

Limited Hazardous Materials Inspection Report

34 Hobson Street
East Haven, CT
Connecticut Department of Housing Application No. 1898
Lothrop Associates Project No. 1524-05

Lothrop Associates LLP
Hartford, CT

April 2014



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



FUSS & O'NEILL
EnviroScience, LLC

April 25, 2014

Mr. Thomas Streicher
Project Architect
Lothrop Associates LLP
100 Pearl Street, 14th Floor
Hartford, CT 06103

RE: Limited Hazardous Materials Inspection
34 Hobson Street, East Haven, Connecticut
Fuss & O'Neill EnviroScience Project No. 20140370.A3E
Lothrop Associates Project No. 1524-05

Dear Mr. Streicher:

Enclosed is the report for the limited hazardous materials inspection performed at 34 Hobson Street located in East Haven, Connecticut.

The inspection was performed from April 15, 2014, through April 18, 2014, by Fuss & O'Neill EnviroScience, LLC licensed inspector and included an asbestos inspection, testing for lead-based paint, a mold visual assessment, and an airborne radon assessment.

The information summarized in this document is for the above-mentioned materials only. It does not include information on other hazardous materials that may exist in the property (such as underground storage tanks, PCB containing building materials, etc.).

If you have any questions regarding the contents of this report, please do not hesitate to contact us at 203) 374-3748. Thank you for this opportunity to have served your environmental needs.

Sincerely,

Kevin McCarthy
Project Manager

Robert L. May, Jr.
President
NEHA NRPP # 105366 RT

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Enclosure

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Limited Hazardous Materials Inspection Report Lothrop Associates LLP

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1 Introduction

On April 15, 2014, through April 18, 2014, Fuss & O'Neill EnviroScience, LLC (EnviroScience) Environmental Analyst, Eduardo Miguel Marques, a State of Connecticut licensed Asbestos Inspector and Certified Lead Paint Inspector, performed a limited hazardous materials Inspection at 34 Hobson Street located in East Haven, Connecticut. Refer to *Appendix A* for EnviroScience certifications and licenses.

This inspection was performed in response to the Connecticut Department of Housing Community Development Block Grant Disaster Recovery (CDBG-DR) "Hurricane Sandy". The inspection including the following:

- Inspection for asbestos containing materials (ACM)
- Lead based-paint inspection
- Mold visual assessment
- Airborne radon assessment

The asbestos inspection was limited and addressed specific materials to be impacted by renovation activities as detailed in the Lothrop Associates LLP initial property inspection report. Refer to *Appendix B* for report.

2 Asbestos Inspection

A Property Owner must ensure that performance of a thorough inspection for asbestos-containing materials (ACM), prior to possible disturbance of materials containing asbestos during renovation or demolition, is conducted. This is a requirement of the U.S. Environmental Protection Agency (EPA) National Emission Standards for Hazardous Air Pollutants (NESHAP) regulation 40 CFR Part 61, Sub-Part 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 insulation on pipe fittings. Surfacing ACM includes all ACM that is sprayed, troweled, 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, but recommends the use of sampling protocols included in 40 CFR Part 763, Sub-Part E - Asbestos Containing Materials in Schools.

Samples of suspect asbestos-containing materials 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-on 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 (\leq) 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.

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 Consultant – Inspector collected samples and prepared proper chain of custody for transmission of samples to an accredited laboratory for analysis by Polarized Light Microscopy (PLM). The sampling locations, material type, quantity, sample identification, and asbestos content are identified by bulk sample analysis in Tables 1 and 2 of the “Results” section. Any materials on the site not listed in the following tables should be considered suspect ACM until sample results prove otherwise. Refer to *Appendix C* for PLM analytical results for asbestos bulk samples.

2.1 Results

Utilizing the EPA protocol and criteria, the following materials were determined to be **ACM**:

Table 1
Asbestos-Containing Materials

Sample No.	Location	Material Type	Quantity	Asbestos Content
041514EMM-18A	Rear flat roof	Flashing cement	70 SF	5% Chrysotile
041514EMM-19A	Main pitched roof, rear pitched roof	Flashing cement		5% Chrysotile

LF = Linear Feet, SF = Square Feet

Utilizing the EPA protocol and criteria, the following materials were determined to be **non-ACM**:

Table 2
Non-Asbestos Containing Materials

Location	Material Type	Sample No.
041514EMM-11A-B	Rear shed and rear flat roof	Rolled sheet roof
041514EMM-12A-B	Rear shed roof	Black underlayment under rolled sheet roof
041514EMM-13A-B	Rear pitched roof	Black underlayment under roof shingle
041514EMM-14A-B	Rear pitched roof	Top layer roof shingle – white/grey
041514EMM-15A-B	Rear pitched roof	Bottom layer roof shingle - red
041514EMM-16A-B	Main pitched roof	Top layer roof shingle – white/grey
041514EMM-17A-B	Main pitched roof	Bottom layer roof shingle - red

2.2 Discussion

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

2.3 Conclusion

The non-friable roofing materials identified in *Section 2.1 - Table 1* have been de-regulated by the Connecticut Department of Public Health (CTDPH). The identified non-friable roofing materials can be removed either by a CTDPH licensed Asbestos Abatement Contractor or by a roofing contractor provided they adhere to all Occupational Safety and Health Administration (OSHA) training requirements and EPA NESHAP regulations. All asbestos waste must be properly sealed (leak/airtight containers) and disposed of in a landfill approved to accept asbestos waste. A licensed Asbestos Abatement Contractor is only required should the ACM be made friable and become a regulated asbestos containing material (RACM) by work activities. All applicable CTDPH regulations shall apply if the material becomes RACM.

Any suspect material encountered during renovation/demolition that is not identified in this report as being non-ACM, should be assumed to be ACM unless sample results prove otherwise.

3 Lead-Based Paint Testing

Comprehensive testing for lead paint was performed at 34 Hobson Street in East Haven, Connecticut, by EnviroScience’s Environmental Analyst Eduardo Miguel Marques on April 15, 2014, for the purpose of compliance with EPA’s Renovation, Repair and Painting Rule (RRP) (40 CFR 745.80 through 92). 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 (*Appendix D*).

For the purpose of this testing, interior and exterior components representing the initial painting history of the buildings and any building-wide repainting by the owners/managers of these building components were tested.

The one-story residential building was constructed with wood. Window and door systems are composed of wood and metal. Walls and ceilings are constructed with sheetrock. There were no children under the age of six present in the residence at the time of the inspection.

3.1 Results

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

**Table 3
Lead Painted Building Components**

Item	Location	Reading (mg/cm ²)	Defective?
Wood window trim	Basement	4.8	No
Wood siding	Room 3 – B,C,D sides	>9.9, >9.9, 9.4	No
Wood crown molding	Room 3	6.3	No
Wood door	Room 3 – D side	>9.9	No
Wood door trim	Room 3 – D side	>9.9	No
Wood door jamb	Room 3 – D side	9.4	No
Wood door jamb	Room 4 – B side	5.9	No
Wood siding	Room 6 – A,B,C sides	9.5, >9.9, 7.6	No
Wood door trim	Room 6 – A side	6.3	No
Wood door jamb	Room 6 – A side	1.2	No
Sheetrock ceiling	Room 6	7.4	No
Sheetrock wall	Room 7 – B,C,D sides	>9.9, >9.9, >9.9	No
Wood wall	Room 9 – C,D sides	2.3, 2.7	No
Wood window sill	Room 9	5.0	No
Wood window sash	Room 9	5.9	Yes

Item	Location	Reading (mg/cm ²)	Defective?
Wood window trim	Room 9	7.9	No
Wood siding	Room 10 – D side	3.3	No
Wood siding	Exterior, behind vinyl siding	3.9	No
Wood door threshold	Exterior – A side	1.8	Yes
Wood window trim	Exterior, basement window	4.3	Yes

3.2 Conclusion

The following building components were determined to contain toxic levels of lead (greater than 1.0 milligrams of lead per square centimeter of paint):

- Exterior wood siding
- Interior wood siding – Room 3, Room 6, Room 9, Room 10
- Wood window trim - Basement
- Wood crown molding – Room 3
- Wood door components – Room 3, Room 6
- Sheetrock ceiling – Room 6
- Sheetrock walls – Room 7
- Wood window components – Room 9
- Wood window trim – Exterior basement windows

If these components are to be demolished during renovations, a Toxicity Characteristic Leaching Procedure (TCLP) sample of the demolition waste stream needs to be collected to determine disposal requirements.

The field testing sheets are provided as *Appendix E* in this report.

Disclaimer: The information contained in this report concerning the presence or absence of lead paint does not constitute a comprehensive lead inspection under Connecticut regulations Section 19a-111-1 to 11. The surfaces tested represent only a portion of those surfaces that would be tested to determine whether the premises are in compliance with Connecticut regulations.

The Contractor shall be aware that OSHA has not established a level of lead in a material below which 29 CFR 1926.62 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.

For purposes of complying with the U.S. Environmental Protection Agency's Renovation, Repair and Painting Rule (RRP) (40 CFR 745.80 through 92) a Comprehensive Lead Inspection of the entire structure or targeted areas scheduled for renovation is necessary to determine if the RRP rule is applicable. A Comprehensive Lead Inspection includes testing representative coated surfaces of each building component in each room or room equivalent for Lead-Based paint content. All similar components to

the surface tested on a per room basis shall be considered as having the same paint (e.g. If more than one window or door in a room typically only one is tested but remaining must be assumed to be the same as the one tested). **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.**

Those surfaces which contain lead paint are subject to RRP work practice and training requirements if more than de-minimus amounts are disturbed in renovation or for projects involving window replacement. Those surfaces which do not contain lead paint are not subject to the RRP requirements. If a specific component or surface is not identified as having been tested it should be presumed to contain lead paint unless tested. Contractor's should be aware that the threshold limit of 1.0 mg/cm² for purposes of RRP requirements is not recognized by the Occupational Safety and Health Administration (OSHA) and workers' exposures are still subject to lead in construction regulation 29 CFR 1926.62 regardless of paint testing results.

4 Mold Visual Assessment

On April 15, 2014, EnviroScience representative Eduardo Miguel Marques 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 flat roof associated with the rear shed has collapsed.

5 Airborne Radon Information, Sampling and Procedure

5.1 Radon 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 United States. Radon 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 found that radon concentrations in outdoor air average approximately 0.4 picoCuries per liter of air (pCi/L). However, radon and its decay products can accumulate too much higher concentrations inside a building. The EPA has adopted an 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 is present in a building is to test. Each frequently occupied room that is in contact with the ground 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 U.S. each year, with a range of 7,000 to 30,000. The U.S. Surgeon General has warned that radon is the second-leading cause of lung cancer deaths after smoking, and is the leading cause among non-smokers.

5.2 Airborne Radon Sampling

On April 15, 2014 through April 18, 2014, EnviroScience representative Eduardo Miguel Marques set up passive radon detection canisters in the residence and then retrieved the same canisters 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 HVAC intakes and returns, doors, and at least 36 inches from windows. Canisters should also 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.

Sample analysis is performed by RTCA and results are included in *Appendix F*.

5.3 Airborne Radon 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 sampling procedures. Blanks are unopened, unexposed canisters which are set out with and shipped with the exposed canisters so that the processing laboratory treats them equally. The number of blanks is at least five percent of the number of canisters deployed up to a maximum of 25 canisters.

5.4 Airborne Radon Analytical Results

Four canisters, including one duplicate and one blank, were placed inside the residence during the sampling period that occurred between April 15, 2014 through April 18, 2014. The concentration of radon in the sample and associated duplicate sample ranged from 5.0 pCi/L to 5.7 pCi/L. The EPA threshold for radon is 4.0 pCi/L.

In *Table 4*, the location and result of the quality control duplicate test is listed below.

**Table 4
Duplicate Sample Result**

Location	Canister Numbers	Radon Concentration (pCi/Liter)			Relative Percent Difference (RPD, %)
		Sample	Sample Duplicate	Sample Average	
Basement	2304800 2304799	5.0	5.7	5.35	13.04

Note Duplicate testing result was satisfactory.

In *Table 5*, the location and result of the quality control blank test is listed below.

**Table 5
Blank Sample Result**

Location	Canister Numbers	Radon Concentration (pCi/Liter)
Basement	2308603	0.2

Note Blank testing result was satisfactory.

5.5 Conclusion

During the course of the airborne radon measurement assessment, four sampling canisters, including one duplicate and one blank, were placed in the residence. The sample collected in the livable space on the first floor (kitchen) had a radon concentration of 2.7 pCi/L; which is acceptable and below the EPA recommended action guideline of 4.0 pCi/L.

However, the samples collected in the basement were above the EPA recommended action guideline of 4.0 pCi/L. The basement was not considered to be a livable space and appears to be only used periodically for laundry at the time of inspection. If the basement is to be renovated to include livable

space (bedrooms, living room, etc.), the a radon mitigation system should be installed to reduce the levels below the threshold.

Report prepared by Environmental Analyst Eduardo Miguel Marques.

Reviewed by:


Kevin McCarthy
Project Manager


Robert L. May, Jr.
President
NEHA NRPP # 105366 RT

Appendix A

Fuss & O'Neill EnviroScience Certifications



0001729 FP **PRSR T7 0 0664 06040

EDUARDO M. MARQUES
FUSS & ONEILL ENVIRO SCIENCE 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.

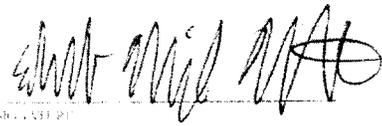
STATE OF CONNECTICUT
DEPARTMENT OF PUBLIC HEALTH

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

ASBESTOS CONSULTANT-INSP/MGMT PLANNER

LICENSE NO.
000201
CURRENT THROUGH
02/28/15
VALIDATION NO.
03-720789

EDUARDO M. MARQUES

 _____
SIGNATURE

 _____
COMMISSIONER

EMPLOYER'S COPY

STATE OF CONNECTICUT
DEPARTMENT OF PUBLIC HEALTH

NAME
EDUARDO M. MARQUES

VALIDATION NO. LICENSE NO. CURRENT THROUGH
03-720789 000201 02/28/15

PROFESSION
ASBESTOS CONSULTANT-INSP/MGMT PLANNER

 _____
SIGNATURE

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COMMISSIONER

WALLET CARD

STATE OF CONNECTICUT
DEPARTMENT OF PUBLIC HEALTH

NAME
EDUARDO M. MARQUES

VALIDATION NO. LICENSE NO. CURRENT THROUGH
03-720789 000201 02/28/15

PROFESSION
ASBESTOS CONSULTANT-INSP/MGMT PLANNER

 _____
SIGNATURE

 _____
COMMISSIONER

Fuss & O'Neill EnviroScience, LLC

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

This is to certify that

Eduardo Miguel Marques

xxx-xx-8045

has successfully completed the

4 Hr. Asbestos Inspector Refresher

Asbestos Accreditation under TSCA Title II

40 CFR Part 763

John Rovinski

John Rovinski, Principal Instructor

Robert L. May, Jr.

Robert L. May, Jr., Training Manager

September 4, 2013

Date of Course

AI-R-09/13-9

Certificate Number

September 4, 2013; A

Examination Date & Grade

September 4, 2014

Expiration Date

0001728 FP **PRSRT T7 0 0664 06040

EDUARDO M. MARQUES
FUSS & ONEILL ENVIRO SCIENCE 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

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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

EDUARDO M. MARQUES

CERTIFICATION NO.
002132
CURRENT THROUGH
02/28/15
VALIDATION NO.
03-720788

COMMISSIONER

EMPLOYER'S COPY

STATE OF CONNECTICUT
DEPARTMENT OF PUBLIC HEALTH

NAME
EDUARDO M. MARQUES

VALIDATION NO. CERTIFICATION NO. CURRENT THROUGH
03-720788 002132 02/28/15

PROFESSION
LEAD INSPECTOR

SIGNATURE

COMMISSIONER

WALLET CARD

STATE OF CONNECTICUT
DEPARTMENT OF PUBLIC HEALTH

NAME
EDUARDO M. MARQUES

VALIDATION NO. CERTIFICATION NO. CURRENT THROUGH
03-720788 002132 02/28/15

PROFESSION
LEAD INSPECTOR

SIGNATURE

COMMISSIONER

Fuss & O'Neill EnviroScience, LLC

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

This is to certify that

Eduardo Miguel Marques

xxx-xx-8045

has successfully completed the
8 Hour Lead Inspector Refresher Course
(Approved per Sec. 20-477, CT General Statutes)

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations (U.S.C. 1001 and 15 U.S.C. 2615), I certify that this training complies with all applicable requirements of Title IV of TSCA, 40 CFR part 745 and any other applicable Federal, State, or local requirements.



Brian Santos, Principal Instructor

February 20 & 24, 2014

Date of Course

February 24, 2014

Examination Date



Robert L. May, Jr., Training Manager

LI-R-02/14-1

Certificate Number

February 24, 2015

Expiration Date

Appendix B

Lothrop Associates LLP Initial Property Inspection Report



100 Pearl Street
 14th Floor
 Hartford, Connecticut 06103
 860-249-7251
 www.lothropassociates.com

Lothrop associates^{LLP}

architects

**State of Connecticut Department of Housing
 Community Development Block Grant -
 Disaster Recovery (CDBG-DR) "Hurricane Sandy"**

Application No. 1898
 Residence of Douglas and Diana Stack
 34 Hobson Street
 East Haven CT

LA project No. 1524-05

Initial Property Inspection Report

Property inspected 25 Feb 2014
 Report date 27 Feb 2014
 Rev. NA

Present for Inspection:

Douglas Stack, Homeowner
 Arthur J. Seckler, III, Senior Associate, Lothrop Associates LLP
 Thomas Streicher, AIA, Lothrop Associates
 Maurizio Huaylla, Lothrop Associates



Damage compliant by owner	Inspection observation <i>Recommendation</i>	Cost estimate
<p>Roof: Owner states roof leaks at the following locations: side porch, rear attached shed and in the vicinity of the front entrance door. Low sloped roof areas the roof blew off</p>	<p>Although the roof is old, there appears to be evidence of small groups of shingles recently being blown off and recent damage possibly from tree limbs/branches being blown onto and off the roof. Low sloped roofs appear to have an old layer asphaltic paper roofing still in place but it appears a newer layer is missing, remnants of the new layer can be seen around wall flashing. See figure 1</p> <p><i>Recommendation: remove the existing roof membrane and associated underlayment, inspect sheathing for damage and replace as required and install complete new roofing system with all required flashing. It is recommended to use a built-up, EPDM or TPO type roof at low slope areas.</i></p>	<p>\$12,000</p>
<p>Flashing @ chimney: Owner states: water entering attic along brick chimney, wetting brick</p>	<p>There is evidence of rain water stains on the brick chimney and the underside of the adjacent roof. There is some minor rot on the roof framing and sheathing. There was no daylight observed coming through the flashing. See figure 2</p> <p><i>Recommendation: replace the flashing included with the "roof" item above. Inspect counter flashing and repair and/or replace as required</i></p>	<p>Included in Roof item above</p>
<p>Interior wall finish: Owner states water damage discoloration in front entry room, possibly caused by roof leak noted above or wind driven rain during storm.</p>	<p>Water staining was observed. No apparent damage to wall finish material. See figure 4</p> <p><i>Recommendation: after roof repair noted above, prime with stain block type primer and repaint the room.</i></p>	<p>\$500</p>

<p>Tree Damage to roof: Owner states a tree limb fell through the roof of the attached shed at the rear of the house. The limb was removed and the damaged area covered with a tarp.</p>	<p>The roof area in question is partially collapsed and there is a tarp over the area. See figure 3</p> <p><i>Recommendation: remove and replace the damaged framing. Install new framing to current code. Provide new 5/8" roof sheathing over area. Provide new roof, see comments on Roof item above</i></p>	<p>\$1,200</p>
<p>Gutters falling: Owner states some but not all of the roof gutters have completely or partially fallen off the building. Except for one that is still partially damaged the gutters have been reattached.</p>	<p>One gutter is partial pulled away from the building.</p> <p><i>Recommendation: re-install the gutter. Replace any and all damaged components with similar and compatible new part.</i></p>	<p>\$250</p>
<p>Total Estimated Cost</p>		<p>\$13,950</p>

Additional comments: it appears this project would be classified as a "repair"



Figure 1



Figure 2



Figure 3



Figure 4

Appendix C

Asbestos Sample Results and Chain of Custody





FUSS & O'NEILL
EnviroScience, LLC

18 PLM

www.fando.com

146 Hartford Road, Manchester, CT 06040

041410155

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

SAMPLE LOG FOR ASBESTOS BULKS

Sheet 1 of 1

Project Name: Lothrop Assoc.

Project No. 20140370, ASE

Building: 34 Holston

Project Manager: KM

Sample ID	Sample Location	Material	Result (%)
0415142MM-11A-B	Rear shed roof, ^{rear} _{clutch} _{roof}	rolled sheet roof	
12A-B	↓	Black underlayment under rolled sheet roof	
13A-B	Rear roof - pitched	Black underlayment under roof shingle	
14A-B	↓	top layer shingle - white/grey	
15A-B	↓	bottom layer shingle - red	
16A-B	Main roof	top layer shingle - white/grey	
17A-B	↓	bottom layer shingle - red	
18A-B	Rear Flat roof (shed)	Flashing cement	
19A-B	Main roof, rear roof	Flashing cement	

041410155
 20140370
 ASE
 KM

Analysis Method: PLM Other

Turnaround Time: 24 hrs

Based on the turnaround time indicated above, analyses are due to EnviroScience on or before this date: _____ Please call the EnviroScience Laboratory if analyses will be late at (860) 646-2469.

Fax Results to the EnviroScience Laboratory at: 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. EPA 400 Point Count all samples of content <1%, positive stop on all point counts.

Samples collected by: [Signature] Date: 4-15-14 Time: 4:00 PM

Samples [Rec'd] [Sent by] [] Date: [] Time: []

Samples Received by: De R Date: 4-16-14 Time: 9:55

Shipped To: EMSL State NT Other _____

Method of Shipment: Fed Ex Other _____

18 PLM



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: 041410155
 CustomerID: ENVI54
 CustomerPO:
 ProjectID:

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

Phone: (860) 646-2469
 Fax: (888) 838-1160
 Received: 04/16/14 9:55 AM
 Analysis Date: 4/16/2014
 Collected: 4/15/2014

Project: 20140370.A8E / Lothrop Assoc / 34 Hobson

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
041514EMM-11A 041410155-0001	Rear shed roof - rolled sheet roof	Red/Black Fibrous Homogeneous	8% Glass 10% Cellulose	82% Non-fibrous (other)	None Detected
041514EMM-11B 041410155-0002	Rear shed roof - rolled sheet roof	Red/Black Fibrous Homogeneous	20% Cellulose 5% Glass	75% Non-fibrous (other)	None Detected
041514EMM-12A 041410155-0003	Rear shed roof - black underlayment under rolled sheet roof	Black Fibrous Homogeneous	5% Glass	95% Non-fibrous (other)	None Detected
041514EMM-12B 041410155-0004	Rear shed roof - black underlayment under rolled sheet roof	Black Fibrous Homogeneous	5% Glass	95% Non-fibrous (other)	None Detected
041514EMM-13A 041410155-0005	Rear roof pitched - black underlayment under roof shingle	Black Fibrous Homogeneous	15% Cellulose	85% Non-fibrous (other)	None Detected
041514EMM-13B 041410155-0006	Rear roof pitched - black underlayment under roof shingle	Black Fibrous Homogeneous	20% Cellulose	80% Non-fibrous (other)	None Detected
041514EMM-14A 041410155-0007	Rear roof pitched - top layer shingle white/grey	Gray/White/Black Fibrous Homogeneous	10% Cellulose 10% Glass	80% Non-fibrous (other)	None Detected

Analyst(s)

Danielle Lenoir (9)
 Matthew Carralero (7)

Stephen Siegel, CIH, Laboratory Manager
 or other approved signatory

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 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 04/17/2014 06:47:43



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 CustomerPO:
 ProjectID:

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

Phone: (860) 646-2469
 Fax: (888) 838-1160
 Received: 04/16/14 9:55 AM
 Analysis Date: 4/16/2014
 Collected: 4/15/2014

Project: 20140370.A8E / Lothrop Assoc / 34 Hobson

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

Sample	Description	Appearance	Non-Asbestos			Asbestos
			% Fibrous	% Non-Fibrous	% Type	
041514EMM-14B 041410155-0008	Rear roof pitched - top layer shingle white/grey	Gray/White/Black Fibrous Homogeneous	15% Cellulose 5% Glass	80% Non-fibrous (other)	None Detected	
041514EMM-15A 041410155-0009	Rear roof pitched - bottom layer shingle red	Red/Black Fibrous Homogeneous	10% Cellulose 8% Glass	82% Non-fibrous (other)	None Detected	
041514EMM-15B 041410155-0010	Rear roof pitched - bottom layer shingle red	Red/Black Fibrous Homogeneous	15% Cellulose 5% Glass	80% Non-fibrous (other)	None Detected	
041514EMM-16A 041410155-0011	Main roof - top layer shingle white/grey	Gray/White/Black Fibrous Homogeneous	10% Cellulose 5% Glass	85% Non-fibrous (other)	None Detected	
041514EMM-16B 041410155-0012	Main roof - top layer shingle white/grey	Gray/White Fibrous Homogeneous	15% Cellulose 5% Glass	80% Non-fibrous (other)	None Detected	
041514EMM-17A 041410155-0013	Main roof - bottom layer shingle red	Red/Black Fibrous Homogeneous	15% Cellulose 10% Glass	75% Non-fibrous (other)	None Detected	
041514EMM-17B 041410155-0014	Main roof - bottom layer shingle red	Red/Black Fibrous Homogeneous	15% Cellulose 5% Glass	80% Non-fibrous (other)	None Detected	
041514EMM-18A 041410155-0015	Rear flat roof shed - flashing cement	Red/Black Fibrous Homogeneous		95% Non-fibrous (other)	5% Chrysotile	
041514EMM-18B 041410155-0016	Rear flat roof shed - flashing cement				Stop Positive (Not Analyzed)	

Analyst(s)

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 or other approved signatory

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 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 04/17/2014 06:47:43



EMSL Analytical, Inc.

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 Received: 04/16/14 9:55 AM
 Analysis Date: 4/16/2014
 Collected: 4/15/2014

Project: 20140370.A8E / Lothrop Assoc / 34 Hobson

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
041514EMM-19A 041410155-0017	Main roof, rear roof - flashing cement	Black Non-Fibrous Homogeneous		95% Non-fibrous (other)	5% Chrysotile
041514EMM-19B 041410155-0018	Main roof, rear roof - flashing cement				Stop Positive (Not Analyzed)

Analyst(s)

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 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 04/17/2014 06:47:43

Appendix D

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. Fuss & O'Neill EnviroScience, LLC 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 E

Lead Testing Field Data Sheets





LEAD INSPECTION COVER SHEET

Inspector's Information

Inspector's Name: Edwardo Miguel Marques License Number: 002132
 XRF Model: RMD Serial Number: 324RI
 Date of Inspection: 4-19-14 Project Number: 20140370.AGE

Property Information

Building Address: 34 Hobson St. (Street)
East Haven, CT (City) Age of Property: _____ (State)
 Describe Structure: one-story residential w/basement
wood/metal - window/door systems, SR-walls

- 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

Multiple Family Dwelling

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

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	9:30 am	1.0	0.9	0.9
Second Check	11:30 am	0.9	0.8	0.86
Third Check				
Fourth Check				



Project Name: Lothrop Assoc.

Project Number: 20140570 ASE

Address: 34 Howson St., East Haven, CT

Project Manager: KM

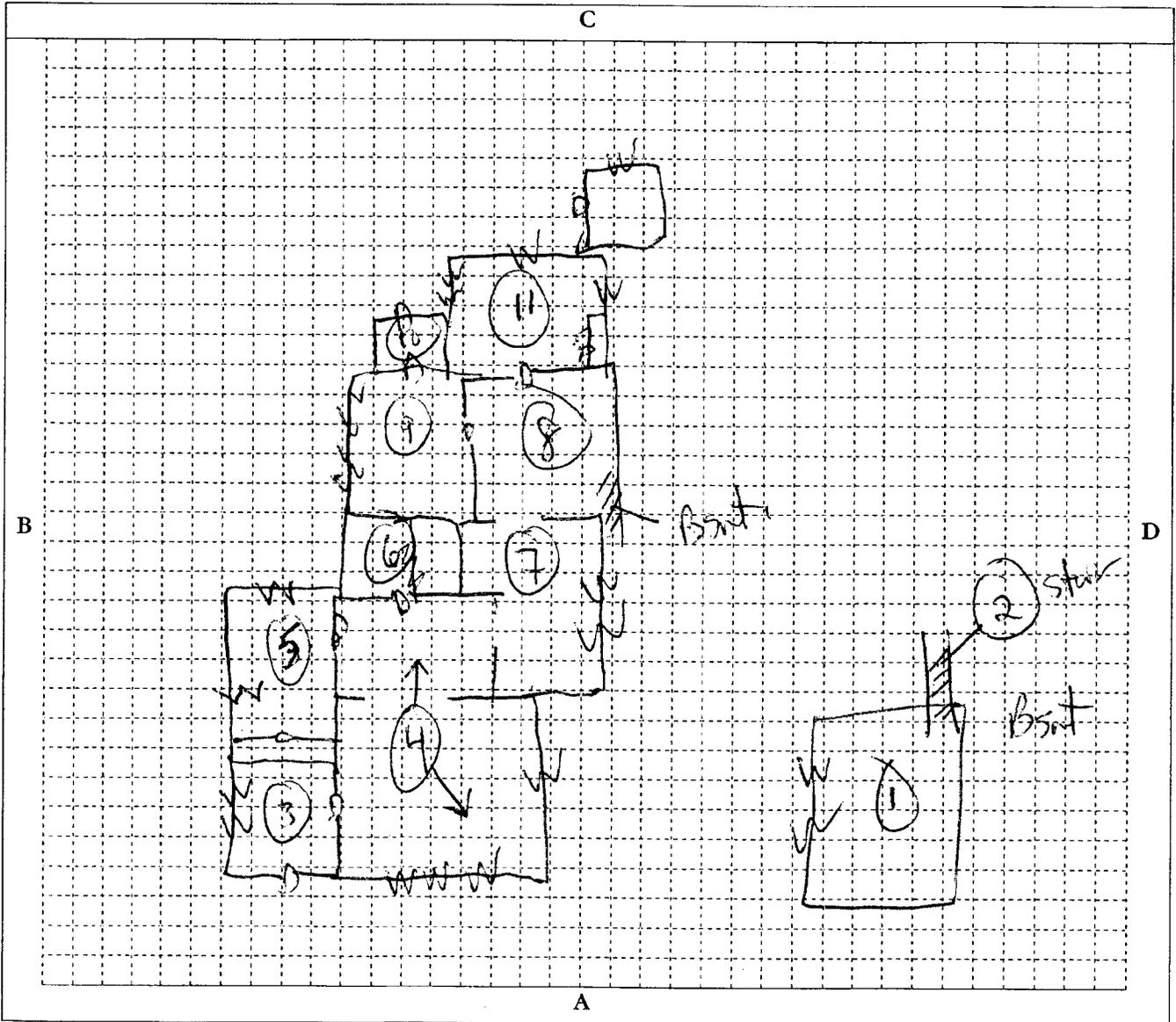
Floor: _____ Room: _____

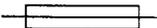
Apt. #/Bldg #: _____

Page 1 of 1

Number of Doors: _____ No. of Windows: _____

Diagram of: Interior



(#) Room Number  Door  Window

Page _____ of _____



XRF FIELD DATA SHEET

Address: 37 Hobson St., East Haven, CT

Apt. #: 1 of 5

Floor: _____ Room: _____

Page 1 of 5

Project Name: Lothrop Assoc.

Project Number: 20140370.ASE

Project Manager: KM (If Positive - Check All That Apply)

Side	Surface	XRF Readings	POS	Substrate	Defective	Chewable	Friction	Impact	Comments
	floor	-0.4		C					Rm. 1 - living
C	wall	-0.1		C					
B	↓	-0.1		C					
A	↓	0.3		C					
C	w. trim	4.8	✓	W	No				
	pipe	0.6		M					
	dry dock	-0.3		W					
	beam	-0.3		W					
D	baseboard	0.4		W					
D	wall	N/C		W					
B	wall	-0.0		W					Rm. 2 - stair
D	↓	-0.0		W					
C	↓	-0.1		W					
A	wall	-0.3		S					
B	↓ (siding)	29.9	✓	W	NO				Rm. 3
C	↓	29.9	✓	W	NO				
D	↓	9.4	✓	W	NO				
	ceiling	-0.1		W					
D	crown molding	0.3	✓	W	NO				
A	door	-0.1		M					
A	door trim	-0.0		W					
A	door jamb	-0.1		W					
B	w. sill	0.2		W					
D	w. trim	0.2		W					
B	w. sash	N/C		Vinyl					
D	door	29.9	✓	W	NO				
D	door trim	29.9	✓	W	NO				
D	door jamb	9.4	✓	W	NO				
A	wall	-0.1		S					Rm. 4
B	↓	-0.3		S					
C	↓	-0.2		S					

* 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:



XRF FIELD DATA SHEET

Address: 34 Hobson St., East Haven

Apt. #: _____

Floor: _____ Room: _____

Page 2 of 5

Project Name: Lothrop Assoc.

Project Number: 20140370.AJE

Project Manager: KM (If Positive - Check All That Apply)

Side	Surface	XRF Readings	POS	Substrate	Defective	Chewable	Friction	Impact	Comments
D	wall	-0.2		S					Rm 4
C	ceiling molding	0.2		W					
A	w. trim	-0.1		W					
A	w. sill	-0.2		W					
A	w. sill	N/C		W					
A	radiator	0.1		M					
C	baseboard	0.3		W					
C	door trim	-0.2		W					
C	door jamb	-0.3		W					
B	door	-0.3		W					
B	door trim	-0.1		W					
B	door jamb	5.9	✓	W	NO				
A	wall	-0.3		S					
B	↓	-0.1		S					
C	↓	0.0		S					
D	↓	-0.1		S					
A	ceiling molding	0.1		W					
B	w. trim	-0.2		W					
B	w. sill	-0.3		W					
C	baseboard	0.2		W					
C	radiator	0.1		M					
D	door trim	-0.1		W					
D	door jamb	-0.1		W					
D	door	-0.4		W					
A	wall-door	-0.1		S					
B	↓	-0.0		S					
C	↓	-0.1		S					
D	↓	0.0		S					
A	ceiling	0.0		S					
A	door	0.2		W					
A	door jamb	0.3		W					

* 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: _____



XRF FIELD DATA SHEET

Address: 34 Hobson St., East Haven, CT

Apt. #: _____

Floor: _____ Room: _____

Page 3 of 5

Project Name: Lothrop Assoc.

Project Number: 20140370.AGE

Project Manager: KM (If Positive - Check All That Apply)

Side	Surface	XRF Readings	POS	Substrate	Defective	Chewable	Friction	Impact	Comments
C	door jamb	0.2		W					Rm 5
	floor	-0.3		W					Rm 4
A	wall	7.5	✓	S	NO				Rm 6
B		29.9	✓	S	NO				
C		7.6	✓	S	NO				
D		N/C							
A	door, trim	6.3	✓	W	NO				
A	door jamb	1.2	✓	W	NO				
A	door	-0.3		W					
	ceiling	7.4	✓	S	NO				
A	wall	0.3		S					Rm 7
B	wall	21.7	✓	S	NO				
C	wall	21.7	✓	S	NO				
D	wall	29.9	✓	S	NO				
C	ceiling molding	0.2		W					
D	w. trim	-0.2		W					
D	w. sill	-0.1		W					
D	radiator	0.4		M					
C	chair rail	-0.1		W					
A	wall	0.1		W					
C		0.2		W					
D		0.0		W					
A	cabinet	-0.1		W					
C	door trim	-0.2		W					
C	door jamb	0.2		W					Rm 8
A	wall	-0.3		W					
B		-0.1							
C		-0.2							
D		-0.2							
C	ceiling molding	0.0		W					
C	door jamb	-0.0		W					

* 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: _____



XRF FIELD DATA SHEET

Address: 34 Hobson St., East Haven, CT

Apt. #: _____
Page 4 of 5

Floor: _____ Room: _____

Project Name: Lothrop Assoc.

Project Number: 20140370.APE

Project Manager: KM (If Positive - Check All That Apply)

Side	Surface	XRF Readings	POS	Substrate	Defective	Chewable	Friction	Impact	Comments
C	door jamb	-0.0		W					Run 8 ↓ Run 9 ↓ Run 10 ↓ Run 11 ↓
C	door	-0.4		W					
B	baseboard	-0.2		W					
B	w. trim	0.3		W					
B	w. sill	-0.3		W					
A	wall	-0.1		W					
B	wall	-0.2		W					
C	↓	2.3	✓	W	NO				
D	↓	2.7	✓	W	NO				
	↓	2.3	✓	W	NO				
D	w. sill	5.0	✓	W	NO				
D	w. sash	5.9	✓	W	Yes				
D	w. trim	7.9	✓	W	NO				
	ceiling	-0.2		Plaster					
C	door	-0.3		W					
C	door trim	-0.1		W					
	floor	0.2		C					
A	wall	0.0		W					
B	↓	0.2		W					
C	↓	-0.3		W					
D	↓ ceiling	3.3	✓	W	NO				
A	door	-0.1		W					
A	door trim	-0.0		W					
	ceiling	-0.1		W					
A	wall	-0.1		S					
B	↓	-0.1		S					
C	↓	-0.0		S					
D	↓	-0.1		S					
B	w. trim	-0.3		W					
B	w. sill	-0.1		W					
B	w. sash	0.1		W					

* 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:



XRF FIELD DATA SHEET

Address: 34 Holson St., East Haven, CT

Apt. #: _____

Floor: _____ Room: _____

Page 5 of 5

Project Name: Lothrop Assoc.

Project Number: 20140376.ASE

Project Manager: _____ (If Positive - Check All That Apply)

Side	Surface	XRF Readings	POS	Substrate	Defective	Chewable	Friction	Impact	Comments
B	baseboard	0.1		W					<p>Run 11</p> <p>Extender - behind vinyl - assumed Cretex to front - above - Run 11 wood siding</p> <p>basement windows</p> <p>Exterior</p>
B	ceiling molding	0.3		W					
C	wall closet	-0.1		S					
D		0.0		S					
A		-0.1		S					
	ceiling	0.0		S					
	tile floor	0.5		M					
A	door	-0.3		W					
A	door jamb	-0.2		W					
A	door trim	-0.0		W					
D	door - closet	-0.1		W					
D	door trim - closet	-0.2		W					
D	door jamb - closet	0.2		W					
	siding	3.9	✓	W	No				
A	foundation	0.6		C					
A	w. trim	0.5		M					
	w. sill	0.3		M					
A	siding	0.3		Vinyl					
A	rafter	0.2		M					
A	door threshold	1.8	✓	W	yes				
A	door kick board	0.0		M					
A	door trim	-0.1		M					
A	door	-0.2		M					
A	door jamb	-0.1		W					
B	w. trim - bsmt	4.3	✓	W	Yes				
A	red door	-0.2		W					
B	↓ trim	-0.3		W					
C	siding	-0.2		Vinyl					
D	gutter	-0.3		M					
A	Shutter	-0.3		M					

* 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: _____

Appendix F

Airborne Radon Assessment Results and Chain of Custody



Site Radon Inspection Report

Date : 4/22/2014

Ms. Karron Redfield
Fuss & O'Neill Envirosience, LLC
146 Hartford Road
Manchester, CT 06040-

Client: Lothrop Asooc
Test Location 34 Hobson Street
Project # 20140370.B8E
East Haven, CT 06512-

Individual Canister Results

Canister ID# : 2304799 Test Start : 04/15/2014 @ 10:49
Canister Type : Charcoal Canister 3 inch Test Stop : 04/18/2014 @ 08:22
Location : Basement - Dup Received: 04/21/2014 @ 11:09
Radon Level : 5.7 pCi/L Analyzed: 04/22/2014 @ 10:55
Error for Measurement is: \pm 0.5 pCi/L

Canister ID# : 2304800 Test Start : 04/15/2014 @ 10:49
Canister Type : Charcoal Canister 3 inch Test Stop : 04/18/2014 @ 08:22
Location : Basement Received: 04/21/2014 @ 11:09
Radon Level : 5.0 pCi/L Analyzed: 04/22/2014 @ 10:55
Error for Measurement is: \pm 0.4 pCi/L

Canister ID# : 2304844 Test Start : 04/15/2014 @ 10:47
Canister Type : Charcoal Canister 3 inch Test Stop : 04/18/2014 @ 08:20
Location : Kitchen Received: 04/21/2014 @ 11:09
Radon Level : 2.7 pCi/L Analyzed: 04/22/2014 @ 10:55
Error for Measurement is: \pm 0.4 pCi/L

Canister ID# : 2308603 Test Start : 04/15/2014 @ 10:47
Canister Type : Charcoal Canister 3 inch Test Stop : 04/18/2014 @ 08:20
Location : BLANK Received: 04/21/2014 @ 11:09
Radon Level : 0.2 pCi/L Analyzed: 04/22/2014 @ 10:55
Error for Measurement is: \pm 0.2 pCi/L



Andreas C. George

Andreas C. George
Radon Measurement Specialist
NJ MES 11089

Dante Galan

Dante Galan
Laboratory Director

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

Site Radon Inspection Report

Date : 4/22/2014

The results indicate that at least one testing device registered at or above the United States Environmental Protection Agency (EPA) action level of 4.0 picoCuries per liter of air (pCi/L). The EPA recommends mitigation if the average of two short-term tests taken in the lowest level of the building suitable for occupancy show radon levels that are equal to or greater than 4.0 pCi/L.

For information on how to reduce radon levels in your home, please review the EPA booklet: Consumer's Guide to Radon Reduction (www.epa.gov/radon/pdfs/consguid.pdf) and 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 free 1-800-458-1158.

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 its consultants based on RTCA-provided results.



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

4/21/14



FUSS & O'NEILL EnviroScience, LLC

Disciplines to Deliver

ENVIII

DE

*RTCA: These items must be included on our results pages
Radon Testing Summary Sheet

*Project Number: 2014 0370 AFE

Placed by: EMM

*Client Name: Lothrop Assoc.

Retrieved by: EMM

*Building: 34 Hobson St.

Start Date: 4-15-14

*Site Address: East Haven, CT 06512

Stop Date: 4-18-14

Weather at Placement: rain

Contact/Phone #: _____

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 mark clearly if any detector is missing or damaged at retrieval.

REMOVE THIS PORTION AND AFFIX TO TEST INFORMATION FORM
2304844

Start Time: 10:47 am
Stop Time: 5:20 am
Identifier: Kitchen

Start Time: _____
Stop Time: _____
Identifier: _____

REMOVE THIS PORTION AND AFFIX TO TEST INFORMATION FORM
2308603

Start Time: 10:47 am
Stop Time: 5:20 am
Identifier: kitchen (blank)

Start Time: _____
Stop Time: _____
Identifier: _____

REMOVE THIS PORTION AND AFFIX TO TEST INFORMATION FORM
2304800

Start Time: 10:49 am
Stop Time: 8:22 am
Identifier: Basement

Start Time: _____
Stop Time: _____
Identifier: _____

REMOVE THIS PORTION AND AFFIX TO TEST INFORMATION FORM
2304799

Start Time: 10:49 am
Stop Time: 8:22 am
Identifier: Basement (duplet)

Start Time: _____
Stop Time: _____
Identifier: _____

Start Time: _____
Stop Time: _____
Identifier: _____

Start Time: _____
Stop Time: _____
Identifier: _____