

March 14, 2025

Paul Clauson
Kenyon-Wanamingo Public Schools
400 6th Street
Kenyon, MN 55946



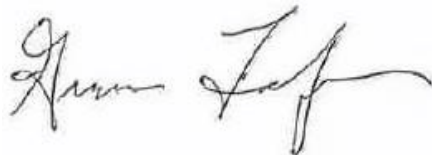
**RE: Kenyon-Wanamingo High/Middle School
2025 Short-Term Radon Testing Results
IEA Project #202510202**

Dear Mr. Clauson:

The Institute for Environmental Assessment, Inc. (IEA) placed one hundred twenty-four (124) Air Chek Pro Chek short-term radon test kits in one hundred six (106) locations in Kenyon-Wanamingo High/Middle School for the purpose of evaluating radon levels.

The number of kits placed includes those used for quality control purposes. See Appendix A for Quality Control information.

The radon test kits were placed by the following Minnesota Department of Health (MDH) licensed Radon Measurement Professional(s):

Measurement Professional	License Number	Signature
Grady LaJeunesse	RMEA-00578	

INTRODUCTION

Radon is a colorless, odorless, tasteless, radioactive gas that occurs naturally in soil, rocks, and underground water supplies and in the ambient air. According to the U.S. Environmental Protection Agency (EPA) and other scientific organizations, naturally occurring radon gas has been associated with an increased risk of developing lung cancer. The chances of developing lung cancer from radon exposure are dependent on several factors, including individual susceptibility and, perhaps more importantly, the dose and duration of exposure. Radon testing in schools is highly recommended by the Minnesota Department of Health (MDH) and EPA.

BROOKLYN PARK
9201 West Broadway, #600
Brooklyn Park, MN 55445
763-315-7900 / FAX 763-315-7920
800-233-9513

MANKATO
610 North Riverfront Drive
Mankato, MN 56001
507-345-8818 / FAX 507-345-5301
800-233-9513

ROCHESTER
210 Woodlake Drive SE
Rochester, MN 55904
507-281-6664 / FAX 507-281-6695
800-233-9513

BRAINERD
601 NW 5th Street, Ste. #4
Brainerd, MN 56401
218-454-0703 / FAX 218-454-0703
800-233-9513

MARSHALL
1420 East College Drive
Marshall, MN 56258
507-476-3599 / FAX 507-537-6985
800-233-9513

VIRGINIA
5525 Emerald Avenue
Mountain Iron, MN 55768
218-410-9521
800-233-9513

METHODOLOGY

IEA placed Air Chek Pro Chek short-term radon test kits in frequently occupied areas in the buildings listed above at Kenyon-Wanamingo Public Schools for the purpose of sampling for radon in accordance with the MDH's *Guidance for Radon Testing in Minnesota Schools* (2024) and ANSI/AARST MA-MFLB 'Protocol for Conducting Measurements of Radon and Radon Decay Products in Multifamily, Schools and Commercial and Multi-Use Buildings' (ANSI/AARST MA-MFLB 2023) using the extended testing protocol.

A total of one hundred twenty-four (124) radon test kits were placed from February 24, 2025, to February 27, 2025, for a total short-term sampling period of three (3) days. The radon test kits were analyzed by AirChek, Inc., MDH license #RL-00003, located at 1936 Butler Bridge Road, Mills River, NC 28759. The Analysis Methodologies are provided in Appendix A.

Air intakes and ventilation systems were operating in normal condition at the time of placement and retrieval. IEA was informed that the HVAC was on a normal operating schedule during the testing period.

IEA followed ANSI/AARST MA-MFLB 2023 for quality assurance measurements by including duplicate kits, control kits (blanks), and spiked kits.

Client communications and commitments were delivered to the client and are located in Appendix C:

- Client Commitments, Advisories and Authorizations
- Facilitating Staff Commitments

Occupant notices were sent to the client for distribution on February 13, 2025.

EVALUATION CRITERIA

The MDH and the EPA have established a recommended action level in intended to be occupied areas of 4.0 picocuries per liter (pCi/L) for an annual average. Testing was conducted during school days when the building is significantly occupied. The HVAC system was set on a normal occupied operating schedule. Testing was conducted during the heating season when the average outdoor temperature is less than 65°F, as recommended by the MDH, when the ventilation system was operating normally, and windows and doors were closed. Consequently, sampling under these "closed" conditions is when the radon risk is most likely to occur.

MDH recommends follow-up testing for sampling results that are above the action level. Please refer to the following table for MDH guidelines:

RESULTS (pCi/L)	RECOMMENDED ACTION
LESS THAN 4	Re-test after changes to foundation or HVAC and every 5 years
GREATER THAN OR EQUAL TO 4	Conduct CRM short-term testing during winter months
LESS THAN 4 (<u>DURING OCCUPANCY</u>) AFTER CRM TESTING	Repeat CRM testing if not conducted during winter or if conducted during abnormal ventilation. Otherwise consider re-testing after changes to foundation or HVAC and every 5 years
GREATER THAN OR EQUAL TO 4 (<u>DURING OCCUPANCY</u>) AFTER CRM TESTING	Reduce radon in rooms to less than 4 through radon mitigation. Conduct CRM testing to verify radon reduction.

CRM: Continuous Radon Monitor

RESULTS & DISCUSSION

The laboratory report(s) and map(s) of each building with sampling locations are provided in Appendix B. The following includes summary results for each building.

Kenyon-Wanamingo High/Middle School

400 6th St, Kenyon, MN 55946

A total of one hundred twenty-four (124) test kits were placed in one hundred six (106) locations at Kenyon-Wanamingo High/Middle School. A kit in room B107 was damaged when the test kits were collected. The number of damaged test kits did not exceed allowance in the ANSI/AARST MA-MFLB 2023 standard.

The results indicated that radon levels for the locations tested in Kenyon-Wanamingo High/Middle School were below the action level of 4 pCi/L. See Table 1 below for a summary of the results:

TABLE 1: KENYON-WANAMINGO HIGH/MIDDLE SCHOOL - RANGE OF RESULTS				
	0.0 – 1.9 pCi/L	2.0 – 2.9 pCi/L	3.0 – 3.9 pCi/L	≥ 4 pCi/L
Number of Locations	102	2	1	0 ¹

¹ All below action level

pCi/L: picocuries per liter

CONCLUSIONS AND RECOMMENDATIONS

The radon levels in the sampled locations were below the EPA action level of 4 pCi/L.

The EPA has established recommended guidelines for permissible radon concentrations in schools. The following are general recommendations for frequently occupied areas of schools:

- The building should be retested at least every 5 years and in conjunction with any sale of the building. The building should be retested at least every 2 years if a mitigation system is present.
- Ground contact rooms that were not tested because they were not occupied, should be tested if they become occupied in the future.

In addition, retesting should be conducted when any of the following circumstances occur:

- A new addition is constructed, or a significant renovation occurs
- Heating or cooling systems are significantly altered, resulting in changes to air pressures or distribution
- Ventilation is significantly altered by extensive weatherization, changes to mechanical systems, or comparable procedures
- Significant openings to soil occur due to:
 - Ground water or slab surface water control systems (e.g., sumps, perimeter drain tile, shower/tub retrofits, etc.)
 - Natural settlement causing major cracks to develop
 - Earthquakes, construction blasting, or formation of sink holes nearby
 - A mitigation system is altered, modified, or repaired
- Rooms should be retested during the winter heating season (i.e., under “closed” conditions) which is typically “worst case” conditions.

Per Minnesota Statutes, section 123B.571, school districts are required to report radon test results at a school board meeting and report results to the MDH. IEA is able to assist with presenting results to the school board, and the MDH reporting. The MDH 'School Radon Testing Form' is located in Appendix E.

For more information regarding radon, see the EPA's A Citizen's Guide to Radon at <http://www.epa.gov/radon>. MDH can be contacted at health.indoorair@state.mn.us or 651-201-4601.

GENERAL COMMENTS

The analysis and opinions expressed in this report are based upon data obtained from radon sampling district-wide and are representative of the locations and time period sampled. This report does not reflect variations in conditions that may occur across the site, property, or facility. Actual conditions may vary and may not become evident without further assessment. The chain of custody for test devices is available upon request. It is the client's responsibility to identify and comply with local statutes regarding obligations that may exist for disclosing test results to occupants and affected third parties.

The report is prepared for the exclusive use of our client for specific application to the project discussed and has been prepared in accordance with generally accepted environmental, health and safety practices. Other than as provided in the preceding sentence and in our Proposal #12639 dated January 30, 2025, regarding radon sampling services at the district locations, including the General Conditions attached thereto, no warranties are extended or made.

Should you require additional radon testing or have any questions regarding radon or any other environmental, health, or safety-related concerns, please do not hesitate to contact our office.

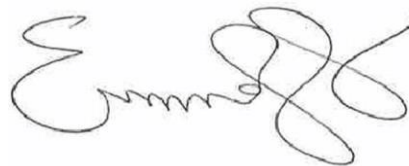
Sincerely,

IEA, Inc.



Chris Berry
Sr. Environmental Technician

Reviewed by:



Emma Squires-Sperling
Laboratory Director

Enc.

Appendix A

*Analysis Methodology and
Quality Control Measurements*

Analysis Methodology

IEA placed Air Chek, Inc. Pro Chek activated charcoal radon test kits designed specifically for the detection of gamma emissions caused by the decay of Radon-222 and its daughter products. The kit is made of a padded envelope which contains activated charcoal. Upon pick-up, the kit is sealed with vinyl tape after 72 to 96 hours of indoor exposure. Individual kits are uniquely identified with a number and corresponding bar code.

Upon receipt at the analytical laboratory, the kits are logged in using the unique numbers assigned to each kit. The kits are placed on a gamma detector to count the gamma emissions from the decay of radon adsorbed by the charcoal. A calibration factor determined in part by the exposure time and decay time is used to calculate the radon concentration. A correction factor is also applied for weight gain from any moisture absorbed by the charcoal during the sampling period.

Any unusual conditions are noted on the processing form and shown on the exposure report.

MDH and ANSI/AARST MA-MFLB 2023 Quality Control Measurements

IEA followed ANSI/AARST MA-MFLB 2023 and MDH recommendations for quality assurance measurements to ensure the accuracy of test results. Quality assurance measurements include side-by-side test kits (duplicates) and unexposed control test kits (blanks).

Duplicates are pairs of test kits placed 4-8 inches apart for the same test period. Duplicates are stored, placed, retrieved, and shipped to the laboratory for analysis in the same manner as the other test kits so that the laboratory cannot distinguish them. Since duplicates are placed side-by-side, the measured values for radon should be the same. In an environment with a radon concentration between 2 and 4 pCi/L, the average of all duplicates' relative percent difference (RPD) should not exceed 25%. In an environment with a radon concentration greater than or equal to 4 pCi/L, the average of all duplicates' relative percent difference (RPD) should not exceed 14%. If they do, an investigation to identify the cause may be warranted and could include repeating the measurements. Duplicate averages are listed in Table 1 below.

Table 1: Duplicate Device Measurements and Averages					
Location	Test 1 (pCi/L)	Test 2 (pCi/L)	Average (pCi/L)	Difference	RPD (%)
103	1.7	1.6	1.7	0.1	6
125	< 0.3	0.7	< 0.5	0.4	80
A113	< 0.3	< 0.3	< 0.3	0.0	0
A128	0.7	< 0.3	< 0.5	0.4	80
A135	< 0.3	< 0.3	< 0.3	0.0	0
B105	0.9	0.5	0.7	0.4	57
C111	< 0.3	< 0.3	< 0.3	0.0	0
D116	< 0.3	< 0.3	< 0.3	0.0	0
D132	0.6	0.7	0.7	0.1	15
E109	< 0.3	< 0.3	< 0.3	0.0	0
F108	0.7	< 0.3	< 0.5	0.4	80
F118	1.9	1.6	1.8	0.3	17

Duplicates averaging < 2.0 pCi/L reach the warning limit when there is a difference between the two results of more than 1pCi/L, but there is no control limit.

Blanks can be used to determine whether the manufacturing, shipping, storage, or processing of the detector has "contaminated" your measurements. Blanks are opened and immediately re-sealed to keep room air from infiltrating the test kit. Blanks are labeled and shipped in the same manner as the exposed test kits so that the laboratory cannot distinguish them. Since blanks are not exposed to radon, their measurement value should be below the lower limit of detection; lower limit of detection for Airchek is < 0.3pCi/L. Field blanks are listed in the laboratory report as FB<Room/Location Name>-1, FB<Room/Location Name>-2, etc. Office blanks are listed in the laboratory report as OStorage-1, OStorage-2, etc. Lab-Transit Blanks are listed in Table 2 below.

Table 2: Blanks

Start Date	End Date	Start Time	End Time	Device ID	Type of Blank	Description	Radon Concentration (pCi/L)
2/24/2025	2/27/2025	8:00am	8:00am	11806272	Field	FBB163-1	< 0.3
2/24/2025	2/27/2025	8:00am	8:00am	11806298	Field	FBB163-2	< 0.3
2/24/2025	2/27/2025	8:00am	8:00am	11806281	Field	FBB163-3	< 0.3
2/24/2025	2/27/2025	1:00pm	1:00pm	11806033	Office	OSTORAGE-1	< 0.3
2/24/2025	2/27/2025	1:00pm	1:00pm	11806025	Office	OSTORAGE-2	< 0.3
2/24/2025	2/27/2025	1:00pm	1:00pm	11806002	Office	OSTORAGE-3	< 0.3
Lab-Transit							
1/31/2025	2/3/2025	7:00am	7:00am	11802699	Lab-Transit	LTRO-1	< 0.3
1/31/2025	2/3/2025	7:00am	7:00am	11802695	Lab-Transit	LTRO-2	< 0.3
1/31/2025	2/3/2025	7:00am	7:00am	11802696	Lab-Transit	LTRO-3	< 0.3
2/5/2025	2/7/2025	8:00am	8:00am	11801507	Lab-Transit	LTRO-1	< 0.3
2/5/2025	2/7/2025	8:00am	8:00am	11801501	Lab-Transit	LTRO-2	< 0.3
2/5/2025	2/7/2025	8:00am	8:00am	11801502	Lab-Transit	LTRO-3	< 0.3
2/5/2025	2/7/2025	8:00am	8:00am	11801508	Lab-Transit	LTRO-4	< 0.3
1/29/2025	1/31/2025	8:00am	8:00am	11802241	Lab-Transit	LTRO-01	< 0.3
1/29/2025	1/31/2025	8:00am	8:00am	11802243	Lab-Transit	LTRO-02	< 0.3
1/29/2025	1/31/2025	8:00am	8:00am	11802244	Lab-Transit	LTRO-03	< 0.3
1/28/2025	1/30/2025	8:00am	8:00am	11802720	Lab-Transit	LTRO-1	< 0.3
1/28/2025	1/30/2025	8:00am	8:00am	11802705	Lab-Transit	LTRO-2	< 0.3
1/28/2025	1/30/2025	8:00am	8:00am	11802715	Lab-Transit	LTRO-3	< 0.3
1/31/2025	2/3/2025	7:00 am	7:00 am	11802737	Lab-Transit	LTRO-1	< 0.3
1/31/2025	2/3/2025	7:00 am	7:00 am	11801860	Lab-Transit	LTRO-2	< 0.3
1/31/2025	2/3/2025	7:00 am	7:00 am	11802712	Lab-Transit	LTRO-3	< 0.3
1/29/2025	1/31/2025	8:00am	8:00am	11802245	Lab-Transit	LTRO-01	< 0.3
1/29/2025	1/31/2025	8:00am	8:00am	11802246	Lab-Transit	LTRO-02	< 0.3
1/29/2025	1/31/2025	8:00am	8:00am	11802248	Lab-Transit	LTRO-03	< 0.3
2/2/2025	2/4/2025	8:00am	8:00am	11806615	Lab-Transit	LTRO-1	< 0.3
2/2/2025	2/4/2025	8:00am	8:00am	11806616	Lab-Transit	LTRO-2	< 0.3
2/2/2025	2/4/2025	8:00am	8:00am	11806613	Lab-Transit	LTRO-3	< 0.3
2/5/2025	2/7/2025	8:00am	8:00am	11802273	Lab-Transit	LTRO-1	< 0.3
2/5/2025	2/7/2025	8:00am	8:00am	11802272	Lab-Transit	LTRO-2	< 0.3

Spikes are test kits that have been exposed in a chamber to a known concentration of radon. Using spiked measurements can help evaluate the accuracy of a laboratory analysis and/or how accurately test kits supplied by a laboratory measure radon. Spiked test kits are labeled and shipped in the same manner as the exposed test kits so that the laboratory cannot distinguish them. Spiked results completed for our laboratory are included in the following pages. Spiked test kits are listed in Table 3 below.

Table 3: Spiked Detectors							
Start Date	End Date	Start Time	End Time	Device ID	Measured Value (pCi/L)	Reference Value (pCi/L)	Relative Percent Error (RPE)
1/31/2025	2/3/2025	09:15AM	09:15AM	11598893	30.7	25.6	19.9
1/31/2025	2/3/2025	09:15AM	09:15AM	11598894	26.5	25.6	3.5
1/31/2025	2/3/2025	09:15AM	09:15AM	11598895	27.4	25.6	7.0
1/31/2025	2/3/2025	09:15AM	09:15AM	11598896	27.6	25.6	7.8
1/31/2025	2/3/2025	09:15AM	09:15AM	11598897	26	25.6	1.6
1/31/2025	2/3/2025	09:15AM	09:15AM	11598899	27.3	25.6	6.6

Any spike result outside the RPE range of $\pm 30\%$ has exceeded the control limit.

Appendix B

Laboratory Reports and Maps

Radon test result report for:**HIGH SCHOOL**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11805998	122-1	2025-02-24 @ 12:00 pm	2025-02-27 @ 10:00 am	0.6 ± 0.3	2025-03-03
11804094	122-2	2025-02-24 @ 12:00 pm	2025-02-27 @ 10:00 am	0.9 ± 0.4	2025-03-03
11805994	122-3	2025-02-24 @ 12:00 pm	2025-02-27 @ 10:00 am	0.8 ± 0.3	2025-03-03
11804089	122-4	2025-02-24 @ 12:00 pm	2025-02-27 @ 10:00 am	0.9 ± 0.4	2025-03-03
11804100	124-1	2025-02-24 @ 12:00 pm	2025-02-27 @ 10:00 am	0.6 ± 0.3	2025-03-03
11805991	124-2	2025-02-24 @ 12:00 pm	2025-02-27 @ 10:00 am	< 0.3	2025-03-03
11804095	A103-1	2025-02-24 @ 12:00 pm	2025-02-27 @ 10:00 am	< 0.3	2025-03-03
11804098	A103-2	2025-02-24 @ 12:00 pm	2025-02-27 @ 10:00 am	< 0.3	2025-03-03
11804097	A103-3	2025-02-24 @ 12:00 pm	2025-02-27 @ 10:00 am	< 0.3	2025-03-03
11804096	A103-4	2025-02-24 @ 12:00 pm	2025-02-27 @ 10:00 am	< 0.3	2025-03-03
11806279	A107	2025-02-24 @ 8:00 am	2025-02-27 @ 8:00 am	0.8 ± 0.3	2025-03-03
11805907	A108	2025-02-24 @ 8:00 am	2025-02-27 @ 8:00 am	< 0.3	2025-03-03
11805902	A110	2025-02-24 @ 8:00 am	2025-02-27 @ 8:00 am	< 0.3	2025-03-03
11805901	A111	2025-02-24 @ 8:00 am	2025-02-27 @ 8:00 am	0.5 ± 0.3	2025-03-03
11806291	A112	2025-02-24 @ 8:00 am	2025-02-27 @ 8:00 am	0.6 ± 0.3	2025-03-03
11806292	A114	2025-02-24 @ 8:00 am	2025-02-27 @ 8:00 am	0.6 ± 0.3	2025-03-03
11806271	A118	2025-02-24 @ 8:00 am	2025-02-27 @ 8:00 am	< 0.3	2025-03-03
11806288	A119	2025-02-24 @ 8:00 am	2025-02-27 @ 8:00 am	0.5 ± 0.3	2025-03-03
11805973	A120	2025-02-24 @ 11:00 am	2025-02-27 @ 9:00 am	0.9 ± 0.3	2025-03-03
11805974	A123	2025-02-24 @ 11:00 am	2025-02-27 @ 10:00 am	0.6 ± 0.3	2025-03-03
11805979	A127	2025-02-24 @ 11:00 am	2025-02-27 @ 10:00 am	< 0.3	2025-03-03
11805969	A129	2025-02-24 @ 11:00 am	2025-02-27 @ 10:00 am	0.6 ± 0.3	2025-03-03
11805977	A131	2025-02-24 @ 11:00 am	2025-02-27 @ 11:00 am	0.5 ± 0.3	2025-03-03
11805980	A132	2025-02-24 @ 11:00 am	2025-02-27 @ 10:00 am	0.7 ± 0.3	2025-03-03
11805978	A133	2025-02-24 @ 11:00 am	2025-02-27 @ 10:00 am	< 0.3	2025-03-03
11805983	A134	2025-02-24 @ 11:00 am	2025-02-27 @ 10:00 am	0.7 ± 0.3	2025-03-03
11805970	A136	2025-02-24 @ 11:00 am	2025-02-27 @ 10:00 am	0.8 ± 0.3	2025-03-03
11805993	B103	2025-02-24 @ 12:00 pm	2025-02-27 @ 10:00 am	< 0.3	2025-03-03
11806000	B104	2025-02-24 @ 12:00 pm	2025-02-27 @ 10:00 am	< 0.3	2025-03-03
11805986	B106	2025-02-24 @ 12:00 pm	2025-02-27 @ 10:00 am	0.6 ± 0.3	2025-03-03
11805985	B107	2025-02-24 @ 12:00 pm	2025-02-27 @ 10:00 am	???? IF1	2025-03-03
11805992	B110	2025-02-24 @ 12:00 pm	2025-02-27 @ 10:00 am	< 0.3	2025-03-03
11806273	B162	2025-02-24 @ 8:00 am	2025-02-27 @ 8:00 am	1.1 ± 0.4	2025-03-03
11806282	B163	2025-02-24 @ 8:00 am	2025-02-27 @ 8:00 am	0.7 ± 0.3	2025-03-03
11805956	C104	2025-02-24 @ 10:00 am	2025-02-27 @ 10:00 am	0.8 ± 0.3	2025-03-03
11805963	C105	2025-02-24 @ 11:00 am	2025-02-27 @ 9:00 am	1.0 ± 0.4	2025-03-03
11805962	C106	2025-02-24 @ 11:00 am	2025-02-27 @ 10:00 am	0.7 ± 0.3	2025-03-03

Radon test result report for:**HIGH SCHOOL**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11805961	C108	2025-02-24 @ 11:00 am	2025-02-27 @ 10:00 am	0.6 ± 0.3	2025-03-03
11805964	C113	2025-02-24 @ 11:00 am	2025-02-27 @ 9:00 am	1.0 ± 0.4	2025-03-03
11805960	C114	2025-02-24 @ 11:00 am	2025-02-27 @ 9:00 am	0.7 ± 0.3	2025-03-03
11805965	C115	2025-02-24 @ 11:00 am	2025-02-27 @ 10:00 am	< 0.3	2025-03-03
11805966	C118	2025-02-24 @ 11:00 am	2025-02-27 @ 10:00 am	< 0.3	2025-03-03
11805951	C122	2025-02-24 @ 10:00 am	2025-02-27 @ 10:00 am	< 0.3	2025-03-03
11805988	C124-1	2025-02-24 @ 12:00 pm	2025-02-27 @ 10:00 am	1.5 ± 0.4	2025-03-03
11805989	C124-2	2025-02-24 @ 12:00 pm	2025-02-27 @ 10:00 am	1.5 ± 0.3	2025-03-03
11805981	COMMONS-1	2025-02-24 @ 11:00 am	2025-02-27 @ 10:00 am	0.9 ± 0.4	2025-03-03
11805982	COMMONS-2	2025-02-24 @ 11:00 am	2025-02-27 @ 10:00 am	0.6 ± 0.4	2025-03-03
11805987	COMMONS-3	2025-02-24 @ 11:00 am	2025-02-27 @ 10:00 am	< 0.3	2025-03-03
11805959	D103	2025-02-24 @ 11:00 am	2025-02-27 @ 9:00 am	1.0 ± 0.3	2025-03-03
11805955	D106	2025-02-24 @ 10:00 am	2025-02-27 @ 9:00 am	0.7 ± 0.3	2025-03-03
11805954	D107	2025-02-24 @ 10:00 am	2025-02-27 @ 9:00 am	0.6 ± 0.3	2025-03-03
11805942	D108	2025-02-24 @ 10:00 am	2025-02-27 @ 9:00 am	0.6 ± 0.3	2025-03-03
11805947	D109	2025-02-24 @ 10:00 am	2025-02-27 @ 9:00 am	0.9 ± 0.4	2025-03-03
11805948	D115	2025-02-24 @ 10:00 am	2025-02-27 @ 9:00 am	0.8 ± 0.3	2025-03-03
11805949	D117	2025-02-24 @ 10:00 am	2025-02-27 @ 9:00 am	< 0.3	2025-03-03
11805950	D118	2025-02-24 @ 10:00 am	2025-02-27 @ 9:00 am	< 0.3	2025-03-03
11805967	D122	2025-02-24 @ 11:00 am	2025-02-27 @ 10:00 am	0.7 ± 0.3	2025-03-03
11805968	D123	2025-02-24 @ 11:00 am	2025-02-27 @ 10:00 am	< 0.3	2025-03-03
11805945	D130	2025-02-24 @ 10:00 am	2025-02-27 @ 9:00 am	1.0 ± 0.3	2025-03-03
11805944	D131	2025-02-24 @ 10:00 am	2025-02-27 @ 9:00 am	1.1 ± 0.3	2025-03-03
11805934	D133	2025-02-24 @ 10:00 am	2025-02-27 @ 9:00 am	0.9 ± 0.3	2025-03-03
11805939	D139	2025-02-24 @ 10:00 am	2025-02-27 @ 9:00 am	1.4 ± 0.4	2025-03-03
11805933	D140	2025-02-24 @ 10:00 am	2025-02-27 @ 9:00 am	1.2 ± 0.4	2025-03-03
11805941	D141	2025-02-24 @ 10:00 am	2025-02-27 @ 9:00 am	0.9 ± 0.4	2025-03-03
11805943	D142	2025-02-24 @ 10:00 am	2025-02-27 @ 9:00 am	0.7 ± 0.3	2025-03-03
11805946	D145	2025-02-24 @ 10:00 am	2025-02-27 @ 9:00 am	0.6 ± 0.4	2025-03-03
11804099	DUP103-1	2025-02-24 @ 12:00 pm	2025-02-27 @ 10:00 am	1.7 ± 0.4	2025-03-03
11804090	DUP103-2	2025-02-24 @ 12:00 pm	2025-02-27 @ 10:00 am	1.6 ± 0.4	2025-03-03
11805996	DUP105-2	2025-02-24 @ 12:00 pm	2025-02-27 @ 10:00 am	0.5 ± 0.3	2025-03-03
11805995	DUP125-1	2025-02-24 @ 12:00 pm	2025-02-27 @ 10:00 am	< 0.3	2025-03-03
11805997	DUP125-2	2025-02-24 @ 12:00 pm	2025-02-27 @ 10:00 am	0.7 ± 0.3	2025-03-03
11806276	DUPA113-1	2025-02-24 @ 8:00 am	2025-02-27 @ 8:00 am	< 0.3	2025-03-03
11806277	DUPA113-2	2025-02-24 @ 8:00 am	2025-02-27 @ 8:00 am	< 0.3	2025-03-03
11805972	DUPA128-1	2025-02-24 @ 11:00 am	2025-02-27 @ 10:00 am	0.7 ± 0.3	2025-03-03

Radon test result report for:**HIGH SCHOOL**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11805971	DUPA128-2	2025-02-24 @ 11:00 am	2025-02-27 @ 10:00 am	< 0.3	2025-03-03
11805975	DUPA135-1	2025-02-24 @ 11:00 am	2025-02-27 @ 10:00 am	< 0.3	2025-03-03
11805976	DUPA135-2	2025-02-24 @ 11:00 am	2025-02-27 @ 10:00 am	< 0.3	2025-03-03
11805999	DUPB105-1	2025-02-24 @ 12:00 pm	2025-02-27 @ 10:00 am	0.9 ± 0.3	2025-03-03
11805958	DUPC111-1	2025-02-24 @ 11:00 am	2025-02-27 @ 9:00 am	< 0.3	2025-03-03
11805957	DUPC111-2	2025-02-24 @ 11:00 am	2025-02-27 @ 9:00 am	< 0.3	2025-03-03
11805953	DUPD116	2025-02-24 @ 10:00 am	2025-02-27 @ 9:00 am	< 0.3	2025-03-03
11805952	DUPD116-2	2025-02-24 @ 10:00 am	2025-02-27 @ 9:00 am	< 0.3	2025-03-03
11805940	DUPD132-1	2025-02-24 @ 10:00 am	2025-02-27 @ 9:00 am	0.6 ± 0.3	2025-03-03
11805936	DUPD132-2	2025-02-24 @ 10:00 am	2025-02-27 @ 9:00 am	0.7 ± 0.3	2025-03-03
11805924	DUPE109-1	2025-02-24 @ 9:00 am	2025-02-27 @ 9:00 am	< 0.3	2025-03-03
11805915	DUPE109-2	2025-02-24 @ 9:00 am	2025-02-27 @ 9:00 am	< 0.3	2025-03-03
11805931	DUPF108-1	2025-02-24 @ 10:00 am	2025-02-27 @ 9:00 am	0.7 ± 0.4	2025-03-03
11805920	DUPF108-2	2025-02-24 @ 10:00 am	2025-02-27 @ 9:00 am	< 0.3	2025-03-03
11805904	DUPF118-1	2025-02-24 @ 9:00 am	2025-02-27 @ 8:00 am	1.9 ± 0.4	2025-03-03
11805911	DUPF118-2	2025-02-24 @ 9:00 am	2025-02-27 @ 8:00 am	1.6 ± 0.4	2025-03-03
11805922	E113	2025-02-24 @ 9:00 am	2025-02-27 @ 9:00 am	< 0.3	2025-03-03
11805921	E114	2025-02-24 @ 9:00 am	2025-02-27 @ 9:00 am	< 0.3	2025-03-03
11805923	E118	2025-02-24 @ 9:00 am	2025-02-27 @ 9:00 am	0.6 ± 0.3	2025-03-03
11805929	E119	2025-02-24 @ 9:00 am	2025-02-27 @ 9:00 am	0.9 ± 0.4	2025-03-03
11805935	E121	2025-02-24 @ 10:00 am	2025-02-27 @ 9:00 am	0.6 ± 0.3	2025-03-03
11805930	E123	2025-02-24 @ 10:00 am	2025-02-27 @ 9:00 am	0.6 ± 0.3	2025-03-03
11805990	E125	2025-02-24 @ 12:00 pm	2025-02-27 @ 10:00 am	1.2 ± 0.3	2025-03-03
11805914	E127	2025-02-24 @ 9:00 am	2025-02-27 @ 9:00 am	3.2 ± 0.4	2025-03-03
11805927	E128	2025-02-24 @ 10:00 am	2025-02-27 @ 9:00 am	0.6 ± 0.4	2025-03-03
11805928	E129	2025-02-24 @ 10:00 am	2025-02-27 @ 9:00 am	0.6 ± 0.3	2025-03-03
11805926	E131	2025-02-24 @ 10:00 am	2025-02-27 @ 9:00 am	< 0.3	2025-03-03
11805925	E134	2025-02-24 @ 10:00 am	2025-02-27 @ 9:00 am	0.5 ± 0.3	2025-03-03
11805913	E136	2025-02-24 @ 9:00 am	2025-02-27 @ 8:00 am	2.5 ± 0.4	2025-03-03
11805919	E138	2025-02-24 @ 9:00 am	2025-02-27 @ 8:00 am	1.9 ± 0.4	2025-03-03
11805918	E140	2025-02-24 @ 9:00 am	2025-02-27 @ 8:00 am	0.9 ± 0.3	2025-03-03
11805917	E142	2025-02-24 @ 9:00 am	2025-02-27 @ 8:00 am	0.8 ± 0.3	2025-03-03
11805903	E147	2025-02-24 @ 9:00 am	2025-02-27 @ 8:00 am	1.1 ± 0.3	2025-03-03
11805910	E149	2025-02-24 @ 9:00 am	2025-02-27 @ 8:00 am	1.5 ± 0.4	2025-03-03
11805909	E155-1	2025-02-24 @ 9:00 am	2025-02-27 @ 9:00 am	1.8 ± 0.3	2025-03-03
11805908	E155-2	2025-02-24 @ 9:00 am	2025-02-27 @ 9:00 am	2.3 ± 0.4	2025-03-03
11805938	F101	2025-02-24 @ 10:00 am	2025-02-27 @ 9:00 am	< 0.3	2025-03-03

March 3, 2025

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

HIGH SCHOOL

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11805937	F103	2025-02-24 @ 10:00 am	2025-02-27 @ 9:00 am	0.6 ± 0.3	2025-03-03
11805932	F106	2025-02-24 @ 10:00 am	2025-02-27 @ 9:00 am	0.6 ± 0.3	2025-03-03
11805912	F107	2025-02-24 @ 10:00 am	2025-02-27 @ 9:00 am	< 0.3	2025-03-03
11805916	F110	2025-02-24 @ 9:00 am	2025-02-27 @ 8:00 am	0.9 ± 0.3	2025-03-03
11805906	F112	2025-02-24 @ 9:00 am	2025-02-27 @ 8:00 am	1.0 ± 0.3	2025-03-03
11805905	F116	2025-02-24 @ 9:00 am	2025-02-27 @ 8:00 am	1.7 ± 0.4	2025-03-03
11806272	FBB163-1	2025-02-24 @ 8:00 am	2025-02-27 @ 8:00 am	< 0.3	2025-03-03
11806298	FBB163-2	2025-02-24 @ 8:00 am	2025-02-27 @ 8:00 am	< 0.3	2025-03-03
11806281	FBB163-3	2025-02-24 @ 8:00 am	2025-02-27 @ 8:00 am	< 0.3	2025-03-03
11805984	KITCHEN OFFICE	2025-02-24 @ 11:00 am	2025-02-27 @ 11:00 am	0.8 ± 0.3	2025-03-03
11806033	OSTORAGE-1	2025-02-24 @ 2:00 pm	2025-02-27 @ 1:00 pm	< 0.3	2025-03-03
11806025	OSTORAGE-2	2025-02-24 @ 2:00 pm	2025-02-27 @ 1:00 pm	< 0.3	2025-03-03
11806002	OSTORAGE-3	2025-02-24 @ 2:00 pm	2025-02-27 @ 1:00 pm	< 0.3	2025-03-03

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



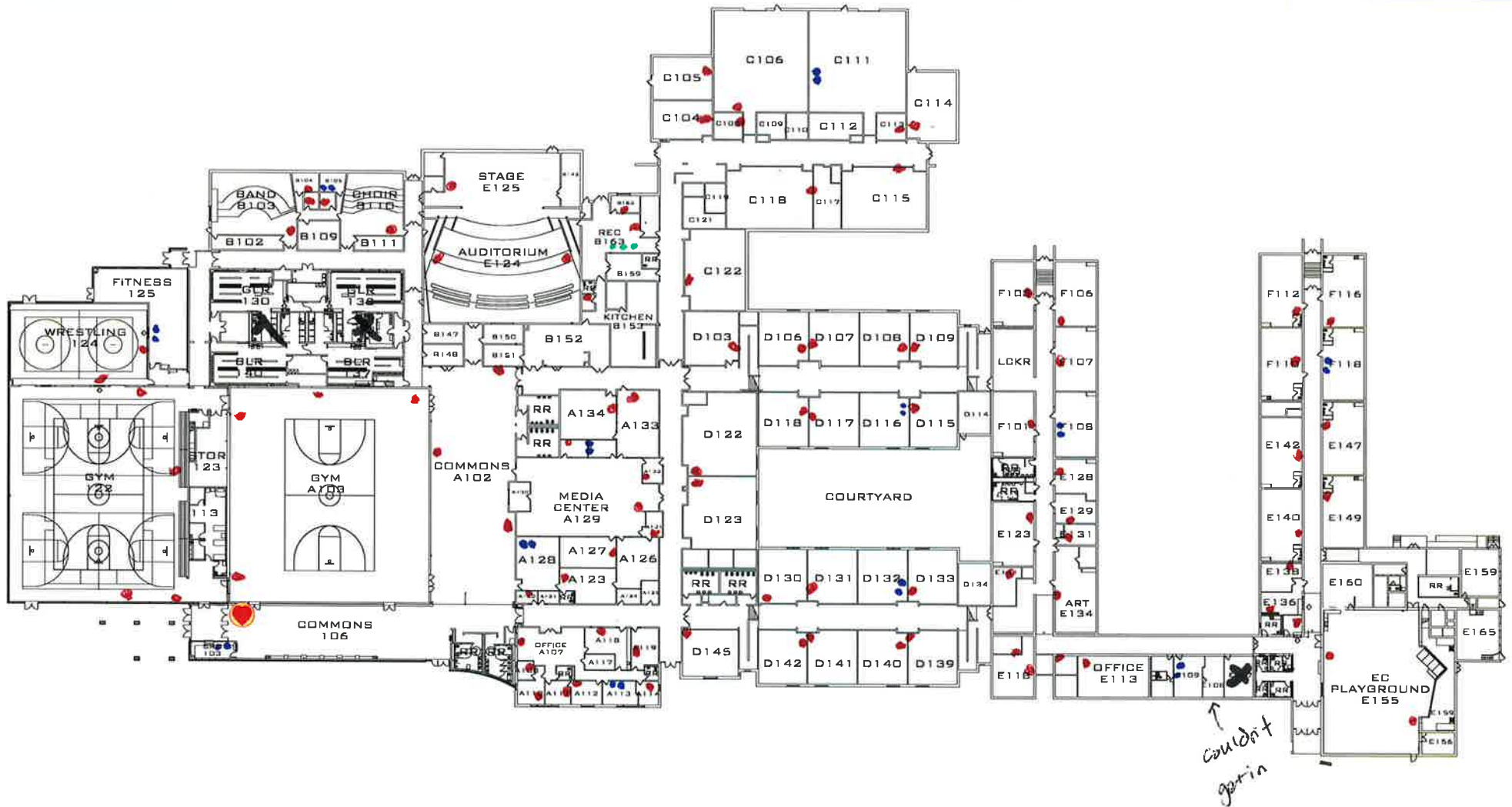
EXTERIOR DOOR

● AED LOCATION

● Detector Location

● Duplicate

● Field Blank



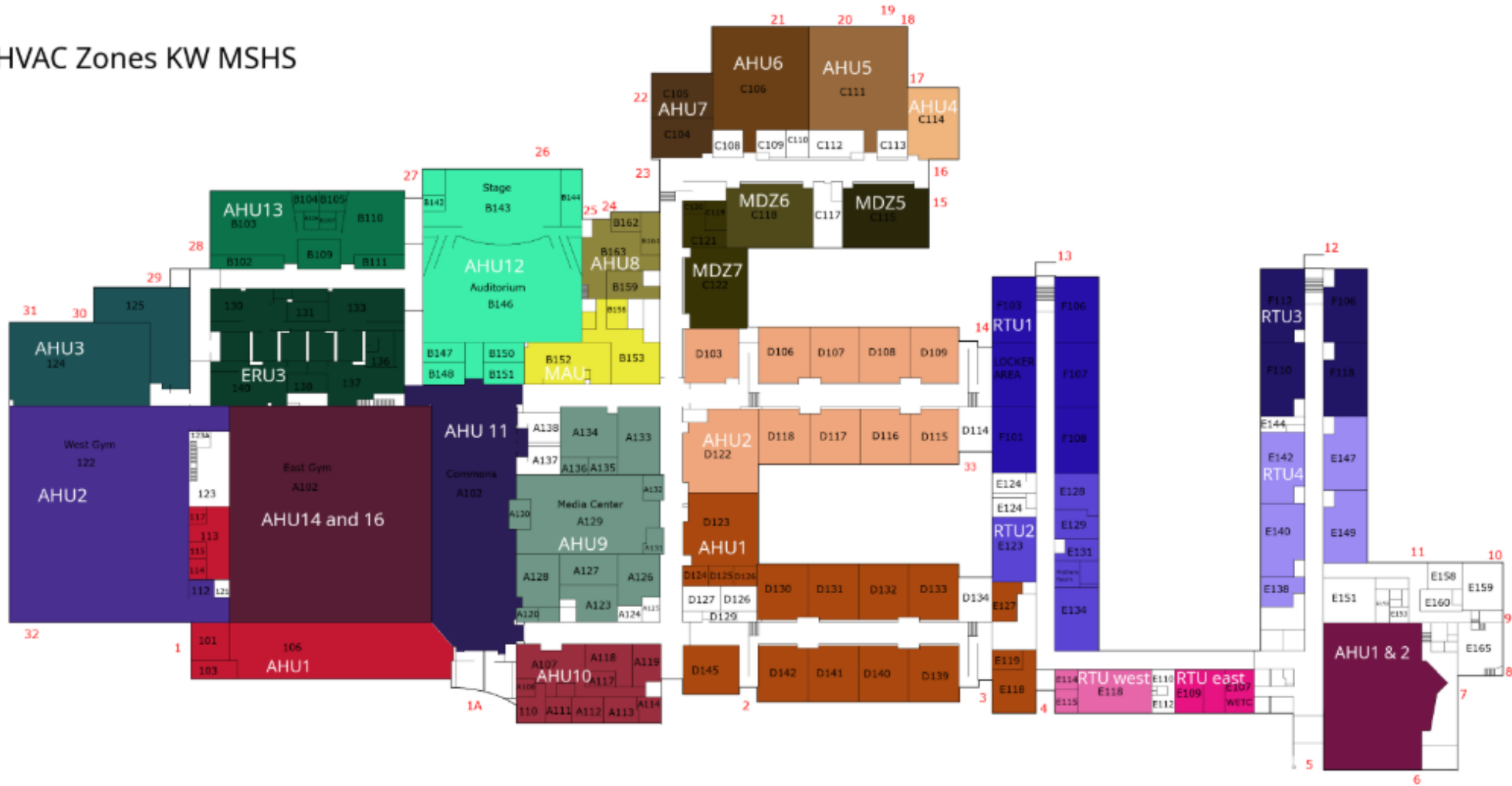
INSTITUTE FOR
ENVIRONMENTAL ASSESSMENT

9201 West Broadway Brooklyn Park, MN 55445
Tel: 763.315.7900 Toll Free: 800.233.9513
Fax: 763.315.7920

MIDDLE/HIGH SCHOOL
FIRST LEVEL FLOOR PLAN FEBRUARY 2019



HVAC Zones KW MSHS



Appendix C

Signed Non-Interference Agreement

and

Client Commitments, Advisories, and Authorizations

NOTICE OF INSPECTION FOR ALL FACILITATING STAFF

A radon test is scheduled for:

Building: High School

Test Start Date: 02-24-2025

Test End Date: 02-27-2025

Please help to maintain the required test conditions throughout the building

1. All windows and exterior doors must be kept closed (aside from momentary entry or exit) for 12 hours before and during the test.
2. Heating and cooling systems must be set to normal occupied operating temperatures.
3. Test devices are not to be disturbed.

Further guidance on required building conditions are located on the next page.

Test devices are not dangerous in any way. The type of devices used for this testing will include:

Short-term test kits. It is important that these devices are fully open and not covered. They will be analyzed by a laboratory.

Continuous radon monitors. These are electronic devices that record hourly radon readings.

Long-term test kits. It is important that these devices are not covered. They will be analyzed by a laboratory.

Declaration of Observed Compliance

Failure to reasonably maintain test conditions can lead to unnecessary expense, disruptions and unreliable data.

Disturbing test devices can also cause unreliable or invalid test results.

- Please report in a timely manner if required test conditions are not maintained.
- Please sign and return this form once the test is complete.

To the best of my knowledge, the required conditions were maintained during the test.

Yes

Name:

Paul Clauson

Signature:



Licensed Measurement Professional:

Grady LaJeunesse RMEA-00578

More Detailed Guidance for Staff

Required Closed-Building Conditions	
Windows	Keep Closed, Seal broken windows closed
External doors (except for normal entry or exit)	Keep Closed
Heating & Cooling Systems	Set to normal operating conditions
Bathroom fans	Operate normally
Fireplaces (including gas)	Do not operate
Auxiliary or temporary systems that bring air into the building	Do not operate (unless an integral part of HVAC or supplies make-up air for combustion appliances)
Exhaust systems (ex. from shops, laundries, kitchens)	Avoid excessive operation
Interior doors, Stairwells, Fire Doors	Operate Normally
Garage doors	Operate normally
Ceiling Fans, Portable Fans	Do not blow directly on the test device
Window AC Units	Operate in recirculation mode only
Window Fans	Do not operate. Seal shut or remove.
Humidifiers, Dehumidifiers, Portable Air Cleaners	Operate Normally
Central Vacuum Cleaner Systems	Operate Normally
Passive crawl space vents	Operate normally
Crawlspace exhaust systems for humidity control	Operate normally
Passive Vents for Combustion Make-Up Air	Leave Open
Combustion Appliance Vents	Operate Normally
Passive Solar Systems	Operate Normally
Attic Vent Fans	Operate Normally
Evaporative Cooling Systems	Do not operate
Required for Test Locations Within a Room	
Place detectors within the general breathing zone Locate detectors no less than:	3 feet from exterior doors, windows or other openings to the outdoors
	20 inches above the floor
	4 inches from other test devices and objects
	1 foot below the ceiling
Place detectors where they are not easily disturbed:	Select a place in an occupied area where the detectors are unlikely to be moved
Place detectors where they are not influenced by other factors:	Do not place devices in closets, crawlspaces, cupboards, sumps or nooks within building foundations
	Do not place devices in area with high air movement (ex. mechanical areas, furnace closets)
	Do not place devices in areas of high humidity (ex. kitchens, bathrooms, laundry rooms)
	Do not place devices near drafts from HVAC systems or fans
	Do not place test devices near heat sources (ex. appliances, radiators, fireplaces, direct sunlight)
	Do not place detectors on devices that produce radiation (ex. natural stone counters, pool tables, rock collections)

COMMITMENTS, ADVISORIES, AND AUTHORIZATIONS

I have been informed of test plan options that comply with ANSI/AARST MA-MFLB 2023.

To the extent reasonably possible, I commit to helping ensure that building conditions required to achieve reliable radon tests are met, as portrayed herein, by accepting the following responsibilities:

1. **BUILDING PREPARATION:** I accept responsibility that, no later than 12 hours prior to testing, each building scheduled for testing will be reviewed for compliance with closed-building requirements.
2. **COMPLIANCE VERIFICATION:** I accept responsibility for taking actions that could include adjustments to HVAC units and repairs, such as for broken windows, where completion is required no later than 12 hours prior to testing. Verification will be provided as signed/initialed below or initialed on a log sheet, to be provided.
3. **PRIOR NOTIFICATIONS:** Notices will be distributed to all tested, non-tested dwellings and posted in publicly accessible areas such as in corridors, elevators and offices in a timely manner, no later than required by local law for gaining access to a dwelling or not later than the day before testing.
4. **ACCESS:** Access will be provided to each location being tested within a building, with intent to access all locations within a building on the same day for both the event of placing test devices, and a second event for retrieving test devices.

A valid measurement at all test locations in each building is required. There is a possibility of delays and additional expense when test locations are not readily accessible or where requirements for *closed-building conditions* are not observed.

Client: Kenyon Wanaamingo Schools
Building: Kenyon
Name: Beth Grese
Title: Superintendent
Signature: Beth Grese
Date: 2/13/25

2/24 + 2/27

Appendix D

Average Building Operating Conditions Comparison

Southern MN

Climate Zone 6 (includes Southern MN)



		Annual Averages			During the Test
		24 Hour	Daytime	Daytime 9-Month	Prevailing During the Test
Operating Condition	Outdoor Temperature and Weather Conditions	45 °F	50 °F	N/A	Average: 39.46 Minimum: 30 Maximum: 50
	Heating Conditions	75%	66%	88%	100%
	Cooling Conditions	-	16%	11%	0%
	Mixed Conditions	25%	16%	-	0%
Normal Operating Condition		- Heating conditions - No variance in outdoor air ventilation			- Heating conditions - No variance in outdoor air ventilation - Snow or ice present outdoors
Condition less likely to inhibit characterization of a radon hazard		Heating and air distribution systems active			Heating and air distribution systems active

Appendix E

MDH Reporting Form

School Radon Testing Reporting Form

According to Minnesota Statute 123B.571, subd. 3, a school district that has tested its school buildings for the presence of radon shall report the results of the tests to the Department of Health. Please use this form to submit information about the most recent round or cycle of testing for each building.

Instructions

1. Complete one form for each building tested. A building is defined as an occupied facility with a unique address. This includes administrative buildings. Please report the MDE School Number.
2. Include this form, reports, and a building map.
3. Submit this form when all work is completed for a round of testing. This includes reporting to the school board, follow-up testing, and mitigation if applicable.
4. Email information to health.indoorair@state.mn.us

Contact Information

(Person submitting this report)

Name: _____

Mailing Address: _____

Phone: _____ Email: _____

Person(s) Deploying or Retrieving Test Devices

List all individuals the placed or picked-up test devices during initial, follow-up, and post-mitigation testing. Additional names can be added in the notes at the end of the form.

Name: _____ Organization/Company: _____

Name: _____ Organization/Company: _____

Name: _____ Organization/Company: _____

School Board Reporting

Were all results reported at a school board meeting? Yes No

Initial Radon Testing

School Building Name: _____ MDE School No.¹: _____

School District Name & District Number: _____

Building Address: _____

Test Kit Manufacturer & Device Name: _____

Date of Kit Retrieval (MM/DD/YYYY): _____ Length of Test (days): _____

Does the test period include weekends? Yes No

Does the test period include school breaks or holidays? Yes No

Was HVAC operating under occupied conditions? Yes No

Were test devices deployed in all occupied or intended to be occupied rooms in contact with the ground, and, if applicable, 10% of upper floor rooms?² Yes No

Were sufficient valid measurements obtained that allow for no further testing?³ Yes No

How many rooms were tested? _____

How many rooms had results ≥ 4 pCi/L? _____

¹ The MDE school number is a 9-digit number in the format XXXX-XX-XXX. The first 4 digits are the organization number, followed by a 2-digit organization type, followed by a 3-digit site/school number. If you are unsure of the school ID number, please search [MDE-ORG \(https://public.education.mn.gov/MdeOrgView/search/tagged/MDEORG_DISTRICT_SCHOOL\)](https://public.education.mn.gov/MdeOrgView/search/tagged/MDEORG_DISTRICT_SCHOOL) by district/charter name and click District View to see a list of the associated schools/find the school number. Example: Anoka High School is 0011-01-0001.

² This includes rooms, offices, classrooms, and other general use areas. Ground contact means: 1) rooms that have floors or walls in contact with the ground; and 2) rooms that are closest to the ground over untested ground-contact locations such as a crawl space, utility tunnel, parking garage, and other non-habitable space that is in contact with the ground. Intended to be occupied rooms are locations where there are plans to occupy rooms even though they are unoccupied at the time of testing. In addition, if the building has upper floors, at least 10% of those upper rooms need to be tested.

³ Section 6.2 of the ANSI/AARST standard allows for a specific small number of invalid measurements (e.g. missing or damaged test kits). Review this section of the standard and evaluate how many rooms needed testing and how many had valid results. If there were too many invalid results, this mean additional testing was required in these locations and answer this question as 'no'

Follow-up Testing, Mitigation, & Post-Mitigation Testing

If one or more rooms tested ≥ 4.0 pCi/L, please answer the questions below:

How many rooms had follow-up testing? _____

Number of rooms with follow-up results: ≥ 4 pCi/L: _____ < 4 pCi/L: _____

Of the rooms with follow-up results ≥ 4 pCi/L, how many rooms were:

Mitigated by diluting or pressurizing the soil or indoor air (not active soil depressurization): _____

Mitigated by installing active soil depressurization system(s)? _____

Reduced by adjusting the HVAC system? _____

Individuals Who Installed Mitigation:

Name: _____ Organization/Company: _____

Name: _____ Organization/Company: _____

What was the cost of the installation and/or HVAC service work to mitigation radon? _____

What is the known or anticipated annual operating cost of mitigation (estimate)? _____

After radon mitigation, how many rooms were re-tested?⁴ _____

Post-mitigation results (# of rooms):

≥ 4 pCi/L: _____ < 4 pCi/L: _____

Notes

Minnesota Department of Health | Environmental Health | Indoor Air Unit

health.indoorair@state.mn.us, www.health.state.mn.us

February 12, 2025

To obtain this information in a different format, call: 651-201-4601.

⁴ The building must be tested to very reduction and ensure mitigation has not increased radon in rooms that used to be low.