EnviroMed

Cleaner environment. Safer workplaces.

Radon Sampling Report
5 Year Radon Re-Evaluation
for
Mary Johnson School
286 Whittemore Road
Middlebury, Connecticut 06762

Prepared
for:
Region 15 Public Schools
Board of Education
286 Whittemore Road
Middlebury, Connecticut 06762

November 2-4, 2021

EnviroMed Project # IH-21-1084

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I. SUMMARY

EnviroMed Services, Inc. was retained by Region 15 Public Schools to conduct a re-evaluation for airborne radon at the Mary Johnson School, 286 Whittemore Road in Middlebury, Connecticut. The purpose of this monitoring was to determine if the airborne radon levels were below the U.S. Environmental Protection Agency (EPA) recommended action level of 4.0 picoCuries per liter of air (pCi/L). The monitoring was conducted November 2-4, 2021 by National Radon Proficiency Program (NRPP) accredited professional John Luby.

II. RADON FACTS AND HEALTH RISK INFORMATION

Radon is the second leading cause of lung cancer. It is naturally occurring radioactive gas. It comes from the natural breakdown (decay) of uranium, which is found in soil and rock all over the United States. Radon travels through soil and enters buildings through cracks and other holes in the foundation. Eventually, it decays into radioactive particles that can become trapped in our lungs when we breathe. As these particles in turn decay, they release small bursts of radiation. This radiation can damage lung tissue and lead to lung cancer over the course of our lifetime.

Radon is colorless, odorless, and tasteless. The only way to know whether or not an elevated level of radon is present in any room of a school is to test.

III. SAMPLING METHODOLOGY

Radon in Air

Monitoring was performed in 10% of occupied rooms that come in contact with the ground within the school. Four (4) EPA approved monitoring devices were placed in designated sample locations at a minimum of 36 inches off the floor, more than one foot from exterior walls and more than three feet from windows. They were opened and allowed to be exposed to the indoor atmosphere for between forty-eight and seventy-two hours, which complies with the Connecticut Department of Public Health (CT DPH) School Radon Testing Guidance and United States Environmental Protection Agency (US EPA) sampling protocol. Upon completion of the monitoring, the canisters were sealed and transported to a State certified laboratory for analysis, Aquatek Labs in Woodbridge, Connecticut. Results can be found in Appendix A.

In order to provide assurance of the quality of the measurement, duplicate (10%) and blank (5%) samples accompanied all testing activities and were submitted to the

laboratory at the same time. Please note that the laboratory allows for a +/- 0.5pCi/L variation on blank samples.

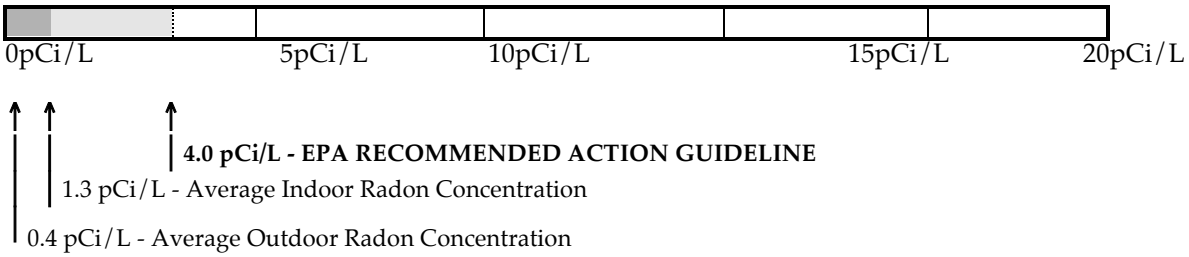
IV. RADON IN AIR TEST RESULTS

Mary Johnson School

Sample ID	*Canister*	*Floor Level*	*Sample Location*	*Radon Level in pCi/L*
R1	RAD10505A	Lower	Classroom #1	1.2
R2	RAD10505B	Lower	Classroom #1*	1.0
R3	RAS6605	Lower	Conference Room - Blank	< 0.5
R4	RAS6606	Lower	Conference Room	0.7

*indicates duplicate sample

Use the following chart to compare your radon test results, expressed in picoCuries of radon per liter of air (pCi/L), with the EPA guidelines.



The CT DPH School Radon Testing Guidance and the US EPA strongly recommend taking further action when the radon test results are 4.0 picoCuries per liter of air (pCi/L) or greater.

The national average indoor radon level is about 1.3 pCi/L. The higher the radon levels the greater the health risk to occupants. Even high levels can be reduced to below 4.0 pCi/L. EPA recommends that you use an EPA or State-approved contractor trained to fix radon problems.

V. WHAT DO THE RADON TEST RESULTS MEAN?

If the radon level is **below 4.0 pCi/L**, you do not need to take action.

If the radon level is **4.0 pCi/L or greater,** use the following chart to determine what should be done next. Depending upon the type of test taken, you will have to either test again or take corrective actions to reduce the radon level.

Note: All tests should meet EPA technical protocols.

Type of Test(s)	*If Radon Level Is 4.0 pCi/L or Greater*
Single Short-Term Test	Test Again*
Average of Short-Term Tests	Fix The Problem
One Long-Term Test	Fix The Problem

*If your first short-term test is several times greater than 4.0 pCi/L - for example, about 10 pCi/L or higher - you should take a second short-term test immediately.

VI. CONCLUSIONS AND RECOMMENDATIONS

Based on the results obtained from the radon monitoring at Mary Johnson School located at 286 Whittemore Road in Middlebury, Connecticut, EnviroMed Services, Inc. makes the following conclusions and recommendations:

- Testing indicates that radon levels are below the EPA Action Level in the school. No further action is required. Radon re-testing is recommended at 5 year intervals.

Appendix A

Laboratory Results

Aquatek LABS
3 Research Drive - Woodbridge, CT 06525

Radon In Air Report

TEST ID: RAD10505
SAMPLE POINT: CLASSRROM #1
SAMPLED BY: ENVIROMED SERVICES
RECEIVED: 11/04/2021 05:30 PM
SETUP: 11/04/2021 05:56 PM

TO: ENVIROMED SERVICES 409

PROPERTY LOCATION: 286 WHITTEMORE ROAD (MARY JOHNSON SCHOOL) - MIDDLEBURY , CT

RESULTS

EXPOSURE START: 11/02/2021 03:00 PM

EXPOSURE STOP: 11/04/2021 03:02 PM

RADON CONCENTRATION (A): 1.2 pCi/L

RADON CONCENTRATION (B): 1.0 pCi/L

RADON CONCENTRATION (AVG): 1.1 pCi/L

RELATIVE % DIFFERENCE: NOT APPLICABLE

The EPA provides guidance for how well dual measurements should agree. The two results reported above fall within those guidelines.

The abbreviation pCi/L means picoCurie per liter of air, the most common method of expressing radon in air concentrations. The United States Environmental Protection Agency and the Centers for Disease Control have used a CONTINUOUS EXPOSURE level of 4.0 pCi/L for the cut-off level at which further testing and / or remedial action are indicated.

BASEMENT

Jeffrey Graham
Radon Measurement Specialist
NRSB ID: ARL169

Aquatek LABS
3 Research Drive - Woodbridge, CT 06525

Radon In Air Report

TO: ENVIROMED SERVICES 409

TEST ID: RAS6606
SAMPLE POINT: CONFERENCE ROOM
SAMPLED BY: ENVIROMED SERVICES
RECEIVED: 11/04/2021 05:50 PM
SETUP: 11/04/2021 06:00 PM

PROPERTY LOCATION: 286 WHITTEMORE ROAD (MARY JOHNSON SCHOOL) - MIDDLEBURY , CT

RESULTS

EXPOSURE START: 11/02/2021 03:02 PM

EXPOSURE STOP: 11/04/2021 03:03 PM

RADON CONCENTRATION: 0.7 pCi/L

The abbreviation pCi/L means picoCurie per liter of air, the most common method of expressing radon in air concentrations. The United States Environmental Protection Agency and the Centers for Disease Control have used a CONTINUOUS EXPOSURE level of 4.0 pCi/L for the cut-off level at which further testing and / or remedial action are indicated.

BASEMENT

Jeffrey Graham
Radon Measurement Specialist

NRSB ID: ARL169

Aquatek LABS
3 Research Drive - Woodbridge, CT 06525

Radon In Air Report

TEST ID: RAS6605
SAMPLE POINT: CONFERENCE ROOM
SAMPLED BY: ENVIROMED SERVICES
RECEIVED: 11/04/2021 05:50 PM
SETUP: 11/04/2021 06:00 PM

TO: ENVIROMED SERVICES 409

PROPERTY LOCATION: 286 WHITTEMORE ROAD (MARY JOHNSON SCHOOL) - MIDDLEBURY , CT

RESULTS

EXPOSURE START: 11/02/2021 03:03 PM

EXPOSURE STOP: 11/04/2021 03:06 PM

RADON CONCENTRATION: < 0.5 pCi/L

The abbreviation pCi/L means picoCurie per liter of air, the most common method of expressing radon in air concentrations. The United States Environmental Protection Agency and the Centers for Disease Control have used a CONTINUOUS EXPOSURE level of 4.0 pCi/L for the cut-off level at which further testing and / or remedial action are indicated.

BASEMENT

Jeffrey Graham
Radon Measurement Specialist

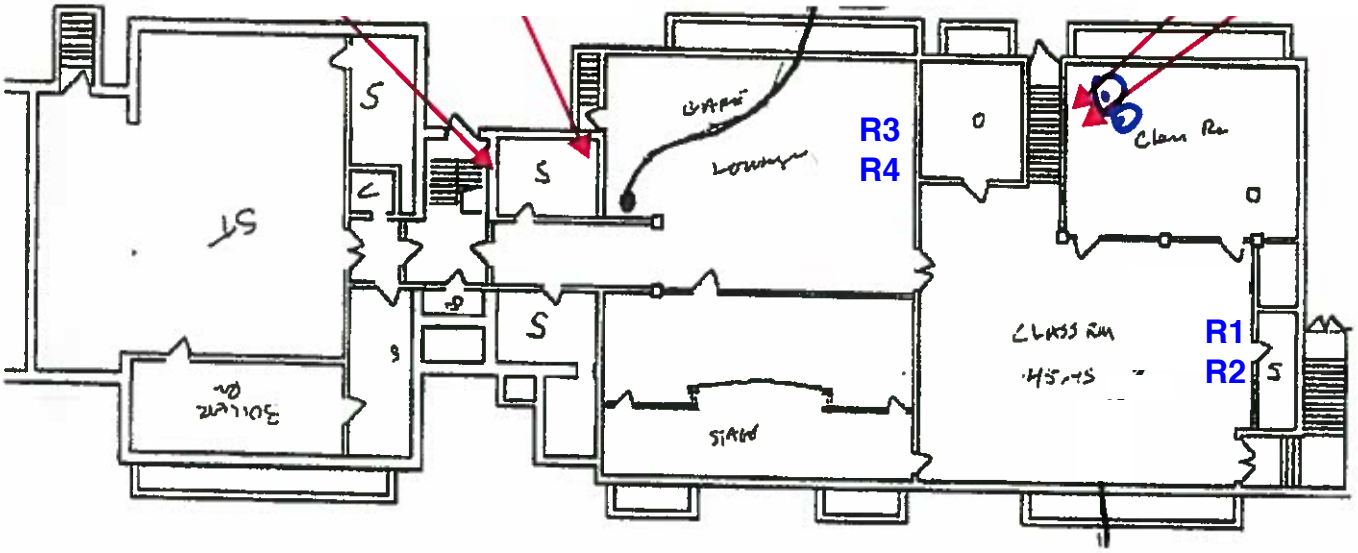
NRSB ID: ARL169

Appendix B

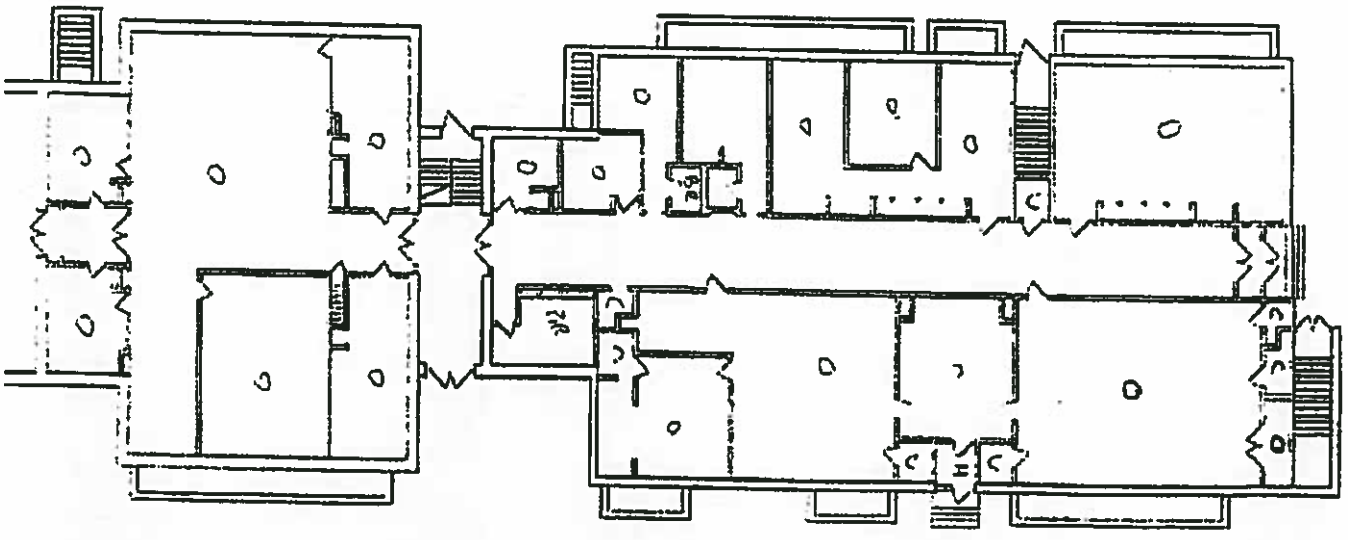
Floor Plan With Sample Locations

Mary Johnson School

RADON SAMPLE LOCATIONS - 2021



LOWER LEVEL



FIRST FLOOR