

December 4, 2018



Mr. Tim Bisek
Facilities and Grounds Director
Jordan Public Schools
500 Sunset Drive
Jordan, MN 55352

**RE: Jordan Public Schools
Short-Term Radon Testing Results
IEA Project #201811170**

Dear Mr. Bisek:

As requested by Jordan Public Schools, IEA placed 126 Air Chek short-term radon test kits in the following buildings for the purpose of evaluating radon levels:

- Jordan High School
- Jordan Elementary School
- Jordan Middle School/District Office

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 Air Chek short-term radon test kits in frequently occupied areas in the buildings listed above at Jordan Public School District 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 128 detectors were placed from November 5, 2018 to November 9, 2018 for a total short-term sampling period of 4 days. The detectors were analyzed by Air Chek, Inc. The sampling and analysis methodologies are provided in Appendix A. IEA followed ANSI/AARST MALB 2014 for quality assurance measurements by including duplicate detectors and control detectors (blanks). The detectors were analyzed by Air Chek, Inc. The sampling and analysis methodologies are provided in Appendix A.

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 the heating season, as recommended by the MDH, when the ventilation system was operating normally, and windows and doors were closed. Consequently, sampling under these “closed” conditions should be considered “worst case.” The 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	Consider re-testing 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 sampling locations, is provided in Appendix B. The Chain of Custody is provided in Appendix C. Following are summary results for each building.

Jordan High School

A total of 39 detectors were placed at Jordan High School. One detector in Room N104 was missing when the detectors were collected. The results for the other 38 detectors 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: JORDAN 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	38	1	0	0 ¹
¹ All below action level				

pCi/L: picocuries per liter

Jordan Middle School & District Office

A total of 40 detectors were placed at Jordan Middle School. Three detectors, one each in Rooms 123, 203, and 416 were missing when the detectors were collected. The results for the other 37 detectors indicated that radon levels were below the action level of 4 pCi/L. See Table 2 below for a summary of the results:

TABLE 2: JORDAN 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 Tests	40	0	0	0 ¹
¹ All below action level				

pCi/L: picocuries per liter

Jordan Elementary School

A total of 49 detectors were placed at Jordan Elementary School. The results indicated that radon levels were below the action level of 4 pCi/L. See Table 3 below for a summary of the results:

TABLE 3: JORDAN 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	49	0	0	0 ¹
¹ 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:

- Retest the building at least every 5 years and in conjunction with any sale of a 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 occur due to:
 - Ground water or slab surface water control systems (e.g., sumps, perimeter drain tile, shower/tub retrofits, etc.) or
 - Natural settlement causing major cracks to develop
 - Earthquakes, construction blasting, or formation of sink holes nearby or
 - 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 D.

GENERAL COMMENTS

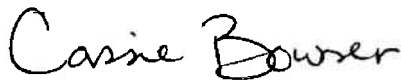
The analysis and opinions expressed in this report are based upon data obtained from radon sampling district-wide and are representative of the locations and time period sampled. This report does not reflect variations in conditions that may occur across the site, property, or facility. Actual conditions 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 #7585 dated October 22, 2018 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 Jordan Public Schools. 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.



Cassie Bowser
Project Manager

CB/tjw 120418
Enc.

Appendix A

Methodology

Sampling Methodology

IEA provided 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 48 to 96 hours of indoor exposure.

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 Quality Assurance Measurements

IEA followed MDH recommendations for quality assurance measurements to ensure the accuracy of test results. Quality assurance measurements include side-by-side detectors (duplicates) and unexposed control detectors (blanks).

Duplicates are pairs of detectors placed 4"-12" 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 detectors 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, all measurements are questionable.

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 detectors so that the laboratory cannot distinguish them. Since blanks are not exposed to radon, their measurement value should be 0.0.

Spike testing is conducted internally by Air Chek Inc. as part of their lab accreditation. IEA submits "spikes" to Air Chek, Inc. as part of their internal Quality Control Plan. "Spikes" are shipped to the laboratory for analysis in the same manner as the other detectors so that the laboratory cannot distinguish them.

Appendix B

Laboratory Report

Radon test result report for:
JORDAN PUBLIC SCHOOLS
MIDDLE SCHOOL

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
9127439	111	2018-11-05 @ 11:00 am	2018-11-09 @ 10:00 am	< 0.3	2018-11-12
9127438	112	2018-11-05 @ 11:00 am	2018-11-09 @ 10:00 am	0.6 ± 0.3	2018-11-12
9127437	114	2018-11-05 @ 11:00 am	2018-11-09 @ 10:00 am	< 0.3	2018-11-12
9127436	115	2018-11-05 @ 11:00 am	2018-11-09 @ 10:00 am	< 0.3	2018-11-12
9127435	116	2018-11-05 @ 11:00 am	2018-11-09 @ 10:00 am	0.5 ± 0.3	2018-11-12
9127434	117	2018-11-05 @ 11:00 am	2018-11-09 @ 10:00 am	< 0.3	2018-11-12
9127433	118	2018-11-05 @ 11:00 am	2018-11-09 @ 10:00 am	0.7 ± 0.3	2018-11-12
9127432	119	2018-11-05 @ 11:00 am	2018-11-09 @ 10:00 am	< 0.3	2018-11-12
9127431	120	2018-11-05 @ 11:00 am	2018-11-09 @ 10:00 am	0.6 ± 0.3	2018-11-12
9127430	121	2018-11-05 @ 11:00 am	2018-11-09 @ 10:00 am	< 0.3	2018-11-12
9127428	122	2018-11-05 @ 11:00 am	2018-11-09 @ 10:00 am	0.9 ± 0.3	2018-11-12
9127426	123B	2018-11-05 @ 11:00 am	2018-11-09 @ 10:00 am	0.7 ± 0.3	2018-11-12
9127440	202	2018-11-05 @ 12:00 pm	2018-11-09 @ 10:00 am	< 0.3	2018-11-12
9127443	204	2018-11-05 @ 12:00 pm	2018-11-09 @ 10:00 am	< 0.3	2018-11-12
9127408	213 PLC	2018-11-05 @ 11:00 am	2018-11-09 @ 10:00 am	0.6 ± 0.3	2018-11-12
9127444	230	2018-11-05 @ 12:00 pm	2018-11-09 @ 10:00 am	1.0 ± 0.3	2018-11-12
9127409	301D	2018-11-05 @ 11:00 am	2018-11-09 @ 10:00 am	0.6 ± 0.3	2018-11-12
9127410	302	2018-11-05 @ 11:00 am	2018-11-09 @ 10:00 am	0.8 ± 0.3	2018-11-12
9127411	304	2018-11-05 @ 11:00 am	2018-11-09 @ 11:00 am	0.8 ± 0.3	2018-11-12
9127412	305	2018-11-05 @ 11:00 am	2018-11-09 @ 10:00 am	< 0.3	2018-11-12
9127423	403	2018-11-05 @ 11:00 am	2018-11-09 @ 11:00 am	< 0.3	2018-11-12
9127422	404	2018-11-05 @ 11:00 am	2018-11-09 @ 11:00 am	< 0.3	2018-11-12
9127421	405	2018-11-05 @ 11:00 am	2018-11-09 @ 11:00 am	< 0.3	2018-11-12
9127420	406	2018-11-05 @ 11:00 am	2018-11-09 @ 11:00 am	< 0.3	2018-11-12
9127414	407	2018-11-05 @ 11:00 am	2018-11-09 @ 10:00 am	0.6 ± 0.3	2018-11-12
9127413	407	2018-11-05 @ 11:00 am	2018-11-09 @ 10:00 am	< 0.3	2018-11-12
9127415	408	2018-11-05 @ 11:00 am	2018-11-09 @ 10:00 am	0.8 ± 0.3	2018-11-12
9127416	409	2018-11-05 @ 11:00 am	2018-11-09 @ 11:00 am	0.7 ± 0.3	2018-11-12
9127417	411	2018-11-05 @ 11:00 am	2018-11-09 @ 11:00 am	< 0.3	2018-11-12
9127419	412	2018-11-05 @ 11:00 am	2018-11-09 @ 11:00 am	0.6 ± 0.3	2018-11-12
9127418	414	2018-11-05 @ 11:00 am	2018-11-09 @ 11:00 am	< 0.3	2018-11-12
9127425	417	2018-11-05 @ 11:00 am	2018-11-09 @ 11:00 am	< 0.3	2018-11-12
9127407	BAND	2018-11-05 @ 11:00 am	2018-11-09 @ 10:00 am	1.4 ± 0.3	2018-11-12
9127406	CHOIR	2018-11-05 @ 11:00 am	2018-11-09 @ 10:00 am	0.9 ± 0.3	2018-11-12
9127405	DISTRICT OFFICE	2018-11-05 @ 11:00 am	2018-11-09 @ 10:00 am	0.6 ± 0.3	2018-11-12
9127404	MAIN OFFICE	2018-11-05 @ 11:00 am	2018-11-09 @ 10:00 am	< 0.3	2018-11-12

November 12, 2018

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7236103	OFFICE COPY ROOM	2018-11-05 @ 9:00 am	2018-11-09 @ 9:00 am	1.1 ± 0.3	2018-11-12

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

Radon test result report for:**HS**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
7236105	BAND ROOM	2018-11-05 @ 9:00 am	2018-11-09 @ 9:00 am	2.0 ± 0.3	2018-11-12
7236104	CHOIR ROOM	2018-11-05 @ 9:00 am	2018-11-09 @ 9:00 am	1.7 ± 0.3	2018-11-12
7236121	E400	2018-11-05 @ 10:00 am	2018-11-09 @ 9:00 am	1.4 ± 0.3	2018-11-12
7236120	E401	2018-11-05 @ 10:00 am	2018-11-09 @ 9:00 am	1.3 ± 0.3	2018-11-12
7236119	E402	2018-11-05 @ 10:00 am	2018-11-09 @ 9:00 am	0.8 ± 0.3	2018-11-12
7236124	E404	2018-11-05 @ 10:00 am	2018-11-09 @ 10:00 am	1.8 ± 0.3	2018-11-12
7236125	E405	2018-11-05 @ 10:00 am	2018-11-09 @ 10:00 am	1.3 ± 0.3	2018-11-12
7236126	E406	2018-11-05 @ 10:00 am	2018-11-09 @ 10:00 am	1.3 ± 0.3	2018-11-12
7236122	M311	2018-11-05 @ 10:00 am	2018-11-09 @ 9:00 am	0.9 ± 0.3	2018-11-12
7236123	M312	2018-11-05 @ 10:00 am	2018-11-09 @ 9:00 am	1.2 ± 0.3	2018-11-12
9127403	MEDIA CENTER	2018-11-05 @ 10:00 am	2018-11-09 @ 10:00 am	1.4 ± 0.3	2018-11-12
7236106	N100	2018-11-05 @ 10:00 am	2018-11-09 @ 9:00 am	0.9 ± 0.3	2018-11-12
7236107	N102	2018-11-05 @ 10:00 am	2018-11-09 @ 9:00 am	1.4 ± 0.3	2018-11-12
7236109	N103	2018-11-05 @ 10:00 am	2018-11-09 @ 9:00 am	1.1 ± 0.3	2018-11-12
9127429	N105	2018-11-05 @ 10:00 am	2018-11-09 @ 9:00 am	1.1 ± 0.3	2018-11-12
7236110	N106	2018-11-05 @ 10:00 am	2018-11-09 @ 9:00 am	0.8 ± 0.3	2018-11-12
7236114	N108	2018-11-05 @ 10:00 am	2018-11-09 @ 9:00 am	0.9 ± 0.3	2018-11-12
7236113	N108	2018-11-05 @ 10:00 am	2018-11-09 @ 9:00 am	0.7 ± 0.3	2018-11-12
7236111	N109	2018-11-05 @ 10:00 am	2018-11-09 @ 9:00 am	1.1 ± 0.3	2018-11-12
7236112	N111	2018-11-05 @ 10:00 am	2018-11-09 @ 9:00 am	1.4 ± 0.3	2018-11-12
7236115	N113	2018-11-05 @ 10:00 am	2018-11-09 @ 9:00 am	1.2 ± 0.3	2018-11-12
7236116	N115	2018-11-05 @ 10:00 am	2018-11-09 @ 9:00 am	1.2 ± 0.3	2018-11-12
7236117	N116	2018-11-05 @ 10:00 am	2018-11-09 @ 9:00 am	1.0 ± 0.3	2018-11-12
7236118	N117	2018-11-05 @ 10:00 am	2018-11-09 @ 9:00 am	1.0 ± 0.3	2018-11-12
9127402	S502	2018-11-05 @ 10:00 am	2018-11-09 @ 10:00 am	1.3 ± 0.3	2018-11-12
7236137	S503	2018-11-05 @ 10:00 am	2018-11-09 @ 10:00 am	1.4 ± 0.3	2018-11-12
9127401	S504	2018-11-05 @ 10:00 am	2018-11-09 @ 10:00 am	1.1 ± 0.3	2018-11-12
7236135	S505	2018-11-05 @ 10:00 am	2018-11-09 @ 10:00 am	1.0 ± 0.3	2018-11-12
7236136	S506	2018-11-05 @ 10:00 am	2018-11-09 @ 10:00 am	1.4 ± 0.3	2018-11-12
7236134	S508	2018-11-05 @ 10:00 am	2018-11-09 @ 10:00 am	1.6 ± 0.3	2018-11-12
7236132	S509	2018-11-05 @ 10:00 am	2018-11-09 @ 10:00 am	1.0 ± 0.3	2018-11-12
7236133	S510	2018-11-05 @ 10:00 am	2018-11-09 @ 10:00 am	1.4 ± 0.3	2018-11-12
7236131	S511	2018-11-05 @ 10:00 am	2018-11-09 @ 10:00 am	1.5 ± 0.3	2018-11-12
7236130	S513	2018-11-05 @ 10:00 am	2018-11-09 @ 10:00 am	1.4 ± 0.3	2018-11-12
7236129	S515	2018-11-05 @ 10:00 am	2018-11-09 @ 10:00 am	1.0 ± 0.3	2018-11-12
7236128	S517	2018-11-05 @ 10:00 am	2018-11-09 @ 10:00 am	1.5 ± 0.3	2018-11-12
7236127	S519	2018-11-05 @ 10:00 am	2018-11-09 @ 10:00 am	1.2 ± 0.3	2018-11-12

November 12, 2018

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

**JORDAN PS
ELEMENTARY**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
9127498	BLANK	2018-11-05 @ 12:00 pm	2018-11-09 @ 11:00 am	< 0.3	2018-11-12

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

November 12, 2018

**** LABORATORY ANALYSIS REPORT ****

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

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
9127494	BLANK	2018-11-05 @ 12:00 pm	2018-11-09 @ 11:00 am	< 0.3	2018-11-12

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

November 12, 2018

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:
JORDAN PS
MIDDLE SCHOOL

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
9127500	BLANK	2018-11-05 @ 12:00 pm	2018-11-09 @ 11:00 am	< 0.3	2018-11-12

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

Radon test result report for:

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
9127470	49	2018-11-05 @ 1:00 pm	2018-11-09 @ 11:00 am	< 0.3	2018-11-12
9127487	64	2018-11-05 @ 1:00 pm	2018-11-09 @ 11:00 am	< 0.3	2018-11-12
9127473	66	2018-11-05 @ 1:00 pm	2018-11-09 @ 11:00 am	0.6 ± 0.3	2018-11-12
9127471	67	2018-11-05 @ 1:00 pm	2018-11-09 @ 11:00 am	< 0.3	2018-11-12
9127474	68	2018-11-05 @ 1:00 pm	2018-11-09 @ 11:00 am	< 0.3	2018-11-12
9127472	69	2018-11-05 @ 1:00 pm	2018-11-09 @ 11:00 am	< 0.3	2018-11-12
9127475	71	2018-11-05 @ 1:00 pm	2018-11-09 @ 11:00 am	< 0.3	2018-11-12
9127476	72	2018-11-05 @ 1:00 pm	2018-11-09 @ 11:00 am	0.5 ± 0.3	2018-11-12
9127477	73	2018-11-05 @ 1:00 pm	2018-11-09 @ 11:00 am	< 0.3	2018-11-12
9127478	74	2018-11-05 @ 1:00 pm	2018-11-09 @ 11:00 am	< 0.3	2018-11-12
9127479	75	2018-11-05 @ 1:00 pm	2018-11-09 @ 11:00 am	< 0.3	2018-11-12
9127480	77	2018-11-05 @ 1:00 pm	2018-11-09 @ 11:00 am	< 0.3	2018-11-12
9127483	79	2018-11-05 @ 1:00 pm	2018-11-09 @ 11:00 am	< 0.3	2018-11-12
9127484	81	2018-11-05 @ 1:00 pm	2018-11-09 @ 11:00 am	< 0.3	2018-11-12
9127485	83	2018-11-05 @ 1:00 pm	2018-11-09 @ 11:00 am	< 0.3	2018-11-12
9127481	84	2018-11-05 @ 1:00 pm	2018-11-09 @ 11:00 am	< 0.3	2018-11-12
9127486	85	2018-11-05 @ 1:00 pm	2018-11-09 @ 11:00 am	0.9 ± 0.3	2018-11-12
9127482	86	2018-11-05 @ 1:00 pm	2018-11-09 @ 11:00 am	< 0.3	2018-11-12

Radon test result report for:**JORDAN PUBLIC SCHOOLS**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
9127454	28	2018-11-05 @ 12:00 pm	2018-11-09 @ 11:00 am	< 0.3	2018-11-12
9127452	29	2018-11-05 @ 1:00 pm	2018-11-09 @ 11:00 am	0.6 ± 0.3	2018-11-12
9127453	30	2018-11-05 @ 1:00 pm	2018-11-09 @ 11:00 am	< 0.3	2018-11-12
9127451	31	2018-11-05 @ 1:00 pm	2018-11-09 @ 11:00 am	< 0.3	2018-11-12
9127449	36	2018-11-05 @ 1:00 pm	2018-11-09 @ 11:00 am	< 0.3	2018-11-12
9127450	37	2018-11-05 @ 1:00 pm	2018-11-09 @ 11:00 am	< 0.3	2018-11-12
9127447	38	2018-11-05 @ 1:00 pm	2018-11-09 @ 11:00 am	< 0.3	2018-11-12
9127448	39	2018-11-05 @ 1:00 pm	2018-11-09 @ 11:00 am	< 0.3	2018-11-12
9127446	41	2018-11-05 @ 1:00 pm	2018-11-09 @ 11:00 am	< 0.3	2018-11-12
9127468	43	2018-11-05 @ 1:00 pm	2018-11-09 @ 11:00 am	< 0.3	2018-11-12
9127469	44	2018-11-05 @ 1:00 pm	2018-11-09 @ 11:00 am	< 0.3	2018-11-12
9127466	46	2018-11-05 @ 1:00 pm	2018-11-09 @ 11:00 am	< 0.3	2018-11-12
9127467	47	2018-11-05 @ 1:00 pm	2018-11-09 @ 11:00 am	< 0.3	2018-11-12
9127465	48	2018-11-05 @ 1:00 pm	2018-11-09 @ 11:00 am	< 0.3	2018-11-12
9127464	50	2018-11-05 @ 1:00 pm	2018-11-09 @ 11:00 am	< 0.3	2018-11-12
9127488	60	2018-11-05 @ 1:00 pm	2018-11-09 @ 11:00 am	< 0.3	2018-11-12
9127493	92	2018-11-05 @ 1:00 pm	2018-11-09 @ 11:00 am	< 0.3	2018-11-12
9127490	94	2018-11-05 @ 1:00 pm	2018-11-09 @ 12:00 pm	< 0.3	2018-11-12
9127489	95	2018-11-05 @ 1:00 pm	2018-11-09 @ 12:00 pm	< 0.3	2018-11-12
9127491	97	2018-11-05 @ 1:00 pm	2018-11-09 @ 12:00 pm	< 0.3	2018-11-12
9127492	98	2018-11-05 @ 1:00 pm	2018-11-09 @ 12:00 pm	< 0.3	2018-11-12

November 12, 2018

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

**JORDAN PUBLIC SCHOOLS
ELEMENTARY**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
9127461	15	2018-11-05 @ 12:00 pm	2018-11-09 @ 11:00 am	< 0.3	2018-11-12
9127460	20	2018-11-05 @ 12:00 pm	2018-11-09 @ 11:00 am	< 0.3	2018-11-12
9127459	21	2018-11-05 @ 12:00 pm	2018-11-09 @ 11:00 am	< 0.3	2018-11-12
9127458	23	2018-11-05 @ 12:00 pm	2018-11-09 @ 11:00 am	< 0.3	2018-11-12
9127457	24	2018-11-05 @ 12:00 pm	2018-11-09 @ 11:00 am	< 0.3	2018-11-12
9127455	25	2018-11-05 @ 12:00 pm	2018-11-09 @ 11:00 am	< 0.3	2018-11-12
9127456	26	2018-11-05 @ 12:00 pm	2018-11-09 @ 11:00 am	< 0.3	2018-11-12
9127445	42	2018-11-05 @ 1:00 pm	2018-11-09 @ 11:00 am	< 0.3	2018-11-12
9127463	MAIN OFFICE	2018-11-05 @ 12:00 pm	2018-11-09 @ 11:00 am	< 0.3	2018-11-12
9127462	MUSIC ROOM	2018-11-05 @ 12:00 pm	2018-11-09 @ 12:00 pm	0.7 ± 0.3	2018-11-12

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

Appendix C

Chain of Custody

Chain-of-Custody Cover Page



IEA, Inc.

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

Device Type (circle)

Radtrak²

Air Chek

Pro Chek

CRM

Project Number

201811170

District:

Jordan Public Schools

Building:

Address: 500 Sunset Drive, Jordan, MN 55352

Project Manager:

Cassie Bowser

Date Disbursed:

November 5, 2018

Time:

9:00 AM

**Disbursing
Measurement
Professional Name:**

Cassie Bowser

Signature:

Cassie Bowser

Date Retrieved:

November 9, 2018

Time Retrieved:

9:00 AM

**Retrieving
Measurement
Professional Name:**

Cassie Bowser

Signature:

Cassie Bowser

**Date sent to Analytical
Lab:**

November 9, 2018

Time:

3:00 PM

Tracking Number:

**Date Lab
Received:**

November 10, 2018

**Received
by:**

Appendix D

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

Were all frequently-occupied ground contact rooms tested? ¹ <input type="checkbox"/> Yes <input type="checkbox"/> No 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
How many rooms had results ≥ 4 pCi/L?:
Were the results reported at a school board meeting? <input type="checkbox"/> Yes <input type="checkbox"/> 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.

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Phone:	Email:

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School District & District Number:	
Building Address:	
Test Kit Manufacturer:	Device Name:
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SCHOOL RADON TESTING REPORTING FORM

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