

January 7, 2021

Mr. Jamie Goebel
Lyle Public School
700 - 2nd Street
Lyle, MN 55953




**RE: Lyle Public School
Short-Term Radon Testing Results
IEA Project #202010132**

Dear Mr. Goebel:

IEA placed seventy-six (76) Air Chek Pro Chek short-term radon test kits in the Lyle Public School building for the purpose of evaluating radon levels.

The radon samples were placed & retrieved by the following certified radon measurement professional:

Craig English	Certification Number: RMEA-00038	Signature: 
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Conditions of air intakes were good and the ventilation system was operating in good condition at the time of placement and retrieval.

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.

IEA placed seventy-six (76) Air Chek Pro Chek short-term radon test kits in frequently occupied areas in the Lyle Public School building for the purpose of sampling for radon in accordance with the MDH's *Guidance for Radon Testing in Minnesota Schools* (2018) and ANSI/AARST 'Protocol for Conducting Measurements of Radon and Radon Decay Products in Schools and Large Buildings' (ANSI/AARST MALB 2014). A total of seventy-six (76) radon test kits were placed from December 14, 2020, to December 17, 2020, 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 sampling and analysis methodologies are provided in Appendix A. IEA followed ANSI/AARST MALB 2014 for quality assurance measurements by including duplicate kits, control kits (blanks), and spiked kits.

INSTITUTE FOR ENVIRONMENTAL ASSESSMENT, INC.
www.ieasafety.com

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

EVALUATION CRITERIA

The MDH and the EPA have established a recommended action level in frequently occupied areas of 4.0 picocuries per liter (pCi/L) for an annual average. **Testing was conducted during school days, although the building was not significantly occupied as classes were being held virtually in a “Distance Learning” model. However, for the duration of the testing period, the HVAC system was set as it normally is during school days with standard occupancy.** 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 (<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 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, which includes a map of the building with sampling locations marked, is provided in Appendix B. The chain of custody cover page is also provided in Appendix B. Following are summary results for the following building.

Lyle Public School
700 - 2nd Street
Lyle, MN 55953

A total of seventy-six (76) test kits were placed at the Lyle Public School. The results ranged from below the level of detection (<0.3 pCi/L) to 1.7 pCi/L. The results indicated that radon levels were below the action level of 4 pCi/L. See Table 1 below for a summary of the results:

TABLE 1: Lyle Public School Building 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	76	0	0	0
All below action level				

pCi/L: picocuries per liter

CONCLUSIONS & 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 sale of the building.
- In addition, be certain to test again when any of the following circumstances occur:
 - A new addition is constructed, or a significant renovation occurs.
 - A ground contact area not previously tested is occupied.
 - 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 may 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 appear 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 a “worst case” condition.
- 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

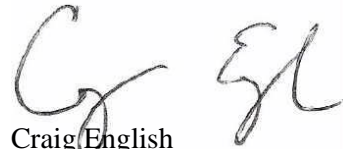
The analysis and opinions expressed in this report are based upon data obtained from radon sampling and are representative of the locations and time period sampled. This report does not reflect variations in conditions that may occur across the site, property, or facility. Actual conditions may vary 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 #8666 dated December 23, 2019, regarding radon sampling services at the district locations, including the General Conditions attached thereto, no warranties are extended or made.

IEA appreciates the opportunity to submit this analysis to the district. 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.

A handwritten signature in black ink, appearing to read 'Craig English', is written over a faint, light gray rectangular background.

Craig English
EHS Account Manager

KW/khb 01072021

Enc.

Appendix A

Methodology and Quality Control Measurements

Sampling 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. The kit is placed during normal occupancy HVAC operations and 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 MALB 2014 Quality Control Measurements

IEA followed ANSI/AARST MALB 2014 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).

ANSI/AARST MALB 2014 requires the reporting of duplicate measurements and their average, as shown in Table 2.

Table 2: Duplicate Device Measurements and Averages			
Location	Test 1 (pCi/L)	Test 2 (pCi/L)	Average (pCi/L)
Room A135	1.5	1.3	1.4
Room A144	0.7	<0.3	0.5
Room A157	1.0	1.7	1.4
Room B116-Staff Workroom	0.6	<0.3	0.4
Room B129	0.7	<0.3	0.5
Room C122	<0.3	<0.3	<0.3
Room C127	<0.3	0.8	0.5

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. See Table 3 for blanks results.

Table 3: Blanks				
Date	Device ID	Type of Blank	Description	Radon Concentration
12/14/2020	9399787	Field	FB129	<0.3
12/14/2020	9399790	Field	FB133	<0.3
12/14/2020	9399781	Field	FC118	<0.3
12/14/2020	9399789	Office	OB111	<0.3
12/14/2020	9399774	Office	OC111	<0.3
12/14/2020	9399782	Office	OC138	<0.3
12/12/2020	9399842	Office	BStorage Room A	<0.3
12/8/2020	9399712	Lab-Transit	LTSTORAGE ROOM A	<0.3
12/8/2020	9399715	Lab-Transit	LTSTORAGE ROOM B	<0.3
12/8/2020	9399716	Lab-Transit	LTSTORAGE ROOM C	<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. See Table 4 for the spiked results.

Table 4: Spiked Detectors			
Date	Device ID	Measured Value (pCi/L)	Reference Value (pCi/L)
12/12/2020	9399884	29.9	25.7
12/12/2020	9362694	27.5	25.7
12/12/2020	9363650	30.7	25.7
12/12/2020	9399834	27.8	25.7

Appendix B

*Chain-of-Custody Cover Page,
Laboratory Report, and Map*

Chain-of-Custody Cover Page

This document should be included in the shipment to Air Chek

IEA, Inc.

9201 West Broadway, Suite 600
Brooklyn Park, MN 55445
763-315-7900

Device Type: AirChek Pro Chek

Project Number: 202010132

District: Lyle Public Schools

Project Manager: Craig English

Date(s) Disbursed: 12-14-2020

Date(s) Retrieved: 12-17-2020

Disbursing
Measurement
Professional Name: Craig English, RMEA-00038

Signature: 

Retrieving
Measurement
Professional Name: Craig English, RMEA-00038

Signature: 

Date sent to Analytical Lab: 12-17-2020

Date Lab Received: _____

Tracking Number: 1Z E84 7W4 03 9Y59 6306 Received by: _____

Radon test result report for:**LYLE PUBLIC SCHOOL
LYLE SCHOOL**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
9399740	A116	2020-12-14 @ 10:00 am	2020-12-17 @ 9:00 am	0.8 ± 0.5	2020-12-22
9399748	A127	2020-12-14 @ 10:00 am	2020-12-17 @ 9:00 am	0.9 ± 0.4	2020-12-22
9399777	A139	2020-12-14 @ 10:00 am	2020-12-17 @ 9:00 am	0.7 ± 0.5	2020-12-22
9399765	A141	2020-12-14 @ 10:00 am	2020-12-17 @ 9:00 am	< 0.3	2020-12-22
9399773	A143	2020-12-14 @ 10:00 am	2020-12-17 @ 9:00 am	1.1 ± 0.5	2020-12-22
9399785	A155 GYM-1	2020-12-14 @ 10:00 am	2020-12-17 @ 9:00 am	1.1 ± 0.5	2020-12-22
9399783	A155 GYM-2	2020-12-14 @ 10:00 am	2020-12-17 @ 9:00 am	0.6 ± 0.4	2020-12-22
9399778	A155 GYM-3	2020-12-14 @ 10:00 am	2020-12-17 @ 9:00 am	0.9 ± 0.5	2020-12-22
9399784	A155 GYM-4	2020-12-14 @ 10:00 am	2020-12-17 @ 9:00 am	0.8 ± 0.4	2020-12-22
9399739	B111	2020-12-14 @ 10:00 am	2020-12-17 @ 9:00 am	0.8 ± 0.4	2020-12-22
9399717	B118 - NURSES OFFICE	2020-12-14 @ 9:00 am	2020-12-17 @ 9:00 am	0.6 ± 0.5	2020-12-22
9399718	B121	2020-12-14 @ 9:00 am	2020-12-17 @ 9:00 am	< 0.3	2020-12-22
9399728	B125	2020-12-14 @ 9:00 am	2020-12-17 @ 9:00 am	< 0.3	2020-12-22
9399720	B126	2020-12-14 @ 9:00 am	2020-12-17 @ 9:00 am	0.8 ± 0.5	2020-12-22
9399719	B127 MAIN OFFICE	2020-12-14 @ 9:00 am	2020-12-17 @ 9:00 am	< 0.3	2020-12-22
9399767	B133	2020-12-14 @ 10:00 am	2020-12-17 @ 9:00 am	0.8 ± 0.5	2020-12-22
9399752	B134	2020-12-14 @ 9:00 am	2020-12-17 @ 9:00 am	< 0.3	2020-12-22
9399753	B135	2020-12-14 @ 10:00 am	2020-12-17 @ 9:00 am	0.5 ± 0.4	2020-12-22
9399754	B136	2020-12-14 @ 10:00 am	2020-12-17 @ 9:00 am	0.6 ± 0.4	2020-12-22
9399759	B137	2020-12-14 @ 10:00 am	2020-12-17 @ 9:00 am	< 0.3	2020-12-22
9399760	B138	2020-12-14 @ 10:00 am	2020-12-17 @ 9:00 am	< 0.3	2020-12-22
9399761	B139	2020-12-14 @ 10:00 am	2020-12-17 @ 9:00 am	< 0.3	2020-12-22
9399762	B140	2020-12-14 @ 10:00 am	2020-12-17 @ 9:00 am	1.1 ± 0.5	2020-12-22
9399732	B142	2020-12-14 @ 10:00 am	2020-12-17 @ 9:00 am	< 0.3	2020-12-22
9399747	B153	2020-12-14 @ 10:00 am	2020-12-17 @ 9:00 am	< 0.3	2020-12-22
9399731	B154 GYM-1	2020-12-14 @ 10:00 am	2020-12-17 @ 9:00 am	< 0.3	2020-12-22
9399776	B154 GYM-2	2020-12-14 @ 10:00 am	2020-12-17 @ 9:00 am	< 0.3	2020-12-22
9399775	B154 GYM-3	2020-12-14 @ 10:00 am	2020-12-17 @ 9:00 am	< 0.3	2020-12-22
9399714	B154 GYM-4	2020-12-14 @ 10:00 am	2020-12-17 @ 9:00 am	< 0.3	2020-12-22
9399722	C111	2020-12-14 @ 9:00 am	2020-12-17 @ 9:00 am	0.6 ± 0.5	2020-12-22
9399721	C115	2020-12-14 @ 9:00 am	2020-12-17 @ 9:00 am	< 0.3	2020-12-22
9399729	C118	2020-12-14 @ 9:00 am	2020-12-17 @ 9:00 am	0.7 ± 0.4	2020-12-22
9399727	C119	2020-12-14 @ 9:00 am	2020-12-17 @ 9:00 am	0.6 ± 0.4	2020-12-22
9399736	C121	2020-12-14 @ 9:00 am	2020-12-17 @ 9:00 am	< 0.3	2020-12-22
9399738	C123	2020-12-14 @ 9:00 am	2020-12-17 @ 9:00 am	< 0.3	2020-12-22
9399735	C124	2020-12-14 @ 9:00 am	2020-12-17 @ 9:00 am	< 0.3	2020-12-22
9399744	C125	2020-12-14 @ 9:00 am	2020-12-17 @ 9:00 am	0.7 ± 0.4	2020-12-22

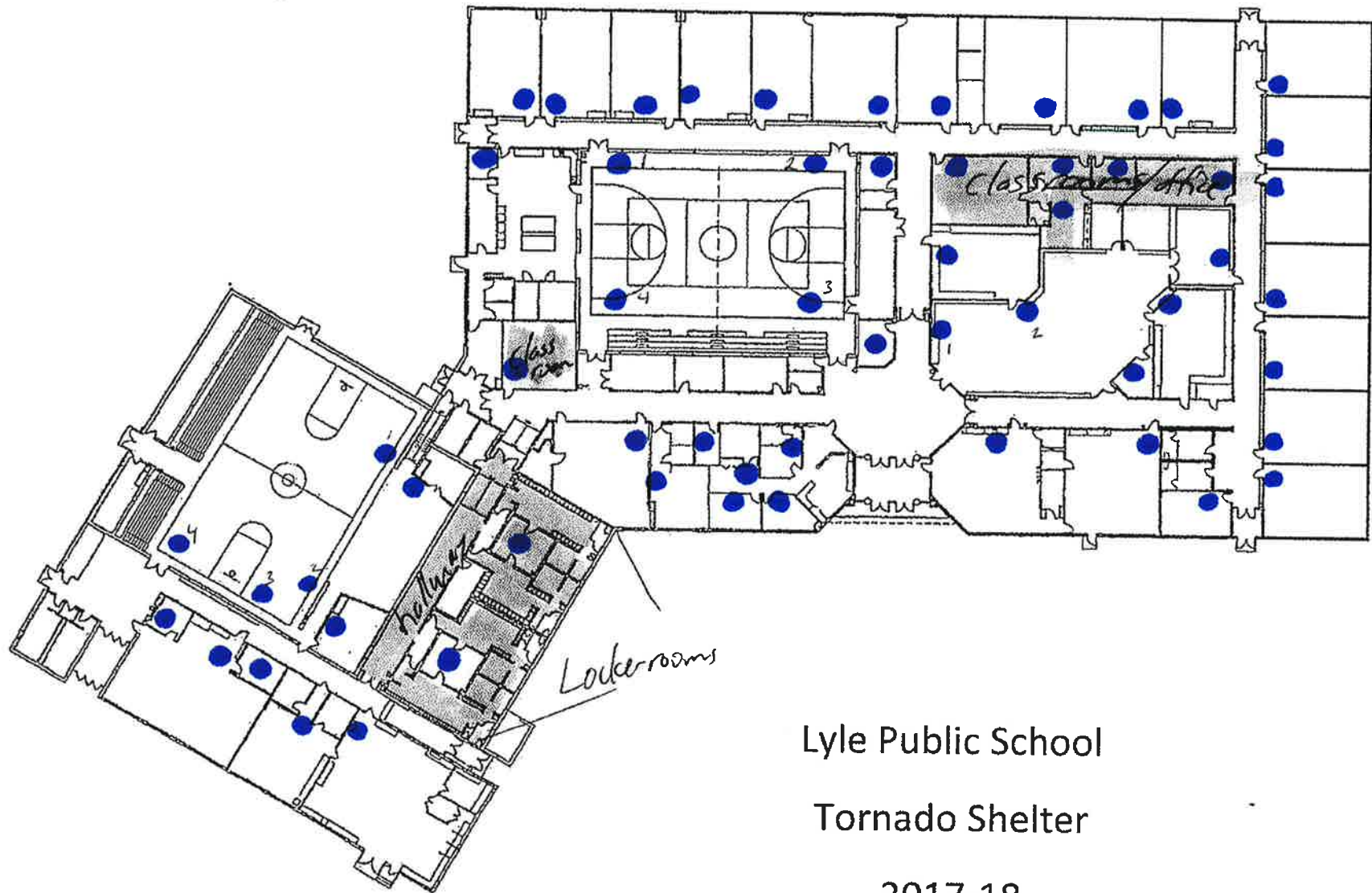
Radon test result report for:

LYLE PUBLIC SCHOOL**LYLE SCHOOL**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
9399743	C126	2020-12-14 @ 9:00 am	2020-12-17 @ 9:00 am	< 0.3	2020-12-22
9399733	C128	2020-12-14 @ 9:00 am	2020-12-17 @ 9:00 am	0.5 ± 0.4	2020-12-22
9399746	C129	2020-12-14 @ 9:00 am	2020-12-17 @ 9:00 am	< 0.3	2020-12-22
9399751	C135	2020-12-14 @ 10:00 am	2020-12-17 @ 9:00 am	0.5 ± 0.4	2020-12-22
9399750	C136	2020-12-14 @ 10:00 am	2020-12-17 @ 9:00 am	< 0.3	2020-12-22
9399768	C137 MEDIA CENTER -1	2020-12-14 @ 10:00 am	2020-12-17 @ 9:00 am	0.9 ± 0.5	2020-12-22
9399769	C137 MEDIA CENTER -2	2020-12-14 @ 10:00 am	2020-12-17 @ 9:00 am	< 0.3	2020-12-22
9399770	C138	2020-12-14 @ 10:00 am	2020-12-17 @ 9:00 am	0.5 ± 0.4	2020-12-22
9399757	C141	2020-12-14 @ 10:00 am	2020-12-17 @ 9:00 am	< 0.3	2020-12-22
9399725	C142	2020-12-14 @ 9:00 am	2020-12-17 @ 9:00 am	< 0.3	2020-12-22
9399726	C143	2020-12-14 @ 9:00 am	2020-12-17 @ 9:00 am	< 0.3	2020-12-22
9399741	C144	2020-12-14 @ 9:00 am	2020-12-17 @ 9:00 am	< 0.3	2020-12-22
9399742	C145	2020-12-14 @ 9:00 am	2020-12-17 @ 9:00 am	< 0.3	2020-12-22
9399755	DA135-1	2020-12-14 @ 10:00 am	2020-12-17 @ 9:00 am	1.5 ± 0.5	2020-12-22
9399756	DA135-2	2020-12-14 @ 10:00 am	2020-12-17 @ 9:00 am	1.3 ± 0.5	2020-12-22
9399766	DA144-1	2020-12-14 @ 10:00 am	2020-12-17 @ 9:00 am	0.7 ± 0.5	2020-12-22
9399758	DA144-2	2020-12-14 @ 10:00 am	2020-12-17 @ 9:00 am	< 0.3	2020-12-22
9399791	DA157-1	2020-12-14 @ 10:00 am	2020-12-17 @ 9:00 am	1.0 ± 0.5	2020-12-22
9399792	DA157-2	2020-12-14 @ 10:00 am	2020-12-17 @ 9:00 am	1.7 ± 0.5	2020-12-22
9399723	DB116 - STAFF WORKROOM-1	2020-12-14 @ 9:00 am	2020-12-17 @ 9:00 am	0.6 ± 0.5	2020-12-22
9399724	DB116- STAFF WORKROOM-2	2020-12-14 @ 9:00 am	2020-12-17 @ 9:00 am	< 0.3	2020-12-22
9399749	DB129-1	2020-12-14 @ 10:00 am	2020-12-17 @ 9:00 am	0.7 ± 0.5	2020-12-22
9399772	DB129-2	2020-12-14 @ 11:00 am	2020-12-17 @ 9:00 am	< 0.3	2020-12-22
9399730	DC122-1	2020-12-14 @ 9:00 am	2020-12-17 @ 9:00 am	< 0.3	2020-12-22
9399737	DC122-2	2020-12-14 @ 9:00 am	2020-12-17 @ 9:00 am	< 0.3	2020-12-22
9399745	DC127-1	2020-12-14 @ 9:00 am	2020-12-17 @ 9:00 am	< 0.3	2020-12-22
9399734	DC127-2	2020-12-14 @ 9:00 am	2020-12-17 @ 9:00 am	0.8 ± 0.5	2020-12-22
9399763	DC147-1	2020-12-14 @ 11:00 am	2020-12-17 @ 9:00 am	< 0.3	2020-12-22
9399771	DC147-2	2020-12-14 @ 11:00 am	2020-12-17 @ 9:00 am	< 0.3	2020-12-22
9399787	FB129	2020-12-14 @ 11:00 am	2020-12-17 @ 9:00 am	< 0.3	2020-12-22
9399790	FB133	2020-12-14 @ 11:00 am	2020-12-17 @ 9:00 am	< 0.3	2020-12-22
9399781	FC118	2020-12-14 @ 11:00 am	2020-12-17 @ 9:00 am	< 0.3	2020-12-22
9399789	OB111	2020-12-14 @ 11:00 am	2020-12-17 @ 9:00 am	< 0.3	2020-12-22
9399774	OC111	2020-12-14 @ 11:00 am	2020-12-17 @ 9:00 am	< 0.3	2020-12-22
9399782	OC138	2020-12-14 @ 11:00 am	2020-12-17 @ 9:00 am	< 0.3	2020-12-22
9399786	STAGE	2020-12-14 @ 10:00 am	2020-12-17 @ 9:00 am	1.1 ± 0.4	2020-12-22

Radon

● — Sample Location



Lyle Public School

Tornado Shelter

2017-18

Appendix C

Signed Non-Interference Agreement

NOTICE OF INSPECTION FOR ALL FACILITATING STAFF

A radon test is scheduled for:

Building: Lyle School

Test Start Date: 12-14-2020 Test End Date: 12-17-2020

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 ☒ No ☐

Name: JOEL JOHNSON

Signature: 

For more information regarding on-site activities, contact:

Licensed Measurement Professional:

Appendix D

Weather Report for Testing Days



CUSTOMIZED WEATHER HISTORY FOR LYLE, MINNESOTA

You're signed in as a subscriber to our Customized Weather History; if you're on a shared computer, [please logout when you're done.](#)

You can search for weather history in two ways:

- **Range of Dates** search allows you to search for a *consecutive range of dates* and is good if you want to know day by day history for a certain period of time, like "January 1 to January 15, 2008".
- **Same Dates Over a Range of Years** is good when you have a specific time of year—perhaps your wedding day, or a summer vacation, or harvest time—and you want to search for the weather over multiple years *for just those dates*. For example, "August 1 to 5 every year from 1970 to 1980."

Location *

55953

ZIP/Postal Code or City,State

[Range of Dates](#)

To search a consecutive range of dates, select a start and end date.

Month Day Year

Dec 14 2020

to

Month Day Year

Dec 17 2020

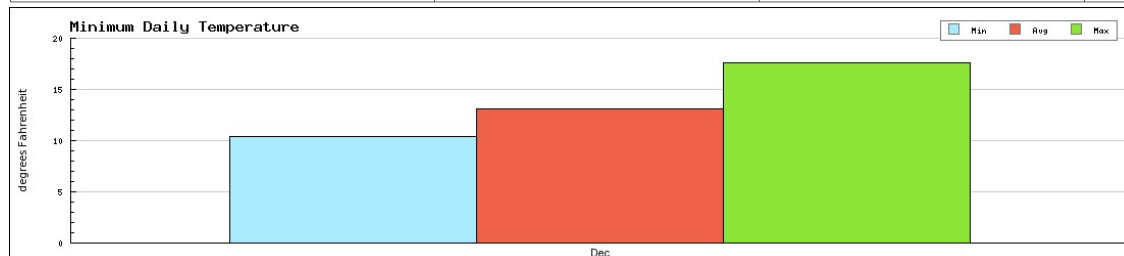
Latest data available: December 22, 2020.

[GO: Search by Range of Dates](#)

[Same Dates Over a Range of Years](#)

WEATHER FROM DECEMBER 14, 2020 TO DECEMBER 17, 2020

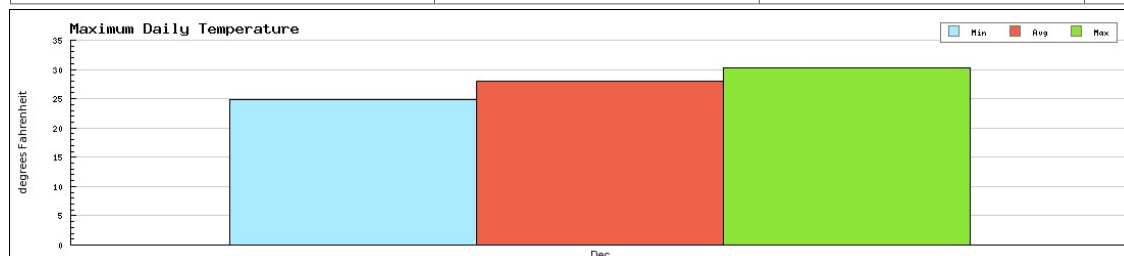
TEMPERATURE	LOW	AVERAGE	HIGH
Minimum Daily Data for 4 days. Download raw data	10.4°F (Dec 14, 2020)	13.1°F	17.6°F (Dec 17, 2020)



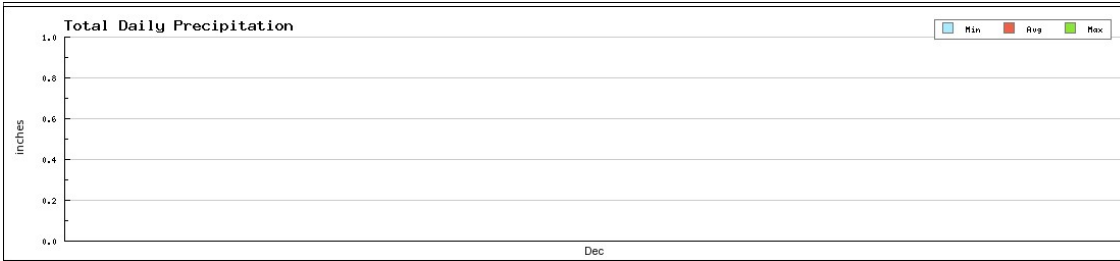
Average Daily Data for 4 days. Download raw data	17.7°F (Dec 15, 2020)	20.1°F	22.4°F (Dec 17, 2020)
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Maximum Daily Data for 4 days. Download raw data	24.8°F (Dec 15, 2020)	27.9°F	30.2°F (Dec 17, 2020)
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PRECIPITATION	LOW	AVERAGE	HIGH
Total Daily Data for 4 days. Download raw data	0.00 IN (Dec 14, 2020)	0.00 IN	0.00 IN (Dec 14, 2020)

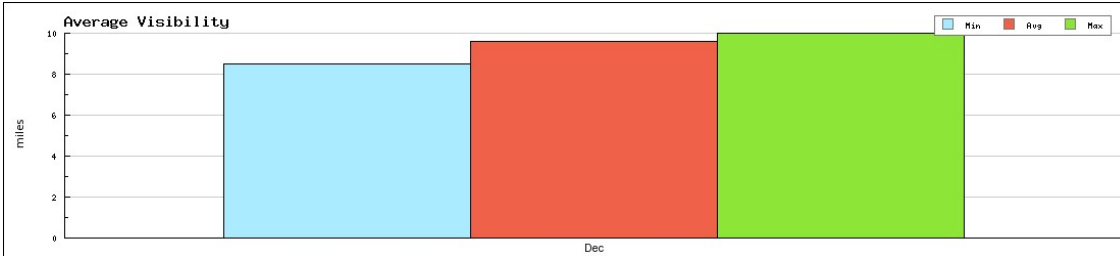


Note: Total Daily Precipitation is not reported by all stations on all days and there are situations where a value is not reported here, but an **Occurrence** of rain or snow is noted below, or vice versa.

Average Dew Point Data for 4 days. Download raw data	6.0 °F (Dec 15, 2020)	12.1 °F	18.3 °F (Dec 17, 2020)
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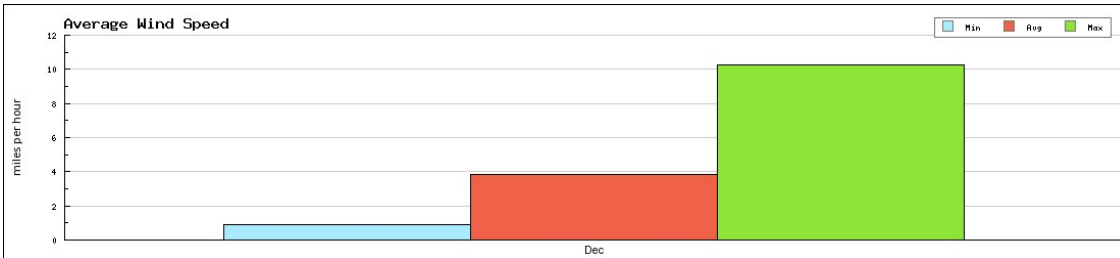
Average Visibility Data for 4 days. Download raw data	8.5 MI (Dec 17, 2020)	9.6 MI	10.0 MI (Dec 14, 2020)
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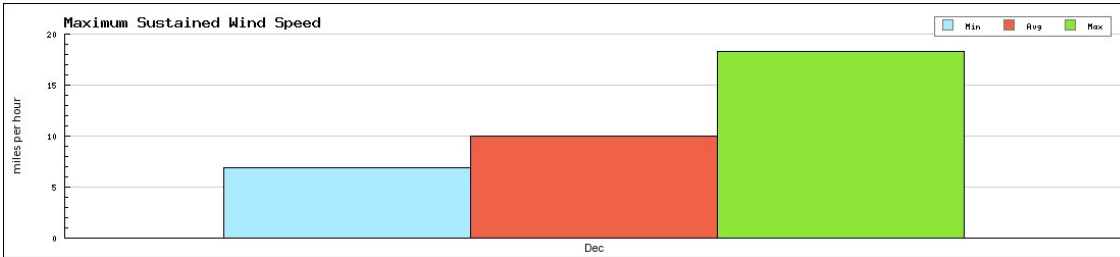
Snow Depth Data not available.	n/a	n/a	n/a
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Note: Snow Depth is not reported by all stations on all days and there are situations where there was actually snow on the ground, but this value is not reported. Note carefully the number of days for which this value is reported.

WIND	LOW	AVERAGE	HIGH
Average Daily Data for 4 days. Download raw data	0.92 MPH (Dec 16, 2020)	3.83 MPH	10.24 MPH (Dec 14, 2020)



Maximum Daily Data for 4 days. Download raw data	6.90 MPH (Dec 15, 2020)	10.04 MPH	18.30 MPH (Dec 14, 2020)
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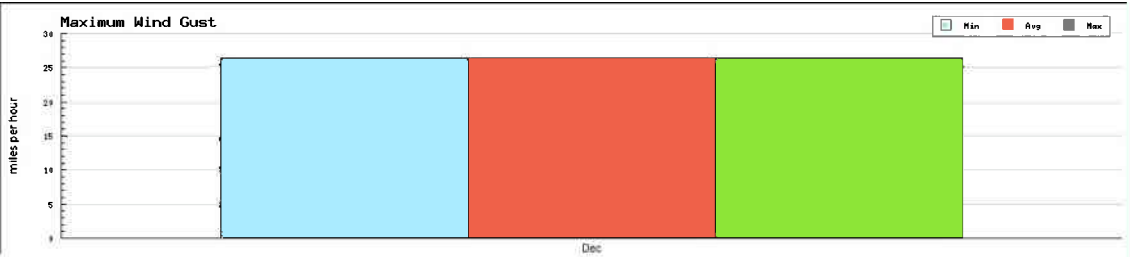


Maximum Daily Gust Data for 1 days. Download raw data	26.35 MPH (Dec 14, 2020)	26.35 MPH	26.35 MPH (Dec 14, 2020)
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PRESSURE	LOW	AVERAGE	HIGH
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Sea Level Pressure Data not available.	n/a	n/a	n/a
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OCCURRENCES	DAYS	PERCENTAGE
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Fog

Rain	0 of 4	0%
Snow	1 of 4	25%
Hail	0 of 4	0%
Thunder	0 of 4	0%
Tornado	0 of 4	0%

Note: Not all occurrence of all weather events are reported for all stations. There are situations, for example, where an **Occurrence** of rain will be reported, but no **Total Daily Precipitation** logged.

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:	
Mailing Address:	
Phone:	Email:

Initial Radon Testing Information

School Building Name:	
School District & District Number:	
Building Address:	
Test Kit Manufacturer:	Device Name:
Date of Kit Retrieval (DD/MM/YY):	Length of Test (days):
How many rooms were tested?	
Does the test period include weekends? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Does the test period include school breaks or holidays? <input type="checkbox"/> Yes <input type="checkbox"/> No	

SCHOOL RADON TESTING REPORTING FORM

<p>Were all frequently-occupied ground contact rooms tested?¹ <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p style="padding-left: 40px;">If no, did you attempt to test all frequently occupied ground contact rooms, meaning test kits were placed in all these rooms? <input type="checkbox"/> Yes <input type="checkbox"/> No</p>
<p>How many rooms had results ≥ 4 pCi/L?:</p>
<p>Were the results reported at a school board meeting? <input type="checkbox"/> Yes <input type="checkbox"/> No</p>

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

If one or more rooms tested ≥ 4 pCi/L, please answer the questions below:

<p>How many rooms had follow-up testing?:</p>		
<p>Number of rooms with follow-up results</p>	<p>≥ 4 pCi/L:</p>	<p>< 4 pCi/L:</p>
<p>Of the rooms that had test results ≥ 4 pCi/L, how many rooms were:</p>		
<p>mitigated by HVAC balancing or operational changes? :</p>		
<p>mitigated by installation of active soil depressurization?:</p>		
<p>addressed through other corrective measures?²:</p>		
<p>What was the cost of the installation and/or HVAC service work, to mitigate radon? \$</p>		
<p>What is the known or anticipated annual operating cost of mitigation (estimate)? \$</p>		
<p>After radon mitigation, how many rooms were retested?:</p>		
<p>Post mitigation results (# of rooms)</p>	<p>≥ 4 pCi/L:</p>	<p>< 4 pCi/L:</p>

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.