MATHIEU RESIDENCE

Limited Hazardous Materials Building Inspection Report

Storm Sandy Residential Rehabilitation Project
55 James Street
Milford, Connecticut

Connecticut Department of Housing Application No. 5022
Lothrop Associates Project No. 1524-30

Lothrop Associates, LLP

White Plains, New York

December 2014

Fuss & O'Neill EnviroScience, LLC
56 Quarry Road
Trumbull, CT 06611

Project No. 20140370.C1E

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Lothrop Associates, LLP
55 James Street, Milford, Connecticut

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1 Introduction

On December 9, 2014, and December 12, 2014, Fuss & O'Neill EnviroScience, LLC (EnviroScience) Representatives Mr. Robert Hobbins and Ms. Helen Rimsa, performed a limited hazardous materials building inspection of the residential structure located at 55 James Street in Milford, Connecticut (the "Site"). Mr. Hobbins and Ms. Rimsa are State of Connecticut-licensed Asbestos Consultant - Inspectors and Licensed Lead Inspectors. The residential structure was not occupied at the time and date of the inspection and is scheduled for renovation. Refer to *Appendix A* for EnviroScience inspectors' state licenses and accreditations.

This inspection was performed in response to the planned renovations to the Site building due to damage caused by Superstorm Sandy, as identified in the *Revised Initial Property Inspection Report* dated June 30, 2014, provided by Lothrop Associates. The limited inspection consisted of the following:

- A inspection for asbestos-containing materials (ACM) associated with the scheduled demolition of the existing residence;
- Testing of painted surfaces coated with suspect lead-based paint (LBP);
- Airborne radon gas assessment; and
- A mold assessment.

2 Asbestos Inspection

A property owner must ensure that performance of a thorough inspection for ACM, prior to possible disturbance of suspect ACM during renovation, is conducted. This is a requirement of the United States (US) Environmental Protection Agency (EPA) National Emission Standards for Hazardous Air Pollutants (NESHAP) regulation located at Title 40 CFR, Part 61, Subpart M.

This includes Friable, Non-Friable Category I, and Non-Friable Category II ACM.

- A Friable Material is defined as material that contains greater than one percent (>1%) asbestos, that when dry can be crumbled, pulverized, or reduced to powder by hand pressure.
- A Category I Non-Friable Material refers to material that contains greater than one percent (>1%) asbestos (e.g. packings, gaskets, resilient floor coverings, asphalt roofing products, etc.) that when dry cannot be crumbled, pulverized, or reduced to powder by hand pressure.
- A Category II Non-Friable Material refers to any non-friable material (excluding Category I materials) that contains greater than one percent (>1%) asbestos that when dry cannot be crumbled, pulverized, or reduced to powder by hand pressure.

During this inspection, suspect ACM were separated into three EPA categories. These categories are: thermal system insulation (TSI), surfacing ACM, and miscellaneous ACM. TSI includes all materials used to prevent heat loss or gain or water condensation on mechanical systems. Examples of TSI are pipe insulation, boiler insulation, duct insulation, and mudded pipe fitting insulations. Surfacing ACM includes all ACM that is applied by spray or trowel, or otherwise applied to an existing surface. Surfacing ACM is commonly used for fireproofing, decorative, and acoustical applications. Miscellaneous materials include all ACM not listed in thermal or surfacing, such as linoleum, vinyl asbestos flooring, and ceiling tiles.

Samples are recommended to be collected in a manner sufficient to determine asbestos content and include homogenous building materials. The EPA NESHAP regulation does not specifically identify a minimum number of samples to be collected and analyzed, but recommends the use of sampling protocols included in EPA Title 40 CFR, Part 763, Subpart E - Asbestos Containing Materials in Schools regulation.

2.1 Methodology

Samples of suspect ACM were collected in accordance with EPA recommendations and Asbestos Hazard Emergency Response Act (AHERA) protocols. The protocols included the following:

1. Surfacing Materials (SURF) (e.g., plaster, spray-applied fireproofing, etc.) were collected in a randomly distributed manner representing each homogenous area based on the overall quantity represented by the sampling as follows:
   a. Three samples collected from each homogenous area that is less than or equal to (≤) 1,000 square feet.
   b. Five samples collected from each homogenous area that is greater than (>) 1,000 square feet, but less than or equal to 5,000 square feet.
   c. Seven samples collected from each homogenous area that is greater than (>) 5,000 square feet.

2. Thermal System Insulation (TSI) (e.g., pipe insulation, tank insulation, etc.) was collected in a randomly distributed manner representing each homogenous area. Three bulk samples were collected as representative of each homogeneous material type, and sent to laboratory for asbestos analysis. Also, a minimum of one sample of any patching material (less than 6 linear of square feet) applied to TSI was collected.

3. Miscellaneous Materials (MISC) (e.g. floor tile, gaskets, construction mastics, etc.) had a minimum of two samples collected as representative of each homogenous material type. Sampling was conducted in a manner sufficient to determine asbestos content of the homogenous material as determined by the Asbestos Inspector. If materials identified were of (significant) minimal quantity, only a single sample was collected.

The Asbestos Consultants – Inspectors collected samples and prepared proper chain-of-custody forms for transmission of samples to a Connecticut-licensed analytical laboratory for analysis by Polarized Light Microscopy (PLM). The sampling locations, material type, and sample identification are identified by bulk sample analysis in *Table 2* of the "Results" section. Suspect materials observed on the Site building that are not listed in the following table should be considered suspect ACM until sample collection and analytical results indicate otherwise. Refer to *Appendix B* for PLM analytical results for asbestos bulk samples and chain-of-custody forms.

2.2 Results

Utilizing the EPA protocol and criteria, the following materials were identified as non-ACM:

Table 1
Non-Asbestos-Containing Materials

Location	Material Type	Sample No.
Bathroom	Gray Sink Undercoating	1209HR01A-B
Kitchen	Gray Sheetrock, White Joint/Taping Compound, & Gray Sheetrock/White Joint/Taping Compound Composite	1209HR02A-B, 03A-B, & 04
Building Exterior	Black Vapor Barrier behind Wood Siding	1212BH01A-C
Building Exterior	Red Brick Foundation & Gray Brick Grout	1212BH02A-B, 03A-B
Building Exterior	Gray Concrete Block Foundation & Gray Concrete Block Grout	1212BH04A-B, 05A-B
Building Exterior	Gray Concrete Skim Coat over Concrete Block Foundation	1212BH06A-B

2.3 Discussion

The EPA defines any material that contains greater than one percent (> 1%) asbestos, utilizing PLM as ACM. Materials that are identified as "none detected" are specified as not containing asbestos.

2.4 Conclusions and Recommendations

Laboratory analysis of the suspect ACM collected indicates that the laboratory results of the samples collected and analyzed do not contain asbestos.

Note that since this asbestos inspection was limited, we recommend conducting a supplemental inspection of hidden and inaccessible areas (behind walls/beneath fixed floors, exterior foundation, etc.) that includes destructive investigations prior to demolition/renovation activities that may disturb these hidden areas. Any suspect ACM encountered during demolition/renovation activities that is not identified in this report as being non-ACM should be presumed to contain asbestos until sample collection and analysis indicate otherwise.

3 Lead-Based Paint Testing

On December 9, 2014, and December 12, 2014, EnviroScience's representatives Mr. Hobbins and Ms. Rimsa performed comprehensive lead paint testing within the Site structure. The purpose of the testing was for compliance with EPA's Renovation, Repair, and Painting Rule (RRP) located at Title 40 CFR,

Parts 745.80 through 92, and the US Department of Housing and Urban Development (HUD) Lead-Safe Housing Rule (Title 24 CFR, Part 35, Subparts B-R).

3.1 Methodology

A direct reading X-ray fluorescence (XRF) analyzer was used to perform the testing. The testing was conducted in accordance with the protocol outlined in the attached document: "Testing Procedures and Equipment" (refer to *Appendix C)*.

For the purpose of this testing, various interior and exterior building components representing the initial painting history of the building, and any building-wide repainting by the owners/managers of these building components were tested. Individual repainting efforts are not discoverable in such a limited testing program.

The main structure was constructed of wood siding with wood window and metal door systems. The interior is composed of sheetrock, wood walls and ceilings, with wood subfloors. There were no children under the age of six present within the residence at time of the inspection.

3.2 XRF Testing Results

The testing indicated consistent painting trends throughout the building interior and exterior. No painted components observed and tested were determined to contain toxic levels of lead (greater than 1.0 milligrams of lead per square centimeter of paint).

The lead testing field data sheets and diagrams are provided as *Appendix D* of this report.

3.3 Conclusions and Recommendations

The testing indicated consistent painting trends throughout the building interior and exterior. No painted interior or exterior building components observed and tested were determined to be coated with toxic levels of lead in paint.

Note that the Occupational Safety and Health Administration (OSHA) has not established a level of lead in a material below which Title 29 CFR, Part 1926.62 ("Lead in Construction") does not apply. The Contractor shall comply with exposure assessment criteria, interim worker protection, and other requirements of the regulation as necessary to protect workers and building occupants.

If a specific component or surface is not identified as having been tested as part of this limited inspection, it should be presumed to contain lead paint until tested. Contractor's should be aware that the threshold limit of 1.0 mg/cm^2 for purposes of EPA RRP requirements is not recognized by OSHA and worker exposures are still subject to the Lead in Construction regulation (Title 29 CFR, Part 1926.62).

This inspection was performed as a comprehensive inspection of all representative surfaces within the residence that are scheduled to be disturbed and can be utilized to determine applicability requirements for the RRP rule on surfaces tested.

4 Mold Visual Assessment

On December 9, 2014, EnviroScience representatives Mr. Hobbins and Ms. Rimsa performed a visual assessment for the presence of suspect mold and water intrusion.

4.1 Observations

Based on our findings, no visible signs of mold were observed during this inspection. The interior of the residence has been gutted during prior clean-up activities and building materials replaced with new materials.

5 Airborne Radon Gas Information, Sampling and Procedure

5.1 Airborne Radon Gas Facts and Health Effects

Radon is a naturally-occurring radioactive gas produced by the natural breakdown (decay) of uranium which is found in soil and rock throughout the US. Radon gas travels through soil and enters buildings through cracks and other penetrations in building foundations. Eventually the gas itself decays into radioactive particles (decay products) that can become trapped in the lungs during human respiration. As these particles in turn decay they release small bursts of radiation which can damage lung tissue and lead to lung cancer over the course of a person's lifespan.

EPA studies have determined that radon gas concentrations in outdoor air average approximately 0.4 picoCuries per liter of air (pCi/L). However, radon and its decay products can accumulate to a much higher concentration inside a building. The EPA has adopted a recommended action level of 4.0 pCi/L; equal to or above which the EPA recommends that building owners take action to reduce the level of airborne radon with the building.

Radon is a colorless, odorless and tasteless gas, and thus, the only way to know whether or not an elevated level of radon gas is present in a building is to test the air for radon gas. Each frequently occupied room that is in contact with the lowest living level of the building should be measured, as even adjacent rooms can have significantly different levels of radon.

Again, radon is a known human carcinogen. Prolonged exposure to elevated radon concentrations causes an increased risk of lung cancer. Like other environmental pollutants, there is some uncertainty about the magnitude of radon health risks. However, scientists are more certain about radon risks than risks from most other cancer-causing environmental pollutants as estimates of radon risk are based on studies of

cancer in humans (underground miners). Additional studies on more typical, non-occupationally exposed, populations are underway.

EPA estimates that radon may cause about 14,000 lung cancer deaths in the US each year, with a range of 7,000 to 30,000. The US Surgeon General has warned that radon gas is the second-leading cause of lung cancer deaths after smoking, and is the leading cause among non-smokers.

5.2 Airborne Radon Gas Sampling Methodology

From December 9, 2014, to December 12, 2014, EnviroScience representative Mr. Hobbins and Ms. Rimsa deployed passive radon gas detection canisters in limited areas within the Site structure. The canisters were retrieved by Mr. Blum at least 48-hours, but not later than 96-hours later. The canisters were supplied by Radon Testing Corporation of America (RTCA).

It is recommended that such canisters be placed at least 20-inches from the floor and 12-inches away from exterior walls. Also, it is recommended that the canisters not be placed near drafts resulting from Heating, Ventilating, and Air Conditioning (HVAC) intakes and returns, doors, and at least 36-inches from windows. Also, canisters should not be exposed to direct sunlight, be covered up, or otherwise disturbed during the testing period. A closed building condition is also utilized for 12-hours prior to testing being conducted.

Airborne radon gas sampling results and chain-of-custody form are included in *Appendix E*.

5.3 Airborne Radon Gas Quality Assurance Procedure

EPA strongly recommends that quality assurance measurements are included in radon measurement studies. Quality assurance measurements include side-by-side canisters (duplicates), and unexposed control canisters (blanks).

Duplicates are pairs of canisters deployed in the same location, side-by-side, for the same measurement period. Duplicates are placed in at least ten percent of all sampling locations. These duplicate canisters are stored, deployed, removed, and shipped to the laboratory for analysis in the same manner as the other canisters. If either or both of the analyses in a duplicate pairing is above the EPA standard of 4.0 pCi/L the relative percent difference (RPD) between the two tests must be determined. If the allowable difference is exceeded, the test is determined to be invalid and a new duplicate test must be run. If both canister results are below the EPA standard then the RPD is not calculated since, despite any disparity, both results are below the EPA standard.

Blanks are utilized to determine whether the manufacturing, shipping, storage, and processing of the canisters has affected the accuracy of airborne radon gas sampling procedures. Blanks are unopened, unexposed canisters that are deployed with and shipped with the exposed canisters, so the processing laboratory treats them without bias. The number of blanks is at least five percent of the total number of canisters deployed, up to a maximum of 25 canisters.

5.4 Airborne Radon Gas Analytical Results

Four canisters, including one duplicate and one blank, were placed in target locations within the structure during sampling that was performed December 9, 2014, to December 12, 2014. The radon gas concentrations in the samples collected during the assessment were determined to contain 0.1 pCi/L. The EPA threshold for radon gas is 4.0 pCi/L.

In *Table 2* below, the locations and results of quality control duplicate tests are listed for the sampling conducted from December 9, 2014, to December 12, 2014:

Table 2
Duplicate Samples Results – December 9, 2014 – December 12, 2014

Location	Canister Numbers	Radon Concentration (pCi/Liter)			Relative Percent Difference (RPD, %)
		Sample	Sample Duplicate	Sample Average	
Kitchen	2357416 & 2357448	0.1	0.1	0.1	Percent Difference Not Needed (No Concentrations Above 4.0 pCi/Liter)

Note Duplicate testing results were satisfactory.

In *Table 3* below, the locations and results of quality control blank tests are listed for sampling conducted from December 9, 2014, to December 12, 2014:

Table 3
Blank Samples Results – December 9, 2014 – December 12, 2014

Location	Canister Numbers	Radon Concentration (pCi/Liter)
Laundry	2346474	0.2

Note Blank testing results were satisfactory

In *Table 4* below, the locations, canister numbers, and radon concentrations are listed for the airborne radon assessment conducted from December 9, 2014, to December 12, 2014:

Table 4
Radon Sampling Results – December 9, 2014 – December 12, 2014

Location	Canister Numbers	Radon Concentration (pCi/Liter)
Kitchen	2357416	0.1
Laundry	2346459	0.1

5.5 Conclusions and Recommendations

During the course of the initial airborne radon gas sampling, four sampling canisters, including one duplicate and one blank, were placed in targeted locations within the Site structure. The analytical results of the samples were below EPA recommended action level of 4.0 pCi/L. No further action regarding radon gas is required.

Report prepared by Senior Scientist Helen Rimsa.

Reviewed by:

Kevin J. McCarthy
Project Manager

Timothy M. Downey
Senior Project Manager

Appendix A

Fuss & O'Neill EnviroScience State Inspector Licenses and Accreditations

WALLET CARD

STATE OF CONNECTICUT
DEPARTMENT OF PUBLIC HEALTH

NAME
HELEN RIMSA

VALIDATION NO.
03-723328

LICENSE NO.
000764

CURRENT THROUGH
03/31/15

PROFESSION
ASBESTOS CONSULTANT-INSPECTOR

SIGNATURE

COMMISSIONER

CERTIFICATE OF ACHIEVEMENT

This certifies that

Helen Rimsa

has successfully completed the

Asbestos Site Inspector Refresher Training
Asbestos Accreditation Under TSCA Title II
40 CFR Part 763

conducted by

Cardno ATC
73 William Franks Drive
West Springfield, MA 01089
(413) 781-0070

Gregory J. Morsch

Principal Instructor: Gregory Morsch

February 20, 2014
Date of Course

February 20, 2015
Expiration Date

Gregory J. Morsch

Regional Manager: Gregory Morsch

SIAR-4794
Certificate Number

February 20, 2014
Examination Date

WALLET CARD

STATE OF CONNECTICUT
DEPARTMENT OF PUBLIC HEALTH

NAME
HELEN RIMSA

VALIDATION NO.
03-723329

CERTIFICATION NO.
002192

CURRENT THROUGH
03/31/15

PROFESSION
LEAD INSPECTOR

Helen Rimsa
SIGNATURE

Jewel Mullen MD
COMMISSIONER

CERTIFICATE OF ACHIEVEMENT

This certifies that

Helen Rimsa
75 School Road, Andover, CT 06232
000-00-9869

has successfully completed the

INSPECTOR REFRESHER

Training Course
conducted by
Cardno ATC
73 William Franks Drive
West Springfield, MA 01089
(413) 781-0070

Principal Instructor:

May 13, 2014	May 13, 2014
Date of Course	*Exam Date*
CTLIR-210	May 13, 2015
Certificate Number	*Expiration Date*

Training Manager:

Training received complies with the requirements of the Connecticut Department of Public Health pursuant to Section 20-477 of the Connecticut General Statutes.

0001088 FP **PRSRT T5 0 0564 06040

JOHN R. HOBBINS
C/O FUSS & O'NEILL ENVIROSCIENCE, LLC
146 HARTFORD ROAD
MANCHESTER CT 06040

Dear Licensed/Certified Professional,

Attached you will find your validated license/certification for the coming year. Should you have any questions about your license/certificate renewal, please do not hesitate to write or call:

Department of Public Health **(860) 509-7603**
P.O. Box 340308
M.S.#12MQA **http://www.dph.state.ct.us**
Hartford, CT 06134-0308

Sincerely,

JEWEL MULLEN, MD, MPH, MPA, COMMISSIONER
DEPARTMENT OF PUBLIC HEALTH

INSTRUCTIONS:

1. Detach and sign each of the cards on this form.
2. Display the large card in a prominent place in your office or place of business.
3. The wallet card is for you to carry on your person. If you do not wish to carry the wallet card, place it in a secure place.
4. The employer's copy is for persons who must demonstrate current licensure/certification in order to retain employment or privileges. The employer's card is to be presented to the employer and kept by them as a part of your personnel file. Only one copy of this card can be supplied to you.

STATE OF CONNECTICUT
DEPARTMENT OF PUBLIC HEALTH
PURSUANT TO THE PROVISIONS OF THE GENERAL STATUTES OF CONNECTICUT
THE INDIVIDUAL NAMED BELOW IS LICENSED
BY THIS DEPARTMENT AS A

ASBESTOS CONSULTANT - INSPECTOR

LICENSE NO.
000700
CURRENT THROUGH
01/31/15
VALIDATION NO.
03-708142

JOHN R. HOBBINS

SIGNATURE

COMMISSIONER

EMPLOYER'S COPY

STATE OF CONNECTICUT
DEPARTMENT OF PUBLIC HEALTH

NAME
JOHN R. HOBBINS

VALIDATION NO.	LICENSE NO.	CURRENT THROUGH
03-708142	000700	01/31/15

PROFESSION
ASBESTOS CONSULTANT-INSPECTOR

SIGNATURE

COMMISSIONER

WALLET CARD

STATE OF CONNECTICUT
DEPARTMENT OF PUBLIC HEALTH

NAME
JOHN R. HOBBINS

VALIDATION NO.	LICENSE NO.	CURRENT THROUGH
03-708142	000700	01/31/15

PROFESSION
ASBESTOS CONSULTANT-INSPECTOR

SIGNATURE

COMMISSIONER

Fuss & O'Neill EnviroScience, LLC

146 Hartford Road, Manchester, CT 06040 – (860) 646-2469

This is to certify that

John Robert Hobbins

xxx-xx-6853

has successfully completed the

4 Hr. Asbestos Inspector Refresher

Asbestos Accreditation under TSCA Title II

40 CFR Part 763

John Rowinski, Principal Instructor

Robert L. May, Jr., Training Manager

September 3, 2014

Date of Course

AI-R-09/14-6

Certificate Number

September 3, 2014

Examination Date

September 3, 2015

Expiration Date

John R. Hobbins
C/O FUSS & O'NEILL ENVIROSCIENCE, LLC
146 HARTFORD ROAD
MANCHESTER, CT 06040

Dear Licensed/Certified Professional,
Attached you will find your validated license/certification for the coming year. Should you have any questions about your license/certificate renewal, please do not hesitate to write or call:

Department of Public Health
P.O. Box 340308
M.S.#12MQA
Hartford, CT 06134-0308

(860) 509-7603
http://www.dph.state.ct.us

Sincerely,

JEWEL MULLEN, MD, MPH, MPA, COMMISSIONER
DEPARTMENT OF PUBLIC HEALTH

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1. Detach and sign each of the cards on this form.
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4. The employer's copy is for persons who must demonstrate current licensure/certification in order to retain employment or privileges. The employer's card is to be presented to the employer and kept by them as a part of your personnel file. Only one copy of this card can be supplied to you.

STATE OF CONNECTICUT
DEPARTMENT OF PUBLIC HEALTH
PURSUANT TO THE PROVISIONS OF THE GENERAL STATUTES OF CONNECTICUT

THE INDIVIDUAL NAMED BELOW IS CERTIFIED
BY THIS DEPARTMENT AS A
Lead Inspector

CERTIFICATION NO.
2156

John R. Hobbins

CURRENT THROUGH
01/31/2015
VALIDATION NO.
DUPLICATE

SIGNATURE
COMMISSIONER

EMPLOYER'S COPY
STATE OF CONNECTICUT
DEPARTMENT OF PUBLIC HEALTH
NAME
John R. Hobbins
VALIDATION NO.
DUPLICATE
CERTIFICATION NO.
2156
CURRENT THROUGH
01/31/2015
PROFESSION
Lead Inspector
SIGNATURE
COMMISSIONER

WALLET CARD
STATE OF CONNECTICUT
DEPARTMENT OF PUBLIC HEALTH
NAME
John R. Hobbins
VALIDATION NO.
DUPLICATE
CERTIFICATION NO.
2156
CURRENT THROUGH
01/31/2015
PROFESSION
Lead Inspector
SIGNATURE
COMMISSIONER

CERTIFICATE OF ACHIEVEMENT

This certifies that

John Robert Hobbins

97 Montowese Street, Branford, CT 06405

000-00-6853

has successfully completed the

INSPECTOR REFRESHER

Training Course
conducted by
Cardno ATC
73 William Franks Drive
West Springfield, MA 01089
(413) 781-0070

Principal Instructor: Neal Freuden

January 30, 2014
Date of Course

January 30, 2014
Exam Date

CTLIR-205
Certificate Number

January 30, 2015
Expiration Date

Training Manager: Gregory Morsch

Training received complies with the requirements of the Connecticut Department of Public Health pursuant to Section 20-477 of the Connecticut General Statutes.

Appendix B

Asbestos Laboratory Report and Chain-of-Custody Forms

EMSL Analytical, Inc.
200 Route 130 North, Cinnaminson, NJ 08077
Phone/Fax: (800) 220-3675 / (856) 786-5974
http://www.EMSL.com cinnasblab@EMSL.com

EMSL Order:	041436400
CustomerID:	ENVI54
CustomerPO:	20140370.C1E
ProjectID:	

Attn: **Kevin McCarthy**
Fuss & O'Neill EnviroScience, LLC
146 Hartford Road
Manchester, CT 06040

Phone:	(860) 646-2469
Fax:	(888) 838-1160
Received:	12/11/14 9:25 AM
Analysis Date:	12/12/2014
Collected:	

Project: **Lothrop-Storm Sandy Residential Rehab / 20140370.C1E / 55 James Street, Milford, CT**

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos				Asbestos
Sample	Description	Appearance	%	Fibrous	%	Non-Fibrous	% Type
1209-HR-1A *041436400-0001*	Bathroom - Grey Sink Undercoat	Gray Non-Fibrous Homogeneous			100%	Non-fibrous (other)	**None Detected**
1209-HR-1B *041436400-0002*	Bathroom - Grey Sink Undercoat	Gray Non-Fibrous Homogeneous			100%	Non-fibrous (other)	**None Detected**
1209-HR-2A *041436400-0003*	Kitchen - Grey Sheetrock	Tan/White Fibrous Homogeneous	30%	Cellulose	68%	Non-fibrous (other)	**None Detected**
			2%	Glass			
1209-HR-2B *041436400-0004*	Kitchen - Grey Sheetrock	Tan/White Fibrous Homogeneous	20%	Cellulose	75%	Non-fibrous (other)	**None Detected**
			5%	Glass			
1209-HR-3A *041436400-0005*	Kitchen - White Joint Compound	White Non-Fibrous Homogeneous			100%	Non-fibrous (other)	**None Detected**
1209-HR-3B *041436400-0006*	Kitchen - White Joint Compound	White Non-Fibrous Homogeneous			100%	Non-fibrous (other)	**None Detected**
1209-HR-4 *041436400-0007*	Kitchen - Grey Sheetrock/ White Joint Compound	Tan/White Non-Fibrous Homogeneous	30%	Cellulose	69%	Non-fibrous (other)	**None Detected**
			1%	Glass			

Analyst(s)
Heather Paulson (4)
Jillian Yurick (3)

Stephen Siegel, CIH, Laboratory Manager
or other approved signatory

EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Samples received in good condition unless otherwise noted. Estimated accuracy, precision and uncertainty data available upon request. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Reporting limit is 1%

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ NVLAP Lab Code 101048-0, AIHA-LAP, LLC-IHLAP Lab 100194, NYS ELAP 10872, NJ DEP 03036, PA ID# 68-00367

Report Amended: 12/17/2014 10:34:13 Replaces the Inital Report 12/12/2014 09:36:25. Reason Code: Client-Change to Project

THIS IS THE LAST PAGE OF THE REPORT.

FUSS & O'NEILL
EnviroScience, LLC

www.fando.com

56 Quarry Road, Trumbull, CT 06611

Phone (203) 374-3748 Fax (203) 374-4391

ASBESTOS BULK SAMPLE CHAIN OF CUSTODY FORM

Sheet __1 of _1_

Project Name: Lothrop-Storm Sandy Residential Rehab Project No. 20140370.C1E Date: 12/09/14

Site Address: 55 James Street, Milford, CT Project Manager: Kevin McCarthy

Sample ID (01A-ABC-Date)	Sample Location	Type of Material
1209-HR-1A	Bathroom	Grey sink undercoat
1209-HR-1B	Bathroom	Grey sink undercoat
1209-HR-2A	Kitchen	Grey sheetrock
1209-HR-2B	Kitchen	Grey sheetrock
1209-HR-3A	Kitchen	White joint compound
1209-HR-3B	Kitchen	White joint compound
1209-HR-4	Kitchen	Grey sheetrock/White joint compound

Analysis Method: ☒ PLM ☐ TEM ☐ **Other** _____ Turnaround Time: 48 hours_____

Based on the turnaround time indicated above, analyses are due to EnviroScience on or before this date: 12/13/14 Please call EnviroScience if analyses will not be completed for requested t/a/t at (617) 282-4675.

Email Results to: hrimsa@fando.com **Do Not Mail Hard Copy Report** **Total # of Samples:** 7
FAX Results to: 888-838-1160.

Special Instructions: Stop analysis on first positive sample in each homogeneous set of samples unless otherwise noted. Do not layer samples unless indicated.

Samples collected by: Helen Rimsa Helen Rimsa

Samples Sent by: Helen Rimsa **Date:** 12/09/14 **Time: 1300**

Samples Received by: _____ **Date:** _____ **Time:** _____

Shipped To: ☒ EMSL State NJ ☐ Other _____

Method of Shipment: ☒ FedEx ☐ Lab Drop Off ☐ Other _____

EMSL Analytical, Inc.
200 Route 130 North, Cinnaminson, NJ 08077
Phone/Fax: (800) 220-3675 / (856) 786-5974
http://www.EMSL.com cinnasblab@EMSL.com

EMSL Order:	041436633
CustomerID:	ENVI54A
CustomerPO:	20140370.C1E
ProjectID:	

Attn: **Kevin McCarthy**
Fuss & O'Neill EnviroScience, LLC
56 Quarry Road
Trumbull, CT 06611

Phone:	(203) 374-3748
Fax:	(203) 374-4391
Received:	12/13/14 10:00 AM
Analysis Date:	12/17/2014
Collected:	12/12/2014

Project: **Lothrop - Storm Sandy Rehab / 55 James St, Milford, CT / 20140370.C1E**

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos				Asbestos
Sample	**Description**	**Appearance**	**%**	**Fibrous**	**%**	**Non-Fibrous**	**% Type**
1212BH01A *041436633-0001*	Exterior Of Building - Black Vapor Barrier Behind Wood Siding	Black Fibrous Homogeneous	65%	Cellulose	35%	Non-fibrous (other)	**None Detected**
1212BH01B *041436633-0002*	Exterior Of Building - Black Vapor Barrier Behind Wood Siding	Black Fibrous Homogeneous	65%	Cellulose	35%	Non-fibrous (other)	**None Detected**
1212BH01C *041436633-0003*	Exterior Of Building - Black Vapor Barrier Behind Wood Siding	Black Fibrous Homogeneous	50%	Cellulose	50%	Non-fibrous (other)	**None Detected**
1212BH02A *041436633-0004*	Exterior Of Building - Brick Foundation	Red Non-Fibrous Homogeneous			100%	Non-fibrous (other)	**None Detected**
1212BH02B *041436633-0005*	Exterior Of Building - Brick Foundation	Red Non-Fibrous Homogeneous			100%	Non-fibrous (other)	**None Detected**
1212BH03A *041436633-0006*	Exterior Of Building - Brick Grout	Gray Non-Fibrous Homogeneous			100%	Non-fibrous (other)	**None Detected**
1212BH03B *041436633-0007*	Exterior Of Building - Brick Grout	Gray Non-Fibrous Homogeneous			100%	Non-fibrous (other)	**None Detected**

Analyst(s)

Amy Johnson (7)
Frank Dicrescenzo (6)

Stephen Siegel, CIH, Laboratory Manager
or other approved signatory

EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Samples received in good condition unless otherwise noted. Estimated accuracy, precision and uncertainty data available upon request. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Reporting limit is 1%

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ NVLAP Lab Code 101048-0, AIHA-LAP, LLC-IHLAP Lab 100194, NYS ELAP 10872, NJ DEP 03036, PA ID# 68-00367

Initial report from 12/17/2014 07:54:51

EMSL Analytical, Inc.
200 Route 130 North, Cinnaminson, NJ 08077
Phone/Fax: (800) 220-3675 / (856) 786-5974
http://www.EMSL.com cinnasblab@EMSL.com

EMSL Order:	041436633
CustomerID:	ENVI54A
CustomerPO:	20140370.C1E
ProjectID:	

Attn: **Kevin McCarthy**
Fuss & O'Neill EnviroScience, LLC
56 Quarry Road
Trumbull, CT 06611

Phone:	(203) 374-3748
Fax:	(203) 374-4391
Received:	12/13/14 10:00 AM
Analysis Date:	12/17/2014
Collected:	12/12/2014

Project: **Lothrop - Storm Sandy Rehab / 55 James St, Milford, CT / 20140370.C1E**

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
1212BH04A *041436633-0008*	Exterior Of Building - Concrete Block Foundation	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
1212BH04B *041436633-0009*	Exterior Of Building - Concrete Block Foundation	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
1212BH05A *041436633-0010*	Exterior Of Building - Concrete Block Grout	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
1212BH05B *041436633-0011*	Exterior Of Building - Concrete Block Grout	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
1212BH06A *041436633-0012*	Exterior Of Building - Concrete Skim Coat Over Concrete Block Foundation	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
1212BH06B *041436633-0013*	Exterior Of Building - Concrete Skim Coat Over Concrete Block Foundation	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**

Analyst(s)
Amy Johnson (7)
Frank Dicrescenzo (6)

Stephen Siegel, CIH, Laboratory Manager
or other approved signatory

EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Samples received in good condition unless otherwise noted. Estimated accuracy, precision and uncertainty data available upon request. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Reporting limit is 1%

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ NVLAP Lab Code 101048-0, AIHA-LAP, LLC-IHLAP Lab 100194, NYS ELAP 10872, NJ DEP 03036, PA ID# 68-00367

Initial report from 12/17/2014 07:54:51

THIS IS THE LAST PAGE OF THE REPORT.

OrderID: 041436633

Fuss & O'Neill EnviroScience EMSL Customer No. ENVP54

FUSS & O'NEILL EnviroScience, LLC

041436633

www.fando.com

56 Quarry Road, Trumbull, CT 066611

Phone (203) 374-3748 Fax (203) 374-4391

ASBESTOS BULK SAMPLE CHAIN OF CUSTODY FORM

Sheet 1 of 1

Project Name: Lothrop-Storm Sandy Rehab Project No. 20140370 C1E Date: 12-12-2014

Site Address: 55 James St. Milford, CT Project Manager: Kevin McCarthy

Sample ID	Sample Location	Type of Material
1212BH01A	Exterior of Building	Black Vapor Barrier behind Wood Siding
1212BH01B	Exterior of Building	Black Vapor Barrier behind Wood Siding
1212BH01C	Exterior of Building	Black Vapor Barrier behind Wood Siding
1212BH02A	Exterior of Building	Brick Foundation
1212BH02B	Exterior of Building	Brick Foundation
1212BH03A	Exterior of Building	Brick Grout
1212BH03B	Exterior of Building	Brick Grout
1212BH04A	Exterior of Building	Concrete Block Foundation
1212BH04B	Exterior of Building	Concrete Block Foundation
1212BH05A	Exterior of Building	Concrete Block Grout
1212BH05B	Exterior of Building	Concrete Block Grout
1212BH06A	Exterior of Building	Concrete Skim Coat over Concrete Block Foundation
1212BH06B	Exterior of Building	Concrete Skim Coat over Concrete Block Foundation

Analysis Method: ☒ PLM ☐ TEM ☐ Other _____ Turnaround Time: 48 hour

Based on the turnaround time indicated above, analyses are due to EnviroScience on or before this date: _____ Please call EnviroScience if analyses will not be completed for requested TAT at (203) 374 - 3748.

Email Results to: kmccarthy @fando.com **Do Not Mail Hard Copy Report** **Total # of Samples:** _____
FAX Results to: 888-838-1160.

Special Instructions: Stop analysis on first positive sample in each homogeneous set of samples unless otherwise noted. Do not layer samples unless indicated. ~~If NOB group samples are all negative by PLM, analyze only "A" group sample (as noted by asterisk (*) above) by TEM NOB per group.~~

Samples collected by: Bob Hobbins BH **Date:** 12-12-14 **Time:** _____

Samples Sent by: Bob Hobbins BH **Date:** 12-12-14 **Time:** _____

Samples Received by: DMB-HX **Date:** 12-13-14 **Time:** 10A

Shipped To: ☒ EMSL State NJ ☐ Other _____

Method of Shipment: ☒ FedEx ☐ Lab Drop Off ☐ Other _____

DEC 13 2014 10:00 AM

13

F:\P2014\0370\C1E\Lab Data\COC_BH_2014-1212.docx

Appendix C

Lead Paint Testing Procedures and Equipment

Standard Operating Procedures
HUD and State of Connecticut Lead-Based Paint Inspections

Testing Procedures and Equipment

The U. S. Department of Housing and Urban Development (HUD) "Guidelines for the Evaluation and Control of Lead Hazards in Housing, September 1997" were consulted for this lead evaluation. HUD has been the agency at the federal level with responsibility for the establishment of national lead-based paint standards for testing and abatement. The HUD document will be referenced as the Guidelines in this report. The State of Connecticut Department of Public Health's current lead regulations, Lead Poisoning Prevention and Control (19a-111-1 through 19a-111-11) were also consulted.

This lead evaluation was comprehensive. A comprehensive inspection means that representative painted surfaces were systematically evaluated on a room-by-room basis in accordance with the Guidelines and the State of Connecticut regulations.

Lead-based paint surfaces and components were identified by utilizing on-site x-ray fluorescence (XRF) instruments. EnviroScience Consultants, Inc. owns and utilizes Radiation Monitoring Device LPA-1s (RMD instruments) exclusively for lead-based paint testing. Each instrument is operated in accordance with state and federal and manufacturer standards on the use of the instruments. State and federal protocols provide, with the exception of wall surfaces, one reading with the instrument on a representative component in each room, i.e., baseboard, chair rail, etc., as sufficient to establish the lead paint classification of all the representatives of that component type in a room. In the case of walls, because of the large spatial areas involved and the variability in lead content in paint over such large areas, the federal and state governments want a reading on each wall surface in a room. Therefore, representative testing is not permitted for walls.

The federal government has developed Performance Characteristic Sheets (PCS) for the type of instrument cited above. Each instrument must be calibrated in accordance with these PCSs on a 1.0-milligram lead standard. Each of EnviroScience's instruments has one of these standards assigned to it. Some of the standards were purchased directly from the government and the others from the manufacturers of the instruments.

For the RMD in the standard reading mode on metal, a Substrate Equivalent Lead (SEL) concentration has to be determined. To determine the SEL, the paint is removed from the surface of the component to obtain a bare substrate reading. After removing the paint, the surface is wiped with a 5% trisodium phosphate solution (a heavy duty cleaner). All paint residue is collected and properly disposed. Once the paint and surrounding area are cleaned, the XRF is utilized to determine the SEL for each surface. The SEL values are subtracted from the XRF values to determine the Corrected Lead Concentration (CLC). The CLC is the lead content of the paint on the component tested.

The RMD instrument has federal government-determined positive and negative ranges for the definition of lead-based paint. XRF results are classified using either the threshold or the inconclusive range. For the threshold, results are classified as positive if they are greater than or equal to the threshold and negative if they are less than the threshold. There is no inconclusive

classification when using the threshold values associated with an RMD instrument. The ranges for the RMD instrument and their various operating modes are as follows:

Radiation Monitoring Device LPA Analyzer 1

30-Second Standard Mode Reading Description	Substrate	Threshold (mg/cm²)
Results corrected for substrate bias on metal substrate only.	Brick	1.0
	Concrete	1.0
	Drywall	1.0
	Metal	0.9
	Plaster	1.0
	Wood	1.0

Quick Mode Reading Description	Substrate	Threshold (mg/cm²)	Inconclusive Range (mg/cm²)
Readings not corrected for substrate bias on any substrate.	Brick	1.0	None
	Concrete	1.0	None
	Drywall	1.0	None
	Metal	1.0	None
	Plaster	1.0	None
	Wood	1.0	None

Prior to the start of any testing, a sketch of the building is drawn, and side designations are given to help identify exactly where readings were taken. Drawings depicting the room-numbering scheme are located on the cover page(s) for the building(s) inspected. Each side of the building was labeled A, B, C, or D. The wall "A" side of the unit is generally the side of primary entrance into a dwelling, and this room is always Room 1. Areas in the units include rooms, hallways, and closets. Areas are numbered in a clockwise fashion as building construction allows. This allows the inspector to indicate which substrate surface was tested. The condition of the surface is described by a check mark in the appropriate column, under the heading "condition of surface" on the testing form.

When more than one surface type was present on a side, the component tested was indicated with a number. If two windows were present on a building side, they were numbered left to right. Closet shelves and shelf supports were numbered top to bottom.

It is understood that the room layouts presented in the report are in conformance with the conditions that exist at the time the testing is performed. EnviroScience avoids labeling a room solely by its current functional use (i.e., living room, bedroom, etc.) since this use can change over time. Similarly, room layouts can change dramatically as dwellings are renovated and additions are built, incorporating existing rooms, or existing interior walls are moved or eliminated altogether.

Appendix D

Lead Testing Field Data Sheets

FUSS & O'NEILL
EnviroScience, LLC

www.fando.com

146 Hartford Road, Manchester, CT 06040

(860) 646-2469 Fax (860) 649-6883

LEAD INSPECTION COVER SHEET

Inspector's Information

Inspector's Name: Robert Hobbins
License Number: 2156
XRF Model: LPA – 1B
Serial Number: 1377
Date of Inspection: December 9, 2014
Project Number: 20140370.C1E

Property Information

Building Address: 55 James Street
(Street)

Milford (City) CT (State) Age of Property: NA

Describe Structure: interior sheetrock walls & ceilings, wood/metal/vinyl windows and doors, and wood floors. Exterior is wood siding and concrete foundation

Are there lead hazards present? ☐ Yes ☒ No
Were lead dust wipes taken? ☐ Yes ☒ No
Were soil samples collected? ☐ Yes ☒ No
Were drinking water samples collected? ☐ Yes ☒ No

Single Family Dwelling ☒

Is there an EBL child present?
☐ Yes ☒ No ☐ Unknown

Is there a child under six years of age in the dwelling?
☐ Yes ☒ No ☐ Unknown

Multiple Family Dwelling ☐

Number of units in building:
Number of units tested:
Is there an EBL child present in the building?
☐ Yes ☐ No ☐ Unknown
If EBL child, which unit(s)?
Is there a child under six years of age in the building?
☐ Yes ☐ No ☐ Unknown
If child under six, which unit(s)?

XRF Calibration Check

Calibration Paint Film Used: ☐ NIST 1.02 mg/cm² ☒ Manufacturer's Standard 1.0 mg/cm²

Calibration Check Limits Used: ☒ RMD (0.7 to 1.3 mg/cm² inclusive)
☐ Scitec MAP4 (0.6 to 1.2 mg/cm² inclusive)

	Hour	First Reading	Second Reading	Third Reading	Average
First Check	811	1.1	1.0	1.2	1.10
Second Check	1000	1.0	1.1	1.0	1.03
Third Check	1400	1.1	1.2	1.2	1.16
Fourth Check					

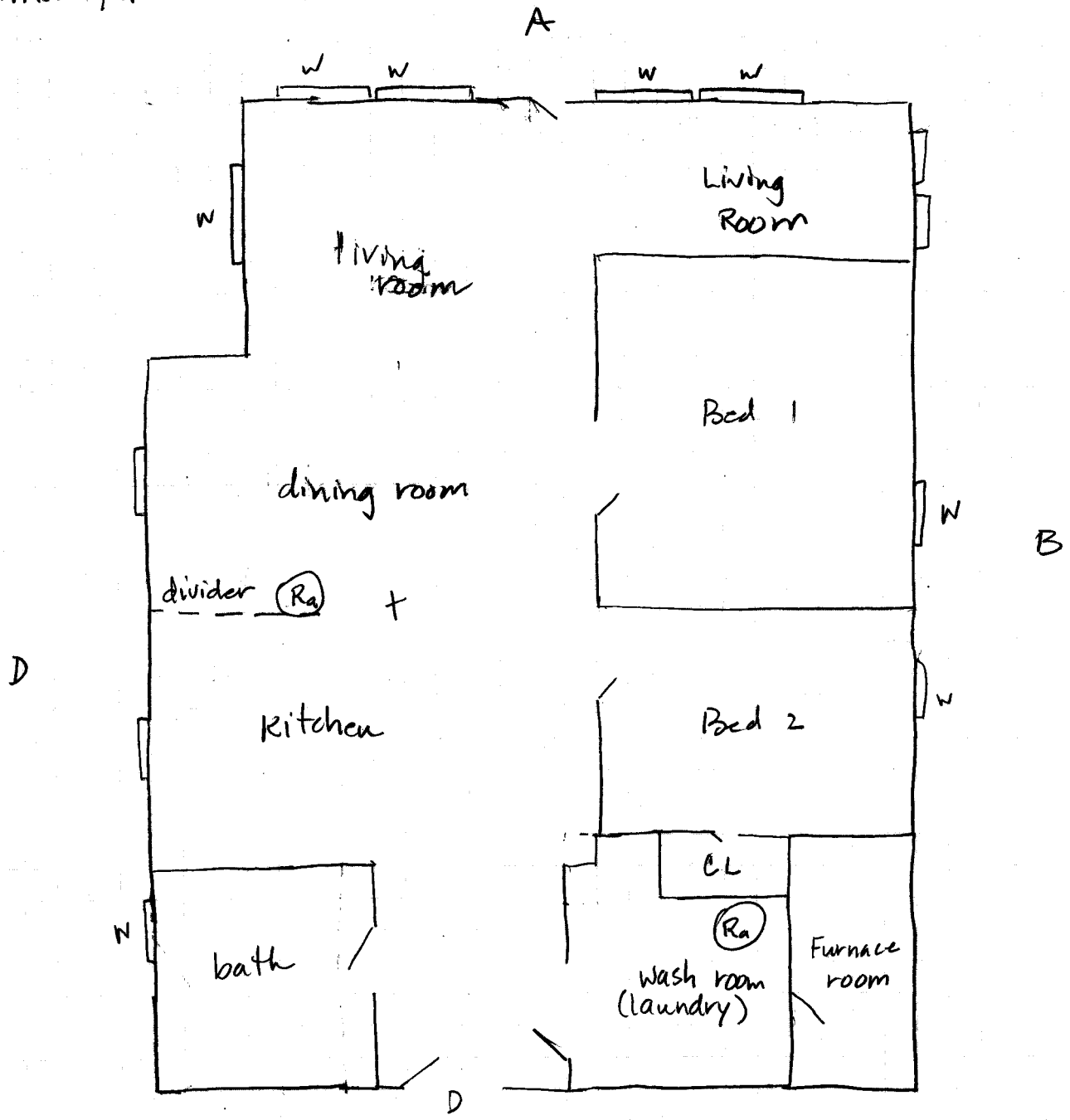
FUSS & O'NEILL

Prepared By	Date	Checked By	Date	Project No
	12/9/14			

Bob Hobbins / Helen Rimsa

Sheet No
of

55 James St
Milford, CT



baseboard heat - gas

C

FUSS & EnviroScience, LLC
www.fando.com
146 Hartford Road, Manchester, CT 06040
(860) 646-2469 Fax (860) 649-6883

XRF FIELD DATA SHEET – INTERIOR ROOM

Address: 55 James St, Milford, CT **Apt. #:**
Floor: 1 **Room:** Living Room **Page** 1 **of** 6
Project Name: QA-Sandy Rehab **Project Number:** 2014~~1034~~.C1E 0370
Project Manager: K. McCarthy (If Positive - Check All That Apply)

Side	Surface	XRF Readings	POS	Substrate	Color	Defective	Chewable	Friction	Impact	Comments
	Floor									
	Baseboards	0.2	–	Wood	wht					
A	Wall	0.0	–	STR	wht	–				
B	Wall	-0.1	–	STR	wht	–				
C	Wall	0.3	–	STR	wht	–				
D	Wall	-0.1	–	STR	wht	–				
	Chair rail	-0.0	–	STR	wht					
–	Ceiling									
	Crown Molding									
A	Door	0.8	inc	metal	wht					
	Casing	0.01	–	wood	wht					
	Jamb	0.3	–	wood	wht					
	Door									
	Casing									
	Jamb									
A	Window Trim	0.3	–	wood	wht	–				
	Sill	0.3	–	wood	wht	–				
	Sash	N/A		vinyl						
	Well	0.1	–	vinyl	wht					
	Cabinet Base									
	Door Exterior									
	Door Interior									
	Walls									
	Shelves									
	Shelf Supports									
	Closet Shelf									
	Shelf Supports									
D	Radiator	1.1	inc	metal	wht					factory coat
	Wall Molding									

* Substrate Type: Metal = M, Wood = W, Plaster = P, Sheetrock = S, Concrete = C, Brick = B
N/A = Not Accessible; N/C = Not Coated; COV = Covered; VR = Vinyl Replacement
Notes: Calibration 8:30 1.2, 1.3, 1.1

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(860) 646-2469 Fax (860) 649-6883

XRF FIELD DATA SHEET – INTERIOR ROOM

Address: 55 James St, Milford, CT **Apt. #:**

Floor: 1 **Room:** Dining/Kitchen **Page** 2 **of** 6

Project Name: QA-Sandy Rehab **Project Number:** 2014~~1031~~C1E

Project Manager: K. McCarthy **(If Positive - Check All That Apply)** 0370

Side	Surface	XRF Readings	POS	Substrate	Color	Defective	Chewable	Friction	Impact	Comments
	Floor									
D	Baseboards	0.3	–	metal	wht					
A	Wall	0.1	–	SHR	wht					
B	Wall	0.0	–	SHR	wht					
C	Wall	–0.1	–	SHR	wht					
D	Wall	0.1	–	SHR	wht					
	Chair rail									
	Ceiling									
	Crown Molding									
	Door									
	Casing									
	Jamb									
B	Door	0.2	–	wood	wht					
	Casing	0.3	–	wood	wht					
	Jamb	0.3	–	wood	wht					
	Window Trim	–0.0	–	wood	wht					
D	Sill	0.2	–	wood	wht					
	Sash	/	–	vinyl	wht					not coated
	Well	–0.1	–	vinyl	wht					
	Cabinet Base		–							
	Door Exterior	–0.0	–	wood	wht					
D	Door Interior	–0.2	–	wood	wht					
	Walls									
	Shelves									
	Shelf Supports									
	Closet Shelf									
	Shelf Supports									
	Radiator									
	Wall Molding									
	divider top	0.1	–	wood	wht					

* Substrate Type: Metal = M, Wood = W, Plaster = P, Sheetrock = S, Concrete = C, Brick = B

N/A = Not Accessible; N/C = Not Coated; COV = Covered; VR = Vinyl Replacement

Notes:

FUSS & [redacted]
EnviroScience, LLC

www.fando.com

146 Hartford Road, Manchester, CT 06040 (860) 646-2469 Fax (860) 649-6883

XRF FIELD DATA SHEET – INTERIOR ROOM

Address: 55 James St, Milford, CT **Apt. #:**
Floor: **Room:** Bedroom 1 **Page** 3 **of** 6
Project Name: QA-Sandy Rehab **Project Number:** 2014~~1031~~.C1E
Project Manager: K. McCarthy **(If Positive - Check All That Apply)** 0370

Side	Surface	XRF Readings	POS	Substrate	Color	Defective	Chewable	Friction	Impact	Comments
	Floor									
C	Baseboards	0.3	–	wood	wht					
A	Wall	0.0	–	sltr	wht					
B	Wall	0.1	–	sltr	wht					
C	Wall	–0.1	–	sltr	wht					
D	Wall	0.2	–	sltr	wht					
	Chair rail									
/	Ceiling	0.1	–	sltr	wht					
	Crown Molding									
D	Door	0.3	–	wood	wht					
	Casing	0.2	–	wood	wht					
	Jamb	0.3	–	wood	wht					
	Door									
	Casing									
	Jamb									
B	Window Trim	–0.0	–	wood	wht					
	Sill	0.0	–	wood	wht					
	Sash	N/C	–	vinyl	wht					factory coated
	Well	0.0	–	vinyl	wht					
	Cabinet Base									
	Door Exterior									
	Door Interior									
	Walls									
	Shelves									
	Shelf Supports									
C	Closet Shelf	–0.0	–	wood	wht					
	Shelf Supports	0.1	–	wood	wht					
	Radiator									
	Wall Molding									

* Substrate Type: Metal = M, Wood = W, Plaster = P, Sheetrock = S, Concrete = C, Brick = B
N/A = Not Accessible; N/C = Not Coated; COV = Covered; VR = Vinyl Replacement
Notes:

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EnviroScience, LLC

www.fando.com

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XRF FIELD DATA SHEET – INTERIOR ROOM

Address: 55 James St, Milford, CT **Apt. #:**
Floor: 1 **Room:** Bedroom 2 **Page** 4 **of** 6
Project Name: QA-Sandy Rehab **Project Number:** 20141~~031~~.C1E
Project Manager: K. McCarthy **(If Positive - Check All That Apply)** 0370

Side	Surface	XRF Readings	POS	Substrate	Color	Defective	Chewable	Friction	Impact	Comments
	Floor									
A	Baseboards	0.1	–	wood	wht					
A	Wall	0.3	–	sHR	wht					
B	Wall	–0.0	–	sHR	wht					
C	Wall	–0.1	–	sHR	wht					
D	Wall	0.3	–	sHR	wht					
	Chair rail									
	Ceiling	–0.2	–	sHR	wht					
	Crown Molding									
D	Door	0.0		wood	wht					
	Casing	–0.0	–	wood	wht					
	Jamb	0.3	–	wood	wht					
	Door									
	Casing									
	Jamb									
B	Window Trim	0.3	–	wood	wht					
	Sill	0.0	–	wood	wht					
	Sash	F.C.								
	Well	0.3	–	vinyl	wht					
	Cabinet Base									
	Door Exterior									
	Door Interior									
	Walls									
	Shelves									
	Shelf Supports									
	Closet Shelf	N/C								
	Shelf Supports	N/C								
	Radiator									
	Wall Molding									

* Substrate Type: Metal = M, Wood = W, Plaster = P, Sheetrock = S, Concrete = C, Brick = B
N/A = Not Accessible; N/C = Not Coated; COV = Covered; VR = Vinyl Replacement
Notes:

FUSS & O'NEILL
EnviroScience, LLC

www.fando.com

146 Hartford Road, Manchester, CT 06040 (860) 646-2469 Fax (860) 649-6883

XRF FIELD DATA SHEET – INTERIOR ROOM

Address: 55 James St, Milford, CT **Apt. #:**
Floor: 1 **Room:** Bath **Page** 5 **of** 6
Project Name: QA-Sandy Rehab **Project Number:** 2014~~1031~~.C1E 0370
Project Manager: K. McCarthy **(If Positive - Check All That Apply)**

Side	Surface	XRF Readings	POS	Substrate	Color	Defective	Chewable	Friction	Impact	Comments
	Floor									
C	Baseboards	0.0	–	wood	wht					
A	Wall	0.2	–	sHR	wht					
B	Wall	–0.0	–	sHR	wht					
C	Wall	–0.2	–	sHR	wht					
D	Wall	–0.0	–	sHR	wht					
	Chair rail									
/	Ceiling	–0.1	–	sHR	wht					
	Crown Molding									
	Door									
	Casing									
	Jamb									
B	Door	–0.1	–	wood	wht					
	Casing	0.2	–	wood	wht					
	Jamb	–0.1	–	wood	wht					
D	Window Trim	0.1	–	wood	wht					
	Sill	0.2	–	wood	wht					
	Sash	N/A	–							
	Well	N/A	–	vinyl	wht					
	Cabinet Base									
	Door Exterior									
	Door Interior									
	Walls									
	Shelves									
	Shelf Supports									
	Closet Shelf	0.2	–	wood	wht					
	Shelf Supports	0.2	–	wood	wht					
	Radiator									
	Wall Molding									

* Substrate Type: Metal = M, Wood = W, Plaster = P, Sheetrock = S, Concrete = C, Brick = B
N/A = Not Accessible; N/C = Not Coated; COV = Covered; VR = Vinyl Replacement
Notes:

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XRF FIELD DATA SHEET – INTERIOR ROOM

Address: 55 James St, Milford, CT **Apt. #:**
Floor: 1 **Room:** Furnace / Laundry Room **Page** 6 **of** 6
Project Name: QA-Sandy Rehab **Project Number:** 2014~~1031~~C1E
Project Manager: K. McCarthy **(If Positive - Check All That Apply)** 0570

Side	Surface	XRF Readings	POS	Substrate	Color	Defective	Chewable	Friction	Impact	Comments
	Floor									
	Baseboards	-0.0	–	wood	wht					
A	Wall	-0.1	–	SHR	wht					
B	Wall	-0.1	–	SHR	wht					
C	Wall	0.2	–	SHR	wht					
D	Wall	-0.0	–	SHR	wht					
	Chair rail									
	Ceiling									
	Crown Molding									
D	Door	-0.1	–	wood	wht					
	Casing	-0.0	–	wood	wht					
	Jamb	-0.0	–	wood	wht					
	Door									
	Casing									
	Jamb									
	Window Trim									
	Sill									
	Sash									
	Well									
	Cabinet Base									
	Door Exterior									
	Door Interior									
	Walls									
	Shelves									
	Shelf Supports									
	Closet Shelf	0.1	–	wood	wht					
	Shelf Supports	0.0	–	wood	wht					
	Radiator									
	Wall Molding									

* Substrate Type: Metal = M, Wood = W, Plaster = P, Sheetrock = S, Concrete = C, Brick = B
N/A = Not Accessible; N/C = Not Coated; COV = Covered; VR = Vinyl Replacement
Notes:

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XRF FIELD DATA SHEET – EXTERIOR OF SIDE _____

Address: 55 James St, Milford CT **Page** 1 **of** 4

Project Name: QA-Storm Sandy Rehab **Project Number:** 2014~~1031~~.C1E

Project Manager: K. McCarthy 0370

(If Positive - Check All That Apply)

Side	Surface	XRF Readings	POS	Substrate	Color	Defective	Chewable	Friction	Impact	Comments
	Foundation									
	Skirt Board									
	Corner Boards	-0.1		wood	wht					
A	Siding	-0.1		wood	grey					
	Upper Trim									
A	Door	0.7		met	wht					
	Casing									
	Jamb	-0.1		wood	wht					
	Threshold									
	Kick Board trim	0.5		wood	wht					
	Storm Door									
	Window Sill	-0.1		wood	wht					
	Trim									
	Sash			vinyl	N/C					
	Blind Stops	0.1		wood	wht					
	Storm Window									
	Basement Sash									
	Frame									
	Bulkhead									
	Downspouts									
	Porch Floor									
	Ceiling Joist									
	Lower Trim									
	Lower Railing									
	Balusters									
	Railing Cap									
	Ceiling									
	Lattice									
	Lattice Frame									
	Support Columns									
	Column Base									
	Brackets									
	Hand Rails									
	Treads									
	Risers									
	Stringers									

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XRF FIELD DATA SHEET – EXTERIOR OF SIDE _____

Address: 55 James St, Milford CT **Page** 2 **of** 4

Project Name: QA-Storm Sandy Rehab **Project Number:** 2014~~1031~~.C1E 0370

Project Manager: K. McCarthy

(If Positive - Check All That Apply)

Side	Surface	XRF Readings	POS	Substrate	Color	Defective	Chewable	Friction	Impact	Comments
	Foundation									
	Skirt Board									
B	Corner Boards	0.2		wood	wht					
B	Siding	0.2		wood	grey					
	Upper Trim									
	Door									
	Casing									
	Jamb									
	Threshold									
	Kick Board									
	Storm Door									
B	Window Sill	0.0		wood	wht ~~grey~~					
B	Trim	0.2		wood	wht					
	Sash									
	Blind Stops									
	Storm Window									
	Basement Sash									
	Frame									
	Bulkhead									
	Downspouts									
	Porch Floor									
	Ceiling Joist									
	Lower Trim									
	Lower Railing									
	Balusters									
	Railing Cap									
	Ceiling									
	Lattice									
	Lattice Frame									
	Support Columns									
	Column Base									
	Brackets									
	Hand Rails									
	Treads									
	Risers									
	Stringers									

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XRF FIELD DATA SHEET – EXTERIOR OF SIDE ____

Address: 55 James St, Milford CT **Page** 3 **of** 4

Project Name: QA-Storm Sandy Rehab **Project Number:** 2014~~1031~~.C1E 0370

Project Manager: K. McCarthy

(If Positive - Check All That Apply)

Side	Surface	XRF Readings	POS	Substrate	Color	Defective	Chewable	Friction	Impact	Comments
	Foundation									
	Skirt Board									
C	Corner Boards	0.0		wood	wht					
	Siding									
	Upper Trim									
C	Door	0.7		metal	wht					
	Casing	0.1		wood	wht					
	Jamb									
	Threshold									
	Kick Board	0.0		wood	wht					
	~~Storm Door~~ trim	0.1		wood	wht					
	Window Sill									
	Trim									
	Sash									
	Blind Stops									
	Storm Window									
	Basement Sash									
	Frame									
	Bulkhead									
	Downspouts									
	Porch Floor									
	Ceiling Joist									
	Lower Trim									
	Lower Railing									
	Balusters									
	Railing Cap									
	Ceiling									
	Lattice									
	Lattice Frame									
	Support Columns									
	Column Base									
	Brackets									
	Hand Rails									
	Treads									
	Risers									
	Stringers									

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XRF FIELD DATA SHEET – EXTERIOR OF SIDE ____

Address: 55 James St, Milford CT **Page** 4 **of** 4

Project Name: QA-Storm Sandy Rehab **Project Number:** 20141031.C1E

Project Manager: K. McCarthy 0370

(If Positive - Check All That Apply)

Side	Surface	XRF Readings	POS	Substrate	Color	Defective	Chewable	Friction	Impact	Comments
D	Foundation	0.5		brick	wht					
	Skirt Board									
D	Corner Boards	0.1		wood	wht					
D	Siding	0.0		wood	grey					
D	Upper Trim	0.4		wood	wht					
	Door									
	Casing									
	Jamb									
	Threshold									
	Kick Board									
	Storm Door									
	Window Sill	0.1		wood	wht					
D	Trim	0.3		wood	wht					
	Sash									
	Blind Stops									
	Storm Window									
	Basement Sash									
	Frame									
	Bulkhead									
	Downspouts									
	Porch Floor									
	Ceiling Joist									
	Lower Trim									
	Lower Railing									
	Balusters									
	Railing Cap									
	Ceiling									
	Lattice									
	Lattice Frame									
	Support Columns									
	Column Base									
	Brackets									
	Hand Rails									
	Treads									
	Risers									
	Stringers									

Appendix E

Airborne Radon Gas Laboratory Report and Chain-Of-Custody Form

Received 12-17-2014

FUSS & O'NEILL
EnviroScience, LLC

Radon Testing Summary Sheet

Contact/Phone #: Bob Hobbins/203-374-3748 x 3526
Project #: 20140370.C1E
Building: 55 James Street
Address: 55 James Street
Milford CT 06460

Placed by: Bob Hobbins
Retrieved by: B. Hobbins
Start Date: 12-9-14
Stop Date: 12/12/14
Weather at Placement: Rain 37° F

email results to jhobbins@fando.com

Instructions: Tear off center bar coded label from canister and affix to sheet in spaces provided. Please make sure top bar coded label is left on detector. Identify test location for each detector in space provided for that detector (room #, location in room, etc.). Use additional sheets as necessary. Please detector is missing or damaged a

REMOVE THIS PORTION AND AFFIX TO TEST INFORMATION FORM
2357416
REMOVE THIS PORTION AND KEEP FOR YOUR RECORDS
2357416
Client
RADON TESTING CORP. OF AMERICA

Start Time: 8:20
Stop Time: 1150
Identifier: Kitchen

REMOVE THIS PORTION AND AFFIX TO TEST INFORMATION FORM
2357448
REMOVE THIS PORTION AND KEEP FOR YOUR RECORDS
2357448
Client
RADON TESTING CORP. OF AMERICA

Start Time: 8:20
Stop Time: 1150
Identifier: Kitchen - D

REMOVE THIS PORTION AND AFFIX TO TEST INFORMATION FORM
2346459
REMOVE THIS PORTION AND KEEP FOR YOUR RECORDS
2346459
Client
RADON TESTING CORP. OF AMERICA

Start Time: 8:21
Stop Time: 1150
Identifier: Laundry

REMOVE THIS PORTION AND AFFIX TO TEST INFORMATION FORM
2346474
REMOVE THIS PORTION AND KEEP FOR YOUR RECORDS
2346474
Client
RADON TESTING CORP. OF AMERICA

Start Time:
Stop Time:
Identifier: Laundry - B

Start Time:
Stop Time:
Identifier:

Start Time:
Stop Time:
Identifier:

Start Time:
Stop Time:
Identifier:

Start Time:
Stop Time:
Identifier:

Start Time:
Stop Time:
Identifier:

Start Time:
Stop Time:
Identifier:

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f (203) 374-4391
www.FandO.com

Connecticut
Massachusetts
New York
Rhode Island
South Carolina

RTCA RADON TESTING CORPORATION OF AMERICA

PC1412170006

Site Radon Inspection Report

Date : 12/17/2014

Mr. Bob Hobbins
Fuss & O'Neill Enviroscience, LLC
146 Hartford Road
Manchester, CT 06040-

Client: 20140370.C1E
Test Location 55 James Street
Milford, CT 06460-

Individual Canister Results

Canister ID# : 2346459
Canister Type : Charcoal Canister 3 inch
Location : Laundry
Radon Level : **0.1 pCi/L**
Error for Measurement is: ± 0.3 pCi/L

Test Start : 12/09/2014 @ 08:21
Test Stop : 12/12/2014 @ 11:50
Received: 12/15/2014 @ 09:59
Analyzed: 12/15/2014 @ 16:35

Canister ID# : 2346474
Canister Type : Charcoal Canister 3 inch
Location : Laundry-B
Radon Level : **0.2 pCi/L**
Error for Measurement is: ± 0.2 pCi/L

Test Start : 12/09/2014 @ 08:21
Test Stop : 12/12/2014 @ 11:50
Received: 12/15/2014 @ 09:59
Analyzed: 12/15/2014 @ 16:35

Canister ID# : 2357416
Canister Type : Charcoal Canister 3 inch
Location : Kitchen
Radon Level : **0.1 pCi/L**
Error for Measurement is: ± 0.4 pCi/L

Test Start : 12/09/2014 @ 08:20
Test Stop : 12/12/2014 @ 11:50
Received: 12/15/2014 @ 09:59
Analyzed: 12/16/2014 @ 10:29

Canister ID# : 2357448
Canister Type : Charcoal Canister 3 inch
Location : Kitchen-D
Radon Level : **0.1 pCi/L**
Error for Measurement is: ± 0.5 pCi/L

Test Start : 12/09/2014 @ 08:20
Test Stop : 12/12/2014 @ 11:50
Received: 12/15/2014 @ 09:59
Analyzed: 12/15/2014 @ 16:35

NRSB

Andreas C. George
Radon Measurement Specialist
NJ MES 11089

Dante Galan
Laboratory Director

NRSB ARL0001
NYS ELAP ID: 10806
PADEP ID: 0346
NJDEP ID: NY933
NJ MEB 90036
FL DOH RB1609
IL RNL2000201

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FAX (914)345-8546

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RTCA RADON TESTING CORPORATION OF AMERICA

PC1412170006

Site Radon Inspection Report

Date : 12/17/2014

The reported results indicate that radon levels in the building tested are below the United States Environmental Protection Agency (EPA) action level of 4.0 picoCuries per liter of air (pCi/L). The EPA recommends retesting if your living patterns change and you begin occupying a lower level of the building, such as a basement or if major remodeling is done.

General radon information may be obtained by consulting the EPA booklet: A Citizen's Guide to Radon (www.epa.gov/radon/pubs/ditguide.html). To request a copy or for further information, please contact your state health department. The EPA maintains a radon information website, including copies of its publications, at www.epa.gov/iaq/radon.

For New Jersey clients: Please see the attached guidance document entitled Radon Testing and Mitigation: The Basics for further information.

For New York clients: If the radon level of one or more testing devices is equal to or exceeds 20 pCi/L please contact the New York State Department of Health, Bureau of Environmental Radiation Protection, for technical advice and assistance at 518-402-7556 or toll free1-800-458-1158.

PLEDGE OF ASSURED QUALITY

All procedures used for generating this report are in complete accordance with the current EPA protocols for the analysis of radon in air (EPA 402-R-92-004). The analytical results relate only to the samples tested, in the condition received by the lab, and that calculations were based upon the information supplied by client. RTCA and its personnel do not assume responsibility or liability, collectively and individually, for analysis results when detectors have been improperly handled or placed by the consumer, nor does RTCA and its personnel accept responsibility for any financial or health consequences of subsequent action or lack of action, taken by the customer or it's consultants based on RTCA-provided results.

National Radon Safety Board NRSB Certified Radon Professionals

Andreas C. George
Radon Measurement Specialist
NJ MES 11089

Dante Galan
Laboratory Director

NRSB ARL0001
NYS ELAP ID: 10806
PADEP ID: 0346
NJDEP ID: NY933
NJ MEB 90036
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FAX (914)345-8546

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