
Radon Measurement Survey Report

Site:

**Johnson Elementary School
1934 Liberty Street
Aurora, Illinois 60505**

Survey Dates: May 7, 2018 thru May 10, 2018



Prepared For:

**East Aurora School District 131
417 Fifth Street
Aurora, Illinois 60505**

Carnow Conibear Project No. A146000137



Radon Measurement Survey Report

Site:

**Johnson Elementary School
1934 Liberty Street
Aurora, Illinois 60505**

Surveyed by:

A handwritten signature in black ink that reads "Nicole Bennett".

Nicole Bennett
Radon Measurement Professional

Report by:

A handwritten signature in black ink that reads "Nicole Bennett".

Nicole Bennett
Radon Measurement Professional

Reviewed by:

A handwritten signature in blue ink that appears to read "Derek Lantry".

Derek Lantry
Director, Technical Services

Report Issued: July 3, 2018

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1.0 EXECUTIVE SUMMARY

Carnow, Conibear, & Assoc., Ltd. (Carnow Conibear) was contracted by East Aurora School District 131 to perform a radon measurement survey at the Johnson Elementary School located at 1934 Liberty Street in Aurora, Illinois. The survey was initiated on May 7, 2018 and completed on May 10, 2018 by Nicole Bennett, an Illinois Emergency Management Agency (IEMA) licensed Radon Measurement Professional (License No. RNI2016213). The scope of work included short term (two to four day) radon measurements in frequently occupied rooms with substantial ground contact. The radon sampling was performed following IEMA and the United States Environmental Protection Agency (USEPA) testing protocols for commercial and school radon measurements, the radon device manufacturer's recommendations, and Carnow Conibear's Quality Assurance Plan.

A total of sixty-four (64) radon test devices were deployed including fifty-six (56) single devices, five (5) duplicates, and three (3) blanks. Activated radon charcoal devices manufactured by Air Chek Inc. were utilized during the radon survey. The activated charcoal devices are passive devices containing activated carbon to measure radon. Testing was initiated on May 7, 2018 and completed on May 10, 2018.

Radon measurement results ranged from less than ($<$) 0.3 to 6.9 PicoCuries per liter (pCi/L). The radon measurement results indicate areas tested exceeded the EPA recommended radon action level of 4.0 pCi/L during the time of the test. The average indoor radon concentrations are 1.3 pCi/L nationwide. The average outdoor radon concentration is 0.4 pCi/L.

Based on the radon measurement results Carnow Conibear recommends:

- Follow-up radon testing in locations exceeding the EPA and IEMA recommended action level of 4.0 pCi/L. Per IEMA, a recommendation to mitigate elevated levels of radon shall not be based on initial measurement results.
- Routine follow-up radon measurement surveys every two (2) years at different seasonal times following IEMA and the USEPA testing protocols and the radon device manufacturer's recommendations.
- Additional testing if significant changes are made to the building's structural or mechanical components.

2.0 BACKGROUND

Radon is a naturally occurring, radioactive, colorless, odorless, tasteless gas produced from the decay of uranium and radium found in most soil and rock. Natural soils and rock such as granites, shales, and corals, contaminated soils from uranium processing mills, contaminated building materials, and groundwater water supplies directly from wells are a few common sources of radon. Radon can be found at some level in all indoor and outdoor air. Unlike most airborne contaminants radon is chemically inert, or chemically inactive. As a result, it is not chemically bound or attached to other materials and can move easily through porous materials or void space.

Typically, most radon gas is generated from the surrounding soil or bedrock, pulled through the soil or rock by air pressure differentials and enters the structure. However, radon gas can come from water, outside air, or contaminated building materials. The strength of the radon source has the biggest impact on indoor radon concentrations. The route of entry (i.e. through holes in the foundation), the building's ventilation rate, foundation type and differences in soils beneath the building can affect the indoor radon concentrations.

The primary health effect attributed to radon exposure is lung cancer. The World Health Organization (WHO), the National Academy of Sciences, the US Department of Health and Human Services, and the EPA classify radon as known human carcinogen. The EPA states radon is the largest source of radiation exposure and risk to the general public. When radon and products of radon decay are inhaled, decay can occur while in contact with the lung prior to being expelled. Because radon is chemically inert, most inhaled radon is rapidly exhaled. However, the inhaled decay products are readily deposited in the lungs, release energy in the form of radiation causing lung tissue damage and consequently increase the risk of lung cancer.

Radon concentrations in air are commonly expressed in picoCuries per liter (pCi/L) in the United States. An EPA national residential radon survey completed in 1991, determined the average indoor radon level is 1.3 pCi/L and the average outdoor level is about 0.4 pCi/L. The National Academy of Sciences' (NAS) latest report on radon, the Biological Effects of Ionizing Radiation (BEIR) VI Report (1999) estimates radon in indoor air causes about 21,000 lung cancer deaths each year in the United States. The EPA states that any level of radon carries some risk, there are no safe levels, and has established an action level of 4.0 pCi/L.

3.0 SCOPE OF WORK

Carnow, Conibear was contracted by East Aurora School District 131 to perform a radon survey at the Johnson Elementary School located at 1934 Liberty Street in Aurora, Illinois.

The scope of work included short term radon measurements in frequently occupied rooms with substantial ground contact. The duration of short term measurements can range from two (2) to four (4) days. Prior to placement of the radon measurement devices a Quality Assurance Project Plan (QAPP) was developed and general observations were performed to verify test conditions, identify device placement locations, and determine structural and mechanical building components. The QAPP was created to document and describe the necessary quality assurance procedures, quality control activities, and provide a clear, concise, and complete plan for the radon measurement operations. Observations of test conditions verified closed building conditions were maintained at a minimum of twelve (12) hours prior to testing and throughout the measurement period. Closed building conditions are necessary for short term radon measurements in order to stabilize the radon and radon decay product concentrations and increase the reproducibility of the measurement. Closed building conditions require windows and exterior doors on all levels be kept closed (except for normal entry and exit) during the measurement period. Closed building conditions also require the normal operation of heating, ventilating, and air conditions systems.

Radon test devices were deployed in fifty-six (56) locations. In addition, five (5) duplicates, and three (3) blanks, were utilized to measure precision and bias, and ensure quality data. Radon test devices were documented in a permanent log noting the address of the building measured, a diagram of the test area noting the exact locations of all measurement devices deployed, exact start and stop times of the measurement period, a description of the device used and serial number, and the name and IEMA license number of the Radon Measurement Professional. At the end of the measurement period the radon test devices were retrieved, resealed, and mailed to the laboratory for analysis.

The radon measurement results are reported in picoCurie per liter. A picoCurie per liter is 2.22 atomic radon disintegrations per minute for each liter of air. The results of the radon measurements are interpreted to determine the need for additional testing and assess the quality and confidence of the measurement data. Typically, follow-up measurements will be recommended in every room with results greater than 4.0 pCi/L. The recommendation to mitigate elevated levels of radon shall not be based on the initial measurement results.

4.0 METHODOLOGY

The radon testing was performed following requirements set forth by the IEMA, USEPA, and Carnow Conibear's Quality Assurance Plan. The radon measurement survey consisted of several phases. The initial phase consisted of preliminary testing protocol, including an explanation of services, instructions to comply with closed building conditions, the development of the Quality Assurance Project Plan, and determination of the testing period. Next, general observations of the building were performed to verify test conditions, identify device placement locations, and determine structural and mechanical building components.

The measurement phase included the radon testing device placement and retrieval. Activated radon charcoal devices manufactured by Air Chek Inc. were utilized during this radon survey. The activated charcoal devices are passive devices containing activated carbon to measure radon. Radon test devices were placed in such a way to limit unintentional interference from building occupants. The measurement devices were placed at least three feet from doors, windows to the outside, at least one foot from exterior walls, at least four feet from heat sources, out of the direct flow of ventilation ducts and sunlight, and suspended in the general breathing zone. Duplicate tests were conducted for a minimum of 10% of the total radon test devices deployed to measure precision. Field blanks were submitted for a minimum of 5% of the total number of radon test devices deployed to measure background gamma radiation. Spike tests were not submitted for this survey but are submitted for a minimum of three per 100 radon test devices or a minimum of three per year to measure laboratory accuracy. A total of sixty-four (64) radon test devices were deployed including fifty-six (56) single devices, five (5) duplicates, and three (3) blanks. At the end of the measurement period the radon measurement devices were retrieved, resealed, and shipped overnight to Air Chek Inc. for analysis. Air Chek Inc. calculates the radon concentration after measuring the gamma activity by the radon decay products produced from the random decay of the collected radon. The final phase consisted of interpreting the results and an assessment of the quality and confidence of the measurement data.

5.0 SUMMARY OF RESULTS

Table 1.0 Radon Measurement Device Results identify all the radon measurement devices deployed and the reported radon results. The radon measurement results are reported in picoCurie per liter (pCi/L).

The radon measurement results indicate areas tested exceeded the EPA and IEMA recommended radon action level of 4.0 pCi/L during the time of the test. No radon mitigation systems were observed in the building. Additionally, the following testing abnormalities were noted during the radon measurement interval:

- The device (serial #9044544) placed in Classroom 206 – Storage was inaccessible at the time of retrieval
- The device (serial #9044562) placed in Room 305 – Learning Resource Center was found collapsed and placed in a different area within the resource center.

Table 1.0 Radon Measurement Device Results

Johnson Elementary School -
1934 Liberty Street
Aurora, Illinois 60505

Device Location	Device Serial #	Start Date	Start Time	Stop Date	Stop Time	Result (pCi/L)	Comments
Social Worker Room 100	9044519	5/7/2018	5:28 PM	5/10/2018	4:09 PM	< 0.3	
Café Johnson 114	9044520	5/7/2018	5:29 PM	5/10/2018	4:10 PM	< 0.3	
Custodian Office 113	9044521	5/7/2018	5:31 PM	5/10/2018	3:37 PM	< 0.3	
Stage 111	9044522	5/7/2018	5:33 PM	5/10/2018	3:43 PM	< 0.3	
Stage Closet 111A	9044523	5/7/2018	5:34 PM	5/10/2018	3:43 PM	< 0.3	
Stage Closet 111B	9044524	5/7/2018	5:36 PM	5/10/2018	3:44 PM	< 0.3	
Gymnasium 109	9044525	5/7/2018	5:38 PM	5/10/2018	3:45 PM	< 0.3	
Gymnasium 109	9044526	5/7/2018	5:39 PM	5/10/2018	3:45 PM	< 0.3	
Equipment Storage 108	9044527	5/7/2018	5:39 PM	5/10/2018	3:46 PM	< 0.3	
Room 107	9044528	5/7/2018	5:41 PM	5/10/2018	3:06 PM	0.8	
Café 114A	9044529	5/7/2018	5:44 PM	5/10/2018	3:36 PM	0.5	
Storage 107B	9044530	5/7/2018	5:50 PM	5/10/2018	4:12 PM	0.8	
Storage 107B	9044531	5/7/2018	5:50 PM	5/10/2018	4:12 PM	0.9	Duplicate RPD = 11.8%
Main Office Area 102	9044532	5/7/2018	5:52 PM	5/10/2018	3:02 PM	< 0.3	
Data Room 102A	9044533	5/7/2018	5:54 PM	5/10/2018	3:04 PM	< 0.3	

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Device Location	Device Serial #	Start Date	Start Time	Stop Date	Stop Time	Result (pCi/L)	Comments
Nurse's Office 103	9044534	5/7/2018	5:54 PM	5/10/2018	3:05 PM	< 0.3	
Office 105	9044535	5/7/2018	5:55 PM	5/10/2018	4:30 PM	< 0.3	
Boiler Room 106	9044536	5/7/2018	5:59 PM	5/10/2018	4:31 PM	6.9	
Office 101	9044537	5/7/2018	6:00 PM	5/10/2018	3:03 PM	< 0.3	
Office 104	9044538	5/7/2018	6:00 PM	5/10/2018	3:05 PM	< 0.3	
Classroom 208	9044539	5/7/2018	6:03 PM	5/10/2018	3:47 PM	< 0.3	
Classroom 208	9044540	5/7/2018	6:03 PM	5/10/2018	3:47 PM	< 0.3	Duplicate RPD 0.0%
Classroom 200	9044541	5/7/2018	6:04 PM	5/10/2018	3:49 PM	< 0.3	
Classroom 207	9044542	5/7/2018	6:05 PM	5/10/2018	3:50 PM	< 0.3	
Classroom 206	9044543	5/7/2018	6:07 PM	5/10/2018	3:53 PM	< 0.3	
Classroom 206 Storage	9044544	5/7/2018	6:08 PM	5/10/2018	---	---	Unable to Retrieve Device
Classroom 201	9044545	5/7/2018	6:09 PM	5/10/2018	3:55 PM	< 0.3	
Classroom 202	9044546	5/7/2018	6:10 PM	5/10/2018	3:56 PM	< 0.3	
Classroom 205	9044547	5/7/2018	6:11 PM	5/10/2018	3:59 PM	< 0.3	
Classroom 205 Storage	9044548	5/7/2018	6:12 PM	5/10/2018	3:59 PM	< 0.3	

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Device Location	Device Serial #	Start Date	Start Time	Stop Date	Stop Time	Result (pCi/L)	Comments
Custodial Closet 202A	9044549	5/7/2018	6:14 PM	5/10/2018	4:00 PM	< 0.3	
Classroom 203	9044550	5/7/2018	6:15 PM	5/10/2018	4:01 PM	< 0.3	
Classroom 204	9044551	5/7/2018	6:15 PM	5/10/2018	4:04 PM	3.8	
Classroom 311	9044552	5/7/2018	6:17 PM	5/10/2018	3:10 PM	< 0.3	
Classroom 311	9044553	5/7/2018	6:17 PM	5/10/2018	3:10 PM	< 0.3	Duplicate RPD = 0.0%
Classroom 300	9044554	5/7/2018	6:19 PM	5/10/2018	3:11 PM	< 0.3	
Classroom 301	9044555	5/7/2018	6:21 PM	5/10/2018	3:11 PM	< 0.3	
Classroom 310	9044556	5/7/2018	6:22 PM	5/10/2018	3:14 PM	0.6	
Classroom 309	9044557	5/7/2018	6:22 PM	5/10/2018	3:15 PM	< 0.3	
Classroom 302	9044558	5/7/2018	6:23 PM	5/10/2018	3:17 PM	< 0.3	
Classroom 308	9044559	5/7/2018	6:25 PM	5/10/2018	3:18 PM	< 0.3	
Office 307	9044560	5/7/2018	6:25 PM	5/10/2018	4:16 PM	0.5	
Server Room 307A	9044561	5/7/2018	6:26 PM	5/10/2018	3:18 PM	< 0.3	
Learning Resource Center 305	9044562	5/7/2018	6:28 PM	5/10/2018	3:20 PM	< 0.3	Device Collapsed and in Different Location
Learning Resource Center 305	9044563	5/7/2018	6:28 PM	5/10/2018	3:20 PM	< 0.3	

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Device Location	Device Serial #	Start Date	Start Time	Stop Date	Stop Time	Result (pCi/L)	Comments
Computer Lab 306	9044564	5/7/2018	6:29 PM	5/10/2018	3:22 PM	1.0	
Classroom 303	9044565	5/7/2018	6:30 PM	5/10/2018	3:24 PM	< 0.3	
Classroom 303	9044566	5/7/2018	6:30 PM	5/10/2018	3:24 PM	< 0.3	Duplicate RPD = 0.0%
Classroom 304	9044567	5/7/2018	6:31 PM	5/10/2018	3:25 PM	< 0.3	
Classroom 400	9044568	5/7/2018	6:33 PM	5/10/2018	4:19 PM	< 0.3	
Electrical Room 400B	9044569	5/7/2018	6:33 PM	5/10/2018	4:20 PM	< 0.3	
Custodial/Mechanical Room 400C	9044570	5/7/2018	6:34 PM	5/10/2018	4:21 PM	0.8	
Classroom 410	9044571	5/7/2018	6:35 PM	5/10/2018	3:27 PM	< 0.3	
Classroom 402	9044572	5/7/2018	6:36 PM	5/10/2018	3:29 PM	< 0.3	
Classroom 403	9044573	5/7/2018	6:37 PM	5/10/2018	3:30 PM	0.5	
Classroom 408	9044574	5/7/2018	6:37 PM	5/10/2018	3:30 PM	< 0.3	
Classroom 409	9044575	5/7/2018	6:38 PM	5/10/2018	3:28 PM	< 0.3	
Classroom 404	9044576	5/7/2018	6:39 PM	5/10/2018	4:24 PM	0.8	
Classroom 404	9044577	5/7/2018	6:39 PM	5/10/2018	4:24 PM	0.7	Duplicate RPD = 13.3%
Classroom 405	9044578	5/7/2018	6:41 PM	5/10/2018	4:25 PM	< 0.3	

Table 1.0 Radon Measurement Device Results

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Device Location	Device Serial #	Start Date	Start Time	Stop Date	Stop Time	Result (pCi/L)	Comments
Classroom 406	9044579	5/7/2018	6:42 PM	5/10/2018	4:26 PM	< 0.3	
Classroom 407	9044580	5/7/2018	6:43 PM	5/10/2018	3:31 PM	< 0.3	
Hallway	9044581	5/7/2018	6:44 PM	5/10/2018	4:35 PM	< 0.3	Blank
Hallway	9044582	5/7/2018	6:44 PM	5/10/2018	4:35 PM	< 0.3	Blank
Hallway	9044583	5/7/2018	6:45 PM	5/10/2018	4:35 PM	< 0.3	Blank

RPD - Relative Percent Difference = difference divided by the average of simultaneous results times 100. Results less than 4.0 pCi/L shall agree with a RPD of less than 67 percent. Results greater than 4.0 pCi/L shall agree with a RPD of less than 36 percent.

The EPA and IEMA recommended radon action level is 4.0 pCi/L.

Bold – indicated result exceeded radon action level.

6.0 CONCLUSIONS

Carnow, Conibear, & Assoc., Ltd. (Carnow Conibear) was contracted by East Aurora School District 131 to perform a radon survey at the Johnson Elementary School located at 1934 Liberty Street in Aurora, Illinois. The survey was initiated on May 7, 2018 and completed on May 10, 2018 by Nicole Bennett, an Illinois Emergency Management Agency (IEMA) licensed Radon Measurement Professional (License No. RNI2016213). The scope of work included short term (two to four day) radon measurements in frequently occupied rooms with substantial ground contact. The radon survey was performed in following the IEMA and the USEPA testing protocols for commercial and school radon measurements, the radon device manufacturer's recommendations, and the Carnow Conibear Quality Assurance Plan.

Radon measurement results ranged from less than ($<$) 0.3 to 6.9 pCi/L. The radon measurement results indicate areas tested exceeded the EPA and IEMA recommended action level of 4.0 pCi/L during the time of the test. The average indoor radon concentrations are 1.3 pCi/L nationwide. The average outdoor radon concentration is 0.4 pCi/L.

Based on the radon measurement results Carnow Conibear recommends the following:

- Follow-up radon testing in locations exceeding the EPA recommended radon action level of 4.0 pCi/L. Per IEMA, a recommendation to mitigate elevated levels of radon shall not be based on initial measurement results. Follow-up radon testing is also recommended in locations with invalid test results.
- Routine follow-up radon measurement surveys every two (2) years at different seasonal times following IEMA and the USEPA testing protocols and the radon device manufacturer's recommendations.
- Additional testing if significant changes are made to the building's structural or mechanical components.

7.0 LIMITATIONS AND CONDITIONS

The information contained in this report was prepared for the exclusive use and reliance of East Aurora School District 131 and Carnow Conibear. This information is based on the specific parameters of the scope of work for this project and the regulations in force at the time of the report.

Carnow Conibear has applied prevailing industry standards and reasonable judgment and effort within the scope of work, while conducting the radon measurement survey. The standards, judgment, and effort used by Carnow Conibear personnel to investigate, assess, and determine the presence of potential environmental hazards and liabilities associated with the radon survey at the Johnson Elementary School, Aurora, Illinois are consistent with requirements outlined in federal and state guidelines. Carnow Conibear makes no warranty, express or implied, that the findings and interpretations in this report are a complete representation of the environmental hazards and liabilities, associated with the Johnson Elementary School, Aurora, Illinois.

APPENDIX A

Floor Plans – Radon Sampling Locations

APPENDIX B

Laboratory Analysis Report

Radon test result report for:**CLIFFORD I. JOHNSON ELEMENTARY SCHO
1934 LIBERTY STREET, AURORA, IL**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
9044536	BOILER ROOM 106	2018-05-07 @ 6:00 pm	2018-05-10 @ 5:00 pm	6.9 ± 0.5	2018-05-14
9044529	CAFÉ 114A	2018-05-07 @ 6:00 pm	2018-05-10 @ 4:00 pm	0.5 ± 0.3	2018-05-14
9044520	CAFÉ JOHNSON 114	2018-05-07 @ 5:00 pm	2018-05-10 @ 4:00 pm	< 0.3	2018-05-14
9044541	CLASSROOM 200	2018-05-07 @ 6:00 pm	2018-05-10 @ 4:00 pm	< 0.3	2018-05-14
9044545	CLASSROOM 201	2018-05-07 @ 6:00 pm	2018-05-10 @ 4:00 pm	< 0.3	2018-05-14
9044546	CLASSROOM 202	2018-05-07 @ 6:00 pm	2018-05-10 @ 4:00 pm	< 0.3	2018-05-14
9044550	CLASSROOM 203	2018-05-07 @ 6:00 pm	2018-05-10 @ 4:00 pm	< 0.3	2018-05-14
9044551	CLASSROOM 204	2018-05-07 @ 6:00 pm	2018-05-10 @ 4:00 pm	3.8 ± 0.4	2018-05-14
9044547	CLASSROOM 205	2018-05-07 @ 6:00 pm	2018-05-10 @ 4:00 pm	< 0.3	2018-05-14
9044548	CLASSROOM 205 STORAGE	2018-05-07 @ 6:00 pm	2018-05-10 @ 4:00 pm	< 0.3	2018-05-14
9044543	CLASSROOM 206	2018-05-07 @ 6:00 pm	2018-05-10 @ 4:00 pm	< 0.3	2018-05-14
9044542	CLASSROOM 207	2018-05-07 @ 6:00 pm	2018-05-10 @ 4:00 pm	< 0.3	2018-05-14
9044540	CLASSROOM 208	2018-05-07 @ 6:00 pm	2018-05-10 @ 4:00 pm	< 0.3	2018-05-14
9044539	CLASSROOM 208	2018-05-07 @ 6:00 pm	2018-05-10 @ 4:00 pm	< 0.3	2018-05-14
9044554	CLASSROOM 300	2018-05-07 @ 6:00 pm	2018-05-10 @ 3:00 pm	< 0.3	2018-05-14
9044555	CLASSROOM 301	2018-05-07 @ 6:00 pm	2018-05-10 @ 3:00 pm	< 0.3	2018-05-14
9044558	CLASSROOM 302	2018-05-07 @ 6:00 pm	2018-05-10 @ 3:00 pm	< 0.3	2018-05-14
9044565	CLASSROOM 303	2018-05-07 @ 7:00 pm	2018-05-10 @ 3:00 pm	< 0.3	2018-05-14
9044566	CLASSROOM 303	2018-05-07 @ 7:00 pm	2018-05-10 @ 3:00 pm	< 0.3	2018-05-14
9044567	CLASSROOM 304	2018-05-07 @ 7:00 pm	2018-05-10 @ 3:00 pm	< 0.3	2018-05-14
9044559	CLASSROOM 308	2018-05-07 @ 6:00 pm	2018-05-10 @ 3:00 pm	< 0.3	2018-05-14
9044557	CLASSROOM 309	2018-05-07 @ 6:00 pm	2018-05-10 @ 3:00 pm	< 0.3	2018-05-14
9044556	CLASSROOM 310	2018-05-07 @ 6:00 pm	2018-05-10 @ 3:00 pm	0.6 ± 0.3	2018-05-14
9044552	CLASSROOM 311	2018-05-07 @ 6:00 pm	2018-05-10 @ 3:00 pm	< 0.3	2018-05-14
9044553	CLASSROOM 311	2018-05-07 @ 6:00 pm	2018-05-10 @ 3:00 pm	< 0.3	2018-05-14
9044568	CLASSROOM 400	2018-05-07 @ 7:00 pm	2018-05-10 @ 4:00 pm	< 0.3	2018-05-14
9044572	CLASSROOM 402	2018-05-07 @ 7:00 pm	2018-05-10 @ 3:00 pm	< 0.3	2018-05-14
9044573	CLASSROOM 403	2018-05-07 @ 7:00 pm	2018-05-10 @ 4:00 pm	0.5 ± 0.3	2018-05-14
9044577	CLASSROOM 404	2018-05-07 @ 7:00 pm	2018-05-10 @ 4:00 pm	0.7 ± 0.3	2018-05-14
9044576	CLASSROOM 404	2018-05-07 @ 7:00 pm	2018-05-10 @ 4:00 pm	0.8 ± 0.3	2018-05-14
9044578	CLASSROOM 405	2018-05-07 @ 7:00 pm	2018-05-10 @ 4:00 pm	< 0.3	2018-05-14
9044579	CLASSROOM 406	2018-05-07 @ 7:00 pm	2018-05-10 @ 4:00 pm	< 0.3	2018-05-14
9044580	CLASSROOM 407	2018-05-07 @ 7:00 pm	2018-05-10 @ 4:00 pm	< 0.3	2018-05-14
9044574	CLASSROOM 408	2018-05-07 @ 7:00 pm	2018-05-10 @ 4:00 pm	< 0.3	2018-05-14
9044575	CLASSROOM 409	2018-05-07 @ 7:00 pm	2018-05-10 @ 3:00 pm	< 0.3	2018-05-14
9044571	CLASSROOM 410	2018-05-07 @ 7:00 pm	2018-05-10 @ 3:00 pm	< 0.3	2018-05-14
9044564	COMPUTER LAB 306	2018-05-07 @ 6:00 pm	2018-05-10 @ 3:00 pm	1.0 ± 0.3	2018-05-14

May 16, 2018

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

CLIFFORD I. JOHNSON ELEMENTARY SCHO
1934 LIBERTY STREET, AURORA, IL

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
9044549	CUSTODIAL CLOSET 202A	2018-05-07 @ 6:00 pm	2018-05-10 @ 4:00 pm	< 0.3	2018-05-14
9044570	CUSTODIAL/MECHANICAL ROOM 400C	2018-05-07 @ 7:00 pm	2018-05-10 @ 4:00 pm	0.8 ± 0.3	2018-05-14
9044521	CUSTODIAN OFFICE 113	2018-05-07 @ 6:00 pm	2018-05-10 @ 4:00 pm	< 0.3	2018-05-14
9044533	DATA ROOM 102A	2018-05-07 @ 6:00 pm	2018-05-10 @ 3:00 pm	< 0.3	2018-05-14
9044569	ELECTRICAL ROOM 400B	2018-05-07 @ 7:00 pm	2018-05-10 @ 4:00 pm	< 0.3	2018-05-14
9044527	EQUIPMENT STORAGE 108	2018-05-07 @ 6:00 pm	2018-05-10 @ 4:00 pm	< 0.3	2018-05-14
9044525	GYMNASIUM 109	2018-05-07 @ 6:00 pm	2018-05-10 @ 4:00 pm	< 0.3	2018-05-14
9044526	GYMNASIUM 109	2018-05-07 @ 6:00 pm	2018-05-10 @ 4:00 pm	< 0.3	2018-05-14
9044583	HALLWAY	2018-05-07 @ 7:00 pm	2018-05-10 @ 5:00 pm	< 0.3	2018-05-14
9044581	HALLWAY	2018-05-07 @ 7:00 pm	2018-05-10 @ 5:00 pm	< 0.3	2018-05-14
9044582	HALLWAY	2018-05-07 @ 7:00 pm	2018-05-10 @ 5:00 pm	< 0.3	2018-05-14
9044562	LEARNING RESOURCE CENTER 305	2018-05-07 @ 6:00 pm	2018-05-10 @ 3:00 pm	< 0.3	2018-05-14
9044563	LEARNING RESOURCE CENTER 305	2018-05-07 @ 6:00 pm	2018-05-10 @ 3:00 pm	< 0.3	2018-05-14
9044532	MAIN OFFICE AREA 102	2018-05-07 @ 6:00 pm	2018-05-10 @ 3:00 pm	< 0.3	2018-05-14
9044534	NURSE&APOS;S OFFICE 103	2018-05-07 @ 6:00 pm	2018-05-10 @ 3:00 pm	< 0.3	2018-05-14
9044537	OFFICE 101	2018-05-07 @ 6:00 pm	2018-05-10 @ 3:00 pm	< 0.3	2018-05-14
9044538	OFFICE 104	2018-05-07 @ 6:00 pm	2018-05-10 @ 3:00 pm	< 0.3	2018-05-14
9044535	OFFICE 105	2018-05-07 @ 6:00 pm	2018-05-10 @ 5:00 pm	< 0.3	2018-05-14
9044560	OFFICE 307	2018-05-07 @ 6:00 pm	2018-05-10 @ 4:00 pm	0.5 ± 0.3	2018-05-14
9044528	ROOM 107	2018-05-07 @ 6:00 pm	2018-05-10 @ 3:00 pm	0.8 ± 0.3	2018-05-14
9044561	SERVER ROOM 307A	2018-05-07 @ 6:00 pm	2018-05-10 @ 3:00 pm	< 0.3	2018-05-14
9044519	SOCIAL WORKER ROOM 100	2018-05-07 @ 5:00 pm	2018-05-10 @ 4:00 pm	< 0.3	2018-05-14
9044522	STAGE 111	2018-05-07 @ 6:00 pm	2018-05-10 @ 4:00 pm	< 0.3	2018-05-14
9044523	STAGE CLOSET 111A	2018-05-07 @ 6:00 pm	2018-05-10 @ 4:00 pm	< 0.3	2018-05-14
9044524	STAGE CLOSET 111B	2018-05-07 @ 6:00 pm	2018-05-10 @ 4:00 pm	< 0.3	2018-05-14
9044531	STORAGE 107B	2018-05-07 @ 6:00 pm	2018-05-10 @ 4:00 pm	0.9 ± 0.3	2018-05-14
9044530	STORAGE 107B	2018-05-07 @ 6:00 pm	2018-05-10 @ 4:00 pm	0.8 ± 0.3	2018-05-14

APPENDIX C

Radon Measurement Professional License

Bruce Rauner
Governor

State of Illinois
IEMA Division of Nuclear Safety

James K. Joseph
Director

Pursuant to the Radon Industry Licensing Act, 420 ILCS 44 et seq. and 32 Illinois Administrative Code 422, Licensing of Radon Detection and Mitigation Services, and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued.

This is to certify that **Nicole Bennett**

License Number **RNI2016213**

has met the requirements for **Radon Measurement Professional**

Issued - Expires **05/18/2016 - 05/31/2021**



Limited to Radon measurements of residential real estate, home environment, school and commercial buildings only.

161391001

Patrick I. Daniels

Patrick I. Daniels, Radon Program