

environmental consulting solutions

523 W. Sunnybrook Drive, Royal Oak, Michigan 48073

September 30, 2020

Mr. Kevin McCarthy Norstar Development USA, L.P. 733 Broadway Albany, New York 12207

Re: Radon Testing

White State Henry Development

Ann Arbor, Michigan ECS Project N100-0010

Dear Mr. McCarthy,

Environmental Consulting Solutions, LLC (ECS) has completed the Radon Testing for the referenced property in Ann Arbor, Michigan.

ECS contracted Advanced Environmental Management Group (AEMG) to perform the testing. The Radon Testing was performed on September 18-21, 2020 by an NSRB certified Radon Measurement Specialist in general accordance with MSHDA Guidelines.

The results of the Radon Testing indicated that radon levels were not detected at levels exceeding the U.S. EPA's recommended action level of 4.0 pCi/l in any of the samples.

Please refer to the attached AEMG report for testing details and analytical results.

Thank you for the opportunity to provide this service to you. If you have any questions, please contact us at 248-763-3639.

Sincerely.

ENVIRONMENTAL CONSULTING SOLUTIONS, LLC

Andrew J. Foerg, CPG

President

Enclosure



September 28, 2020

Environmental Consulting Solutions, LLC c/o Andrew Foerg 523 West Sunnybrook Royal Oak, Michigan 48073

Re: Radon Test Results, White State Henry Development Ann Arbor, MI

Dear Mr. Foerg:

This report documents the results of the radon gas assessment conducted by Advanced Environmental Management Group, LLC (AEM Group) over the period of September 18 through 21, 2020 at the White State Henry Development (WSH). The assessment was conducted in accordance with the Michigan State Housing Development Authority (MSHDA) Environmental Review Requirements and American Association of Radon Scientists and Technologists (AARST). This assessment was designed to determine if radon gas in the subsurface is migrating into residential units at concentrations exceeding action levels. The identified areas of concern were: 1) each individual unit/room that is in contact with the ground, and 2) 10 percent of the units above the ground floor (floors two and three). It is noted that WSH Development is new construction and radon resistant measures were implemented during construction.

Radon Sampling Results Summary

Fourteen apartment units (101 through 106, 203, 304 Henry St., and 101 through 104, 203, 304 White St.) and one common area (Community Room) at the WSH were tested for radon. In addition, three duplicates and two blank radon samplers were deployed. The activated carbon samplers are short-term tests and were run for approximately 65-66 hours. The samplers were retrieved and shipped two day express to the selected laboratory, Air Chek, Inc., of Mills River, North Carolina. The Field Log, sample results, and site figure for the radon sampling are presented in the table in Attachment I. The laboratory test reports for the radon samples are included in Attachment II.

As seen in the attachments, the radon levels ranged from <0.3 pCi/l (the laboratory detection level) to 1.1 ± 0.3 pCi/l. All samples were below the U.S. EPA's recommended action level for radon of 4.0 pCi/l.

Quality Assurance/Quality Control

Three Duplicates and two Blank radon samplers were deployed as standard Quality Assurance/Quality Control. Statistical analysis of the QA/QC samples indicate the

three Duplicates and two blanks were within AARST protocol control limits. See Attachment III

Conclusion

Radon was not detected at levels above the U.S. EPA's recommended action level of 4.0 pCi/l for radon mitigation in the areas tested at the White State Henry. Based on the results of the radon gas assessment, radon gas currently does not require mitigation at the subject property. It is recommended that retesting be conducted every two years and whenever significant changes to the building's structure or mechanical systems occur.

The sampling work was performed and/or overseen by a National Radon Safety Board (NRSB) certified Radon Measurement Specialist, Mark R. Peterson, Certification Number NRSB 13SS020. Certificates for the Radon Measurement Specialist and Air Chek, Inc. laboratory are included in Attachment IV.

Should you have any questions concerning this report or any other aspect of this project, please do not hesitate to contact me at (734) 354-9070.

Sincerely,

Mark Peterson CPG Senior Geologist AEM Group, LLC

NRSB Certification #13SS020 NRSB Certification #9G0008

Attachments

Attachment I Radon Test Results and Site Figure

Attachment II Laboratory Report
Attachment III QA/QC Results
Attachment IV Certifications

Attachment I

Radon Test Results and Site Figure

AEM Group

Radon Sampling Results Table

Project Name: White State Henry Development
Building Name: White State Henry

Project Address: Various Addresses White, State, and Henry Streets

Ann Arbor, MI

Sample Serial Number	Room/Unit Number	Placement Location	Start Date	Start Time	End Date	End Time	Test Result	Covid Resident Interview Conducted Y/N	Covid Issues Identified	Initials of Interviewer
7308897	1525 S. State (Community Room)	Kitchen	9/18/20	2:00:00 PM	9/21/20	8:00:00 AM	$0.6 \pm 0.3 \text{ pCi/l}$	NOP	NA	NA
7308898	1525 S. State (Community Room) D	Kitchen	9/18/20	2:00:00 PM	9/21/20	8:00:00 AM	$0.7 \pm 0.3 \text{ pCi/l}$	NOP	NA	NA
7308917	1525 S. State (Community Room) B	Kitchen	9/18/20	2:00:00 PM	9/21/20	8:00:00 AM	<0.3 pCi/l	NOP	NA	NA
7308912	101 White st	Kitchen	9/18/20	3:00:00 PM	9/21/20	8:00:00 AM	0.6 ± 0.3 pCi/l	NOP	NA	NA
7308909	102 White St.	Kitchen	9/18/20	3:00:00 PM	9/21/20	8:00:00 AM	<0.3 pCi/l	NOP	NA	NA
7308879	103 White St.	Kitchen	9/18/20	3:00:00 PM	9/21/20	8:00:00 AM	0.6 ± 0.3 pCi/l	NOP	NA	NA
7308888	103 White St. D	Kitchen	9/18/20	3:00:00 PM	9/21/20	8:00:00 AM	0.6 ± 0.3 pCi/l	NOP	NA	NA
7308915	103 White St. B	Kitchen	9/18/20	3:00:00 PM	9/21/20	8:00:00 AM	<0.3 pCi/l	NOP	NA	NA
7308891	104 White St.	Kitchen	9/18/20	3:00:00 PM	9/21/20	8:00:00 AM	<0.3 pCi/l	NOP	NA	NA
7308889	203 White st	Kitchen	9/18/20	3:00:00 PM	9/21/20	8:00:00 AM	<0.3 pCi/l	NOP	NA	NA
7308910	304 White St.	Kitchen	9/18/20	3:00:00 PM	9/21/20	8:00:00 AM	<0.3 pCi/l	NOP	NA	NA
7308896	101 Henry St.	Kitchen	9/18/20	2:00:00 PM	9/21/20	8:00:00 AM	<0.3 pCi/l	NOP	NA	NA
7308882	102 Henry St.	Kitchen	9/18/20	2:00:00 PM	9/21/20	8:00:00 AM	1.0 ± 0.3 pCi/l	NOP	NA	NA
7308887	103 Henry St.	Kitchen	9/18/20	2:00:00 PM	9/21/20	8:00:00 AM	<0.3 pCi/l	NOP	NA	NA
7308894	104 Henry St.	Kitchen	9/18/20	2:00:00 PM	9/21/20	8:00:00 AM	1.1 ± 0.3 pCi/l	NOP	NA	NA
7308880	105 Henry St.	Kitchen	9/18/20	2:00:00 PM	9/21/20	8:00:00 AM	0.6 ± 0.3 pCi/l	NOP	NA	NA
7308913	106 Henry St	Kitchen	9/18/20	3:00:00 PM	9/21/20	8:00:00 AM	<0.3 pCi/l	NOP	NA	NA
7308906	203 Henry St.	Kitchen	9/18/20	3:00:00 PM	9/21/20	8:00:00 AM	<0.3 pCi/l	NOP	NA	NA
7308916	304 Henry St.	Kitchen	9/18/20	3:00:00 PM	9/21/20	8:00:00 AM	<0.3 pCi/l	NOP	NA	NA
7308911	304 HenrySt. D	Kitchen	9/18/20	3:00:00 PM	9/21/20	8:00:00 AM	<0.3 pCi/l	NOP	NA	NA

Samplers Name: Mark Peterson

Notes: D = Duplicate

B = Blank

NOP = No occupants present

Exceeded EPA Action Level of 4.0 pCi/l

Exceeds EPA recommended Level 2.0 to 3.9

Building not occupied by residents at time of sampling

Closed house conditions not met prior to sampling (Front Door open by Tradesmen)

Closed house conditions met during sampling period

77.9.9 P.O. SELEN-BEONES ONE SELECTION OF SE F.S.P. FUSCO,
SHAFFER &
ARCHITECTS AND PLANNIES SSE, NINT MILESOAD PENDAL, MORGAN, 4020 PIONE SEASOANS PAY MASSA **VPPARTMENTS** ₹ 9 NDUIS.007 BULDING PLAN WHITE STATE HENRY NORSTAR DEVELOPMENT USA, L.P. 1510 White St 101 thru 104 - 1st floor units 1510 White St 201 thru 204 - 2nd floor units 1510 White St 301 thru 304 - 3rd floor units 204 204 304 Envisor L BICYCLE STORAGE TYP. 102 R.M. 202 8.M. 302 101 201 #uvr 103 303 303 BUILDING PLAN TYP, FIRST FLOOR UNIT 206 306 306 21.9-29 wau 105 8 705 Henry St 101 thru 106 - 1st floor units 705 Henry St 201 thru 206 - 2nd floor units 705 Henry St 301 thru 306 - 3rd floor units CANODY TYP, FIRST FLOOR UNIT 104 204 304 321-2 5/8" 103 STE 203 BULG 303 202 Secret TYP, PRST PLOCE UNIT PORCH, TYP. 1525 S State St - Community Center - 1st Floor 1527 S State St 201 - 2nd floor unit 1527 S State St 301 - 3rd floor unit 10 E 9 101 201 301 CENTER AEG. 7/E O: 60

AEM Group Radon Sampling Chain of Custody/Data Log

Project Name: WHITE STATE HENRY REUE (UPMEN)

Project Address: lol wit 175 ST.

		Sample Serial Number	Room/Unit Number	Placement Location	Start Date	Start Time	End Date	End Time	Test Result	Covid Resident Interview Conducted	Covid Issues Identified Y/N	Intials of Interviewer
	1	+ 7308897°	COMMENTY ROOM	aircitén	5/1/2	2:60	9/21/20	8° 4				
	2	73088981	11 000		1,51	*1	9/7/7	13: w				
	3	7308917	Le Digule	L t	11	14	9/2/20	8=				
	4	+ 730 88964	101 theway ST	41711te ~	L	Li	9/21/0	8100				
	2	1308882	102 Hanry ST	Kitchen	9/18/2		9/2//20					
	4	+73088870	113 Henry st	Kitchen	9/18/20	2:00	9/21/20	もい				
	7	+ 7308894 -	104 Hanry St	H: Ichen	9/18/20	2:00	1/1/10	5 L				
	8	1-7308880 0€	105 Henry st	Hitchen	918120	2:00	9/3/1/20	8.60				
×	7	1-7308913	106 Honry 57.	Kitchen	9/18/Zo	3:00	9/2/2	Pilu				
	10	173089120	101 Unito 5t.	frithm	9118/20		1/2/20	8:00				
	11	17308909	102 white 5%.	Kitchen	9/18/20		9/3/12/	8.00				
		730887	TO3 White St. 78730887	Witchen	9/10/20	3:00	7/21/2	8:00				
	13	7197567										
	14	+7308888°	103 White St. DUP	Hitchen	9/18120		9/21/25	8:00		7		
	'	+13089150	103 Uhite St. Blank	Hitchen	9/18/20	3:60	9/4/2	8:40				
•	((+7308891 0	104 Hh; Ye St.	tithhan	9/18/20	3.00	9/21/20	8:4				
١	ורו	+7308889	203 Nr. to 2+.	te: tuben	9/18/20	2:00	9/2/20	tim				
		+7308410,	304 Julite 5+.	hitchen	9/18/20		9/21/2	8100				
		M-7308906 🤌	203 Henry 5+.	Witchon	9/18/00	3:00	9/21/20	81W				
		L7308911 ·	304 Henry 5+	h: Lchen	9/18/20	3:06	9/21/2	5: W				
2	1	t 7308all	304 Henry S+ DUP	Kitchen	9/18/20	3:00	9/4/2	PW				
							744					
											A	
	į											

Samplers Name: MP/CB
D = Duplictae
B = Blank

Attachment II

Laboratory Results



Radon Measurement Technician

Advanced Enviro Management Group Mark Peterson 44339 Plymouth Oaks Blvd Plymouth, MI 48170-2585 734-354-9070

Device Information

Pro Chek Activated Charcoal Serial#: 7308879 Analyzed by: Air Chek

Post Mitigation Radon Test Information

Dates of Test: 2020-09-18 @ 3:00 pm to 2020-09-21 @ 8:00 am

Property Address	<u>Test Number</u>	Analysis Date	<u>Result</u>
1st Floor			
103 White St Ann Arbor MI 48104-	7308879	2020-09-23	0.6 ± 0.3 pCi/l

Interpreting your Test Result

The test sample data indicated that this test was being performed after the installation of a radon mitigation system. Your test result is below the 4.0 pCi/L EPA action level at this time. The EPA recommends that houses with mitigation system be tested every 2 years to make sure that the system continues to function properly. The amount of radon in homes naturally fluctuates throughout the year for reasons, such as seasonal weather patterns, living habits, etc. Long term testing can be used to determine your annual radon concentration, which will give a better understanding of the effectiveness of the mitigation system.

• No tampering was observed during the radon test.

The subject home described has been tested for the presence of radon gas according to US EPA short-term testing protocols. The test and analysis have been performed to comply with EPA's *Home Buyer's and Seller's Guide to Radon*. This report represents the average radon concentration at the time of sampling and at the specific location in the building. However, it must be noted that radon concentrations will vary from day to day and from season to season.



Radon Measurement Technician

Advanced Enviro Management Group Mark Peterson 44339 Plymouth Oaks Blvd Plymouth, MI 48170-2585 734-354-9070

Device Information

Pro Chek Activated Charcoal Serial#: 7308880 Analyzed by: Air Chek

Post Mitigation Radon Test Information

Dates of Test: 2020-09-18 @ 2:00 pm to 2020-09-21 @ 8:00 am

Property Address	<u>Test Number</u>	Analysis Date	<u>Result</u>
1st Floor			
105 Henry St Ann Arbor MI 48104-	7308880	2020-09-23	$0.6 \pm 0.3 \text{ pCi/l}$

Interpreting your Test Result

The test sample data indicated that this test was being performed after the installation of a radon mitigation system. Your test result is below the 4.0 pCi/L EPA action level at this time. The EPA recommends that houses with mitigation system be tested every 2 years to make sure that the system continues to function properly. The amount of radon in homes naturally fluctuates throughout the year for reasons, such as seasonal weather patterns, living habits, etc. Long term testing can be used to determine your annual radon concentration, which will give a better understanding of the effectiveness of the mitigation system.

• No tampering was observed during the radon test.

The subject home described has been tested for the presence of radon gas according to US EPA short-term testing protocols. The test and analysis have been performed to comply with EPA's *Home Buyer's and Seller's Guide to Radon*. This report represents the average radon concentration at the time of sampling and at the specific location in the building. However, it must be noted that radon concentrations will vary from day to day and from season to season.



Radon Measurement Technician

Advanced Enviro Management Group Mark Peterson 44339 Plymouth Oaks Blvd Plymouth, MI 48170-2585 734-354-9070

Device Information

Pro Chek Activated Charcoal Serial#: 7308882 Analyzed by: Air Chek

Post Mitigation Radon Test Information

Dates of Test: 2020-09-18 @ 2:00 pm to 2020-09-21 @ 8:00 am

Property Address	<u>Test Number</u>	Analysis Date	<u>Result</u>
1st Floor			
102 Henry St Ann Arbor, MI 48104-	7308882	2020-09-23	1.0 ± 0.3 pCi/l

Interpreting your Test Result

The test sample data indicated that this test was being performed after the installation of a radon mitigation system. Your test result is below the 4.0 pCi/L EPA action level at this time. The EPA recommends that houses with mitigation system be tested every 2 years to make sure that the system continues to function properly. The amount of radon in homes naturally fluctuates throughout the year for reasons, such as seasonal weather patterns, living habits, etc. Long term testing can be used to determine your annual radon concentration, which will give a better understanding of the effectiveness of the mitigation system.

• No tampering was observed during the radon test.

The subject home described has been tested for the presence of radon gas according to US EPA short-term testing protocols. The test and analysis have been performed to comply with EPA's *Home Buyer's and Seller's Guide to Radon*. This report represents the average radon concentration at the time of sampling and at the specific location in the building. However, it must be noted that radon concentrations will vary from day to day and from season to season.



Radon Measurement Technician

Advanced Enviro Management Group Mark Peterson 44339 Plymouth Oaks Blvd Plymouth, MI 48170-2585 734-354-9070

Device Information

Pro Chek Activated Charcoal Serial#: 7308887 Analyzed by: Air Chek

Post Mitigation Radon Test Information

Dates of Test: 2020-09-18 @ 2:00 pm to 2020-09-21 @ 9:00 am

Property Address	<u>Test Number</u>	Analysis Date	<u>Result</u>
1st Floor			
103 Henry St Ann Arbor, MI 48104-	7308887	2020-09-23	< 0.3 pCi/l

Interpreting your Test Result

The test sample data indicated that this test was being performed after the installation of a radon mitigation system. Your test result is below the 4.0 pCi/L EPA action level at this time. The EPA recommends that houses with mitigation system be tested every 2 years to make sure that the system continues to function properly. The amount of radon in homes naturally fluctuates throughout the year for reasons, such as seasonal weather patterns, living habits, etc. Long term testing can be used to determine your annual radon concentration, which will give a better understanding of the effectiveness of the mitigation system.

• No tampering was observed during the radon test.

The subject home described has been tested for the presence of radon gas according to US EPA short-term testing protocols. The test and analysis have been performed to comply with EPA's *Home Buyer's and Seller's Guide to Radon*. This report represents the average radon concentration at the time of sampling and at the specific location in the building. However, it must be noted that radon concentrations will vary from day to day and from season to season.



Radon Measurement Technician

Advanced Enviro Management Group Mark Peterson 44339 Plymouth Oaks Blvd Plymouth, MI 48170-2585 734-354-9070

Device Information

Pro Chek Activated Charcoal Serial#: 7308888 Analyzed by: Air Chek

Post Mitigation Radon Test Information

Dates of Test: 2020-09-18 @ 3:00 pm to 2020-09-21 @ 8:00 am

Property Address	<u>Test Number</u>	Analysis Date	<u>Result</u>
1st Floor 103 White St Ann Arbor MI 48104-	7308888	2020-09-23	0.6 ± 0.3 pCi/l

Interpreting your Test Result

The test sample data indicated that this test was being performed after the installation of a radon mitigation system. Your test result is below the 4.0 pCi/L EPA action level at this time. The EPA recommends that houses with mitigation system be tested every 2 years to make sure that the system continues to function properly. The amount of radon in homes naturally fluctuates throughout the year for reasons, such as seasonal weather patterns, living habits, etc. Long term testing can be used to determine your annual radon concentration, which will give a better understanding of the effectiveness of the mitigation system.

• No tampering was observed during the radon test.

The subject home described has been tested for the presence of radon gas according to US EPA short-term testing protocols. The test and analysis have been performed to comply with EPA's *Home Buyer's and Seller's Guide to Radon*. This report represents the average radon concentration at the time of sampling and at the specific location in the building. However, it must be noted that radon concentrations will vary from day to day and from season to season.



Radon Measurement Technician

Advanced Enviro Management Group Mark Peterson 44339 Plymouth Oaks Blvd Plymouth, MI 48170-2585 734-354-9070

Device Information

Pro Chek Activated Charcoal Serial#: 7308889 Analyzed by: Air Chek

Post Mitigation Radon Test Information

Dates of Test: 2020-09-18 @ 3:00 pm to 2020-09-21 @ 9:00 am

Property Address	<u>Test Number</u>	Analysis Date	<u>Result</u>
1st Floor			
203 White St Ann Arbor MI 48104-	7308889	2020-09-23	< 0.3 pCi/l

Interpreting your Test Result

The test sample data indicated that this test was being performed after the installation of a radon mitigation system. Your test result is below the 4.0 pCi/L EPA action level at this time. The EPA recommends that houses with mitigation system be tested every 2 years to make sure that the system continues to function properly. The amount of radon in homes naturally fluctuates throughout the year for reasons, such as seasonal weather patterns, living habits, etc. Long term testing can be used to determine your annual radon concentration, which will give a better understanding of the effectiveness of the mitigation system.

• No tampering was observed during the radon test.

The subject home described has been tested for the presence of radon gas according to US EPA short-term testing protocols. The test and analysis have been performed to comply with EPA's *Home Buyer's and Seller's Guide to Radon*. This report represents the average radon concentration at the time of sampling and at the specific location in the building. However, it must be noted that radon concentrations will vary from day to day and from season to season.



Radon Measurement Technician

Advanced Enviro Management Group Mark Peterson 44339 Plymouth Oaks Blvd Plymouth, MI 48170-2585 734-354-9070

Device Information

Pro Chek Activated Charcoal Serial#: 7308891 Analyzed by: Air Chek

Post Mitigation Radon Test Information

Dates of Test: 2020-09-18 @ 3:00 pm to 2020-09-21 @ 8:00 am

Property Address	<u>Test Number</u>	Analysis Date	<u>Result</u>
1st Floor			
104 White St Ann Arbor, MI 48104-	7308891	2020-09-23	< 0.3 pCi/l

Interpreting your Test Result

The test sample data indicated that this test was being performed after the installation of a radon mitigation system. Your test result is below the 4.0 pCi/L EPA action level at this time. The EPA recommends that houses with mitigation system be tested every 2 years to make sure that the system continues to function properly. The amount of radon in homes naturally fluctuates throughout the year for reasons, such as seasonal weather patterns, living habits, etc. Long term testing can be used to determine your annual radon concentration, which will give a better understanding of the effectiveness of the mitigation system.

• No tampering was observed during the radon test.

The subject home described has been tested for the presence of radon gas according to US EPA short-term testing protocols. The test and analysis have been performed to comply with EPA's *Home Buyer's and Seller's Guide to Radon*. This report represents the average radon concentration at the time of sampling and at the specific location in the building. However, it must be noted that radon concentrations will vary from day to day and from season to season.



Radon Measurement Technician

Advanced Enviro Management Group Mark Peterson 44339 Plymouth Oaks Blvd Plymouth, MI 48170-2585 734-354-9070

Device Information

Pro Chek Activated Charcoal Serial#: 7308894 Analyzed by: Air Chek

Post Mitigation Radon Test Information

Dates of Test: 2020-09-18 @ 2:00 pm to 2020-09-21 @ 8:00 am

Property Address	<u>Test Number</u>	Analysis Date	<u>Result</u>
1st Floor 104 Henry St	7200004	2020 00 22	11.02 67
Ann Arbor MI 48104-	7308894	2020-09-23	$1.1 \pm 0.3 \text{pCi/l}$

Interpreting your Test Result

The test sample data indicated that this test was being performed after the installation of a radon mitigation system. Your test result is below the 4.0 pCi/L EPA action level at this time. The EPA recommends that houses with mitigation system be tested every 2 years to make sure that the system continues to function properly. The amount of radon in homes naturally fluctuates throughout the year for reasons, such as seasonal weather patterns, living habits, etc. Long term testing can be used to determine your annual radon concentration, which will give a better understanding of the effectiveness of the mitigation system.

• No tampering was observed during the radon test.

The subject home described has been tested for the presence of radon gas according to US EPA short-term testing protocols. The test and analysis have been performed to comply with EPA's *Home Buyer's and Seller's Guide to Radon*. This report represents the average radon concentration at the time of sampling and at the specific location in the building. However, it must be noted that radon concentrations will vary from day to day and from season to season.



Radon Measurement Technician

Advanced Enviro Management Group Mark Peterson 44339 Plymouth Oaks Blvd Plymouth, MI 48170-2585 734-354-9070 **Device Information**

Pro Chek Activated Charcoal Serial#: 7308906 Analyzed by: Air Chek

Post Mitigation Radon Test Information

Dates of Test: 2020-09-18 @ 3:00 pm to 2020-09-21 @ 8:00 am

Property Address	<u>Test Number</u>	Analysis Date	<u>Result</u>
1st Floor			
203 Henry St Ann Arbor MI 48104-	7308906	2020-09-23	< 0.3 pCi/l

Interpreting your Test Result

The test sample data indicated that this test was being performed after the installation of a radon mitigation system. Your test result is below the 4.0 pCi/L EPA action level at this time. The EPA recommends that houses with mitigation system be tested every 2 years to make sure that the system continues to function properly. The amount of radon in homes naturally fluctuates throughout the year for reasons, such as seasonal weather patterns, living habits, etc. Long term testing can be used to determine your annual radon concentration, which will give a better understanding of the effectiveness of the mitigation system.

• No tampering was observed during the radon test.

The subject home described has been tested for the presence of radon gas according to US EPA short-term testing protocols. The test and analysis have been performed to comply with EPA's *Home Buyer's and Seller's Guide to Radon*. This report represents the average radon concentration at the time of sampling and at the specific location in the building. However, it must be noted that radon concentrations will vary from day to day and from season to season.



Radon Measurement Technician

Advanced Enviro Management Group Mark Peterson 44339 Plymouth Oaks Blvd Plymouth, MI 48170-2585 734-354-9070

Device Information

Pro Chek Activated Charcoal Serial#: 7308909 Analyzed by: Air Chek

Post Mitigation Radon Test Information

Dates of Test: 2020-09-18 @ 3:00 pm to 2020-09-21 @ 8:00 am

Property Address	<u>Test Number</u>	Analysis Date	<u>Result</u>
1st Floor			
102 White St Ann Arbor MI 48104-	7308909	2020-09-23	< 0.3 pCi/l

Interpreting your Test Result

The test sample data indicated that this test was being performed after the installation of a radon mitigation system. Your test result is below the 4.0 pCi/L EPA action level at this time. The EPA recommends that houses with mitigation system be tested every 2 years to make sure that the system continues to function properly. The amount of radon in homes naturally fluctuates throughout the year for reasons, such as seasonal weather patterns, living habits, etc. Long term testing can be used to determine your annual radon concentration, which will give a better understanding of the effectiveness of the mitigation system.

• No tampering was observed during the radon test.

The subject home described has been tested for the presence of radon gas according to US EPA short-term testing protocols. The test and analysis have been performed to comply with EPA's *Home Buyer's and Seller's Guide to Radon*. This report represents the average radon concentration at the time of sampling and at the specific location in the building. However, it must be noted that radon concentrations will vary from day to day and from season to season.



Radon Measurement Technician

Advanced Enviro Management Group Mark Peterson 44339 Plymouth Oaks Blvd Plymouth, MI 48170-2585 734-354-9070 **Device Information**

Pro Chek Activated Charcoal Serial#: 7308910 Analyzed by: Air Chek

Post Mitigation Radon Test Information

Dates of Test: 2020-09-18 @ 3:00 pm to 2020-09-21 @ 9:00 am

Property Address	Test Number	Analysis Date	<u>Result</u>
1st Floor			
304 White St Ann Arbor, MI 48104-	7308910	2020-09-23	< 0.3 pCi/l

Interpreting your Test Result

The test sample data indicated that this test was being performed after the installation of a radon mitigation system. Your test result is below the 4.0 pCi/L EPA action level at this time. The EPA recommends that houses with mitigation system be tested every 2 years to make sure that the system continues to function properly. The amount of radon in homes naturally fluctuates throughout the year for reasons, such as seasonal weather patterns, living habits, etc. Long term testing can be used to determine your annual radon concentration, which will give a better understanding of the effectiveness of the mitigation system.

• No tampering was observed during the radon test.

The subject home described has been tested for the presence of radon gas according to US EPA short-term testing protocols. The test and analysis have been performed to comply with EPA's *Home Buyer's and Seller's Guide to Radon*. This report represents the average radon concentration at the time of sampling and at the specific location in the building. However, it must be noted that radon concentrations will vary from day to day and from season to season.



Radon Measurement Technician

Advanced Enviro Management Group Mark Peterson 44339 Plymouth Oaks Blvd Plymouth, MI 48170-2585 734-354-9070 **Device Information**

Pro Chek Activated Charcoal Serial#: 7308911 Analyzed by: Air Chek

Post Mitigation Radon Test Information

Dates of Test: 2020-09-18 @ 3:00 pm to 2020-09-21 @ 8:00 am

Property Address	<u>Test Number</u>	Analysis Date	<u>Result</u>
1st Floor			
304 Henry St Ann Arbor, MI 48104-	7308911	2020-09-23	< 0.3 pCi/l

Interpreting your Test Result

The test sample data indicated that this test was being performed after the installation of a radon mitigation system. Your test result is below the 4.0 pCi/L EPA action level at this time. The EPA recommends that houses with mitigation system be tested every 2 years to make sure that the system continues to function properly. The amount of radon in homes naturally fluctuates throughout the year for reasons, such as seasonal weather patterns, living habits, etc. Long term testing can be used to determine your annual radon concentration, which will give a better understanding of the effectiveness of the mitigation system.

• No tampering was observed during the radon test.

The subject home described has been tested for the presence of radon gas according to US EPA short-term testing protocols. The test and analysis have been performed to comply with EPA's *Home Buyer's and Seller's Guide to Radon*. This report represents the average radon concentration at the time of sampling and at the specific location in the building. However, it must be noted that radon concentrations will vary from day to day and from season to season.



Radon Measurement Technician

Advanced Enviro Management Group Mark Peterson 44339 Plymouth Oaks Blvd Plymouth, MI 48170-2585 734-354-9070 **Device Information**

Pro Chek Activated Charcoal Serial#: 7308913 Analyzed by: Air Chek

Post Mitigation Radon Test Information

Dates of Test: 2020-09-18 @ 3:00 pm to 2020-09-21 @ 8:00 am

Property Address	<u>Test Number</u>	Analysis Date	<u>Result</u>
1st Floor			
106 Henry St Ann Arbor MI 48104-	7308913	2020-09-23	< 0.3 pCi/l

Interpreting your Test Result

The test sample data indicated that this test was being performed after the installation of a radon mitigation system. Your test result is below the 4.0 pCi/L EPA action level at this time. The EPA recommends that houses with mitigation system be tested every 2 years to make sure that the system continues to function properly. The amount of radon in homes naturally fluctuates throughout the year for reasons, such as seasonal weather patterns, living habits, etc. Long term testing can be used to determine your annual radon concentration, which will give a better understanding of the effectiveness of the mitigation system.

• No tampering was observed during the radon test.

The subject home described has been tested for the presence of radon gas according to US EPA short-term testing protocols. The test and analysis have been performed to comply with EPA's *Home Buyer's and Seller's Guide to Radon*. This report represents the average radon concentration at the time of sampling and at the specific location in the building. However, it must be noted that radon concentrations will vary from day to day and from season to season.



Radon Measurement Technician

Advanced Enviro Management Group Mark Peterson 44339 Plymouth Oaks Blvd Plymouth, MI 48170-2585 734-354-9070

Device Information

Pro Chek Activated Charcoal Serial#: 7308915 Analyzed by: Air Chek

Post Mitigation Radon Test Information

Dates of Test: 2020-09-18 @ 3:00 pm to 2020-09-21 @ 8:00 am

Property Address	<u>Test Number</u>	Analysis Date	<u>Result</u>
1st Floor			
103 White St Ann Arbor, MI 48104-	7308915	2020-09-23	< 0.3 pCi/l

Interpreting your Test Result

The test sample data indicated that this test was being performed after the installation of a radon mitigation system. Your test result is below the 4.0 pCi/L EPA action level at this time. The EPA recommends that houses with mitigation system be tested every 2 years to make sure that the system continues to function properly. The amount of radon in homes naturally fluctuates throughout the year for reasons, such as seasonal weather patterns, living habits, etc. Long term testing can be used to determine your annual radon concentration, which will give a better understanding of the effectiveness of the mitigation system.

• No tampering was observed during the radon test.

The subject home described has been tested for the presence of radon gas according to US EPA short-term testing protocols. The test and analysis have been performed to comply with EPA's *Home Buyer's and Seller's Guide to Radon*. This report represents the average radon concentration at the time of sampling and at the specific location in the building. However, it must be noted that radon concentrations will vary from day to day and from season to season.



Radon Measurement Technician

Advanced Enviro Management Group Mark Peterson 44339 Plymouth Oaks Blvd Plymouth, MI 48170-2585 734-354-9070

Device Information

Pro Chek Activated Charcoal Serial#: 7308916 Analyzed by: Air Chek

Post Mitigation Radon Test Information

Dates of Test: 2020-09-18 @ 3:00 pm to 2020-09-21 @ 8:00 am

Property Address	Test Number	Analysis Date	<u>Result</u>
1st Floor			
304 Henry St Ann Arbor, MI 48104-	7308916	2020-09-23	< 0.3 pCi/l

Interpreting your Test Result

The test sample data indicated that this test was being performed after the installation of a radon mitigation system. Your test result is below the 4.0 pCi/L EPA action level at this time. The EPA recommends that houses with mitigation system be tested every 2 years to make sure that the system continues to function properly. The amount of radon in homes naturally fluctuates throughout the year for reasons, such as seasonal weather patterns, living habits, etc. Long term testing can be used to determine your annual radon concentration, which will give a better understanding of the effectiveness of the mitigation system.

• No tampering was observed during the radon test.

The subject home described has been tested for the presence of radon gas according to US EPA short-term testing protocols. The test and analysis have been performed to comply with EPA's *Home Buyer's and Seller's Guide to Radon*. This report represents the average radon concentration at the time of sampling and at the specific location in the building. However, it must be noted that radon concentrations will vary from day to day and from season to season.



Radon Measurement Technician

Advanced Enviro Management Group Mark Peterson 44339 Plymouth Oaks Blvd Plymouth, MI 48170-2585 734-354-9070

Device Information

Pro Chek Activated Charcoal Serial#: 7308917 Analyzed by: Air Chek

Post Mitigation Radon Test Information

Dates of Test: 2020-09-18 @ 3:00 pm to 2020-09-21 @ 8:00 am

Property Address	<u>Test Number</u>	Analysis Date	<u>Result</u>
1st Floor White State Henry Kitchen	7308917	2020-09-23	< 0.3 pCi/l

Interpreting your Test Result

The test sample data indicated that this test was being performed after the installation of a radon mitigation system. Your test result is below the 4.0 pCi/L EPA action level at this time. The EPA recommends that houses with mitigation system be tested every 2 years to make sure that the system continues to function properly. The amount of radon in homes naturally fluctuates throughout the year for reasons, such as seasonal weather patterns, living habits, etc. Long term testing can be used to determine your annual radon concentration, which will give a better understanding of the effectiveness of the mitigation system.

• No tampering was observed during the radon test.

The subject home described has been tested for the presence of radon gas according to US EPA short-term testing protocols. The test and analysis have been performed to comply with EPA's *Home Buyer's and Seller's Guide to Radon*. This report represents the average radon concentration at the time of sampling and at the specific location in the building. However, it must be noted that radon concentrations will vary from day to day and from season to season.



Radon Measurement Technician

Advanced Enviro Management Group Mark Peterson 44339 Plymouth Oaks Blvd Plymouth, MI 48170-2585 734-354-9070

Device Information

Pro Chek Activated Charcoal Serial#: 7308912 Analyzed by: Air Chek

Post Mitigation Radon Test Information

Dates of Test: 2020-09-18 @ 3:00 pm to 2020-09-21 @ 8:00 am

Property Address	Test Number	Analysis Date	Result
1st Floor 101 White St Ann Arbor, MI 48104-	7308912	2020-09-23	0.6 ± 0.3 pCi/l

Interpreting your Test Result

The test sample data indicated that this test was being performed after the installation of a radon mitigation system. Your test result is below the 4.0 pCi/L EPA action level at this time. The EPA recommends that houses with mitigation system be tested every 2 years to make sure that the system continues to function properly. The amount of radon in homes naturally fluctuates throughout the year for reasons, such as seasonal weather patterns, living habits, etc. Long term testing can be used to determine your annual radon concentration, which will give a better understanding of the effectiveness of the mitigation system.

• No tampering was observed during the radon test.

The subject home described has been tested for the presence of radon gas according to US EPA short-term testing protocols. The test and analysis have been performed to comply with EPA's *Home Buyer's and Seller's Guide to Radon*. This report represents the average radon concentration at the time of sampling and at the specific location in the building. However, it must be noted that radon concentrations will vary from day to day and from season to season.

Your health risk

The primary health risk from long-term exposure to radon is lung cancer. The risk of developing a lung cancer from radon exposure depends both on how much radon is present and how long you are exposed to radon. The higher the radon level or the longer the time of exposure, even if the levels are relatively low, the greater the risk. Exposures up to 4 pCi/L may present some risk of contracting lung cancer to more sensitive occupants, especially children and those who live with smokers. The US Congress set as a goal the lowering of radon levels in buildings to equal the levels of outside air.

PERFORMING RADON TESTS FOR A REAL ESTATE TRANSACTION

US EPA protocols state that when using passive devices, such as activated charcoal tests, two short-term tests should be conducted, either together or sequentially, at the same location in the building. The tests should be averaged together and if the average is 4.0 pCi/L or higher, radon mitigation is recommended. Even if the average is below 4.0 pCi/L, the buyers should consider testing in a different season or deploy a long-term test device to assess their long-term risks. It is **highly recommended** that any property transaction tests be conducted by a non-interested third party. To locate a listed or certified radon tester, contact your state radon office or visit our website at http://www.neha-nrpp.org to download a list of NRPP certified testers. You should also visit the EPA website to download a copy of EPA's Home Buyer's and Seller's Guide to Radon.

Radon Test Device Placement

The US EPA recommends that testing device(s) be placed in the lowest level of the home that could be used regularly, whether it is finished or unfinished. Conduct the test in any space that could be used by the buyer as a bedroom, play area, family room, den, exercise room, or workshop. Based on their client's intended use of the space, the qualified testing professional should identify the appropriate test location and inform their client (buyer). Do not test in a closet, stairway, hallway, crawl space or in an enclosed area of high humidity or high air velocity. An enclosed area may include a kitchen, bathroom, laundry room or furnace room.

Variations in Radon Levels

When tests are performed in different seasons or under different weather conditions, the initial screening and follow-up tests may vary considerably. Radon levels can vary significantly between seasons, so different values **are to be expected**. Even during normal weather, indoor radon levels may rise and fall by a factor of two on a daily cycle; for example, from 5 pCi/L to 10 pCi/L in 24 hours. During rapidly changing or stormy weather, the levels may change more dramatically. Because continual changes in radon levels are considered normal, expose the testing device for as long as is practical, while following the manufacturer's recommendations. This, of course, provides a better overall average of the measurement.

If you are comparing tests, or are averaging a series of tests, bear in mind that any radon test returns only the average of the levels present during a **specific period of time** at the **precise location** of the test. Conditions during a different test period or at a different location in the building are **expected to be different.**

Test results can also vary if the radon test instructions were not carefully followed. A laboratory measuring radon in samples taken outside the lab **must rely on the person conducting the test**. For example, the wrong starting or ending date of a test will significantly affect the calculated result. The location of each radon test can also influence the result. For example, a test placed in the blowing air stream of a fan is likely to collect more radon than it would under normal conditions. Also, three tests conducted in one home, but in three different rooms, **would be expected to have at least slightly different test results.**

Test results from a properly used activated charcoal test will more closely reflect the average radon concentrations over the last three to four days of the test period. This happens because the radon collected by the activated charcoal has a radioactive half-life of only four days. Thus, much of the radon collected early in a seven day test has already begun to decay prior to the conclusion of the test.

Retesting

It is important to understand that radon levels can change at some point in the future. Therefore, it is important to retest when there is occupancy by a new owner, before and after a new addition to the house, alterations that could alter ventilation patterns, if major cracks are noticed in foundation walls or the slab, you begin using a ground contact area of the home not previously tested, or even recent nearby construction blasting or earthquakes. EPA recommends that homes be retested every 2-3 years. If the home has been previously mitigated or alterations are made to the mitigation system, retesting should be done.

Mitigation

When radon mitigation is necessary, it is advisable that a state-licensed or nationally- certified contractor be used to design and install the mitigation system. For easy to read mitigation information, go to the US EPA website and download a copy of the <u>Consumer's Guide to Radon Reduction</u>.

For technical information, call (828) 684-0893. Office hours are Mon-Fri 8:30 to 5:30 EASTERN You can reach us by Fax at (828) 684-8498 or write to Air Chek, Inc., Box 2000, Naples, NC 28760 **Web Site:** http://www.radon.com **Email to:** info@radon.com



Radon Measurement Technician

Advanced Enviro Management Group Mark Peterson 44339 Plymouth Oaks Blvd Plymouth, MI 48170-2585 734-354-9070

Device Information

Pro Chek Activated Charcoal Serial#: 7308898 Analyzed by: Air Chek

Post Mitigation Radon Test Information

Dates of Test: 2020-09-18 @ 2:00 pm to 2020-09-21 @ 8:00 am

Property Address	<u>Test Number</u>	Analysis Date	<u>Result</u>
1st Floor			
1525 S State St Ann Arbor, MI 48104-4301	7308898	2020-09-23	0.7 ± 0.3 pCi/l

Interpreting your Test Result

The test sample data indicated that this test was being performed after the installation of a radon mitigation system. Your test result is below the 4.0 pCi/L EPA action level at this time. The EPA recommends that houses with mitigation system be tested every 2 years to make sure that the system continues to function properly. The amount of radon in homes naturally fluctuates throughout the year for reasons, such as seasonal weather patterns, living habits, etc. Long term testing can be used to determine your annual radon concentration, which will give a better understanding of the effectiveness of the mitigation system.

• No tampering was observed during the radon test.

The subject home described has been tested for the presence of radon gas according to US EPA short-term testing protocols. The test and analysis have been performed to comply with EPA's *Home Buyer's and Seller's Guide to Radon*. This report represents the average radon concentration at the time of sampling and at the specific location in the building. However, it must be noted that radon concentrations will vary from day to day and from season to season.

Your health risk

The primary health risk from long-term exposure to radon is lung cancer. The risk of developing a lung cancer from radon exposure depends both on how much radon is present and how long you are exposed to radon. The higher the radon level or the longer the time of exposure, even if the levels are relatively low, the greater the risk. Exposures up to 4 pCi/L may present some risk of contracting lung cancer to more sensitive occupants, especially children and those who live with smokers. The US Congress set as a goal the lowering of radon levels in buildings to equal the levels of outside air.

PERFORMING RADON TESTS FOR A REAL ESTATE TRANSACTION

US EPA protocols state that when using passive devices, such as activated charcoal tests, two short-term tests should be conducted, either together or sequentially, at the same location in the building. The tests should be averaged together and if the average is 4.0 pCi/L or higher, radon mitigation is recommended. Even if the average is below 4.0 pCi/L, the buyers should consider testing in a different season or deploy a long-term test device to assess their long-term risks. It is **highly recommended** that any property transaction tests be conducted by a non-interested third party. To locate a listed or certified radon tester, contact your state radon office or visit our website at http://www.neha-nrpp.org to download a list of NRPP certified testers. You should also visit the EPA website to download a copy of EPA's Home Buyer's and Seller's Guide to Radon.

Radon Test Device Placement

The US EPA recommends that testing device(s) be placed in the lowest level of the home that could be used regularly, whether it is finished or unfinished. Conduct the test in any space that could be used by the buyer as a bedroom, play area, family room, den, exercise room, or workshop. Based on their client's intended use of the space, the qualified testing professional should identify the appropriate test location and inform their client (buyer). Do not test in a closet, stairway, hallway, crawl space or in an enclosed area of high humidity or high air velocity. An enclosed area may include a kitchen, bathroom, laundry room or furnace room.

Variations in Radon Levels

When tests are performed in different seasons or under different weather conditions, the initial screening and follow-up tests may vary considerably. Radon levels can vary significantly between seasons, so different values **are to be expected**. Even during normal weather, indoor radon levels may rise and fall by a factor of two on a daily cycle; for example, from 5 pCi/L to 10 pCi/L in 24 hours. During rapidly changing or stormy weather, the levels may change more dramatically. Because continual changes in radon levels are considered normal, expose the testing device for as long as is practical, while following the manufacturer's recommendations. This, of course, provides a better overall average of the measurement.

If you are comparing tests, or are averaging a series of tests, bear in mind that any radon test returns only the average of the levels present during a **specific period of time** at the **precise location** of the test. Conditions during a different test period or at a different location in the building are **expected to be different.**

Test results can also vary if the radon test instructions were not carefully followed. A laboratory measuring radon in samples taken outside the lab **must rely on the person conducting the test**. For example, the wrong starting or ending date of a test will significantly affect the calculated result. The location of each radon test can also influence the result. For example, a test placed in the blowing air stream of a fan is likely to collect more radon than it would under normal conditions. Also, three tests conducted in one home, but in three different rooms, **would be expected to have at least slightly different test results.**

Test results from a properly used activated charcoal test will more closely reflect the average radon concentrations over the last three to four days of the test period. This happens because the radon collected by the activated charcoal has a radioactive half-life of only four days. Thus, much of the radon collected early in a seven day test has already begun to decay prior to the conclusion of the test.

Retesting

It is important to understand that radon levels can change at some point in the future. Therefore, it is important to retest when there is occupancy by a new owner, before and after a new addition to the house, alterations that could alter ventilation patterns, if major cracks are noticed in foundation walls or the slab, you begin using a ground contact area of the home not previously tested, or even recent nearby construction blasting or earthquakes. EPA recommends that homes be retested every 2-3 years. If the home has been previously mitigated or alterations are made to the mitigation system, retesting should be done.

Mitigation

When radon mitigation is necessary, it is advisable that a state-licensed or nationally- certified contractor be used to design and install the mitigation system. For easy to read mitigation information, go to the US EPA website and download a copy of the <u>Consumer's Guide to Radon Reduction</u>.

For technical information, call (828) 684-0893. Office hours are Mon-Fri 8:30 to 5:30 EASTERN You can reach us by Fax at (828) 684-8498 or write to Air Chek, Inc., Box 2000, Naples, NC 28760 **Web Site:** http://www.radon.com **Email to:** info@radon.com



Radon Measurement Technician

Advanced Enviro Management Group Mark Peterson 44339 Plymouth Oaks Blvd Plymouth, MI 48170-2585 734-354-9070

Device Information

Pro Chek Activated Charcoal Serial#: 7308897 Analyzed by: Air Chek

Post Mitigation Radon Test Information

Dates of Test: 2020-09-18 @ 2:00 pm to 2020-09-21 @ 8:00 am

Property Address	<u>Test Number</u>	Analysis Date	<u>Result</u>
1st Floor			
1525 S State St Ann Arbor, MI 48104-4301	7308897	2020-09-23	0.6 ± 0.3 pCi/l

Interpreting your Test Result

The test sample data indicated that this test was being performed after the installation of a radon mitigation system. Your test result is below the 4.0 pCi/L EPA action level at this time. The EPA recommends that houses with mitigation system be tested every 2 years to make sure that the system continues to function properly. The amount of radon in homes naturally fluctuates throughout the year for reasons, such as seasonal weather patterns, living habits, etc. Long term testing can be used to determine your annual radon concentration, which will give a better understanding of the effectiveness of the mitigation system.

• No tampering was observed during the radon test.

The subject home described has been tested for the presence of radon gas according to US EPA short-term testing protocols. The test and analysis have been performed to comply with EPA's *Home Buyer's and Seller's Guide to Radon*. This report represents the average radon concentration at the time of sampling and at the specific location in the building. However, it must be noted that radon concentrations will vary from day to day and from season to season.

Your health risk

The primary health risk from long-term exposure to radon is lung cancer. The risk of developing a lung cancer from radon exposure depends both on how much radon is present and how long you are exposed to radon. The higher the radon level or the longer the time of exposure, even if the levels are relatively low, the greater the risk. Exposures up to 4 pCi/L may present some risk of contracting lung cancer to more sensitive occupants, especially children and those who live with smokers. The US Congress set as a goal the lowering of radon levels in buildings to equal the levels of outside air.

PERFORMING RADON TESTS FOR A REAL ESTATE TRANSACTION

US EPA protocols state that when using passive devices, such as activated charcoal tests, two short-term tests should be conducted, either together or sequentially, at the same location in the building. The tests should be averaged together and if the average is 4.0 pCi/L or higher, radon mitigation is recommended. Even if the average is below 4.0 pCi/L, the buyers should consider testing in a different season or deploy a long-term test device to assess their long-term risks. It is **highly recommended** that any property transaction tests be conducted by a non-interested third party. To locate a listed or certified radon tester, contact your state radon office or visit our website at http://www.neha-nrpp.org to download a list of NRPP certified testers. You should also visit the EPA website to download a copy of EPA's Home Buyer's and Seller's Guide to Radon.

Radon Test Device Placement

The US EPA recommends that testing device(s) be placed in the lowest level of the home that could be used regularly, whether it is finished or unfinished. Conduct the test in any space that could be used by the buyer as a bedroom, play area, family room, den, exercise room, or workshop. Based on their client's intended use of the space, the qualified testing professional should identify the appropriate test location and inform their client (buyer). Do not test in a closet, stairway, hallway, crawl space or in an enclosed area of high humidity or high air velocity. An enclosed area may include a kitchen, bathroom, laundry room or furnace room.

Variations in Radon Levels

When tests are performed in different seasons or under different weather conditions, the initial screening and follow-up tests may vary considerably. Radon levels can vary significantly between seasons, so different values **are to be expected**. Even during normal weather, indoor radon levels may rise and fall by a factor of two on a daily cycle; for example, from 5 pCi/L to 10 pCi/L in 24 hours. During rapidly changing or stormy weather, the levels may change more dramatically. Because continual changes in radon levels are considered normal, expose the testing device for as long as is practical, while following the manufacturer's recommendations. This, of course, provides a better overall average of the measurement.

If you are comparing tests, or are averaging a series of tests, bear in mind that any radon test returns only the average of the levels present during a **specific period of time** at the **precise location** of the test. Conditions during a different test period or at a different location in the building are **expected to be different.**

Test results can also vary if the radon test instructions were not carefully followed. A laboratory measuring radon in samples taken outside the lab **must rely on the person conducting the test**. For example, the wrong starting or ending date of a test will significantly affect the calculated result. The location of each radon test can also influence the result. For example, a test placed in the blowing air stream of a fan is likely to collect more radon than it would under normal conditions. Also, three tests conducted in one home, but in three different rooms, **would be expected to have at least slightly different test results.**

Test results from a properly used activated charcoal test will more closely reflect the average radon concentrations over the last three to four days of the test period. This happens because the radon collected by the activated charcoal has a radioactive half-life of only four days. Thus, much of the radon collected early in a seven day test has already begun to decay prior to the conclusion of the test.

Retesting

It is important to understand that radon levels can change at some point in the future. Therefore, it is important to retest when there is occupancy by a new owner, before and after a new addition to the house, alterations that could alter ventilation patterns, if major cracks are noticed in foundation walls or the slab, you begin using a ground contact area of the home not previously tested, or even recent nearby construction blasting or earthquakes. EPA recommends that homes be retested every 2-3 years. If the home has been previously mitigated or alterations are made to the mitigation system, retesting should be done.

Mitigation

When radon mitigation is necessary, it is advisable that a state-licensed or nationally- certified contractor be used to design and install the mitigation system. For easy to read mitigation information, go to the US EPA website and download a copy of the <u>Consumer's Guide to Radon Reduction</u>.

For technical information, call (828) 684-0893. Office hours are Mon-Fri 8:30 to 5:30 EASTERN You can reach us by Fax at (828) 684-8498 or write to Air Chek, Inc., Box 2000, Naples, NC 28760 **Web Site:** http://www.radon.com **Email to:** info@radon.com



Radon Measurement Technician

Advanced Enviro Management Group Mark Peterson 44339 Plymouth Oaks Blvd Plymouth, MI 48170-2585 734-354-9070

Device Information

Pro Chek Activated Charcoal Serial#: 7308896 Analyzed by: Air Chek

Post Mitigation Radon Test Information

Dates of Test: 2020-09-18 @ 2:00 pm to 2020-09-21 @ 8:00 am

Property Address	Test Number	Analysis Date	<u>Result</u>
1st Floor			
101 Henry St Ann Arbor, MI 48104-	7308896	2020-09-23	< 0.3 pCi/l

Interpreting your Test Result

The test sample data indicated that this test was being performed after the installation of a radon mitigation system. Your test result is below the 4.0 pCi/L EPA action level at this time. The EPA recommends that houses with mitigation system be tested every 2 years to make sure that the system continues to function properly. The amount of radon in homes naturally fluctuates throughout the year for reasons, such as seasonal weather patterns, living habits, etc. Long term testing can be used to determine your annual radon concentration, which will give a better understanding of the effectiveness of the mitigation system.

• No tampering was observed during the radon test.

The subject home described has been tested for the presence of radon gas according to US EPA short-term testing protocols. The test and analysis have been performed to comply with EPA's *Home Buyer's and Seller's Guide to Radon*. This report represents the average radon concentration at the time of sampling and at the specific location in the building. However, it must be noted that radon concentrations will vary from day to day and from season to season.

Your health risk

The primary health risk from long-term exposure to radon is lung cancer. The risk of developing a lung cancer from radon exposure depends both on how much radon is present and how long you are exposed to radon. The higher the radon level or the longer the time of exposure, even if the levels are relatively low, the greater the risk. Exposures up to 4 pCi/L may present some risk of contracting lung cancer to more sensitive occupants, especially children and those who live with smokers. The US Congress set as a goal the lowering of radon levels in buildings to equal the levels of outside air.

PERFORMING RADON TESTS FOR A REAL ESTATE TRANSACTION

US EPA protocols state that when using passive devices, such as activated charcoal tests, two short-term tests should be conducted, either together or sequentially, at the same location in the building. The tests should be averaged together and if the average is 4.0 pCi/L or higher, radon mitigation is recommended. Even if the average is below 4.0 pCi/L, the buyers should consider testing in a different season or deploy a long-term test device to assess their long-term risks. It is **highly recommended** that any property transaction tests be conducted by a non-interested third party. To locate a listed or certified radon tester, contact your state radon office or visit our website at http://www.neha-nrpp.org to download a list of NRPP certified testers. You should also visit the EPA website to download a copy of EPA's Home Buyer's and Seller's Guide to Radon.

Radon Test Device Placement

The US EPA recommends that testing device(s) be placed in the lowest level of the home that could be used regularly, whether it is finished or unfinished. Conduct the test in any space that could be used by the buyer as a bedroom, play area, family room, den, exercise room, or workshop. Based on their client's intended use of the space, the qualified testing professional should identify the appropriate test location and inform their client (buyer). Do not test in a closet, stairway, hallway, crawl space or in an enclosed area of high humidity or high air velocity. An enclosed area may include a kitchen, bathroom, laundry room or furnace room.

Variations in Radon Levels

When tests are performed in different seasons or under different weather conditions, the initial screening and follow-up tests may vary considerably. Radon levels can vary significantly between seasons, so different values **are to be expected**. Even during normal weather, indoor radon levels may rise and fall by a factor of two on a daily cycle; for example, from 5 pCi/L to 10 pCi/L in 24 hours. During rapidly changing or stormy weather, the levels may change more dramatically. Because continual changes in radon levels are considered normal, expose the testing device for as long as is practical, while following the manufacturer's recommendations. This, of course, provides a better overall average of the measurement.

If you are comparing tests, or are averaging a series of tests, bear in mind that any radon test returns only the average of the levels present during a **specific period of time** at the **precise location** of the test. Conditions during a different test period or at a different location in the building are **expected to be different.**

Test results can also vary if the radon test instructions were not carefully followed. A laboratory measuring radon in samples taken outside the lab **must rely on the person conducting the test**. For example, the wrong starting or ending date of a test will significantly affect the calculated result. The location of each radon test can also influence the result. For example, a test placed in the blowing air stream of a fan is likely to collect more radon than it would under normal conditions. Also, three tests conducted in one home, but in three different rooms, **would be expected to have at least slightly different test results.**

Test results from a properly used activated charcoal test will more closely reflect the average radon concentrations over the last three to four days of the test period. This happens because the radon collected by the activated charcoal has a radioactive half-life of only four days. Thus, much of the radon collected early in a seven day test has already begun to decay prior to the conclusion of the test.

Retesting

It is important to understand that radon levels can change at some point in the future. Therefore, it is important to retest when there is occupancy by a new owner, before and after a new addition to the house, alterations that could alter ventilation patterns, if major cracks are noticed in foundation walls or the slab, you begin using a ground contact area of the home not previously tested, or even recent nearby construction blasting or earthquakes. EPA recommends that homes be retested every 2-3 years. If the home has been previously mitigated or alterations are made to the mitigation system, retesting should be done.

Mitigation

When radon mitigation is necessary, it is advisable that a state-licensed or nationally- certified contractor be used to design and install the mitigation system. For easy to read mitigation information, go to the US EPA website and download a copy of the <u>Consumer's Guide to Radon Reduction</u>.

For technical information, call (828) 684-0893. Office hours are Mon-Fri 8:30 to 5:30 EASTERN You can reach us by Fax at (828) 684-8498 or write to Air Chek, Inc., Box 2000, Naples, NC 28760 **Web Site:** http://www.radon.com **Email to:** info@radon.com

Your health risk

The primary health risk from long-term exposure to radon is lung cancer. The risk of developing a lung cancer from radon exposure depends both on how much radon is present and how long you are exposed to radon. The higher the radon level or the longer the time of exposure, even if the levels are relatively low, the greater the risk. Exposures up to 4 pCi/L may present some risk of contracting lung cancer to more sensitive occupants, especially children and those who live with smokers. The US Congress set as a goal the lowering of radon levels in buildings to equal the levels of outside air.

PERFORMING RADON TESTS FOR A REAL ESTATE TRANSACTION

US EPA protocols state that when using passive devices, such as activated charcoal tests, two short-term tests should be conducted, either together or sequentially, at the same location in the building. The tests should be averaged together and if the average is 4.0 pCi/L or higher, radon mitigation is recommended. Even if the average is below 4.0 pCi/L, the buyers should consider testing in a different season or deploy a long-term test device to assess their long-term risks. It is **highly recommended** that any property transaction tests be conducted by a non-interested third party. To locate a listed or certified radon tester, contact your state radon office or visit our website at http://www.neha-nrpp.org to download a list of NRPP certified testers. You should also visit the EPA website to download a copy of EPA's Home Buyer's and Seller's Guide to Radon.

Radon Test Device Placement

The US EPA recommends that testing device(s) be placed in the lowest level of the home that could be used regularly, whether it is finished or unfinished. Conduct the test in any space that could be used by the buyer as a bedroom, play area, family room, den, exercise room, or workshop. Based on their client's intended use of the space, the qualified testing professional should identify the appropriate test location and inform their client (buyer). Do not test in a closet, stairway, hallway, crawl space or in an enclosed area of high humidity or high air velocity. An enclosed area may include a kitchen, bathroom, laundry room or furnace room.

Variations in Radon Levels

When tests are performed in different seasons or under different weather conditions, the initial screening and follow-up tests may vary considerably. Radon levels can vary significantly between seasons, so different values **are to be expected**. Even during normal weather, indoor radon levels may rise and fall by a factor of two on a daily cycle; for example, from 5 pCi/L to 10 pCi/L in 24 hours. During rapidly changing or stormy weather, the levels may change more dramatically. Because continual changes in radon levels are considered normal, expose the testing device for as long as is practical, while following the manufacturer's recommendations. This, of course, provides a better overall average of the measurement.

If you are comparing tests, or are averaging a series of tests, bear in mind that any radon test returns only the average of the levels present during a **specific period of time** at the **precise location** of the test. Conditions during a different test period or at a different location in the building are **expected to be different.**

Test results can also vary if the radon test instructions were not carefully followed. A laboratory measuring radon in samples taken outside the lab **must rely on the person conducting the test**. For example, the wrong starting or ending date of a test will significantly affect the calculated result. The location of each radon test can also influence the result. For example, a test placed in the blowing air stream of a fan is likely to collect more radon than it would under normal conditions. Also, three tests conducted in one home, but in three different rooms, **would be expected to have at least slightly different test results.**

Test results from a properly used activated charcoal test will more closely reflect the average radon concentrations over the last three to four days of the test period. This happens because the radon collected by the activated charcoal has a radioactive half-life of only four days. Thus, much of the radon collected early in a seven day test has already begun to decay prior to the conclusion of the test.

Retesting

It is important to understand that radon levels can change at some point in the future. Therefore, it is important to retest when there is occupancy by a new owner, before and after a new addition to the house, alterations that could alter ventilation patterns, if major cracks are noticed in foundation walls or the slab, you begin using a ground contact area of the home not previously tested, or even recent nearby construction blasting or earthquakes. EPA recommends that homes be retested every 2-3 years. If the home has been previously mitigated or alterations are made to the mitigation system, retesting should be done.

Mitigation

When radon mitigation is necessary, it is advisable that a state-licensed or nationally- certified contractor be used to design and install the mitigation system. For easy to read mitigation information, go to the US EPA website and download a copy of the <u>Consumer's Guide to Radon Reduction</u>.

For technical information, call (828) 684-0893. Office hours are Mon-Fri 8:30 to 5:30 EASTERN You can reach us by Fax at (828) 684-8498 or write to Air Chek, Inc., Box 2000, Naples, NC 28760 **Web Site:** http://www.radon.com **Email to:** info@radon.com

Attachment III

QA/QC Results

AEM Group Blank Quality Control Data

Project Name: White State Henry Development

Radon professional ID #: Mark Peterson NRSB 13SS020

Data input date: 9/25/20

Blank or Background Spreadsheet and Chart

Purpose: Determination of Air Chek Charcoal Blank or Background

Enter data only in columns with GREEN headers

<u>Date</u>	Device ID	Blank #	Reported Value (pCi/L)
9/18/20	7308917	1	<0.3
9/18/20	7308915	2	<0.3

Lower Limit of Detection (LLD) =	0.3	pCi/L
	11.1	Bq/M3

AARST QA PLAN Document, Copyright AARST May 2013, All Rights Reserved

AEM Group Duplicate Quality Control Data

Project Name: White State Henry Developemnet Radon Professional ID # : $\underline{Mark\ Peterson\ NRSB\ 13SS020}$

Data input date: 9/24/20

Duplicate Spreadsheet and Charts

Purpose: Determination of precision for

AIR CHEK Charcoal

Calculate Relative percent difference (RPD) = [(Higher - Lower) / Average] x 100%

Duplicates shall be performed at the rate of: 10% of the total number of tests or 50 per month, whichever is smaller

Note: Add table entries (do not skip a row) Enter data only in columns with GREEN headers

Duplicates Averaging 4.0 pCi/L or Greater								
<u>Date</u>	Dup#	<u>A</u>	<u>B</u>	Avg	<u>RPD (%)</u>			

Duplicates Averaging 2.0 - 3.9 pCi/L									
<u>Date</u>	Dup#	<u>A</u>	<u>B</u>	Avg	RPD (%)				

Duplicates Averaging < 2.0 pCi/L									
Date	Dup#	<u>A</u>	<u>B</u>	Avg	RPD (%)				
9/18/20	1	0.6	0.7	0.7	15.4				
9/18/20	2	0.6	0.6	0.6	0.0				
9/18/20	3	0.3	0.3	0.3	0.0				

In-Control Level = 14% Warning Level = 28% Control Limit = 36% In-Control Level = 25% Warning Level = 50% Control Limit = 67% No Control Limits

AARST QA PLAN Document, Copyright AARST May 2013, All Rights Reserved

Attachment IV

Certifications



Laboratory Accreditations

- + NELAP Accredited
- + NRSB Certified Laboratory
- NRPP Certified Laboratory

NRPP Certified Lab # 101138 AL.

The NRPP Device codes for products we sell or support, (Device Code, Device Group, Device Type, Description)



8200, Group 22, AC, Air Chek Foil Bag Test Kit 8201, Group 22, AC, Pro Chek Foil Bag Test Kit 463, Group 3, CR, femto-Tech CRM-510M Blind Continuous 8207, Group 24, AT, RSSI AT-101 Alpha Track Detector

@ 2020 \cdot Air Chek, Inc. All rights reserved

THE NATIONAL RADON SAFETY BOARD

Certified Radon Professionals

Certifies that

Mark R. Peterson

Has Successfully Met The Established & Published Requirements for Certification by The National Radon Safety Board as a

Radon Measurement Specialist

13SS020

Certification Number

3/30/2022

Expiration Date







This certificate is the property of The National Radon Safety Board