



MCPS RADON TESTING – EXECUTIVE SUMMARY

Site Name	Kingsview Middle School
Date of Test Report	2/20/2023
Round of Testing	Initial Follow-up Post Remediation 2 Year Testing 5 Year Testing HVAC Upgrade Window Replacement New Addition New Facility
# Rooms Tested	89
# Rooms Re-tested	4
# Rooms \geq 4.0 pCi/L	0
Lowest Value	<0.3 pCi/L
Highest Value	1.1 pCi/L

Project Status:

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



February 20, 2023

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

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

Location: Kingsview Middle School
18909 Kingsview Road
Germantown, MD 20874

Dear Mr. Croyle:

KCI Technologies, Inc. (KCI) is pleased to submit the following report to Montgomery County Public Schools (MCPS) pursuant to completing a “short-term” 3 day radon test for the Beall Elementary School, located at 451 Beall Avenue in Rockville, Maryland 20850 (subject site).

Scope of Services:

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

KCI visited the site initially on December 5, 2022 and deployed sixty-six (66) activated charcoal (AC) radon test kits. KCI deployed radon test kits in all frequently-occupied ground contact rooms, and other areas, (if applicable) in accordance with AARST guidance.

KCI returned to the site on December 8, 2022 to retrieve initial testing radon sampling test kits. KCI shipped all radon tests via overnight delivery to Airchek, Inc. for analysis by gamma-ray spectroscopy. Airchek, Inc. is a NRSB certified analytical laboratory for radon analysis (certification # ARL1402) located at 1936 Butler Bridge Road, Mills River, North Carolina.

KCI re-visited the site on January 31, 2023 to deploy seven (7) activated charcoal (AC) radon test kits for testing of missed rooms or compromised test kits during initial testing.

KCI returned to the site on February 3, 2023 to retrieve the radon re-sampling test kits. KCI shipped all radon tests via overnight delivery to Accustar Labs – MA for analysis by gamma-ray spectroscopy. Accustar Labs – MA is a NRSB certified analytical laboratory for radon analysis (certification #ARL0017) located at 2 Saber Way, Ward Hill, MA 01835.

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

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

Evaluation of Testing Conditions:

These tests represent:

- Follow up to initial testing.

These tests were conducted to:

- Evaluated radon concentrations at the facility.

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

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

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

KCI also compiled weather data for the testing period and conducted observations of relevant field conditions. During the initial test period, weather records indicate low temperatures were in the 20s°F and high temperatures ranged to the mid-50s°F. Maximum sustained winds ranged from 0-12 miles per hour. Average humidity was around 75% with .04 inches of precipitation (rain) was recorded during testing period.

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

Results:

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

The results of the radon test analysis indicated the following:

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

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

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

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

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

Sincerely,



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

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

ATTACHMENT A

Floor Plan With Test Locations

ATTACHMENT B

Radon Test Summary Spreadsheet

Table Notes:

AC- Activated Charcoal

ACI- Air Check, Inc.

D- Duplicate

FB- Field Blank

KCI- KCI Technologies, Inc.

OB- Office Blank

PM- Project Manager

OC- Quality Control

Table 1- Radon Testing Results		
Kingsview MS		
Test Period: 12/13/2022 - 12/20/2022		
Kit Number	Room / Area	Result
11288006	A109	< 0.3
11288012	A112	< 0.3
11288005	A114	< 0.3
11288023	APR	< 0.3
11288027	APR	< 0.3
11288009	Aux Gym	< 0.3
11288029	Aux Gym	< 0.3
11288003	Aux Gym 2	< 0.3
11288016	B108	0.6
11288020	B109	0.5
11288015	B110	1.1
11288021	BS Office	< 0.3
11288031	C106	< 0.3
11288043	C107	< 0.3
11288039	C109	0.5
11288080	C110	< 0.3
11288088	C111	< 0.3
11288035	C112	< 0.3
11288048	C114	< 0.3
11288041	C115	< 0.3
11288042	C115	< 0.3
11288044	C116	< 0.3
11288045	C117	< 0.3
11288046	C118	< 0.3
11288036	C119	< 0.3
11288037	C120	< 0.3
11288062	C132	< 0.3
11288024	C135	< 0.3
11288030	C136	< 0.3
11288059	C147	< 0.3
11288084	C148 TV	< 0.3
11288100	C150	< 0.3
11288007	C157	< 0.3
11288049	C159	< 0.3
11288061	C159	< 0.3
11288086	C160	< 0.3
11288094	C160	< 0.3
11288060	C161	< 0.3
11288033	Counseling	< 0.3
11288097	D104	< 0.3
11288068	D104 Office	< 0.3
11288053	D107	< 0.3

Table 1- Radon Testing Results		
Kingsview MS		
Test Period: 12/13/2022 - 12/20/2022		
Kit Number	Room / Area	Result
11288017	D109	< 0.3
11288050	D110	< 0.3
11288056	D111	< 0.3
11288025	D112	< 0.3
11288069	D113	< 0.3
11288074	D113	< 0.3
11288081	D115	< 0.3
11288073	D117	N/A
11288087	D117	N/A
11288055	D130	< 0.3
11288064	D130	< 0.3
11288054	D130B	< 0.3
11288085	D131	< 0.3
11288004	E105	< 0.3
11288001	E106	< 0.3
11288002	E106	< 0.3
11288071	E107	< 0.3
11288072	E108	< 0.3
11288026	E109	< 0.3
11288075	E111	< 0.3
11288032	E112	< 0.3
11288077	E113	< 0.3
11288018	E114	N/A
11288013	E118	< 0.3
11288070	E119	< 0.3
11288010	E122	< 0.3
11288014	E122	< 0.3
11288011	E123	< 0.3
11288079	E130	< 0.3
11288098	E131	< 0.3
11288076	E132	< 0.3
11288099	E132	< 0.3
11288078	E133	< 0.3
11288066	E205	< 0.3
11288057	E213	< 0.3
11288058	E219	< 0.3
11288067	E222	< 0.3
11288065	E223	< 0.3
11288008	Gym	< 0.3
11288038	Gym	N/A
11288019	Kitchen Office	< 0.3
11288047	Main Office	< 0.3

Table 1- Radon Testing Results		
Kingsview MS		
Test Period: 12/13/2022 - 12/20/2022		
Kit Number	Room / Area	Result
11288093	Media	< 0.3
11288096	Media	< 0.3
11288034	Nurse C137	< 0.3
11288022	Stage	< 0.3
11288028	Stage	< 0.3
11288040	Workroom	< 0.3

Table 2- Radon Testing Results			
Kingsview MS			
Test Period: 12/13/22 - 12/20/22			
Kit Number	QC Type	Room / Area	Result
11288023	D	APR	< 0.3
11288041	D	C115	< 0.3
11288049	FB	C159	< 0.3
11288094	D	C160	< 0.3
11288069	D	D113	< 0.3
11288087	FB	D117	N/A
11288064	D	D130	< 0.3
11288010	FB	E122	< 0.3
11288076	D	E132	< 0.3
11288038	D	Gym	N/A
11288028	FB	Stage	< 0.3
11286988	OB	OFFICE BLANK	< 0.3
11286990	TB	TRAVEL BLANK	< 0.3

Table 1- Radon Testing Results		
Kingsview MS RT		
Test Period: 01/31/2023 - 02/03/2023		
Kit Number	Room / Area	Result
11288283	CONFERENCE	< 0.3
11288284	CONFERENCE	< 0.3
11288291	CONFERENCE	< 0.3
11288276	D117	< 0.3
11288282	E114	< 0.3
11288278	GYM	0.5
11288281	GYM	< 0.3

Table 2- Radon Testing Results			
Kingsview MS RT			
Test Period: 01/31/23 - 02/03/23			
Kit Number	QC Type	Room / Area	Result
11288284	D	Conference	< 0.3
11288283	FB	Conference	< 0.3
11634990	OB	OFFICE BLANK	< 0.3
11634991	TB	TRAVEL BLANK	< 0.3

ATTACHMENT C

Laboratory Analytical Results

Radon test result report for:

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11288006	A109	2022-12-13 @ 9:00 am	2022-12-20 @ 8:00 am	< 0.3	2022-12-22
11288012	A112	2022-12-13 @ 9:00 am	2022-12-20 @ 8:00 am	< 0.3	2022-12-22
11288005	A114	2022-12-13 @ 9:00 am	2022-12-20 @ 8:00 am	< 0.3	2022-12-22
11288027	APR	2022-12-13 @ 8:00 am	2022-12-20 @ 8:00 am	< 0.3	2022-12-22
11288023	APR	2022-12-13 @ 8:00 am	2022-12-20 @ 8:00 am	< 0.3	2022-12-22
11288009	AUX GYM	2022-12-13 @ 9:00 am	2022-12-20 @ 8:00 am	< 0.3	2022-12-22
11288029	AUX GYM	2022-12-13 @ 9:00 am	2022-12-20 @ 8:00 am	< 0.3	2022-12-22
11288003	AUX GYM 2	2022-12-13 @ 9:00 am	2022-12-20 @ 9:00 am	< 0.3	2022-12-22
11288016	B108	2022-12-13 @ 8:00 am	2022-12-20 @ 8:00 am	0.6 ± 0.3	2022-12-22
11288020	B109	2022-12-13 @ 8:00 am	2022-12-20 @ 8:00 am	0.5 ± 0.3	2022-12-22
11288015	B110	2022-12-13 @ 8:00 am	2022-12-20 @ 8:00 am	1.1 ± 0.3	2022-12-22
11288021	BS OFFICE	2022-12-13 @ 8:00 am	2022-12-20 @ 8:00 am	< 0.3	2022-12-22
11288031	C106	2022-12-13 @ 8:00 am	2022-12-20 @ 7:00 am	< 0.3	2022-12-22
11288043	C107	2022-12-13 @ 8:00 am	2022-12-20 @ 7:00 am	< 0.3	2022-12-22
11288039	C109	2022-12-13 @ 8:00 am	2022-12-20 @ 8:00 am	0.5 ± 0.3	2022-12-22
11288080	C110	2022-12-13 @ 11:00 am	2022-12-20 @ 8:00 am	< 0.3	2022-12-22
11288088	C111	2022-12-13 @ 11:00 am	2022-12-20 @ 10:00 am	< 0.3	2022-12-22
11288035	C112	2022-12-13 @ 8:00 am	2022-12-20 @ 8:00 am	< 0.3	2022-12-22
11288048	C114	2022-12-13 @ 8:00 am	2022-12-20 @ 8:00 am	< 0.3	2022-12-22
11288042	C115	2022-12-13 @ 8:00 am	2022-12-20 @ 8:00 am	< 0.3	2022-12-22
11288041	C115	2022-12-13 @ 8:00 am	2022-12-20 @ 8:00 am	< 0.3	2022-12-22
11288044	C116	2022-12-13 @ 8:00 am	2022-12-20 @ 8:00 am	< 0.3	2022-12-22
11288045	C117	2022-12-13 @ 8:00 am	2022-12-20 @ 8:00 am	< 0.3	2022-12-22
11288046	C118	2022-12-13 @ 8:00 am	2022-12-20 @ 8:00 am	< 0.3	2022-12-22
11288036	C119	2022-12-13 @ 8:00 am	2022-12-20 @ 8:00 am	< 0.3	2022-12-22
11288037	C120	2022-12-13 @ 8:00 am	2022-12-20 @ 8:00 am	< 0.3	2022-12-22
11288062	C132	2022-12-13 @ 11:00 am	2022-12-20 @ 8:00 am	< 0.3	2022-12-22
11288024	C135	2022-12-13 @ 8:00 am	2022-12-20 @ 8:00 am	< 0.3	2022-12-22
11288030	C136	2022-12-13 @ 8:00 am	2022-12-20 @ 8:00 am	< 0.3	2022-12-22
11288059	C147	2022-12-13 @ 10:00 am	2022-12-20 @ 9:00 am	< 0.3	2022-12-22
11288084	C148 TV	2022-12-13 @ 10:00 am	2022-12-20 @ 10:00 am	< 0.3	2022-12-22
11288100	C150	2022-12-13 @ 10:00 am	2022-12-20 @ 9:00 am	< 0.3	2022-12-22
11288007	C157	2022-12-13 @ 9:00 am	2022-12-20 @ 8:00 am	< 0.3	2022-12-22
11288049	C159	2022-12-13 @ 10:00 am	2022-12-20 @ 9:00 am	< 0.3	2022-12-22
11288061	C159	2022-12-13 @ 10:00 am	2022-12-20 @ 9:00 am	< 0.3	2022-12-22
11288086	C160	2022-12-13 @ 10:00 am	2022-12-20 @ 9:00 am	< 0.3	2022-12-22
11288094	C160	2022-12-13 @ 10:00 am	2022-12-20 @ 9:00 am	< 0.3	2022-12-22

Radon test result report for:

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11288060	C161	2022-12-13 @ 10:00 am	2022-12-20 @ 9:00 am	< 0.3	2022-12-22
11288033	COUNSELING	2022-12-13 @ 8:00 am	2022-12-20 @ 8:00 am	< 0.3	2022-12-22
11288097	D104	2022-12-13 @ 10:00 am	2022-12-20 @ 9:00 am	< 0.3	2022-12-22
11288068	D104 OFFICE	2022-12-13 @ 10:00 am	2022-12-20 @ 9:00 am	< 0.3	2022-12-22
11288053	D107	2022-12-13 @ 10:00 am	2022-12-20 @ 9:00 am	< 0.3	2022-12-22
11288017	D109	2022-12-13 @ 10:00 am	2022-12-20 @ 9:00 am	< 0.3	2022-12-22
11288050	D110	2022-12-13 @ 10:00 am	2022-12-20 @ 9:00 am	< 0.3	2022-12-22
11288056	D111	2022-12-13 @ 10:00 am	2022-12-20 @ 9:00 am	< 0.3	2022-12-22
11288025	D112	2022-12-13 @ 9:00 am	2022-12-20 @ 9:00 am	< 0.3	2022-12-22
11288074	D113	2022-12-13 @ 10:00 am	2022-12-20 @ 9:00 am	< 0.3	2022-12-22
11288069	D113	2022-12-13 @ 10:00 am	2022-12-20 @ 9:00 am	< 0.3	2022-12-22
11288081	D115	2022-12-13 @ 9:00 am	2022-12-20 @ 9:00 am	< 0.3	2022-12-22
11288064	D130	2022-12-13 @ 10:00 am	2022-12-20 @ 9:00 am	< 0.3	2022-12-22
11288055	D130	2022-12-13 @ 10:00 am	2022-12-20 @ 9:00 am	< 0.3	2022-12-22
11288054	D130B	2022-12-13 @ 10:00 am	2022-12-20 @ 9:00 am	< 0.3	2022-12-22
11288085	D131	2022-12-13 @ 10:00 am	2022-12-20 @ 9:00 am	< 0.3	2022-12-22
11288004	E105	2022-12-13 @ 9:00 am	2022-12-20 @ 9:00 am	< 0.3	2022-12-22
11288002	E106	2022-12-13 @ 9:00 am	2022-12-20 @ 9:00 am	< 0.3	2022-12-22
11288001	E106	2022-12-13 @ 9:00 am	2022-12-20 @ 9:00 am	< 0.3	2022-12-22
11288071	E107	2022-12-13 @ 9:00 am	2022-12-20 @ 9:00 am	< 0.3	2022-12-22
11288072	E108	2022-12-13 @ 9:00 am	2022-12-20 @ 9:00 am	< 0.3	2022-12-22
11288026	E109	2022-12-13 @ 9:00 am	2022-12-20 @ 9:00 am	< 0.3	2022-12-22
11288075	E111	2022-12-13 @ 9:00 am	2022-12-20 @ 9:00 am	< 0.3	2022-12-22
11288032	E112	2022-12-13 @ 9:00 am	2022-12-20 @ 9:00 am	< 0.3	2022-12-22
11288077	E113	2022-12-13 @ 9:00 am	2022-12-20 @ 9:00 am	< 0.3	2022-12-22
11288013	E118	2022-12-13 @ 9:00 am	2022-12-20 @ 9:00 am	< 0.3	2022-12-22
11288070	E119	2022-12-13 @ 9:00 am	2022-12-20 @ 9:00 am	< 0.3	2022-12-22
11288010	E122	2022-12-13 @ 9:00 am	2022-12-20 @ 9:00 am	< 0.3	2022-12-22
11288014	E122	2022-12-13 @ 9:00 am	2022-12-20 @ 9:00 am	< 0.3	2022-12-22
11288011	E123	2022-12-13 @ 9:00 am	2022-12-20 @ 9:00 am	< 0.3	2022-12-22
11288079	E130	2022-12-13 @ 9:00 am	2022-12-20 @ 9:00 am	< 0.3	2022-12-22
11288098	E131	2022-12-13 @ 9:00 am	2022-12-20 @ 9:00 am	< 0.3	2022-12-22
11288076	E132	2022-12-13 @ 9:00 am	2022-12-20 @ 9:00 am	< 0.3	2022-12-22
11288099	E132	2022-12-13 @ 9:00 am	2022-12-20 @ 9:00 am	< 0.3	2022-12-22
11288078	E133	2022-12-13 @ 9:00 am	2022-12-20 @ 9:00 am	< 0.3	2022-12-22
11288066	E205	2022-12-13 @ 10:00 am	2022-12-20 @ 10:00 am	< 0.3	2022-12-22
11288057	E213	2022-12-13 @ 10:00 am	2022-12-20 @ 10:00 am	< 0.3	2022-12-22

Radon test result report for:

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11288057	E213	2022-12-13 @ 10:00 am	2022-12-20 @ 10:00 am	< 0.3	2022-12-22
11288058	E219	2022-12-13 @ 10:00 am	2022-12-20 @ 10:00 am	< 0.3	2022-12-22
11288067	E222	2022-12-13 @ 10:00 am	2022-12-20 @ 10:00 am	< 0.3	2022-12-22
11288065	E223	2022-12-13 @ 10:00 am	2022-12-20 @ 10:00 am	< 0.3	2022-12-22
11288008	GYM	2022-12-13 @ 9:00 am	2022-12-20 @ 8:00 am	< 0.3	2022-12-22
11288019	KITCHEN OFFICE	2022-12-13 @ 8:00 am	2022-12-20 @ 8:00 am	< 0.3	2022-12-22
11288047	MAIN OFFICE	2022-12-13 @ 8:00 am	2022-12-20 @ 7:00 am	< 0.3	2022-12-22
11288096	MEDIA	2022-12-13 @ 10:00 am	2022-12-20 @ 9:00 am	< 0.3	2022-12-22
11288093	MEDIA	2022-12-13 @ 10:00 am	2022-12-20 @ 9:00 am	< 0.3	2022-12-22
11288034	NURSE C137	2022-12-13 @ 8:00 am	2022-12-20 @ 8:00 am	< 0.3	2022-12-22
11288022	STAGE	2022-12-13 @ 8:00 am	2022-12-20 @ 8:00 am	< 0.3	2022-12-22
11288028	STAGE	2022-12-13 @ 8:00 am	2022-12-20 @ 8:00 am	< 0.3	2022-12-22
11288040	WORKROOM	2022-12-13 @ 8:00 am	2022-12-20 @ 8:00 am	< 0.3	2022-12-22

February 7, 2023

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11288283	CONFERENCE	2023-01-31 @ 10:00 am	2023-02-03 @ 10:00 am	< 0.3	2023-02-07
11288284	CONFERENCE	2023-01-31 @ 10:00 am	2023-02-03 @ 10:00 am	< 0.3	2023-02-07
11288291	CONFERENCE	2023-01-31 @ 10:00 am	2023-02-03 @ 10:00 am	< 0.3	2023-02-07
11288276	D117	2023-01-31 @ 10:00 am	2023-02-03 @ 10:00 am	< 0.3	2023-02-07
11288282	E114	2023-01-31 @ 10:00 am	2023-02-03 @ 10:00 am	< 0.3	2023-02-07
11288278	GYM	2023-01-31 @ 9:00 am	2023-02-03 @ 10:00 am	0.5 ± 0.3	2023-02-07
11288281	GYM	2023-01-31 @ 9:00 am	2023-02-03 @ 10:00 am	< 0.3	2023-02-07

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

EXPOSURE IN BOWSER-MORNER RADON CHAMBER

CLIENT KCI TECHNOLOGIES, INC Job Number 208802

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

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

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

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

11633682, 11633687, 11633688 _____

11633695, 11633696 _____

P3 left

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

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

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

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

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

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

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

February 3, 2023

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

OFFICE

MAIN

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

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



Radon Test Kit Chain of Custody

Project Name: MCPS Radon – Week 2 January Schools

Name of Schools:

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

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

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



MONTGOMERY COUNTY PUBLIC SCHOOLS RADON TESTING

Executive Summary:
Kingsview Middle School
18909 Kingsview Road,
Germantown, MD 20874

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:	4
# of Rooms \geq 4.0 pCi/L:	0
Low Value:	<0.4
High Value:	0.4

Project Status

Retesting completed: No further action at this time.



March 15, 2019

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

Re: Radon Testing Services

Location: Kingsview Middle School
18909 Kingsview Road,
Germantown, MD 20874

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 Kingsview Middle School, located at 18909 Kingsview Road, Germantown, MD 20874 (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 four (4) activated charcoal (AC) radon test kit. PSI deployed radon test kits in frequently-occupied ground contact rooms, and other areas, (if applicable) in accordance with AARST guidance. PSI returned to the site on February 28, 2019 to retrieve the radon sampling test kit. A floor plan map of the building with the test location is included as Attachment A of this report.

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

Evaluation of Testing Conditions:

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

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



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

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

Results:

The results of the radon test analysis indicated the following:

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

Notes:
D -Duplicate Sample

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

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

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

ATTACHMENT B

Radon Test Summary Spreadsheet

Radon Testing Results		
Kingsview Middle School		
Testing period: 2/25/19 - 2/28/19		
Kit Number	Room / Area	Result (pCi/L)
3923429	C118	<0.4
3923430	C135	<0.4
3923488	E114	0.4
3923489	B101	<0.4

Table Notes:

D – Duplicate

FB – Field Blank

OB – Office Blank

TB – Transit Blank

QC – Quality Control

ATTACHMENT C

Laboratory Analytical Results

NRPP 105011 AL
NRSB ARL0007

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

Laboratory Report for:

Property Tested: Project # 04481387-1

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

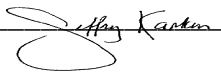
MCPS Radon Survey Kingview MS
18909 Kingsview Road
Germantown MD 20874

Log Number	Device Number	Test Exposure Duration:			Area Tested	Result pCi/L
3220632	3923429	02/25/2019 11:30 am	02/28/2019 11:30 am	Main floor Room C118	< 0.4	
3220633	3923430	02/25/2019 11:33 am	02/28/2019 11:33 am	Main floor Room C135	< 0.4	
3220634	3923488	02/25/2019 11:36 am	02/28/2019 11:36 am	Main floor Room E114	0.4	
3220635	3923489	02/25/2019 11:38 am	02/28/2019 11:38 am	Main floor Room B101	< 0.4	

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

Distributed by: Intertek-PSI (VA)

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

Report Reviewed By: 

Report Approved By: 

Disclaimer:

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

Shawn Price, Director of Laboratory Operations, AccuStar Labs

This report may only be transferred to a third party in its entirety. Analytical results relate to the samples AS RECEIVED BY THE LABORATORY. Results shown on this report represent levels of radon gas measured between the dates shown in the room or area of the site identified above as "Property Tested". Incorrect information will affect results. The results may not be construed as either predictive or supportive of measurements conducted in any area of this structure at any other time. AccuStar Labs, its employees and agents are not responsible for the consequences of any action taken or not taken based upon the results reported or any verbal or written interpretation of the results.



**MONTGOMERY COUNTY PUBLIC SCHOOLS
RADON TESTING**

Executive Summary:
Kingsview Middle School
18909 Kingsview Road,
Germantown, MD 20874

Date of Test Report:	1/10/2019
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:	84
# of Rooms \geq 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 10, 2019

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

Re: Radon Testing Services

Location: Kingsview Middle School
18909 Kingsview Road,
Germantown, MD 20874

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 Kingsview Middle School, located at 18909 Kingsview Road, Germantown, MD 20874 (subject site).

Scope of Services:

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

PSI visited the site on December 4, 2018 and deployed eighty-nine (89) activated charcoal (AC) radon test kits. PSI deployed radon test kits in frequently-occupied ground contact rooms, and other areas, (if applicable) in accordance with AARST guidance. PSI returned to the site on December 7, 2018 to retrieve the radon sampling test kits. A floor plan map of the building with the test locations is included as Attachment A of this report.

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

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



Evaluation of Testing Conditions:

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

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

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

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

Results:

The results of the radon test analysis indicated the following:

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

Notes:

D -Duplicate Sample

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

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

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



Respectfully Submitted,

INTERTEK-PSI

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

Nand Kaushik, P.E.
Department Manager, Environmental Services
Nand.Kaushik@intertek.com

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

ATTACHMENT B

Radon Test Summary Spreadsheet

Radon Testing Results		
Kingsview Middle School		
Testing period: 12/4/18 - 12/7/18		
Kit Number	Room / Area	Result (pCi/L)
3927707	A109	<0.4
3927709	A112	<0.4
3927710	A114	<0.4
3917884	B108	0.5
3917823	B109	<0.4
3917824	B110	0.7
3926245	B130 (Kitchen Office)	<0.4
3915572	Building Services	<0.4
3917322	C106	<0.4
3917263	C107	<0.4
3917880	C109	<0.4
3917879	C110	<0.4
3917878	C111	<0.4
3917326	C112	<0.4
3917325	C114	<0.4
3917340	C115	<0.4
3927740	C116	<0.4
3927739	C117	<0.4
3927738	C120	<0.4
3927734	C121	<0.4
3927737	C122	<0.4
3917321	C132	<0.4
3927736	C133	<0.4
3917324	C136	<0.4
3927993	C137 (Health)	<0.4
3927995	C145 (IMC)	<0.4
3927996	C145 (IMC)	<0.4
3917344	C147	<0.4
3927997	C148 (TV Studio)	<0.4
3927991	C150	<0.4
3917346	C154	<0.4
3917345	C157	0.8
3917342	C159	0.4
3917343	C160	<0.4
3927999	C161	0.5
3917821	Cafeteria	<0.4
3917822	Cafeteria	<0.4
3917900	D104	<0.4
3927731	D104A	<0.4
3917896	D109	<0.4
3917897	D109A	0.5
3917895	D110	<0.4
3927733	D112	<0.4

Radon Testing Results		
Kingsview Middle School		
Testing period: 12/4/18 - 12/7/18		
Kit Number	Room / Area	Result (pCi/L)
3927732	D113	0.5
3917898	D115	<0.4
3917891	D130A	<0.4
3917893	D130B	0.6
3917894	D131	<0.4
3917341	D205	<0.4
3917922	Dance Studio	0.5
3927704	E104	<0.4
3927703	E105	<0.4
3927701	E106	<0.4
3926269	E107	<0.4
3926268	E108	<0.4
3926262	E109	<0.4
3926263	E111	<0.4
3926261	E112	<0.4
3917349	E113	<0.4
3917348	E119	<0.4
3926270	E122	<0.4
3917350	E123	<0.4
3926266	E130	0.4
3926267	E131	<0.4
3926264	E132	0.4
3926265	E133	0.5
3926426	E206	<0.4
3926427	E209	<0.4
3927705	Gym	0.5
3927706	Gym	0.5
3927994	Health Ofiice	<0.4
3926244	Kitchen	<0.4
3917323	Main Office	<0.4
3927998	TV Control Room	0.4
3915573	Weight Room	<0.4

Radon Testing Results		
Kingsview Middle School		
Testing period: 12/4/18 - 12/7/18		
Kit Number	QC Type	Result (pCi/L)
3927708	A109 (D)	<0.4
3917829	B130 (Kitchen Office) (D)	<0.4
3927735	C121 (D)	<0.4
3927992	C150 (D)	<0.4
3917347	C154 (D)	<0.4
3928000	C161 (D)	<0.4
3917899	D115 (D)	<0.4
3917892	D130A (D)	<0.4
3927702	E106 (D)	<0.4
3918309	Field Blank	<0.4
3918515	Field Blank	<0.4
3927724	Office Blank	<0.4
3927605	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

NRPP 105011 AL
NRSB ARL0007

Laboratory Report for:

Property Tested: Project # 04481387-1

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

MCPS Radon Survey Kingsview Middle School
Not Indicated
Darnestown MD 20874

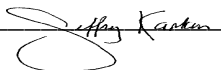
Log Number	Device Number	Test Exposure Duration:		Area Tested	Result pCi/L
3202920	3917891	12/04/2018 2:00 pm	12/07/2018 1:31 pm	Floor First Room D130A	< 0.4
3202921	3917892	12/04/2018 2:00 pm	12/07/2018 1:31 pm	Floor First Room D130A Duplicate	< 0.4
3202922	3917893	12/04/2018 2:01 pm	12/07/2018 1:32 pm	Floor First Room D130B	0.6
3202923	3917894	12/04/2018 2:02 pm	12/07/2018 1:33 pm	Floor First Room D131	< 0.4
3202924	3917895	12/04/2018 2:03 pm	12/07/2018 1:34 pm	Floor First Room D110	< 0.4
3202925	3917896	12/04/2018 2:04 pm	12/07/2018 1:35 pm	Floor First Room D109	< 0.4
3202926	3917897	12/04/2018 2:05 pm	12/07/2018 1:36 pm	Floor First Room D109A	0.5
3202927	3917898	12/04/2018 2:06 pm	12/07/2018 1:38 pm	Floor First Room D115	< 0.4
3202928	3917899	12/04/2018 2:06 pm	12/07/2018 1:38 pm	Floor First Room D115 Duplicate	< 0.4
3202929	3917900	12/04/2018 2:08 pm	12/07/2018 1:39 pm	Floor First Room D104	< 0.4
3202930	3917350	12/04/2018 2:53 pm	12/07/2018 2:19 pm	Floor First Room E123	< 0.4


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

Test Performed By: Rinzo Renthlei

Distributed by: Intertek-PSI (VA)

Date Received: 12/08/2018 Date Logged: Date Analyzed: 12/08/2018 Date Reported: 12/17/2018

Report Reviewed By: 

Report Approved By: 

Shawn Price, Director of Laboratory Operations, AccuStar Labs

Disclaimer:

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

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.

NRPP 105011 AL
NRSB ARL0007

Laboratory Report for:

Property Tested: Project # 04481387-1

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

MCPS Radon Survey Kingsview Middle School
Not Indicated
Darnestown MD 20874

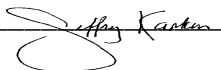
Log Number	Device Number	Test Exposure	Duration:	Area Tested	Result pCi/L
3202931	3927731	12/04/2018 2:09 pm	12/07/2018 1:40 pm	Floor First Room D104A	< 0.4
3202932	3927732	12/04/2018 2:10 pm	12/07/2018 1:41 pm	Floor First Room D113	0.5
3202933	3927733	12/04/2018 2:11 pm	12/07/2018 1:42 pm	Floor First Room D112 Office	< 0.4
3202934	3927734	12/04/2018 2:12 pm	12/07/2018 1:44 pm	Floor First Room C121	< 0.4
3202935	3927735	12/04/2018 2:12 pm	12/07/2018 1:44 pm	Floor First Room C121 Duplicate	< 0.4
3202936	3927736	12/04/2018 2:14 pm	12/07/2018 1:45 pm	Floor First Room C133	< 0.4
3202937	3927737	12/04/2018 2:15 pm	12/07/2018 1:46 pm	Floor First Room C122	< 0.4
3202938	3927738	12/04/2018 2:16 pm	12/07/2018 1:47 pm	Floor First Room C120	< 0.4
3202939	3927739	12/04/2018 2:17 pm	12/07/2018 1:48 pm	Floor First Room C117	< 0.4
3202940	3927740	12/04/2018 2:18 pm	12/07/2018 1:49 pm	Floor First Room C116	< 0.4
3202941	3917340	12/04/2018 2:19 pm	12/07/2018 1:50 pm	Floor First Room C115	< 0.4


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

Test Performed By: Rinzo Renthlei

Distributed by: Intertek-PSI (VA)

Date Received: 12/08/2018 Date Logged: Date Analyzed: 12/08/2018 Date Reported: 12/17/2018

Report Reviewed By: 

Report Approved By: 

Shawn Price, Director of Laboratory Operations, AccuStar Labs

Disclaimer:

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

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NRPP 105011 AL
NRSB ARL0007

Laboratory Report for:

Property Tested: Project # 04481387-1

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

MCPS Radon Survey Kingsview Middle School
Not Indicated
Darnestown MD 20874

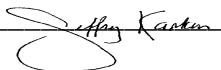
Log Number	Device Number	Test Date	Exposure Duration	Test Date	Test Time	Area Tested	Result pCi/L
3202942	3917325	12/04/2018	2:20 pm	12/07/2018	1:51 pm	Floor First Room C114	< 0.4
3202943	3917326	12/04/2018	2:21 pm	12/07/2018	1:52 pm	Floor First Room C112	< 0.4
3202944	3917878	12/04/2018	2:22 pm	12/07/2018	1:53 pm	Floor First Room C111	< 0.4
3202945	3917879	12/04/2018	2:23 pm	12/07/2018	1:54 pm	Floor First Room C110	< 0.4
3202946	3917880	12/04/2018	2:24 pm	12/07/2018	1:55 pm	Floor First Room C109	< 0.4
3202947	3917321	12/04/2018	2:25 pm	12/07/2018	1:56 pm	Floor First Room C132	< 0.4
3202948	3917322	12/04/2018	2:26 pm	12/07/2018	1:57 pm	Floor First Room C106	< 0.4
3202949	3917323	12/04/2018	2:27 pm	12/07/2018	1:58 pm	Floor First Room General Office	< 0.4
3202950	3917324	12/04/2018	2:28 pm	12/07/2018	1:59 pm	Floor First Room C136	< 0.4
3202951	3917263	12/04/2018	2:29 pm	12/07/2018	2:00 pm	Floor First Room C107	< 0.4
3202952	3927991	12/04/2018	2:30 pm	12/07/2018	2:02 pm	Floor First Room C150	< 0.4


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

Test Performed By: Rinzo Renthlei

Distributed by: Intertek-PSI (VA)

Date Received: 12/08/2018 Date Logged: Date Analyzed: 12/08/2018 Date Reported: 12/17/2018

Report Reviewed By: 

Report Approved By: 

Shawn Price, Director of Laboratory Operations, AccuStar Labs

Disclaimer:

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NRPP 105011 AL
NRSB ARL0007

Laboratory Report for:

Property Tested: Project # 04481387-1

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

MCPS Radon Survey Kingsview Middle School
Not Indicated
Darnestown MD 20874

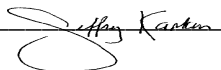
Log Number	Device Number	Test Date	Exposure Duration	Area Tested	Result pCi/L
3202953	3927992	12/04/2018	2:30 pm - 12/07/2018 2:02 pm	Floor First Room C150 Duplicate	< 0.4
3202954	3927993	12/04/2018	2:31 pm - 12/07/2018 2:03 pm	Floor First Room C137 Health	< 0.4
3202955	3927994	12/04/2018	2:32 pm - 12/07/2018 2:04 pm	Floor First Room Nurse Office	< 0.4
3202956	3927995	12/04/2018	2:33 pm - 12/07/2018 2:05 pm	Floor First Room C145 IMC	< 0.4
3202957	3927996	12/04/2018	2:34 pm - 12/07/2018 2:06 pm	Floor First Room C145 IMC	< 0.4
3202958	3927997	12/04/2018	2:35 pm - 12/07/2018 2:07 pm	Floor First Room C148 TV Studio	< 0.4
3202959	3927998	12/04/2018	2:36 pm - 12/07/2018 2:08 pm	Floor First Room TV Control Room	0.4
3202960	3927999	12/04/2018	2:37 pm - 12/07/2018 2:10 pm	Floor First Room C161	0.5
3202961	3928000	12/04/2018	2:37 pm - 12/07/2018 2:10 pm	Floor First Room C161 Duplicate	< 0.4
3202962	3917342	12/04/2018	2:45 pm - 12/07/2018 2:11 pm	Floor First Room C159	0.4
3202963	3917343	12/04/2018	2:46 pm - 12/07/2018 2:12 pm	Floor First Room C160	< 0.4

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

Test Performed By: Rinzo Renthlei

Distributed by: Intertek-PSI (VA)

Date Received: 12/08/2018 Date Logged: Date Analyzed: 12/08/2018 Date Reported: 12/17/2018

Report Reviewed By: 

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

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NRPP 105011 AL
NRSB ARL0007

Laboratory Report for:

Property Tested: Project # 04481387-1

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

MCPS Radon Survey Kingsview Middle School
Not Indicated
Darnestown MD 20874

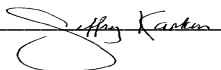
Log Number	Device Number	Test Date	Exposure Duration	Test Date	Test Time	Area Tested	Result pCi/L
3202964	3917344	12/04/2018	2:47 pm	12/07/2018	2:13 pm	Floor First Room C147 (Tampered)	< 0.4
3202965	3917345	12/04/2018	2:48 pm	12/07/2018	2:14 pm	Floor First Room C157	0.8
3202966	3917346	12/04/2018	2:49 pm	12/07/2018	2:16 pm	Floor First Room C154	< 0.4
3202967	3917347	12/04/2018	2:49 pm	12/07/2018	2:16 pm	Floor First Room C154 Duplicate	< 0.4
3202968	3917348	12/04/2018	2:51 pm	12/07/2018	2:17 pm	Floor First Room E119	< 0.4
3202969	3917349	12/04/2018	2:52 pm	12/07/2018	2:18 pm	Floor First Room E113	< 0.4
3202970	3926261	12/04/2018	2:54 pm	12/07/2018	2:20 pm	Floor First Room E112	< 0.4
3202971	3926262	12/04/2018	2:55 pm	12/07/2018	2:21 pm	Floor First Room E109	< 0.4
3202972	3926263	12/04/2018	2:56 pm	12/07/2018	2:22 pm	Floor First Room E111	< 0.4
3202973	3926264	12/04/2018	2:57 pm	12/07/2018	2:23 pm	Floor First Room E132	0.4
3202974	3926265	12/04/2018	2:58 pm	12/07/2018	2:24 pm	Floor First Room E133	0.5


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

Test Performed By: Rinzo Renthlei

Distributed by: Intertek-PSI (VA)

Date Received: 12/08/2018 Date Logged: Date Analyzed: 12/08/2018 Date Reported: 12/17/2018

Report Reviewed By: 

Report Approved By: 

Shawn Price, Director of Laboratory Operations, AccuStar Labs

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NRPP 105011 AL
NRSB ARL0007

Laboratory Report for:

Property Tested: Project # 04481387-1

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

MCPS Radon Survey Kingsview Middle School
Not Indicated
Darnestown MD 20874

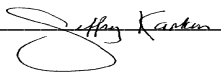
Log Number	Device Number	Test Exposure	Duration:	Area Tested	Result pCi/L
3202975	3926266	12/04/2018 2:59 pm	12/07/2018 2:25 pm	Floor First Room E130	0.4
3202976	3926267	12/04/2018 3:00 pm	12/07/2018 2:26 pm	Floor First Room E131	< 0.4
3202977	3926268	12/04/2018 3:01 pm	12/07/2018 2:27 pm	Floor First Room E108	< 0.4
3202978	3926269	12/04/2018 3:02 pm	12/07/2018 2:28 pm	Floor First Room E107	< 0.4
3202979	3926270	12/04/2018 3:03 pm	12/07/2018 2:29 pm	Floor First Room E122	< 0.4
3202980	3927701	12/04/2018 3:04 pm	12/07/2018 2:31 pm	Floor First Room E106	< 0.4
3202981	3927702	12/04/2018 3:04 pm	12/07/2018 2:31 pm	Floor First Room E106 Duplicate	< 0.4
3202982	3927703	12/04/2018 3:06 pm	12/07/2018 2:32 pm	Floor First Room E105	< 0.4
3202983	3927704	12/04/2018 3:07 pm	12/07/2018 2:33 pm	Floor First Room E104	< 0.4
3202984	3927705	12/04/2018 3:08 pm	12/07/2018 2:34 pm	Floor First Room Gym	0.5
3202985	3927706	12/04/2018 3:09 pm	12/07/2018 2:35 pm	Floor First Room Gym	0.5


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

Test Performed By: Rinzo Renthlei

Distributed by: Intertek-PSI (VA)

Date Received: 12/08/2018 Date Logged: Date Analyzed: 12/08/2018 Date Reported: 12/17/2018

Report Reviewed By: 

Report Approved By: 

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NRPP 105011 AL
NRSB ARL0007

Laboratory Report for:

Property Tested: Project # 04481387-1

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

MCPS Radon Survey Kingsview Middle School
Not Indicated
Darnestown MD 20874

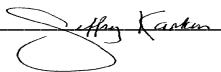
Log Number	Device Number	Test Exposure	Duration:	Area Tested	Result pCi/L
3202986	3927707	12/04/2018 3:10 pm	12/07/2018 2:37 pm	Floor First Room A109	< 0.4
3202987	3927708	12/04/2018 3:10 pm	12/07/2018 2:37 pm	Floor First Room A109 Duplicate	< 0.4
3202988	3927709	12/04/2018 3:12 pm	12/07/2018 2:38 pm	Floor First Room A112	< 0.4
3202989	3927710	12/04/2018 3:13 pm	12/07/2018 2:39 pm	Floor First Room A114	< 0.4
3202990	3917922	12/04/2018 3:15 pm	12/07/2018 2:40 pm	Floor First Room Dance Studio	0.5
3202991	3915573	12/04/2018 3:17 pm	12/07/2018 2:41 pm	Floor First Room Wight Room	< 0.4
3202992	3915572	12/04/2018 3:35 pm	12/07/2018 2:42 pm	Floor First Room BSM	< 0.4
3202993	3917821	12/04/2018 3:37 pm	12/07/2018 2:43 pm	Floor First Room Dining Room	< 0.4
3202994	3917822	12/04/2018 3:39 pm	12/07/2018 2:44 pm	Floor First Room Dining Room	< 0.4
3202995	3917823	12/04/2018 3:41 pm	12/07/2018 2:45 pm	Floor First Room B109	< 0.4
3202996	3917824	12/04/2018 3:43 pm	12/07/2018 2:46 pm	Floor First Room B110	0.7


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

Test Performed By: Rinzo Renthlei

Distributed by: Intertek-PSI (VA)

Date Received: 12/08/2018 Date Logged: Date Analyzed: 12/08/2018 Date Reported: 12/17/2018

Report Reviewed By: 

Report Approved By: 

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NRPP 105011 AL
NRSB ARL0007

Laboratory Report for:

Property Tested: Project # 04481387-1

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

MCPS Radon Survey Kingsview Middle School
Not Indicated
Darnestown MD 20874

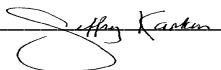
Log Number	Device Number	Test	Exposure	Duration:	Area Tested	Result pCi/L
3202997	3917884	12/04/2018	3:45 pm	12/07/2018 2:47 pm	Floor First Room B108	0.5
3202998	3926244	12/04/2018	3:47 pm	12/07/2018 2:48 pm	Floor First Room Kitchen	< 0.4
3202999	3926245	12/04/2018	3:49 pm	12/07/2018 2:50 pm	Floor First B130 Kitchen Off.	< 0.4
3203000	3917829	12/04/2018	3:51 pm	12/07/2018 2:50 pm	Floor First B130 Kitchen Off. Duplicate	< 0.4
3203001	3926426	12/04/2018	3:53 pm	12/07/2018 2:51 pm	Floor Second Room E206	< 0.4
3203002	3926427	12/04/2018	3:55 pm	12/07/2018 2:52 pm	Floor Second Room E209	< 0.4
3203003	3917341	12/04/2018	4:00 pm	12/07/2018 2:53 pm	Floor Second Room D205	< 0.4
3203004	3927724	12/04/2018	6:00 am	12/07/2018 6:00 pm	Floor NA Room Office Blank	< 0.4
3203005	3927605	12/04/2018	6:00 am	12/07/2018 6:00 pm	Floor NA Room Transit Blank	< 0.4
3203006	3918309	12/04/2018	2:00 pm	12/07/2018 3:00 pm	Floor NA Room Field Blank	< 0.4
3203007	3918515	12/04/2018	2:00 pm	12/07/2018 3:00 pm	Floor NA Room Field Blank	< 0.4


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

Test Performed By: Rinzo Renthlei

Distributed by: Intertek-PSI (VA)

Date Received: 12/08/2018 Date Logged: Date Analyzed: 12/08/2018 Date Reported: 12/17/2018

Report Reviewed By: 

Report Approved By: 

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NRPP 105011 AL
NRSB ARL0007
Ohio RL41

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

Laboratory Report for:

Property Tested:

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

MCPS Radon Survey
4514 Taylorsville Road
Dayton OH 45424

Log Number	Device Number	Test Exposure Duration:	Area Tested	Result pCi/L
3204125	3926831	12/07/2018 9:47 am - 12/10/2018 9:47 am	Spike	36.1
3204126	3926832	12/07/2018 9:47 am - 12/10/2018 9:47 am	Spike	34.8
3204127	3926833	12/07/2018 9:47 am - 12/10/2018 9:47 am	Spike	33.7
3204128	3926834	12/07/2018 9:47 am - 12/10/2018 9:47 am	Spike	35.8
3204129	3926835	12/07/2018 9:47 am - 12/10/2018 9:47 am	Spike	35.0
3204130	3926836	12/07/2018 9:47 am - 12/10/2018 9:47 am	Spike	34.5
3204131	3926837	12/07/2018 9:47 am - 12/10/2018 9:47 am	Spike	34.6
3204132	3926838	12/07/2018 9:47 am - 12/10/2018 9:47 am	Spike	34.3
3204133	3926839	12/07/2018 9:47 am - 12/10/2018 9:47 am	Spike	33.2
3204134	3926840	12/07/2018 9:47 am - 12/10/2018 9:47 am	Spike	34.0

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

Test Performed By: Unknown

Distributed by: Intertek-PSI (VA)

Date Received: 12/12/2018 Date Logged: 12/12/2018 Date Analyzed: 12/12/2018 Date Reported: 12/13/2018

Report Reviewed By: 

Report Approved By: 

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EXPOSURE IN BOWSER-MORNER RADON CHAMBER

CLIENT Intertek - PSI Job Number 187732

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

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

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

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

3926831 thru 3926840 _____

G2 left

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

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

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

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

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

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

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



Chain of Custody

Project Name: MCPS Radon Survey 2018

Name of Schools:

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

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

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

RADON SCREENING SURVEY – FOLLOW-UP KINGSVIEW MIDDLE SCHOOL

18909 Kingsview Road, Germantown, Maryland 20874

EXECUTIVE SUMMARY

Date of Test Report:	4/12/16 Follow-Up
Round of Testing:	Initial Follow-up Post Remediation
# Rooms Tested	2
# Rooms \geq 4.0 pCi/L:	0
Low Value:	<0.4
High Value:	<0.4
Confirmed Rooms \geq 4.0 pCi/L US EPA Action Level	0

Summary of Sampling Events \geq 4.0 pCi/L

Room	Result (pCi/L) 2/16/16 Initial	Result (pCi/L) 4/12/16 Follow-Up	Average Result (pCi/L)
C115	0.6 Tampered	<0.4	0.5
E207	--- Missing	<0.4	<0.4



MCPS RADON TESTING

Executive Summary: Kingsview Middle School

Date of Test Report:	4/12/2016
Round of Testing:	Initial Follow-up Post Remediation
# Rooms Tested:	2
# Rooms \geq 4.0 pCi/L:	0
Low Value:	< 0.4
High Value:	< 0.4

Project Status:

Retesting completed; no further action at this time.



April 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: Kingsview Middle School
18909 Kingsview Road
Germantown, MD 20874

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 Kingsview Middle School, located at 18909 Kingsview Road in Germantown, Maryland 20874 (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 two (2) 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 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 pCi/L	none	n/a
< 4.0 pCi/L	See Attachment B	

Notes:
D- Duplicate sample

The office blank and lab transit blanks had test results of less than the laboratory detection limit of 0.4 pCi/L. The Spike sample analysis results indicate the laboratory is operating within statistical control limits.

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

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

Sincerely,



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

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

ATTACHMENT A

Floor Plan With Test Locations

ATTACHMENT B

Radon Test Summary Spreadsheet

Table Notes:

AC- Activated Charcoal

ACI- Air Chek, Inc.

D- Duplicate

FB- Field Blank

KCI- KCI Technologies, Inc.

OB- Office Blank*

PM- Project Manager

QC- Quality Control

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

Radon Testing Results		
Kingsview MS		
Test Period: 03/08/16-03/11/16		
Kit Number	Room / Area	Result
3028807	C115	<0.4
3029003	E207	<0.4

Table Note:

* Missing or Compromised Sample

ATTACHMENT C

Laboratory Analytical Results

NRPP 10511AL
NRSB ARL0007

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

Laboratory Report for:

Property Tested: Project # 12146341

KCI Technologies
936 Ridgebrook Rd
Sparks MD 21152

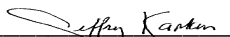
Kingsview MS
18909 Kingsvie Rd
Germantown MD 20874

Log Number	Device Number	Test Exposure Duration:		Area Tested	Result (pCi/L)
3016782	3028807	03/08/2016 5:04 pm	03/11/2016 1:00 pm	Unit C115 First Floor	<0.4
3016783	3029003	03/08/2016 5:08 pm	03/11/2016 1:03 pm	Unit E207 Second 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: 03/15/2016 Date Reported: 03/16/2016

Report Reviewed By: 

Report Approved By: 

Carolyn D. Koke, President, AccuStar Labs

Disclaimer:

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

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NRPP 10511AL
NRSB ARL0007

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

Laboratory Report for:

Property Tested: Project # 12146341

KCI Technologies
936 Ridgebrook Rd
Sparks MD 21152

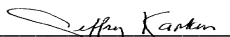
MCPS Radon Phase 11 Office Blank

Log Number	Device Number	Test Exposure Duration:	Area Tested	Result (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: 03/15/2016 Date Analyzed: 03/15/2016 Date Reported: 03/16/2016

Report Reviewed By: 

Report Approved By: 

Carolyn D. Koke, President, AccuStar Labs

Disclaimer:

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NRPP 10511AL
NRSB ARL0007

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

Laboratory Report for:

Property Tested:

KCI Technologies
936 Ridgebrook Rd
Sparks MD 21152

MCPS
Transit Blanks

Log Number	Device Number	Test Exposure Duration:		Area Tested	Result (pCi/L)
3010588	3028953	01/19/2016 1:00 pm	01/22/2016 9:30 am	1	< 0.4
3010589	3028955	01/19/2016 1:00 pm	01/22/2016 9:30 am	2	< 0.4
3010590	3028954	01/19/2016 1:00 pm	01/22/2016 9:30 am	3	< 0.4
3010591	3028997	01/19/2016 1:00 pm	01/22/2016 9:30 am	4	< 0.4

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

Distributed by: KCI Technologies, Inc.

Date Received: 01/27/2016 Date Logged: 01/27/2016 Date Analyzed: 01/28/2016 Date Reported: 01/28/2016

Report Reviewed By: Christie Bates

Report Approved By: Carolyn D. Koke

Carolyn D. Koke, President, AccuStar Labs

Disclaimer:

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

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Return canisters for analysis to:
AccuStar Labs
929 Mt. Zion Rd., Lebanon, PA 17046
800-523-4964

AccuStar Labs - Lebanon, PA
INFORMATION FORM - Large Buildings -
Projects - Apartments

Instructions on back of form
Read instructions carefully
Discrepancies will invalidate tests

Test Site Info

Name of Building/Project or Owner: Transit
 Site Address: Transit
 City: _____ State: _____ Zip: _____ County: _____
 Projects Contact Name: Don Coale Phone: _____ Email: _____

Do not use this form in
New Jersey or Florida
Call for correct forms.

Multi-Page Report Y-N

LAB USE ONLY	
Wgt. Gain	pCi/L
	LOH
	LOH
	LOH
	LOH

Detector Serial#	ROOM NAME & NUMBER - LOCATION OF DETECTOR IN ROOM (indicate duplicates and blanks)	Floor	Start Date	Start Time Include AM/PM	Stop Date	Stop Time Include AM/PM
3028953	Transit	1	1/19/16	approx: 00pm 1/23/16		9:30am
8955	Transit	1	1/19/16			
8954	Transit	1	1/19/16			
8997	Transit	1	1/19/16			

1/27/2016

KCI Technologies, Inc.

3010588 3028953 ACPC275B EXP12/31/2018

Structure Type: (circle one or more) Basement - Crawlspace - Slab on Grade - Other
Test Purpose: (Circle all that apply) Initial Screening - Follow Up Test - Post Mitigation - Real Estate - Other
Building Type: (Circle One) Residential - Non Residential Private Day Care - Private School Day Care in Public School - Public School

Both Placed by and Retrieved by signatures are required
Canisters placed by _____ # _____
Canisters retrieved by _____ # _____

Send Results To: _____
 Company Name: KCI Tech
 Address: 936 Ridgebrook
 City: Sparks State: MD Zip: 21152
 Phone: 410-599-3826
 EMAIL Results to: James.Mouldale@kci.com

Were general operating conditions maintained?
 Yes - No explain if NO
 Were closed building conditions maintained?
 Yes - No explain if NO
 Normal Temp. Yes - No
 Normal Humidity Yes - No
 Windy Y-N Rainy Y-N

Make sure information is complete and correct.
 If a recalculation is requested there is a \$10.00 recalc fee PER Canister.

Mailing: PO Box 990 Jonestown, PA 17038
 Shipping: 929 Mt Zion Road, Lebanon, PA 17046
 800-523-4964 fax 717-274-5662
 NEHA 10511AL NRSB ARL 0007

TCS INDUSTRIES, INC.

(717) 657-7032

RADON GAS DETECTION

www.radondetek.com

4326 Crestview Road, Harrisburg, PA 17112

James Mouldale
KCI
936 Ridgebrook Rd.
Sparks, MD 21152

April 04, 2016

Dear Mr. Mouldale:

The spike exposure data were:

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

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

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

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

Sincerely,



Carl H. Distenfeld, CHP

TCS Radon Chamber NRSB CHM 0002

NRPP 10511AL
NRSB ARL0007

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

Laboratory Report for:

Property Tested:

KCI Technologies
936 Ridgebrook Rd
Sparks MD 21152

MCPS
Radon Spike Sample Laboratory Results


Log Number	Device Number	Test Exposure Duration:	Area Tested	Result (pCi/L)
3020102	3029166	04/04/2016 11:10 am 04/06/2016 11:13 am	Not Indicated	11.9
3020103	3029214	04/04/2016 11:10 am 04/06/2016 11:13 am	Not Indicated	11.5
3020104	3029217	04/04/2016 11:10 am 04/06/2016 11:13 am	Not Indicated	10.7
3020105	3029218	04/04/2016 11:10 am 04/06/2016 11:13 am	Not Indicated	11.3
3020106	3029219	04/04/2016 11:10 am 04/06/2016 11:13 am	Not Indicated	11.0
3020107	3029220	04/04/2016 11:10 am 04/06/2016 11:13 am	Not Indicated	10.5

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

Distributed by: KCI Technologies, Inc.

Date Received: 04/07/2016 Date Logged: 04/07/2016 Date Analyzed: 04/07/2016 Date Reported: 04/08/2016

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

Report Reviewed By: 

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

Disclaimer:

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

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MCPS RADON TESTING

Executive Summary: Kingsview Middle School

Date of Test Report:	2/16/2016
Round of Testing:	Initial Follow-up Post Remediation
# Rooms Tested:	62
# 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.



February 16, 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: Kingsview Middle School
18909 Kingsview Road
Germantown, MD 20874

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 Kingsview Middle School, located at 18909 Kingsview Road in Germantown, Maryland 20874 (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-six (76) activated charcoal (AC) radon test kits. KCI deployed radon test kits in frequently-occupied ground contact rooms, and other areas, (if applicable) in accordance with AARST guidance. A floor plan map of the building with the test locations is included as Attachment A of this report.

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

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

Butler Bridge Road, Mills River, North Carolina.

Evaluation of Testing Conditions:

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

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

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

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

Results:

The results of the radon test analysis indicated the following:

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

Notes:
D- Duplicate sample

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

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

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

Sincerely,



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

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

ATTACHMENT A

Floor Plan With Test Locations

ATTACHMENT B

Radon Test Summary Spreadsheet

Table Notes:

AC- Activated Charcoal

ACI- Air Chek, Inc.

D- Duplicate

FB- Field Blank

KCI- KCI Technologies, Inc.

OB- Office Blank

PM- Project Manager

QC- Quality Control

Radon Testing Results		
Kingsview Middle School		
Test Period: 01/19/16-01/26/16		
Kit Number	Room / Area	Result
7716916	A102	0.7
7716917	A102	< 0.3
7716919	A102	0.9
7716920	A102	0.6
7716918	A104	< 0.3
7716915	A109	< 0.3
7716914	A112	< 0.3
7716913	A114	< 0.3
7716984	B101	< 0.3
7716985	B101	< 0.3
7716989	B108	0.9
7716987	B109	0.6
7716986	B110	1
7716974	BLDG. SVC. OFFICE	< 0.3
7716948	C106	< 0.3
7716963	C107	< 0.3
7716967	C109	< 0.3
7716973	C110	< 0.3
7716945	C111	< 0.3
7716954	C112	< 0.3
7716970	C114	< 0.3
7716965	* C115 (tampered)	0.6
7716964	C116	< 0.3
7716962	C118	< 0.3
7716959	C121	< 0.3
7716960	C122	0.6
7716971	C128	0.6
7716947	C133	< 0.3
7716950	C135	0.6
7716951	C136	< 0.3
7716949	C137	0.7
7716944	C145	< 0.3
7716961	C145	< 0.3
7716958	C147	< 0.3
7716969	C150	< 0.3
7716943	C161	< 0.3
7716941	D104	< 0.3
7716937	D109	< 0.3
7716957	D110	< 0.3
7716942	D112	< 0.3
7716955	D115	< 0.3
7716932	D130A	< 0.3
7716934	D130B	0.6
7716936	D131	< 0.3
7716982	D208	< 0.3
7716976	D215	< 0.3

Table Note:

* Missing or Compromised Sample

Radon Testing Results		
Kingsview Middle School		
Test Period: 01/19/16-01/26/16		
Kit Number	Room / Area	Result
7716979	D231	< 0.3
7716923	E105	< 0.3
7716938	E106	< 0.3
7716940	E107	< 0.3
7716926	E108	< 0.3
7716929	E109	< 0.3
7716924	E111	< 0.3
7716925	E112	< 0.3
7716930	E113	0.6
7716933	E114	< 0.3
7716935	E119	< 0.3
7716931	E122	0.6
7716956	E123	< 0.3
7716972	E130	< 0.3
7716922	E131	0.9
7716928	E132	< 0.3
7716927	E133	0.7
7716983	* E207 (missing)	0
7716980	E214	< 0.3
7716981	E232	< 0.3
7716952	MAIN OFFICE	0.5

Table Note:

* Missing or Compromised Sample

Radon Testing Results		
Kingsview Middle School		
Test Period: 01/19/16-01/22/16		
Kit Number	QC Type	Result
7716975	D (A112)	< 0.3
7716953	D (BLDG. SVC. OFFICE)	< 0.3
7716968	D (C128)	< 0.3
7716977	D (D104)	< 0.3
7716921	D (E108)	< 0.3
7716939	D (E123)	< 0.3
7716946	FB (C133)	< 0.3
7716978	FB (D104)	< 0.3
7721573	OB (0)	< 0.3

Table Note:

* Missing or Compromised Sample

ATTACHMENT C

Laboratory Analytical Results

February 11, 2016
LABORATORY ANALYSIS REPORT **

Radon test result report for:
**KINGSVIEW MIDDLE SCHOOL
 MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7721573	0	2016-01-19 @ 7:00 pm	2016-01-22 @ 2:00 pm	< 0.3	2016-01-27
7716916	A102	2016-01-19 @ 12:00 pm	2016-01-22 @ 9:00 am	0.7 ± 0.3	2016-01-27
7716917	A102	2016-01-19 @ 12:00 pm	2016-01-22 @ 9:00 am	< 0.3	2016-01-27
7716919	A102	2016-01-19 @ 12:00 pm	2016-01-22 @ 9:00 am	0.9 ± 0.3	2016-01-27
7716920	A102	2016-01-19 @ 12:00 pm	2016-01-22 @ 9:00 am	0.6 ± 0.3	2016-01-27
7716918	A104	2016-01-19 @ 12:00 pm	2016-01-22 @ 9:00 am	< 0.3	2016-01-27
7716915	A109	2016-01-19 @ 12:00 pm	2016-01-22 @ 9:00 am	< 0.3	2016-01-27
7716914	A112	2016-01-19 @ 12:00 pm	2016-01-22 @ 9:00 am	< 0.3	2016-01-27
7716975	A112	2016-01-19 @ 12:00 pm	2016-01-22 @ 9:00 am	< 0.3	2016-01-27
7716913	A114	2016-01-19 @ 12:00 pm	2016-01-22 @ 9:00 am	< 0.3	2016-01-27
7716984	B101	2016-01-19 @ 1:00 pm	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7716985	B101	2016-01-19 @ 1:00 pm	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7716989	B108	2016-01-19 @ 1:00 pm	2016-01-22 @ 8:00 am	0.9 ± 0.3	2016-01-27
7716987	B109	2016-01-19 @ 1:00 pm	2016-01-22 @ 8:00 am	0.6 ± 0.3	2016-01-27
7716986	B110	2016-01-19 @ 1:00 pm	2016-01-22 @ 8:00 am	1.0 ± 0.3	2016-01-27
7716953	BLDG. SVC. OFFIC	2016-01-19 @ 9:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7716974	BLDG. SVC. OFFIC	2016-01-19 @ 9:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7716948	C106	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7716963	C107	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7716967	C109	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7716973	C110	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7716945	C111	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7716968	C128	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7716971	C128	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	0.6 ± 0.3	2016-01-27
7716954	C112	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7716970	C114	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7716965	C115	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	0.6 ± 0.3	2016-01-27
7716964	C116	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7716962	C118	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7716959	C121	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7716960	C122	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	0.6 ± 0.3	2016-01-27
7716946	C133	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7716947	C133	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7716950	C135	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	0.6 ± 0.3	2016-01-27
7716951	C136	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7716949	C137	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	0.7 ± 0.3	2016-01-27
7716944	C145	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-27

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

Radon test result report for:
**KINGSVIEW MIDDLE SCHOOL
 MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7716961	C145	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7716958	C147	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7716969	C150	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7716943	C161	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7716941	D104	2016-01-19 @ 11:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7716977	D104	2016-01-19 @ 1:00 pm	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7716978	D104	2016-01-19 @ 1:00 pm	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7716937	D109	2016-01-19 @ 11:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7716957	D110	2016-01-19 @ 11:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7716942	D112	2016-01-19 @ 11:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7716955	D115	2016-01-19 @ 10:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7716932	D130A	2016-01-19 @ 11:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7716934	D130B	2016-01-19 @ 11:00 am	2016-01-22 @ 8:00 am	0.6 ± 0.3	2016-01-27
7716936	D131	2016-01-19 @ 11:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7716982	D208	2016-01-19 @ 1:00 pm	2016-01-22 @ 9:00 am	< 0.3	2016-01-27
7716976	D215	2016-01-19 @ 1:00 pm	2016-01-22 @ 9:00 am	< 0.3	2016-01-27
7716979	D231	2016-01-19 @ 1:00 pm	2016-01-22 @ 9:00 am	< 0.3	2016-01-27
7716923	E105	2016-01-19 @ 12:00 pm	2016-01-22 @ 9:00 am	< 0.3	2016-01-27
7716938	E106	2016-01-19 @ 12:00 pm	2016-01-22 @ 9:00 am	< 0.3	2016-01-27
7716940	E107	2016-01-19 @ 12:00 pm	2016-01-22 @ 9:00 am	< 0.3	2016-01-27
7716921	E108	2016-01-19 @ 11:00 am	2016-01-22 @ 9:00 am	< 0.3	2016-01-27
7716926	E108	2016-01-19 @ 11:00 am	2016-01-22 @ 9:00 am	< 0.3	2016-01-27
7716929	E109	2016-01-19 @ 11:00 am	2016-01-22 @ 9:00 am	< 0.3	2016-01-27
7716924	E111	2016-01-19 @ 11:00 am	2016-01-22 @ 9:00 am	< 0.3	2016-01-27
7716925	E112	2016-01-19 @ 11:00 am	2016-01-22 @ 9:00 am	< 0.3	2016-01-27
7716930	E113	2016-01-19 @ 11:00 am	2016-01-22 @ 9:00 am	0.6 ± 0.2	2016-01-27
7716933	E114	2016-01-19 @ 11:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7716935	E119	2016-01-19 @ 11:00 am	2016-01-22 @ 8:00 am	< 0.3	2016-01-27
7716931	E122	2016-01-19 @ 11:00 am	2016-01-22 @ 9:00 am	0.6 ± 0.2	2016-01-27
7716956	E123	2016-01-19 @ 11:00 am	2016-01-22 @ 9:00 am	< 0.3	2016-01-27
7716939	E123	2016-01-19 @ 11:00 am	2016-01-22 @ 9:00 am	< 0.3	2016-01-27
7716972	E130	2016-01-19 @ 11:00 am	2016-01-22 @ 9:00 am	< 0.3	2016-01-27
7716922	E131	2016-01-19 @ 11:00 am	2016-01-22 @ 9:00 am	0.9 ± 0.3	2016-01-27
7716928	E132	2016-01-19 @ 11:00 am	2016-01-22 @ 9:00 am	< 0.3	2016-01-27
7716927	E133	2016-01-19 @ 11:00 am	2016-01-22 @ 9:00 am	0.7 ± 0.3	2016-01-27
7716983	E207	@	@		
7716980	E214	2016-01-19 @ 1:00 pm	2016-01-22 @ 9:00 am	< 0.3	2016-01-27

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

Radon test result report for:
**KINGSVIEW MIDDLE SCHOOL
MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7716981	E232	2016-01-19 @ 1:00 pm	2016-01-22 @ 9:00 am	< 0.3	2016-01-27
7716952	MAIN OFFICE	2016-01-19 @ 9:00 am	2016-01-22 @ 8:00 am	0.5 ± 0.3	2016-01-27

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February 2, 2016
LABORATORY ANALYSIS REPORT

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

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

February
15,
2016

**** LABORATORY ANALYSIS
REPORT ****

Spike Sample Laboratory Results

Radon test result report for:
MCPS

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

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

EXPOSURE IN BOWSER-MORNER RADON CHAMBER

CLIENT KCF Technologies Inc. Job Number 173704

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

Date Start: 11/30/16 Date Stop: 2/1/16 Date Start: _____ Date Stop: _____

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

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

7718281, 7718282, 7718291, _____

7718288, 7718289, 7718273 _____

ε3 Left

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

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

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

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

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

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

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



Chain of Custody

Project Name: MCPS Radon Phase VI

Name of Schools:

- | | | |
|--------------------------|------------------------------|---------------------------|
| 1. Francis Scott Key MS | 12. Little Bennett ES | 23. Rolling Terrace ES |
| 2. Gaithersburg ES | 13. Loiderman MS | 24. Roscoe Nix ES |
| 3. Gaithersburg MS | 14. Longview ES | 25. Sally K. Ride ES |
| 4. Galway ES | 15. Meadow Hall ES | 26. Spark Matsunaga ES |
| 5. Great Seneca Creek ES | 16. Neelsville MS | 27. Tacoma Park ES |
| 6. Harmony Hills ES | 17. New Hampshire Estates ES | 28. Thomas Pyle MS |
| 7. John Poole MS | 18. North Bethesda MS | 29. Wayside ES |
| 8. Judith A. Resnik ES | 19. Northwest HS | 30. Westbrook ES (retest) |
| 9. Kemp Mill ES | 20. Pine Crest ES | 31. Westland MS (retest) |
| 10. Kingsview MS | 21. Radnor Center | 32. William B. Gibbs ES |
| 11. Lakelands Park MS | 22. Ritchie Park ES | 33. William Tyler Page ES |

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

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