220620	3923364	02/25/2019	1:45 pm	02/28/2019	1:45 pm	Floor Main Room 180	0.7
3220621	3923365	02/25/2019	1:47 pm	02/28/2019	1:47 pm	Floor Main Room 178	< 0.4
3220622	3923366	02/25/2019	1:49 pm	02/28/2019	1:49 pm	Floor Main Room 143 Office	0.7

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:

The factor 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.

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 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 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 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 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 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 may only be transferred to a third party in its entirety.

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: Lakelands Park Middle School 1200 Main Street Gaithersburg, MD 20878

Date of Test Report:	01/15/2019
Round of Testing:	Initial
	Follow-up
	Post Remediation
	2 Year Testing
	5 Year Testing
	HVAC Upgrade
	Window Replacement
	New Addition
	New Facility
# of Rooms Tested:	75
# of Rooms ≥ 4.0 pCi/L:	0
Low Value:	< 0.4
High Value:	0.8

Project Status

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



January 15, 2019

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

Re: Radon Testing Services

Location: Lakelands Park Middle School 1200 Main Street Gaithersburg, MD 20878

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 Lakelands Park Middle School, located at 1200 Main Street, Gaithersburg, MD 20878 (subject site).

Scope of Services:

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

PSI visited the site on December 03, 2018 and deployed ninety (90) activated charcoal (AC) radon test kits. PSI deployed radon test kits in frequently-occupied ground contact rooms, and other areas, (if applicable) in accordance with AARST guidance. PSI returned to the site on December 06, 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).



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.

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

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

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

Results:

The results of the radon test analysis indicated the following:

Radon Concentration	Room	Result	
≥ 4.0 pCi/L	None	NA	
≤ 4.0 pCi/L	See Attachment B		
Notes:			

D -Duplicate Sample

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

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

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


Respectfully Submitted,

INTERTEK-PSI

Non-Ame Jewlih

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						
Lakelands Park Middle School						
Testing period: 12/03/18 - 12/06/18						
Kit Number	Room / Area	Result (pCi/L)				
3926182	100	< 0.4				
3928192	100A	< 0.4				
3928193	100B	< 0.4				
3928194	100C	< 0.4				
3928196	100D	< 0.4				
3928160	100F	0.4				
3928197	100G	0.4				
3926187	101C	< 0.4				
3926186	101D	0.6				
3926188	1011	< 0.4				
3928169	Across 100D	< 0.4				
3926183	101	0.4				
3926184	101	0.8				
3928155	101	< 0.4				
3928156	102	< 0.4				
3928157	102A	0.4				
3928159	102E	< 0.4				
3928211	103	0.6				
3928214	103A	0.4				
3928212	103B	0.4				
3928213	103C	0.6				
3926189	105	0.7				
3928215	107 (Gym)	0.4				
3928216	107 (Gym)	0.4				
3928154	109	0.4				
3928161	114	< 0.4				
3928162	114A	< 0.4				
3928163	114B	0.7				
3928164	114D	0.7				
3928165	114E	0.6				
3928166	114F	< 0.4				
3928168	114H	0.4				
3928153	120	0.6				
3928152	122	< 0.4				
3888371	122B	< 0.4				
3928151	124	< 0.4				
3928219	125	< 0.4				
3928220	130	< 0.4				
3928217	132	< 0.4				
3928178	140	0.6				
3928177	140B	0.5				
3928173	142	< 0.4				
3928174	142A	< 0.4				

Radon Testing Results							
	Lakelands Park Middle School						
Testing period: 12/03/18 - 12/06/18							
Kit Number Room / Area Result (pCi/L)							
3928179	143	0.4					
	143 Office (MISSED)						
3928180	145	0.4					
3926181	145A	< 0.4					
3928175	149	< 0.4					
3928149	150	0.7					
3928171	151	0.5					
3928148	152	< 0.4					
3928150	155	0.7					
3928145	156	0.5					
3928146	157	0.5					
3928144	158	< 0.4					
3928143	160	0.4					
3928142	162	0.4					
3928141	164	0.4					
3928190	166	0.6					
3928187	167	0.4					
3928189	168	0.4					
3888421	169	0.7					
3928184	173	0.7					
3928188	176	< 0.4					
3928186	178 (TAMPERED)	< 0.4					
3928185	180 (TAMPERED)	0.8					
3928183	190	< 0.4					
3928182	191	0.7					
3928181	193	0.6					
3928248	200	0.5					
3928249	200	< 0.4					
3928250	256	0.4					
3928245	264	0.4					
3928246	269	< 0.4					
3928247	291	< 0.4					
3928244	321	< 0.4					
3928241	352	0.4					
3928242	368	0.5					
3928243	393	0.4					
3926185	Kitchen	0.4					

Radon Testing Results						
Lakelands Park Middle School						
Te	sting period: 12/03/18 - 12/06	/18				
Kit Number	QC Type	Result (pCi/L)				
3928158	102A (D)	0.5				
3926190	105 (D)	0.7				
3928167	114F (D)	0.6				
3928218	132 (D)	0.5				
3928176	149 (D)	< 0.4				
3928172	151 (D)	0.5				
3928147	157 (D)	0.5				
3926655	Field Blank	< 0.4				
3926656	Field Blank	< 0.4				
3917552	Office Blank	< 0.4				
3926666	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



Laboratory Report for:

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

Property Tested: Project # 04481387-1

Intertek-PSI (VA)	MCPS Radon Survey Lakelands MS
2930 Eskridge Road	1200 Main Street
Fairfax VA 22031	Darnestown MD 20878

Log Number	Device Number		Test Expos	sure Duratio	n:	Area Tested	Result pCi/L
3202150	3928181	12/03/2018	6:06 pm	12/06/2018	2:38 pm	First Floor Room 193	0.6
3202151	3928182	12/03/2018	6:07 pm	12/06/2018	2:40 pm	First Floor Room 191	0.7
3202152	3928183	12/03/2018	6:08 pm	12/06/2018	2:42 pm	First Floor Room 190	< 0.4
3202153	3928184	12/03/2018	6:09 pm	12/06/2018	2:43 pm	First Floor Room 173	0.7
3202154	3928185	12/03/2018	6:11 pm	12/06/2018	2:47 pm	First Floor Room 180	0.8
3202155	3928186	12/03/2018	6:12 pm	12/06/2018	2:49 pm	First Floor Room 178	< 0.4
3202156	3928187	12/03/2018	6:13 pm	12/06/2018	2:50 pm	First Floor Room 167	0.4
3202157	3928188	12/03/2018	6:14 pm	12/06/2018	2:55 pm	First Floor Room 176	< 0.4
3202158	3928189	12/03/2018	6:15 pm	12/06/2018	2:56 pm	First Floor Room 168	0.4
3202159	3928190	12/03/2018	6:16 pm	12/06/2018	3:00 pm	First Floor Room 166	0.6
3202160	3928141	12/03/2018	6:17 pm	12/06/2018	3:02 pm	First Floor Room 164	0.4

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

Test Performed By: Lian Zadeng Distributed by: Intertek-PSI (VA) Date Received: 12/07/2018 Date Logged: 12/07/2018 Date Analyzed: 12/07/2018 Date Reported: 12/19/2018

Report Reviewed By: _

Report Approved By:

Shawn Price, Director of Laboratory Operations, AccuStar Labs

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

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.

Disclaimer:



Radon in Air

NRPP 105011 AL NRSB ARL0007

Laboratory Report for:

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

Property Tested: Project # 04481387-1

Intertek-PSI (VA)	MCPS Radon Survey Lakelands MS
2930 Eskridge Road	1200 Main Street
Fairfax VA 22031	Darnestown MD 20878

Log Number	Device Number		Test Expos	sure Duratio	n:	Area Tested	Result pCi/L
3202161	3928142	12/03/2018	6:18 pm	12/06/2018	3:04 pm	First Floor Room 162	0.4
3202162	3928143	12/03/2018	6:20 pm	12/06/2018	3:06 pm	First Floor Room 160	0.4
3202163	3928144	12/03/2018	6:21 pm	12/06/2018	3:07 pm	First Floor Room 158	< 0.4
3202164	3928145	12/03/2018	6:22 pm	12/06/2018	3:10 pm	First Floor Room 156	0.5
3202165	3928146	12/03/2018	6:23 pm	12/06/2018	3:11 pm	First Floor Room 157	0.5
3202166	3928147	12/03/2018	6:23 pm	12/06/2018	3:11 pm	First Floor Room 157 Duplicate	0.5
3202167	3928148	12/03/2018	6:24 pm	12/06/2018	3:14 pm	First Floor Room 152	< 0.4
3202168	3928149	12/03/2018	6:25 pm	12/06/2018	3:16 pm	First Floor Room 150	0.7
3202169	3928150	12/03/2018	6:26 pm	12/06/2018	3:17 pm	First Floor Room 155	0.7
3202170	3928171	12/03/2018	6:27 pm	12/06/2018	3:19 pm	First Floor Room 151	0.5
3202171	3928172	12/03/2018	6:27 pm	12/06/2018	3:19 pm	First Floor Room 151 Duplicate	0.5

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

Test Performed By: Lian Zadeng Distributed by: Intertek-PSI (VA) Date Received: 12/07/2018 Date Logged: 12/07/2018 Date Analyzed: 12/07/2018 Date Reported: 12/19/2018

Report Reviewed By: _

Report Approved By: Shawn Price, Director of Laboratory Operations, AccuStar Labs

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

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Disclaimer:



Laboratory Report for:

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

Property Tested: Project # 04481387-1

Intertek-PSI (VA)	MCPS Radon Survey Lakelands MS
2930 Eskridge Road	1200 Main Street
Fairfax VA 22031	Darnestown MD 20878

Log Number	Device Number		Test Expos	sure Duratio	n:	Area Tested	Result pCi/L
3202172	3928173	12/03/2018	6:27 pm	12/06/2018	3:19 pm	First Floor Room 142	< 0.4
3202173	3928174	12/03/2018	6:29 pm	12/06/2018	3:22 pm	First Floor Room 142A	< 0.4
3202174	3928175	12/03/2018	6:31 pm	12/06/2018	3:24 pm	First Floor Room 149	< 0.4
3202175	3928176	12/03/2018	6:31 pm	12/06/2018	3:24 pm	First Floor Room 149 Duplicate	< 0.4
3202176	3928177	12/03/2018	6:32 pm	12/06/2018	3:26 pm	First Floor Room 140B	0.5
3202177	3928178	12/03/2018	6:33 pm	12/06/2018	3:28 pm	First Floor Room 140	0.6
3202178	3928179	12/03/2018	6:34 pm	12/06/2018	3:30 pm	First Floor Room 143	0.4
3202179	3928180	12/03/2018	6:35 pm	12/06/2018	3:31 pm	First Floor Room 145	0.4
3202180	3926181	12/03/2018	6:37 pm	12/06/2018	3:33 pm	First Floor Room 145A	< 0.4
3202181	3926182	12/03/2018	6:38 pm	12/06/2018	3:35 pm	First Floor Room 100	< 0.4
3202182	3926183	12/03/2018	6:40 pm	12/06/2018	3:36 pm	First Floor Room 101	0.4

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

Test Performed By: Lian Zadeng

Distributed by: Intertek-PSI (VA)

Date Received: 12/07/2018 Date Logged: 12/07/2018

Date Analyzed: 12/07/2018 Date Reported: 12/19/2018

Disclaimer:

Report Reviewed By: _

Report Approved By:

Shawn Price, Director of Laboratory Operations, AccuStar Labs

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



Laboratory Report for:

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

Property Tested: Project # 04481387-1

Intertek-PSI (VA)	MCPS Radon Survey Lakelands MS
2930 Eskridge Road	1200 Main Street
Fairfax VA 22031	Darnestown MD 20878

Log Number	Device Number		Test Expos	sure Duratio	n:	Area Tested	Result pCi/L
3202183	3926184	12/03/2018	6:41 pm	12/06/2018	3:38 pm	First Floor Room 101	0.8
3202184	3926185	12/03/2018	6:42 pm	12/06/2018	3:39 pm	First Floor Room Kitchen	0.4
3202185	3926186	12/03/2018	6:43 pm	12/06/2018	3:40 pm	First Floor Room 101D	0.6
3202186	3926187	12/03/2018	6:44 pm	12/06/2018	3:41 pm	First Floor Room 101C2	< 0.4
3202187	3926188	12/03/2018	6:45 pm	12/06/2018	3:43 pm	First Floor Room 1011	< 0.4
3202188	3926189	12/03/2018	6:47 pm	12/06/2018	3:45 pm	First Floor Room 105	0.7
3202189	3926190	12/03/2018	6:47 pm	12/06/2018	3:45 pm	First Floor Room 105 Duplicate	0.7
3202190	3928211	12/03/2018	6:50 pm	12/06/2018	3:50 pm	First Floor Room 103	0.6
3202191	3928212	12/03/2018	6:52 pm	12/06/2018	3:52 pm	First Floor Room 103B	0.4
3202192	3928213	12/03/2018	6:53 pm	12/06/2018	3:54 pm	First Floor Room 103C	0.6
3202193	3928214	12/03/2018	6:54 pm	12/06/2018	3:56 pm	First Floor Room 103A	0.4

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

Test Performed By: Lian Zadeng

Distributed by: Intertek-PSI (VA)

Date Received: 12/07/2018 Date Logged:

ed: 12/07/2018

Date Analyzed: 12/07/2018

Date Reported: 12/19/2018

Report Reviewed By: _ Disclaimer:

Report Approved By:

Shawn Price, Director of Laboratory Operations, AccuStar Labs

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



Laboratory Report for:

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

Property Tested: Project # 04481387-1

Intertek-PSI (VA)	MCPS Radon Survey Lakelands MS
2930 Eskridge Road	1200 Main Street
Fairfax VA 22031	Darnestown MD 20878

Log Number	Device Number		Test Expos	sure Duratio	n:	Area Tested	Result pCi/L
3202194	3928215	12/03/2018	6:56 pm	12/06/2018	3:57 pm	First Floor Room 107 Gym	0.4
3202195	3928216	12/03/2018	6:57 pm	12/06/2018	3:59 pm	First Floor Room 107 Gym	0.4
3202196	3928217	12/03/2018	6:59 pm	12/06/2018	4:04 pm	First Floor Room 132	< 0.4
3202197	3928218	12/03/2018	6:59 pm	12/06/2018	4:04 pm	First Floor Room 132 Duplicate	0.5
3202198	3928219	12/03/2018	7:00 pm	12/06/2018	4:00 pm	First Floor Room 125	< 0.4
3202199	3928220	12/03/2018	7:05 pm	12/06/2018	4:05 pm	First Floor Room 130	< 0.4
3202200	3928151	12/03/2018	7:08 pm	12/06/2018	4:06 pm	First Floor Room 124	< 0.4
3202201	3928153	12/03/2018	7:11 pm	12/06/2018	4:10 pm	First Floor Room 120	0.6
3202202	3928152	12/03/2018	7:13 pm	12/06/2018	4:11 pm	First Floor Room 122	< 0.4
3202203	3928154	12/03/2018	7:14 pm	12/06/2018	4:12 pm	First Floor Room 109	0.4
3202204	3928155	12/03/2018	7:16 pm	12/06/2018	4:13 pm	First Floor Room 101	< 0.4

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

Test Performed By: Lian Zadeng										
Distributed by: Intertek-PSI (VA)										
Date Received: 12/07/2018 Date Logged		12/07/2018	Date Analyzed: 12/07/2018	Date Reported:	12/19/2018					

Report Reviewed By: _

Cantin

Report Approved By:

Shawn Price, Director of Laboratory Operations, AccuStar Labs

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

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.

Disclaimer:



Laboratory Report for:

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

Property Tested: Project # 04481387-1

Intertek-PSI (VA)	MCPS Radon Survey Lakelands MS		
2930 Eskridge Road	1200 Main Street		
Fairfax VA 22031	Darnestown MD 20878		

Log Number	Device Number		Test Expos	sure Duratio	n:	Area Tested	Result pCi/L
3202205	3928156	12/03/2018	7:18 pm	12/06/2018	4:15 pm	First Floor Room 102	< 0.4
3202206	3928157	12/03/2018	7:22 pm	12/06/2018	4:17 pm	First Floor Room 102A	0.4
3202207	3928158	12/03/2018	7:22 pm	12/06/2018	4:17 pm	First Floor Room 102A Duplicate	0.5
3202208	3928159	12/03/2018	7:27 pm	12/06/2018	4:18 pm	First Floor Room 102E	< 0.4
3202209	3928192	12/03/2018	7:28 pm	12/06/2018	4:19 pm	First Floor Room Ms Reed	< 0.4
3202210	3928193	12/03/2018	7:29 pm	12/06/2018	4:20 pm	First Floor Room 100B	< 0.4
3202211	3928194	12/03/2018	7:30 pm	12/06/2018	4:21 pm	First Floor Room 100C	< 0.4
3202212	3928196	12/03/2018	7:32 pm	12/06/2018	4:23 pm	First Floor Room 100D	< 0.4
3202213	3928197	12/03/2018	7:33 pm	12/06/2018	4:24 pm	First Floor Room 100G	0.4
3202214	3928160	12/03/2018	7:35 pm	12/06/2018	4:25 pm	First Floor Room 110F	0.4
3202215	3928161	12/03/2018	7:36 pm	12/06/2018	4:27 pm	First Floor Room 114	< 0.4

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

Test Performed By: Lian Zadeng Distributed by: Intertek-PSI (VA) Date Received: 12/07/2018 Date Logged: 12/07/2018 Date Analyzed: 12/07/2018 Date Reported: 12/19/2018

Report Reviewed By: _

Report Approved By:

Shawn Price, Director of Laboratory Operations, AccuStar Labs

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Disclaimer:



Laboratory Report for:

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

Property Tested: Project # 04481387-1

Intertek-PSI (VA)	MCPS Radon Survey Lakelands MS		
2930 Eskridge Road	1200 Main Street		
Fairfax VA 22031	Darnestown MD 20878		

Log Number	Device Number		Test Expos	sure Duratio	n:	Area Tested	Result pCi/L
3202216	3928162	12/03/2018	7:38 pm	12/06/2018	4:30 pm	First Floor Room 114A	< 0.4
3202217	3928163	12/03/2018	7:39 pm	12/06/2018	4:32 pm	First Floor Room 114B	0.7
3202218	3928164	12/03/2018	7:40 pm	12/06/2018	4:34 pm	First Floor Room 114D	0.7
3202219	3928165	12/03/2018	7:41 pm	12/06/2018	4:35 pm	First Floor Room 114E	0.6
3202220	3928166	12/03/2018	7:42 pm	12/06/2018	4:37 pm	First Floor Room 114F	< 0.4
3202221	3928167	12/03/2018	7:42 pm	12/06/2018	4:37 pm	First Floor Room 114F Duplicate	0.6
3202222	3928168	12/03/2018	7:45 pm	12/06/2018	4:39 pm	First Floor Room 114H	0.4
3202223	3928169	12/03/2018	7:47 pm	12/06/2018	4:40 pm	First Floor Room 100D	< 0.4
3202224	3928241	12/03/2018	7:33 pm	12/06/2018	4:35 pm	Floor Third Room 352	0.4
3202225	3928242	12/03/2018	7:35 pm	12/06/2018	4:37 pm	Floor Third Room 368	0.5
3202226	3928243	12/03/2018	7:37 pm	12/06/2018	4:39 pm	Floor Third Room 393	0.4

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

Test Performed By: Lian Zadeng

Distributed by: Intertek-PSI (VA)

Date Received: 12/07/2018 Date Logged:

12/07/2018 Date Ana

Date Analyzed: 12/07/2018 Date Reported: 12/19/2018

Disclaimer:

Report Reviewed By: _

Report Approved By:

Shawn Price, Director of Laboratory Operations, AccuStar Labs

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



Laboratory Report for:

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

Property Tested: Project # 04481387-1

Intertek-PSI (VA)	MCPS Radon Survey Lakelands MS		
2930 Eskridge Road	1200 Main Street		
Fairfax VA 22031	Darnestown MD 20878		

Log Number	Device Number		Test Expos	sure Duratio	n:	Area Tested	Result pCi/L
3202227	3928244	12/03/2018	7:39 pm	12/06/2018	4:40 pm	Floor Third Room 321	< 0.4
3202228	3928245	12/03/2018	7:41 pm	12/06/2018	4:41 pm	Floor Second Room 264	0.4
3202229	3928246	12/03/2018	7:43 pm	12/06/2018	4:42 pm	Floor Second Room 269	< 0.4
3202230	3928247	12/03/2018	7:45 pm	12/06/2018	4:43 pm	Floor Second Room 291	< 0.4
3202231	3928248	12/03/2018	7:47 pm	12/06/2018	4:43 pm	Floor Second Room 200	0.5
3202232	3928249	12/03/2018	7:49 pm	12/06/2018	4:44 pm	Floor Second Room 200	< 0.4
3202233	3928250	12/03/2018	7:50 pm	12/06/2018	4:45 pm	Floor Second Room 256	0.4
3202234	3917552	12/03/2018	6:00 am	12/06/2018	4:45 pm	Field Blank	< 0.4
3202235	3926655	12/03/2018	6:06 am	12/06/2018	4:45 pm	Field Blank	< 0.4
3202236	3926656	12/03/2018	6:06 am	12/06/2018	4:45 pm	Field Blank	< 0.4
3202237	3926666	12/03/2018	6:00 am	12/06/2018	4:45 pm	Field Blank	< 0.4

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

Test Performed By: Lian Zadeng								
Distributed by: Intertek-PSI (VA)								
Date Received: 12/07/2018	Date Logged:	12/07/2018	Date Analyzed: 12/07					

Date Analyzed: 12/07/2018 Date Reported: 12/19/2018

Disclaimer:

Report Reviewed By: _ Cantin

Report Approved By:

Shawn Price, Director of Laboratory Operations, AccuStar Labs

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



 NELAC NY 11769
 EPA Method #402-R-92-004

 NRPP 103216 AL
 Liquid Scintillation

 NRSB ARL0017
 NRPP Device Code 8088

 NRSB Device Code 12193
 NRSB Device Code 12193

 Laboratory Report for:
 Property Tested:

 Intertek-PSI (VA)
 MCPS Radon Survey

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

1200 Main Street Gaithersburg Maryland 20878 USA

Log Number	Device Number		Test Expos	sure Duration:	Area Tested	Result pCi/L
2391565	3888371	12/03/2018	7:10 pm	12/06/2018 4:08 pm	First Floor Room 122B	< 0.4
2391571	3888421	12/03/2018	6:10 pm	12/06/2018 2:45 pm	First Floor Room 169	0.7

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

Distributed by: Intertek-PSI (VA)

Date Received: 12/12/2018 Date Logged:

d: 12/12/2018

Date Analyzed: 12/08/2018 Date Reported: 01/02/2019

Disclaimer:

Report Reviewed By: _____

Report Approved By: Shawn Price, Director of Laboratory Operations, AccuStar Labs

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



Radon in Air

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

NRPP 105011 AL NRSB ARL0007 Ohio RL41

Laboratory Report for:

Property Tested:

Intertek-PSI (VA)	MCPS Radon Survey		
2930 Eskridge Road	4514 Taylorsville Road		
Fairfax VA 22031	Dayton OH 45424		

Log Number	Device Number		Test Expos	sure Duratio	n:	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: Unknow	n				
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 Review	ed By:	the Kartin	Report Approved By:	XX	
Disclaimer:		\sum	Shawn Price, Dire	ctor of Laboratory Oper	ations, AccuStar Labs
The uncertainty of this radon measure concentrations, sample collection tech	ment is ~+/- 10 %. Fa niques and operation o	ctors contributing to of the dwelling. Interfe	uncertainty include statistical variations, d erence with test conditions may influence	aily and seasonal variati the test results.	ions in radon
This report may only be transferred to	a third party in its optir	oty Applytical recults	relate to the samples AS RECEIVED BY		Posulta chown on

EXPOSURE IN BOWSER-MORNER RADON CHAMBER

CLIENT Intertal - PS	I	Job Number 187732	
NOMINAL Conditions: Radon Conc 33.6	pCi/L Rel. Hum	49.1 % Temp. 20.1	F
Date Start: 12/7/18 Date Stop: 12/10/18	P Date Start:	Date Stop:	
Time Start: <u>0947</u> Time Stop: <u>0947</u>	_ Time Start:	Time Stop:	
Device No.'s: (10) Char. Cans-	Device No.'s:_		
3926831 thro 3926840			
		6	
G2 Laft			
Date Start: Date Stop:	Date Start:	Date Stop:	
Time Start: Time Stop:	Time Start:	Time Stop:	
Device No.'s:	Device No.'s:_	24	
Date Start: Date Stop:	Date Start:	Date Stop:	
Time Start: Time Stop:	Time Start:	Time Stop:	
Device No.'s:	Device No.'s:		

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



Chain of Custody

Project Name: MCPS Radon Survey 2018

Name of Schools:

- 1. Ewing Center
- 2. Department of Food & Nutrition Services
- 3. Damascus HS
- 4. Edison HS
- 5. Emory Grove Center
- 6. John Poole MS
- 7. Lakelands Park MS
- 8. Laytonsville ES
- 9. Gaithersburg HS
- 10. Neelsville MS
- 11. Sequoyah ES
- 12. Clarksburg ES Annex

- 13. Garrett Park ES Annex
- 14. Goshen ES
- 15. Kingsley Wilderness Center
- 16. Kensington Parkwood ES
- 17. Monocacy ES
- 18. Lakewood ES
- 19. Little Bennett ES
- 20. Lois P. Rockwell ES
- 21. Olney ES
- 22. North Chevy Chase ES
- 23. Woodfield ES
- 24. Wootton HS

	Date	Initials
Radon Test Kits Deployed	12/03/2018	NL
Radon Test Kits Sampled	12/06/2018	ML
Radon Test Kits Shipped to Lab*	12/06/2018	NL
Padon Tost Kits Passived by Lab*	12/07/2018;	1.0
	12/08/2018	NL

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

1200 Main Street, Gaithersburg, Maryland 20878

Date of Test Report:	4/12/16 Follow-Up	
Round of Testing:	Initial	
	Follow-up	
	Post Remediation	
# Rooms Tested	1	
# Rooms <u>></u> 4.0 pCi/L:	0	
Low Value:	<0.4	
High Value:	<0.4	
Confirmed Rooms ≥ 4.0 pCi/L US EPA	0	
Action Level		

EXECUTIVE SUMMARY

Summary of Sampling Events ≥ 4.0 pCi/L

Room	Result (pCi/L) 2/17/16 Initial	Result (pCi/L) 4/12/16 Follow-Up	Average Result (pCi/L)
114A	Missing	<0.4	<0.4



936 RIDGEBROOK ROAD • SPARKS, MD 21152 • 410-316-7800 • (FAX) 410-316-7935

MCPS RADON TESTING

Executive Summary: Lakelands Park Middle School

Date of Test Report:	4/12/2016
Round of Testing:	Initial
	Follow-up
	Post Remediation
# Rooms Tested:	1
# Rooms \geq 4.0 pCi/L:	0
Low Value:	< 0.4
High Value:	< 0.4

Project Status: Retesting completed; no further action at this time.



ENGINEERS • PLANNERS • SCIENTISTS • CONSTRUCTION MANAGERS

936 RIDGEBROOK ROAD • SPARKS, MD 21152 • 410-316-7800 • (FAX) 410-316-7935

April 12, 2016

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

Re:	Radon Testing Services		
	KCI Job # 12146341.31		
Location:	Lakelands Park Middle School		
	1000 14 ' 04 4		

1200 Main Street Gaithersburg, MD 20878

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 Lakelands Park Middle School, located at 1200 Main Street in Gaithersburg, Maryland 20878 (subject site).

Scope of Services:

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

KCI visited the site on March 8, 2016 and deployed one (1) activated charcoal (AC) radon test kit. 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 location is included as Attachment A of this report.

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

KCI returned to the site on March 11, 2016 to retrieve the radon sampling test kits. KCI shipped all radon tests via overnight delivery to AccuStar Labs for analysis by gamma-ray spectroscopy. Accustar Labs is a NRSB certified analytical laboratory for radon analysis (certification # ARL0007) located at 929 Mount

Zion Road, Lebanon, Pennsylvania.

Evaluation of Testing Conditions:

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

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

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

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

Results:

The results of the radon test analysis indicated the following:

Radon Concentration	Room	Result
≥4.0 piC/L	none	n/a
<4.0 piC/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. 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.

Mr. Richard Cox March 12, 2016 Page 4

Sincerely,

James Makler

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

Attachments:

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

ATTACHMENT A

Floor Plan With Test Locations

ATTACHMENT B

Radon Test Summary Spreadsheet

Table Notes:

- AC- Activated Charcoal
- ACI- Air Chek, Inc.
- **D-** Duplicate
- FB- Field Blank
- KCI- KCI Technologies, Inc.
- **OB- Office Blank***
- PM- Project Manager
- QC- Quality Control

*Office blanks were submitted at a rate of 1% for all samples deployed in Phase 11 testing. Office blanks were not submitted under each school individually.

Radon Testing Results			
Lakelands Park Middle School			
Test Period: 03/08/16-03/11/16			
Kit Number	Room / Area	Result	
3029011	114A	<0.4	

ATTACHMENT C

Laboratory Analytical Results



Radon in Air

NRPP 10511AL NRSB ARL0007	EPA Method #402-R-92-004 Charcoal Canister NRPP Device Code 6048 NRSB Device Code 10317
Laboratory Report for:	Property Tested: Project # 12146341
KCI Technologies	Lakelands MS
936 Ridgebrook Rd	1200 Main St
Sparks MD 21152	Gaithersburg MD 20878

Log Number	Device Number	Test Exposu	re Duration:	Area Tested	Result (pCi/L)
3016769	3029011	03/08/2016 2:47 pm	03/11/2016 12:15 pm	Unit 114A First Floor	<0.4

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

Distributed by: KCI Technologies, Inc.

Date Received: 03/15/2016 Date Logged:

03/15/2016

Date Analyzed: 03/16/2016

Date Reported: 03/16/2016

Disclaimer:

Report Reviewed By: ______ Report Approved By: ______ Report Approved By: ______ Carolyn D. Koke, President, AccuStar Labs

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

AccuStar Labs	11 Awl Street	Medway MA 02053
Ann Ctor	しつううううく	Professional Radon Laboratory Services Since 1984

888.480-8812 Radon Device Type Open Face Canister www.accustarlabs.com

Send Written Report To:

Site Tested:

Name	KCI Technologies, Inc	Site Name	Lakelands NAS
Address	936 Ridgebrook Road	Address	1200 Main St.
Address		Address	
City / Town	Sparks	City / Town	Co Abersburg
State/Province	Postal Code MD 21152	State/Province	Postal Code MD
Report Country	/ Baltimore County	Test Country	Montgomery County
Email Address	tehsin@kci.com	Project Numbe	r 12146341

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Contact	Tehsin Aurangabadwala
Telephone	410-891-1726
Technician	
Cert Number	
Signature	

20878

Lab Use Only						
Stop Time	12:15					
Stop Date	03/11/2016					
Start Time	[4:47					
Start Date	03/08/2016					
Name of Room	130					
Floor	į					
Unit Number	1(4 A					
Building Number						
Device Number	302904					
Lab Use Only						

Test must start before the expiration date shown on your device or test results will be invalid



Laboratory Report for:

NRPP 10511AL

NRSB ARL0007

Radon in Air

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

Property Tested: Project # 12146341

MCPS Radon Phase 11 Office Blank

KCI Technologies 936 Ridgebrook Rd Sparks MD 21152

Log Number	Device Number	Test Exposur	e Duration:		Area Tested	Resul	t (pCi/L)
3016739	3029191	03/08/2016 10:00 am	03/11/2016	10:00 am	Office Blank		<0.4

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

Distributed by: KCI Technologies, Inc.

Date Received: 03/15/2016 Date Logged:

ogged: 03/15/2016

Date Analyzed: 03/15/2016 Date Reporte

Date Reported: 03/16/2016

Disclaimer:

Report Reviewed By: ___ effry Cartin

Report Approved By: ______ Report Approved By: ______ Carolyn D. Koke, President, AccuStar Labs

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

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Professional Radon Lab	Send Writte	Name	Address	Address	City / Town	State/Provin	Report Cour	Email Addre	Lab Use Only						

Test must start before the expiration date shown on your device or test results will be invalid

Rev E1512

1 of 1



Radon in Air

				EPA Method #402-R-92-004
NRPP 10	0511AL			Charcoal Canister
NRSB A	RL0007			NRPP Device Code 6048
				NRSB Device Code 10317
Labora	atory Report	for:	Property Tested:	
		!	MORO	
ł		ogies	MCP5	
ę	936 Ridgebro	ook Rd	Transit Blanks	
5	Sparks MD	21152		
Log Number	Device Number	Test Exposure Duration:	Area Tested	Result (pCi/L)
3010588	3028053	01/10/2016 1.00 pm $01/22/2016$ 9.30	am 1	< 0.4

Turnbol	Hambol				
3010588	3028953	01/19/2016 1:00 pm	01/22/2016 9:30 am	1	<
3010589	3028955	01/19/2016 1:00 pm	01/22/2016 9:30 am	2	<
3010590	3028954	01/19/2016 1:00 pm	01/22/2016 9:30 am	3	<
3010591	3028997	01/19/2016 1:00 pm	01/22/2016 9:30 am	4	<

Comment: AMENDED REPORT for 3028953-8955, 3028997 on 2/22/16 to add all missing information from the blank datasheet. A copy of this report was emailed to james.moulsdale@kci.com.

Distributed by: KCI Technologies, Inc. Date Received: 01/27/2016 Date Logged: 01/27/2016 Date Analyzed: 01/28/2016 Date Reported: 01/28/2016 Report Reviewed By: Cruese Bates Report Approved By: Cruely D. Koke

Disclaimer:

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

Return canisters for analysis to: AccuStar Labs 929 Mt. Zion Rd., Lebanon, PA 17046 RECEIVED JA 800-523-4964	Accus AN 2NF/DRMAT	Star Lab ION FO rojects	s – Lebanc RM - Large - Apartmer	on, PA Buildings - its	Instr Read Disc	uctions on bac l instructions o repancies will	ck of fo carefull invalid	rm y ate tests	
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TCS INDUSTRIES, INC.

(717) 657-7032

RADON GAS DETECTION

www.radondetek.com

4326 Crestview Road, Harrisburg, PA 17112

James Moulsdale KCI 936 Ridgebrook Rd. Sparks, MD 21152 April 04, 2016

Dear Mr. Moulsdale:

The spike exposure data were:

Start 04/04/16 @ 1110 hrs EDT End 04/06/16 @ 1113 hrs EDT

AC 3029218, 3029219, 3029220, 3029217, 3029214, 3029217, and 3029166

Average radon concentration was 10.6 pCi/L +/- 5%

Avg, Temp. was 71FAvg. RHwas 51%Elevationwas 490 feet above sea level

Sincerely,

Cut

Carl H. Distenfeld, CHP


NRPP 10511AL NRSB ARL0007

Laboratory Report for:

KCI Technologies

936 Ridgebrook Rd Sparks MD 21152 EPA Method #402-R-92-004 Charcoal Canister NRPP Device Code 6048 NRSB Device Code 10317

Property Tested:

MCPS Radon Spike Sample Laboratory Results

Log Number	Number	Test Exposur	e Duration:	Area Tested	Result (pCi/L)
3020102	3029166	04/04/2016 11:10 am	04/06/2016 11:1	3 am Not Indicated	11.9
3020103	3029214	04/04/2016 11:10 am	04/06/2016 11:1	3 am Not Indicated	11.5
3020104	3029217	04/04/2016 11:10 am	04/06/2016 11:1	3 am Not Indicated	10.7
3020105	3029218	04/04/2016 11:10 am	04/06/2016 11:1	3 am Not Indicated	11.3
3020106	3029219	04/04/2016 11:10 am	04/06/2016 11:1	3 am Not Indicated	11.0
3020107	3029220	04/04/2016 11:10 am	04/06/2016 11:1	3 am Not Indicated	10.5

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

Distributed by: KCI Technolo	gies, Inc.					
Date Received: 04/07/2016	Date Logged:	04/07/2016	Date Analyzed:	04/07/2016	Date Reported:	04/08/2016
Note: Spike samples are test canisters t They provide a quality control measur tested.	hat are deliberately exp e in the testing process	osed to a controlled h and do NOT reflect ra	igh level of radon in a lat Idon levels in the buildin	boratory. g being		
Report Review Disclaimer: The uncertainty of this radon measu concentrations, sample collection ter	red By:	Factors contributing	Report Approv	ed By: Carolyn statistical variatio ditions may influ	D. Koke, President, Ad ns, daily and seasonal ence the test results.	ccuStar Labs variations in radon

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.

PO BOX 990 Jonestown PA 17038 717-274-8310

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Test must start before the expiration date shown on your device or test results will be invalid

1 of 1

Rev E1512



936 RIDGEBROOK ROAD • SPARKS, MD 21152 • 410-316-7800 • (FAX) 410-316-7935

MCPS RADON TESTING

Executive Summary: Lakelands Park Middle School

Date of Test Report:	2/17/2016
Round of Testing:	Initial
	Follow-up
	Post Remediation
# Rooms Tested:	64
# Rooms \geq 4.0 pCi/L:	0
Low Value:	< 0.3
High Value:	1.0

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



ENGINEERS • PLANNERS • SCIENTISTS • CONSTRUCTION MANAGERS

936 RIDGEBROOK ROAD • SPARKS, MD 21152 • 410-316-7800 • (FAX) 410-316-7935

February 17, 2016

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

Re:	Radon Testing Services
	KCI Job # 12146341.25
Location:	Lakelands Park Middle School 1200 Main Street

Gaithersburg, MD 20878

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 Lakelands Park Middle School, located at 1200 Main Street in Gaithersburg, Maryland 20878 (subject site).

Scope of Services:

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

KCI visited the site on January 19, 2016 and deployed seventy-eight (78) activated charcoal (AC) radon test kits. KCI deployed radon test kits in frequently-occupied ground contact rooms, and other areas, (if applicable) in accordance with AARST guidance. A floor plan map of the building with the test locations is included as Attachment A of this report.

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

KCI returned to the site on January 22, 2016 to retrieve the radon sampling test kits. KCI shipped all radon tests via overnight delivery to Airchek, Inc. for analysis by gamma-ray spectroscopy. Airchek, Inc. is a NRSB certified analytical laboratory for radon analysis (certification # ARL1402) located at 1936

Butler Bridge Road, Mills River, North Carolina.

Evaluation of Testing Conditions:

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

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

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

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

Results:

The results of the radon test analysis indicated the following:

Radon Concentration	Room	Result	
≥4.0 piC/L	none	n/a	
<4.0 piC/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.

Mr. Richard Cox February 17, 2016 Page 4

Sincerely,

James Makler

James M. Moulsdale 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						
Lakelands Park Middle School Test Period: 01/19/16-01/22/16							
						Kit Number Decult	
7710675	102						
7719075	102	< 0.3 0.6					
7710683	105	0.0					
7719650	105	< 0.3					
7710671	100	1					
7722226	11/	< 0.3					
7714101	120	0.5					
7719676	120	< 0.3					
7719686	122	< 0.3					
7719687	140	< 0.3					
7714109	140	< 0.3					
7710520	143	0.0					
7710670	145	0.0					
7710696	149	< 0.3					
7719684	150	1					
7714113	150	< 0.3					
7719688	157	0.0					
7710668	152	< 0.3					
7710689	156	0.0					
771/108	150	< 0.7					
7714130	158	< 0.3					
7714104	160	0.0					
7710685	160	0.0					
7710692	166	0.7					
7719681	167	< 0.3					
7710699	168	0.5					
7714116	173	< 0.3					
7714135	176	< 0.3					
7714115	178	0.6					
7719685	180	0.7					
7714110	190	0.6					
7714120	191	0.6					
7722227	193	0.7					
7714132	250	0.6					
7714111	251	< 0.3					
7714121	252	< 0.3					
7719693	257	< 0.3					
7719689	258	< 0.3					
7710666	259	< 0.3					
7710698	357	< 0.3					
7710695	366	< 0.3					
7714106	368	0.6					
7710697	374	0.6					
7710700	376	< 0.3					
7714125	378	< 0.3					
772224	100B	0.5					

	Radon Testing Results						
	Lakelands Park Middle School Test Period: 01/19/16-01/22/16						
Kit Number	Room / Area	Result					
7722240	100C	0.7					
7722222	100D	0.7					
7722225	100F	< 0.3					
7708683	100G	< 0.3					
7722212	100H	0.9					
7719690	1011	0.7					
7722243	102A	0.6					
7722219	* 114A (missing)	0					
7722207	114B	< 0.3					
7722221	114D	0.7					
7722234	114E	1					
7722223	114F	< 0.3					
7722216	114H	0.8					
7719694	CAFE	0.6					
7722244	CAFE	< 0.3					
7719679	GYM	< 0.3					
7719680	GYM	< 0.3					
7722220	MAIN OFFICE	< 0.3					
7714102	MEDIA	< 0.3					
7719677	MEDIA	< 0.3					
7712894	R1	0.6					

	Radon Testing Results						
	Lakelands Park Middle School						
	Test Period: 01/19/16-01/22/16						
Kit Number	QC Type	Result					
7719682	D (103)	< 0.3					
7722203	D (114)	< 0.3					
7714105	D (143)	0.7					
7710694	D (145)	0.6					
7710693	D (166)	< 0.3					
7714117	D (190)	< 0.3					
7719691	D (258)	< 0.3					
7719678	D (CAFE)	0.6					
7714112	FB (140)	< 0.3					
7714118	FB (258)	< 0.3					
7722214	OB (0)	< 0.3					

ATTACHMENT C

Laboratory Analytical Results

February LABORATORY ANALYSIS 11, REPORT **

Radon test result report for: LAKELANDS PARK MIDDLE SCHOOL MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7722214	0	2016-01-19 @ 5:00 pm	2016-01-22 @ 11:00 am	< 0.3	2016-01-27
7722224	100B	2016-01-19 @ 9:00 am	2016-01-22 @ 8:00 am	0.5 ± 0.3	2016-01-26
7722240	100C	2016-01-19 @ 9:00 am	2016-01-22 @ 8:00 am	0.7 ± 0.3	2016-01-26
7722222	100D	2016-01-19 @ 9:00 am	2016-01-22 @ 8:00 am	0.7 ± 0.3	2016-01-26
7722225	100F	2016-01-19 @ 9:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7708683	100G	2016-01-19 @ 9:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7722212	100H	2016-01-19 @ 9:00 am	2016-01-22 @ 8:00 am	0.9 ± 0.3	2016-01-26
7719690	101I	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	0.7 ± 0.3	2016-01-26
7719675	102	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7722243	102A	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	0.6 ± 0.3	2016-01-26
7722241	103	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	0.6 ± 0.3	2016-01-26
7719682	103	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7719683	105	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7719650	106	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7710671	109	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	1.0 ± 0.3	2016-01-26
7722226	114	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7722203	114	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7722219	114A	@	@		
7722207	114B	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7722221	114D	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	0.7 ± 0.3	2016-01-26
7722234	114E	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	1.0 ± 0.3	2016-01-26
7722223	114F	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7722216	114H	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	0.8 ± 0.3	2016-01-26
7714101	120	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	0.6 ± 0.3	2016-01-26
7719676	122	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7719686	124	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7714112	140	2016-01-19 @ 11:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7719687	140	2016-01-19 @ 11:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7714109	142	2016-01-19 @ 11:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7710520	143	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	0.6 ± 0.3	2016-01-26
7714105	143	2016-01-19 @ 11:00 am	2016-01-22 @ 7:00 am	0.7 ± 0.3	2016-01-26
7710670	145	2016-01-19 @ 12:00 pm	2016-01-22 @ 8:00 am	0.8 ± 0.3	2016-01-26
7710694	145	2016-01-19 @ 12:00 pm	2016-01-22 @ 7:00 am	0.6 ± 0.3	2016-01-26
7710696	149	2016-01-19 @ 12:00 pm	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7719684	150	2016-01-19 @ 11:00 am	2016-01-22 @ 8:00 am	1.0 ± 0.4	2016-01-27
7714113	151	2016-01-19 @ 11:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7719688	152	2016-01-19 @ 11:00 am	2016-01-22 @ 8:00 am	0.6 ± 0.3	2016-01-26

February LABORATORY ANALYSIS 11, REPORT **

Radon test result report for: LAKELANDS PARK MIDDLE SCHOOL MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7710668	155	2016-01-19 @ 11:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7710689	156	2016-01-19 @ 11:00 am	2016-01-22 @ 8:00 am	0.7 ± 0.3	2016-01-26
7714108	157	2016-01-19 @ 11:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7714130	158	2016-01-19 @ 11:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7714104	160	2016-01-19 @ 11:00 am	2016-01-22 @ 8:00 am	0.6 ± 0.3	2016-01-26
7710685	164	2016-01-19 @ 11:00 am	2016-01-22 @ 8:00 am	0.7 ± 0.3	2016-01-26
7710692	166	2016-01-19 @ 11:00 am	2016-01-22 @ 7:00 am	0.9 ± 0.3	2016-01-26
7710693	166	2016-01-19 @ 11:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7719681	167	2016-01-19 @ 11:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7710699	168	2016-01-19 @ 11:00 am	2016-01-22 @ 7:00 am	0.5 ± 0.3	2016-01-26
7714116	173	2016-01-19 @ 11:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7714135	176	2016-01-19 @ 11:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7714115	178	2016-01-19 @ 11:00 am	2016-01-22 @ 7:00 am	0.6 ± 0.3	2016-01-26
7719685	180	2016-01-19 @ 11:00 am	2016-01-22 @ 7:00 am	0.7 ± 0.3	2016-01-26
7714117	190	2016-01-19 @ 11:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7714110	190	2016-01-19 @ 11:00 am	2016-01-22 @ 7:00 am	0.6 ± 0.3	2016-01-26
7714120	191	2016-01-19 @ 11:00 am	2016-01-22 @ 7:00 am	0.6 ± 0.3	2016-01-26
7722227	193	2016-01-19 @ 11:00 am	2016-01-22 @ 7:00 am	0.7 ± 0.3	2016-01-26
7714132	250	2016-01-19 @ 12:00 pm	2016-01-22 @ 8:00 am	0.6 ± 0.3	2016-01-26
7714111	251	2016-01-19 @ 12:00 pm	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7714121	252	2016-01-19 @ 12:00 pm	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7719693	257	2016-01-19 @ 12:00 pm	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7714118	258	2016-01-19 @ 12:00 pm	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7719689	258	2016-01-19 @ 12:00 pm	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7719691	258	2016-01-19 @ 12:00 pm	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7710666	259	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7710698	357	2016-01-19 @ 12:00 pm	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7710695	366	2016-01-19 @ 12:00 pm	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7714106	368	2016-01-19 @ 12:00 pm	2016-01-22 @ 8:00 am	0.6 ± 0.3	2016-01-26
7710697	374	2016-01-19 @ 12:00 pm	2016-01-22 @ 8:00 am	0.6 ± 0.3	2016-01-26
7710700	376	2016-01-19 @ 12:00 pm	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7714125	378	2016-01-19 @ 12:00 pm	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7722244	CAFE	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7719678	CAFE	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	0.6 ± 0.3	2016-01-26
7719694	CAFE	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	0.6 ± 0.3	2016-01-26
7719679	GYM	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7719680	GYM	2016-01-19 @ 10:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-26

February LABORATORY ANALYSIS 11, REPORT **

Radon test result report for: LAKELANDS PARK MIDDLE SCHOOL MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7722220	MAIN OFFICE	2016-01-19 @ 9:00 am	2016-01-22 @ 7:00 am	< 0.3	2016-01-26
7719677	MEDIA	2016-01-19 @ 12:00 pm	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7714102	MEDIA	2016-01-19 @ 12:00 pm	2016-01-22 @ 8:00 am	< 0.3	2016-01-26
7712894	R1	2016-01-19 @ 9:00 am	2016-01-22 @ 8:00 am	0.6 ± 0.3	2016-01-26

February LABORATORY ANALYSIS 2, REPORT **

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

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

February LABORATORY ANALYSIS 15, 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 Technologie	5 Inc. Job Number 173704		
NOMINAL Conditions: Radon Conc 5.9	pCi/L Rel. Hum <u>45.9</u> % Temp. <u>79.0</u>		
Date Start: 1/30/16 Date Stop: 2/1/16	Date Start: Date Stop:		
Time Start: <u>9926</u> Time Stop: <u>996</u>	Time Start: Time Stop:		
Device No.'s: (6) Char. Bago-	Device No.'s:		
, ופבצורר, בוצבצורר אוצבצורר			
7718288, 7718289, 7718273			
E3 Left			
Date Start: Date Stop:	Date Start: Date Stop:		
Time Start: Time Stop:	Time Start: Time Stop:		
Device No.'s:	Device No.'s:		
Date Start: Date Stop:	Date Start: Date Stop:		
Time Start: Time Stop:	Time Start: Time Stop:		
Device No.'s:	Device No.'s:		
	·*		

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



ENGINEERS · PLANNERS · SCIENTISTS · CONSTRUCTION MANAGERS

Corporate Office: 936 Ridgebrook road • Sparks , Maryland 21152 • 410-316-7800 • (Fax) 410-316-7935

Chain of Custody

Project Name: MCPS Radon Phase VI

Name of Schools:

- 1. Francis Scott Key MS
- 2. Gaithersburg ES
- 3. Gaithersburg MS
- 4. Galway ES
- 5. Great Seneca Creek ES
- 6. Harmony Hills ES
- 7. John Poole MS
- 8. Judith A. Resnik ES
- 9. Kemp Mill ES
- 10. Kingsview MS
- 11. Lakelands Park MS

13. Loiderman MS

12. Little Bennett ES

- 14. Longview ES
- 15. Meadow Hall ES
- 16. Neelsville MS
- 17. New Hampshire Estates ES
- 18. North Bethesda MS
- 19. Northwest HS
- 20. Pine Crest ES
- 21. Radnor Center
- 22. Ritchie Park ES

- 23. Rolling Terrace ES
- 24. Roscoe Nix ES
- 25. Sally K. Ride ES
- 26. Spark Matsunaga ES
- 27. Tacoma Park ES
- 28. Thomas Pyle MS
- 29. Wayside ES
- 30. Westbrook ES (retest)
- 31. Westland MS (retest)
- 32. William B. Gibbs ES
- 33. William Tyler Page ES

	Date	Initials
Radon Test Kits Deployed	1/19/16	JM
Radon Test Kits Sampled	1/22/16	JM
Radon Test Kits Shipped to Lab*	1/22/16	JM
Radon Test Kits Received by Lab*	1/26/16	JM

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