



## Environmental Resources Group

28003 Center Oaks Court • Suite 106 • Wixom, MI • 48393  
Phone: 248-773-7986 • Fax: 248-924-3108

August 8, 2013

Mr. Richard Higgins  
Norstar Development USA, L.P.  
733 Broadway  
Albany, New York 12207

**Re: Radon Testing  
Miller Manor  
727 Miller Avenue, Ann Arbor, Michigan  
ERG Project 1126.004**

Dear Mr. Higgins,

Environmental Resources Group, LLC (ERG) has completed the Radon Testing for the referenced property in Ann Arbor, Michigan.

ERG contracted Compliance, Inc. to perform the testing. The Radon Testing was performed on April 25-May 2, 2013 by an NSRB certified Radon Measurement Specialist in general accordance with MSHDA Guidelines. The Radon Testing focused on residential units in contact with the ground, non-residential rooms in contact with the ground, common areas, stairways and elevators.

The results of the Radon Testing indicated that the radon levels were not detected at levels exceeding the U.S. EPA Recommended Action Level.

Please refer to the attached Compliance, Inc. 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 248-773-7986.

Sincerely,

**ENVIRONMENTAL RESOURCES GROUP, LLC**

Andrew J. Foerg, CPG  
Senior Project Manager

Enclosures



May 29, 2013

Andrew Foerg, CPG  
Environmental Resource Group LLC  
28003 Center Oaks Court  
Wixom, MI

**Subject: Radon Sampling Multi Family Unit Test Results**  
Miller Manor  
727 Miller Ave  
Ann Arbor, MI

Dear Mr. Foerg,

This report documents the results of the radon gas assessment conducted by Compliance, Inc., (Compliance) over the period of April 25, 2013 to May 2, 2013 at the Miller Manor. The assessment was conducted in accordance with the MSHDA Environmental Review Requirements. This assessment was designed to determine if radon gas in the subsurface is migrating into the residential areas of the building at concentrations exceeding action levels. The identified areas of concerns in the building are rooms in contact with the ground or other locations considered potential radon migration pathways. The areas/rooms of concern are identified as Residential Rooms 108, 110, 112, and 114; Office 100; Boiler Room; Utility Room; Appliance Storage; Trash Room; Community Room #1; Community Room #2; Reception Area, East and West Staircase; and first floor elevator entrance.

### **Radon Sampling Results**

A total of 17 radon samplers were placed in Miller Manor on April 25, 2013. The activated carbon samplers are short term tests and were run for approximately 95 to 144 hours. After 95 to 144 hours, the samplers were retrieved and shipped over night to the selected laboratory, Air Chek, Inc. of Mills River, North Carolina. The results for the radon sampling are presented in the table in Attachment 1. The sample locations are depicted on the Radon Sample Location Map in Attachment 2. The laboratory test reports for the radon samples are included in Attachment 3.

As seen in the attachments, radon levels reported in the samples ranged from <0.3 to 2.6 pCi/l. Radon Samples RS-6 (West Staircase) and RS-10 (Community Room #2) showed radon levels of 2.6 and 2.1, respectively. All samples reported radon levels below the U.S. EPA's recommended action level for radon of 4.0 pCi/l.

It is noted that radon tests RS-7 and a duplicate sample RS-17, both from Community Room #1, were missing when the samples were retrieved. Additionally, radon test RS-14 from Room 108 was discarded by the tenant.

### **Conclusion**

Radon was not detected at levels above U.S. EPA's recommended action level for radon mitigation (4 pCi/l) in any of the areas tested at Miller Manor. The American Association of Radon professionals and technologists (ARRST) protocol for conducting radon measurements in multifamily buildings, however, recommends considering mitigation when test results are between 2.0 and 4.0 pCi/l. As a part of such consideration, it is noted that only two radon samples in Miller Manor had levels in excess of 2.0 pCi/l (RS-6 and RS-10) and both of those were from nonresidential rooms in the building.

The radon sampling work was performed by a National Radon Safety Board (NRSB) certified Radon Measurement Specialist, Mark R. Peterson Certification Number NRSB 13SS020. Copies of the Radon Mr. Peterson's certification and Air Chek, Inc.'s laboratory certification are included in Attachment 4.

Should you have any questions concerning this report or any other aspect of this project, please do not hesitate to contact me at (810) 225-8674.

Sincerely,  
**COMPLIANCE, INC.**

Mark R. Peterson, CPG  
NRSB Certification #13SS020  
NRSB Certification #9G0008  
ARRST Certification #102675RMT

Attachments

# **Attachment 1**

Analytical Results Table

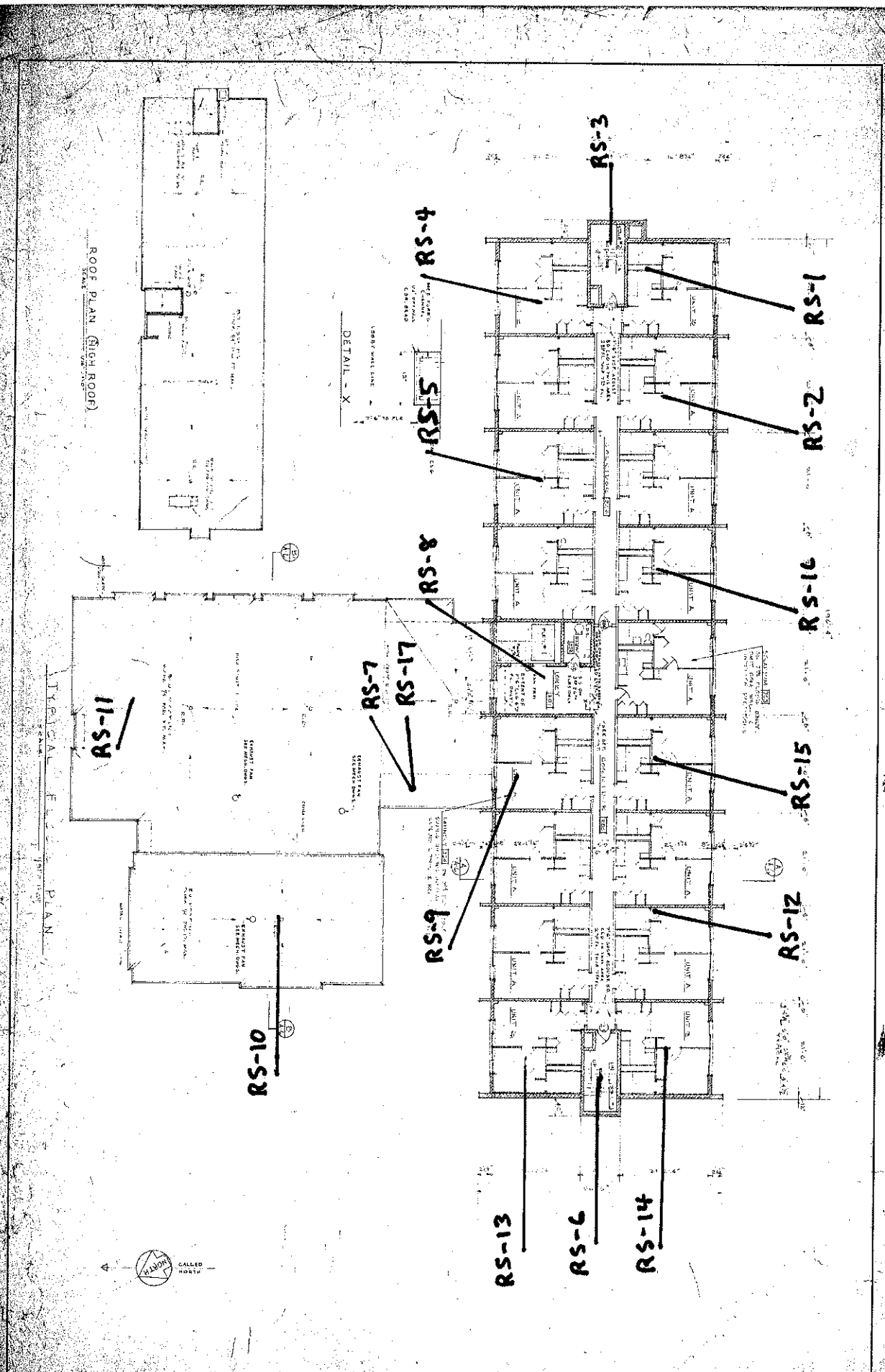
**Miller Manor Radon Sampling Table**  
**727 Miller Ave.**  
**Ann Arbor, Michigan**

Sample Number	Kit Number	Sample Location	Start Date	Start Time	End Date	End Time	Analytical Results pCi/l	
RS-1	4703396	BOILER ROOM	4/25/13	9:00 AM	5/2/13	9:00AM	<0.3 ± 0.3	
RS-2	4703403	UTILITY ROOM	4/25/13	9:00 AM	4/29/13	9:00AM	0.7 ± 0.2	
RS-3	4703411	E. STAIRCASE	4/25/13	10:00 AM	4/29/13	9:00AM	<0.3 ± 0.2	
RS-4	4703404	APPLIANCE STORAGE	4/25/13	10:00 AM	4/29/13	9:00AM	1.8 ± 0.2	
RS-5	4703405	TRASH ROOM	4/25/13	10:00 AM	4/29/13	9:00AM	0.9 ± 0.2	
RS-6	4703406	W. STAIRCASE	4/25/13	10:00 AM	4/29/13	9:00AM	2.6 ± 0.2	
RS-7	4703399	COMMUNITY ROOM #1	SAMPLE MISSING					
RS-8	4703400	ELEVATOR 1ST FLOOR	4/25/13	10:00 AM	4/29/13	9:00AM	0.8 ± 0.2	
RS-9	4703398	ROOM 100	4/25/13	10:00 AM	4/29/13	10AM	1.9 ± 0.2	
RS-10	4703397	COMMUNITY ROOM #2	4/25/13	10:00 AM	4/29/13	10AM	2.1 ± 0.2	
RS-11	4703414	RECEPTION AREA	4/25/13	10:00 AM	4/29/13	10AM	1.2 ± 0.2	
RS-12	4703410	ROOM 112	4/25/13	10:00 AM	4/29/13	9:00AM	0.3 ± 0.2	
RS-13	4703412	ROOM 114	4/25/13	10:00 AM	4/29/13	9:00AM	1.7 ± 0.2	
RS-14	4703409	ROOM 113	SAMPLE DISPOSED BY TENANT					
RS-15	4703407	ROOM 110	4/25/13	10:00 AM	4/29/13	9:00AM	<0.3 ± 0.2	
RS-16	4703402	ROOM108	4/25/13	10:00 AM	4/29/13	9:00AM	1.1 ± 0.2	
RS-17	4703402	COMMUNITY ROOM #1 DUP	SAMPLE MISSING					

At or Above 4.0 pCi/l

# **Attachment 2**

Sample Location Maps



DRAWING IS NOT AN EXACT DIPICTION OF CURRENT FLOOR PLAN. SAMPLE LOCATIONS ARE ESTIMATED.

<p>damon-worley-cady-kirk and associates REGISTERED ARCHITECTS</p>	<p>HOUSING FOR THE ELDERLY AND Aged Housing Authority</p>	<p>1/1/77</p>	<p>1/1/77</p>	<p>1/1/77</p>	<p>1/1/77</p>
	<p>1/1/77</p>	<p>1/1/77</p>	<p>1/1/77</p>	<p>1/1/77</p>	<p>1/1/77</p>

STATE OF OHIO  
REGISTERED ARCHITECTS

# **Attachment 3**

Laboratory Reports



**Radon Test Result: < 0.3 ±0.3 pCi/L**

**Test Started 04/25/13 at 9:00 am**

**Test Ended 05/02/13 at 9:00 am**

Closed house conditions not indicated by user.

RS-1 BOILER RM

### INTERPRETING YOUR TEST RESULT

This radon test was provided to you by COMPLIANCE, INC / 810-225-8674. The US EPA action level for indoor radon is 4.0 pCi/L. Test results in this range (0.5 pCi/L or less) are, for all practical purposes, equivalent to the radon levels found in fresh air. However, if you make any structural changes or start to use a lower level of the building more frequently you should test again.

You may be able to obtain additional information about radon related subjects by calling the "Radon Fix-It Line" at 800-644-6999 Monday thru Friday between NOON and 8 pm EST.

This test result reflects the amount of radon measured in this sample AFTER it arrived at our laboratory. All analysis computations are automatically adjusted to reflect the length of test, the amount of moisture in the sample, time from the end of test, and the amount of radiation measured. If ALL the test instructions were carefully followed, then it is reasonable to assume this is an accurate assessment of the average level of the radon this sample was exposed to during the time indicated on the test packet.

## READ THIS FIRST

This result has been rounded to one-tenth (0.1) of a pCi/L (picoCurie per liter), the most common method of reporting radon in air.

## NEXT...PLEASE...READ

everything under the heading

## INTERPRETING YOUR TEST RESULT

### 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. Recently the US Congress set as a goal the lowering of radon levels in buildings to equal the levels of outside air.

### What is a picoCurie

For those interested in the numbers, a picoCurie is 0.000,000,000,001 (one-trillionth) of a Curie, an international measurement unit of radioactivity. One pCi/L means that in one liter of air there will be 2.2 radioactive disintegrations each minute. For example, at 4 pCi/L there will be approximately 12,672 radioactive disintegrations in one liter of air, during a 24-hour period.

### Conducting Follow-up Measurements

USEPA protocol describes two general types of radon measurements: short-term tests conducted from 48 hours up to 90 days, and long-term tests that last from 90 to 365 days. Your first test (initial/screening) should be a short-term 'worst-case' screening to see if there is a potential for high exposure to radon. Screening tests should be conducted under closed-building conditions, in the lowest lived-in area in the house, because the highest concentrations of radon will usually be found in a room closest to the underlying soil. Tests made under these conditions are less likely to miss a house with a potential for high concentrations. On the other hand, if the results of worst-case screening tests are very low, there is a high probability that the average annual concentrations in the house are also low.

\* Your state has designated a radon officer to assist citizens with questions on radon. Most offer free information on radon and radon reduction techniques, and most keep a list of qualified radon testing and mitigation businesses. Your radon officer can also provide the phone number of your regional USEPA office.

**Radon Test Result: 2.1 ±0.2 pCi/L**

**Test Started 04/25/13 at 10:00 am**

**Test Ended 04/29/13 at 10:00 am**

Closed house conditions maintained during test.

**Location 1st Floor**



RS-10 COMMUNITY RM #2

727 MILLER

ANN ARBOR, MI 48103

### INTERPRETING YOUR TEST RESULT

This radon test was provided to you by COMPLIANCE, INC / 810-225-8674. The US EPA action level for indoor radon is 4.0 pCi/L. The EPA recommendation for results in this range (2.0 to 3.9 pCi/L) is to conduct further tests to determine the true annual average, ideally with a long-term test kit. If the result remains between 2 and 4 there is little short-term risk, but you should consider fixing your home. Additionally, if you make any structural changes or start to use a lower level of the building more frequently, you should test again.

You may be able to obtain additional information about radon related subjects by calling your **state radon officer at 800-723-6642**. Or call the "Radon Fix-It Line" at 800-644-6999 Monday thru Friday between NOON and 8 pm EST.

This test result reflects the amount of radon measured in this sample AFTER it arrived at our laboratory. All analysis computations are automatically adjusted to reflect the length of test, the amount of moisture in the sample, time from the end of test, and the amount of radiation measured. If ALL the test instructions were carefully followed, then it is reasonable to assume this is an accurate assessment of the average level of the radon this sample was exposed to during the time indicated on the test packet.

## READ THIS FIRST

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### 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. Recently the US Congress set as a goal the lowering of radon levels in buildings to equal the levels of outside air.

### What is a picoCurie

For those interested in the numbers, a picoCurie is 0.000,000,000,001 (one-trillionth) of a Curie, an international measurement unit of radioactivity. One pCi/L means that in one liter of air there will be 2.2 radioactive disintegrations each minute. For example, at 4 pCi/L there will be approximately 12,672 radioactive disintegrations in one liter of air, during a 24-hour period.

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**Radon Test Result: 1.9 ±0.2 pCi/L**

**Test Started 04/25/13 at 10:00 am**

**Test Ended 04/29/13 at 10:00 am**

Closed house conditions maintained during test.

**Location 1st Floor**



RS-9 ROOM 100  
727 MILLER  
ANN ARBOR, MI 48103

**INTERPRETING YOUR TEST RESULT**

This radon test was provided to you by COMPLIANCE, INC / 810-225-8674. The US EPA action level for indoor radon is 4.0 pCi/L. The EPA indicates that there is little short-term risk with test results in this range (0.6 to 1.9 pCi/L). However, because radon levels fluctuate daily, as well as seasonally, you may want to retest during another season. Additionally, if you make any structural changes or start to use a lower level of the building more frequently, you should test again.

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**Radon Test Result: 0.8 ±0.2 pCi/L**

**Test Started 04/25/13 at 10:00 am**

**Test Ended 04/29/13 at 9:00 am**

Closed house conditions maintained during test.

**Location 1st Floor**



RS-8 ELEVATOR 1ST FL  
727 MILLER  
ANN ARBOR, MI 48103

### INTERPRETING YOUR TEST RESULT

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**Radon Test Result: 1.1 ±0.2 pCi/L**

**Test Started 04/25/13 at 10:00 am**

**Test Ended 04/29/13 at 9:00 am**

Closed house conditions maintained during test.

**Location 1st Floor**



RS#16 ROOM 108  
727 MILLER  
ANN ARBOR, MI 48103

**INTERPRETING YOUR TEST RESULT**

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**Radon Test Result: 0.7 ±0.2 pCi/L**

**Test Started 04/25/13 at 9:00 am**

**Test Ended 04/29/13 at 9:00 am**

Closed house conditions maintained during test.

**Location 1st Floor**



RS-2 UTILITY RM 1  
727 MILLER  
ANN ARBOR, MI 48103

**INTERPRETING YOUR TEST RESULT**

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**Radon Test Result: 1.8 ±0.2 pCi/L**

**Test Started 04/25/13 at 10:00 am**

**Test Ended 04/29/13 at 9:00 am**

Closed house conditions maintained during test.

**Location 1st Floor**



RS-4 APP STORAGE  
727 MILLER  
ANN ARBOR, MI 48103

### INTERPRETING YOUR TEST RESULT

This radon test was provided to you by COMPLIANCE, INC / 810-225-8674. The US EPA action level for indoor radon is 4.0 pCi/L. The EPA indicates that there is little short-term risk with test results in this range (0.6 to 1.9 pCi/L). However, because radon levels fluctuate daily, as well as seasonally, you may want to retest during another season. Additionally, if you make any structural changes or start to use a lower level of the building more frequently, you should test again.

You may be able to obtain additional information about radon related subjects by calling your **state radon officer at 800-723-6642**. Or call the "Radon Fix-It Line" at 800-644-6999 Monday thru Friday between NOON and 8 pm EST.

This test result reflects the amount of radon measured in this sample AFTER it arrived at our laboratory. All analysis computations are automatically adjusted to reflect the length of test, the amount of moisture in the sample, time from the end of test, and the amount of radiation measured. If ALL the test instructions were carefully followed, then it is reasonable to assume this is an accurate assessment of the average level of the radon this sample was exposed to during the time indicated on the test packet.

## READ THIS FIRST

This result has been rounded to one-tenth (0.1) of a pCi/L (picoCurie per liter), the most common method of reporting radon in air.

## NEXT...PLEASE...READ

everything under the heading

## INTERPRETING YOUR TEST RESULT

### 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. Recently the US Congress set as a goal the lowering of radon levels in buildings to equal the levels of outside air.

### What is a picoCurie

For those interested in the numbers, a picoCurie is 0.000,000,000,001 (one-trillionth) of a Curie, an international measurement unit of radioactivity. One pCi/L means that in one liter of air there will be 2.2 radioactive disintegrations each minute. For example, at 4 pCi/L there will be approximately 12,672 radioactive disintegrations in one liter of air, during a 24-hour period.

### Conducting Follow-up Measurements

USEPA protocol describes two general types of radon measurements: short-term tests conducted from 48 hours up to 90 days, and long-term tests that last from 90 to 365 days. Your first test (initial/screening) should be a short-term 'worst-case' screening to see if there is a potential for high exposure to radon. Screening tests should be conducted under closed-building conditions, in the lowest lived-in area in the house, because the highest concentrations of radon will usually be found in a room closest to the underlying soil. Tests made under these conditions are less likely to miss a house with a potential for high concentrations. On the other hand, if the results of worst-case screening tests are very low, there is a high probability that the average annual concentrations in the house are also low.

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**Radon Test Result: 0.9 ±0.2 pCi/L**

**Test Started 04/25/13 at 10:00 am**

**Test Ended 04/29/13 at 9:00 am**

Closed house conditions maintained during test.

**Location 1st Floor**



RS-5 TRASH RM  
727 MILLER  
ANN ARBOR, MI 48103

**INTERPRETING YOUR TEST RESULT**

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everything under the heading

**INTERPRETING YOUR TEST RESULT**

**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. Recently the US Congress set as a goal the lowering of radon levels in buildings to equal the levels of outside air.

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**Radon Test Result: 2.6 ±0.2 pCi/L**

**Test Started 04/25/13 at 10:00 am**

**Test Ended 04/29/13 at 9:00 am**

Closed house conditions maintained during test.

**Location 1st Floor**



RS-6 W STAIRCASE  
727 MILLER  
ANN ARBOR, MI 48103

### INTERPRETING YOUR TEST RESULT

This radon test was provided to you by COMPLIANCE, INC / 810-225-8674. The US EPA action level for indoor radon is 4.0 pCi/L. The EPA recommendation for results in this range (2.0 to 3.9 pCi/L) is to conduct further tests to determine the true annual average, ideally with a long-term test kit. If the result remains between 2 and 4 there is little short-term risk, but you should consider fixing your home. Additionally, if you make any structural changes or start to use a lower level of the building more frequently, you should test again.

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## INTERPRETING YOUR TEST RESULT

### 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. Recently the US Congress set as a goal the lowering of radon levels in buildings to equal the levels of outside air.

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**05/01/13 ACTIVATED CHARCOAL RADON TEST #4703407**

**Radon Test Result: < 0.3 ±0.2 pCi/L**

**Test Started 04/25/13 at 10:00 am**

**Test Ended 04/29/13 at 9:00 am**

Closed house conditions maintained during test.

**Location 1st Floor**



RS-15 ROOM 110  
727 MILLER  
ANN ARBOR, MI 48103

**INTERPRETING YOUR TEST RESULT**

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**INTERPRETING YOUR TEST RESULT**

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**05/01/13 ACTIVATED CHARCOAL RADON TEST #4703410**

**Radon Test Result: < 0.3 ±0.2 pCi/L**

**Test Started 04/25/13 at 10:00 am**

**Test Ended 04/29/13 at 9:00 am**

Closed house conditions maintained during test.

**Location 1st Floor**



**RS-12 ROOM 112**

**727 MILLER**

**ANN ARBOR, MI 48103**

**INTERPRETING YOUR TEST RESULT**

This radon test was provided to you by COMPLIANCE, INC / 810-225-8674. The US EPA action level for indoor radon is 4.0 pCi/L. Test results in this range(0.5 pCi/L or less) are, for all practical purposes, equivalent to the radon levels found in fresh air. However, if you make any structural changes or start to use a lower level of the building more frequently you should test again.

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**INTERPRETING YOUR TEST RESULT**

**Your health risk**

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**05/01/13 ACTIVATED CHARCOAL RADON TEST #4703411**

**Radon Test Result: < 0.3 ±0.2 pCi/L**

**Test Started 04/25/13 at 10:00 am**

**Test Ended 04/29/13 at 9:00 am**

Closed house conditions maintained during test.

**Location 1st Floor**



**RS-3 E STAIRCASE  
727 MILLER  
ANN ARBOR, MI 48103**

**INTERPRETING YOUR TEST RESULT**

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**INTERPRETING YOUR TEST RESULT**

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**Radon Test Result: 1.7 ±0.2 pCi/L**

**Test Started 04/25/13 at 10:00 am**

**Test Ended 04/29/13 at 9:00 am**

Closed house conditions maintained during test.

**Location 1st Floor**



RS-13 ROOM 114  
727 MILLER  
ANN ARBOR, MI 48103

**INTERPRETING YOUR TEST RESULT**

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**Radon Test Result: 1.2 ±0.2 pCi/L**

**Test Started 04/25/13 at 10:00 am**

**Test Ended 04/29/13 at 10:00 am**

Closed house conditions maintained during test.

**Location 1st Floor**



RS-11 RECEPTION AREA  
727 MILLER  
ANN ARBOR, MI 48103

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## Conducting Follow-up Measurements

**The higher your initial (screening) tests, the sooner you should conduct follow-up measurements.** The EPA states that you should retest the same location that was tested initially. **For additional or follow-up testing,** make sure at least one test is conducted in the **lowest lived-in level** of the home. Also choose regularly used rooms, such as family rooms, dens, playrooms, or bedrooms. A bedroom on the lower level may be a good choice, because people generally spend the most time in their bedrooms (approximately one-third of the year). If there are children, it may be appropriate to test their rooms or other areas where they spend a lot of time, especially at the lower levels. All short-term follow-up tests **must** be conducted under closed-building conditions. If closed-building conditions cannot be maintained, a long-term measurement conducted under normal living conditions could be used to help estimate average annual exposures.

Tests **should not be conducted** in a kitchen or a bathroom because high humidity, exhaust fans, and other factors can adversely affect the test results. Tests **should not be conducted** in storage areas or laundry rooms, because relatively little time is spent there. Although radon in water may be a contributor to the concentration of airborne radon, radon in air should be **confirmed** before a test for radon in water is performed.

It is recommended that before spending any time or money on radon mitigation, one should conduct multiple (three or more) tests to be certain there is a need. A few more tests will most certainly cost considerably less than any mitigation work.

If follow-up measurements have **confirmed** that the average annual level of radon is equal to or greater than 4 pCi/L, the USEPA recommends that the building or home be mitigated for radon. Consider also that a future buyer is likely to demand that the building pass a radon test before purchasing.

**Variations in Radon Levels:** what can affect your test results and why it may be important to conduct confirmation tests.

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 the norm, 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 five days of the test period. This happens because the radon collected by the activated charcoal has a radioactive half-life of only four days. This means, for example, over one-half of the radon collected during the first three days of a seven day test 'died' before the test ended. Seven day exposures of activated charcoal test devices are suggested because this allows the charcoal to equilibrate with its environment, averaging out the peaks and valleys that normally occur in real-life radon levels. Also the aspect of user convenience is considered, because most find it easier to remember to end a test on the same day of the week it was started.

If you have further questions regarding this test or need advice on follow-up testing, call fax or write to our technical service department listed below. Thank you for choosing the Air Chek test device.

## PERFORMING RADON TESTS FOR A REAL ESTATE TRANSACTION

EPA guidelines recommend that at least two short-term tests should be conducted, either together or sequentially, at the same location in the building. If the average of all the tests is below 4 pCi/L, then no further action is necessary at this time. 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 or regional EPA radon office or visit our website at <http://www.radon.com> to download a list of NEHA-certified testers. Ask for or download publication number EPA 402-K-00-008 **Home Buyer's and Seller's Guide to Radon**.

Limitation of Liability: While we at Air Chek, Inc. make every effort to maintain the highest possible quality control and include several checks and verification steps in our procedures, we make NO WARRANTY OF ANY KIND, EXPRESSED OR IMPLIED, INCLUDING WITHOUT LIMITATION ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS with respect to any item furnished, information supplied or services rendered you by Air Chek, Inc. Before any action is taken on the basis of test results given to you by Air Chek, Inc. we recommend that further testing be done. Neither Air Chek, Inc., nor any of our employees or agents, shall be liable under any claim, charge, or demand, whether in contract, tort or otherwise, for any and all losses, costs, charges, claims, demands, fees, expenses, injuries or damages (including without limitation INCIDENTAL OR CONSEQUENTIAL DAMAGES WHICH ARE EXCLUDED) of any nature or kind arising out of, connected with, resulting from, or sustained as a result of any item furnished, information supplied, or service rendered to you by Air Chek, Inc.

Notice to Pennsylvania Residents: The Radon Certification Act requires that anyone who provides any radon-related service or product to the general public must be certified by the Pennsylvania Department of Environmental Protection. You are entitled to evidence of certification from any person who provides such services or products. You are also entitled to a price list for services or products offered. All radon measurement data will be sent to the Department as required in the Act and will be kept confidential. If you have any questions, comments, or complaints concerning persons who provide radon-related services, please contact the Department of Environmental Protection, P.O. Box 8469, Harrisburg, PA 17105-8469 (717-783-4594).

The radon test kit(s) used for this report is certified by the NEHA-NRPP, Lab ID: 101138, for use in all fifty states. It is also listed or certified for use in all states that have a radon program.

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](mailto:info@radon.com)

# **Attachment 4**

Certifications



National Environmental Health Association  
National Radon Proficiency Program



May 24, 2011

B. V. Alvarez  
Air Chek, Inc.  
1936 Butler Bridge Road  
Mills River, NC 28759

Name of Analytical Laboratory: **Air Chek, Inc.**

NEHA Certification Number: 101138 AL

NEHA Expiration Date: 5/31/2013

*The firm and/or individual referenced above has met the requirements for certification as an Analytical Laboratory with the National Environmental Health Association's National Radon Proficiency Program. Certification has been granted for the specific measurement devices listed below. Verification of adherence to state and local regulations is advised.*

This laboratory is certified to analyze and interpret devices for certified radon professionals who will interpret results to clients.

**Devices:** femto-Tech CRM-510M "blind" Continuous Monitor

Air Chek Foil Bag Test Kit

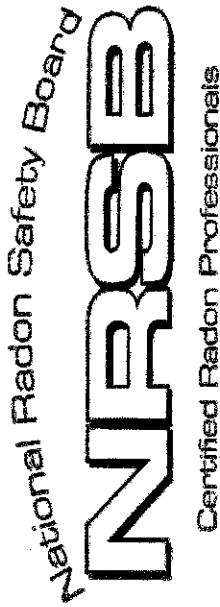
Pro Chek Foil Bag Test Kit

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Angel Anderson Price, NEHA-NRPP Executive Director

Administrative Office ~ P.O. Box 2109 ~ Fletcher, NC 28732 828.890.4117 ~  
e-mail: [angel@neha-nrpp.org](mailto:angel@neha-nrpp.org) ~ [www.radongas.org](http://www.radongas.org)

# The National Radon Safety Board



Certifies that

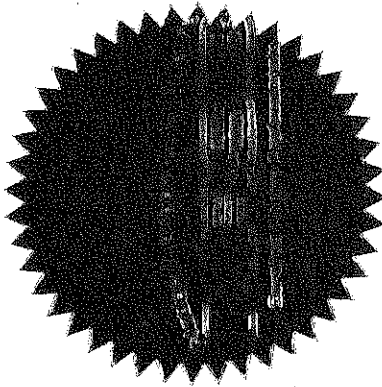
*Mark R. Peterson*

has successfully met the established and published requirements for Certification by The National Radon Safety Board as a

## **RADON MEASUREMENT SPECIALIST**

NRSB 13SS020  
Certification Number

4/30/2015  
Expiration Date



*Michelle Kunderlich*  
Executive Secretary

*This certificate is the property of The National Radon Safety Board and is not official without the raised seal.*