



MCPS RADON TESTING - EXECUTIVE SUMMARY

Site Name	Burnt Mills Elementary School
Date of Report	2/21/2020
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	46
# Rooms ≥ 4.0 pCi/L	0
Lowest Value	<0.3 pCi/L
Highest Value	2.2 pCi/L

Project Status

Current Project Status at this time: Testing Complete; no further action.



2/21/2020

Mr. Richard Cox, MS
Environmental Team Leader
Montgomery County Public Schools
Division of Maintenance
Gaithersburg, Maryland 20879

Re: Radon Testing Services

KCI Job #12146341126

Location: Burnt Mills Elementary School

1211 Chilids Street
Silver Spring, Maryland 20901

Dear Mr. Cox:

KCI Technologies, Inc. (KCI) is pleased to submit the following report to Montgomery County Public Schools pursuant to completing a “short-term” 3-day radon test for the Burnt Mills Elementary School, located at 1211 Chilids Street in Silver Spring, Maryland 20901 (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 Provider (certification #111004 RT) 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 1/6/2020 and deployed fifty-five (55) 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 Appendix 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 sixty (60) 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.

KCI returned to the site on 1/9/2020 to retrieve the radon sampling test kits. KCI shipped all radon tests via overnight delivery to Aircheck, Inc. for analysis by gamma-ray spectroscopy. Aircheck, Inc. is a National Radon Safety Board (NRSB) radon measurement provider and is a certified analytical laboratory for radon analysis (certification #ARL1402) located at 1936 Butler Bridge Road, Mills River, North Carolina.

EVALUATION OF TESTING CONDITIONS

These tests represent:

- Follow-up to initial testing.

These tests were conducted to:

- Evaluate radon 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 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.

KCI also compiled weather data for the testing period and conducted observations of relevant field conditions. During the test period, weather records indicate low temperatures were in the upper-20s and high temperatures were in the mid-50s. Maximum sustained winds ranged from 10-23 miles per hour. Average humidity was around 64%. 0.32 inches of precipitation (rain) was recorded during the 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	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 410-316-7800.

Sincerely,

Mr. Tyler P. McCleaf
Radon Measurement Provider
111004 RT

KCI Technologies, Inc.

Attachments:

A- Floor Plan with Test Locations

B - Tables 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 Chek, Inc.

D- Duplicate

FB- Field Blank

KCI- KCI Technologies, Inc.

OB- Office Blank

PM- Project Manager

QC- Quality Control

Table 1- Radon Testing Results		
Burnt Mills Elementary School		
Test Period: 1/6/2020-1/9/2020		
Kit Number	Room / Area	Result
9347501	MAIN OFFICE	0.9
9347502	PRINCIPAL'S OFFICE	< 0.3
9347503	HEALTH ROOM	0.9
9347504	WORK ROOM	0.7
9347505	CONF. ROOM	0.7
9347506	1	0.9
9347507	5	2
9347508	2	1.1
9347509	3	1.3
9347510	4	0.7
9347511	5	2.2
9347512	22	< 0.3
9347513	23	< 0.3
9347514	STAGE	1.1
9347515	ALL PURPOSE ROOM	1
9347516	ALL PURPOSE ROOM	1.6
9347517	K21	0.9
9347518	A1	0.7
9347519	A3	< 0.3
9347520	A2	0.6
9347521	A1	< 0.3
9347522	K20	1.3
9347523	A1	0.8
9347524	BLDG. SERVICES	1.3
9347525	B1	< 0.3
9347526	MUSIC	0.9
9347527	ART	< 0.3
9347528	B2	< 0.3
9347529	MEDIA CENTER	0.5
9347530	STAFF LOUNGE	0.9
9347531	A4	0.8
9347532	MEDIA CENTER	< 0.3
9347533	12	< 0.3
9347534	15A	1
9347535	13	0.5
9347536	14	0.9
9347537	15	1.2
9347538	B4	0.9
9347539	11	< 0.3
9347540	11A	0.9
9347541	12	< 0.3
9347542	17	1.3

9347543	B3	1.2
9347544	12	1
9347545	B5	2
9347546	18	1.5
9347547	CHILD CARE	< 0.3
9347548	19	1
9347549	16	0.8
9347550	GYM	< 0.3
9347551	GYM	< 0.3
9347552	GYM	< 0.3
9347553	PE OFFICE	0.7
9347554	9	0.6
9347556	6	1
9348307	OFFICE BLANK	< 0.3

Table 2- Radon Testing Results			
Burnt Mills Elementary School			
Test Period: 1/6/2020-1/9/2020			
Kit Number	QC Type	Room / Area	Result
9347511	D	5	2.2
9347523	D	A1	0.8
9347521	FB	A1	<0.3
9347529	D	MEDIA CENTER	0.5
9347533	D	12	<0.3
9347541	FB	12	<0.3
9347551	D	GYM	<0.3
9348319	TRANSIT BLANK	NA	<0.3
9348320	TRANSIT BLANK	NA	<0.3
9348313	TRANSIT BLANK	NA	<0.3

ATTACHMENT C

Laboratory Analytical Results

Radon test result report for:

MCPS - Spike Sample Lab Results. Measured values are satisfactory, i.e., within $\pm 25\%$ of the chamber's reference value (25.7 pCi/L).

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
9340067	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	25.1 \pm 2.4 D	2020-01-03
9340035	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	22.5 \pm 2.3 D	2020-01-03
9340003	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	25.2 \pm 2.4 D	2020-01-03
9340089	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	23.3 \pm 2.3 D	2020-01-03
9340072	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	18.3 \pm 2.0 D	2020-01-03
9340040	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	27.3 \pm 2.6 D	2020-01-03
9340008	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	24.8 \pm 2.5 D	2020-01-03
9340094	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	24.7 \pm 2.5 D	2020-01-03
9340099	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	27.5 \pm 2.6 D	2020-01-03
9340077	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	25.2 \pm 2.5 D	2020-01-03
9340045	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	24.7 \pm 2.4 D	2020-01-03
9340013	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	25.9 \pm 2.6 D	2020-01-03
9340018	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	29.1 \pm 2.8 D	2020-01-03
9341704	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	25.1 \pm 2.4 D	2020-01-03
9340050	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	27.2 \pm 2.6 D	2020-01-03
9340023	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	28.2 \pm 2.7 D	2020-01-03
9341709	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	25.5 \pm 2.4 D	2020-01-03
9340055	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	27.8 \pm 2.6 D	2020-01-03
9340060	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	27.3 \pm 2.5 D	2020-01-03
9340028	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	23.9 \pm 2.3 D	2020-01-03
9341714	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	28.3 \pm 2.7 D	2020-01-03
9340082	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	26.4 \pm 2.6 D	2020-01-03
9340065	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	24.2 \pm 2.4 D	2020-01-03
9340033	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	26.2 \pm 2.5 D	2020-01-03
9341719	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	26.7 \pm 2.5 D	2020-01-03
9340001	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	26.3 \pm 2.5 D	2020-01-03
9340087	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	24.8 \pm 2.4 D	2020-01-03
9340070	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	19.5 \pm 2.4 D	2020-01-03
9340038	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	24.7 \pm 2.3 D	2020-01-03
9340006	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	25.2 \pm 2.4 D	2020-01-03
9340092	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	31.4 \pm 2.8 D	2020-01-03
9340097	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	26.7 \pm 2.5 D	2020-01-03
9340075	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	29.6 \pm 2.6 D	2020-01-03
9340043	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	28.1 \pm 2.6 D	2020-01-03
9340011	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	26.8 \pm 2.5 D	2020-01-03
9340016	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	23.2 \pm 2.4 D	2020-01-03
9341702	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	26.8 \pm 2.5 D	2020-01-03

Radon test result report for:

MCPS - Spike Sample Lab Results. Measured values are satisfactory, i.e., within $\pm 25\%$ of the chamber's reference value (25.7 pCi/L).

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
9340048	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	25.5 \pm 2.4 D	2020-01-03
9340021	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	26.7 \pm 2.6 D	2020-01-03
9341707	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	25.8 \pm 2.4 D	2020-01-03
9340053	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	25.8 \pm 2.5 D	2020-01-03
9340058	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	28.5 \pm 2.7 D	2020-01-03
9340026	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	25.9 \pm 2.4 D	2020-01-03
9341712	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	24.3 \pm 2.4 D	2020-01-03
9340080	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	25.1 \pm 2.4 D	2020-01-03
9340063	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	25.8 \pm 2.5 D	2020-01-03
9340031	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	24.9 \pm 2.4 D	2020-01-03
9341717	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	25.7 \pm 2.4 D	2020-01-03
9340085	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	26.9 \pm 2.5 D	2020-01-03
9340068	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	26.2 \pm 2.5 D	2020-01-03
9340036	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	23.6 \pm 2.3 D	2020-01-03
9340004	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	26.9 \pm 2.6 D	2020-01-03
9340090	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	26.3 \pm 2.5 D	2020-01-03
9340073	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	26.8 \pm 2.5 D	2020-01-03
9340041	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	25.6 \pm 2.4 D	2020-01-03
9340009	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	24.1 \pm 2.4 D	2020-01-03
9340095	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	25.2 \pm 2.5 D	2020-01-03
9340100	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	24.5 \pm 2.4 D	2020-01-03
9340078	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	25.0 \pm 2.4 D	2020-01-03
9340046	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	28.0 \pm 2.6 D	2020-01-03
9340014	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	21.8 \pm 2.8 D	2020-01-03
9340019	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	26.0 \pm 2.5 D	2020-01-03
9341705	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	27.8 \pm 2.6 D	2020-01-03
9340051	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	25.5 \pm 2.4 D	2020-01-03
9340056	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	27.7 \pm 2.6 D	2020-01-03
9340024	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	28.3 \pm 2.5 D	2020-01-03
9341710	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	24.2 \pm 2.3 D	2020-01-03
9340061	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	28.9 \pm 2.6 D	2020-01-03
9340029	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	23.0 \pm 2.3 D	2020-01-03
9341715	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	27.0 \pm 2.5 D	2020-01-03
9340083	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	24.9 \pm 2.4 D	2020-01-03
9340066	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	25.1 \pm 2.4 D	2020-01-03
9340034	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	26.4 \pm 2.5 D	2020-01-03
9341720	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	25.3 \pm 2.5 D	2020-01-03

Radon test result report for:

MCPS - Spike Sample Lab Results. Measured values are satisfactory, i.e., within $\pm 25\%$ of the chamber's reference value (25.7 pCi/L).

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
9340002	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	25.7 \pm 2.5 D	2020-01-03
9340088	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	26.4 \pm 2.5 D	2020-01-03
9340071	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	24.9 \pm 2.4 D	2020-01-03
9340039	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	26.9 \pm 2.5 D	2020-01-03
9340007	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	26.9 \pm 2.4 D	2020-01-03
9340093	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	25.1 \pm 2.5 D	2020-01-03
9340098	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	26.8 \pm 2.5 D	2020-01-03
9340076	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	25.1 \pm 2.5 D	2020-01-03
9340044	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	25.2 \pm 2.5 D	2020-01-03
9340012	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	22.5 \pm 2.2 D	2020-01-03
9340017	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	25.3 \pm 2.5 D	2020-01-03
9341703	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	26.0 \pm 2.5 D	2020-01-03
9340049	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	26.0 \pm 2.5 D	2020-01-03
9340022	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	28.6 \pm 2.6 D	2020-01-03
9341708	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	28.8 \pm 2.8 D	2020-01-03
9340054	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	26.8 \pm 2.5 D	2020-01-03
9340059	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	26.5 \pm 2.6 D	2020-01-03
9340027	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	26.6 \pm 2.5 D	2020-01-03
9341713	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	26.5 \pm 2.5 D	2020-01-03
9340081	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	18.4 \pm 2.1 D	2020-01-03
9340064	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	26.5 \pm 2.5 D	2020-01-03
9340032	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	26.1 \pm 2.4 D	2020-01-03
9341718	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	23.7 \pm 2.4 D	2020-01-03
9340086	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	26.9 \pm 2.6 D	2020-01-03
9340069	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	25.6 \pm 2.5 D	2020-01-03
9340037	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	28.4 \pm 2.6 D	2020-01-03
9340005	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	???? DIF1	2020-01-03
9340091	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	26.5 \pm 2.5 D	2020-01-03
9340096	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	26.2 \pm 2.5 D	2020-01-03
9340074	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	27.7 \pm 2.5 D	2020-01-03
9340042	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	26.6 \pm 2.5 D	2020-01-03
9340010	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	27.5 \pm 2.5 D	2020-01-03
9341701	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	22.9 \pm 2.3 D	2020-01-03
9340047	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	26.7 \pm 2.5 D	2020-01-03
9340015	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	25.4 \pm 2.5 D	2020-01-03
9340020	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	24.1 \pm 2.4 D	2020-01-03
9341706	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	31.0 \pm 2.7 D	2020-01-03

Radon test result report for:

MCPS - Spike Sample Lab Results. Measured values are satisfactory, i.e., within $\pm 25\%$ of the chamber's reference value (25.7 pCi/L).

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
9340052	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	27.4 \pm 2.6 D	2020-01-03
9340057	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	27.3 \pm 2.5 D	2020-01-03
9340025	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	25.1 \pm 2.4 D	2020-01-03
9341711	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	22.5 \pm 2.2 D	2020-01-03
9340079	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	26.9 \pm 2.5 D	2020-01-03
9340062	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	25.6 \pm 2.5 D	2020-01-03
9340030	N/A	2019-12-21 @ 8:00 am	2019-12-23 @ 8:00 am	25.0 \pm 2.4 D	2020-01-03
9341716	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	25.1 \pm 2.4 D	2020-01-03
9340084	N/A	2019-12-21 @ 9:00 am	2019-12-23 @ 9:00 am	24.5 \pm 2.3 D	2020-01-03

EXPOSURE IN BOWSER-MORNER RADON CHAMBER

CLIENT KCI Technologies Inc Job Number 193598

NOMINAL Conditions: Radon Conc _____ pCi/L Rel. Hum _____ % Temp. _____ F

Date Start: 12/21/19 Date Stop: 12/23/19

Time Start: 0830 Time Stop: 0830

(Group 4)
Device No.'s: (20) Char. Bags -

9340061 thru 9340080

Temp of _____
RH % _____
Avg pCi/L _____

52

Date Start: 12/21/19 Date Stop: 12/23/19

Time Start: 0835 Time Stop: 0835

(Group 5)
Device No.'s: (20) Char. Bags -

9340081 thru 9340100

Temp of _____
RH % _____
Avg pCi/L _____

25

Date Start: 12/21/19 Date Stop: 12/23/19

Time Start: 0840 Time Stop: 0840

(Group 6)
Device No.'s: (20) Char. Bags -

9341701 thru 9341720

Temp of _____
RH % _____
Avg pCi/L _____

25

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

Radon test result report for:
BURNT MILLS ES
309

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
9347506	1	2020-01-06 @ 8:00 am	2020-01-09 @ 9:00 am	0.9 ± 0.4	2020-01-14
9347539	11	2020-01-06 @ 9:00 am	2020-01-09 @ 9:00 am	< 0.3	2020-01-14
9347540	11A	2020-01-06 @ 9:00 am	2020-01-09 @ 9:00 am	0.9 ± 0.4	2020-01-14
9347533	12	2020-01-06 @ 10:00 am	2020-01-09 @ 10:00 am	< 0.3	2020-01-14
9347541	12	2020-01-06 @ 10:00 am	2020-01-09 @ 10:00 am	< 0.3	2020-01-14
9347544	12	2020-01-06 @ 10:00 am	2020-01-09 @ 10:00 am	1.0 ± 0.5	2020-01-14
9347535	13	2020-01-06 @ 10:00 am	2020-01-09 @ 10:00 am	0.5 ± 0.4	2020-01-14
9347536	14	2020-01-06 @ 10:00 am	2020-01-09 @ 10:00 am	0.9 ± 0.4	2020-01-14
9347537	15	2020-01-06 @ 10:00 am	2020-01-09 @ 10:00 am	1.2 ± 0.5	2020-01-14
9347534	15A	2020-01-06 @ 9:00 am	2020-01-09 @ 10:00 am	1.0 ± 0.5	2020-01-14
9347549	16	2020-01-06 @ 10:00 am	2020-01-09 @ 10:00 am	0.8 ± 0.4	2020-01-14
9347542	17	2020-01-06 @ 10:00 am	2020-01-09 @ 10:00 am	1.3 ± 0.5	2020-01-14
9347546	18	2020-01-06 @ 10:00 am	2020-01-09 @ 10:00 am	1.5 ± 0.5	2020-01-14
9347548	19	2020-01-06 @ 10:00 am	2020-01-09 @ 10:00 am	1.0 ± 0.4	2020-01-14
9347508	2	2020-01-06 @ 8:00 am	2020-01-09 @ 9:00 am	1.1 ± 0.5	2020-01-14
9347512	22	2020-01-06 @ 9:00 am	2020-01-09 @ 10:00 am	< 0.3	2020-01-14
9347513	23	2020-01-06 @ 9:00 am	2020-01-09 @ 10:00 am	< 0.3	2020-01-14
9347509	3	2020-01-06 @ 8:00 am	2020-01-09 @ 9:00 am	1.3 ± 0.5	2020-01-14
9347510	4	2020-01-06 @ 8:00 am	2020-01-09 @ 9:00 am	0.7 ± 0.4	2020-01-14
9347556	6	2020-01-06 @ 10:00 am	2020-01-09 @ 9:00 am	1.0 ± 0.4	2020-01-14
9347554	9	2020-01-06 @ 10:00 am	2020-01-09 @ 9:00 am	0.6 ± 0.4	2020-01-14
9347518	A1	2020-01-06 @ 9:00 am	2020-01-09 @ 9:00 am	0.7 ± 0.5	2020-01-14
9347523	A1	2020-01-06 @ 9:00 am	2020-01-09 @ 9:00 am	0.8 ± 0.5	2020-01-14
9347521	A1	2020-01-06 @ 9:00 am	2020-01-09 @ 9:00 am	< 0.3	2020-01-14
9347520	A2	2020-01-06 @ 9:00 am	2020-01-09 @ 9:00 am	0.6 ± 0.4	2020-01-14
9347519	A3	2020-01-06 @ 9:00 am	2020-01-09 @ 9:00 am	< 0.3	2020-01-14
9347531	A4	2020-01-06 @ 9:00 am	2020-01-09 @ 9:00 am	0.8 ± 0.4	2020-01-14
9347516	ALL PURPOSE ROOM	2020-01-06 @ 9:00 am	2020-01-09 @ 9:00 am	1.6 ± 0.5	2020-01-14
9347515	ALL PURPOSE ROOM	2020-01-06 @ 9:00 am	2020-01-09 @ 9:00 am	1.0 ± 0.5	2020-01-14
9347527	ART	2020-01-06 @ 9:00 am	2020-01-09 @ 9:00 am	< 0.3	2020-01-14
9347525	B1	2020-01-06 @ 9:00 am	2020-01-09 @ 9:00 am	< 0.3	2020-01-14
9347528	B2	2020-01-06 @ 9:00 am	2020-01-09 @ 9:00 am	< 0.3	2020-01-14
9347543	B3	2020-01-06 @ 10:00 am	2020-01-09 @ 10:00 am	1.2 ± 0.4	2020-01-14
9347538	B4	2020-01-06 @ 9:00 am	2020-01-09 @ 10:00 am	0.9 ± 0.5	2020-01-14
9347545	B5	2020-01-06 @ 10:00 am	2020-01-09 @ 10:00 am	2.0 ± 0.5	2020-01-14
9347524	BLDG. SERVICES	2020-01-06 @ 9:00 am	2020-01-09 @ 9:00 am	1.3 ± 0.5	2020-01-14
9347547	CHILD CARE	2020-01-06 @ 10:00 am	2020-01-09 @ 10:00 am	< 0.3	2020-01-14

Radon test result report for:
BURNT MILLS ES
309

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
9347505	CONF. ROOM	2020-01-06 @ 8:00 am	2020-01-09 @ 9:00 am	0.7 ± 0.4	2020-01-14
9347550	GYM	2020-01-06 @ 10:00 am	2020-01-09 @ 10:00 am	< 0.3	2020-01-14
9347551	GYM	2020-01-06 @ 10:00 am	2020-01-09 @ 10:00 am	< 0.3	2020-01-14
9347552	GYM	2020-01-06 @ 10:00 am	2020-01-09 @ 10:00 am	< 0.3	2020-01-14
9347503	HEALTH ROOM	2020-01-06 @ 8:00 am	2020-01-09 @ 9:00 am	0.9 ± 0.5	2020-01-14
9347522	K20	2020-01-06 @ 9:00 am	2020-01-09 @ 10:00 am	1.3 ± 0.5	2020-01-14
9347517	K21	2020-01-06 @ 9:00 am	2020-01-09 @ 10:00 am	0.9 ± 0.4	2020-01-14
9347501	MAIN OFFICE	2020-01-06 @ 8:00 am	2020-01-09 @ 9:00 am	0.9 ± 0.5	2020-01-14
9347529	MEDIA CENTER	2020-01-06 @ 9:00 am	2020-01-09 @ 9:00 am	0.5 ± 0.4	2020-01-14
9347532	MEDIA CENTER	2020-01-06 @ 9:00 am	2020-01-09 @ 9:00 am	< 0.3	2020-01-14
9347526	MUSIC	2020-01-06 @ 9:00 am	2020-01-09 @ 9:00 am	0.9 ± 0.5	2020-01-14
9347553	PE OFFICE	2020-01-06 @ 10:00 am	2020-01-09 @ 10:00 am	0.7 ± 0.4	2020-01-14
9347502	PRINCIPAL'S OFFICE	2020-01-06 @ 8:00 am	2020-01-09 @ 9:00 am	< 0.3	2020-01-14
9347530	STAFF LOUNGE	2020-01-06 @ 9:00 am	2020-01-09 @ 9:00 am	0.9 ± 0.4	2020-01-14
9347514	STAGE	2020-01-06 @ 9:00 am	2020-01-09 @ 9:00 am	1.1 ± 0.5	2020-01-14
9347504	WORK ROOM	2020-01-06 @ 8:00 am	2020-01-09 @ 9:00 am	0.7 ± 0.4	2020-01-14

January 14, 2020

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:
BURNT MILLS ES
R

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
9347511	5	2020-01-06 @ 8:00 am	2020-01-09 @ 9:00 am	2.2 ± 0.5	2020-01-14
9347507	5	2020-01-06 @ 8:00 am	2020-01-09 @ 9:00 am	2.0 ± 0.5	2020-01-14

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 2019 Week 3

Name of Schools:

- | | |
|------------------------------|----------------------------|
| 1. Bannockburn E.S. | 12. Montgomery Knolls E.S. |
| 2. Bethesda E.S. | 13. Newport Mills M.S. |
| 3. Bethesda-Chevy Chase H.S. | 14. Oak View E.S. |
| 4. Bradley Hill E.S. | 15. Rock View E.S. |
| 5. Burning Tree E.S. | 16. Roscoe Nix E.S. |
| 6. Burnt Mills E.S. | 17. Sligo M.S. |
| 7. East Silver Springs E.S. | 18. Spring Mill Center |
| 8. Einstein H.S. | 19. Springbrook H.S. |
| 9. Flora Singer E.S. | 20. Westland M.S. |
| 10. Key M.S. | 21. Woodlin M.S. |
| 11. Montgomery Blair H.S. | |

	Date	Initials
Radon Test Kits Deployed	1/6/20 to 1/7/20	JM
Radon Test Kits Collected	1/9/20 to 1/10/20	JM
Radon Test Kits Shipped to Lab*	1/10/20	JM
Radon Test Kits Received by Lab*	1/13/202	JM

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



MCPS RADON TESTING

Executive Summary: Burnt Mills Elementary School

Date of Test Report:	1/22/2016
Round of Testing:	Initial Follow-up Post Remediation
# Rooms Tested:	55
# Rooms \geq 4.0 pCi/L:	0
Low Value:	< 0.3
High Value:	2.9

Project Status:

Initial testing completed; no further action at this time.



January 22, 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 # 12146341.21

Location: Burnt Mills Elementary School
11211 Childs Street
Silver Spring, MD 20901

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 Burnt Mills Elementary School, located at 11211 Childs Street in Silver Spring, Maryland 20901 (subject site).

Scope of Services:

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

KCI visited the site on December 28, 2015 and deployed sixty-qpg (63) 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 December 31, 2015 to retrieve the radon sampling test kits. KCI shipped all radon tests via overnight delivery to Airchek, Inc. for analysis by gamma-ray spectroscopy. Airchek, Inc. is a NRSB certified analytical laboratory for radon analysis (certification # ARL1402) located at 1936

Butler Bridge Road, Mills River, North Carolina.

Evaluation of Testing Conditions:

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

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

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

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

Results:

The results of the radon test analysis indicated the following:

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

Notes:

D- Duplicate sample

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

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

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

Sincerely,



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

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

ATTACHMENT 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		
Burnt Mills ES		
Test Period: 12/28/15-12/31/15		
Kit Number	Room / Area	Result
7714099	1	1.5
7714072	2	0.7
7714100	3	1.8
7714073	4	< 0.3
7714076	5	1.6
7714080	10	0.7
7714055	11	0.9
7714057	12	< 0.3
7714060	13	0.7
7714063	14	< 0.3
7714058	15	1
7714041	16	< 0.3
7714039	17	1.2
7714062	18	< 0.3
7714093	19	0.9
7714051	11A	1.1
7714061	15A	0.7
7714056	ART	1
7714082	CLASS	1.7
7714065	CLASS	0.6
7714089	CLASS	1.9
7714052	CLASS	1.1
7714091	CLASS	< 0.3
7714079	CLASS	< 0.3
7714088	CLASS	< 0.3
7714024	CLASS	0.7
7714023	CONFERENCE	< 0.3
7714086	GYM	< 0.3
7714084	GYM	1.6
7714090	GYM	< 0.3
7714083	K20	< 0.3
7714066	K21	< 0.3
7714092	LIBRARY	0.6
7714040	LIBRARY	< 0.3
7714095	LOUNGE	1.2
7714028	ML1011	< 0.3
7714021	ML547	< 0.3
7714032	ML769	< 0.3
7714033	ML921	< 0.3
7714030	MPR	1.5
7714025	MPR	2.8
7714081	MU	0.7
7714071	MUSIC	0.6
7714096	NURSE	< 0.3
7714067	NURSE	< 0.3
7714087	OFFICE	< 0.3

Table Note:

* Missing or Compromised Sample

Radon Testing Results		
Burnt Mills ES		
Test Period: 12/28/15-12/31/15		
Kit Number	Room / Area	Result
7714077	OFFICE	2.9
7714068	OFFICE	< 0.3
7714098	OFFICE	< 0.3
7714097	OFFICE	< 0.3
7714013	OFFICE	0.6
7714085	OFFICE	0.9
7714002	READING	< 0.3

Table Note:

* Missing or Compromised Sample

Radon Testing Results		
Burnt Mills ES		
Test Period: 12/28/15-12/31/15		
Kit Number	QC Type	Result
7714059	D (13)	0.6
7714064	D (18)	< 0.3
7714031	D (ML547)	< 0.3
7714078	D (MU)	< 0.3
7714075	D (MUSIC)	< 0.3
7714042	FB (CLASS)	< 0.3
7714026	FB (ML769)	< 0.3
7710525	OB (0)	< 0.3

Table Note:

* Missing or Compromised Sample

ATTACHMENT C

Laboratory Analytical Results

January 16, 2016
LABORATORY ANALYSIS REPORT

Radon test result report for:
BURNT MILLS ES.
MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7710525	0	2015-12-28 @ 4:00 pm	2015-12-31 @ 12:00 pm	< 0.3	2016-01-05
7714099	1	2015-12-28 @ 1:00 pm	2015-12-31 @ 11:00 am	1.5 ± 0.4	2016-01-05
7714080	10	2015-12-28 @ 1:00 pm	2015-12-31 @ 11:00 am	0.7 ± 0.4	2016-01-05
7714055	11	2015-12-28 @ 2:00 pm	2015-12-31 @ 10:00 am	0.9 ± 0.4	2016-01-05
7714051	11A	2015-12-28 @ 2:00 pm	2015-12-31 @ 10:00 am	1.1 ± 0.4	2016-01-05
7714057	12	2015-12-28 @ 2:00 pm	2015-12-31 @ 10:00 am	< 0.3	2016-01-05
7714059	13	2015-12-28 @ 2:00 pm	2015-12-31 @ 10:00 am	0.6 ± 0.4	2016-01-05
7714060	13	2015-12-28 @ 2:00 pm	2015-12-31 @ 10:00 am	0.7 ± 0.4	2016-01-05
7714063	14	2015-12-28 @ 2:00 pm	2015-12-31 @ 10:00 am	< 0.3	2016-01-05
7714058	15	2015-12-28 @ 2:00 pm	2015-12-31 @ 10:00 am	1.0 ± 0.4	2016-01-05
7714061	15A	2015-12-28 @ 2:00 pm	2015-12-31 @ 10:00 am	0.7 ± 0.4	2016-01-05
7714041	16	2015-12-28 @ 2:00 pm	2015-12-31 @ 10:00 am	< 0.3	2016-01-05
7714039	17	2015-12-28 @ 2:00 pm	2015-12-31 @ 11:00 am	1.2 ± 0.4	2016-01-05
7714062	18	2015-12-28 @ 2:00 pm	2015-12-31 @ 10:00 am	< 0.3	2016-01-05
7714064	18	2015-12-28 @ 2:00 pm	2015-12-31 @ 10:00 am	< 0.3	2016-01-05
7714093	19	2015-12-28 @ 3:00 pm	2015-12-31 @ 10:00 am	0.9 ± 0.4	2016-01-05
7714072	2	2015-12-28 @ 1:00 pm	2015-12-31 @ 11:00 am	0.7 ± 0.4	2016-01-05
7714100	3	2015-12-28 @ 1:00 pm	2015-12-31 @ 11:00 am	1.8 ± 0.4	2016-01-05
7714073	4	2015-12-28 @ 1:00 pm	2015-12-31 @ 11:00 am	< 0.3	2016-01-05
7714076	5	2015-12-28 @ 1:00 pm	2015-12-31 @ 11:00 am	1.6 ± 0.4	2016-01-05
7714056	ART	2015-12-28 @ 1:00 pm	2015-12-31 @ 10:00 am	1.0 ± 0.4	2016-01-05
7714065	CLASS	2015-12-28 @ 2:00 pm	2015-12-31 @ 12:00 pm	0.6 ± 0.4	2016-01-05
7714079	CLASS	2015-12-28 @ 3:00 pm	2015-12-31 @ 11:00 am	< 0.3	2016-01-05
7714082	CLASS	2015-12-28 @ 2:00 pm	2015-12-31 @ 12:00 pm	1.7 ± 0.4	2016-01-05
7714024	CLASS	2015-12-28 @ 2:00 pm	2015-12-31 @ 10:00 am	0.7 ± 0.4	2016-01-05
7714088	CLASS	2015-12-28 @ 2:00 pm	2015-12-31 @ 10:00 am	< 0.3	2016-01-05
7714089	CLASS	2015-12-28 @ 2:00 pm	2015-12-31 @ 11:00 am	1.9 ± 0.4	2016-01-05
7714091	CLASS	2015-12-28 @ 3:00 pm	2015-12-31 @ 10:00 am	< 0.3	2016-01-05
7714042	CLASS	2015-12-28 @ 2:00 pm	2015-12-31 @ 10:00 am	< 0.3	2016-01-05
7714052	CLASS	2015-12-28 @ 2:00 pm	2015-12-31 @ 10:00 am	1.1 ± 0.4	2016-01-05
7714023	CONFERENCE	2015-12-28 @ 3:00 pm	2015-12-31 @ 11:00 am	< 0.3	2016-01-05
7714084	GYM	2015-12-28 @ 1:00 pm	2015-12-31 @ 11:00 am	1.6 ± 0.4	2016-01-05
7714086	GYM	2015-12-28 @ 3:00 pm	2015-12-31 @ 10:00 am	< 0.3	2016-01-05
7714090	GYM	2015-12-28 @ 3:00 pm	2015-12-31 @ 10:00 am	< 0.3	2016-01-05
7714083	K20	2015-12-28 @ 3:00 pm	2015-12-31 @ 11:00 am	< 0.3	2016-01-05
7714066	K21	2015-12-28 @ 3:00 pm	2015-12-31 @ 11:00 am	< 0.3	2016-01-05
7714092	LIBRARY	2015-12-28 @ 2:00 pm	2015-12-31 @ 11:00 am	0.6 ± 0.3	2016-01-05

January 16, 2016
** LABORATORY ANALYSIS REPORT **

Radon test result report for:
BURNT MILLS ES.
MAIN

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7714040	LIBRARY	2015-12-28 @ 2:00 pm	2015-12-31 @ 10:00 am	< 0.3	2016-01-05
7714095	LOUNGE	2015-12-28 @ 1:00 pm	2015-12-31 @ 10:00 am	1.2 ± 0.4	2016-01-05
7714028	ML1011	2015-12-28 @ 3:00 pm	2015-12-31 @ 11:00 am	< 0.3	2016-01-05
7714021	ML547	2015-12-28 @ 3:00 pm	2015-12-31 @ 11:00 am	< 0.3	2016-01-05
7714031	ML547	2015-12-28 @ 3:00 pm	2015-12-31 @ 11:00 am	< 0.3	2016-01-05
7714026	ML769	2015-12-28 @ 3:00 pm	2015-12-31 @ 11:00 am	< 0.3	2016-01-05
7714032	ML769	2015-12-28 @ 3:00 pm	2015-12-31 @ 11:00 am	< 0.3	2016-01-05
7714033	ML921	2015-12-28 @ 3:00 pm	2015-12-31 @ 11:00 am	< 0.3	2016-01-05
7714025	MPR	2015-12-28 @ 3:00 pm	2015-12-31 @ 11:00 am	2.8 ± 0.5	2016-01-05
7714030	MPR	2015-12-28 @ 3:00 pm	2015-12-31 @ 11:00 am	1.5 ± 0.4	2016-01-05
7714078	MU	2015-12-28 @ 1:00 pm	2015-12-31 @ 10:00 am	< 0.3	2016-01-05
7714081	MU	2015-12-28 @ 1:00 pm	2015-12-31 @ 10:00 am	0.7 ± 0.4	2016-01-05
7714071	MUSIC	2015-12-28 @ 2:00 pm	2015-12-31 @ 10:00 am	0.6 ± 0.4	2016-01-05
7714075	MUSIC	2015-12-28 @ 2:00 pm	2015-12-31 @ 10:00 am	< 0.3	2016-01-05
7714067	NURSE	2015-12-28 @ 1:00 pm	2015-12-31 @ 11:00 am	< 0.3	2016-01-05
7714096	NURSE	2015-12-28 @ 1:00 pm	2015-12-31 @ 11:00 am	< 0.3	2016-01-05
7714068	OFFICE	2015-12-28 @ 1:00 pm	2015-12-31 @ 11:00 am	< 0.3	2016-01-05
7714077	OFFICE	2015-12-28 @ 1:00 pm	2015-12-31 @ 11:00 am	2.9 ± 0.5	2016-01-05
7714013	OFFICE	2015-12-28 @ 3:00 pm	2015-12-31 @ 11:00 am	0.6 ± 0.4	2016-01-05
7714085	OFFICE	2015-12-28 @ 2:00 pm	2015-12-31 @ 10:00 am	0.9 ± 0.4	2016-01-05
7714087	OFFICE	2015-12-28 @ 3:00 pm	2015-12-31 @ 11:00 am	< 0.3	2016-01-05
7714097	OFFICE	2015-12-28 @ 3:00 pm	2015-12-31 @ 11:00 am	< 0.3	2016-01-05
7714098	OFFICE	2015-12-28 @ 1:00 pm	2015-12-31 @ 11:00 am	< 0.3	2016-01-05
7714002	READING	2015-12-28 @ 1:00 pm	2015-12-31 @ 10:00 am	< 0.3	2016-01-05

January 15, 2016
** LABORATORY ANALYSIS REPORT **

Radon test result report for:
**MCPS PHASE 3 & 4
TRANSIT BLANKS**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7708218	TRANSIT 4	2015-12-18 @ 12:00 pm	2015-12-21 @ 12:00 pm	< 0.3	2015-12-23
7708200	TRANSIT 1	2015-12-18 @ 12:00 pm	2015-12-21 @ 12:00 pm	< 0.3	2015-12-23
7708190	TRANSIT 10	2015-12-18 @ 12:00 pm	2015-12-21 @ 12:00 pm	< 0.3	2015-12-23
7708189	TRANSIT 11	2015-12-18 @ 12:00 pm	2015-12-21 @ 12:00 pm	< 0.3	2015-12-23
7708191	TRANSIT 12	2015-12-18 @ 12:00 pm	2015-12-21 @ 12:00 pm	< 0.3	2015-12-23
7708188	TRANSIT 13	2015-12-18 @ 12:00 pm	2015-12-21 @ 12:00 pm	< 0.3	2015-12-23
7708197	TRANSIT 14	2015-12-18 @ 12:00 pm	2015-12-21 @ 12:00 pm	< 0.3	2015-12-23
7708186	TRANSIT 15	2015-12-18 @ 12:00 pm	2015-12-21 @ 12:00 pm	< 0.3	2015-12-23
7708185	TRANSIT 16	2015-12-18 @ 12:00 pm	2015-12-21 @ 12:00 pm	< 0.3	2015-12-23
7708184	TRANSIT 17	2015-12-18 @ 12:00 pm	2015-12-21 @ 12:00 pm	< 0.3	2015-12-23
7708182	TRANSIT 18	2015-12-18 @ 12:00 pm	2015-12-21 @ 12:00 pm	< 0.3	2015-12-23
7708187	TRANSIT 18	2015-12-18 @ 12:00 pm	2015-12-21 @ 12:00 pm	< 0.3	2015-12-23
7708199	TRANSIT 2	2015-12-18 @ 12:00 pm	2015-12-21 @ 12:00 pm	< 0.3	2015-12-23
7708181	TRANSIT 20	2015-12-18 @ 12:00 pm	2015-12-21 @ 12:00 pm	< 0.3	2015-12-23
7708180	TRANSIT 21	2015-12-18 @ 12:00 pm	2015-12-21 @ 12:00 pm	< 0.3	2015-12-23
7708183	TRANSIT 22	2015-12-18 @ 12:00 pm	2015-12-21 @ 12:00 pm	< 0.3	2015-12-23
7708178	TRANSIT 23	2015-12-18 @ 12:00 pm	2015-12-21 @ 12:00 pm	< 0.3	2015-12-23
7708179	TRANSIT 24	2015-12-18 @ 12:00 pm	2015-12-21 @ 12:00 pm	< 0.3	2015-12-23
7708177	TRANSIT 25	2015-12-18 @ 12:00 pm	2015-12-21 @ 12:00 pm	< 0.3	2015-12-23
7708176	TRANSIT 26	2015-12-18 @ 12:00 pm	2015-12-21 @ 12:00 pm	< 0.3	2015-12-23
7708174	TRANSIT 27	2015-12-18 @ 12:00 pm	2015-12-21 @ 12:00 pm	< 0.3	2015-12-23
7708173	TRANSIT 28	2015-12-18 @ 12:00 pm	2015-12-21 @ 12:00 pm	< 0.3	2015-12-23
7708175	TRANSIT 29	2015-12-18 @ 12:00 pm	2015-12-21 @ 12:00 pm	< 0.3	2015-12-23
7708198	TRANSIT 3	2015-12-18 @ 12:00 pm	2015-12-21 @ 12:00 pm	< 0.3	2015-12-23
7708172	TRANSIT 30	2015-12-18 @ 12:00 pm	2015-12-21 @ 12:00 pm	< 0.3	2015-12-23
7708194	TRANSIT 5	2015-12-18 @ 12:00 pm	2015-12-21 @ 12:00 pm	< 0.3	2015-12-23
7708196	TRANSIT 6	2015-12-18 @ 12:00 pm	2015-12-21 @ 12:00 pm	< 0.3	2015-12-23
7708193	TRANSIT 7	2015-12-18 @ 12:00 pm	2015-12-21 @ 12:00 pm	< 0.3	2015-12-23
7708192	TRANSIT 8	2015-12-18 @ 12:00 pm	2015-12-21 @ 12:00 pm	< 0.3	2015-12-23
7708195	TRANSIT 9	2015-12-18 @ 12:00 pm	2015-12-21 @ 12:00 pm	< 0.3	2015-12-23

December
23,
2015

**LABORATORY ANALYSIS
REPORT ****

Spike Sample Laboratory Results

Radon test result report for:
MCPS

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

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

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

EXPOSURE IN BOWSER-MORNER RADON CHAMBER

CLIENT KCI Technologies Inc. Job Number 173224

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

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

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

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

7706211, 7706366, _____

7706380, 7706381 _____

F3 Left

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

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

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

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

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

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

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



Chain of Custody

Project Name: MCPS Radon Phase III

Name of Schools:

- | | | |
|-----------------------|-----------------------|-----------------------|
| 1. Burnt Mills ES | 13. Georgian Frost ES | 25. Northlake Center |
| 2. Burtonsville ES | 14. Germantown ES | 26. Olney ES |
| 3. Cedar Grove ES | 15. Goshen ES | 27. Rosa Parks MS |
| 4. Cloverly ES | 16. Greencastle ES | 28. Poolesville ES |
| 5. Cold Spring ES | 17. Greenwood ES | 29. Poolesville HS |
| 6. Damascus HS | 18. Lake Seneca ES | 30. Potomac ES |
| 7. Darnestown ES | 19. Laytonsville ES | 31. Rock Terrace HS |
| 8. Diamond ES | 20. Col. E. Brooke MS | 32. Rosemary Hills ES |
| 9. Charles R. Drew ES | 21. Luxmanor ES | 33. Carl Sandburg |
| 10. DuFief ES | 22. Magruder HS | 34. Sequoyah ES |
| 11. Thomas Edison HS | 23. Thur. Marshall ES | 35. Stedwick ES |
| 12. Robert Frost MS | 24. Monocacy ES | 36. Whetstone ES |

	Date	Initials
Radon Test Kits Deployed	12/28/15	JM
Radon Test Kits Sampled	12/31/15	JM
Radon Test Kits Shipped to Lab*	12/31/15	JM
Radon Test Kits Received by Lab*	1/4/16	JM

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