

February 28, 2024

Bill Tollefson
Crosby-Ironton Public Schools
711 Poplar Street
Crosby, MN 56441



**RE: Districtwide Short-Term Radon Testing Results
IEA Project #202311192**

Dear Mr. Tollefson:

IEA placed 207 Air Chek Pro Chek short-term radon test kits in 147 locations in the following buildings for the purpose of evaluating radon levels:

- Crosby-Ironton High School – 87 locations
- Cuyuna Range Elementary – 60 locations

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
Grant Chapa	RMEA-00039	

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.

METHODOLOGY

IEA placed 207 Chek Pro Chek short-term radon test kits in frequently occupied areas in the buildings listed above at Crosby-Ironton Public Schools for the purpose of sampling for radon in accordance with the MDH’s *Guidance for Radon Testing in Minnesota Schools (2021)* 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).

A total of 207 radon test kits were placed from January 23, 2024, to January 26, 2024, for a total short-term sampling period of three 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 January 23, 2024.

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 4	Conduct CRM short-term testing during winter months
LESS THAN 4 (DURING OCCUPANCY) 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 4 (DURING OCCUPANCY) 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, maps of each building with sampling locations, and chain of custody are provided in Appendix B. The following includes summary results for each building.

Crosby-Ironton High School

711 Poplar Street
 Crosby, MN 56441

A total of 126 test kits were placed in 87 locations at Crosby-Ironton High School.

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

TABLE 1: CROSBY-IRONTON HIGH 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 Tests	126	0	0	0 ¹
¹ All below action level				

pCi/L: picocuries per liter

Cuyuna Range Elementary School

509 Sixth Street Northeast
 Crosby, MN 56441

A total of 77 test kits were placed in 60 locations at Cuyuna Range Elementary School.

The results indicated that radon levels in Cuyuna Range Elementary School were below the action level of 4 pCi/L. See Table 2 below for a summary of the results:

TABLE 2: CUYUNA RANGE ELEMENTARY 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 Tests	74	3	0	0 ¹
¹ All below action level				

pCi/L: picocuries per liter

CONCLUSIONS AND RECOMMENDATIONS

It is recommended by ANSI/AARST MA-MFLB 2023 to consider taking action and address results of radon concentrations greater than half the action level (2-4 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.
- 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 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 #11735 dated November 29, 2023, 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.



Grant Chapa
Account Manager

GC/mh 02222024

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. The average of all duplicates' relative percent difference (RPD) should not exceed 25%. 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)
CIHS - Band Room	0.9	0.7	0.8
CIHS - Metal Shop	0.6	0.9	0.75
CIHS - Room 108	0.9	0.6	0.75
CIHS - Room 125	0.6	0.3	0.45
CIHS - Room 207	0.7	0.6	0.65
CIHS - Room 304	0.6	0.7	0.65
CIHS - Room 326	0.7	0.7	0.7
CIHS - Room 505	1.4	1.5	1.45
CIHS - Weight Room	1.0	1.3	1.15
CIHS - DO Conference Room	0.6	0.6	0.6
CRES - Adaptive PE	1.4	1.4	1.4
CRES - F1	1.6	1.7	1.65
CRES - Music Room	1.3	1.5	1.4
CRES - Resource Room G	1.5	1.5	1.5
CRES - Room 103	2.1	1.3	1.7
CRES - Room 113	1.5	1.8	1.65

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. Field blanks are listed in the laboratory report as FStorage Room A, FStorage Room B, etc. Office blanks are listed in the laboratory report as OStorage Room A, OStorage Room B, etc. Lab-Transit Blanks are listed in Table 2 below.

Table 2: Blanks						
Date	Start Time	End Time	Device ID	Type of Blank	Description	Radon Concentration (pCi/L)
1/23/2024	10:00 AM	8:00 AM	11383202	Field	FStorage Room A	<0.3
1/23/2024	10:00 AM	8:00 AM	11383201	Field	FStorage Room B	<0.3
1/23/2024	10:00 AM	8:00 AM	11383229	Field	FStorage Room C	<0.3
1/23/2024	1:00 PM	11:00 AM	11376138	Field	FStorage Room D	<0.3
1/23/2024	1:00 PM	11:00 AM	11376188	Field	FStorage Room E	<0.3
1/23/2024	1:00 PM	11:00 AM	11376145	Field	FStorage Room F	<0.3
1/23/2024	7:00 AM	7:00 AM	11376106	Office	OStorage Room A	<0.3
1/23/2024	7:00 AM	7:00 AM	11376105	Office	OStorage Room B	<0.3
10/6/2023	8:00 AM	8:00 AM	11610507	Lab-Transit	LTBP-1	<0.3
11/10/2023	9:00 AM	9:00 AM	11620313	Lab-Transit	LTBP-2	<0.3
12/1/2023	8:19 AM	8:19 AM	11610519	Lab-Transit	LTBP-3	<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					
Date	Start Time	End Time	Device ID	Measured Value (pCi/L)	Reference Value (pCi/L)
12/1/2023	8:19 AM	8:19 AM	11610520	43.5	47.0
12/1/2023	8:19 AM	8:19 AM	11610521	50.2	47.0
12/1/2023	8:19 AM	8:19 AM	11610522	45.6	47.0
12/1/2023	8:19 AM	8:19 AM	11610523	46.5	47.0
12/1/2023	8:19 AM	8:19 AM	11610524	47.5	47.0
12/1/2023	8:19 AM	8:19 AM	11610525	40.1	47.0

Appendix B

Laboratory Reports and Maps

Radon test result report for:
CROSBY - IRONTON PUBLIC SCHOOLS
CROSBY - IRONTON HIGH SCHOOL

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11383214	003	2024-01-23 @ 11:00 am	2024-01-26 @ 10:00 am	0.9 ± 0.3	2024-01-27
11383087	004	2024-01-23 @ 11:00 am	2024-01-26 @ 10:00 am	0.6 ± 0.3	2024-01-27
11383206	ACTIVITIES DIRECTOR	2024-01-23 @ 11:00 am	2024-01-26 @ 9:00 am	0.5 ± 0.3	2024-01-27
11383263	AUDITORIUM - 1	2024-01-23 @ 11:00 am	2024-01-26 @ 9:00 am	0.9 ± 0.3	2024-01-27
11383286	AUDITORIUM - 2	2024-01-23 @ 11:00 am	2024-01-26 @ 9:00 am	0.9 ± 0.3	2024-01-27
11383277	AUDITORIUM - 3	2024-01-23 @ 11:00 am	2024-01-26 @ 9:00 am	0.8 ± 0.3	2024-01-27
11383221	AUTO SHOP	2024-01-23 @ 11:00 am	2024-01-26 @ 10:00 am	0.7 ± 0.3	2024-01-27
11383251	BAND ROOM	2024-01-23 @ 10:00 am	2024-01-26 @ 9:00 am	0.9 ± 0.3	2024-01-27
11383299	BILLS OFFICE	2024-01-23 @ 10:00 am	2024-01-26 @ 10:00 am	0.5 ± 0.3	2024-01-27
11383233	BOYS LR OFFICE	2024-01-23 @ 10:00 am	2024-01-26 @ 8:00 am	0.8 ± 0.3	2024-01-27
11383243	CHOIR ROOM	2024-01-23 @ 10:00 am	2024-01-26 @ 9:00 am	0.9 ± 0.3	2024-01-27
11383274	COMM ED	2024-01-23 @ 11:00 am	2024-01-26 @ 9:00 am	< 0.3	2024-01-27
11383259	COMMONS - 1	2024-01-23 @ 10:00 am	2024-01-26 @ 8:00 am	1.0 ± 0.3	2024-01-27
11383247	COMMONS - 2	2024-01-23 @ 10:00 am	2024-01-26 @ 8:00 am	0.6 ± 0.3	2024-01-27
11383212	COMMONS - 3	2024-01-23 @ 10:00 am	2024-01-26 @ 8:00 am	0.7 ± 0.3	2024-01-27
11383248	COMMONS - 4	2024-01-23 @ 10:00 am	2024-01-26 @ 8:00 am	0.5 ± 0.3	2024-01-27
11383241	COMMONS - 5	2024-01-23 @ 10:00 am	2024-01-26 @ 8:00 am	0.8 ± 0.3	2024-01-27
11383289	CONFERENCE ROOM	2024-01-23 @ 10:00 am	2024-01-26 @ 9:00 am	0.8 ± 0.3	2024-01-27
11383252	D BAND ROOM	2024-01-23 @ 10:00 am	2024-01-26 @ 9:00 am	0.7 ± 0.3	2024-01-27
11383230	D METAL SHOP	2024-01-23 @ 11:00 am	2024-01-26 @ 10:00 am	0.9 ± 0.3	2024-01-27
11383088	D ROOM 108	2024-01-23 @ 11:00 am	2024-01-26 @ 9:00 am	0.6 ± 0.3	2024-01-27
11383293	D ROOM 125	2024-01-23 @ 11:00 am	2024-01-26 @ 10:00 am	< 0.3	2024-01-27
11383295	D ROOM 207	2024-01-23 @ 11:00 am	2024-01-26 @ 10:00 am	0.6 ± 0.3	2024-01-27
11383237	D ROOM 304	2024-01-23 @ 10:00 am	2024-01-26 @ 9:00 am	0.7 ± 0.3	2024-01-27
11383249	D ROOM 326	2024-01-23 @ 10:00 am	2024-01-26 @ 9:00 am	0.7 ± 0.3	2024-01-27
11383269	D ROOM 505	2024-01-23 @ 11:00 am	2024-01-26 @ 9:00 am	1.5 ± 0.3	2024-01-27
11383211	D WEIGHT ROOM	2024-01-23 @ 10:00 am	2024-01-26 @ 9:00 am	1.3 ± 0.3	2024-01-27
11383092	DDO RECEPTION	2024-01-23 @ 10:00 am	2024-01-26 @ 8:00 am	0.6 ± 0.3	2024-01-27
11383234	DO CONFERENCE ROOM	2024-01-23 @ 10:00 am	2024-01-26 @ 8:00 am	0.6 ± 0.3	2024-01-27
11383096	DO COPY ROOM	2024-01-23 @ 10:00 am	2024-01-26 @ 8:00 am	1.1 ± 0.3	2024-01-27
11383235	DO RECEPTION	2024-01-23 @ 10:00 am	2024-01-26 @ 8:00 am	0.6 ± 0.3	2024-01-27
11383276	ELECTRICAL ROOM	2024-01-23 @ 11:00 am	2024-01-26 @ 8:00 am	0.6 ± 0.3	2024-01-27
11383207	FORUM ROOM	2024-01-23 @ 10:00 am	2024-01-26 @ 10:00 am	0.5 ± 0.3	2024-01-27
11383202	FSTORAGE ROOM A	2024-01-23 @ 10:00 am	2024-01-26 @ 8:00 am	< 0.3	2024-01-27
11383201	FSTORAGE ROOM B	2024-01-23 @ 10:00 am	2024-01-26 @ 8:00 am	< 0.3	2024-01-27
11383229	FSTORAGE ROOM C	2024-01-23 @ 10:00 am	2024-01-26 @ 8:00 am	< 0.3	2024-01-27
11383100	GIRLS LR OFFICE	2024-01-23 @ 10:00 am	2024-01-26 @ 8:00 am	0.9 ± 0.3	2024-01-27

Radon test result report for:**CROSBY - IRONTON PUBLIC SCHOOLS
CROSBY - IRONTON HIGH SCHOOL**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11383099	HR OFFICE	2024-01-23 @ 10:00 am	2024-01-26 @ 8:00 am	1.0 ± 0.3	2024-01-27
11383279	HS MAIN OFFICE CONFERENCE ROOM	2024-01-23 @ 11:00 am	2024-01-26 @ 9:00 am	< 0.3	2024-01-27
11383083	HS OFFICE WORK ROOM	2024-01-23 @ 11:00 am	2024-01-26 @ 9:00 am	< 0.3	2024-01-27
11383220	KITCHEN	2024-01-23 @ 10:00 am	2024-01-26 @ 8:00 am	0.7 ± 0.3	2024-01-27
11383084	MAIN OFFICE RECEPTION	2024-01-23 @ 11:00 am	2024-01-26 @ 9:00 am	0.6 ± 0.3	2024-01-27
11383272	MEDIA CENTER - 1	2024-01-23 @ 11:00 am	2024-01-26 @ 9:00 am	< 0.3	2024-01-27
11383257	MEDIA CENTER - 2	2024-01-23 @ 11:00 am	2024-01-26 @ 9:00 am	0.5 ± 0.3	2024-01-27
11383280	MEDIA CENTER - 3	2024-01-23 @ 11:00 am	2024-01-26 @ 9:00 am	0.5 ± 0.3	2024-01-27
11383239	MEDIA CENTER WORK ROOM 1	2024-01-23 @ 10:00 am	2024-01-26 @ 9:00 am	< 0.3	2024-01-27
11383283	MEDIA CENTER WORK ROOM 2	2024-01-23 @ 11:00 am	2024-01-26 @ 9:00 am	0.5 ± 0.3	2024-01-27
11383228	METAL SHOP	2024-01-23 @ 11:00 am	2024-01-26 @ 10:00 am	0.6 ± 0.3	2024-01-27
11383216	METAL SHOP OFFICE	2024-01-23 @ 11:00 am	2024-01-26 @ 10:00 am	0.8 ± 0.3	2024-01-27
11383268	MULTIPURPOSE ROOM	2024-01-23 @ 11:00 am	2024-01-26 @ 9:00 am	0.7 ± 0.3	2024-01-27
11383082	NURSES OFFICE	2024-01-23 @ 11:00 am	2024-01-26 @ 9:00 am	< 0.3	2024-01-27
11383255	OFFICE D	2024-01-23 @ 11:00 am	2024-01-26 @ 9:00 am	< 0.3	2024-01-27
11383080	OFFICE E	2024-01-23 @ 11:00 am	2024-01-26 @ 9:00 am	< 0.3	2024-01-27
11383078	OFFICE F	2024-01-23 @ 11:00 am	2024-01-26 @ 9:00 am	< 0.3	2024-01-27
11383215	PE BOYS LR OFFICE	2024-01-23 @ 10:00 am	2024-01-26 @ 9:00 am	1.3 ± 0.3	2024-01-27
11383236	PE GIRLS LR OFFICE	2024-01-23 @ 10:00 am	2024-01-26 @ 9:00 am	1.2 ± 0.3	2024-01-27
11383238	PE GYM - 1	2024-01-23 @ 10:00 am	2024-01-26 @ 8:00 am	0.8 ± 0.3	2024-01-27
11383245	PE GYM - 2	2024-01-23 @ 10:00 am	2024-01-26 @ 8:00 am	0.8 ± 0.3	2024-01-27
11383095	PE GYM - 3	2024-01-23 @ 10:00 am	2024-01-26 @ 8:00 am	0.8 ± 0.3	2024-01-27
11383232	PE GYM - 4	2024-01-23 @ 10:00 am	2024-01-26 @ 8:00 am	0.7 ± 0.3	2024-01-27
11383246	PE GYM - 5	2024-01-23 @ 10:00 am	2024-01-26 @ 8:00 am	0.7 ± 0.3	2024-01-27
11383242	PE GYM - 6	2024-01-23 @ 10:00 am	2024-01-26 @ 8:00 am	0.5 ± 0.3	2024-01-27
11383091	PE GYM - 7	2024-01-23 @ 10:00 am	2024-01-26 @ 8:00 am	0.7 ± 0.3	2024-01-27
11383097	PRINCIPAL	2024-01-23 @ 11:00 am	2024-01-26 @ 9:00 am	0.5 ± 0.3	2024-01-27
11383291	RANGER GYM - 2	2024-01-23 @ 11:00 am	2024-01-26 @ 8:00 am	< 0.3	2024-01-27
11383284	RANGER GYM - 3	2024-01-23 @ 11:00 am	2024-01-26 @ 8:00 am	< 0.3	2024-01-27
11383079	RANGER GYM - 4	2024-01-23 @ 11:00 am	2024-01-26 @ 8:00 am	< 0.3	2024-01-27
11383081	RANGER GYM - 5	2024-01-23 @ 11:00 am	2024-01-26 @ 8:00 am	< 0.3	2024-01-27
11383267	RANGER GYM - 6	2024-01-23 @ 11:00 am	2024-01-26 @ 8:00 am	< 0.3	2024-01-27
11383075	RANGER GYM - 7	2024-01-23 @ 11:00 am	2024-01-26 @ 8:00 am	< 0.3	2024-01-27
11383094	RANGER GYM - 8	2024-01-23 @ 11:00 am	2024-01-26 @ 8:00 am	< 0.3	2024-01-27
11383275	RANGER GYM - 1	2024-01-23 @ 11:00 am	2024-01-26 @ 8:00 am	< 0.3	2024-01-27
11383204	RANGER MADE CLASSROOM	2024-01-23 @ 11:00 am	2024-01-26 @ 10:00 am	0.8 ± 0.3	2024-01-27
11383219	RANGER MADE SHOP	2024-01-23 @ 11:00 am	2024-01-26 @ 10:00 am	0.6 ± 0.3	2024-01-27

Radon test result report for:

**CROSBY - IRONTON PUBLIC SCHOOLS
CROSBY - IRONTON HIGH SCHOOL**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11383224	RECEIVING ROOM	2024-01-23 @ 10:00 am	2024-01-26 @ 8:00 am	0.5 ± 0.3	2024-01-27
11383271	ROOM 102	2024-01-23 @ 11:00 am	2024-01-26 @ 9:00 am	0.8 ± 0.3	2024-01-27
11383297	ROOM 103	2024-01-23 @ 11:00 am	2024-01-26 @ 9:00 am	0.6 ± 0.3	2024-01-27
11383288	ROOM 104	2024-01-23 @ 11:00 am	2024-01-26 @ 9:00 am	< 0.3	2024-01-27
11383226	ROOM 105	2024-01-23 @ 11:00 am	2024-01-26 @ 9:00 am	0.8 ± 0.3	2024-01-27
11383225	ROOM 106	2024-01-23 @ 11:00 am	2024-01-26 @ 9:00 am	0.7 ± 0.3	2024-01-27
11383098	ROOM 107	2024-01-23 @ 11:00 am	2024-01-26 @ 9:00 am	0.5 ± 0.3	2024-01-27
11383258	ROOM 108	2024-01-23 @ 11:00 am	2024-01-26 @ 9:00 am	0.9 ± 0.3	2024-01-27
11383265	ROOM 109	2024-01-23 @ 11:00 am	2024-01-26 @ 9:00 am	0.7 ± 0.3	2024-01-27
11383285	ROOM 110	2024-01-23 @ 11:00 am	2024-01-26 @ 9:00 am	0.5 ± 0.3	2024-01-27
11383281	ROOM 111	2024-01-23 @ 11:00 am	2024-01-26 @ 9:00 am	0.6 ± 0.3	2024-01-27
11383093	ROOM 112	2024-01-23 @ 11:00 am	2024-01-26 @ 9:00 am	0.8 ± 0.3	2024-01-27
11383273	ROOM 113	2024-01-23 @ 11:00 am	2024-01-26 @ 9:00 am	< 0.3	2024-01-27
11383294	ROOM 114	2024-01-23 @ 11:00 am	2024-01-26 @ 9:00 am	1.7 ± 0.3	2024-01-27
11383278	ROOM 120	2024-01-23 @ 11:00 am	2024-01-26 @ 10:00 am	< 0.3	2024-01-27
11383085	ROOM 121	2024-01-23 @ 11:00 am	2024-01-26 @ 10:00 am	0.6 ± 0.3	2024-01-27
11383287	ROOM 124	2024-01-23 @ 11:00 am	2024-01-26 @ 10:00 am	0.7 ± 0.3	2024-01-27
11383209	ROOM 125	2024-01-23 @ 11:00 am	2024-01-26 @ 10:00 am	0.6 ± 0.3	2024-01-27
11383296	ROOM 126	2024-01-23 @ 11:00 am	2024-01-26 @ 10:00 am	0.6 ± 0.3	2024-01-27
11383086	ROOM 207	2024-01-23 @ 11:00 am	2024-01-26 @ 10:00 am	0.7 ± 0.3	2024-01-27
11383090	ROOM 302	2024-01-23 @ 10:00 am	2024-01-26 @ 9:00 am	0.5 ± 0.3	2024-01-27
11383089	ROOM 304	2024-01-23 @ 10:00 am	2024-01-26 @ 9:00 am	0.6 ± 0.3	2024-01-27
11383222	ROOM 308	2024-01-23 @ 10:00 am	2024-01-26 @ 9:00 am	0.6 ± 0.3	2024-01-27
11383213	ROOM 310	2024-01-23 @ 10:00 am	2024-01-26 @ 9:00 am	0.5 ± 0.3	2024-01-27
11383217	ROOM 312	2024-01-23 @ 10:00 am	2024-01-26 @ 9:00 am	0.5 ± 0.3	2024-01-27
11383205	ROOM 314	2024-01-23 @ 10:00 am	2024-01-26 @ 9:00 am	1.1 ± 0.3	2024-01-27
11383210	ROOM 316	2024-01-23 @ 10:00 am	2024-01-26 @ 9:00 am	0.7 ± 0.3	2024-01-27
11383076	ROOM 318	2024-01-23 @ 10:00 am	2024-01-26 @ 9:00 am	0.6 ± 0.3	2024-01-27
11383218	ROOM 320	2024-01-23 @ 10:00 am	2024-01-26 @ 9:00 am	1.0 ± 0.3	2024-01-27
11383261	ROOM 322	2024-01-23 @ 10:00 am	2024-01-26 @ 9:00 am	0.8 ± 0.3	2024-01-27
11383254	ROOM 324	2024-01-23 @ 10:00 am	2024-01-26 @ 9:00 am	0.7 ± 0.3	2024-01-27
11383298	ROOM 326	2024-01-23 @ 10:00 am	2024-01-26 @ 9:00 am	0.7 ± 0.3	2024-01-27
11383077	ROOM 330	2024-01-23 @ 10:00 am	2024-01-26 @ 9:00 am	0.6 ± 0.3	2024-01-27
11383292	ROOM 505	2024-01-23 @ 11:00 am	2024-01-26 @ 9:00 am	1.4 ± 0.3	2024-01-27
11383282	SS OFFICE G	2024-01-23 @ 10:00 am	2024-01-26 @ 9:00 am	< 0.3	2024-01-27
11383266	SS OFFICE H	2024-01-23 @ 10:00 am	2024-01-26 @ 9:00 am	< 0.3	2024-01-27
11383301	SS SCHOOL COUNSELOR	2024-01-23 @ 10:00 am	2024-01-26 @ 9:00 am	< 0.3	2024-01-27

Radon test result report for:

**CROSBY - IRONTON PUBLIC SCHOOLS
CROSBY - IRONTON HIGH SCHOOL**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11383260	STAFF DINING	2024-01-23 @ 11:00 am	2024-01-26 @ 9:00 am	0.6 ± 0.3	2024-01-27
11383290	STAFF WORK ROOM	2024-01-23 @ 10:00 am	2024-01-26 @ 9:00 am	< 0.3	2024-01-27
11383250	STUDENT SUPPORT CENTER	2024-01-23 @ 10:00 am	2024-01-26 @ 9:00 am	0.7 ± 0.3	2024-01-27
11383208	SUPERINTENDENT OFFICE	2024-01-23 @ 10:00 am	2024-01-26 @ 8:00 am	0.9 ± 0.3	2024-01-27
11383264	TECH SUPPORT	2024-01-23 @ 11:00 am	2024-01-26 @ 9:00 am	0.7 ± 0.3	2024-01-27
11383231	TRAINERS ROOM	2024-01-23 @ 10:00 am	2024-01-26 @ 8:00 am	0.9 ± 0.3	2024-01-27
11383203	WEIGHT ROOM	2024-01-23 @ 10:00 am	2024-01-26 @ 9:00 am	1.0 ± 0.3	2024-01-27
11383262	WOOCK GYM - 1	2024-01-23 @ 11:00 am	2024-01-26 @ 9:00 am	1.4 ± 0.3	2024-01-27
11383227	WOOCK GYM - 2	2024-01-23 @ 11:00 am	2024-01-26 @ 9:00 am	1.7 ± 0.3	2024-01-27
11383253	WOOCK GYM - 3	2024-01-23 @ 11:00 am	2024-01-26 @ 9:00 am	1.4 ± 0.3	2024-01-27
11383240	WOOCK GYM - 4	2024-01-23 @ 11:00 am	2024-01-26 @ 9:00 am	1.2 ± 0.3	2024-01-27
11383256	WOOCK GYM - 5	2024-01-23 @ 11:00 am	2024-01-26 @ 9:00 am	1.5 ± 0.3	2024-01-27
11383270	WOOCK GYM - 6	2024-01-23 @ 11:00 am	2024-01-26 @ 9:00 am	1.2 ± 0.3	2024-01-27
11383223	WOOD SHOP	2024-01-23 @ 11:00 am	2024-01-26 @ 10:00 am	1.1 ± 0.3	2024-01-27
11383300	WOOD SHOP OFFICE	2024-01-23 @ 11:00 am	2024-01-26 @ 10:00 am	1.2 ± 0.3	2024-01-27
11383244	WRESTLING ROOM	2024-01-23 @ 10:00 am	2024-01-26 @ 8:00 am	0.7 ± 0.3	2024-01-27

Radon test result report for:

**CROSBY - IRONTON PUBLIC SCHOOLS
 CUYUNA RANGE ELEMENTARY SCHOOL**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11376140	ADAPTIVE PE	2024-01-23 @ 12:00 pm	2024-01-26 @ 11:00 am	1.4 ± 0.3	2024-01-27
11376154	AUDITORIUM - 1	2024-01-23 @ 12:00 pm	2024-01-26 @ 11:00 am	1.4 ± 0.3	2024-01-27
11376141	AUDITORIUM - 2	2024-01-23 @ 12:00 pm	2024-01-26 @ 11:00 am	1.1 ± 0.3	2024-01-27
11376119	BAND ROOM	2024-01-23 @ 12:00 pm	2024-01-26 @ 11:00 am	2.1 ± 0.3	2024-01-27
11376133	CAFETERIA - 1	2024-01-23 @ 12:00 pm	2024-01-26 @ 11:00 am	1.2 ± 0.3	2024-01-27
11376134	CAFETERIA - 2	2024-01-23 @ 12:00 pm	2024-01-26 @ 11:00 am	1.2 ± 0.3	2024-01-27
11376139	COLLABORATIVE SERVICE WORKER	2024-01-23 @ 12:00 pm	2024-01-26 @ 11:00 am	1.9 ± 0.3	2024-01-27
11376183	CRES RECEPTION	2024-01-23 @ 12:00 pm	2024-01-26 @ 11:00 am	1.7 ± 0.3	2024-01-27
11376118	CUSTODIAL OFFICE	2024-01-23 @ 1:00 pm	2024-01-26 @ 11:00 am	1.7 ± 0.3	2024-01-27
11376122	D ADAPTIVE PE	2024-01-23 @ 1:00 pm	2024-01-26 @ 11:00 am	1.4 ± 0.3	2024-01-27
11376176	D F1	2024-01-23 @ 12:00 pm	2024-01-26 @ 11:00 am	1.7 ± 0.3	2024-01-27
11376113	D MUSIC ROOM	2024-01-23 @ 1:00 pm	2024-01-26 @ 11:00 am	1.5 ± 0.3	2024-01-27
11376109	D RESOURCE ROOM G	2024-01-23 @ 1:00 pm	2024-01-26 @ 10:00 am	1.5 ± 0.3	2024-01-27
11376168	D ROOM 103	2024-01-23 @ 12:00 pm	2024-01-26 @ 10:00 am	1.3 ± 0.3	2024-01-27
11376142	D ROOM 113	2024-01-23 @ 12:00 pm	2024-01-26 @ 10:00 am	1.8 ± 0.3	2024-01-27
11376181	F1	2024-01-23 @ 12:00 pm	2024-01-26 @ 11:00 am	1.6 ± 0.3	2024-01-27
11376180	F2	2024-01-23 @ 12:00 pm	2024-01-26 @ 11:00 am	1.5 ± 0.3	2024-01-27
11376179	F3	2024-01-23 @ 12:00 pm	2024-01-26 @ 11:00 am	1.1 ± 0.3	2024-01-27
11376178	F4	2024-01-23 @ 12:00 pm	2024-01-26 @ 11:00 am	1.7 ± 0.3	2024-01-27
11376177	F5	2024-01-23 @ 12:00 pm	2024-01-26 @ 11:00 am	1.7 ± 0.3	2024-01-27
11376108	FILE ROOM	2024-01-23 @ 12:00 pm	2024-01-26 @ 11:00 am	1.6 ± 0.3	2024-01-27
11376148	FLEXIBLE LEARNING CENTER	2024-01-23 @ 12:00 pm	2024-01-26 @ 11:00 am	1.6 ± 0.3	2024-01-27
11376138	FSTORAGE ROOM	2024-01-23 @ 1:00 pm	2024-01-26 @ 11:00 am	< 0.3	2024-01-27
11376188	FSTORAGE ROOM E	2024-01-23 @ 1:00 pm	2024-01-26 @ 11:00 am	< 0.3	2024-01-27
11376145	FSTORAGE ROOM F	2024-01-23 @ 1:00 pm	2024-01-26 @ 11:00 am	< 0.3	2024-01-27
11376132	GYM A - 1	2024-01-23 @ 12:00 pm	2024-01-26 @ 11:00 am	1.5 ± 0.3	2024-01-27
11376127	GYM A - 2	2024-01-23 @ 12:00 pm	2024-01-26 @ 11:00 am	1.4 ± 0.3	2024-01-27
11376153	GYM A - 3	2024-01-23 @ 12:00 pm	2024-01-26 @ 11:00 am	1.3 ± 0.3	2024-01-27
11376126	GYM B - 1	2024-01-23 @ 12:00 pm	2024-01-26 @ 11:00 am	1.5 ± 0.3	2024-01-27
11376125	GYM B - 2	2024-01-23 @ 12:00 pm	2024-01-26 @ 11:00 am	1.5 ± 0.3	2024-01-27
11376131	GYM B - 3	2024-01-23 @ 12:00 pm	2024-01-26 @ 11:00 am	1.6 ± 0.3	2024-01-27
11376124	INSTRUCTIONAL SERVICES	2024-01-23 @ 1:00 pm	2024-01-26 @ 11:00 am	1.5 ± 0.3	2024-01-27
11376120	KITCHEN	2024-01-23 @ 12:00 pm	2024-01-26 @ 11:00 am	0.8 ± 0.3	2024-01-27
11376102	MEDIA CENTER - 1	2024-01-23 @ 1:00 pm	2024-01-26 @ 10:00 am	2.3 ± 0.3	2024-01-27
11376103	MEDIA CENTER - 2	2024-01-23 @ 1:00 pm	2024-01-26 @ 10:00 am	1.3 ± 0.3	2024-01-27
11376104	MEDIA SERVICES	2024-01-23 @ 1:00 pm	2024-01-26 @ 11:00 am	1.5 ± 0.3	2024-01-27
11376135	MUSIC ROOM	2024-01-23 @ 12:00 pm	2024-01-26 @ 11:00 am	1.3 ± 0.3	2024-01-27

Radon test result report for:
CROSBY - IRONTON PUBLIC SCHOOLS
CUYUNA RANGE ELEMENTARY SCHOOL

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11376117	NORTHERN PINES CONFERENCE ROOM	2024-01-23 @ 1:00 pm	2024-01-26 @ 11:00 am	1.2 ± 0.3	2024-01-27
11376161	NORTHERN PINES ERIN	2024-01-23 @ 1:00 pm	2024-01-26 @ 11:00 am	1.9 ± 0.3	2024-01-27
11376107	NORTHERN PINES MADDIE OFFICE	2024-01-23 @ 1:00 pm	2024-01-26 @ 11:00 am	1.7 ± 0.3	2024-01-27
11376128	NORTHERN PINES TIFFANY OFFICE	2024-01-23 @ 1:00 pm	2024-01-26 @ 11:00 am	1.4 ± 0.3	2024-01-27
11376182	NURSE	2024-01-23 @ 12:00 pm	2024-01-26 @ 11:00 am	1.4 ± 0.3	2024-01-27
11376123	OTPT	2024-01-23 @ 1:00 pm	2024-01-26 @ 11:00 am	1.4 ± 0.3	2024-01-27
11376184	PRINCIPAL	2024-01-23 @ 12:00 pm	2024-01-26 @ 11:00 am	1.5 ± 0.3	2024-01-27
11376175	RESOURCE ROOM A	2024-01-23 @ 12:00 pm	2024-01-26 @ 11:00 am	1.5 ± 0.3	2024-01-27
11376174	RESOURCE ROOM B	2024-01-23 @ 12:00 pm	2024-01-26 @ 11:00 am	1.5 ± 0.3	2024-01-27
11376110	RESOURCE ROOM F	2024-01-23 @ 1:00 pm	2024-01-26 @ 10:00 am	1.3 ± 0.3	2024-01-27
11376130	RESOURCE ROOM G	2024-01-23 @ 1:00 pm	2024-01-26 @ 10:00 am	1.5 ± 0.3	2024-01-27
11376172	ROOM 101	2024-01-23 @ 12:00 pm	2024-01-26 @ 10:00 am	1.5 ± 0.3	2024-01-27
11376173	ROOM 102	2024-01-23 @ 12:00 pm	2024-01-26 @ 10:00 am	1.6 ± 0.3	2024-01-27
11376169	ROOM 103	2024-01-23 @ 12:00 pm	2024-01-26 @ 10:00 am	2.1 ± 0.3	2024-01-27
11376166	ROOM 104	2024-01-23 @ 12:00 pm	2024-01-26 @ 10:00 am	1.5 ± 0.3	2024-01-27
11376159	ROOM 105	2024-01-23 @ 12:00 pm	2024-01-26 @ 10:00 am	1.5 ± 0.3	2024-01-27
11376167	ROOM 106	2024-01-23 @ 12:00 pm	2024-01-26 @ 10:00 am	1.0 ± 0.3	2024-01-27
11376170	ROOM 106B	2024-01-23 @ 12:00 pm	2024-01-26 @ 11:00 am	1.0 ± 0.3	2024-01-27
11376171	ROOM 107	2024-01-23 @ 12:00 pm	2024-01-26 @ 10:00 am	1.6 ± 0.3	2024-01-27
11376164	ROOM 108	2024-01-23 @ 12:00 pm	2024-01-26 @ 10:00 am	1.5 ± 0.3	2024-01-27
11376165	ROOM 108A	2024-01-23 @ 12:00 pm	2024-01-26 @ 10:00 am	1.5 ± 0.3	2024-01-27
11376158	ROOM 109	2024-01-23 @ 12:00 pm	2024-01-26 @ 10:00 am	1.6 ± 0.3	2024-01-27
11376160	ROOM 110	2024-01-23 @ 12:00 pm	2024-01-26 @ 10:00 am	1.3 ± 0.3	2024-01-27
11376157	ROOM 110B	2024-01-23 @ 12:00 pm	2024-01-26 @ 10:00 am	1.2 ± 0.3	2024-01-27
11376163	ROOM 111	2024-01-23 @ 12:00 pm	2024-01-26 @ 10:00 am	1.4 ± 0.3	2024-01-27
11376152	ROOM 111B	2024-01-23 @ 12:00 pm	2024-01-26 @ 11:00 am	1.1 ± 0.3	2024-01-27
11376150	ROOM 112	2024-01-23 @ 12:00 pm	2024-01-26 @ 10:00 am	1.3 ± 0.3	2024-01-27
11376149	ROOM 112B	2024-01-23 @ 12:00 pm	2024-01-26 @ 10:00 am	1.5 ± 0.3	2024-01-27
11376143	ROOM 113	2024-01-23 @ 12:00 pm	2024-01-26 @ 10:00 am	1.5 ± 0.3	2024-01-27
11376144	ROOM 113A	2024-01-23 @ 12:00 pm	2024-01-26 @ 10:00 am	1.4 ± 0.3	2024-01-27
11376156	ROOM 114	2024-01-23 @ 12:00 pm	2024-01-26 @ 10:00 am	1.3 ± 0.3	2024-01-27
11376155	ROOM 115	2024-01-23 @ 12:00 pm	2024-01-26 @ 10:00 am	1.3 ± 0.3	2024-01-27
11376189	ROOM 203	2024-01-23 @ 1:00 pm	2024-01-26 @ 11:00 am	1.4 ± 0.3	2024-01-27
11376187	ROOM 208	2024-01-23 @ 1:00 pm	2024-01-26 @ 11:00 am	1.4 ± 0.3	2024-01-27
11376162	ROOM 213	2024-01-23 @ 1:00 pm	2024-01-26 @ 11:00 am	1.4 ± 0.3	2024-01-27
11376121	SCHOOL COUNSELOR	2024-01-23 @ 1:00 pm	2024-01-26 @ 11:00 am	1.3 ± 0.3	2024-01-27
11376129	SENSORY ROOM	2024-01-23 @ 1:00 pm	2024-01-26 @ 11:00 am	1.5 ± 0.3	2024-01-27

January 27, 2024

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

**CROSBY - IRONTON PUBLIC SCHOOLS
CUYUNA RANGE ELEMENTARY SCHOOL**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11376151	STAFF LOUNGE	2024-01-23 @ 12:00 pm	2024-01-26 @ 11:00 am	1.6 ± 0.3	2024-01-27
11376101	TITLE 1	2024-01-23 @ 1:00 pm	2024-01-26 @ 11:00 am	1.3 ± 0.3	2024-01-27

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

January 27, 2024

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

**CROSBY - IRONTON SCHOOLS
CROSBY - IRONTON HIGH SCHOOL**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11376106	OSTORAGE ROOM A	2024-01-23 @ 7:00 am	2024-01-26 @ 7:00 am	< 0.3	2024-01-27
11376105	OSTORAGE ROOM B	2024-01-23 @ 7:00 am	2024-01-26 @ 7:00 am	< 0.3	2024-01-27

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

January 23, 2024

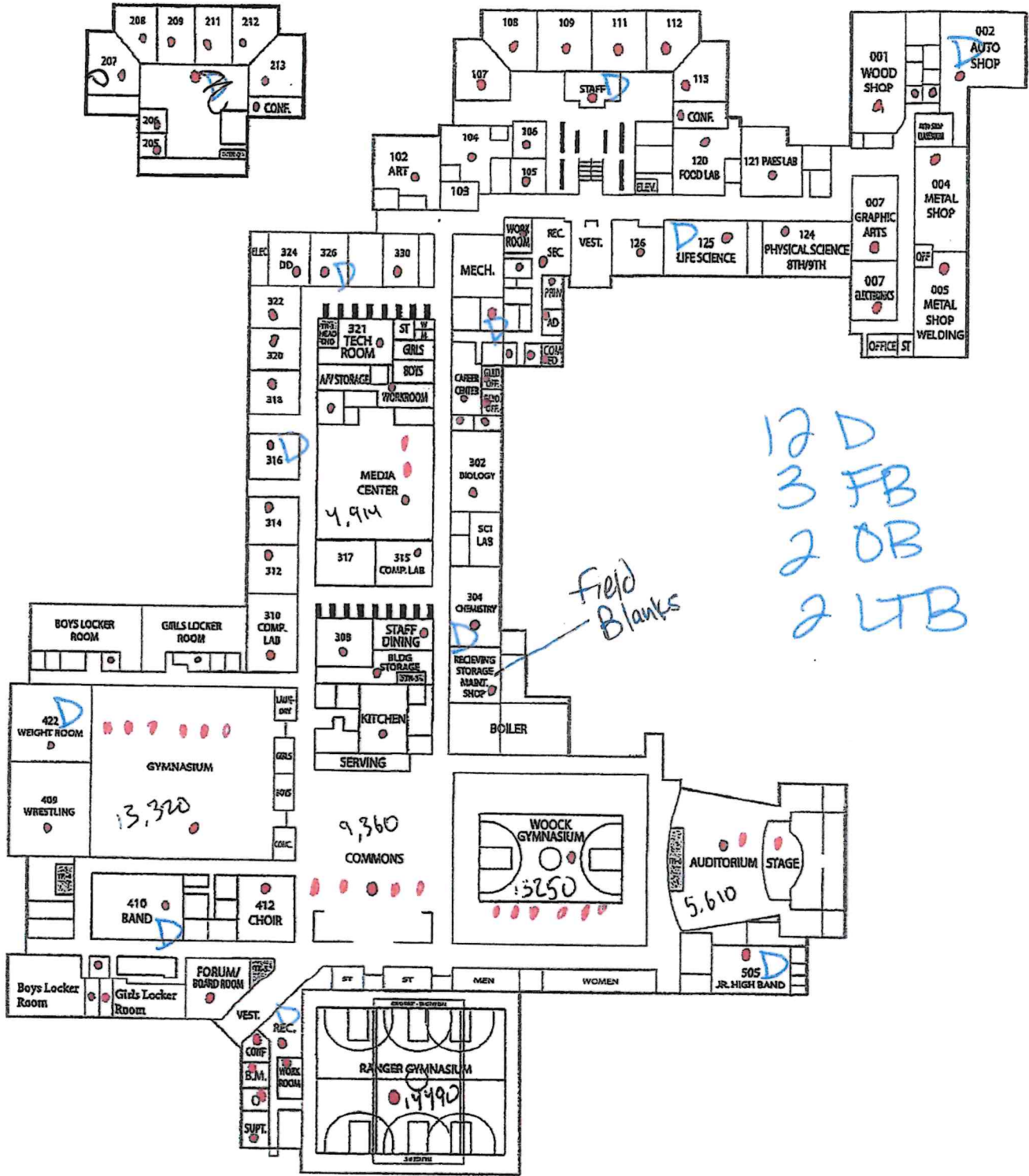
**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:
CROSBY-IRONTON PS
LAB TRANSIT

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11383305	LTNC-1	2024-01-20 @ 12:00 pm	2024-01-22 @ 12:00 pm	< 0.3	2024-01-23
11383306	LTNC-2	2024-01-20 @ 12:00 pm	2024-01-22 @ 12:00 pm	< 0.3	2024-01-23

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

Crosby-Ironton High School

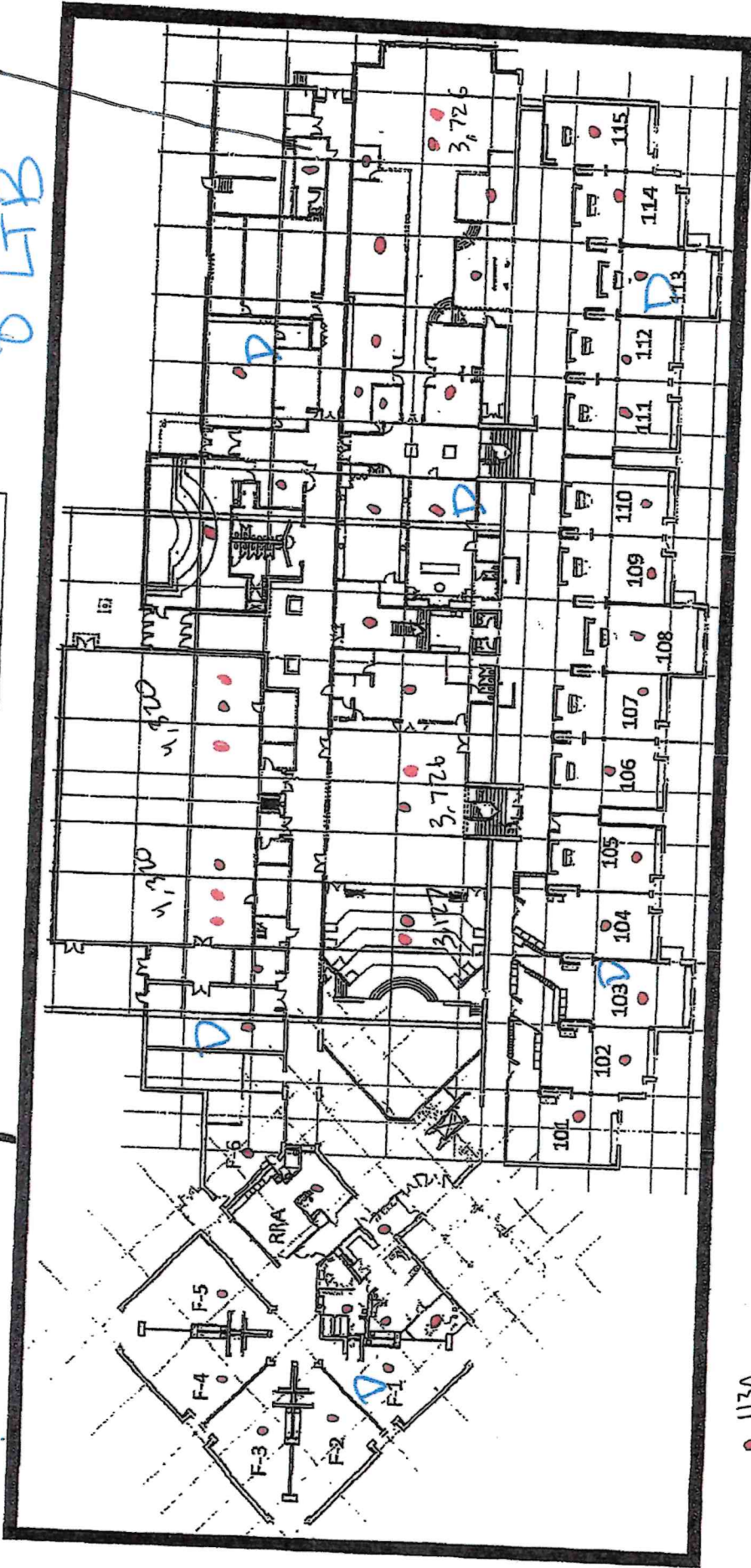


Cuyuna Range Elementary

CRES Main Level

UD
 OFB
 ODB
 OLTB

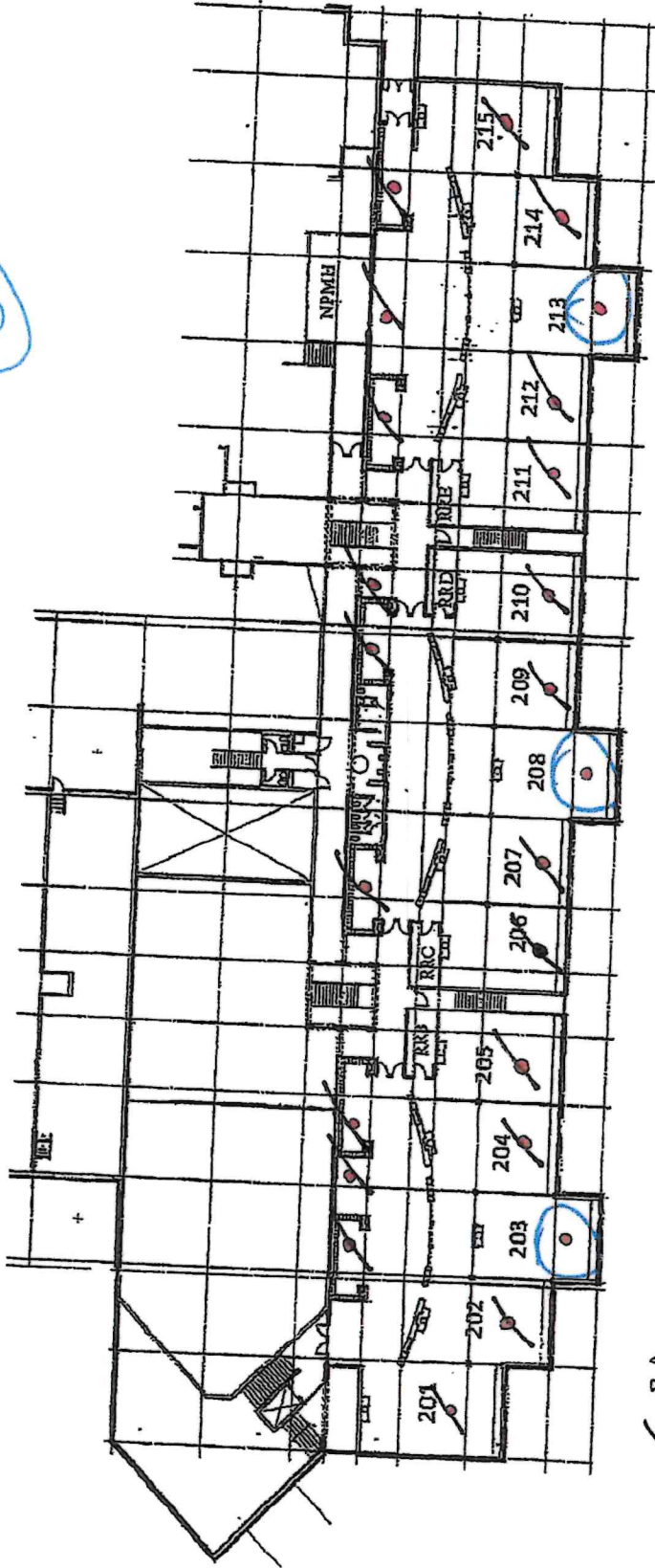
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- 113A
- 112B
- 111B
- 110B
- 109A
- 106B

CRES 2nd Level

3



- 203A
- 205C
- 208A
- 213A

Appendix C

*Signed Non-Interference Agreement
Client Commitments, Advisories, and Authorizations*

NOTICE OF INSPECTION FOR ALL FACILITATING STAFF

A radon test is scheduled for:

Building: Crosby-Ironton High School

Test Start Date: 01-23-2024

Test End Date: 01-26-2024

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 anyway. 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.

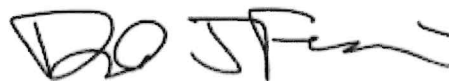
To the best of my knowledge, the required conditions were maintained during the test.

Yes

Name:

Dave Fournier

Signature:



Licensed Measurement Professional:

Grant Chapa RMEA-00039

Building: Cuyuna Range Elementary School
Test Start Date: 01-23-2024 Test End 01-26-2024
Date: _____

- Please help to maintain the required test conditions throughout the building
4. All windows and exterior doors must be kept closed (aside from momentary entry or exit) for 12 hours before and during the test.
 5. Heating and cooling systems must be set to normal occupied operating temperatures.
 6. 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 anyway. 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: Dave Fournier
Signature: 

Licensed Measurement Professional: Grant Chapa RMEA-00039

COMMITMENTS, ADVISORIES, AND AUTHORIZATIONS

I have been informed of test plan options that comply with ANSI/AARST MALB 2014 with 1/2021 Revisions.

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: _____

Building: _____

Name: _____

Title: _____

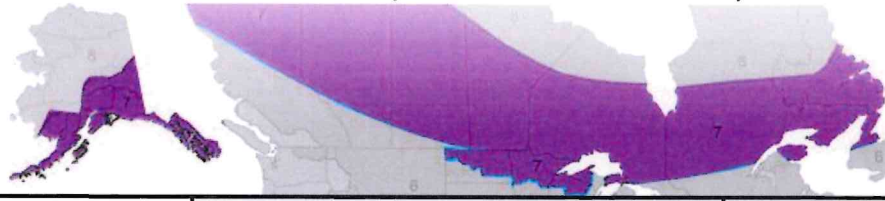
Signature: _____

Date: _____

Appendix D

Average Building Operating Conditions Comparison

Climate Zone 7 (includes Northern MN)



		Averages			During the Test
		24 Hour	Daytime	Daytime 9-Month	Prevailing During the Test
Operating Condition	Outdoor Temperature and Weather Conditions	39 °F	45 °F	N/A	Average: 30°F Minimum: 24°F Maximum: 36°F
	Heating Conditions	83%	75%	100%	100%
	Cooling Conditions	-	-	-	0%
	Mixed Conditions	16%	25%	-	0%
Normal Operating Condition		<ul style="list-style-type: none"> • Heating conditions • No variance in outdoor air ventilation 			<ul style="list-style-type: none"> • Heating conditions • No variance in outdoor air ventilation • Snow or ice present outdoors
Condition less likely to inhibit characterization of a radon hazard		<ul style="list-style-type: none"> • Heating and air distribution systems active 			<ul style="list-style-type: none"> • 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 its tests to the Department of Health. Please use this form to submit information about the most recent round or cycle of testing conducted for each building.

Instructions

1. Complete one form for each building tested. In this case, a building is defined as an occupied facility with a unique address. This includes administrative buildings.
2. Include this form, raw data (e.g. laboratory report) 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, and follow-up testing and post-mitigation testing, if applicable.
4. Email information to health.indoorair@state.mn.us.

Contact Information

Name: WILLIAM J. TOLLEFSON

Mailing Address: 711 POPLAR ST CROSBY MN 56441

Phone: 218 545-8811 Email: btollefson@ci.k12.mn.us

Initial Radon Testing Information

School Building Name: CROSBY-IRONTON HIGH SCHOOL

School District & District Number: CROSBY-IRONTON PUBLIC SCHOOLS ISD# 0182

Building Address: 711 POPLAR ST CROSBY MN 56441

Test Kit Manufacturer: AIR CHECK Device Name: CHECK PRO CHECK

Date of Kit Retrieval (DD/MM/YY): 01/20/24 Length of Test (days): 3

How many rooms were tested? 92 using 126 kits

Does the test period include weekends? Yes No

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

SCHOOL RADON TESTING REPORTING FORM

Were all frequently-occupied ground contact rooms tested?¹ Yes No

If no, did you attempt to test all frequently occupied ground contact rooms, meaning test kits were placed in all these rooms? Yes No

How many rooms had results ≥ 4 pCi/L?: 0

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

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

If one or more rooms tested ≥ 4 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 that had test results ≥ 4 pCi/L, how many rooms were:

mitigated by HVAC balancing or operational changes? :

mitigated by installation of active soil depressurization?:

addressed through other corrective measures?²:

What was the cost of the installation and/or HVAC service work, to mitigate radon? \$

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

After radon mitigation, how many rooms were retested?:

Post mitigation results (# of rooms) ≥ 4 pCi/L: < 4 pCi/L:

¹ This includes classrooms, offices, break rooms, laboratories, cafeterias, libraries, auditoriums, gymnasiums, etc. It includes rooms on grade and rooms above unoccupied spaces that are in contact with the ground, such as rooms above storage rooms, crawl spaces, tunnels, and boiler rooms. If only a sample or portion of rooms were tested, then respond with 'no'.

² 'Other corrective measures' could include moving staff out of a room and making a room unoccupied or trying to seal radon entry points.

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 its tests to the Department of Health. Please use this form to submit information about the most recent round or cycle of testing conducted for each building.

Instructions

1. Complete one form for each building tested. In this case, a building is defined as an occupied facility with a unique address. This includes administrative buildings.
2. Include this form, raw data (e.g. laboratory report) 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, and follow-up testing and post-mitigation testing, if applicable.
4. Email information to health.indoorair@state.mn.us.

Contact Information

Name: WILLIAM J. TOLLEFSON
Mailing Address: 711 POPLAR ST CROSBY MN 56441
Phone: 218 545-8811 Email: btollefson@ci.k12.mn.us

Initial Radon Testing Information

School Building Name: CUYUNA RANGE ELEMENTARY SCHOOL
School District & District Number: CROSBY-IRONTON PUBLIC SCHOOLS ISD # 182
Building Address: 509 6th AVE NE, CROSBY MN 56441
Test Kit Manufacturer: AIR CHECK Device Name: CHECK PRO CHECK
Date of Kit Retrieval (DD/MM/YY): 01/26/24 Length of Test (days): 3
How many rooms were tested? 49 rooms using 74 kits
Does the test period include weekends? Yes No
Does the test period include school breaks or holidays? Yes No

SCHOOL RADON TESTING REPORTING FORM

Were all frequently-occupied ground contact rooms tested?¹ Yes No

If no, did you attempt to test all frequently occupied ground contact rooms, meaning test kits were placed in all these rooms? Yes No

How many rooms had results ≥ 4 pCi/L?: 0

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

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

If one or more rooms tested ≥ 4 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 that had test results ≥ 4 pCi/L, how many rooms were:

mitigated by HVAC balancing or operational changes? :

mitigated by installation of active soil depressurization?:

addressed through other corrective measures?²:

What was the cost of the installation and/or HVAC service work, to mitigate radon? \$

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

After radon mitigation, how many rooms were retested?:

Post mitigation results (# of rooms) ≥ 4 pCi/L: < 4 pCi/L:

¹ This includes classrooms, offices, break rooms, laboratories, cafeterias, libraries, auditoriums, gymnasiums, etc. It includes rooms on grade and rooms above unoccupied spaces that are in contact with the ground, such as rooms above storage rooms, crawl spaces, tunnels, and boiler rooms. If only a sample or portion of rooms were tested, then respond with 'no'.

² 'Other corrective measures' could include moving staff out of a room and making a room unoccupied or trying to seal radon entry points.