Radon Testing Report

Woodstock Elementary School
Frog Pond Road
Woodstock, CT 06281

November 27, 2017 – November 30, 2017

Prepared By:
Michael M. Akana
EASTCONN
376 Hartford Turnpike
Hampton, CT. 06247

EASTCONN
Where Learning Comes to Life

December 7, 2012

Re: Radon Testing Woodstock Elementary School

Encl:

State of Connecticut Radon Testing Report
Summary Sheets
Laboratory Data
List of Mitigation Professionals
Certifications

As required, EASTCONN conducted comprehensive radon sampling between the dates of November 26 and November 30, 2012.

The testing was conducted in accordance with Connecticut General Statute (CGS) 10-220(d), the Connecticut Department of Public Health School Radon Testing Guidance and the United States Environmental Protection Agency.

Sampling was conducted in 6 rooms, ten percent (10%) of the frequently occupied rooms in contact with the ground, first floor and below ground level areas, which were previously tested during the period of December 11 - 13, 2007. A total of 49 rooms were tested during the initial testing period. No test results from that period were at or exceeded 4.0 pCi/L.

These testing locations were mainly composed of staff areas and classrooms. Testing was conducted during a time of normal occupancy with HVAC heating in operation, under closed building conditions and with an absence of construction activities.

The testing was conducted with passive short-term radon test kits utilizing activated charcoal collection devices. Following the protocols listed above, the test kits were deployed one per every 2000 square feet of continuous room space. Blind duplicate samples were deployed in 10% of the sample locations side-by-side exactly 4 inches apart for the same measurement period. They were randomly placed throughout the school to measure the precision of the sampling
Additionally, blank samples were submitted to measure the accuracy of the testing. The blank samples were deployed in 5% of the sample locations randomly placed throughout the school. These blanks were not exposed during the testing period but were shipped,

376 Hartford Turnpike, Hampton, CT 06247
(860) 455-0707 Fax: (860) 455-0691
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handled and analyzed in the same fashion as all test kits and identified by a numbering system know only to the technician. These samples were taken during the same testing period.

Re-Testing

No re-testing was required

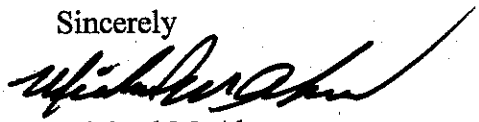
Please Note:

According to the Connecticut General Statute (CGS) 10-220(d), testing is required every five (5) years on ten percent (10%) of the building after the initial testing with a different ten percent (10%) of the building tested thereafter.

The State of Connecticut Radon Testing Form provides a summary of the sampling activities and the results to the State Department of Health. This form has been submitted and it is required that a copy of this report be kept available in the Main Office for staff and parental review. It is also required that parents and staff be notified of the testing results in a brief summary as soon as possible but not later than one month after follow up test results are received if they were required. If elevated radon levels exist, the notification should include the school's plan to reduce the levels.

If you have any questions or concerns please do not hesitate to contact me. I can be reached at 860-455-1500 or by email at makana@eastconn.org.

Sincerely



Michael M. Akana
EASTCONN

STATE OF CONNECTICUT

DEPARTMENT OF PUBLIC HEALTH
RADON PROGRAM
SCHOOL RADON **RE-EVALUATION** REPORT FORM

May 2017

The following form must be submitted to the Connecticut Department of Public Health Radon Program within ten (10) business days of providing a final written report of radon measurement activities to school personnel. **Do not send test results or other documents.** Submit only one signed form by **mail, fax** OR **email (preferred)** to the Radon Program at:

CT Department of Public Health Radon Program
410 Capitol Avenue MS#12RAD
Hartford, CT 06134-0308
Fax: 860-509-7295
Email: DPH.RadonReports@ct.gov

Name of School: Woodstock Elementary School

Address:
(Street, town, zip code) Frog Pond Road
Woodstock, CT 06281

Measurement Company: EASTCONN

Please provide the following summary information:

Testing Dates:
(deployment & retrieval. Include confirmatory testing dates if necessary) 11/27/20117 - 11/30/2017

Total # of Rooms Tested: 6

Total # of Rooms Requiring Re-Testing: 0

Total # of Rooms Where Average Results were at or above 4.0 pCi/L: 0

Radon measurement activities were performed at the location above in accordance with United States Environmental Protection Agency protocols and the Connecticut Department of Public Health Radon Program's *School Radon Testing Guidance.*

Michael M. Akana NSRB 7ST0006 — Measurement Professional / NRPP/NRSB # — Signature — 11/30/17 Date

Brian Musumeci / Facilities Director — School Designee / Title — Signature — 11/30/17 Date

Phone: (860) 509-7299
Telephone Device for the Deaf (860) 509-7191
450 Capitol Avenue - MS # 51RAD
P.O. Box 340308 Hartford, CT 06134
An Equal Opportunity Employer

Woodstock Elementary School
Frog Pond Road
Woodstock, CT 06281

Radon in Air Summary Sheet

Location	Initial Test Dates	Canister Number	Initial Results	Re-test Dates	Canister Number	Re-test Results
Room 27	12/11/07 – 12/13/07	630317	0.9 pCi/L	11/27/17 – 11/30/17	580194	0.7 pCi/L
Room 131	12/11/07 – 12/13/07	630314	1.2 pCi/L	11/27/17 – 11/30/17	580200	1.1 pCi/L
Media Room	12/11/07 – 12/13/07	630365	0.9 pCi/L	11/27/17 – 11/30/17	580199	0.9 pCi/L
Media Room	12/11/07 – 12/13/07	630366	0.8 pCi/L	11/27/17 – 11/30/17	580115	1.1 pCi/L
Room 13	12/11/07 – 12/13/07	630333	0.2 pCi/L	11/27/17 – 11/30/17	580202	0.7 pCi/L
Custodial Office	12/11/07 – 12/13/07	630338	0.3 pCi/L	11/27/17 – 11/30/17	580178	< 0.4 pCi/L
Room 8	12/11/07 – 12/13/07	630349	0.4 pCi/L	11/27/17 – 11/30/17	580157	0.8 pCi/L

Radon in Air Summary Sheet
Follow up Testing
If Required

Location	Initial Test Dates	Canister Number	Initial Results	Follow Up Test Date	Canister Number	Follow Up Results	Average	Standard
None	None	None	None	None	None	None	None	None

Average of the initial test results and follow up test results (when required) shall not meet or exceed the action level of 4.0 pCi/L. Take action to reduce radon levels if they do.

Recommendations

All re-testing results were within acceptable limits. No further action is required.

Canisters which appeared to have been moved, tampered with or questionable conditions: None

EASTCONN and its personnel do not assume responsibility or liability for laboratory analysis results when test kits have been tampered with, relocated or covered during the testing period, or if opening of windows and/or doors (other than normal entry and exists from the facility) has occurred. Every precaution is taken to provide accurate measurements including Quality Control checks for precision and accuracy.

Any questionable conditions have been recorded and noted above

Duplicate Samples and Unexposed Blanks

Duplicate measurements provide a measure of precision. It shows how closely measured results are grouped together. **If both results are over 4.0 pCi/L and the Relative Percent Difference differs by 25% or more,** the quality of the data should be questioned. The rooms in question should be re-tested.

If both tests are below 4.0 pCi/L 67% Relative Percent Difference or less is acceptable.

If one test result is above 4.0 pCi/L and one is below 4.0 pCi/L and the higher result is less than twice the lower, the results are ok. If more than twice disregard results and re-test.

Blanks measure bias and may uncover problems associated with improper storage, handling or shipping. **Blanks should be within the lower limits of the device.**

Location	Canister Number	Duplicate Canister Number	Results	Duplicate Result	Average	Relative Percent Difference	EPA/DPH Acceptable Standard
Custodial Office	580178	580152	<0.4 pCi/L	<0.4 pCi/L	0.4 pCi/L	0%	67% or Less
Room 27 Field Blank	580187	N/A	< 0.4 pCi/L	N/A	N/A	N/A	0% or Less

AccuStar
Professional Radon Laboratory Services Since 1984

Radon in Air

NELAC NY 11769
P 101193 AL
B ARL0017
CT License PH-0313

EPA Method #402-R-92-004
Charcoal Canister
NRPP Device Code 1017, 1159
NRSB Device Code 10302,10320

Laboratory Report for:

Eastconn
376 Hartford Turnpike
Hampton CT 06247

Property Tested:

Woodstock Elementary School
Frog Pond Road
Woodstock CT 06281

Log Number	Device Number	Test Exposure Duration:		Area Tested	Result (pCi/L)
2198112	580194	11/27/2017 9:38 am	11/30/2017 10:32 am	Room 27	0.7
2198113	580187	11/27/2017 9:38 am	11/30/2017 10:32 am	Room 27 Field Blank	< 0.4
2198114	580200	11/27/2017 9:40 am	11/30/2017 10:33 am	Room 131	1.1
2198115	580199	11/27/2017 9:42 am	11/30/2017 10:34 am	Media Room	0.9
2198116	580115	11/27/2017 9:42 am	11/30/2017 10:35 am	Media Room	1.1
2198117	580202	11/27/2017 9:44 am	11/30/2017 10:36 am	Room 13	0.7
21 18	580178	11/27/2017 9:47 am	11/30/2017 10:38 am	Custodial Room	< 0.4
2198119	580152	11/27/2017 9:47 am	11/30/2017 10:38 am	Custodial Room Duplicate	< 0.4
2198120	580157	11/27/2017 9:49 am	11/30/2017 10:39 am	Room 8	0.8

Comment: Eastconn was emailed a copy of this report. A copy of this report was emailed to makana@eastconn.org.

Test Performed By: Akana

Distributed by: Eastconn

Date Received: 12/01/2017 Date Logged: 12/01/2017 Date Analyzed: 12/01/2017 Date Reported: 12/01/2017

Radon is a naturally occurring radioactive gas that may cause cancer and may be found in drinking water and indoor air. Radon escaping from water can be the source of elevated levels of radon in air. Some people who are exposed to radon in drinking water may be at increased risk of getting cancer over the course of their lifetime, especially lung cancer. The Connecticut Department of Public Health recommends to homeowners served by a private well to consider treatment if their average annual (two or more samples in one year) radon in water is 5000 pCi/L or greater. For more information call the Connecticut Radon Program at 860-509-7367 or visit their website at www.dph.state.ct.us.\BRS\Radon\radon-program.htm.

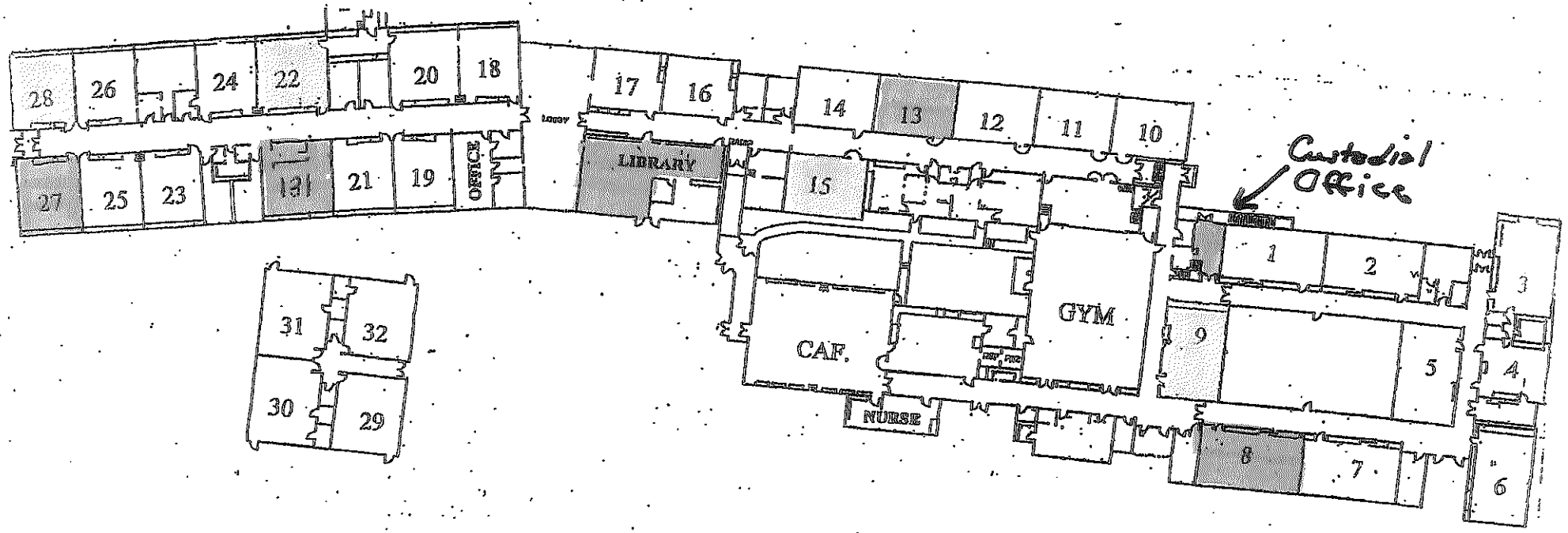
Report Reviewed By: Spike Harrison Report Approved By: _____
Shawn Price, Director of Laboratory Operations, AccuStar Labs

Disclaimer:

The uncertainty of this radon measurement is ~+/- 10 %. Factors contributing to uncertainty include statistical variations, daily and seasonal variations in radon concentrations, sample collection techniques and operation of the dwelling. Interference with test conditions may influence the test results.

Th port may only be transferred to a third party in its entirety. Analytical results relate to the samples AS RECEIVED BY THE LABORATORY. Results sh on this report represent levels of radon gas measured between the dates shown in the room or area of the site identified above as "Property Tested". Incorrect information will affect results. The results may not be construed as either predictive or supportive of measurements conducted in any area of this structure at any other time. AccuStar Labs, its employees and agents are not responsible for the consequences of any action taken or not taken based upon the results reported or any verbal or written interpretation of the results.

WOODSTOCK ELEMENTARY IOOL FLOOR PLAN (Updated 9/17/12)



2012

2017

The National Radon Safety Board

National Radon Safety Board

NRSB

Certified Radon Professionals

Certifies that

Michael M. Akana

has successfully met the established and published requirements for Certification by The National Radon Safety Board as a

RADON MEASUREMENT TECHNICIAN

NRSB 7ST0006

Certification Number

7/30/2018

Expiration Date

Michelle Kunkelich
Executive Secretary

Executive Director

This certificate is the property of The National Radon Safety Board and is not official without the raised seal.

State of Connecticut Department of Public Health
Regulatory Services Branch
Environmental Health Section
Radon Program

This Certificate is awarded to

Michael Akana

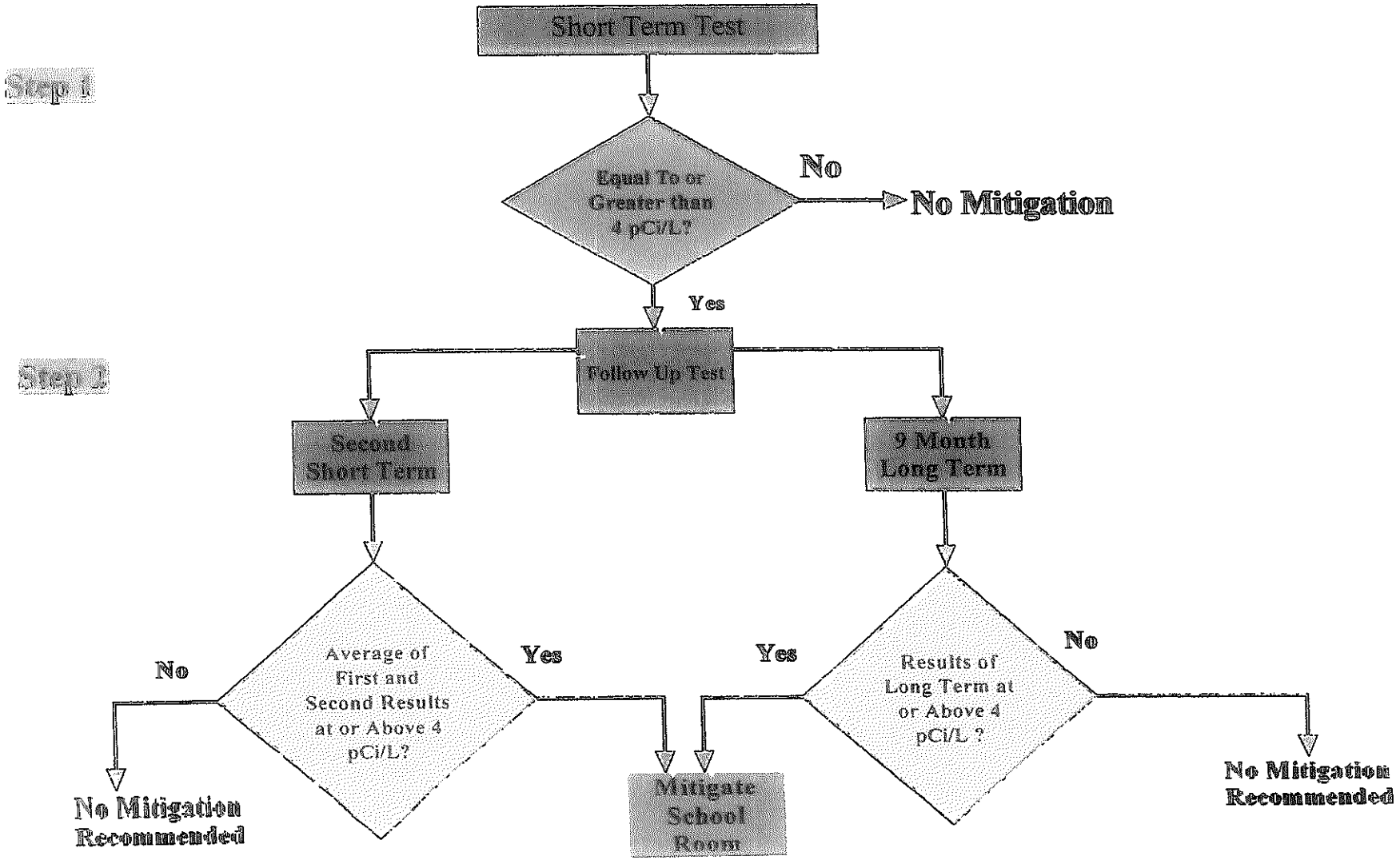
For the satisfactory completion of the training course

Radon Measurement in Connecticut Schools

Course Date: July 12, 2016

Allison Sullivan, Environmental Analyst 3

EPA Protocols for Schools
Measurement Strategy



EPA Map of Radon Zones

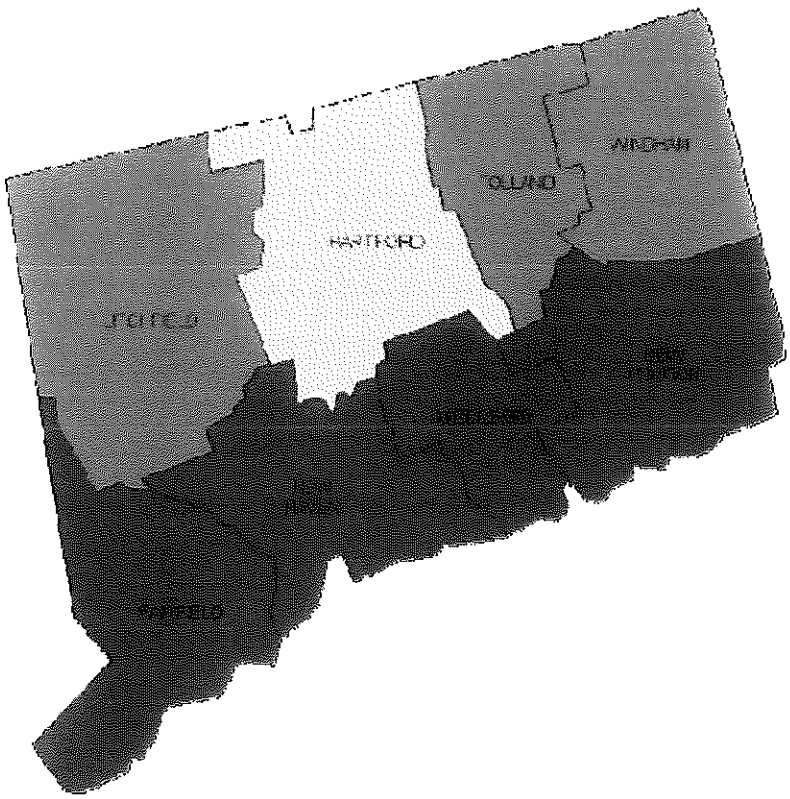
CONNECTICUT

The U.S. EPA and the U.S. Geological Survey have evaluated the radon potential in the U.S. and have developed this map to assist National, State, and local organizations to target their resources and to assist building code officials in deciding whether radon-resistant features are applicable in new construction. This map is not intended to be used to determine if a home in a given zone should be tested for radon. Homes with elevated levels of radon have been found in all three zones. All homes should be tested regardless of geographic location. The map assigns each of the 3,141 counties in the U.S. to one of three zones based on radon potential. Each zone designation reflects the average short-term radon measurement that can be expected to be measured in a building without the implementation of radon control methods. The radon zone designation of the highest priority is Zone 1.

Zone 1 Highest Potential (greater than 4 pCi/L)

Zone 2 Moderate Potential (from 2 to 4 pCi/L)

Zone 3 Low Potential (less than 2 pCi/L)



Radon Decision Grid

If you have...	...done a short-term test.	...done a follow-up short-term test.	...done a follow-up long-term test.	...water from a private well.
...a radon level less than 4 pCi/L.	**A follow up test is not necessary.** If you tested during the summer, consider retesting in the winter when levels are usually higher. In addition, retest every five years or after	**No action is necessary.** If your radon level is above 2 pCi/L, consider further testing and mitigation. In addition, retest every five years or after major remodeling.	**No action is necessary.** If your long-term test included fall and winter months, then you have an idea of your annual radon exposure. If this level is above two, you may want to think about mitigating.	**Consider testing your water.** You can have elevated levels of radon in your water even if your air level is below the EPA recommended action level.
...a radon level between 4 pCi/L and 20 pCi/L.	**Do follow-up testing.** If your measurement is closer to 4 pCi/L, do a long-term test for one year. If it is closer to 20 pCi/L, do a long-term test for three months. Or, do a short-term test during each of the four seasons and average the results.	**Take action to reduce radon levels within one year.** These levels are above average and should be addressed.	**Take action to reduce radon levels within one year.** These levels are above average and should be addressed.	**Test your water for radon.** Radon in your water may be contributing to the radon in your air.
...a radon level between 20 pCi/L and 50 pCi/L.	**Do a follow-up short term test as soon as possible.** You can use another 2-7 day test or use an alpha track detector for 1 month.	**Take action to reduce radon levels within six months.** These levels are greatly above average and should be fixed soon.	**Not applicable.** At this level, even with seasonal variations, your average yearly exposure to radon is high. Long-term testing would be pointless.	**Test your water for radon.** Radon in your water may be contributing to the radon in your air.
...a radon level greater than 50 pCi/L.	**Do a follow-up short-term test as soon as possible.** Test for no more than one week,. This will work to verify the original results.	**Take action to reduce radon levels as soon as possible.** These results are very high and should be fixed as soon as possible.	**Not applicable.** At this level, even with seasonal variations, your average yearly exposure to radon is high. Long-term testing would be pointless.	**Test your water for radon.** Radon in your water may be contributing to the radon in your air.

Using the Radon Decision Grid

The Radon Decision grid can help you to think about how to work with your radon test results. This grid represents the guidance that the Connecticut Department of Public Health (CT DPH) provides to Connecticut residents testing for radon.*

1. Select the option from the top row that applies to your situation.

2. Select the option from the left column that applies to your situation.

If you have...	...done a short-term test...	...done a follow-up short-term test.	...done a follow-up long-term test.	...water from a private well.
...a radon level less than 4 pCi/L.	A follow up test is not necessary. If you tested during the summer, consider retesting in the winter when levels are usually higher. In addition, retest every five years or after major remodeling.	No action is necessary. If your radon level is above 2 pCi/L, consider further testing and mitigation. In addition, retest every five years or after major remodeling.	No action is necessary. If your long-term test included fall and winter months, then you have an idea of your annual radon exposure. If this level is above two, you may want to think about mitigating.	Consider testing your water. You can have elevated levels of radon in your water even if your air level is below the EPA recommended action level
...a radon level between 4 pCi/L and 20 pCi/L.	Do follow-up testing. If your measurement is closer to 4 pCi/L, do a long-term test for one year. If it is closer to 20 pCi/L, do a long-term test for three months. Or, do a short-term test during each of the four seasons and average the results.	Take action to reduce radon levels within one year. These levels are above average and should be addressed.	Take action to reduce radon levels within one year. These levels are above average and should be addressed.	Test your water for radon. Radon in your water may be contributing to the radon in your air.
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...a radon level greater than 50 pCi/L.	Do a follow-up short-term test as soon as possible. Test for no more than one week. This will work to verify the original results.	Take action to reduce radon levels as soon as possible. These results are very high and should be fixed as soon as possible.	Not applicable. At this level, even with seasonal variations, your average yearly exposure to radon is high. Long-term testing.	Test your water for radon. Radon in your water may be contributing to the radon in your air.

3. Find the square where the row and column intersect. Read this advice.

Some Definitions

pCi/L– picocuries per liter, the unit of measurement for radon concentration.

4 pCi/L– the EPA recommended action level for radon in air. The EPA recommends that radon levels of 4 pCi/L or higher be reduced.

Mitigation– reduction of radon levels. This usually involves installation of a mitigation (radon reduction) system.

Short-term test– a radon test that lasts between 2 (two) and 90 (ninety) days. Short term tests usually take two to seven days.

Long-term test– a radon test that lasts from 90 (ninety) days to 1 (one) year.

*This Radon Decision Grid will probably not be helpful to people involved in a real estate transaction. If you are buying or selling a home, please see our document concerning radon and real estate transactions.

Connecticut Department of Public Health

Radon Program

List of Radon Mitigation Professionals

This following list contains the names of individuals or companies who have been trained according to the U.S Environmental Protection Agency (U.S. EPA) protocols for radon mitigation. These individuals or companies listed are registered with the State of Connecticut Department of Consumer Protection (DCP) as Home Improvement Contractors and certified by one of the two National Radon Proficiency Programs; (1) The National Environmental Health Association (NEHA) and (2) the National Radon Safety Board (NRSB).

The State of Connecticut, Department of Public Health (CT DPH) is required under Connecticut General Statute 19a-14b, to "maintain a list of companies or individuals that are included in current lists of National Radon Proficiency Programs." The CT DPH cannot be responsible for the knowledge or experience of these individuals or companies, nor for their fees or business practices. Inclusion on this list does not constitute an endorsement or a recommendation of the firms. People are encouraged to take normal consumer precautions before selecting a professional and be certain that the selected professional obtains all necessary building permits before proceeding with any work. You may visit the CT ELicensing website for more information regarding companies or individuals. Mitigation companies must utilize licensed electricians, plumbers, and other professionals for all applicable components of the work rendered.

Overview of Radon In Air Mitigation Techniques

If you have confirmed your radon in air level to be 4 picocuries per liter (pCi/L) or higher based on the average of two tests, U.S. EPA suggests that your home be fixed. There are several methods that a contractor can use to lower radon in air levels in your home. Some techniques prevent radon from entering your home while others reduce radon levels after it has entered. EPA generally recommends methods which prevent the entry of radon. Soil suction, for example, prevents radon from entering your home by drawing the radon from below the house and venting it through a pipe, or pipes, to the air above the house where it is quickly diluted. Refer to the U.S. EPA document, *Consumer's Guide to Radon Reduction*, for more information on radon mitigation systems, costs, and effectiveness. This document can be found on the CT DPH Radon Program website at www.ct.gov/dph/radon . You may contact the CT DPH Radon Program at (860) 509-7367 to request a copy of this document.

The cost of fixing a home generally ranges from $800 to $2500 with an average cost of $1200. Some radon reduction systems can reduce radon levels in your home by up to 99%.

Overview of Radon In Water Mitigation Techniques

If you have tested your private well and have confirmed your radon in water level to be 5,000 pCi/L or higher based on the average of two water samples, CT DPH recommends that your home be fixed in one of two ways.

- Granular Activated Carbon (GAC) System

  GAC systems are used to reduce radon levels that are between 5,000 and 10,000 pCi/L. This system uses special charcoal filters to remove radon from the water. You need to change the filter in this system according to the manufacturer's recommendations. The average cost for a GAC system is $1500-$3000.

- Aeration System

  Aeration systems are used to reduce radon levels that are above 10,000 pCi/L. This type of system bubbles air through the water so that the radon is released into the air and vented away from your home. The average cost for an aeration system is $3000-$5000.

For more information about radon in water, visit the program's website at www.ct.gov/dph/radon. Read the "Radon in Your Water" fact sheet or call the CT DPH Radon Program at (860) 509-7367.

List of Companies or Individuals that Offer Radon Mitigation Services

Name of Company:	City/Town	ST	Telephone	Individuals listed by NEHA/NRSB	Mitigation Services
A. Douglas Thibodeau LLC	Marlborough	CT	860-978-1513	A. Douglas Thibodeau	Air, Water
A & R Environmental LLC	Andover	CT	860-742-6767	Al Bonner, Joshua Clark, Jordan Clark	Air, Water
Air Quality Control	Lansing	MI	203-846-5906 800-420-3881	Jamey Gelina	Air
Air & Water Environmental	Granby	CT	860-413-9354	Jeff Sheridan	Air, Water
Air Sense	Pawcatuck	CT	860-599-5599	Douglas Hoagland	Air, Water
Alliance Water Treatment Company	Stamford	CT	800-838-0596	John Piatek	Air, Water
American Home Radon Services Inc.	Brookfield , New Milford	CT	800-224-4441 203-775-1887	Peter Piller, Jr.	Air, Water
Ash Environmental Services, LLC	Farmington	CT	860-655-7071	Robert Bertolette	Air, Water
Banner Water, LLC	Tolland	CT	860-872-8077	Sean Banning	Air, Water
Buzzano Contracting Radon Reduction Service	Newtown	CT	203-426-7196	Steve Nicolosi	Air, Water
Connecticut Basement Systems Radon, Inc.	Stratford	CT	800-319-8867	Kevin Bednarz, Matthew Bednarz, Thomas Brady, Ralph Colon, Michael Dellaquila, Ronald Holzbauer, Steve Senkowicz	Air, Water
Connecticut Radon	Groton	CT	860-448-6780	Don Martin	Air, Water
DMI / Accusystems	Old Saybrook	CT	860-399-5799	Don Morrison	Air, Water
Energy Tech LLC	Higganum	CT	860-345-3993	Joseph Brasky, Ken Smith	Air, Water
Foley's Pump Service, Inc	Danbury	CT	800-528-7018	Scott Usinger	Water
HouseWorks Home Services, Inc.	Milford	CT	203-301-9051	Stan Bajerski, Joe Monte	Air
HSW Radon Contractors, LLC	Woodbury	CT	866-787-2366 203-910-7877	Kenneth Aceashian	Air, Water
J. H. Barlow Pump Supply Co., Inc.	Wolcott	CT	203-879-9230	Jeremiah J. Weid	Air, Water
J. R Dockendorff Environmental	Terryville	CT	860-213-2982	Jay R. Dockendorff	Air, Water
Nationwide Radon	Dayville	CT	800-277-8055 860-942-9210	Paul Brisson	
NE Radon Doctors	Avon	CT	860-478-5234	Edward Lewis	Air, Water
Northeast Radon & Water Systems	Milford	CT	203-543-0447	Scott Monforte	Air, Water
NorthStar Radon Systems, LLC	Canton	CT	860-693-1573	Gerald Holland	Air, Water
Oasis Environmental Solutions	Redding Ridge	CT	203-942-9983	Jim Jasensky	Air, Water
Professional Water Systems, Inc.	Ridgefield	CT	800-432-6897	Andrew Hurlbut	Water
Radon Mitigation Across Connecticut, LLC.	Plainville	CT	860-883-9976	Edward P. Peshka	Air

Updated January 31, 2011

Radon Mitigation Corp of America	Elmsford	NY	914-345-8004	Kurt Dorfi	Air
Radon Solutions of Connecticut	Madison	CT	203-245-6744	Nick Sunday	Air, Water
Radon Systems of Connecticut	Cheshire	CT	203-272-3600	Bruce H. Corey	Air
Solvit, Inc.	Plainville	CT	860-747-2000	Paul Lamoureux	Air, Water
U.S Radon, Inc.	Monroe North Scituate	CT RI	866-723-6664 401-641-1549	Norman Johnson, Tanya Skorohod-Johnson, Lorrie Higgins	Air, Water

Updated January31, 2011

Radon Testing Report

Woodstock Middle School

147 Route 169

Woodstock, CT 06281

November 27, 2017 – November 30, 2017

Prepared By:
Michael M. Akana
EASTCONN
376 Hartford Turnpike
Hampton, CT. 06247

EASTCONN
Where Learning Comes to Life

December 7, 2012

Re: Radon Re-testing Woodstock Middle School

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Additionally, blank samples were submitted to measure the accuracy of the testing. The blank samples were deployed in 5% of the sample locations randomly placed throughout the school. These blanks were not exposed during the testing period but were shipped,

376 Hartford Turnpike, Hampton, CT 06247
(860) 455-0707 Fax: (860) 455-0691
www.eastconn.org

handled and analyzed in the same fashion as all test kits and identified by a numbering system know only to the technician. These samples were taken during the same testing period.

Re-Testing

No re-testing was required

Please Note:

According to the Connecticut General Statute (CGS) 10-220(d), testing is required every five (5) years on ten percent (10%) of the building after the initial testing with a different ten percent (10%) of the building tested thereafter.

The State of Connecticut Radon Testing Form provides a summary of the sampling activities and the results to the State Department of Health. This form has been submitted and it is required that a copy of this report be kept available in the Main Office for staff and parental review. It is also required that parents and staff be notified of the testing results in a brief summary as soon as possible but not later than one month after follow up test results are received if they were required. If elevated radon levels exist, the notification should include the school's plan to reduce the levels.

If you have any questions or concerns please do not hesitate to contact me. I can be reached at 860-455-1500 or by email at makana@eastconn.org.

Sincerely

Michael M. Akana
EASTCONN

STATE OF CONNECTICUT

DEPARTMENT OF PUBLIC HEALTH
RADON PROGRAM
SCHOOL RADON **RE-EVALUATION** REPORT FORM

May 2017

The following form must be submitted to the Connecticut Department of Public Health Radon Program within ten (10) business days of providing a final written report of radon measurement activities to school personnel. **Do not send test results or other documents.** Submit only one signed form by **mail, fax** OR **email (preferred)** to the Radon Program at:

CT Department of Public Health Radon Program
410 Capitol Avenue MS#12RAD
Hartford, CT 06134-0308
Fax: 860-509-7295
Email: DPH.RadonReports@ct.gov

Name of School: Woodstock Middle School

Address:
(Street, town, zip code) 147 Route 169
Woodstock, CT 06281

Measurement Company: EASTCONN

Please provide the following summary information:

Testing Dates:
(deployment & retrieval. Include confirmatory testing dates if necessary) 11/27/20117 - 11/30/2017

Total # of Rooms Tested: 4

Total # of Rooms Requiring Re-Testing: 0

Total # of Rooms Where Average Results were at or above 4.0 pCi/L: 0

Radon measurement activities were performed at the location above in accordance with United States Environmental Protection Agency protocols and the Connecticut Department of Public Health Radon Program's *School Radon Testing Guidance.*

Michael M. Akana NSRB 7ST0006 — Measurement Professional / NRPP/NRSB # — Signature — 11/30/17 Date

Brian Musumeci / Facilities Director — School Designee / Title — Signature — 11/30/17 Date

Phone: (860) 509-7299
Telephone Device for the Deaf (860) 509-7191
450 Capitol Avenue - MS # 51RAD
P.O. Box 340308 Hartford, CT 06134
An Equal Opportunity Employer

Woodstock Middle School
147 Route 169
Woodstock, CT 06281

Radon in Air Summary Sheet

Location	Initial Test Dates	Canister Number	Initial Results	Re-test Dates	Canister Number	Re-test Results
Room 001	12/11/07 – 12/13/07	630305	1.1 pCi/L	11/26/12 – 11/30/12	580140	0.7 pCi/L
Room 003	12/11/07 – 12/13/07	630307	1.0 pCi/L	11/26/12 – 11/30/12	580182	0.4 pCi/L
Band Room	12/11/07 – 12/13/07	630284	0.7 pCi/L	11/26/12 – 11/30/12	580159	0.7 pCi/L
Band Room	12/11/07 – 12/13/07	630286	1.0 pCi/L	11/26/12 – 11/30/12	580188	0.7 pCi/L
Super's Office	12/11/07 – 12/13/17	630280	1.1 pCi/L	11/26/17 – 11/30/17	580135	0.6 pCi/L

Radon in Air Summary Sheet
Follow up Testing
If Required

Location	Initial Test Dates	Canister Number	Initial Results	Follow Up Test Date	Canister Number	Follow Up Results	Average	Standard
None	None	None	None	None	None	None	None	None

Average of the initial test results and follow up test results (when required) shall not meet or exceed the action level of 4.0 pCi/L. Take action to reduce radon levels if they do.

Recommendations

All re-testing results were within acceptable limits. No further action is required.

Canisters witch appeared to be moved, tampered with or questionable conditions: None

EASTCONN and its personnel do not assume responsibility or liability for laboratory analysis results when test kits have been tampered with, relocated or covered during the testing period, or if opening of windows and/or doors (other than normal entry and exists from the facility) has occurred. Every precaution is taken to provide accurate measurements including Quality Control checks for precision and accuracy.

Any questionable conditions have been recorded and noted above

Duplicate Samples and Unexposed Blanks

Duplicate measurements provide a measure of precision. It shows how closely measured results are grouped together. **If both results are over 4.0 pCi/L and the Relative Percent Difference differs by 25% or more,** the quality of the data should be questioned. The rooms in question should be re-tested.

If both tests are below 4.0 pCi/L 67% Relative Percent Difference or less is acceptable.

If one test result is above 4.0 pCi/L and one is below 4.0 pCi/L and the higher result is less than twice the lower, the results are ok. If more than twice disregard results and re-test.

Blanks measure bias and may uncover problems associated with improper storage, handling or shipping. **Blanks should be within the lower limits of the device.**

Re-Test Location	Canister Number	Duplicate Canister Number	Results	Duplicate Result	Average	Relative Percent Difference	EPA/DPH Acceptable Standard
Room 003	580182	580181	0.4 pCi/L	0.4 pCi/L	0.4 pCi/L	0%	67% or Less
Room 001 Field Blank	580201	N/A	< 0.4 pCi/L	N/A	N/A	N/A	0% or Less

AccuStar
Professional Radon Laboratory Services Since 1984

Radon in Air

NELAC NY 11769
N[illegible]P 101193 AL
N[illegible]B ARL0017
CT License PH-0313

EPA Method #402-R-92-004
Charcoal Canister
NRPP Device Code 1017, 1159
NRSB Device Code 10302,10320

Laboratory Report for:

Eastconn
376 Hartford Turnpike
Hampton CT 06247

Property Tested:

Woodstock Middle School
147 Route 169
Woodstock CT 06281

Log Number	Device Number	Test Exposure Duration:		Area Tested	Result (pCi/L)
2198105	580140	11/27/2017 9:15 am	11/30/2017 10:10 am	Room 001	0.7
2198106	580201	11/27/2017 9:15 am	11/30/2017 10:10 am	Room 001 Field Blank	< 0.4
2198107	580182	11/27/2017 9:18 am	11/30/2017 10:11 am	Room 003	0.4
2198108	580181	11/27/2017 9:18 am	11/30/2017 10:11 am	Room 003 Duplicate	0.4
2198109	580159	11/27/2017 9:22 am	11/30/2017 10:14 am	Band Room	0.7
2198110	580188	11/27/2017 9:22 am	11/30/2017 10:14 am	Band Room	0.7
21[illegible]11	580135	11/27/2017 9:24 am	11/30/2017 10:15 am	Super Office	0.6

Comment: Eastconn was emailed a copy of this report. A copy of this report was emailed to makana@eastconn.org.

Test Performed By: Akana

Distributed by: Eastconn

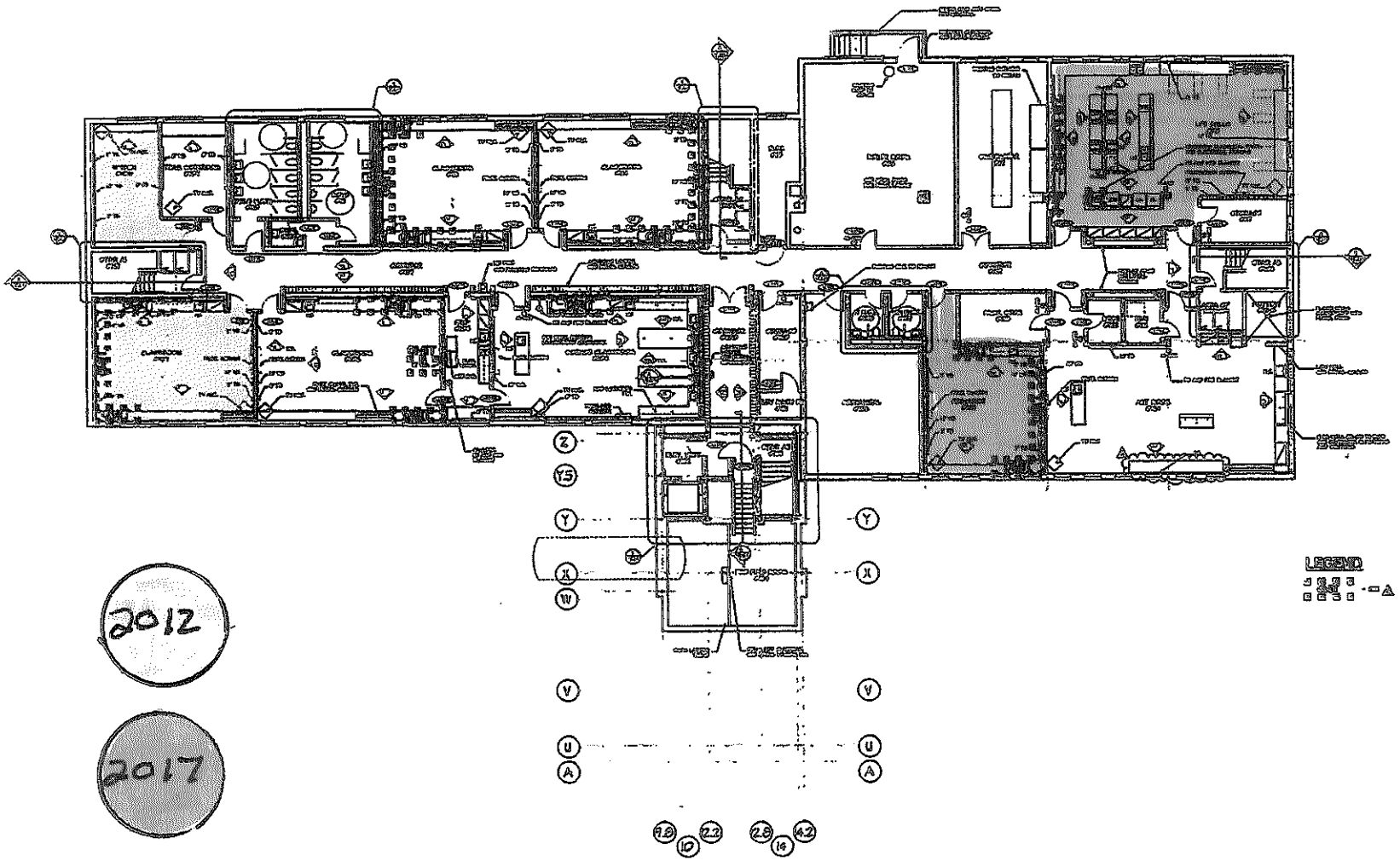
Date Received: 12/01/2017 Date Logged: 12/01/2017 Date Analyzed: 12/01/2017 Date Reported: 12/01/2017

Radon is a naturally occurring radioactive gas that may cause cancer and may be found in drinking water and indoor air. Radon escaping from water can be the source of elevated levels of radon in air. Some people who are exposed to radon in drinking water may be at increased risk of getting cancer over the course of their lifetime, especially lung cancer. The Connecticut Department of Public Health recommends to homeowners served by a private well to consider treatment if their average annual (two or more samples in one year) radon in water is 5000 pCi/L or greater. For more information call the Connecticut Radon Program at 860-509-7367 or visit their website at www.dph.state.ct.us.\BRS\Radon\radon-program.htm.

Report Reviewed By: ____________ Report Approved By: ____________
Shawn Price, Director of Laboratory Operations, AccuStar Labs

Disclaimer:
The uncertainty of this radon measurement is ~+/- 10 %. Factors contributing to uncertainty include statistical variations, daily and seasonal variations in radon concentrations, sample collection techniques and operation of the dwelling. Interference with test conditions may influence the test results.

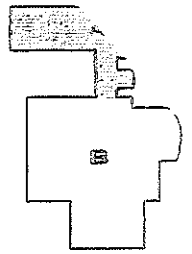
Th[illegible]port may only be transferred to a third party in its entirety. Analytical results relate to the samples AS RECEIVED BY THE LABORATORY. Results sh[illegible]on this report represent levels of radon gas measured between the dates shown in the room or area of the site identified above as "Property Tested". Incorrect information will affect results. The results may not be construed as either predictive or supportive of measurements conducted in any area of this structure at any other time. AccuStar Labs, its employees and agents are not responsible for the consequences of any action taken or not taken based upon the results reported or any verbal or written interpretation of the results.



2012

2017

LOWER LEVEL REFERENCE PLAN AREA A



KEY PLAN

REVISIONS

WOODSTOCK MIDDLE SCHOOL

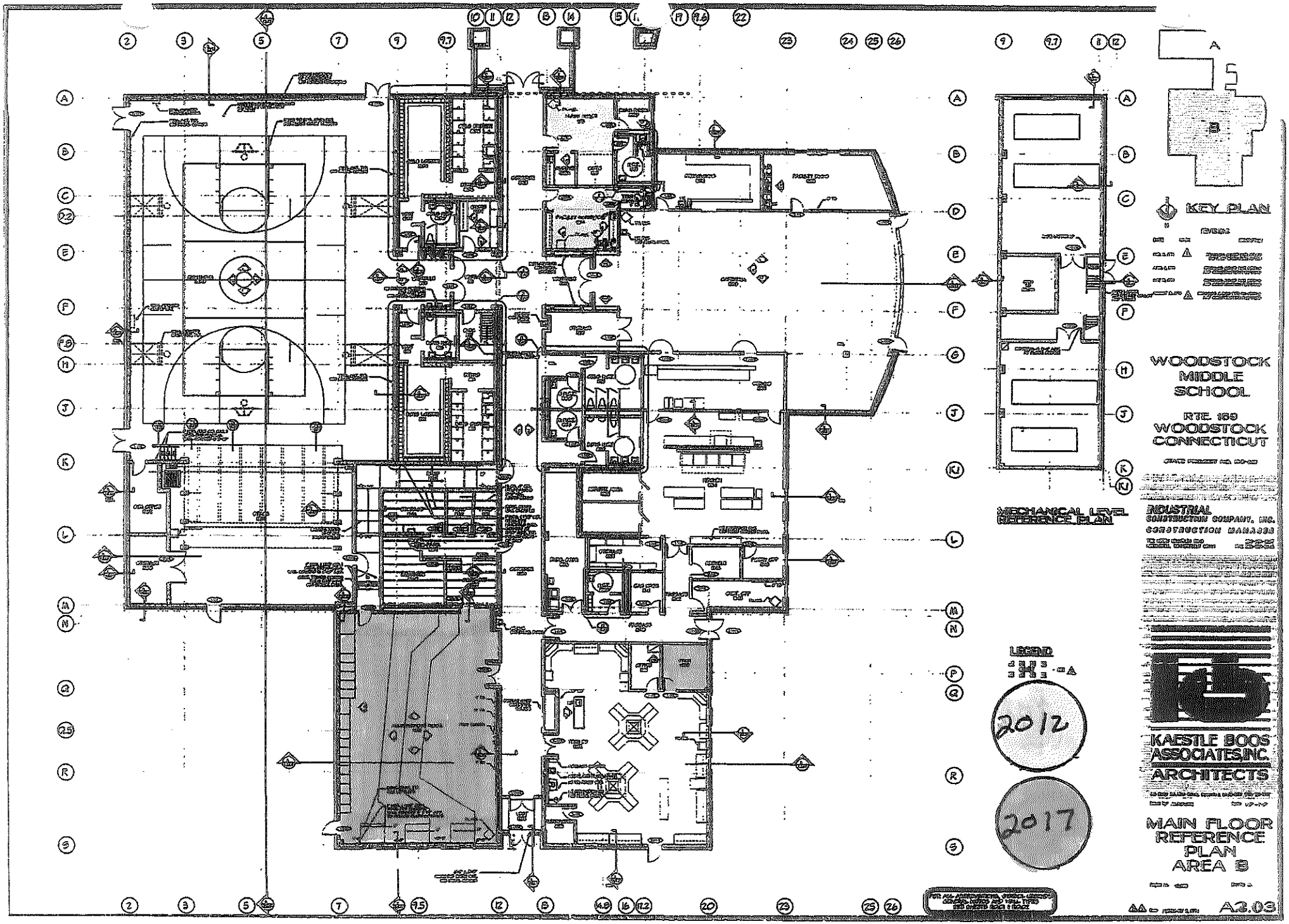
RTE. 169
WOODSTOCK
CONNECTICUT

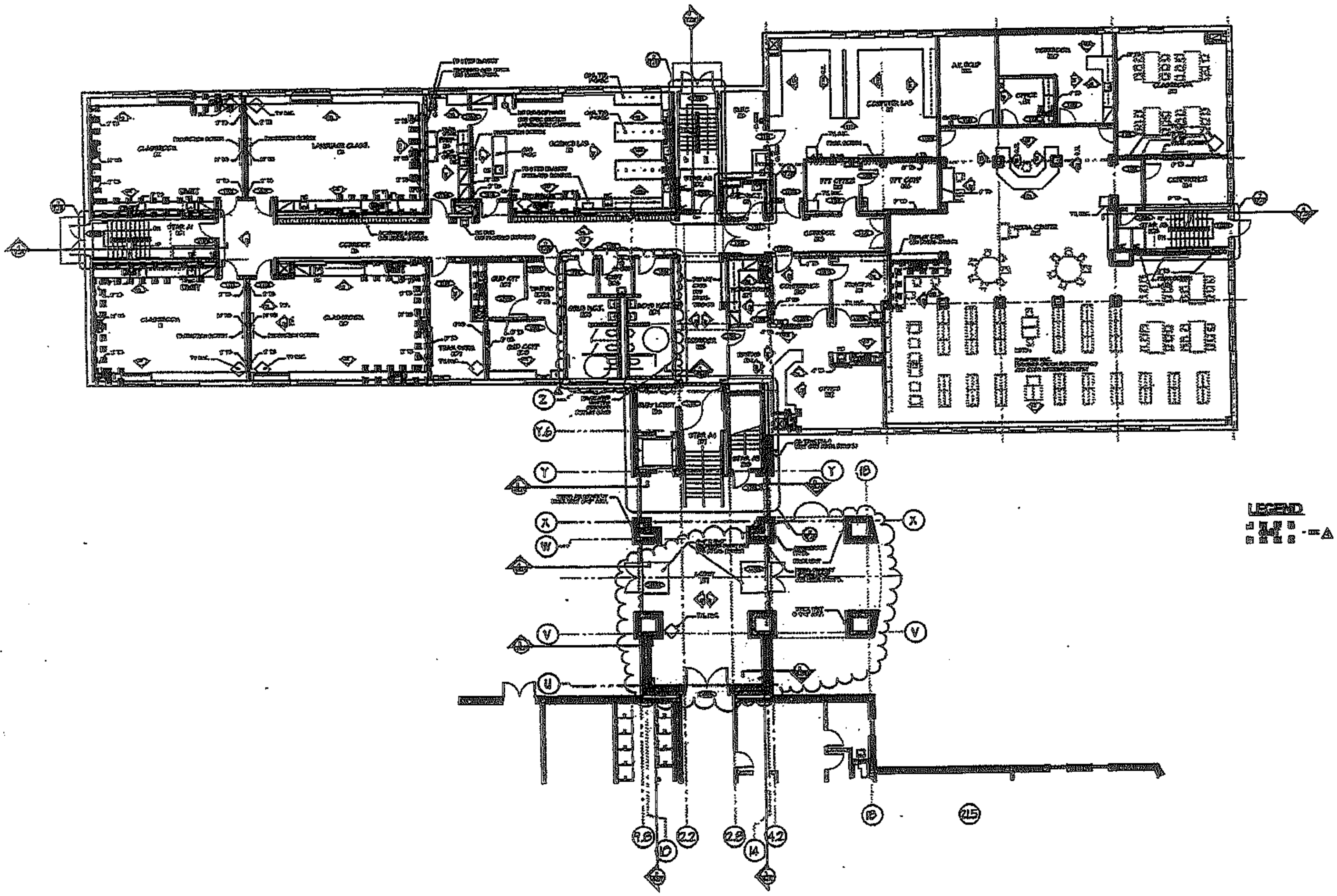
INDUSTRIAL CONSTRUCTION COMPANY, INC.
CONSTRUCTION MANAGER

KAESTLE BOOS ASSOCIATES, INC.
ARCHITECTS

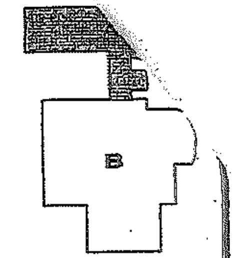
LOWER LEVEL REFERENCE PLAN AREA A

A2.01


MECHANICAL LEVEL REFERENCE PLAN
KEY PLAN
WOODSTOCK MIDDLE SCHOOL
RTE. 169
WOODSTOCK
CONNECTICUT
INDUSTRIAL CONSTRUCTION COMPANY, INC.
CONSTRUCTION MANAGERS
LEGEND
2012
2017
KAESTLE BOOS ASSOCIATES, INC.
ARCHITECTS
MAIN FLOOR REFERENCE PLAN AREA B
A2.03



FIRST FLOOR REFERENCE PLAN AREA A



KEY PLAN

REVISIONS

WOODSTOCK MIDDLE SCHOOL

RTE. 169
WOODSTOCK CONNECTICUT

INDUSTRIAL CONSTRUCTION COMPANY, INC.
CONSTRUCTION MANAGER

KAESTLE BOOS ASSOCIATES, INC.
ARCHITECTS

FIRST FLOOR REFERENCE PLAN AREA A

A2.02

The National Radon Safety Board

National Radon Safety Board

NRSB

Certified Radon Professionals

Certifies that

Michael M. Akana

has successfully met the established and published requirements for Certification by The National Radon Safety Board as a

RADON MEASUREMENT TECHNICIAN

NRSB 7ST0006

Certification Number

7/30/2018

Expiration Date

Michelle Kunkelich
Executive Secretary

Executive Director

This certificate is the property of The National Radon Safety Board and is not official without the raised seal.

State of Connecticut Department of Public Health
Regulatory Services Branch
Environmental Health Section
Radon Program

This Certificate is awarded to

Michael Akana

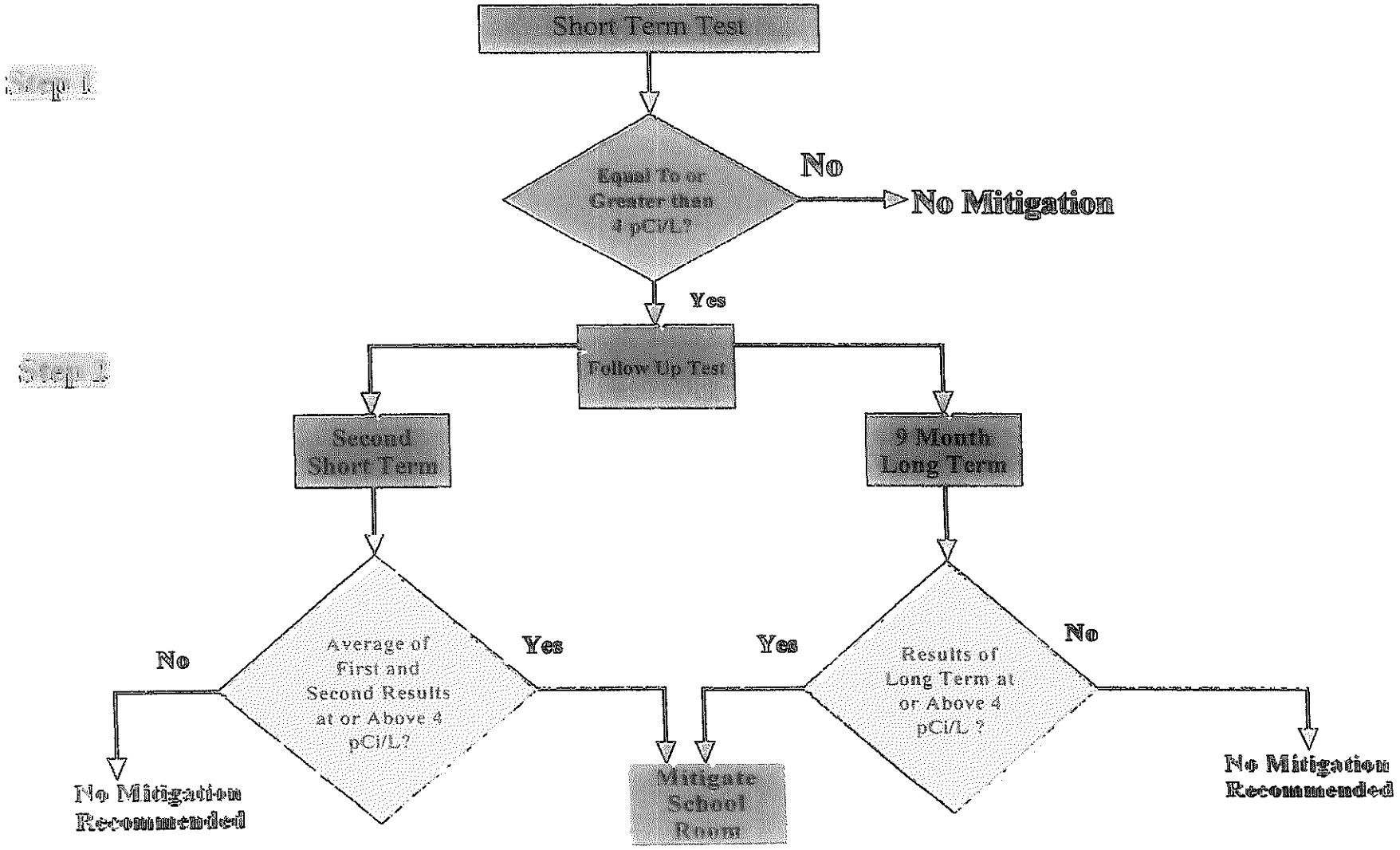
For the satisfactory completion of the training course

Radon Measurement in Connecticut Schools

Course Date: July 12, 2016

Allison Sullivan, Environmental Analyst 3

EPA Protocols for Schools
Measurement Strategy



EPA Map of Radon Zones

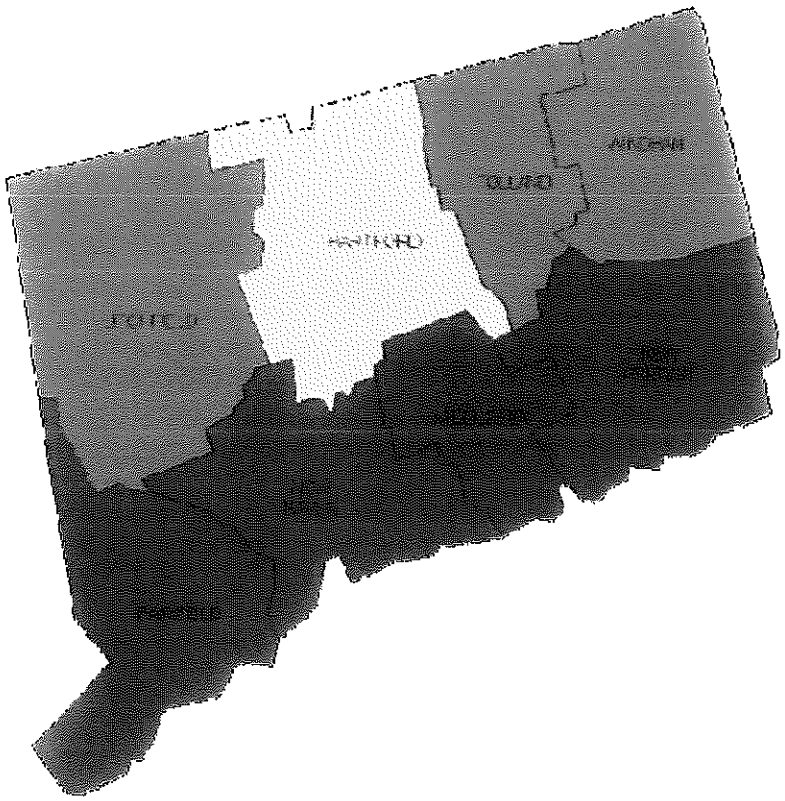
CONNECTICUT

The U.S. EPA and the U.S. Geological Survey have evaluated the radon potential in the U.S. and have developed this map to assist National, State, and local organizations to target their resources and to assist building code officials in deciding whether radon-resistant features are applicable in new construction. This map is not intended to be used to determine if a home in a given zone should be tested for radon. Homes with elevated levels of radon have been found in all three zones. All homes should be tested regardless of geographic location. The map assigns each of the 3,141 counties in the U.S. to one of three zones based on radon potential. Each zone designation reflects the average short-term radon measurement that can be expected to be measured in a building without the implementation of radon control methods. The radon zone designation of the highest priority is Zone 1.

Zone 1 Highest Potential (greater than 4 pCi/L)

Zone 2 Moderate Potential (from 2 to 4 pCi/L)

Zone 3 Low Potential (less than 2 pCi/L)



Radon Decision Grid

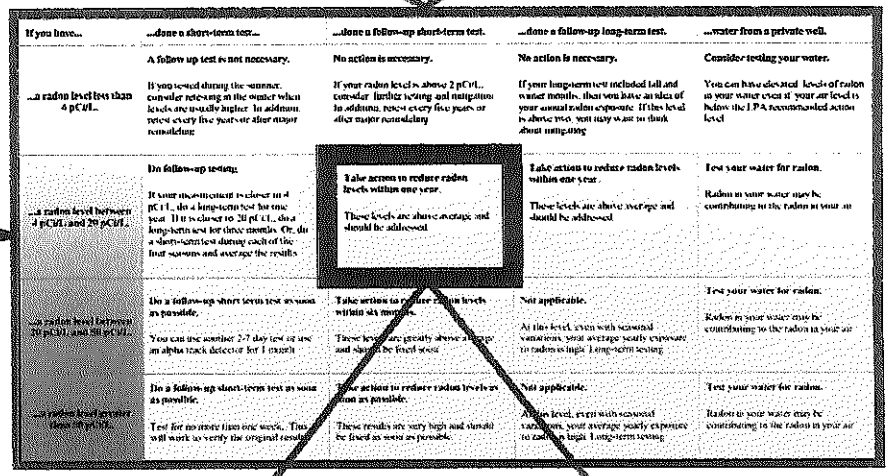
If you have...	...done a short-term test.	...done a follow-up short-term test.	...done a follow-up long-term test.	...water from a private well.
...a radon level less than 4 pCi/L.	**A follow up test is not necessary.** If you tested during the summer, consider retesting in the winter when levels are usually higher. In addition, retest every five years or after	**No action is necessary.** If your radon level is above 2 pCi/L, consider further testing and mitigation. In addition, retest every five years or after major remodeling.	**No action is necessary.** If your long-term test included fall and winter months, then you have an idea of your annual radon exposure. If this level is above two, you may want to think about mitigating.	**Consider testing your water.** You can have elevated levels of radon in your water even if your air level is below the EPA recommended action level.
...a radon level between 4 pCi/L and 20 pCi/L.	**Do follow-up testing.** If your measurement is closer to 4 pCi/L, do a long-term test for one year. If it is closer to 20 pCi/L, do a long-term test for three months. Or, do a short-term test during each of the four seasons and average the results.	**Take action to reduce radon levels within one year.** These levels are above average and should be addressed.	**Take action to reduce radon levels within one year.** These levels are above average and should be addressed.	**Test your water for radon.** Radon in your water may be contributing to the radon in your air.
...a radon level between 20 pCi/L and 50 pCi/L.	**Do a follow-up short term test as soon as possible.** You can use another 2-7 day test or use an alpha track detector for 1 month.	**Take action to reduce radon levels within six months.** These levels are greatly above average and should be fixed soon.	**Not applicable.** At this level, even with seasonal variations, your average yearly exposure to radon is high. Long-term testing would be pointless.	**Test your water for radon.** Radon in your water may be contributing to the radon in your air.
...a radon level greater than 50 pCi/L.	**Do a follow-up short-term test as soon as possible.** Test for no more than one week,. This will work to verify the original results.	**Take action to reduce radon levels as soon as possible.** These results are very high and should be fixed as soon as possible.	**Not applicable.** At this level, even with seasonal variations, your average yearly exposure to radon is high. Long-term testing would be pointless.	**Test your water for radon.** Radon in your water may be contributing to the radon in your air.

Using the Radon Decision Grid

The Radon Decision grid can help you to think about how to work with your radon test results. This grid represents the guidance that the Connecticut Department of Public Health (CT DPH) provides to Connecticut residents testing for radon.*

1. Select the option from the top row that applies to your situation.

2. Select the option from the left column that applies to your situation.



If you have...	...done a short-term test...	...done a follow-up short-term test.	...done a follow-up long-term test.	...water from a private well.
...a radon level less than 4 pCi/L.	A follow up test is not necessary. If you tested during the summer, consider retesting in the winter when levels are usually higher. In addition, retest every five years or after major remodeling	No action is necessary. If your radon level is above 2 pCi/L, consider further testing and mitigation. In addition, retest every five years or after major remodeling	No action is necessary. If your long-term test included fall and winter months, then you have an idea of your annual radon exposure. If this level is above 2 pCi/L, you may want to think about mitigating	Consider testing your water. You can have elevated levels of radon in your water even if your air level is below the EPA recommended action level
...a radon level between 4 pCi/L and 20 pCi/L.	Do follow-up testing. If your measurement is closer to 4 pCi/L, do a long-term test for one year. If it is closer to 20 pCi/L, do a long-term test for three months. Or, do a short-term test during each of the four seasons and average the results.	Take action to reduce radon levels within one year. These levels are above average and should be addressed.	Take action to reduce radon levels within one year. These levels are above average and should be addressed.	Test your water for radon. Radon in your water may be contributing to the radon in your air.
...a radon level between 20 pCi/L and 50 pCi/L.	Do a follow-up short-term test as soon as possible. You can use another 2-7 day test or use an alpha track detector for 1 month.	Take action to reduce radon levels within six months. These levels are greatly above average and should be fixed soon.	Not applicable. At this level, even with seasonal variations, your average yearly exposure to radon is high. Long-term testing	Test your water for radon. Radon in your water may be contributing to the radon in your air.
...a radon level greater than 50 pCi/L.	Do a follow-up short-term test as soon as possible. Test for no more than one week. This will work to verify the original result.	Take action to reduce radon levels as soon as possible. These results are very high and should be fixed as soon as possible.	Not applicable. At this level, even with seasonal variations, your average yearly exposure to radon is high. Long-term testing	Test your water for radon. Radon in your water may be contributing to the radon in your air.

3. Find the square where the row and column intersect. Read this advice.

Some Definitions

pCi/L– picocuries per liter, the unit of measurement for radon concentration.

4 pCi/L– the EPA recommended action level for radon in air. The EPA recommends that radon levels of 4 pCi/L or higher be reduced.

Mitigation– reduction of radon levels. This usually involves installation of a mitigation (radon reduction) system.

Short-term test– a radon test that lasts between 2 (two) and 90 (ninety) days. Short term tests usually take two to seven days.

Long-term test– a radon test that lasts from 90 (ninety) days to 1 (one) year.

*This Radon Decision Grid will probably not be helpful to people involved in a real estate transaction. If you are buying or selling a home, please see our document concerning radon and real estate transactions.

Connecticut Department of Public Health

Radon Program

List of Radon Mitigation Professionals

This following list contains the names of individuals or companies who have been trained according to the U.S Environmental Protection Agency (U.S. EPA) protocols for radon mitigation. These individuals or companies listed are registered with the State of Connecticut Department of Consumer Protection (DCP) as Home Improvement Contractors and certified by one of the two National Radon Proficiency Programs; (1) The National Environmental Health Association (NEHA) and (2) the National Radon Safety Board (NRSB).

The State of Connecticut, Department of Public Health (CT DPH) is required under Connecticut General Statute 19a-14b, to "maintain a list of companies or individuals that are included in current lists of National Radon Proficiency Programs." The CT DPH cannot be responsible for the knowledge or experience of these individuals or companies, nor for their fees or business practices. Inclusion on this list does not constitute an endorsement or a recommendation of the firms. People are encouraged to take normal consumer precautions before selecting a professional and be certain that the selected professional obtains all necessary building permits before proceeding with any work. You may visit the CT ELicensing website for more information regarding companies or individuals. Mitigation companies must utilize licensed electricians, plumbers, and other professionals for all applicable components of the work rendered.

Overview of Radon In Air Mitigation Techniques

If you have confirmed your radon in air level to be 4 picocuries per liter (pCi/L) or higher based on the average of two tests, U.S. EPA suggests that your home be fixed. There are several methods that a contractor can use to lower radon in air levels in your home. Some techniques prevent radon from entering your home while others reduce radon levels after it has entered. EPA generally recommends methods which prevent the entry of radon. Soil suction, for example, prevents radon from entering your home by drawing the radon from below the house and venting it through a pipe, or pipes, to the air above the house where it is quickly diluted. Refer to the U.S. EPA document, *Consumer's Guide to Radon Reduction*, for more information on radon mitigation systems, costs, and effectiveness. This document can be found on the CT DPH Radon Program website at www.ct.gov/dph/radon . You may contact the CT DPH Radon Program at (860) 509-7367 to request a copy of this document.

The cost of fixing a home generally ranges from $800 to $2500 with an average cost of $1200. Some radon reduction systems can reduce radon levels in your home by up to 99%.

Overview of Radon In Water Mitigation Techniques

If you have tested your private well and have confirmed your radon in water level to be 5,000 pCi/L or higher based on the average of two water samples, CT DPH recommends that your home be fixed in one of two ways.

- Granular Activated Carbon (GAC) System

  GAC systems are used to reduce radon levels that are between 5,000 and 10,000 pCi/L. This system uses special charcoal filters to remove radon from the water. You need to change the filter in this system according to the manufacturer's recommendations. The average cost for a GAC system is $1500-$3000.

- Aeration System

  Aeration systems are used to reduce radon levels that are above 10,000 pCi/L. This type of system bubbles air through the water so that the radon is released into the air and vented away from your home. The average cost for an aeration system is $3000-$5000.

For more information about radon in water, visit the program's website at www.ct.gov/dph/radon. Read the "Radon in Your Water" fact sheet or call the CT DPH Radon Program at (860) 509-7367.

List of Companies or Individuals that Offer Radon Mitigation Services

Name of Company:	City/Town	ST	Telephone	Individuals listed by NEHA/NRSB	Mitigation Services
A. Douglas Thibodeau LLC	Marlborough	CT	860-978-1513	A. Douglas Thibodeau	Air, Water
A & R Environmental LLC	Andover	CT	860-742-6767	Al Bonner, Joshua Clark, Jordan Clark	Air, Water
Air Quality Control	Lansing	MI	203-846-5906 800-420-3881	Jamey Gelina	Air
Air & Water Environmental	Granby	CT	860-413-9354	Jeff Sheridan	Air, Water
Air Sense	Pawcatuck	CT	860-599-5599	Douglas Hoagland	Air, Water
Alliance Water Treatment Company	Stamford	CT	800-838-0596	John Piatek	Air, Water
American Home Radon Services Inc.	Brookfield , New Milford	CT	800-224-4441 203-775-1887	Peter Piller, Jr.	Air, Water
Ash Environmental Services, LLC	Farmington	CT	860-655-7071	Robert Bertolette	Air, Water
Banner Water, LLC	Tolland	CT	860-872-8077	Sean Banning	Air, Water
Buzzano Contracting Radon Reduction Service	Newtown	CT	203-426-7196	Steve Nicolosi	Air, Water
Connecticut Basement Systems Radon, Inc.	Stratford	CT	800-319-8867	Kevin Bednarz, Matthew Bednarz, Thomas Brady, Ralph Colon, Michael Dellaquila, Ronald Holzbauer, Steve Senkowicz	Air, Water
Connecticut Radon	Groton	CT	860-448-6780	Don Martin	Air, Water
DMI / Accusystems	Old Saybrook	CT	860-399-5799	Don Morrison	Air, Water
Energy Tech LLC	Higganum	CT	860-345-3993	Joseph Brasky, Ken Smith	Air, Water
Foley's Pump Service, Inc	Danbury	CT	800-528-7018	Scott Usinger	Water
HouseWorks Home Services, Inc.	Milford	CT	203-301-9051	Stan Bajerski, Joe Monte	Air
HSW Radon Contractors, LLC	Woodbury	CT	866-787-2366 203-910-7877	Kenneth Aceashian	Air, Water
J. H. Barlow Pump Supply Co., Inc.	Wolcott	CT	203-879-9230	Jeremiah J. Weid	Air, Water
J. R Dockendorff Environmental	Terryville	CT	860-213-2982	Jay R. Dockendorff	Air, Water
Nationwide Radon	Dayville	CT	800-277-8055 860-942-9210	Paul Brisson	
NE Radon Doctors	Avon	CT	860-478-5234	Edward Lewis	Air, Water
Northeast Radon & Water Systems	Milford	CT	203-543-0447	Scott Monforte	Air, Water
NorthStar Radon Systems, LLC	Canton	CT	860-693-1573	Gerald Holland	Air, Water
Oasis Environmental Solutions	Redding Ridge	CT	203-942-9983	Jim Jasensky	Air, Water
Professional Water Systems, Inc.	Ridgefield	CT	800-432-6897	Andrew Hurlbut	Water
Radon Mitigation Across Connecticut, LLC.	Plainville	CT	860-883-9976	Edward P. Peshka	Air

Updated January 31, 2011

Radon Mitigation Corp of America	Elmsford	NY	914-345-8004	Kurt Dorfi	Air
Radon Solutions of Connecticut	Madison	CT	203-245-6744	Nick Sunday	Air, Water
Radon Systems of Connecticut	Cheshire	CT	203-272-3600	Bruce H. Corey	Air
Solvit, Inc.	Plainville	CT	860-747-2000	Paul Lamoureux	Air, Water
U.S Radon, Inc.	Monroe North Scituate	CT RI	866-723-6664 401-641-1549	Norman Johnson, Tanya Skorohod-Johnson, Lorrie Higgins	Air, Water

Updated January31, 2011