Carnow, Conibear & Assoc., Ltd.
Environmental Consulting Services
600 W. Van Buren St., Suite 500, Chicago, IL 60607
t: 312.782.4486 f: 312.782.5145
www.ccaltd.com



# **Radon Measurement Survey Report**

Site:

# Dieterich Elementary School 1141 Jackson Street Aurora, Illinois 60505

Survey Dates: May 8, 2018 thru May 10, 2018



Prepared For:

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

Carnow Conibear Project No. A146000137

Carnow, Conibear & Assoc., Ltd.
Environmental Consulting Services
600 W. Van Buren St., Suite 500, Chicago, IL 60607
t: 312.782.4486 f: 312.782.5145
www.ccaltd.com



# **Radon Measurement Survey Report**

Site:

Dieterich Elementary School 1141 Jackson Street Aurora, Illinois 60505

Surveyed by:	Micale Bunett
	Nicole Bennett
	Radon Measurement Professional
Report by:	Micole Burnett
	Nicole Bennett
	Radon Measurement Professional
Reviewed by:	

Derek Lantry

Director, Technical Services

Report Issued: July 3, 2018

# **TABLE OF CONTENTS**

1.0	EXECUTIVE SUMMARY	1
2.0	BACKGROUND	2
3.0	SCOPE OF WORK	3
4.0	METHODOLOGY	4
5.0	SUMMARY OF RESULTS	5
6.0	CONCLUSIONS	<u>e</u>
7.0	LIMITATIONS AND CONDITIONS	10

### **APPENDICES**

Appendix A Floor Plans – Radon Sampling Locations
Appendix B Laboratory Analysis Report
Appendix C Radon Measurement Professional License

# 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 Dieterich Elementary School located at 1141 Jackson Street in Aurora, Illinois. The survey was initiated on May 8, 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 fifty-three (53) radon test devices were deployed including forty-six (46) single devices, four (4) 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 8, 2018 and completed on May 10, 2018.

Radon measurement results ranged from less than (<) 0.3 to 1.2 PicoCuries per liter (pCi/L). The radon measurement results indicate areas tested were below 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 routine followup radon measurement survey every three (3) years, preferably at different seasonal times of the year. Additional radon testing is recommended 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 Dieterich Elementary School located at 1141 Jackson 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 forty-six (46) locations. In addition, four (4) 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 fifty-three (53) radon test devices were deployed including forty-six (46) single devices, four (4) 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).

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

### **Table 1.0 Radon Measurement Device Results**

## Dieterich Elementary School -1141 Jackson Street Aurora, Illinois 60505

Device Location	Device Serial #	Start Date	Start Time	Stop Date	Stop Time	Result (pCi/L)	Comments
Main Office 5	9045115	5/8/2018	4:00 PM	5/10/2018	6:31 PM	< 0.3	
Principal's Office 5B	9045116	5/8/2018	4:02 PM	5/10/2018	6:32 PM	< 0.3	
Principal's Office Closet	9045117	5/8/2018	4:02 PM	5/10/2018	6:33 PM	0.6	
Main Office Storage 5A	9045118	5/8/2018	4:03 PM	5/10/2018	6:44 PM	< 0.3	
Classroom 3	9045119	5/8/2018	4:05 PM	5/10/2018	6:37 PM	< 0.3	
Classroom 3	9045120	5/8/2018	4:05 PM	5/10/2018	6:37 PM	< 0.3	Duplicate RPD = 0.0%
Classroom 4	9045121	5/8/2018	4:06 PM	5/10/2018	6:38 PM	< 0.3	
Classroom 2	9045122	5/8/2018	4:08 PM	5/10/2018	6:39 PM	< 0.3	
Classroom 1	9045123	5/8/2018	4:10 PM	5/10/2018	6:41 PM	< 0.3	
Classroom 1 Storage	9045124	5/8/2018	4:12 PM	5/10/2018	6:42 PM	< 0.3	
Gymnasium 26	9045125	5/8/2018	4:14 PM	5/10/2018	6:45 PM	< 0.3	
Gymnasium 26	9045126	5/8/2018	4:14 PM	5/10/2018	6:45 PM	< 0.3	
Classroom 22	9045127	5/8/2018	4:17 PM	5/10/2018	6:47 PM	< 0.3	
Classroom 22	9045128	5/8/2018	4:18 PM	5/10/2018	6:48 PM	< 0.3	
Storage 22B	9045129	5/8/2018	4:20 PM	5/10/2018	6:51 PM	< 0.3	
Gymnasium Storage Closet 22A	9045130	5/8/2018	4:21 PM	5/10/2018	6:49 PM	< 0.3	
Classroom 6	9045131	5/8/2018	4:24 PM	5/10/2018	6:52 PM	< 0.3	
Classroom 6	9045132	5/8/2018	4:24 PM	5/10/2018	6:52 PM	< 0.3	Duplicate RPD = 0.0%
Classroom 24	9045133	5/8/2018	4:25 PM	5/10/2018	6:54 PM	< 0.3	
Classroom Storage 24A	9045134	5/8/2018	4:26 PM	5/10/2018	6:54 PM	< 0.3	
Staff Lounge 23	9045135	5/8/2018	4:27 PM	5/10/2018	6:50 PM	< 0.3	

### **Table 1.0 Radon Measurement Device Results**

# Dieterich Elementary School -1141 Jackson Street Aurora, Illinois 60505

Device Location	Device Serial #	Start Date	Start Time	Stop Date	Stop Time	Result (pCi/L)	Comments
Stage 26A	9045136	5/8/2018	4:30 PM	5/10/2018	6:55 PM	< 0.3	
Classroom 7	9045137	5/8/2018	4:31 PM	5/10/2018	6:56 PM	< 0.3	
Classroom 8	9045138	5/8/2018	4:33 PM	5/10/2018	6:57 PM	< 0.3	
Classroom 9	9045139	5/8/2018	4:36 PM	5/10/2018	6:57 PM	< 0.3	
Classroom 9B	9045140	5/8/2018	4:37 PM	5/10/2018	6:58 PM	< 0.3	
Closet 9C	9045141	5/8/2018	4:39 PM	5/10/2018	6:59 PM	< 0.3	
Classroom 9A	9045142	5/8/2018	4:39 PM	5/10/2018	7:00 PM	< 0.3	
Nurse's Office 25D	9045143	5/8/2018	4:42 PM	5/10/2018	7:03 PM	< 0.3	
Classroom 25B	9045144	5/8/2018	4:44 PM	5/10/2018	7:04 PM	< 0.3	
Multipurpose Room 34	9045145	5/8/2018	4:50 PM	5/10/2018	7:05 PM	< 0.3	
Multipurpose Room 34	9045146	5/8/2018	4:51 PM	5/10/2018	7:06 PM	< 0.3	
Office 32	9045147	5/8/2018	4:53 PM	5/10/2018	7:08 PM	< 0.3	
Office 32	9045148	5/8/2018	4:53 PM	5/10/2018	7:08 PM	< 0.3	Duplicate RPD = 0.0%
Classroom 29	9045149	5/8/2018	4:55 PM	5/10/2018	7:12 PM	0.7	
Classroom 27	9045150	5/8/2018	4:56 PM	5/10/2018	7:13 PM	0.6	
Classroom 28	9045151	5/8/2018	4:57 PM	5/10/2018	7:16 PM	< 0.3	
Classroom 30	9045152	5/8/2018	4:57 PM	5/10/2018	7:15 PM	0.9	
Classroom 19	9045153	5/8/2018	5:00 PM	5/10/2018	7:26 PM	< 0.3	
Mechanical Room 43	9045154	5/8/2018	5:03 PM	5/10/2018	7:30 PM	1.2	
Classroom 25	9045155	5/8/2018	5:04 PM	5/10/2018	7:15 PM	< 0.3	
Custodial Closet 26A	9045156	5/8/2018	5:05 PM	5/10/2018	7:17 PM	< 0.3	
Assistant Principal's Office 20B	9045157	5/8/2018	5:07 PM	5/10/2018	7:27 PM	< 0.3	

#### **Table 1.0 Radon Measurement Device Results**

### Dieterich Elementary School -1141 Jackson Street Aurora, Illinois 60505

Device Location	Device Serial #	Start Date	Start Time	Stop Date	Stop Time	Result (pCi/L)	Comments
Classroom 20	9045158	5/8/2018	5:09 PM	5/10/2018	7:24 PM	< 0.3	
Classroom 20A	9045159	5/8/2018	5:10 PM	5/10/2018	7:23 PM	1.1	
Classroom 20A	9045160	5/8/2018	5:10 PM	5/10/2018	7:23 PM	1.1	Duplicate RPD = 0.0%
Classroom 18	9045161	5/8/2018	5:11 PM	5/10/2018	7:21 PM	< 0.3	
Classroom 17	9045162	5/8/2018	5:12 PM	5/10/2018	7:22 PM	< 0.3	
Classroom 16	9045163	5/8/2018	5:14 PM	5/10/2018	7:20 PM	< 0.3	
Classroom 15	9045164	5/8/2018	5:15 PM	5/10/2018	7:19 PM	0.7	
Hallway	9045165	5/8/2018	5:16 PM	5/10/2018	7:31 PM	< 0.3	Blank
Hallway	9045166	5/8/2018	5:16 PM	5/10/2018	7:31 PM	< 0.3	Blank
Hallway	9045167	5/8/2018	5:17 PM	5/10/2018	7:31 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 RDP of less than 36 percent. The EPA and IEMA recommended radon action level is 4.0 pCi/L.

# 6.0 CONCLUSIONS

Carnow, Conibear, & Assoc., Ltd. (Carnow Conibear) was contracted by East Aurora School District 131 to perform a radon survey at the Dieterich Elementary School located at 1141 Jackson Street in Aurora, Illinois. The survey was initiated on May 8, 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 1.2 pCi/L. The radon measurement results indicate radon concentrations for areas tested were below 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:

- A routine follow-up radon measurement survey every three (3) years, preferably at different seasonal times of the year. Follow-up radon testing is also recommended in locations with invalid test results.
- Additional radon 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 Dieterich 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 Dieterich Elementary School, Aurora, Illinois.

# **APPENDIX A**

Floor Plans – Radon Sampling Locations

# Radon test result report for: G.N. DIETRICH ELEMENTARY SCHOOL 1141 JACKSON STREET, AURORA, IL

Kit#	Room Id	Started	Ended	pCi/L	Analyzed
9045157	ASSISTANT PRINCIPAL'S OFFICE 2	2018-05-08 @ 5:00 pm	2018-05-10 @ 7:00 pm	< 0.3	2018-05-14
9045123	CLASSROOM 1	•	2018-05-10 @ 7:00 pm	< 0.3	2018-05-14
9045124	CLASSROOM 1 STORAGE	-	2018-05-10 @ 7:00 pm	< 0.3	2018-05-14
9045164	CLASSROOM 15	•	2018-05-10 @ 7:00 pm	$0.7 \pm 0.3$	2018-05-14
9045163	CLASSROOM 16	•	2018-05-10 @ 7:00 pm	< 0.3	2018-05-14
9045162	CLASSROOM 17	-	2018-05-10 @ 7:00 pm	< 0.3	2018-05-14
9045161	CLASSROOM 18	2018-05-08 @ 5:00 pm	2018-05-10 @ 7:00 pm	< 0.3	2018-05-14
9045153	CLASSROOM 19	2018-05-08 @ 5:00 pm	2018-05-10 @ 7:00 pm	< 0.3	2018-05-14
9045122	CLASSROOM 2	2018-05-08 @ 4:00 pm	2018-05-10 @ 7:00 pm	< 0.3	2018-05-14
9045158	CLASSROOM 20	2018-05-08 @ 5:00 pm	2018-05-10 @ 7:00 pm	< 0.3	2018-05-14
9045159	CLASSROOM 20A	2018-05-08 @ 5:00 pm	2018-05-10 @ 7:00 pm	$1.1 \pm 0.3$	2018-05-14
9045160	CLASSROOM 20A	2018-05-08 @ 5:00 pm	2018-05-10 @ 7:00 pm	$1.1 \pm 0.3$	2018-05-14
9045127	CLASSROOM 22	2018-05-08 @ 4:00 pm	2018-05-10 @ 7:00 pm	< 0.3	2018-05-14
9045128	CLASSROOM 22	2018-05-08 @ 4:00 pm	2018-05-10 @ 7:00 pm	< 0.3	2018-05-14
9045133	CLASSROOM 24	2018-05-08 @ 4:00 pm	2018-05-10 @ 7:00 pm	< 0.3	2018-05-14
9045155	CLASSROOM 25	2018-05-08 @ 5:00 pm	2018-05-10 @ 7:00 pm	< 0.3	2018-05-14
9045144	CLASSROOM 25B	2018-05-08 @ 5:00 pm	2018-05-10 @ 7:00 pm	< 0.3	2018-05-14
9045150	CLASSROOM 27	2018-05-08 @ 5:00 pm	2018-05-10 @ 7:00 pm	$0.6 \pm 0.3$	2018-05-14
9045151	CLASSROOM 28	2018-05-08 @ 5:00 pm	2018-05-10 @ 7:00 pm	< 0.3	2018-05-14
9045149	CLASSROOM 29	2018-05-08 @ 5:00 pm	2018-05-10 @ 7:00 pm	$0.7 \pm 0.3$	2018-05-14
9045120	CLASSROOM 3	2018-05-08 @ 4:00 pm	2018-05-10 @ 7:00 pm	< 0.3	2018-05-14
9045119	CLASSROOM 3	2018-05-08 @ 4:00 pm	2018-05-10 @ 7:00 pm	< 0.3	2018-05-14
9045152	CLASSROOM 30	2018-05-08 @ 5:00 pm	2018-05-10 @ 7:00 pm	$0.9 \pm 0.3$	2018-05-14
9045121	CLASSROOM 4	2018-05-08 @ 4:00 pm	2018-05-10 @ 7:00 pm	< 0.3	2018-05-14
9045132	CLASSROOM 6	2018-05-08 @ 4:00 pm	2018-05-10 @ 7:00 pm	< 0.3	2018-05-14
9045131	CLASSROOM 6	2018-05-08 @ 4:00 pm	2018-05-10 @ 7:00 pm	< 0.3	2018-05-14
9045137	CLASSROOM 7	-	2018-05-10 @ 7:00 pm	< 0.3	2018-05-14
9045138	CLASSROOM 8	-	2018-05-10 @ 7:00 pm	< 0.3	2018-05-14
9045139	CLASSROOM 9	-	2018-05-10 @ 7:00 pm	< 0.3	2018-05-14
9045142	CLASSROOM 9A	•	2018-05-10 @ 7:00 pm	< 0.3	2018-05-14
9045140	CLASSROOM 9B	•	2018-05-10 @ 7:00 pm	< 0.3	2018-05-14
9045134	CLASSROOM STORAGE 24A	*	2018-05-10 @ 7:00 pm	< 0.3	2018-05-14
9045141	CLOSET 9C	-	2018-05-10 @ 7:00 pm	< 0.3	2018-05-14
9045156	CUSTODIAL CLOSET 26A	•	2018-05-10 @ 7:00 pm	< 0.3	2018-05-14
9045126	GYMNASIUM 26	-	2018-05-10 @ 7:00 pm	< 0.3	2018-05-14
9045125	GYMNASIUM 26	-	2018-05-10 @ 7:00 pm	< 0.3	2018-05-14
9045130	GYMNASIUM STORAGE CLOSET 22A	2018-05-08 @ 4:00 pm	2018-05-10 @ 7:00 pm	< 0.3	2018-05-14

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

# Radon test result report for: G.N. DIETRICH ELEMENTARY SCHOOL 1141 JACKSON STREET, AURORA, IL

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
9045165	HALLWAY	2018-05-08 @ 5:00 pm	2018-05-10 @ 8:00 pm	< 0.3	2018-05-14
9045166	HALLWAY	2018-05-08 @ 5:00 pm	2018-05-10 @ 8:00 pm	< 0.3	2018-05-14
9045167	HALLWAY	2018-05-08 @ 5:00 pm	2018-05-10 @ 8:00 pm	< 0.3	2018-05-14
9045115	MAIN OFFICE 5	2018-05-08 @ 4:00 pm	2018-05-10 @ 7:00 pm	< 0.3	2018-05-14
9045118	MAIN OFFICE STORAGE 5A	2018-05-08 @ 4:00 pm	2018-05-10 @ 7:00 pm	< 0.3	2018-05-14
9045154	MECHANICAL ROOM 43	2018-05-08 @ 5:00 pm	2018-05-10 @ 8:00 pm	$1.2 \pm 0.3$	2018-05-14
9045145	MULTIPURPOSE ROOM 34	2018-05-08 @ 5:00 pm	2018-05-10 @ 7:00 pm	< 0.3	2018-05-14
9045146	MULTIPURPOSE ROOM 34	2018-05-08 @ 5:00 pm	2018-05-10 @ 7:00 pm	< 0.3	2018-05-14
9045143	NURSE'S OFFICE 25D	2018-05-08 @ 5:00 pm	2018-05-10 @ 7:00 pm	< 0.3	2018-05-14
9045148	OFFICE 32	2018-05-08 @ 5:00 pm	2018-05-10 @ 7:00 pm	< 0.3	2018-05-14
9045147	OFFICE 32	2018-05-08 @ 5:00 pm	2018-05-10 @ 7:00 pm	< 0.3	2018-05-14
9045116	PRINCIPAL'S OFFICE 5B	2018-05-08 @ 4:00 pm	2018-05-10 @ 7:00 pm	< 0.3	2018-05-14
9045117	PRINCIPAL'S OFFICE CLOSET	2018-05-08 @ 4:00 pm	2018-05-10 @ 7:00 pm	$0.6 \pm 0.3$	2018-05-14
9045135	STAFF LOUNGE 23	2018-05-08 @ 4:00 pm	2018-05-10 @ 7:00 pm	< 0.3	2018-05-14
9045136	STAGE 26A	2018-05-08 @ 5:00 pm	2018-05-10 @ 7:00 pm	< 0.3	2018-05-14
9045129	STORAGE 22B	2018-05-08 @ 4:00 pm	2018-05-10 @ 7:00 pm	< 0.3	2018-05-14

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

# **APPENDIX B**

Laboratory Analysis Report

# Radon test result report for: G.N. DIETRICH ELEMENTARY SCHOOL 1141 JACKSON STREET, AURORA, IL

Kit#	Room Id	Started	Ended	pCi/L	Analyzed
9045157	ASSISTANT PRINCIPAL'S OFFICE 2	2018-05-08 @ 5:00 pm	2018-05-10 @ 7:00 pm	< 0.3	2018-05-14
9045123	CLASSROOM 1	•	2018-05-10 @ 7:00 pm	< 0.3	2018-05-14
9045124	CLASSROOM 1 STORAGE	-	2018-05-10 @ 7:00 pm	< 0.3	2018-05-14
9045164	CLASSROOM 15	•	2018-05-10 @ 7:00 pm	$0.7 \pm 0.3$	2018-05-14
9045163	CLASSROOM 16	•	2018-05-10 @ 7:00 pm	< 0.3	2018-05-14
9045162	CLASSROOM 17	-	2018-05-10 @ 7:00 pm	< 0.3	2018-05-14
9045161	CLASSROOM 18	2018-05-08 @ 5:00 pm	2018-05-10 @ 7:00 pm	< 0.3	2018-05-14
9045153	CLASSROOM 19	2018-05-08 @ 5:00 pm	2018-05-10 @ 7:00 pm	< 0.3	2018-05-14
9045122	CLASSROOM 2	2018-05-08 @ 4:00 pm	2018-05-10 @ 7:00 pm	< 0.3	2018-05-14
9045158	CLASSROOM 20	2018-05-08 @ 5:00 pm	2018-05-10 @ 7:00 pm	< 0.3	2018-05-14
9045159	CLASSROOM 20A	2018-05-08 @ 5:00 pm	2018-05-10 @ 7:00 pm	$1.1 \pm 0.3$	2018-05-14
9045160	CLASSROOM 20A	2018-05-08 @ 5:00 pm	2018-05-10 @ 7:00 pm	$1.1 \pm 0.3$	2018-05-14
9045127	CLASSROOM 22	2018-05-08 @ 4:00 pm	2018-05-10 @ 7:00 pm	< 0.3	2018-05-14
9045128	CLASSROOM 22	2018-05-08 @ 4:00 pm	2018-05-10 @ 7:00 pm	< 0.3	2018-05-14
9045133	CLASSROOM 24	2018-05-08 @ 4:00 pm	2018-05-10 @ 7:00 pm	< 0.3	2018-05-14
9045155	CLASSROOM 25	2018-05-08 @ 5:00 pm	2018-05-10 @ 7:00 pm	< 0.3	2018-05-14
9045144	CLASSROOM 25B	2018-05-08 @ 5:00 pm	2018-05-10 @ 7:00 pm	< 0.3	2018-05-14
9045150	CLASSROOM 27	2018-05-08 @ 5:00 pm	2018-05-10 @ 7:00 pm	$0.6 \pm 0.3$	2018-05-14
9045151	CLASSROOM 28	2018-05-08 @ 5:00 pm	2018-05-10 @ 7:00 pm	< 0.3	2018-05-14
9045149	CLASSROOM 29	2018-05-08 @ 5:00 pm	2018-05-10 @ 7:00 pm	$0.7 \pm 0.3$	2018-05-14
9045120	CLASSROOM 3	2018-05-08 @ 4:00 pm	2018-05-10 @ 7:00 pm	< 0.3	2018-05-14
9045119	CLASSROOM 3	2018-05-08 @ 4:00 pm	2018-05-10 @ 7:00 pm	< 0.3	2018-05-14
9045152	CLASSROOM 30	2018-05-08 @ 5:00 pm	2018-05-10 @ 7:00 pm	$0.9 \pm 0.3$	2018-05-14
9045121	CLASSROOM 4	2018-05-08 @ 4:00 pm	2018-05-10 @ 7:00 pm	< 0.3	2018-05-14
9045132	CLASSROOM 6	2018-05-08 @ 4:00 pm	2018-05-10 @ 7:00 pm	< 0.3	2018-05-14
9045131	CLASSROOM 6	2018-05-08 @ 4:00 pm	2018-05-10 @ 7:00 pm	< 0.3	2018-05-14
9045137	CLASSROOM 7	-	2018-05-10 @ 7:00 pm	< 0.3	2018-05-14
9045138	CLASSROOM 8	-	2018-05-10 @ 7:00 pm	< 0.3	2018-05-14
9045139	CLASSROOM 9	-	2018-05-10 @ 7:00 pm	< 0.3	2018-05-14
9045142	CLASSROOM 9A	•	2018-05-10 @ 7:00 pm	< 0.3	2018-05-14
9045140	CLASSROOM 9B	•	2018-05-10 @ 7:00 pm	< 0.3	2018-05-14
9045134	CLASSROOM STORAGE 24A	*	2018-05-10 @ 7:00 pm	< 0.3	2018-05-14
9045141	CLOSET 9C	-	2018-05-10 @ 7:00 pm	< 0.3	2018-05-14
9045156	CUSTODIAL CLOSET 26A	•	2018-05-10 @ 7:00 pm	< 0.3	2018-05-14
9045126	GYMNASIUM 26	-	2018-05-10 @ 7:00 pm	< 0.3	2018-05-14
9045125	GYMNASIUM 26	-	2018-05-10 @ 7:00 pm	< 0.3	2018-05-14
9045130	GYMNASIUM STORAGE CLOSET 22A	2018-05-08 @ 4:00 pm	2018-05-10 @ 7:00 pm	< 0.3	2018-05-14

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

# Radon test result report for: G.N. DIETRICH ELEMENTARY SCHOOL 1141 JACKSON STREET, AURORA, IL

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
9045165	HALLWAY	2018-05-08 @ 5:00 pm	2018-05-10 @ 8:00 pm	< 0.3	2018-05-14
9045166	HALLWAY	2018-05-08 @ 5:00 pm	2018-05-10 @ 8:00 pm	< 0.3	2018-05-14
9045167	HALLWAY	2018-05-08 @ 5:00 pm	2018-05-10 @ 8:00 pm	< 0.3	2018-05-14
9045115	MAIN OFFICE 5	2018-05-08 @ 4:00 pm	2018-05-10 @ 7:00 pm	< 0.3	2018-05-14
9045118	MAIN OFFICE STORAGE 5A	2018-05-08 @ 4:00 pm	2018-05-10 @ 7:00 pm	< 0.3	2018-05-14
9045154	MECHANICAL ROOM 43	2018-05-08 @ 5:00 pm	2018-05-10 @ 8:00 pm	$1.2 \pm 0.3$	2018-05-14
9045145	MULTIPURPOSE ROOM 34	2018-05-08 @ 5:00 pm	2018-05-10 @ 7:00 pm	< 0.3	2018-05-14
9045146	MULTIPURPOSE ROOM 34	2018-05-08 @ 5:00 pm	2018-05-10 @ 7:00 pm	< 0.3	2018-05-14
9045143	NURSE'S OFFICE 25D	2018-05-08 @ 5:00 pm	2018-05-10 @ 7:00 pm	< 0.3	2018-05-14
9045148	OFFICE 32	2018-05-08 @ 5:00 pm	2018-05-10 @ 7:00 pm	< 0.3	2018-05-14
9045147	OFFICE 32	2018-05-08 @ 5:00 pm	2018-05-10 @ 7:00 pm	< 0.3	2018-05-14
9045116	PRINCIPAL'S OFFICE 5B	2018-05-08 @ 4:00 pm	2018-05-10 @ 7:00 pm	< 0.3	2018-05-14
9045117	PRINCIPAL'S OFFICE CLOSET	2018-05-08 @ 4:00 pm	2018-05-10 @ 7:00 pm	$0.6 \pm 0.3$	2018-05-14
9045135	STAFF LOUNGE 23	2018-05-08 @ 4:00 pm	2018-05-10 @ 7:00 pm	< 0.3	2018-05-14
9045136	STAGE 26A	2018-05-08 @ 5:00 pm	2018-05-10 @ 7:00 pm	< 0.3	2018-05-14
9045129	STORAGE 22B	2018-05-08 @ 4:00 pm	2018-05-10 @ 7:00 pm	< 0.3	2018-05-14

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

# **APPENDIX C**

Radon Measurement Professional License

Bruce Rauner Governor

# State of Illinois

James K. Joseph Director

# **IEMA** Division of Nuclear Safety

Pursuant to the Radon Industry Licensing Act, 420 ILCS 44 et seg, and 32 Illinois Adminstrative 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, Radon Program