RADON DETECTION SPECIALISTS

RADON TEST REPORT
LONG-TERM MEASUREMENT

FACILITY NAME: J.B. NELSON SCHOOL
Test Site: 334 William Wood Lane
Batavia, IL 60510

Report Date: July 8, 2025

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Table of Contents

Section 1.0 Radon Health Effects

Radon is recognized by the Environmental Protection Agency as well as the scientific and medical communities as a Class A carcinogen, accounting for 15,000 – 22,000 lung cancer deaths annually. Exposure to radon gas is the leading cause of lung cancer among non-smokers.

Radon is a naturally occurring, radioactive gas which comes from the soil. It can't be seen, smelled or tasted. The only way to know if the level of radon gas in your building exceeds the recommended Action Level of 4.0 pCi/L is to test. States have different requirements and laws regarding the registration and licensing of individuals and companies that perform radon testing services. Radon Detection Specialists, Inc. carries national accreditations for commercial and government buildings, schools, multi-family housing communities, and individual residences and meets or exceeds all industry best practices.

The amount of radon in the soil depends on soil chemistry, which naturally varies. Radon levels in the soil can range from a few hundred to several thousands of pCi/L (pico Curies per liter of air). The amount of radon that escapes from the soil and enters the building depends on the weather, soil porosity, soil moisture, and the suction within the building.

Radon is the leading cause of lung cancer among non-smokers.

- There is no safe level of radon exposure. Any exposure causes some risk of developing cancer. The National Academy of Sciences (NAS) concluded that only cigarette smoking poses a greater risk. Exposure to radon accounts for 10% of all lung cancer deaths annually.
- As we breathe, the alpha radiation from radon and its decay products cause damage to the sensitive lung tissue. Most of the radiation dose is not actually from radon itself, but rather from radon's chain of short-lived decay products that are inhaled and lodged in the airways of the lungs. These radionuclides decay quickly, producing other radionuclides that continue damaging the lung tissue. Those particles that are retained long enough release radiation and damage the surrounding lung tissue. It is this damage that can lead to lung cancer.

What other health risks are related to radon exposure?

- No other respiratory ailments are linked to radon exposure.
- There are preliminary studies that are looking at the link between radon exposure and the development of Parkinson's and Alzheimer's disease. These are early studies, and research is on-going.

Section 2.0 Radon Testing Protocol for This Site

Pre-Deployment Testing Strategy

Measurements will be conducted in 3 locations which previously demonstrated potentially elevated levels during a previous short-term measurement.

Materials and Methods

RDS will use Alpha Track Detectors to measure radon levels in the air in the above referenced property. The test will comply with all protocols set forth by IEMA and ANSI/AARST, as well as the RDS Quality Assurance Plan.

Duplicate measurements will be conducted for not less than 10% of the total single devices placed to measure precision. Shipping blanks will be deployed for not less than 5% of the total number of single measurements deployed to measure background gamma radiation.

RDS will locate devices in such a way to limit unintentional interference from building occupants. A walk-through inspection of the building will allow RDS to document observations regarding radon entry mechanisms and general building pressure gradients. Measurement results will be reported in picoCuries per liter (pCi/L) of air.

Section 3.0 Scope of Work Performed

Radon Detection Specialists performed a Long-Term Measurement in 3 locations at J.B. Nelson School, located at 334 William Wood Lane, in Batavia, IL.

This scope of work included a 97-day (long-term) radon test. This measurement was conducted from Wednesday, April 2, 2025 to Tuesday, July 8, 2025.

The testing was conducted in accordance with the Illinois Emergency Management Agency Department of Nuclear Safety (IEMA) and the United States Environmental Protection Agency testing protocols for commercial radon measurements, ANSI/AARST standards, the device manufacturer's recommendations, and the RDS Quality Assurance Plan.

A total of 7 devices were deployed at this site in these configurations:

Measurement Type	Number of Devices
Single	3
Duplicate	3
Blank	1

Section 4.0 Site Conditions and Device Placement

Site Conditions

1. The subject building was occupied and fully-functional during this radon measurement.
2. The testing period was noted to have been unremarkable in terms of changes/repairs to the building functionality and the weather.

Device Locations

If an appropriate and accurate drawing is provided by the client and dimensional device plotting is possible, Appendix B provides a detailed drawing showing the device locations. If Appendix B is blank, please refer to the Device Placement columns provided in Appendix A (Room Use and Room Number) as an explanation of device locations.

The building was tested in accordance with ANSI/AARST and EPA protocols with regard to device placement and analytical methods of calculating results.

1. Tampering was not detected at the time the devices were retrieved, unless noted in the Comment Column.
2. Devices were placed strategically to reduce accidental interference by building occupants.
3. Duplicates are averaged together. It is the average of the two devices upon which Follow-Up Testing and mitigation decisions should be based.

Section 5.0 Test Location Results and Recommendations

Test Location Results Table

The table below lists the radon test results by location in the facility.

Because radon levels fluctuate hourly, daily, weekly, seasonally and yearly, these results should not be used to estimate radon levels of rooms that were not measured, or to estimate future radon levels of rooms that were measured.

Changes to the building components (both structural and mechanical) can affect radon concentrations.

The EPA Action Level is 4.0 picoCuries per Liter (pCi/L).

Location #	Room Name/Number	Description	Results (pCi/L)
1	104	Classroom	1.9
2	147	Office	0.6
3	149	Room	1.5
4	Shipping	Blank	0.9

All of the regularly occupiable locations had average readings below the Action Level of 4.0 pCi/L. No additional testing is recommended at this time.

Because different ventilation systems and varying seasonal pressures can influence radon levels, it is the recommendation of this testing professional to perform another short-term test in two years, in an alternating season, to establish an alternate seasonal baseline.

A Note about Long-Term Testing

The EPA Action Level of 4.0 pCi/L is based on annual average exposure. As a matter of best practice in measurement, a long-term measurement is the best way to determine occupants' annual exposure because radon levels vary hourly, daily, weekly, seasonally, and over the years. Long-term testing (lasting 90 days to one year) provides a better understanding of building radon concentrations and the risks of exposure to radon.

To have a thorough understanding of occupants' risk of exposure, a long-term measurement is always recommended. This type of measurement will provide the best indication of radon concentrations and are the basis upon which mitigation decisions should be made.

Should you choose to engage in a long-term measurement as recommended, please contact us for further details.

Appendix A: Device Table

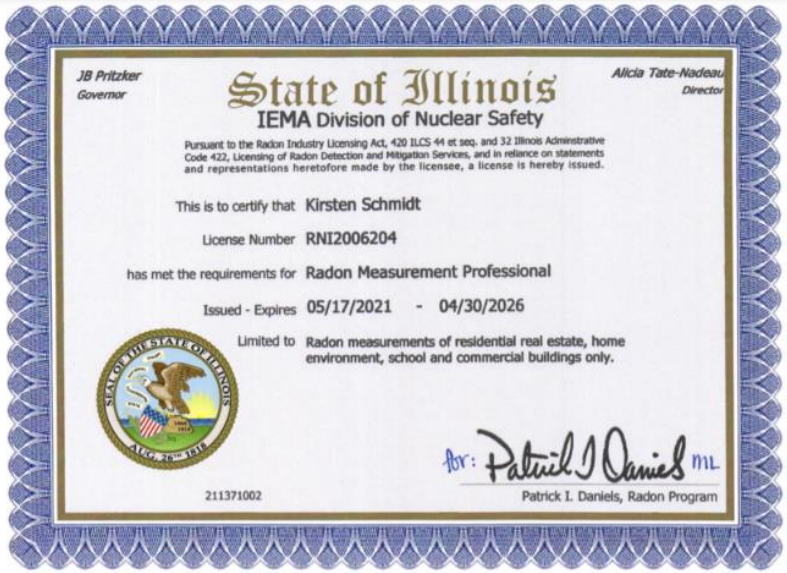
The table below lists all the devices deployed and their reported radon levels. The results were determined using calculations supplied by the device manufacturer.

Location #	Device #	Serial Number	Room Name/Number	Room Description	Foundation	Occupiable?	Start Day/Time	End Day/Time	Invalid or Missing?	Device Radon Level (pCi/L)	Set Type
1	1	846392	104	Classroom	Slab-on-Grade	Yes	4/2/2025 12:00 PM	7/8/2025 12:00 PM		1.5	S
1	2	846367	104	Classroom	Slab-on-Grade	Yes	4/2/2025 12:00 PM	7/8/2025 12:00 PM		2.2	D
2	3	846212	147	Office	Slab-on-Grade	Yes	4/2/2025 12:00 PM	7/8/2025 12:00 PM		0.6	S
2	4	846387	147	Office	Slab-on-Grade	Yes	4/2/2025 12:00 PM	7/8/2025 12:00 PM		0.6	D
3	5	846388	149	Room	Slab-on-Grade	Yes	4/2/2025 12:00 PM	7/8/2025 12:00 PM		1.3	S
3	6	847121	149	Room	Slab-on-Grade	Yes	4/2/2025 12:00 PM	7/8/2025 12:00 PM		1.7	D
4	7	847052	Shipping	Blank		Yes	4/2/2025 12:00 PM	7/8/2025 12:00 PM		0.9	B

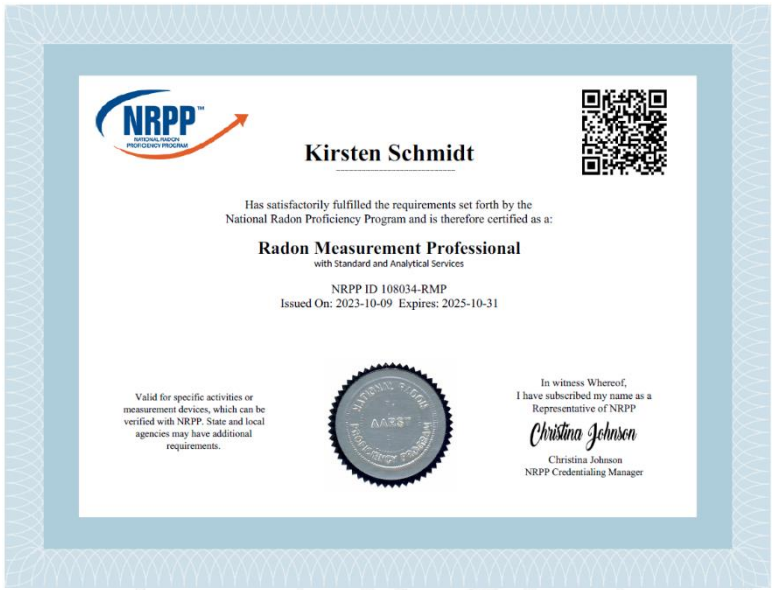
Appendix B: Site Plan Showing Device Locations

Site plan not available.

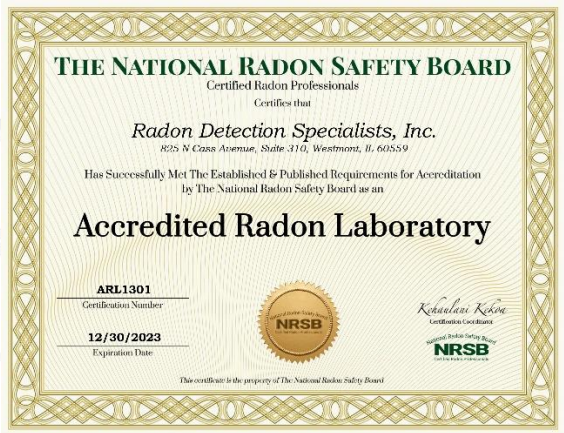
Appendix C: License and Credentials



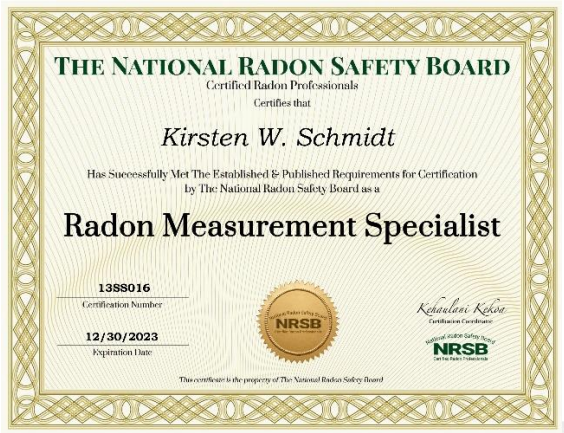
IEMA: Radon Measurement Professional RNI2006204



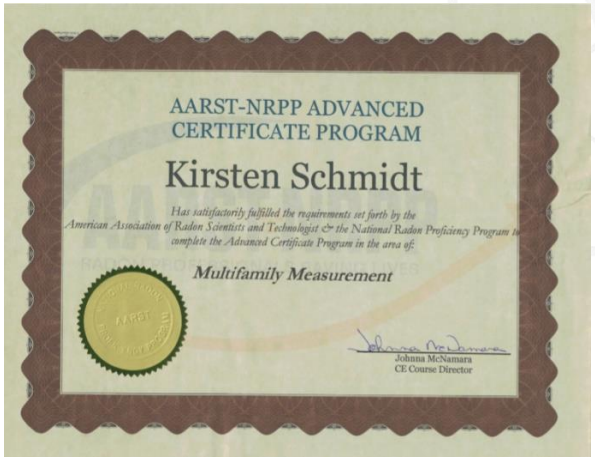
NRPP: Radon Measurement Professional with Standard and Analytical Services
NRPP ID 108034-RMP



NRSB: Accredited Radon Laboratory NRSB ARL1301



NRSB: Radon Measurement Specialist NRSB 13SS016



AARST-NRPP: Advanced Certification: Multifamily Measurement