



MCPS RADON TESTING - EXECUTIVE SUMMARY

| | |
|--------------------------|---|
| Site Name | Argyle Middle School |
| Date of Report | 2/28/2020 |
| 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 | 3 |
| # Rooms \geq 4.0 pCi/L | 0 |
| Lowest Value | <0.3 pCi/L |
| Highest Value | <0.3 pCi/L |

Project Status

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



2/28/2020

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

Re: Radon Testing Services

KCI Job #12146341.126

Location: Argyle Middle School
2400 Bel Pre Road
Silver Spring, Maryland 20906

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 Argyle Middle School, located at 2400 Bel Pre Road in Silver Spring, Maryland 20906 (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 #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 2/11/2020 and deployed six (6) 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.

KCI sampled the following locations during this follow-up test:

1. Rooms with missing test kits from the December 2019 testing period (i.e. test kit was deployed but not recovered),

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2. Rooms with invalidated test kits from the December 2019 testing period (e.g. an open window in the room or disturbed test kit),
 3. Rooms which were locked/inaccessible during the December 2019 testing period,
 4. Rooms with elevated December 2019 results (i.e. ≥ 3.5 pCi/L),
 5. Rooms previously tested for radon but not tested in December 2019, and
 6. Additional rooms that require testing (if applicable.)

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 six (6) 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 2/14/2020 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 NRSB 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 mid-20s to the upper-40s; and high temperatures ranged from the lower-40s to the upper-50s. Maximum sustained winds ranged from 14-24 miles per hour. Average humidity was approximately 74%. A total of 1.32 inches of rain were recorded during the testing period. The weather conditions during the testing period may have resulted in atypical radon test results for this facility.

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). Follow-up 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
 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

Floor Plan Legend

X-Sample Location (in red)

X- Previous Sample Location

1- Not Samled; No Ground Contact

2- Not Samled; Unoccupied (e.g. Storage, Mechanical)

3- Not Samled; High Humidity/Moisture

4- Not Samled; Bathroom/Hallway

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 | | |
|--------------------------------|---------------|--------|
| Argyle Middle School | | |
| Test Period: 02/11/20-02/14/20 | | |
| Kit Number | Room / Area | Result |
| 9339790 | AUXILIARY GYM | < 0.3 |
| 9346971 | 201 | < 0.3 |
| 9346973 | GYM | < 0.3 |
| 9346974 | AUXILIARY GYM | < 0.3 |
| 9346975 | GYM | < 0.3 |
| 9348502 | OFFICE BLANK | < 0.3 |

| Table 2- Radon Testing Results | | | |
|--------------------------------|---------------|-------------|--------|
| Argyle Middle School | | | |
| Test Period: 02/11/20-02/14/20 | | | |
| | | | |
| Kit Number | QC Type | Room / Area | Result |
| 9348522 | TRANSIT BLANK | NA | 0.7 |
| 9341735 | TRANSIT BLANK | NA | <0.3 |

ATTACHMENT C

Laboratory Analytical Results

February 19, 2020

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

ARGYLE MS

MAIN

| Kit # | Room Id | Started | Ended | pCi/L | Analyzed |
|--------------|----------------|----------------------|-----------------------|--------------|-----------------|
| 9346971 | 201 | 2020-02-11 @ 8:00 am | 2020-02-14 @ 11:00 am | < 0.3 | 2020-02-19 |
| 9339790 | AUXILIARY GYM | 2020-02-11 @ 8:00 am | 2020-02-14 @ 11:00 am | < 0.3 | 2020-02-19 |
| 9346974 | AUXILIARY GYM | 2020-02-11 @ 8:00 am | 2020-02-14 @ 11:00 am | < 0.3 | 2020-02-19 |
| 9346975 | GYM | 2020-02-11 @ 8:00 am | 2020-02-14 @ 11:00 am | < 0.3 | 2020-02-19 |
| 9346973 | GYM | 2020-02-11 @ 8:00 am | 2020-02-14 @ 11:00 am | < 0.3 | 2020-02-19 |

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 194523

NOMINAL Conditions: Radon Conc 25.8 pCi/L Rel. Hum 49.8 % Temp. 70.2 F

Date Start: 2/21/20 Date Stop: 2/24/20 Date Start: _____ Date Stop: _____

Time Start: 0745 Time Stop: 0745 Time Start: _____ Time Stop: _____

Device No.'s: (9) Char Bags - Device No.'s: _____

9341725 thru 9341733

52 ccp

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

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

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

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

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

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

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

Radon test 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 |
|---------|---------|----------------------|----------------------|----------------|------------|
| 9341725 | N/A | 2020-02-21 @ 8:00 am | 2020-02-24 @ 8:00 am | 26.9 \pm 1.6 | 2020-02-26 |
| 9341730 | N/A | 2020-02-21 @ 8:00 am | 2020-02-24 @ 8:00 am | 26.1 \pm 1.6 | 2020-02-26 |
| 9341728 | N/A | 2020-02-21 @ 8:00 am | 2020-02-24 @ 8:00 am | 26.9 \pm 1.6 | 2020-02-26 |
| 9341726 | N/A | 2020-02-21 @ 8:00 am | 2020-02-24 @ 8:00 am | 25.8 \pm 1.5 | 2020-02-26 |
| 9341731 | N/A | 2020-02-21 @ 8:00 am | 2020-02-24 @ 8:00 am | 25.1 \pm 1.5 | 2020-02-26 |
| 9341729 | N/A | 2020-02-21 @ 8:00 am | 2020-02-24 @ 8:00 am | 26.2 \pm 1.6 | 2020-02-26 |
| 9341727 | N/A | 2020-02-21 @ 8:00 am | 2020-02-24 @ 8:00 am | 27.2 \pm 1.6 | 2020-02-26 |
| 9341732 | N/A | 2020-02-21 @ 8:00 am | 2020-02-24 @ 8:00 am | 27.3 \pm 1.6 | 2020-02-26 |



Radon Test Kit Chain of Custody

Project Name: MCPS Radon 2019 Week 2

Name of Schools:

- | | |
|-----------------------|-------------------|
| 1. Argyle M.S. | 6. Fallsmead E.S. |
| 2. Banneker M.S. | 7. Farquhar M.S. |
| 3. Bel Pre E.S. | 8. Kennedy H.S. |
| 4. Blake H.S. | 9. Magruder H.S. |
| 5. Briggs Chaney M.S. | 10. Wheaton H.S. |

| | Date | Initials |
|----------------------------------|---------|----------|
| Radon Test Kits Deployed | 2/11/20 | JM |
| Radon Test Kits Collected | 2/14/20 | JM |
| Radon Test Kits Shipped to Lab* | 2/14/20 | JM |
| Radon Test Kits Received by Lab* | 2/17/20 | JM |

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



MCPS RADON TESTING - EXECUTIVE SUMMARY

| | |
|--------------------------|---|
| Site Name | Argyle Middle School |
| Date of Report | 2/3/2020 |
| 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 | 67 |
| # Rooms \geq 4.0 pCi/L | 0 |
| Lowest Value | <0.3 pCi/L |
| Highest Value | 2.5 pCi/L |

Project Status

Current Project Status at this time: Testing Complete; missed locations and missing/compromised tests to be sampled.



2/3/2020

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: Argyle Middle School

2400 Bel Pre Road
Silver Spring, Maryland 20906

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 Argyle Middle School, located at 2400 Bel Pre Road in Silver Spring, Maryland 20906 (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 <https://www.montgomeryschoolsmd.org/departments/facilities/maintenance/default.aspx?id=458858> or www.epa.gov/radon.

KCI visited the site on 12/16/2019 and deployed eighty-three (83) 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 12/19/2019 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 lower-20s and high temperatures were in the lower-40s. Maximum sustained winds ranged from 12-26 miles per hour. Average humidity was around 67%. 0.54 inches of precipitation (rain and snow) 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 | | |
|------------------------------------|------------------------|---------|
| Argyle Middle School | | |
| Test Period: 12/16/2019-12/19/2019 | | |
| Kit Number | Room / Area | Result |
| 9340801 | MAIN OFFICE | 0.7 |
| 9340802 | MAIN OFFICE 1 | < 0.3 |
| 9340803 | MAIN OFFICE 2 | < 0.3 |
| 9340804 | MAIN OFFICE 2 | 0.5 |
| 9340805 | MAIN OFFICE CONFERENCE | < 0.3 |
| 9340806 | MAIN OFFICE 3 | < 0.3 |
| 9340807 | GUIDANCE OFFICE LOBBY | < 0.3 |
| 9340808 | GUIDANCE OFFICE LOBBY | < 0.3 |
| 9340809 | GUIDANCE OFFICE 2 | 0.7 |
| 9340810 | GUIDANCE OFFICE 1 | 0.6 |
| 9340811 | GUIDANCE OFFICE 3 | < 0.3 |
| 9340812 | GUIDANCE OFFICE 4 | < 0.3 |
| 9340813 | GUIDANCE GRU | < 0.3 |
| 9340814 | 201 | MISSING |
| 9340815 | 202 | < 0.3 |
| 9340816 | 202C | < 0.3 |
| 9340817 | GUIDANCE GRU | < 0.3 |
| 9340818 | 205 | < 0.3 |
| 9340819 | 205C | 0.5 |
| 9340820 | 204 | < 0.3 |
| 9340821 | 203 | < 0.3 |
| 9340822 | 206 | < 0.3 |
| 9340823 | 207 | < 0.3 |
| 9340824 | 209 | < 0.3 |
| 9340825 | 208 | < 0.3 |
| 9340826 | 208 | < 0.3 |
| 9340827 | 209C | < 0.3 |
| 9340828 | 209C | 0.8 |
| 9340829 | 210 | < 0.3 |
| 9340830 | 211 | < 0.3 |
| 9340831 | 222 | < 0.3 |
| 9340832 | 222 | < 0.3 |
| 9340833 | GYM | < 0.3 |
| 9340834 | GYM | 0.7 |
| 9340835 | STAGE | 0.6 |
| 9340836 | GYM | < 0.3 |
| 9340837 | 221 | < 0.3 |
| 9340838 | 220 | < 0.3 |
| 9340839 | IMC WORKROOM | < 0.3 |
| 9340840 | IMC | < 0.3 |
| 9340841 | IMC | < 0.3 |
| 9340842 | 236 | < 0.3 |
| 9340843 | 235 CONF | 0.7 |
| 9340844 | 234 | 0.7 |
| 9340845 | 234 | 0.6 |
| 9340846 | 235 | < 0.3 |
| 9340847 | 233 | 0.6 |
| 9340848 | 233 | < 0.3 |
| 9340849 | 230A | 0.6 |
| 9340850 | 230 | 0.6 |

| | | |
|---------|--------------------------|---------|
| 9340851 | 231 | < 0.3 |
| 9340852 | 232 | 0.8 |
| 9340853 | 232 | 0.9 |
| 9340854 | CAFE | 0.6 |
| 9340855 | CAFE | 0.8 |
| 9340856 | CAFE | 0.6 |
| 9340857 | 102 | 0.6 |
| 9340858 | 101 | 0.6 |
| 9340859 | 103 | < 0.3 |
| 9340860 | 105 | 0.7 |
| 9340861 | 106 | < 0.3 |
| 9340862 | 104 | < 0.3 |
| 9340863 | 105C | 0.5 |
| 9340864 | 105C | 0.8 |
| 9340865 | 108 | < 0.3 |
| 9340866 | 109 | < 0.3 |
| 9340867 | 109 | < 0.3 |
| 9340868 | 107 | < 0.3 |
| 9340869 | 109C | 0.6 |
| 9340870 | 111 | < 0.3 |
| 9340871 | 110 | 0.6 |
| 9340872 | 124 | < 0.3 |
| 9340873 | 126 | 0.6 |
| 9340874 | 122 | 1.3 |
| 9340875 | 122 | 0.6 |
| 9340876 | 120A | 0.6 |
| 9340877 | 120 | < 0.3 |
| 9340878 | 131 | 1 |
| 9340879 | BUILDING SERVICES OFFICE | 0.6 |
| 9340880 | 130 | < 0.3 |
| 9340881 | 128 | 0.5 |
| 9340882 | 129 | 0.8 |
| 9340883 | 127 | 0.8 |
| 9340884 | 127 | 0.6 |
| 9340885 | 121 | 0.9 |
| 9340886 | 123 | 1.1 |
| 9340887 | 125 | 0.9 |
| 9340888 | 121 | < 0.3 |
| 9340889 | STAFF DINING | < 0.3 |
| 9340890 | GYM | MISSING |
| 9341372 | OFFICE BLANK | 0.6 |

| Table 2- Radon Testing Results | | | |
|------------------------------------|---------------|-----------------------|--------|
| Argyle Middle School | | | |
| Test Period: 12/16/2019-12/19/2019 | | | |
| Kit Number | QC Type | Room / Area | Result |
| 9340804 | D | MAIN OFFICE 2 | 0.5 |
| 9340808 | FB | GUIDANCE OFFICE LOBBY | <0.3 |
| 9340817 | D | GUIDANCE GRU | <0.3 |
| 9340826 | D | 208 | <0.3 |
| 9340827 | FB | 209C | <0.3 |
| 9340834 | D | GYM | 0.7 |
| 9340845 | D | 234 | 0.6 |
| 9340848 | FB | 233 | <0.3 |
| 9340852 | D | 232 | 0.8 |
| 9340864 | D | 105C | 0.8 |
| 9340867 | FB | 109 | <0.3 |
| 9340884 | D | 127 | 0.6 |
| 9340888 | FB | 121 | <0.3 |
| 9341377 | TRANSIT BLANK | NA | 0.5 |
| 9341379 | TRANSIT BLANK | NA | < 0.3 |
| 9341380 | TRANSIT BLANK | NA | < 0.3 |
| 9341398 | TRANSIT BLANK | NA | < 0.3 |

ATTACHMENT C

Laboratory Analytical Results

Radon test result report for:
ARGYLE MS
MAIN

| Kit # | Room Id | Started | Ended | pCi/L | Analyzed |
|---------|---------|-----------------------|----------------------|-----------|------------|
| 9340858 | 101 | 2019-12-16 @ 10:00 am | 2019-12-19 @ 9:00 am | 0.6 ± 0.4 | 2019-12-23 |
| 9340857 | 102 | 2019-12-16 @ 10:00 am | 2019-12-19 @ 9:00 am | 0.6 ± 0.4 | 2019-12-23 |
| 9340859 | 103 | 2019-12-16 @ 10:00 am | 2019-12-19 @ 9:00 am | < 0.3 | 2019-12-23 |
| 9340862 | 104 | 2019-12-16 @ 10:00 am | 2019-12-19 @ 9:00 am | < 0.3 | 2019-12-23 |
| 9340860 | 105 | 2019-12-16 @ 10:00 am | 2019-12-19 @ 9:00 am | 0.7 ± 0.4 | 2019-12-23 |
| 9340864 | 105C | 2019-12-16 @ 10:00 am | 2019-12-19 @ 9:00 am | 0.8 ± 0.4 | 2019-12-23 |
| 9340863 | 105C | 2019-12-16 @ 10:00 am | 2019-12-19 @ 9:00 am | 0.5 ± 0.4 | 2019-12-23 |
| 9340861 | 106 | 2019-12-16 @ 10:00 am | 2019-12-19 @ 9:00 am | < 0.3 | 2019-12-23 |
| 9340868 | 107 | 2019-12-16 @ 10:00 am | 2019-12-19 @ 9:00 am | < 0.3 | 2019-12-23 |
| 9340865 | 108 | 2019-12-16 @ 10:00 am | 2019-12-19 @ 9:00 am | < 0.3 | 2019-12-23 |
| 9340866 | 109 | 2019-12-16 @ 10:00 am | 2019-12-19 @ 9:00 am | < 0.3 | 2019-12-23 |
| 9340867 | 109 | 2019-12-16 @ 10:00 am | 2019-12-19 @ 9:00 am | < 0.3 | 2019-12-23 |
| 9340869 | 109C | 2019-12-16 @ 10:00 am | 2019-12-19 @ 9:00 am | 0.6 ± 0.4 | 2019-12-23 |
| 9340871 | 110 | 2019-12-16 @ 10:00 am | 2019-12-19 @ 9:00 am | 0.6 ± 0.4 | 2019-12-23 |
| 9340870 | 111 | 2019-12-16 @ 10:00 am | 2019-12-19 @ 9:00 am | < 0.3 | 2019-12-23 |
| 9340877 | 120 | 2019-12-16 @ 10:00 am | 2019-12-19 @ 9:00 am | < 0.3 | 2019-12-23 |
| 9340876 | 120A | 2019-12-16 @ 10:00 am | 2019-12-19 @ 9:00 am | 0.6 ± 0.3 | 2019-12-23 |
| 9340888 | 121 | 2019-12-16 @ 10:00 am | 2019-12-19 @ 8:00 am | < 0.3 | 2019-12-23 |
| 9340885 | 121 | 2019-12-16 @ 10:00 am | 2019-12-19 @ 8:00 am | 0.9 ± 0.3 | 2019-12-23 |
| 9340874 | 122 | 2019-12-16 @ 10:00 am | 2019-12-19 @ 9:00 am | 1.3 ± 0.4 | 2019-12-23 |
| 9340875 | 122 | 2019-12-16 @ 10:00 am | 2019-12-19 @ 9:00 am | 0.6 ± 0.4 | 2019-12-23 |
| 9340886 | 123 | 2019-12-16 @ 10:00 am | 2019-12-19 @ 8:00 am | 1.1 ± 0.4 | 2019-12-23 |
| 9340872 | 124 | 2019-12-16 @ 10:00 am | 2019-12-19 @ 9:00 am | < 0.3 | 2019-12-23 |
| 9340887 | 125 | 2019-12-16 @ 10:00 am | 2019-12-19 @ 8:00 am | 0.9 ± 0.4 | 2019-12-23 |
| 9340873 | 126 | 2019-12-16 @ 10:00 am | 2019-12-19 @ 9:00 am | 0.6 ± 0.4 | 2019-12-23 |
| 9340883 | 127 | 2019-12-16 @ 10:00 am | 2019-12-19 @ 9:00 am | 0.8 ± 0.4 | 2019-12-23 |
| 9340884 | 127 | 2019-12-16 @ 10:00 am | 2019-12-19 @ 9:00 am | 0.6 ± 0.4 | 2019-12-23 |
| 9340881 | 128 | 2019-12-16 @ 10:00 am | 2019-12-19 @ 9:00 am | 0.5 ± 0.4 | 2019-12-23 |
| 9340882 | 129 | 2019-12-16 @ 10:00 am | 2019-12-19 @ 9:00 am | 0.8 ± 0.3 | 2019-12-23 |
| 9340880 | 130 | 2019-12-16 @ 10:00 am | 2019-12-19 @ 9:00 am | < 0.3 | 2019-12-23 |
| 9340878 | 131 | 2019-12-16 @ 10:00 am | 2019-12-19 @ 9:00 am | 1.0 ± 0.3 | 2019-12-23 |
| 9340815 | 202 | 2019-12-16 @ 8:00 am | 2019-12-19 @ 8:00 am | < 0.3 | 2019-12-23 |
| 9340816 | 202C | 2019-12-16 @ 8:00 am | 2019-12-19 @ 8:00 am | < 0.3 | 2019-12-23 |
| 9340821 | 203 | 2019-12-16 @ 8:00 am | 2019-12-19 @ 8:00 am | < 0.3 | 2019-12-23 |
| 9340820 | 204 | 2019-12-16 @ 8:00 am | 2019-12-19 @ 8:00 am | < 0.3 | 2019-12-23 |
| 9340818 | 205 | 2019-12-16 @ 8:00 am | 2019-12-19 @ 8:00 am | < 0.3 | 2019-12-23 |
| 9340819 | 205C | 2019-12-16 @ 8:00 am | 2019-12-19 @ 8:00 am | 0.5 ± 0.4 | 2019-12-23 |

Radon test result report for:**ARGYLE MS****MAIN**

| Kit # | Room Id | Started | Ended | pCi/L | Analyzed |
|---------|--------------------------|-----------------------|----------------------|-----------|------------|
| 9340822 | 206 | 2019-12-16 @ 8:00 am | 2019-12-19 @ 8:00 am | < 0.3 | 2019-12-23 |
| 9340823 | 207 | 2019-12-16 @ 8:00 am | 2019-12-19 @ 8:00 am | < 0.3 | 2019-12-23 |
| 9340825 | 208 | 2019-12-16 @ 8:00 am | 2019-12-19 @ 8:00 am | < 0.3 | 2019-12-23 |
| 9340826 | 208 | 2019-12-16 @ 8:00 am | 2019-12-19 @ 8:00 am | < 0.3 | 2019-12-23 |
| 9340824 | 209 | 2019-12-16 @ 8:00 am | 2019-12-19 @ 8:00 am | < 0.3 | 2019-12-23 |
| 9340827 | 209C | 2019-12-16 @ 8:00 am | 2019-12-19 @ 8:00 am | < 0.3 | 2019-12-23 |
| 9340828 | 209C | 2019-12-16 @ 8:00 am | 2019-12-19 @ 8:00 am | 0.8 ± 0.4 | 2019-12-23 |
| 9340829 | 210 | 2019-12-16 @ 8:00 am | 2019-12-19 @ 8:00 am | < 0.3 | 2019-12-23 |
| 9340830 | 211 | 2019-12-16 @ 8:00 am | 2019-12-19 @ 8:00 am | < 0.3 | 2019-12-23 |
| 9340838 | 220 | 2019-12-16 @ 9:00 am | 2019-12-19 @ 8:00 am | < 0.3 | 2019-12-23 |
| 9340837 | 221 | 2019-12-16 @ 9:00 am | 2019-12-19 @ 8:00 am | < 0.3 | 2019-12-23 |
| 9340832 | 222 | 2019-12-16 @ 9:00 am | 2019-12-19 @ 8:00 am | < 0.3 | 2019-12-23 |
| 9340831 | 222 | 2019-12-16 @ 9:00 am | 2019-12-19 @ 8:00 am | < 0.3 | 2019-12-23 |
| 9340850 | 230 | 2019-12-16 @ 9:00 am | 2019-12-19 @ 8:00 am | 0.6 ± 0.4 | 2019-12-23 |
| 9340849 | 230A | 2019-12-16 @ 9:00 am | 2019-12-19 @ 8:00 am | 0.6 ± 0.4 | 2019-12-23 |
| 9340851 | 231 | 2019-12-16 @ 9:00 am | 2019-12-19 @ 8:00 am | < 0.3 | 2019-12-23 |
| 9340852 | 232 | 2019-12-16 @ 9:00 am | 2019-12-19 @ 8:00 am | 0.8 ± 0.4 | 2019-12-23 |
| 9340853 | 232 | 2019-12-16 @ 9:00 am | 2019-12-19 @ 8:00 am | 0.9 ± 0.4 | 2019-12-23 |
| 9340847 | 233 | 2019-12-16 @ 9:00 am | 2019-12-19 @ 8:00 am | 0.6 ± 0.4 | 2019-12-23 |
| 9340848 | 233 | 2019-12-16 @ 9:00 am | 2019-12-19 @ 8:00 am | < 0.3 | 2019-12-23 |
| 9340844 | 234 | 2019-12-16 @ 9:00 am | 2019-12-19 @ 8:00 am | 0.7 ± 0.4 | 2019-12-23 |
| 9340845 | 234 | 2019-12-16 @ 9:00 am | 2019-12-19 @ 8:00 am | 0.6 ± 0.4 | 2019-12-23 |
| 9340846 | 235 | 2019-12-16 @ 9:00 am | 2019-12-19 @ 8:00 am | < 0.3 | 2019-12-23 |
| 9340843 | 235 CONF | 2019-12-16 @ 9:00 am | 2019-12-19 @ 8:00 am | 0.7 ± 0.4 | 2019-12-23 |
| 9340842 | 236 | 2019-12-16 @ 9:00 am | 2019-12-19 @ 8:00 am | < 0.3 | 2019-12-23 |
| 9340879 | BUILDING SERVICES OFFICE | 2019-12-16 @ 10:00 am | 2019-12-19 @ 9:00 am | 0.6 ± 0.4 | 2019-12-23 |
| 9340856 | CAFE | 2019-12-16 @ 10:00 am | 2019-12-19 @ 9:00 am | 0.6 ± 0.4 | 2019-12-23 |
| 9340854 | CAFE | 2019-12-16 @ 10:00 am | 2019-12-19 @ 9:00 am | 0.6 ± 0.4 | 2019-12-23 |
| 9340855 | CAFE | 2019-12-16 @ 10:00 am | 2019-12-19 @ 9:00 am | 0.8 ± 0.3 | 2019-12-23 |
| 9340813 | GUIDANCE GRU | 2019-12-16 @ 8:00 am | 2019-12-19 @ 8:00 am | < 0.3 | 2019-12-23 |
| 9340817 | GUIDANCE GRU | 2019-12-16 @ 8:00 am | 2019-12-19 @ 8:00 am | < 0.3 | 2019-12-23 |
| 9340810 | GUIDANCE OFFICE 1 | 2019-12-16 @ 8:00 am | 2019-12-19 @ 8:00 am | 0.6 ± 0.4 | 2019-12-23 |
| 9340809 | GUIDANCE OFFICE 2 | 2019-12-16 @ 8:00 am | 2019-12-19 @ 8:00 am | 0.7 ± 0.4 | 2019-12-23 |
| 9340811 | GUIDANCE OFFICE 3 | 2019-12-16 @ 8:00 am | 2019-12-19 @ 8:00 am | < 0.3 | 2019-12-23 |
| 9340812 | GUIDANCE OFFICE 4 | 2019-12-16 @ 8:00 am | 2019-12-19 @ 8:00 am | < 0.3 | 2019-12-23 |
| 9340808 | GUIDANCE OFFICE LOBBY | 2019-12-16 @ 8:00 am | 2019-12-19 @ 8:00 am | < 0.3 | 2019-12-23 |
| 9340807 | GUIDANCE OFFICE LOBBY | 2019-12-16 @ 8:00 am | 2019-12-19 @ 8:00 am | < 0.3 | 2019-12-23 |

Radon test result report for:**ARGYLE MS****MAIN**

| Kit # | Room Id | Started | Ended | pCi/L | Analyzed |
|---------|------------------------|-----------------------|----------------------|-----------|------------|
| 9340836 | GYM | 2019-12-16 @ 9:00 am | 2019-12-19 @ 8:00 am | < 0.3 | 2019-12-23 |
| 9340834 | GYM | 2019-12-16 @ 9:00 am | 2019-12-19 @ 8:00 am | 0.7 ± 0.3 | 2019-12-23 |
| 9340833 | GYM | 2019-12-16 @ 9:00 am | 2019-12-19 @ 8:00 am | < 0.3 | 2019-12-23 |
| 9340841 | IMC | 2019-12-16 @ 9:00 am | 2019-12-19 @ 8:00 am | < 0.3 | 2019-12-23 |
| 9340840 | IMC | 2019-12-16 @ 9:00 am | 2019-12-19 @ 8:00 am | < 0.3 | 2019-12-23 |
| 9340839 | IMC WORKROOM | 2019-12-16 @ 9:00 am | 2019-12-19 @ 8:00 am | < 0.3 | 2019-12-23 |
| 9340801 | MAIN OFFICE | 2019-12-16 @ 7:00 am | 2019-12-19 @ 7:00 am | 0.7 ± 0.4 | 2019-12-23 |
| 9340802 | MAIN OFFICE 1 | 2019-12-16 @ 7:00 am | 2019-12-19 @ 7:00 am | < 0.3 | 2019-12-23 |
| 9340803 | MAIN OFFICE 2 | 2019-12-16 @ 7:00 am | 2019-12-19 @ 7:00 am | < 0.3 | 2019-12-23 |
| 9340804 | MAIN OFFICE 2 | 2019-12-16 @ 7:00 am | 2019-12-19 @ 7:00 am | 0.5 ± 0.4 | 2019-12-23 |
| 9340806 | MAIN OFFICE 3 | 2019-12-16 @ 8:00 am | 2019-12-19 @ 8:00 am | < 0.3 | 2019-12-23 |
| 9340805 | MAIN OFFICE CONFERENCE | 2019-12-16 @ 7:00 am | 2019-12-19 @ 7:00 am | < 0.3 | 2019-12-23 |
| 9340889 | STAFF DINING | 2019-12-16 @ 10:00 am | 2019-12-19 @ 8:00 am | < 0.3 | 2019-12-23 |
| 9340835 | STAGE | 2019-12-16 @ 9:00 am | 2019-12-19 @ 8:00 am | 0.6 ± 0.4 | 2019-12-23 |

EXPOSURE IN BOWSER-MORNER RADON CHAMBER

CLIENT KCI Technologies Inc. Job Number 193598

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

Temp °F 70.1
RH % 50.1
Avg pCi/L 25.4

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

Time Start: 0815 Time Stop: 0815

(Group 1)
Device No.'s: (20) Char. Bags-

9340001 thru 9340020

55

Temp °F 70.1
RH % 50.1
Avg pCi/L 25.4

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

Time Start: 0829 Time Stop: 0820

(Group 2)
Device No.'s: (20) Char. Bags-

9340021 thru 9340040

54

Temp °F 70.1
RH % 50.1
Avg pCi/L 25.4

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

Time Start: 0825 Time Stop: 0825

(Group 3)
Device No.'s: (20) Char. Bags-

9340041 thru 9340060

53

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

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:**S****N/A**

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

Radon test result report for:**S****N/A**

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

January 3, 2020

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

S

N/A

| 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 ± 2.6 D | 2020-01-03 |
| 9340057 | N/A | 2019-12-21 @ 8:00 am | 2019-12-23 @ 8:00 am | 27.3 ± 2.5 D | 2020-01-03 |
| 9340025 | N/A | 2019-12-21 @ 8:00 am | 2019-12-23 @ 8:00 am | 25.1 ± 2.4 D | 2020-01-03 |
| 9341711 | N/A | 2019-12-21 @ 9:00 am | 2019-12-23 @ 9:00 am | 22.5 ± 2.2 D | 2020-01-03 |
| 9340079 | N/A | 2019-12-21 @ 9:00 am | 2019-12-23 @ 9:00 am | 26.9 ± 2.5 D | 2020-01-03 |
| 9340062 | N/A | 2019-12-21 @ 9:00 am | 2019-12-23 @ 9:00 am | 25.6 ± 2.5 D | 2020-01-03 |
| 9340030 | N/A | 2019-12-21 @ 8:00 am | 2019-12-23 @ 8:00 am | 25.0 ± 2.4 D | 2020-01-03 |
| 9341716 | N/A | 2019-12-21 @ 9:00 am | 2019-12-23 @ 9:00 am | 25.1 ± 2.4 D | 2020-01-03 |
| 9340084 | N/A | 2019-12-21 @ 9:00 am | 2019-12-23 @ 9:00 am | 24.5 ± 2.3 D | 2020-01-03 |

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 2019 Week 2

Name of Schools:

- | | |
|-------------------------------|---------------------|
| 1. Argyle M.S. | 13. Candelwood E.S. |
| 2. Banneker M.S. | 14. Drew E.S. |
| 3. Bel Pre E.S. | 15. Fallsmead E.S. |
| 4. Bells Mill E.S. | 16. Farquhar M.S. |
| 5. Bethesda Maintenance Depot | 17. Kennedy H.S. |
| 6. Beverly Farms E.S. | 18. Luxmanor E.S. |
| 7. Blake H.S. | 19. Magruder H.S. |
| 8. Dufief E.S. | 20. Redland M.S. |
| 9. Briggs Chaney M.S. | 21. Shriver E.S. |
| 10. Brookhaven E.S. | 22. Smith Center |
| 11. Burtonsville E.S. | 23. Viers Mill E.S. |
| 12. Cabin John M.S. | 24. Wheaton H.S. |

| | Date | Initials |
|----------------------------------|-------------------------|----------|
| Radon Test Kits Deployed | 12/16/19 to 12/17/19 | |
| Radon Test Kits Collected | 12/19/19 to 12/20/19 | |
| Radon Test Kits Shipped to Lab* | 12/20/19 | |
| Radon Test Kits Received by Lab* | 12/23/19 | |

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



MCPS RADON TESTING

Executive Summary: Argyle Middle School

| | |
|---------------------------|--|
| Date of Test Report: | 2/03/2016 (Rev 1) |
| Round of Testing: | Initial Follow-up Post Remediation |
| # Rooms Tested: | 47 |
| # Rooms \geq 4.0 pCi/L: | 0 |
| Low Value: | < 0.3 |
| High Value: | 1.5 |

Project Status:

Initial testing completed; no further action at this time.



February 3, 2016 (Rev 1)

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

Re: **Radon Testing Services**
KCI Job # 12146341.24

Location: Argyle Middle School
2400 Bel Pre Road
Silver Spring, MD 20906

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 Argyle Middle School, located at 2400 Bel Pre Road in Silver Spring, Maryland 20906 (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 11, 2016 and deployed fifty-six (56) 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 14, 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,



H. Allen Bennett
Certified Industrial Hygienist
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 | | |
|---------------------------------------|--------------------|---------------|
| Argyle Middle School | | |
| Test Period: 01/11/16-01/14/16 | | |
| Kit Number | Room / Area | Result |
| 7721725 | 101 | < 0.3 |
| 7721717 | 102 | < 0.3 |
| 7721719 | 103 | < 0.3 |
| 7721716 | 104 | < 0.3 |
| 7721720 | 105 | 0.7 |
| 7721718 | 106 | < 0.3 |
| 7721709 | 107 | < 0.3 |
| 7721707 | 108 | < 0.3 |
| 7721710 | 109 | < 0.3 |
| 7721715 | 110 | 0.9 |
| 7721713 | 111 | < 0.3 |
| 7721728 | 120 | 0.6 |
| 7721703 | 121 | 1.5 |
| 7721723 | 122 | 0.6 |
| 7721705 | 123 | 0.6 |
| 7721727 | 124 | < 0.3 |
| 7721704 | 125 | 1 |
| 7721726 | 126 | < 0.3 |
| 7721702 | 127 | 0.6 |
| 7721729 | 128 | < 0.3 |
| 7721706 | 129 | 0.9 |
| 7721731 | 130 | < 0.3 |
| 7721724 | 131 | 0.8 |
| 7721732 | 132 | < 0.3 |
| 7721758 | 204 | < 0.3 |
| 7721755 | 232 | < 0.3 |
| 7721751 | 236 | < 0.3 |
| 7721714 | 102C | < 0.3 |
| 7721708 | 105C | < 0.3 |
| 7721733 | 109C | < 0.3 |
| 7721735 | 120A | < 0.3 |
| 7721754 | 236A | < 0.3 |
| 7721759 | CLINIC | < 0.3 |
| 7721721 | DR | 0.6 |
| 7721748 | GUID A | < 0.3 |
| 7721744 | GUID B | < 0.3 |
| 7721746 | GUID C | < 0.3 |
| 7721736 | GUID D | < 0.3 |
| 7721742 | GUID E | < 0.3 |
| 7721747 | GUIDANCE | < 0.3 |
| 7721722 | KITCHEN OFFICE | < 0.3 |
| 7721711 | MECH RM 1 OFFICE | < 0.3 |
| 7721743 | OFF A | < 0.3 |
| 7721749 | OFF B | < 0.3 |
| 7721740 | OFFICE | < 0.3 |
| 7721739 | PRINC CONF RM | 0.6 |

Table Note:

* Missing or Compromised Sample

| Radon Testing Results | | |
|---------------------------------------|--------------------|---------------|
| Argyle Middle School | | |
| Test Period: 01/11/16-01/14/16 | | |
| Kit Number | Room / Area | Result |
| 7721738 | PRINCIPAL | < 0.3 |

Table Note:

* Missing or Compromised Sample

| Radon Testing Results | | |
|---------------------------------------|----------------|---------------|
| Argyle Middle School | | |
| Test Period: 01/11/16-01/14/16 | | |
| Kit Number | QC Type | Result |
| 7721712 | D (105C) | < 0.3 |
| 7721750 | D (236) | < 0.3 |
| 7721730 | D (DR) | < 0.3 |
| 7721737 | D (GUID B) | < 0.3 |
| 7721745 | D (OFFICE) | < 0.3 |
| 7721734 | FB (123) | < 0.3 |
| 7721701 | FB (125) | < 0.3 |
| 7721741 | FB (OFF A) | < 0.3 |
| 7718265 | OB (0) | < 0.3 |

Table Note:

* Missing or Compromised Sample

ATTACHMENT C

Laboratory Analytical Results

February 1, 2016
LABORATORY ANALYSIS REPORT **

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

| Kit # | Room Id | Started | Ended | pCi/L | Analyzed |
|---------|---------|-----------------------|----------------------|-----------|------------|
| 7718265 | 0 | 2016-01-11 @ 2:00 pm | 2016-01-14 @ 1:00 pm | < 0.3 | 2016-01-18 |
| 7721725 | 101 | 2016-01-11 @ 9:00 am | 2016-01-14 @ 9:00 am | < 0.3 | 2016-01-18 |
| 7721717 | 102 | 2016-01-11 @ 9:00 am | 2016-01-14 @ 9:00 am | < 0.3 | 2016-01-18 |
| 7721714 | 102C | 2016-01-11 @ 9:00 am | 2016-01-14 @ 9:00 am | < 0.3 | 2016-01-18 |
| 7721719 | 103 | 2016-01-11 @ 9:00 am | 2016-01-14 @ 9:00 am | < 0.3 | 2016-01-18 |
| 7721716 | 104 | 2016-01-11 @ 9:00 am | 2016-01-14 @ 9:00 am | < 0.3 | 2016-01-18 |
| 7721720 | 105 | 2016-01-11 @ 9:00 am | 2016-01-14 @ 9:00 am | 0.7 ± 0.3 | 2016-01-18 |
| 7721708 | 105C | 2016-01-11 @ 9:00 am | 2016-01-14 @ 9:00 am | < 0.3 | 2016-01-18 |
| 7721712 | 105C | 2016-01-11 @ 9:00 am | 2016-01-14 @ 9:00 am | < 0.3 | 2016-01-18 |
| 7721718 | 106 | 2016-01-11 @ 9:00 am | 2016-01-14 @ 9:00 am | < 0.3 | 2016-01-18 |
| 7721709 | 107 | 2016-01-11 @ 9:00 am | 2016-01-14 @ 9:00 am | < 0.3 | 2016-01-18 |
| 7721707 | 108 | 2016-01-11 @ 9:00 am | 2016-01-14 @ 9:00 am | < 0.3 | 2016-01-18 |
| 7721710 | 109 | 2016-01-11 @ 9:00 am | 2016-01-14 @ 9:00 am | < 0.3 | 2016-01-18 |
| 7721733 | 109C | 2016-01-11 @ 10:00 am | 2016-01-14 @ 9:00 am | < 0.3 | 2016-01-18 |
| 7721715 | 110 | 2016-01-11 @ 9:00 am | 2016-01-14 @ 9:00 am | 0.9 ± 0.3 | 2016-01-18 |
| 7721713 | 111 | 2016-01-11 @ 9:00 am | 2016-01-14 @ 9:00 am | < 0.3 | 2016-01-18 |
| 7721728 | 120 | 2016-01-11 @ 9:00 am | 2016-01-14 @ 9:00 am | 0.6 ± 0.3 | 2016-01-18 |
| 7721735 | 120A | 2016-01-11 @ 10:00 am | 2016-01-14 @ 9:00 am | < 0.3 | 2016-01-18 |
| 7721703 | 121 | 2016-01-11 @ 9:00 am | 2016-01-14 @ 9:00 am | 1.5 ± 0.3 | 2016-01-18 |
| 7721723 | 122 | 2016-01-11 @ 9:00 am | 2016-01-14 @ 9:00 am | 0.6 ± 0.3 | 2016-01-18 |
| 7721734 | 123 | 2016-01-11 @ 10:00 am | 2016-01-14 @ 9:00 am | < 0.3 | 2016-01-18 |
| 7721705 | 123 | 2016-01-11 @ 9:00 am | 2016-01-14 @ 9:00 am | 0.6 ± 0.3 | 2016-01-18 |
| 7721727 | 124 | 2016-01-11 @ 9:00 am | 2016-01-14 @ 9:00 am | < 0.3 | 2016-01-18 |
| 7721701 | 125 | 2016-01-11 @ 9:00 am | 2016-01-14 @ 9:00 am | < 0.3 | 2016-01-18 |
| 7721704 | 125 | 2016-01-11 @ 9:00 am | 2016-01-14 @ 9:00 am | 1.0 ± 0.3 | 2016-01-18 |
| 7721726 | 126 | 2016-01-11 @ 9:00 am | 2016-01-14 @ 9:00 am | < 0.3 | 2016-01-18 |
| 7721702 | 127 | 2016-01-11 @ 9:00 am | 2016-01-14 @ 9:00 am | 0.6 ± 0.3 | 2016-01-18 |
| 7721729 | 128 | 2016-01-11 @ 9:00 am | 2016-01-14 @ 9:00 am | < 0.3 | 2016-01-18 |
| 7721706 | 129 | 2016-01-11 @ 9:00 am | 2016-01-14 @ 9:00 am | 0.9 ± 0.3 | 2016-01-18 |
| 7721731 | 130 | 2016-01-11 @ 10:00 am | 2016-01-14 @ 9:00 am | < 0.3 | 2016-01-18 |
| 7721724 | 131 | 2016-01-11 @ 9:00 am | 2016-01-14 @ 9:00 am | 0.8 ± 0.3 | 2016-01-18 |
| 7721732 | 132 | 2016-01-11 @ 10:00 am | 2016-01-14 @ 9:00 am | < 0.3 | 2016-01-18 |
| 7721758 | 204 | 2016-01-11 @ 10:00 am | 2016-01-14 @ 9:00 am | < 0.3 | 2016-01-18 |
| 7721755 | 232 | 2016-01-11 @ 10:00 am | 2016-01-14 @ 9:00 am | < 0.3 | 2016-01-18 |
| 7721750 | 236 | 2016-01-11 @ 10:00 am | 2016-01-14 @ 9:00 am | < 0.3 | 2016-01-18 |
| 7721751 | 236 | 2016-01-11 @ 10:00 am | 2016-01-14 @ 9:00 am | < 0.3 | 2016-01-18 |
| 7721754 | 236A | 2016-01-11 @ 10:00 am | 2016-01-14 @ 9:00 am | < 0.3 | 2016-01-18 |

February 1, 2016
****LABORATORY ANALYSIS REPORT****

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

| Kit # | Room Id | Started | Ended | pCi/L | Analyzed |
|---------|------------------|-----------------------|----------------------|-----------|------------|
| 7721759 | CLINIC | 2016-01-11 @ 10:00 am | 2016-01-14 @ 9:00 am | < 0.3 | 2016-01-18 |
| 7721721 | DR | 2016-01-11 @ 9:00 am | 2016-01-14 @ 9:00 am | 0.6 ± 0.3 | 2016-01-18 |
| 7721730 | DR | 2016-01-11 @ 10:00 am | 2016-01-14 @ 9:00 am | < 0.3 | 2016-01-18 |
| 7721748 | GUID A | 2016-01-11 @ 10:00 am | 2016-01-14 @ 9:00 am | < 0.3 | 2016-01-18 |
| 7721737 | GUID B | 2016-01-11 @ 10:00 am | 2016-01-14 @ 9:00 am | < 0.3 | 2016-01-18 |
| 7721744 | GUID B | 2016-01-11 @ 10:00 am | 2016-01-14 @ 9:00 am | < 0.3 | 2016-01-18 |
| 7721746 | GUID C | 2016-01-11 @ 10:00 am | 2016-01-14 @ 9:00 am | < 0.3 | 2016-01-18 |
| 7721736 | GUID D | 2016-01-11 @ 10:00 am | 2016-01-14 @ 9:00 am | < 0.3 | 2016-01-18 |
| 7721742 | GUID E | 2016-01-11 @ 10:00 am | 2016-01-14 @ 9:00 am | < 0.3 | 2016-01-18 |
| 7721747 | GUIDANCE | 2016-01-11 @ 10:00 am | 2016-01-14 @ 9:00 am | < 0.3 | 2016-01-18 |
| 7721722 | KITCHEN OFFICE | 2016-01-11 @ 9:00 am | 2016-01-14 @ 9:00 am | < 0.3 | 2016-01-18 |
| 7721711 | MECH RM 1 OFFICE | 2016-01-11 @ 9:00 am | 2016-01-14 @ 9:00 am | < 0.3 | 2016-01-18 |
| 7721741 | OFF A | 2016-01-11 @ 10:00 am | 2016-01-14 @ 8:00 am | < 0.3 | 2016-01-18 |
| 7721743 | OFF A | 2016-01-11 @ 10:00 am | 2016-01-14 @ 8:00 am | < 0.3 | 2016-01-18 |
| 7721749 | OFF B | 2016-01-11 @ 10:00 am | 2016-01-14 @ 8:00 am | < 0.3 | 2016-01-18 |
| 7721740 | OFFICE | 2016-01-11 @ 10:00 am | 2016-01-14 @ 8:00 am | < 0.3 | 2016-01-18 |
| 7721745 | OFFICE | 2016-01-11 @ 10:00 am | 2016-01-14 @ 8:00 am | < 0.3 | 2016-01-18 |
| 7721739 | PRINC CONF RM | 2016-01-11 @ 10:00 am | 2016-01-14 @ 8:00 am | 0.6 ± 0.3 | 2016-01-18 |
| 7721738 | PRINCIPAL | 2016-01-11 @ 10:00 am | 2016-01-14 @ 8:00 am | < 0.3 | 2016-01-18 |

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 |

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 µR/h Elevation = 820 ft**



Chain of Custody

Project Name: MCPS Radon Phase V

Name of Schools:

- | | | |
|-------------------------|---------------------------|-------------------------|
| 1. Arcola ES | 11. Clopper Mill ES | 21. Parkland Magnet MS |
| 2. Argyle ES | 12. College Gardens ES | 22. Rachel Carson ES |
| 3. Bells Mill ES | 13. Eastern MS | 23. Roberto Clemente MS |
| 4. Bethesda ES | 14. Fallsmead ES | 24. Rock Creek ES |
| 5. Brookhaven ES | 15. Fields Road ES | 25. Rockview ES |
| 6. Burning Tree ES | 16. Flower Hill ES | 26. Rockville HS |
| 7. Capt. James Daly ES | 17. Flower Valley ES | 27. Rocky Hill MS |
| 8. Carderock Springs ES | 18. Fox Chapel ES | 28. Seneca Valley HS |
| 9. Cashell ES | 19. Glen Haven ES | 29. Westover ES |
| 10. Clearspring ES | 20. James Hubert Blake HS | 30. William Farquar MS |

| | Date | Initials |
|----------------------------------|---------|----------|
| Radon Test Kits Deployed | 1/11/16 | JM |
| Radon Test Kits Sampled | 1/14/16 | JM |
| Radon Test Kits Shipped to Lab* | 1/15/16 | JM |
| Radon Test Kits Received by Lab* | 1/18/16 | JM |

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

M. A. CECIL & ASSOCIATES, INC.
4475 Shannon Way, Port Republic, Maryland 20676 (301) 855-7710
INDUSTRIAL HYGIENE AND ENVIRONMENTAL HEALTH

September 7, 2011

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

Re: Argyle Elementary School - Retest

Dear Mr. Yarup:

Environmental radon testing has been completed at Argyle Elementary.

A charcoal canister was placed in the cafeteria of the school. The canister was placed on August 24, 2011 and retrieved on August 26, 2011. The detected radon concentration, <0.5 pico curies per liter (pCi/l) of air, was below the EPA recommended level of 4.0 pCi/l.

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

Sincerely,



Michael A. Cecil, CIH

RECEIVED

OCT 25 2011

ENVIRONMENTAL
SERVICE/IAQ

M. A. CECIL & ASSOCIATES, INC.
4475 Shannon Way, Port Republic, Maryland 20676 (301) 855-7710
INDUSTRIAL HYGIENE AND ENVIRONMENTAL HEALTH

July 15, 2010

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

Re: Radon Evaluation- Arcola Elementary

Dear Mr. Yarup:

Environmental radon testing was completed at Arcola Elementary.

Charcoal canisters were placed in twenty-five locations on the first floor of the school. The canisters were placed on June 29, 2010 and retrieved on July 2, 2010. The results, expressed as pico Curies per liter (pCi/l) of air, and the sampling locations are summarized in the attached table.

The detected radon concentrations for all 25 sampling locations were below the EPA recommended level of 4.0 pico curries per liter of air.

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

Sincerely,

Kim Fowler
Industrial Hygienist

Michael A. Cecil, CIH

Environmental Radon Testing Results
Arcola Elementary
June 29, 2010

| Location | Detected Radon Concentration (pCi/l) |
|-----------------|---|
| Room 012 | 2.0 |
| Room 016 | 0.7 |
| Room 007 | <0.5 |
| Room 018 | 0.5 |
| Room 009 | 1.0 |
| Room 022 | <0.5 |
| Room 013 | 0.9 |
| Room 024 | <0.5 |
| Room 015 | 0.6 |
| Room 028 | 1.1 |
| Room 019 | 0.6 |
| Room 025 | 1.1 |
| Room 040 | 0.6 |
| Room 027 | 0.6 |
| Room 044 | 1.0 |
| Room 031 | <0.5 |
| Room 046 | 0.7. |
| Room 003 | <0.5 |
| Room 010 | 0.7 |
| Room 006 | 2.1 |
| Room 004 | 1.9 |
| Room 008 | 0.6 |
| Room 101 | <0.5 |
| Room 100C | 0.7 |
| Room 100H | 1.0 |