SHIVEHATTERY
ARCHITECTURE + ENGINEERING

March 23, 2023

Clear Creek Amana Community School District
ATTN: Mr. Maury Gallagher
1486 Hwy 6 NW, P.O. Box 487
Oxford, IA 52322

RE: Administration Building – Radon Testing

Dear Mr. Gallagher:

Per your request and authorization, Shive-Hattery, Inc. assembled a short-term radon testing plan and completed the testing for the Administration Building outside of Oxford, Iowa. The intent of the testing was to determine the level of radon within all ground contact, occupied areas of the building.

Methods and Procedures

The testing procedure for this project was performed by personnel trained and certified under the National Radon Proficiency Program (NRPP) and State of Iowa Department of Public Health. On May 24, 2022, House File 2412 was signed into law in the State of Iowa. This legislation calls for:

- Establish a radon testing plan.
- Preform short-term testing of all attendance centers by July 1, 2027.
- All buildings will have to be retested once every five years following.
- Radon plans and test results will need to be published to the district website.
- All new school construction must incorporate radon-resistant construction techniques.

The American Association of Radon Scientists and Technologists (AARST) Consortium on National Radon Standards (ANSI/AARST MALB 2014) “Protocol for Conducting Measurements of Radon and Radon Decay Products in Schools and Large Buildings” is the reference standard for this project, which is the recommended protocol in the State of Iowa for schools.

Available drawings were utilized to determine a testing strategy. Samples were collected from each defined testing area, including but not limited to classrooms, offices, gyms, libraries, cafeterias, and other areas of normal occupancy. Pertinent information such as location, date, time, thermostat settings, active mitigation systems, tamper controls, and weather conditions were recorded for each sample. The tests were started after a minimum of 12 hours of closed building conditions.

It is recommended that the testing period represent normal conditions when the building is significantly occupied during the active heating season. The operating condition for this building represents active heating with outdoor temperatures less than or equal to 35°F. Clear characterization of a radon hazard is most likely to be observed under this normal operating condition. Therefore, the test should reasonably characterize radon hazards.

There will be some uncertainty with any measurement result due to statistical variations and other factors such as daily and seasonal variations in radon concentrations. Variations may be due to changes in weather, operation of the building, or possible interference with the necessary test conditions.

Rad Elec E-PERM short-term measurement chambers and electrets were utilized in all tests. The electrets were analyzed for radon using an electron voltage reader (Serial #: E0747) by:

Analyst: Sam Becker
License: RNTST10096
Address: Shive-Hattery
2839 Northgate Drive
Iowa City, Iowa 52245
Phone: (319) 354-3040

Summary of Findings

Short-term testing was completed on March 20-23, 2023, in all ground contact, occupied areas of the building. Blank and duplicate samples were used as a means of quality control. All quality control devices were in normal ranges. Results from the initial testing show that no locations were found to be above 4.0 pCi/L. All results are located at the end of this report.

Recommendations

It is recommended that this building be retested in 5 years according to CCACSD's radon testing program. Retesting is also recommended after a new addition or significant renovation occurs, additional ground floor rooms not previously tested are occupied, heating or cooling systems are significantly altered, natural disasters, or the installation of ground water control or radon mitigation systems.

Radon was found in most rooms tested to some degree. It is important to understand that no level of radon is safe and can cause lung cancer with long exposure. Radon is the second leading cause of lung cancer.

Please call our office if you should have any questions or comments.

Sincerely,

SHIVE-HATTERY, INC.

Samuel S. Becker
Residential Measurement Provider
IA License Number: RNTST10096
NRPP License Number: 108001 RT
Expiration Date: April 30, 2023

SSB/mas

Enc.

Shive-Hattery

2839 Northgate Drive
Iowa City IA 52445
319-354-3040 / 319-248-3405 / 319-530-2456 (cell)
http://www.shive-hattery.com/ / sbecker@shive-hattery.com

Radon Test Report

Batch #: 032323-3

Customer:

Clear Creek Amana Community School District
1486 Hwy 6 NW
Oxford IA 52322

Test Site:

Maury Gallagher
1486 Hwy 6 NW Bldg.- Administration Building
Oxford IA 52322

E-PERM® Electret Ion Chambers were used for short-term radon screening measurements that were conducted at the above referenced test site by: Shive-Hattery

The Results are as follows:

Serial No.	Type	Location	Test Start Date		Test End Date		Results (pCi/L)
SNE858	SST	Superintendent	20-Mar-2023	7:40 AM	23-Mar-2023	6:50 AM	0.9
SNK478	SST	Special Services	20-Mar-2023	7:40 AM	23-Mar-2023	6:50 AM	0.8
SNL467	SST	Accounts Receivable	20-Mar-2023	7:40 AM	23-Mar-2023	6:50 AM	0.6
SNL472	SST	Health	20-Mar-2023	7:40 AM	23-Mar-2023	6:50 AM	0.8
SNL474	SST	DEI	20-Mar-2023	7:40 AM	23-Mar-2023	6:50 AM	0.8
SNL476	SST	Cirriculum	20-Mar-2023	7:40 AM	23-Mar-2023	6:50 AM	1.0
SNL486	SST	Data	20-Mar-2023	7:40 AM	23-Mar-2023	6:50 AM	1.2
SNL494	SST	Cirriculum/Special Services	20-Mar-2023	7:40 AM	23-Mar-2023	6:50 AM	1.0
SNL503	SST	Human Resources	20-Mar-2023	7:40 AM	23-Mar-2023	6:50 AM	0.8
SNL553	SST	Copy Room/Mail	20-Mar-2023	7:40 AM	23-Mar-2023	6:50 AM	1.0
SNL556	SST	Communications	20-Mar-2023	7:40 AM	23-Mar-2023	6:50 AM	0.5
SNL560	SST	Accounting	20-Mar-2023	7:40 AM	23-Mar-2023	6:50 AM	1.0
SNL705	SST	Board Room	20-Mar-2023	7:40 AM	23-Mar-2023	6:50 AM	0.6
SNL744	SST	Accounts Payable	20-Mar-2023	7:40 AM	23-Mar-2023	6:50 AM	1.8
SNM865	SST	Reception	20-Mar-2023	7:40 AM	23-Mar-2023	6:50 AM	1.5
SNM966	SST	Business & Finance	20-Mar-2023	7:40 AM	23-Mar-2023	6:50 AM	0.8
SNL501	SST	Associate Sup.	20-Mar-2023	7:40 AM	23-Mar-2023	6:50 AM	1.3
SNL579	SST	Associate Sup.	20-Mar-2023	7:40 AM	23-Mar-2023	6:50 AM	0.5

Average Radon Concentration in: Associate Sup. 0.9 pCi/L

SNL352	SST	Payroll	20-Mar-2023	7:40 AM	23-Mar-2023	6:50 AM	0.8
SNL680	SST	Payroll	20-Mar-2023	7:40 AM	23-Mar-2023	6:50 AM	0.8

Average Radon Concentration in: Payroll 0.8 pCi/L

Deployed By: Sam Becker 108001 RT
Retrieved By: Sam Becker 108001 RT
Analyzed By: Sam Becker 108001 RT **Reader S/N:** E0747 **Reader Calibration Due:** 01-Nov-2023

Conditions: Requirements for Closed-Building Met
Weather: No Abnormal Weather Conditions
Vents: Open / Fan Auto
Mitigation: No System Installed

Radon Health Risk Information

Radon is the second leading cause of lung cancer after smoking. The U.S. Environmental Protection Agency (EPA) and the Surgeon General strongly recommend that further action be taken when a home's radon test results are 4.0 pCi/L or greater. The national average indoor radon level is about 1.3 pCi/L. The higher the home's radon level, the greater the health risk to you and your family. Reducing your radon levels can be done easily, effectively and fairly inexpensively. Even homes with very high radon levels can be reduced below 4.0 pCi/L. Please refer to the EPA website at www.epa.gov/radon for further information to assist you in evaluating your test results or deciding if further action is needed.