CAPOZZO RESIDENCE

Limited Hazardous Materials Building Inspection Report

60 Cosey Beach Avenue
East Haven, CT
Connecticut Department of Housing Application No. 1129
Lothrop Associates Project No. 1524-23

#1129

Lothrop Associates LLP

Hartford, CT

May 2014

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

Project No. 20140370.B4E

FUSS & O'NEILL
EnviroScience, LLC

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60 Cosey Beach Avenue, East Haven, Connecticut
Lothrop Associates LLP

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Appendices

1 Introduction

From May 5, 2014, through May 7, 2014, Fuss & O'Neill EnviroScience, LLC (EnviroScience) Environmental Analyst, Mr. Eduardo Miguel Marques performed a limited hazardous materials building inspection at the property located at 60 Cosey Beach Avenue located in East Haven, Connecticut (the "Site"). On May 5, 2014, EnviroScience's Mr. Ulkens Auguste performed sampling for lead in dust and lead in drinking water. Mr. Auguste is a state-licensed lead inspector/risk assessor. Refer to *Appendix A* for EnviroScience state licenses, certifications and accreditations.

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 (LBP) inspection;
- A Mold visual assessment; and
- Airborne radon gas assessment.

The asbestos inspection was limited and addressed specific materials to be impacted by renovation activities as detailed in the Lothrop Associates LLP (Lothrop) 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 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 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 Title 40 CFR, Part 763, Subpart E - Asbestos Containing Materials in Schools.

2.1 Methodology

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 (≤) 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 inspector collected samples and prepared proper chain of custody forms for transmission of samples to a State of Connecticut-licensed asbestos analytical laboratory for analysis by Polarized Light Microscopy (PLM). The sampling locations, material type, quantity, sample identification, and asbestos content are identified in Tables 1 and 2 of the "Results" section below. Materials not listed in the following tables, but identified at the Site should be considered suspect ACM until sample results indicate otherwise. Refer to *Appendix C* for the PLM analytical results.

2.2 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	Estimated Quantity	Asbestos Content
050514EMM-05A	Exterior	Transite Siding	4,200 SF	20% Chrysotile

SF = Square Feet

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

Table 2
Non-Asbestos-Containing Materials

Sample No.	Location	Material Type
050514EMM-04A-B	Exterior – Front Stairs	Mortar Associated With Stairs
050514EMM-06A-B	Basement	Mortar
050514EMM-07A-B	1st Floor Bathroom	Linoleum/Backing
050514EMM-08A-B	1st Floor Bathroom	Ceramic Floor Tile Mudset
050514EMM-09A-B	1st Floor Bathroom	Ceramic Floor Tile Grout
050514EMM-10A-C	Addition – Rear Room	Sheetrock/Joint Compound (Composite) – Addition
050514EMM-11A-C	Addition – Rear Room	Joint Compound - Addition
050514EMM-12A-C	Master Bedroom	Sheetrock/Joint Compound (Composite)
050514EMM-13A-C	Master Bedroom	Joint Compound
050514EMM-14A-B	Exterior - Addition	Mortar Associated with CMU Foundation
050514EMM-15A-B	Exterior - Addition	Cement Foundation Coating

2.3 Discussion

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

2.4 Conclusions

ACM identified in *Section 2.1 - Table 1* must be removed by a State of Connecticut-licensed Asbestos Abatement Contractor prior to building renovations that will disturb these materials. This is a requirement of the State of Connecticut Department of Public Health (CTDPH) Standards for Asbestos Abatement.

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

On May 5, 2014, EnviroScience representative Mr. Eduardo Miguel Marques conducted comprehensive testing for LBP-coated building materials at the Site structure. The purpose of LBP 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 (24 CFR 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 (*Appendix D).*

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

The two-story residential building was constructed with wood. Window systems are composed of wood, metal, and vinyl; 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 and date of the inspection.

3.2 Results

The testing indicated consistent painting trends throughout the building interior and exterior. The following painted components were determined to contain toxic levels of lead (greater than 1.0 milligram of lead per square centimeter of paint [mg/cm^2]):

Table 3
Lead-Painted Building Components

Building Component	Location	Reading (mg/cm^2)	Defective?
Wood Door Trim	Room 2	5.6	No
Wood Door Jamb	Room 2	4.2	No
Wood Stair Stringer (Outer)	Room 4/5 Stairs	2.5	Yes
Wood Corner Board	Exterior	2.2	Yes
Wood Lower Siding Trim	Exterior	4.8	Yes
Wood Window Trim	Exterior	3.5	Yes
Wood Window Sill	Exterior	2.2	Yes
Wood Porch Ceiling	Exterior	7.1	Yes
Wood Porch Ceiling Joist	Exterior	8.0	Yes
Wood Upper Door Trim	Exterior	1.0	Yes

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

3.3 Dust Wipe Samples

On May 5, 2014, EnviroScience lead inspector/risk assessor, Mr. Ulkens Auguste, collected dust wipe samples inside the residence located at 60 Cosey Beach Avenue to evaluate whether a lead dust hazard existed. The sample numbers, locations, and results are as follows:

Table 4
Lead Dust Wipe Sample Results

Sample No.	Location	Results
050514UA-34	Room 1 Front, Floor	<10 µg/ft^2
050514UA-35	Room 1, Window Sill	57 µg/ft^2
050514UA-36	Room 1 Rear, Window Sill	<40 µg/ft^2
050514UA-37	Room 1 Rear, Floor	<10 µg/ft^2
050514UA-38	Room, Window Sill	<40 µg/ft^2
050514UA-39	Room 2, Floor	<10 µg/ft^2
050514UA-40	Room 3, Floor	<10 µg/ft^2

Sample No.	Location	Results
050514UA-41	Room 3, Window Sill	59 µg/ft^2
050514UA-42	Field Blank	<10 µg/ft^2
050514UA-43	Field Blank	<10 µg/ft^2

Dust wipe samples were collected from window sill and floor locations as delineated on our sample log. The dust wipe sampling was conducted in accordance with the protocol outlined in the document "Lead Testing Procedures and Equipment" (*Appendix D).* Sample results were compared to Connecticut standards for dust as follows:

- 40 µg/ft² - for floors
- 250 µg/ft² - window sills

Dust wipe sample results were acceptable and below the State of Connecticut standards; a lead dust hazard does not exist.

The analytical dust wipe sample results and their locations are provided as *Appendix F* in this report.

3.4 Soil Samples

On May 5, 2014, two composite soil samples were collected from exterior bare soil locations. The sample results are as follows:

Table 5
Soil Sample Results

Sample No.	Location	Results*
050514UA-44	C-Side Composite, Drip Line	310 mg/kg
050514UA-45	D-Side Composite, Drip Line	170 mg/kg

*mg/kg = milligrams per kilogram

The soil sampling was conducted in accordance with the protocol outlined in the document "Lead Testing Procedures and Equipment" (*Appendix D).*

Soil sample results were below the Connecticut standard for lead in soil of 400 mg/kg. A lead in soil hazard does not exist in the areas tested.

The analytical sample results and their locations are provided as *Appendix G* in this report.

3.5 Drinking Water Samples

On May 5, 2014, drinking water samples (first draw and flush) were collected from the kitchen faucet. Both sample results were none detected.

The water sample results were below the federal lead in drinking water standard of 15 parts per billion); a lead in drinking water hazard does not exist at this Site.

The analytical sample results and their locations are provided as *Appendix H* in this report.

3.6 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):

- Wood door trim and wood door jamb, Room 2;
- Wood stair stringer (outer), Room 4/5 stairway;
- Exterior wood corner board;
- Exterior wood lower siding trim;
- Exterior window trim
- Exterior window sill;
- Exterior wood porch ceiling;
- Exterior wood porch ceiling joist; and
- Exterior wood upper door trim.

Interior defective lead-based paint identified (wood floor in Room 2 and wood wall in Room 3) need to be abated.

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.

If these building components are to be demolished during renovations, a representative sample of the anticipated waste stream must be collected and analyzed using the EPA Toxicity Characteristic Leaching Procedure (TCLP) to determine disposal requirements.

Dust wipe sample results were below the State of Connecticut standards; a lead dust hazard does not exist at the Site structure.

Soil sample results were below the State of Connecticut standard for lead in soil of 400 mg/kg (ppm). A lead in soil hazard does not exist in the areas tested.

The drinking water sample results were below the federal drinking water standard. A lead in drinking water hazard does not exist at this location.

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. 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/cm^2 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 May 5, 2014, EnviroScience representative Eduardo Miguel Marques performed a visual assessment for the presence of suspect mold and water intrusion.

4.1 Observations

Evidence of water damage was identified on the following building materials/locations:

- Wood floor appears to be rotted – bathroom (Room 2);
- Approximately 3 SF of sheetrock ceiling – rear room (Room 1);
- Paint observed to be peeling in several locations due to moisture impact – rear room (Room 1) and bathroom (Room 2); and
- Sheetrock wall corner joint – master bedroom (Room 9).

4.2 Recommendations

Potential exposure to mold during renovation should be considered and appropriate work protection, possible use of engineering controls and surface treatment of mold on building materials to remain should be considered.

Building materials to remain in areas of visible suspect mold growth should be thoroughly cleaned and a mold inhibitor should be applied to them, if possible. Remediation of visible suspect mold growth and removal of water damaged building materials should be performed within a negative pressure enclosure/conditions, using properly trained and protected workers. Removal should comply with guidance according to EPA and the Institute of Inspection, Cleaning and Restoration Certification (IICRC).

5 Airborne Radon Gas 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 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 that can damage lung tissue and lead to lung cancer over the course of a person's lifespan.

EPA studies indicate 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 within 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 lowest living space of the building should be tested, as even adjacent rooms can have significantly different levels of radon gas.

Again, radon gas 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 Sampling

From May 5, 2014 to May 7, 2014, EnviroScience representative Mr. Eduardo Miguel Marques deployed 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 Heating, Ventilating and Air Conditioning (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 was performed by RTCA; analytical results are included in *Appendix I*.

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 analysis in a duplicate pairing are 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 that are deployed with, and shipped with the exposed canisters, so that the processing laboratory treats them without bias. 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 from May 5, 2014 to May 7, 2014. The concentration of radon gas in the sample and associated duplicate sample ranged from 0.3 pCi/L to 0.4 pCi/L. The EPA recommended action level for indoor radon gas is 4.0 pCi/L.

In *Table 6* below, the location and result of the quality control duplicate test is listed:

Table 6
Duplicate Sample Result

Location	Canister Numbers	Radon Concentration (pCi/Liter)			Relative Percent Difference (RPD, %)
		Sample	Sample Duplicate	Sample Average	
Living Room	2300764 &2302052	0.3	0.4	0.35	Percent Difference Not Needed (No Concentrations Above 4.0 pCi/Liter)

Note Duplicate testing result was satisfactory.

In *Table 7* below, the location and result of the quality control blank test is listed:

Table 7
Blank Sample Result

Location	Canister Numbers	Radon Concentration (pCi/Liter)
Basement	2303533	0.2

Note Blank testing result was satisfactory.

5.5 Conclusions

During the course of the airborne radon measurement assessment, four sampling canisters, including one duplicate and one blank, were placed in the residence. The samples were below EPA recommended action guideline of 4.0 pCi/L. No further action regarding radon gas is required.

Report prepared by Environmental Analyst Eduardo Miguel Marques.

Reviewed by:

Kevin McCarthy
Project Manager

Timothy M. Downey
Senior Project Manager

Appendix A

Fuss &O'Neill EnviroScience State License, Certifications and Accreditations

0001769 FP **PRSRT T7 0 1264 06040
ULKENS AUGUSTE
146 HARTFORD RD
C/O FUSS & O'NEIL ENVIRO SCIENCE
MANCHESTER CT 06040-5992

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.#12HQA **http://www.dph.state.ct.us**
Hartford, CT 06134-0308

Sincerely,

Jewel Mullen MD

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

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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.
000770
CURRENT THROUGH
09/30/14
VALIDATION NO.
03-637410

ULKENS AUGUSTE

SIGNATURE

Jewel Mullen MD
COMMISSIONER

EMPLOYER'S COPY

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DEPARTMENT OF PUBLIC HEALTH

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Jewel Mullen MD
COMMISSIONER

Fuss & O'Neill EnviroScience, LLC

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

This is to certify that

Ulkens Auguste

xxx-xx-6277

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

January 6, 2014

Date of Course

AI-R-01/14-4

Certificate Number

January 6, 2014

Examination Date

January 6, 2015

Expiration Date

0001768 FP **PRSRT T7 0 1264 06040

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146 HARTFORD RD
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MANCHESTER CT 06040-5992

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Jewel Mullen MD

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BY THIS DEPARTMENT AS A

LEAD INSPECTOR RISK ASSESSOR

CERTIFICATION NO.
002234
CURRENT THROUGH
09/30/14
VALIDATION NO.
03-637409

ULKENS AUGUSTE

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COMMISSIONER

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LEAD INSPECTOR RISK ASSESSOR

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Fuss & O'Neill EnviroScience, LLC

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

This is to certify that

Ulkens Auguste

xxx-xx-6277

has successfully completed the

8 Hour Lead Inspector Risk Assessor 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

Robert L. May, Jr., Training Manager

February 20 & 25, 2014
Date of Course

LIRA-R-02/14-1
Certificate Number

February 25, 2014
Examination Date

February 25, 2015
Expiration Date

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:

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M.S.#12MQA **http://www.dph.state.ct.us**
Hartford, CT 06134-0308

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

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THE INDIVIDUAL NAMED BELOW IS LICENSED
BY THIS DEPARTMENT AS A

ASBESTOS CONSULTANT-INSP/MGMT PLANNER

LICENSE NO. 000201
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EDUARDO M. MARQUES

SIGNATURE

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SIGNATURE

COMMISSIONER

Fuss & O'Neill EnviroScience, LLC

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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 Rowinski, Principal Instructor

Robert L. May, Jr., Training Manager

September 4, 2013

Date of Course

A1-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

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 CERTIFIED
BY THIS DEPARTMENT AS A

LEAD INSPECTOR

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

EDUARDO M. MARQUES

SIGNATURE 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

Robert L. May, Jr., Training Manager

February 20 & 24, 2014
Date of Course

LI-R-02/14-1
Certificate Number

February 24, 2014
Examination Date

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. **1129**
Residence of Pasquale & Marie Capozzo
60 Cosey Beach Avenue
East Haven CT

LA project No. 1524-23

Initial Property Inspection Report

Property Inspected 4 April 2014
Report Date 15 April 2014
Rev. NA

Present at inspection:
Pasquale Capozzo, Homeowner
Thomas Streicher, AIA, Lothrop Associates LLP
Maurizio Huaylla, Lothrop Associates LLP

Damage compliant by owner	Inspection observation *Recommendation*	Rehabilitation Cost projection	Mitigation cost projection
The property is in an AE Flood Zone *12' above datum zero:* If the dwelling is remediated and raised above the flood zone a new structure with new footings will be designed and constructed to raise the building. The existing foundation walls and footings shall be removed with this new construction included in the cost of this item estimate. Modification of existing and/or construction of new exterior stairs to accommodate the new elevation are included in this item cost.			***$125,000***
Flooded basement: Owner reports the basement flooded with several feet of water.	The basement has signs of water damage at several locations. There was a water line visible on a window about 4 ½ feet above the basement floor. The scum forming the waterline is on the inside of the glass indicating the basement was flooded to that level. ***See figure 1*** *Recommendation: The basement appears sufficiently dried out. Owner may want to get a dehumidifier for the basement.*	NA	NA
Heating equipment: The owner states the central heating, air-conditioning system and the water heater where destroyed in the flood. New units were installed in the basement.	A new water heater and new central heating/air-conditioning system is installed. The air-conditioning is not set up or functional and the condenser is not yet installed or at its final location. ***See figure 2*** *Recommendation: The basics utilities are met, hot water and heat are functional. Air-conditioning is a luxury not covered by the CDBD-DR program. The owner should complete the AC installation on their own.*	NA	NA

Electric service panel: The owner states the service panel was under water. The owner states the panel was allowed to dry out and no further action was taken.	The service panel is currently in use. The panel is rusted and has some sediment on the exterior. ***See figure 3*** *Recommendation: Continued use of this service panel should be considered* ***hazardous****. It potentially could be a fire and electrical shock hazard. Replace the panel and all its components together with the service cable. Replace any circuit wiring that shows any sign of damage complete to the next existing junction that has not been exposed to water. Any wiring that may remain should have the conductors cleaned at the connection interface with panel fixtures.*	$4,500	$4,500
Masonry basement foundation wall degrading: The owner expressed concern over the stability of the foundation wall and demonstrated portions falling away by removing a small piece of parging or mortar patch by hand.	The basement exist under only a small portion of the house, it appears to be the oldest portion. The foundation wall is mortared stone and red brick. Most of the mortar appears to consist mostly of beach sand and is loose and crumbly. It looks to have had mortar patched several times over the decades, some of this is lose and cracked. The foundation wall seems to be relatively solid, at least as solid as it ever was. It seems that when new, it wasn't the best quality construction and does not meet current codes or modern use. It cannot be determined if the mortar was degraded by exposure to salt water or if it is just old. It appears some of the thin poorly applied mortar patches are falling away but these don't seem to present a structural issue. Newer parging on the exterior above grade seems to be sound. ***See figures 4 & 5*** *Recommendation: If the foundation wall is to remain in use, continue ongoing maintenance required for an old structure. No immediate work required under the CDBG-DR program.*	NA	NA
Basement floor: The owner pointed out an area on the concrete floor in the basement that was slightly falling into a washed out area.	An area of floor was cracked. The full extent could not be determined due to objects on the floor. *Recommendation: Remove loose and cracked portions and fill in with new concrete*, if done as a rehabilitation	$2,500	NA
First floor flooded: The first floor has two levels, the lower rear level is about 7"-8" lower than the main floor. The owner reports the lower lever had a few inches of water on it but this did not get to the higher level. The owner stated the floor around a toilet at this floor level has become rotted after the storm and is now moving.	The floor around the toilet appears to be rotted. It is likely this condition existing prior to the storm but the water entry from the storm may have worsened the situation. The water entry from the storm in this area does not seem to be related to a storm surge and may have simply been wind driven rain or spray getting in. ***See figure 6*** *Recommendation: Replace the rooted subfloor, joist (if any) and finish floor.*	$750	$750

Wall water damage, first floor: The owner pointed out a few areas of damaged drywall near the floor at the low floor area of the house. Most severe was around a door and adjacent to the damaged floor near the toilet.	There is some water staining and a few areas have water damaged drywall, all low near the floor. See comments on exterior wall below. ***See figure 6*** *Recommendation: Replace the damaged drywall patched into adjoining surfaces. Paint the walls.*	$500	$500
Damage to exterior wall: The owner pointed out damage to a portion of exterior siding.	The damage in question here is all on an addition to the house that appears to be poorly built. The addition has T-111 siding and a wood "water table" part way up the wall. There is no flashing at the water table and it looks as if there never was any flashing. The siding and water table wood is rotted from a point slightly above the water table down to the bottom of the siding. This continues all the way around the addition. It appears that the lack of flashing allowed water to get behind the siding causing the rotting condition. This addition also contains the first floor low floor area mentioned above. It is possible this lack of flashing water entry also caused the interior wall/floor damage mentioned above. ***See figures 7 & 8*** *Recommendation: This damage was caused by poor workmanship on the building and not the storm. Take no action under the CDBG-DR program.*	NA	NA
Roof: The owner states the roof sustained some wind damage. The owner had the roof replaced and new soffits and fascias installed.	The existing roof on the building looks to be newly installed. *Recommendation: Work is done, take no action.*	NA	NA
Second floor dry wall damage: owner stated a roof leak damaged the drywall.	Damage exists on an inside corner full height at a second floor wall *Recommendation: Replace the drywall and patch into existing. Paint the surfaces.*	$500	$500
Siding: The owner states some siding was wind damaged. The owner stated he had a contractor replace the siding missing from gable end and salvage some removed siding to patch in at other areas of the house.	The vinyl siding on the gable end is a different color then the rest of the house. *Recommendation: Work is done, take no action.*	NA	NA
Front porch entry steps: The owner states the storm surge displaced a few bricks and tread stones.	A few tread stones and bricks are loose & missing ***See figure 9*** *Recommendation: remove loose and cracked mortar and grout and re-set, replace missing treads, if done as a rehabilitation*	$500	NA
Porch wood joint open: The owner states after the storm he noticed some porch trim loose with gaps in the joints.	The porch floor rim trim has an open outside corner joint and one piece is loose at the end. The wood is starting to dry rot. The open joint may be due one member popping out. Open joint looks older then the storm due to the inside being painted. ***See figure 10*** *Recommendation: Not likely due to storm*	NA	NA

	damage, take no action.		
Cracking driveway and curb: The owner states after the storm the concrete paved driveway and adjacent concrete curb cracked and sank. The owner expressed concern over sink holes and indicated a bituminous paved patch in the driveway was installed after the storm to fill a sink hole.	The cracks in the concrete appear to have weathering in the crack that is older than the storm. ***See figures 11, 12, 13 & 14*** *Recommendation: Not likely due to storm damage, take no action.*	NA	NA
Third floor deck wobbly: The owner reports the third floor deck is wobbly. He reports he had his contractor add bracing to the deck but it is still wobbly.	The deck wobbles when one stands on it and shakes back and forth. The framing is exposed and it can be seen it does not have any framing elements that form structural triangulation. The newly added bracing also does not form any structural triangulation. ***See figure 15*** *Recommendation: Not likely due to storm damage, take no action.*	NA	NA
Total Cost Projection		$9,250	$131,250

Additional comments: It appears this project would be classified as a repair if done as rehabilitation only. If done as a mitigation project it would classify as an alteration. Asbestos, lead, mold and other hazardous material assessment, abatement or removal is not included in the cost projection.

Figure 1 note the water line on the glass

See following pages for additional photos

Figure 3

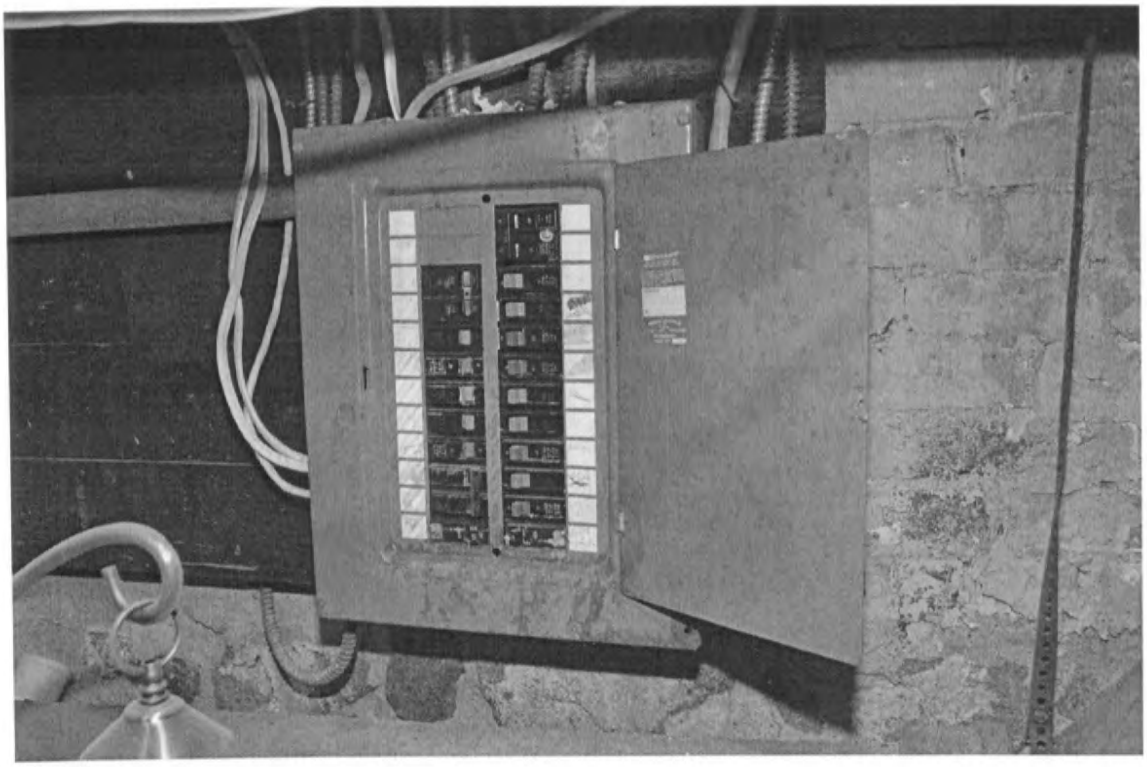

Figure 2

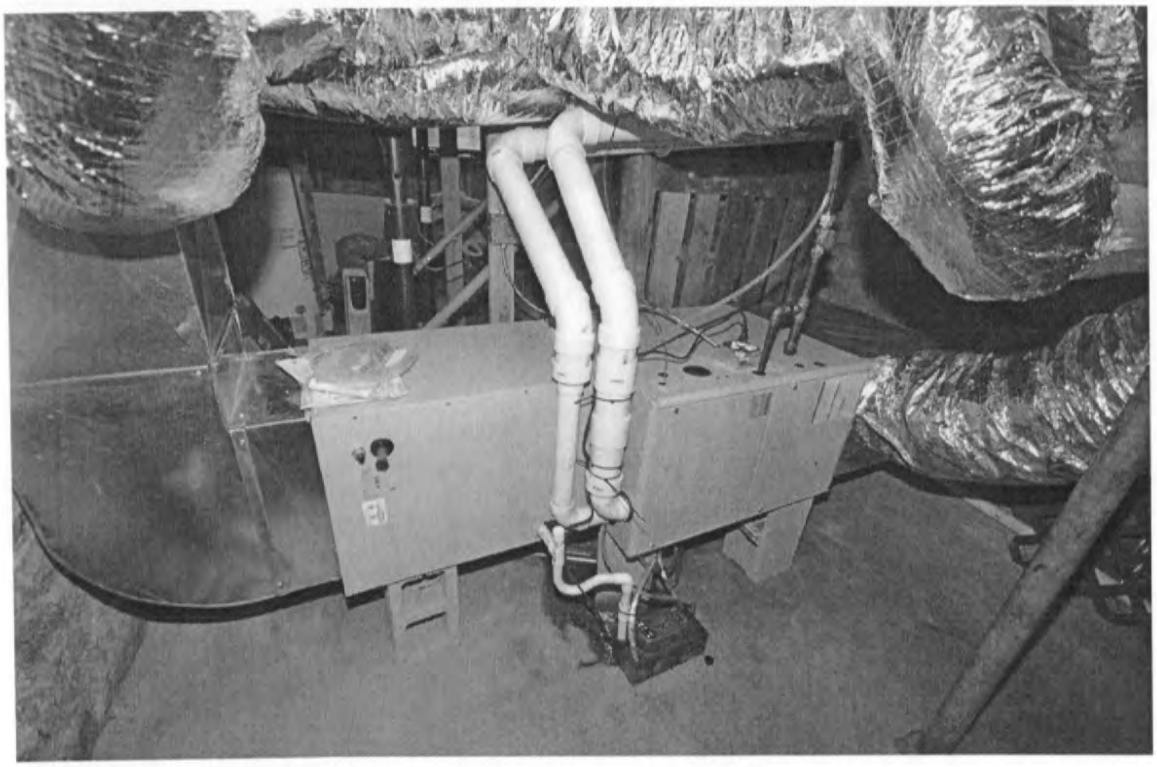

Figure 2

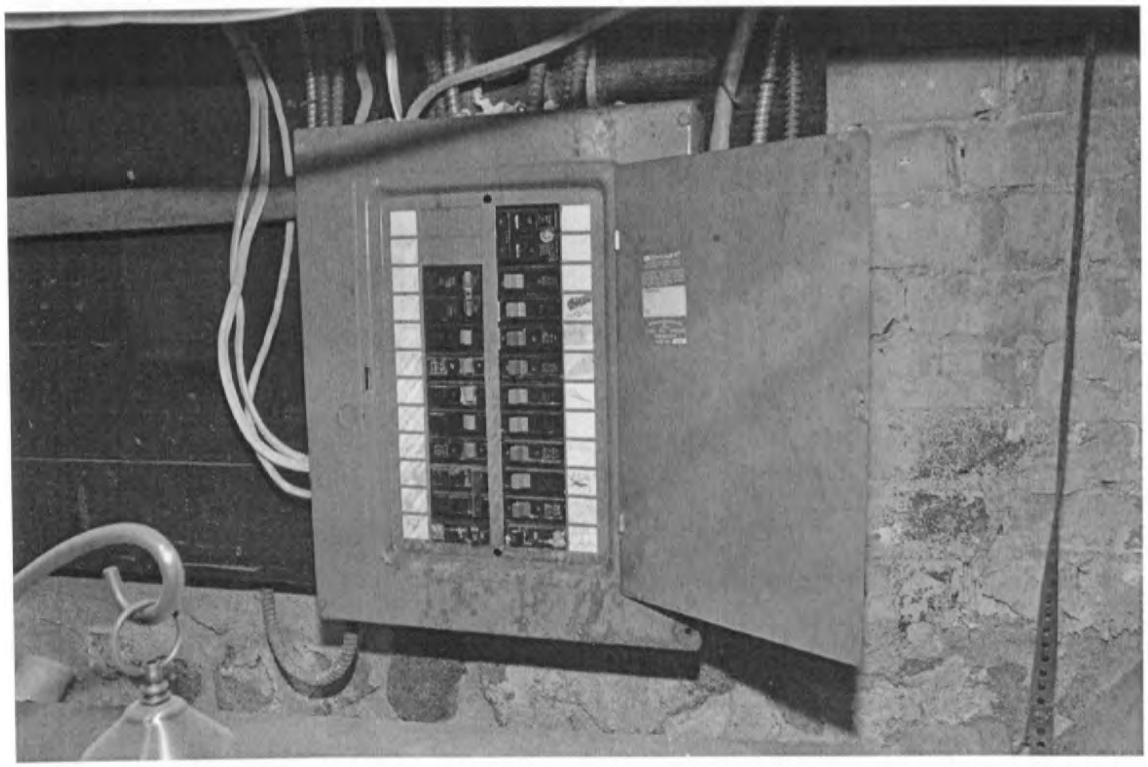

Figure 3

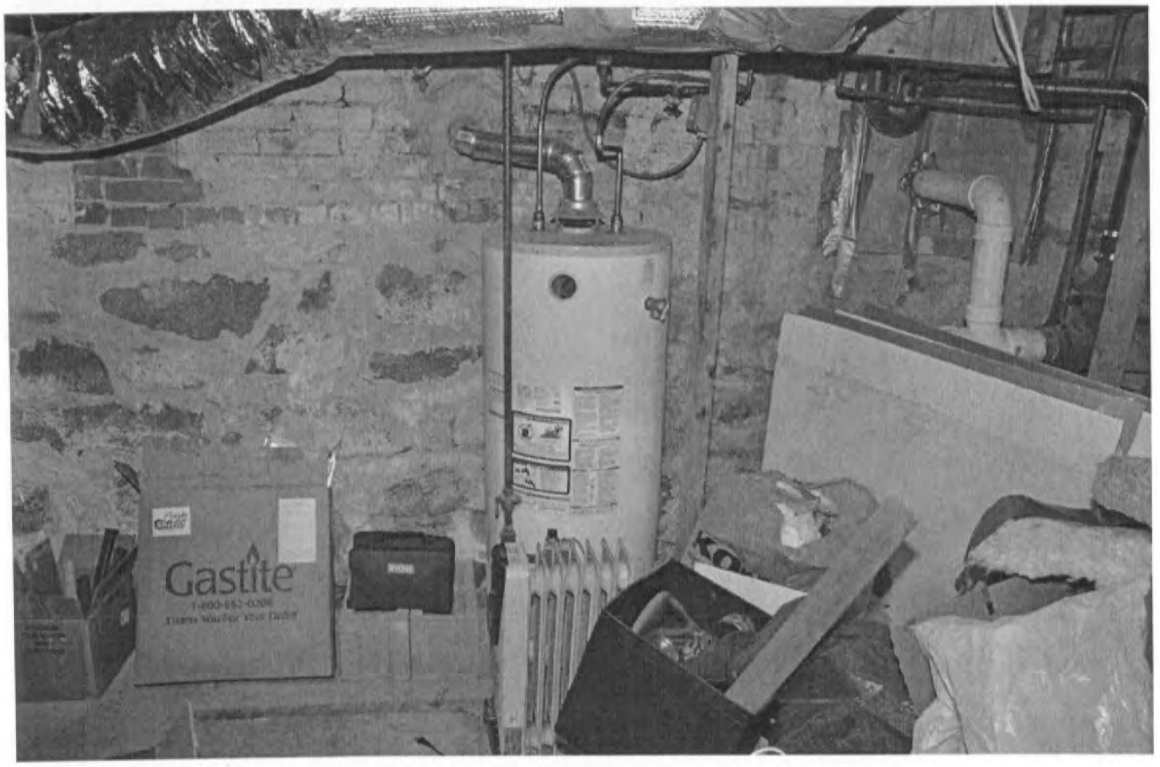

Figure 4

Figure 5

Figure 6

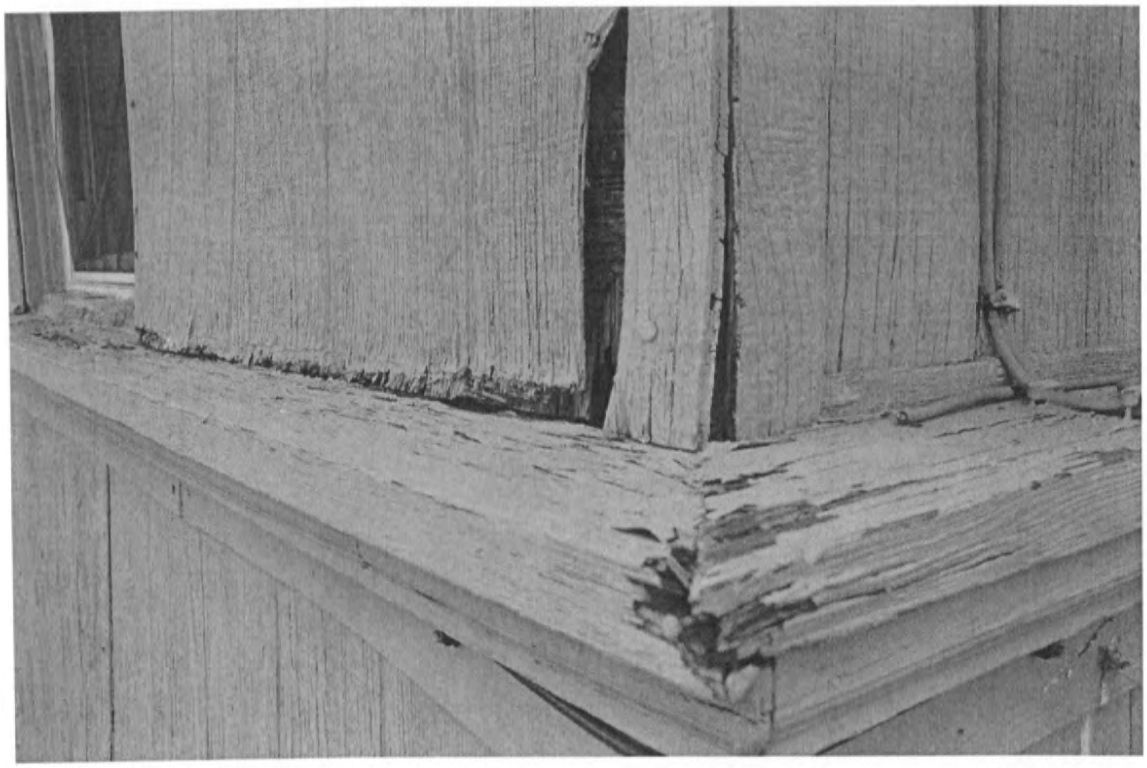

Figure 7

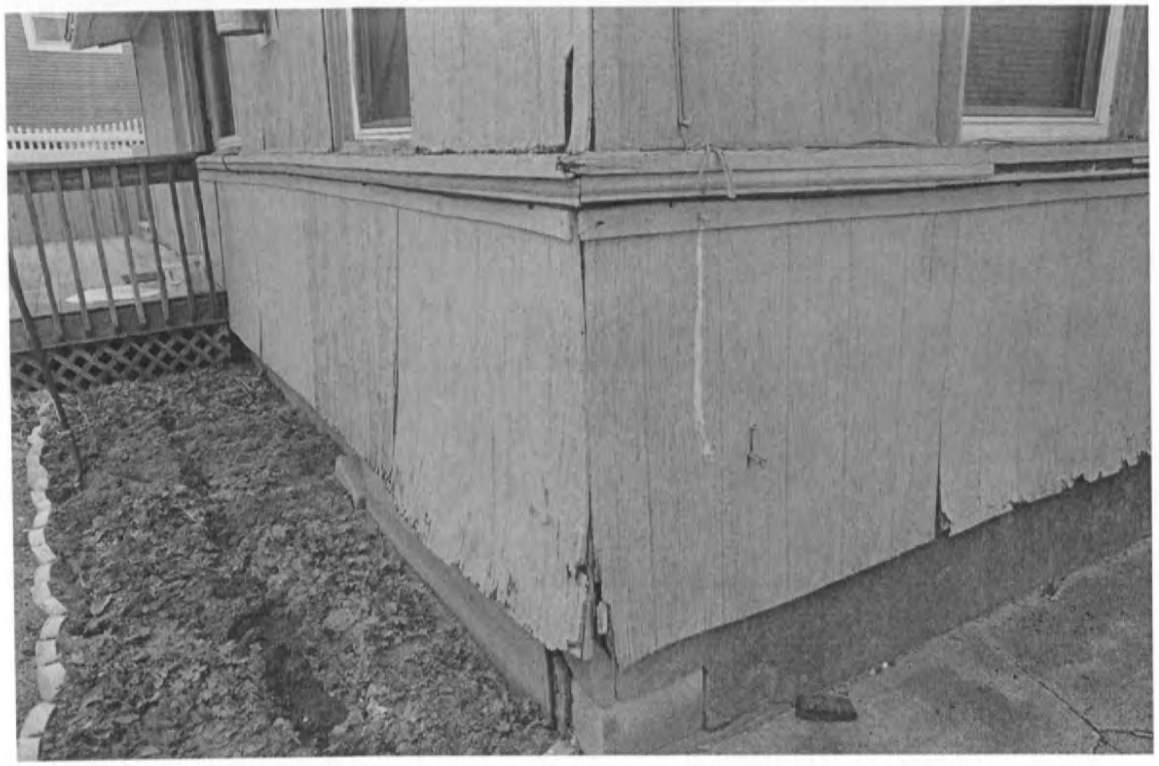

Figure 8

Figure 9

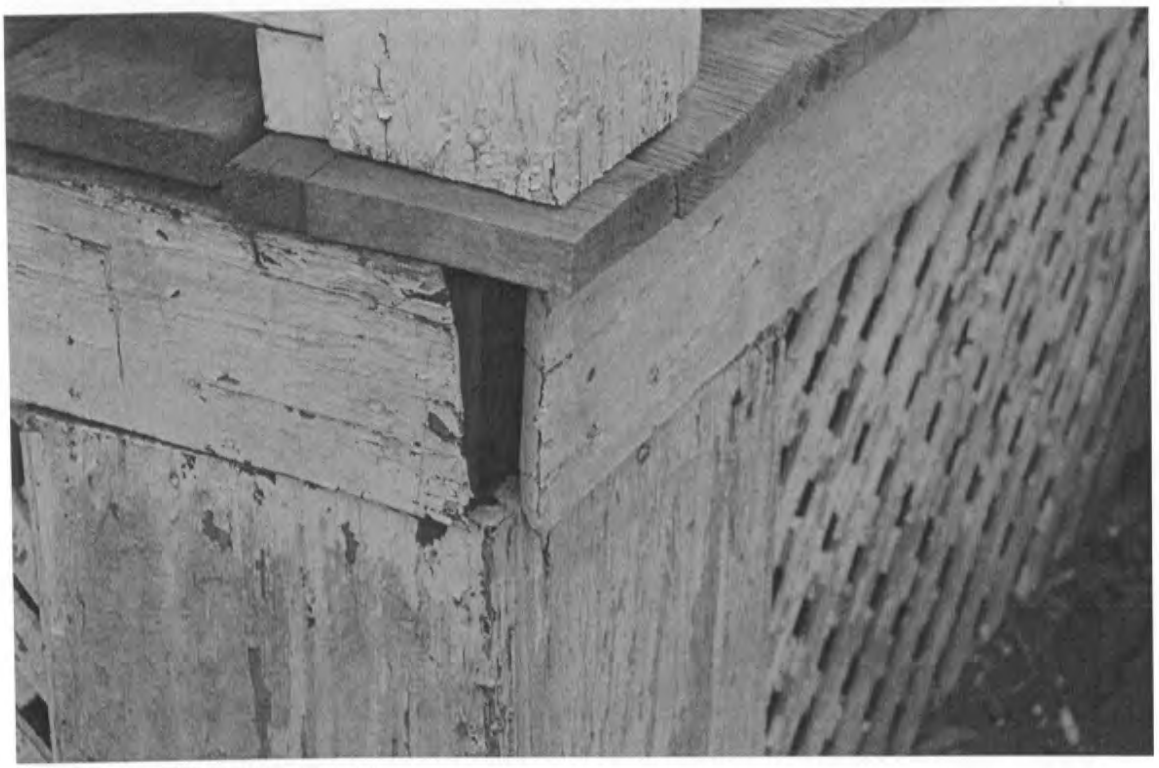

Figure 10 note old paint in open joint

Figure 11

Figure 12

Figure 13

Figure1 4

Figure 15

Appendix C

Asbestos Sample Results and Chain of Custody Forms

FUSS & O'NEILL
EnviroScience, LLC

146 Hartford Road, Manchester, CT 06040

www.fando.com

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

041412302

SAMPLE LOG FOR ASBESTOS BULKS

Sheet 1 of 1

Project Name: Lothrop Assoc. Project No. 20140370,

Building: 60 Cosey Beach, East Haven CT Project Manager: KM

Sample ID	Sample Location	Material	Result (%)
050514EMM-04A-B	Exterior - front porch stairs -	mortar	
-05A-B	Exterior siding	transite siding	
-06A-B	Basement	mortar	
-07A-B	1st floor bath	linoleum / backing	
-08A-B	1st A. bath	mastic - conc floor	
-09A-B	↓	grout - conc floor	
10A-C	Addition (rear Rm) ceiling, ceiling, wall	sheetrock/joint cmpd. (composite) - addition	
11A-C	↓ ↓ ↓	Joint cmpd. - addition	
12A-C	Master bedroom	sheetrock/Joint cmpd. (composite)	
13A-C	↓	Joint cmpd.	
14A-B	Addition	concrete/mortar from CMU - foundation	
15A-B	↓	cement coating on foundation	

Analysis Method: ☑ PLM ☐ Other

Turnaround Time 24 hr

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 <4%, positive stop on all point counts.

RECEIVED EMSL CINNAMINSON N.J. 2014 MAY -6 A 8:23

Samples collected by: [signature] **Date:** 5-5-14 **Time:** pm

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

Samples Received by: AM EMSL FX **Date:** 5/6/14 **Time:** 0940

Shipped To: ☑ EMSL State NJ ☐ Other _____

Method of Shipment: ☑ Fed Ex ☐ 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:	041412302
CustomerID:	ENVI54
CustomerPO:	20140370.
ProjectID:	

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

Phone:	(860) 646-2469
Fax:	(888) 838-1160
Received:	05/06/14 9:40 AM
Analysis Date:	5/6/2014
Collected:	

Project: **LOTHROP ASSOC. /60 COSEY BEACH, EAST HAVEN, CT / 20140370**

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**
050514EMM-04A *041412302-0001*	EXTERIOR-FRONT PORCH STAIRS - MORTAR	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
050514EMM-04B *041412302-0002*	EXTERIOR-FRONT PORCH STAIRS - MORTAR	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
050514EMM-05A *041412302-0003*	EXTERIOR SIDING - TRANSITE SIDING	Gray Fibrous Homogeneous		80% Non-fibrous (other)	**20% Chrysotile**
050514EMM-05B *041412302-0004*	EXTERIOR SIDING - TRANSITE SIDING				**Stop Positive (Not Analyzed)**
050514EMM-06A *041412302-0005*	BASEMENT - MORTAR	White Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
050514EMM-06B *041412302-0006*	BASEMENT - MORTAR	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
050514EMM-07A *041412302-0007*	1ST FLOOR BATH - LINOLEUM/ BACKING	Gray Fibrous Homogeneous	40% Cellulose 5% Glass	55% Non-fibrous (other)	**None Detected**

Analyst(s)

Michael Garrity (16)
Naadira Carter (11)

Stephen Siegel, CIH, Laboratory Manager
or other approved signatory

Initial report from 05/07/2014 06:32:36

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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**
050514EMM-07B *041412302-0008*	1ST FLOOR BATH - LINOLEUM/ BACKING	Gray Fibrous Homogeneous	30% Cellulose 5% Glass		65% Non-fibrous (other)	**None Detected**
050514EMM-08A *041412302-0009*	1ST FLOOR BATH - MUDSET-CERAMIC FLOOR	Gray Non-Fibrous Homogeneous			100% Non-fibrous (other)	**None Detected**
050514EMM-08B *041412302-0010*	1ST FLOOR BATH - MUDSET-CERAMIC FLOOR	Gray Non-Fibrous Homogeneous			100% Non-fibrous (other)	**None Detected**
050514EMM-09A *041412302-0011*	1ST FLOOR BATH - GROUT-CERAMIC FLOOR	Gray Non-Fibrous Homogeneous			100% Non-fibrous (other)	**None Detected**
050514EMM-09B *041412302-0012*	1ST FLOOR BATH - GROUT-CERAMIC FLOOR	Gray Non-Fibrous Homogeneous			100% Non-fibrous (other)	**None Detected**
050514EMM-10A *041412302-0013*	ADDITION (REAR ROOM(CEILING, CEILING, WALL - SHEETROCK/ JOINT COMOUND	Gray/White Fibrous Heterogeneous	10% Cellulose		90% Non-fibrous (other)	**None Detected**

Analyst(s)
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Project: **LOTHROP ASSOC. /60 COSEY BEACH, EAST HAVEN, CT / 20140370**

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**
050514EMM-10B *041412302-0014*	ADDITION (REAR ROOM(CEILING, CEILING, WALL - SHEETROCK/ JOINT COMOUND	Gray/White Non-Fibrous Heterogeneous	10%	Cellulose	90% Non-fibrous (other)	**None Detected**
050514EMM-10C *041412302-0015*	ADDITION (REAR ROOM(CEILING, CEILING, WALL - SHEETROCK/ JOINT COMOUND	Brown/White Fibrous Homogeneous	10%	Cellulose	90% Non-fibrous (other)	**None Detected**
050514EMM-11A *041412302-0016*	ADDITION (REAR ROOM(CEILING, CEILING, WALL - JOINT COMPOUND	White Non-Fibrous Homogeneous			100% Non-fibrous (other)	**None Detected**
050514EMM-11B *041412302-0017*	ADDITION (REAR ROOM(CEILING, CEILING, WALL - JOINT COMPOUND	White Non-Fibrous Homogeneous			100% Non-fibrous (other)	**None Detected**
050514EMM-11C *041412302-0018*	ADDITION (REAR ROOM(CEILING, CEILING, WALL - JOINT COMPOUND	White Non-Fibrous Homogeneous			100% Non-fibrous (other)	**None Detected**

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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
050514EMM-12A *041412302-0019*	MASTER BEDROOM - SHEETROCK/ JOINT COMPOUND	White Fibrous Heterogeneous	12% Cellulose 2% Glass		86% Non-fibrous (other)	**None Detected**
050514EMM-12B *041412302-0020*	MASTER BEDROOM - SHEETROCK/ JOINT COMPOUND	White Fibrous Heterogeneous	10% Cellulose 2% Glass		88% Non-fibrous (other)	**None Detected**
050514EMM-12C *041412302-0021*	MASTER BEDROOM - SHEETROCK/ JOINT COMPOUND	Gray/White Fibrous Homogeneous	5% Glass		95% Non-fibrous (other)	**None Detected**
050514EMM-13A *041412302-0022*	MASTER BEDROOM - JOINT COMPOUND	White Non-Fibrous Homogeneous			100% Non-fibrous (other)	**None Detected**
050514EMM-13B *041412302-0023*	MASTER BEDROOM - JOINT COMPOUND	White Non-Fibrous Homogeneous			100% Non-fibrous (other)	**None Detected**
050514EMM-13C *041412302-0024*	MASTER BEDROOM - JOINT COMPOUND	White Non-Fibrous Homogeneous			100% Non-fibrous (other)	**None Detected**

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Project: **LOTHROP ASSOC. /60 COSEY BEACH, EAST HAVEN, CT / 20140370**

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
050514EMM-14A *041412302-0025*	ADDITION - MORTAR FROM CMU-FOUNDATION	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
050514EMM-14B *041412302-0026*	ADDITION - MORTAR FROM CMU-FOUNDATION	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
050514EMM-15A *041412302-0027*	ADDITION - CEMENT COATING ON FOUNDATION	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
050514EMM-15B *041412302-0028*	ADDITION - CEMENT COATING ON FOUNDATION	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**

Analyst(s)
Michael Garrity (16)
Naadira Carter (11)

Stephen Siegel, CIH, Laboratory Manager
or other approved signatory

Initial report from 05/07/2014 06:32:36

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Appendix D

Lead Paint Testing Procedures and Equipment

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EnviroScience, LLC

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.

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Lead Dust Wipe Sampling Protocol

Data Collection

A. A description of the sample location is recorded.

B. Surface type (floor, windowsill, window well) is noted.

C. Surface area measurements are recorded.

Wipe Sampling Method

A. The area to be wiped is identified and measured.

B. A disposable glove is put on and the "ghost wipe" package is opened.

C. Without touching any other surface, the wipe is opened and placed flat down on the surface. Using firm, consistent pressure, a wipe is taken in a single "S" motion.

D. Next the wipe is folded in half with the contaminated side facing inward and another wipe is taken again at 90 degrees to the first "S" wipe. Do not use a scrubbing motion, but be sure to collect all visible dust in the measured area.

E. The wipe is folded again with the contaminated side inward. Without touching any other surface, the wipe is placed into a plastic centrifuge tube. The tube is sealed and labeled. The sample number indicates the date and sampler's identity.

F. The samples are submitted to our laboratory on our standard sample log. Date and time of transfer is recorded to ensure proper chain of custody. The analytical procedure utilized is a modified EPA SW-846-3050. Blanks are submitted in accordance with EnviroScience's QA/QC program.

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Lead In Soil Composite Sampling Protocol

Linear Transect Method:

For use around roadways, buildings, and other structures such as painted fencing, concrete walls, etc. Each side of the building is labeled with a letter. The 'A' side of the building is the street side. The remaining sides are labeled B, C, and D, clockwise around the building. Fencing and concrete walls are similarly labeled if there is a street side. Otherwise, along with roadways, these structures can be labeled using the directional points North, South, East and West.

1. Linear transects are established parallel to the building, wall, fence or roadway at 2 foot intervals.

2. Three (3) to ten (10) distinct locations roughly equidistant from one another along the transect line are selected as sample points. As a general rule, we would like to see five sampling points for each 100 feet of transect line, but sample points should be at least 2 feet apart, so in smaller areas (less than 10 feet), fewer samples may be collected.

3. Samples of the top one-half inch (.5") of soil should be taken using a metal spoon or stainless-steel scoop. Collect soil until a circular hole of approximately 2 inches in diameter (0.5" deep) has been created. Samples from each of the sampling points should be composited into a 24-ounce plastic bag of at least 3 mil in weight. The bags should be either zip-locked or foldable with puncture proof tabs.

4. After each composite sample is collected, the sampling spoon or scoop should be thoroughly cleaned with a disposable wipe to prevent cross contamination of other composite samples to be collected in other areas on the site.

5. The soil samples are dried, weighed out and digested in nitric acid according to EPA Method 3050. Analysis is performed by direct aspiration flame atomic absorption spectrophotometry according to EPA Method 7420. Results are expressed in milligrams per kilogram (mg/kg), or parts-per-million (ppm).

Grid Method:

In other areas, such as play areas and other open spaces, an X shaped axis should be developed with directional reference points of North, South, East and West. At least five, but not more than ten sampling points should be designated along each axis. The sampling points should be equidistant from one another and should be at least one foot distant from each other.

The sampling and compositing procedures outlined in the linear transect method should be followed for each axis.

For all soil sampling, a property sketch should be drawn. It is recommended that you use the space provided on the back of the lead in soil sample log.

Appendix E

Lead Testing Field Data Sheets

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

LEAD INSPECTION COVER SHEET

Inspector's Information

Inspector's Name: Eduardo Miguel Marques
License Number: 002132
XRF Model: RMD
Serial Number: 1157
Date of Inspection: 5-5-14
Project Number: 20140320-84E

Property Information

Building Address: 60 Casey Beach, East Haven, CT
(Street) (City) (State)
Age of Property:
Describe Structure: two-story residential, wood/metal window systems, wood/metal door systems

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 ☑ (EW)

Is there an EBL child present?
☐ Yes ☑ No (EW) ☐ Unknown

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

Multiple Family Dwelling ☑

Number of units in building: 2
Number of units tested: 2
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	9:00 am	1.0	0.9	0.9	0.93
Second Check	12:15 pm	1.0	0.8	0.9	0.9
Third Check					
Fourth Check					

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Project Name: Lothrop Assoc. **Project Number:** 20140321.64E

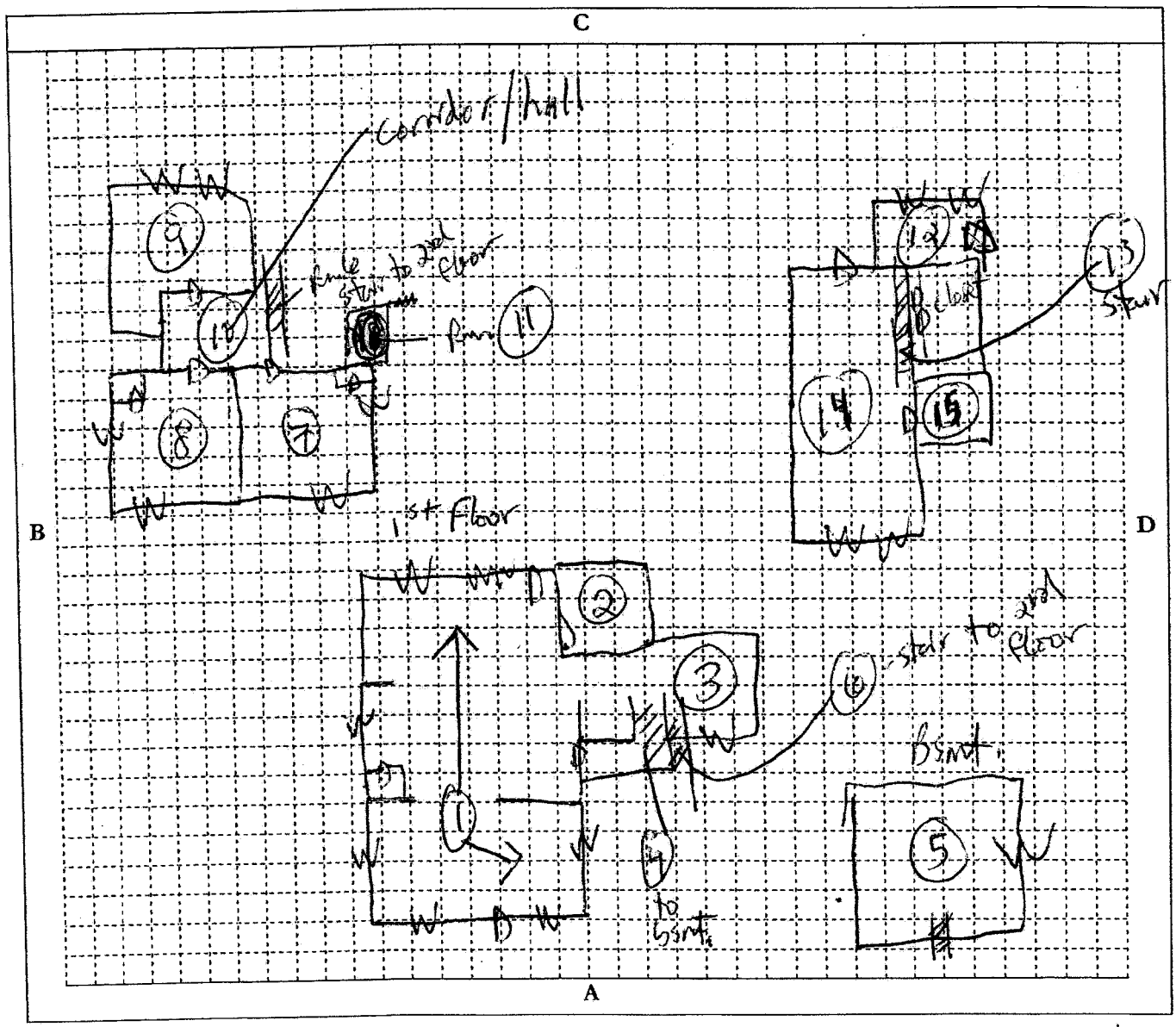
Project Manager: KM

Address: 60 Cosey Beach, East Haven, CT **Apt. #/Bldg #:**

Floor: **Room:** **Page** 1 **of** 1

Number of Doors: **No. of Windows:**

Diagram of: Floor plan



(#) Room Number Door Window

Page 1 of 1

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XRF FIELD DATA SHEET

Address: 60 Cosey Beach, East Haven, CT **Apt. #:**

Floor: **Room:** **Page** 1 **of** 7

Project Name: Lothrop Assoc. **Project Number:** 20140320.B4E

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

Side	Surface	XRF Readings	POS	Substrate	Defective	Chewable	Friction	Impact	Comments
A	Wall	-0.0		S					Room 1
B	↓	-0.1		↓					↓
C	↓	-0.1		↓					↓
D	↓	-0.0		↓					↓
A	window trim	-0.1		W					↓
↓	w. sill	-0.0		W					↓
↓	w. sash/sash	N/C		Vinyl					↓
A	baseboard	-0.1		W					↓
	floor	-0.2		W					↓
D	cabinet	0.1		W					↓
	↓ shelve	0.1		W					↓
	↓ door	-0.1		W					↓
A	door	-0.2		M					↓
A	door trim	-0.1		W					↓
A	door jmb	0.1		W					↓
A	storm door	-0.1		M					↓
C	door trim	-0.1		W					↓
	ceiling	-0.2		S					↓
A	walls	-0.1		S					Rm. 2
B	↓	-0.2		S					↓
C	↓	-0.1		S					↓
D	↓	-0.3		S					↓
	ceiling	0.0		S					↓
B	door	0.0		W					↓
B	door trim	5.6	✓	W	NO				↓
B	door jmb	9.2	✓	W	NO				↓
C	baseboard	-0.1		W					↓
C	upper trim	-0.3		W					↓
B	window trim	-0.0		W					↓
B	w. sill	-0.1		W					↓
B	w. sash	N/C		Vinyl					↓

* 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

Address: 60 Cosey Beach, East Haven, CT **Apt. #:**

Floor: **Room:** **Page** 2 **of** 7

Project Name: Lothrop Assoc. **Project Number:** 20140370.64E

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

Side	Surface	XRF Readings	POS	Substrate	Defective	Chewable	Friction	Impact	Comments
A	walls	-0.0		S					Rm 3
B	↓	-0.1		S					↓
C		-0.0		S					
D	↓	-0.0		S					
	ceiling	-0.0		S					
A	w. trim	-0.0		W					
A	W. Sill	0.1		W					
A	w. sash	N/C		Vinyl					
A	cabinet	-0.0		W					
A	baseboard	-0.1		W					↓
A	wall	0.0		S					Rm. 4 - Stair to Lsrt.
D	↓	0.0		S					↓
	floor	-0.1		W					
B	wall	-0.3		W					
	ceiling	-0.1		W					
B	door jamb	0.1		W					
B	door	-0.1		W					
	stair components	N/C		W					↓
A	wall	-0.0		B					Rm 5 - Lsrt.
	stair stringer	2.5	✓	W	Yes				Rm 4/5 intersection of stringer
B/C/D	wall	N/C		B/C					↓
D	window components	NC		W					
B	walls	-0.1		S					Rm. 6
D	↓	-0.0		S					↓
	ceiling	-0.1		S					
	railing	-0.0		W					
B	balister	-0.2		W					↓
A	wall	-0.1		~~VVS~~ S					Rm. 7
B	↓	-0.1		S					↓
C		-0.2		S					
D	↓	-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:

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XRF FIELD DATA SHEET

Address: 60 Cosey Beach, East Haven, CT **Apt. #:**

Floor: **Room:** **Page** 3 **of** 7

Project Name: LoThrop Assoc. **Project Number:** 20141370.B4E

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

Side	Surface	XRF Readings	POS	Substrate	Defective	Chewable	Friction	Impact	Comments
	ceiling	-0.2		S					Rm 7
A	w. trim	-0.0		W					
A	w. sill	-0.2		W					
A	w. sash	NC		Vinyl					
A	baseboard	0.1		W					
A	crown molding	-0.0		W					
C	door	-0.1		W					
C	door trim	-0.1		W					
C	door jamb	-0.2		W					
A	wall	-0.1		W					Rm 7 - closet
B	↓	-0.1		W					
C		-0.1		W					
D		-0.0		W					
	ceiling	-0.0		W					
A	door	-0.2		W					
A	door trim	0.1		W					
A	door jamb	-0.1		W					
	shelf	0.0		W					
	shelf support	0.2		W					
A	wall	-0.0		S					Rm 8
B	↓	-0.1		S					
C		0.0		S					
D		-0.2		S					
	ceiling	0.1		S					
A	w. trim	0.6		W					
A	w sill	0.0		W					
A	baseboard	0.5		W					
C	door	-0.0		W					
C	door trim	0.6		W					
C	door jamb	0.3		W					
D	crown molding	0.0		W					

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

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XRF FIELD DATA SHEET

Address: 60 Cosey Beach East Haven, CT **Apt. #:**

Floor: **Room:** **Page** 4 **of** 7

Project Name: Lothrop Assoc. **Project Number:** 20140370.64E

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

Side	Surface	XRF Readings	POS	Substrate	Defective	Chewable	Friction	Impact	Comments
B	wall	0.0		S					Rm. 8 - closet
	shelf	0.2		W					
	↓ support	0.0		W					
	ceiling	0.0		S					
A	door	0.1		W					
A	door trim	0.0		W					
A	door jamb	0.0		W					
A	wall	0.1		S					Rm. 9
B	↓	-0.3		S					
C		-0.0		S					
D		-0.0		S					
	ceiling	0.0		S					
C	baseboard	-0.0		W					
C	w. trim	-0.0		W					
C	w. sill	-0.1		W					
C	w. sash	N/C		Vinyl					
A	door trim	0.0		W					
A	door jamb	0.0		W					
A	door	-0.1		W					
A	wall	-0.0		S					Rm 9 - closet
	ceiling	-0.0		S					
	shelf	0.1		W					
	↓ support	0.1		W					
C	door	-0.2		W					
C	door trim	0.1		W					
C	door jamb	-0.0		W					
A	wall	-0.1		S					Rm 10
B		-0.1		S					
C		-0.2		S					
D	↓	0.0		S					
	ceiling	-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:

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XRF FIELD DATA SHEET

Address: 60 Cosey Beach Ave. East Haven **Apt. #:**

Floor: **Room:** **Page** 5 **of** 7

Project Name: Lothrop Assoc. **Project Number:** 20140320.04E

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

Side	Surface	XRF Readings	POS	Substrate	Defective	Chewable	Friction	Impact	Comments
A	baseboard	0.1		W					Rm 10
C	door trim	-0.0		W					
C	d. jamb	0.2		W					
C	door	0.1		W					
A	wall	-0.0		S					Rm. 11
B		0.0		S					
C		0.0		S					
D		-0.2		S					
	ceiling	-0.1		S					
B	door	-0.1		W					
B	door trim	0.0		W					
B	door jamb	0.1		W					
A	baseboard	0.1		W					
A	wall	-0.3		S					Rm. 12
B		-0.1		S					
C		-0.2		S					
D		-0.2		S					
	ceiling	-0.1		S					
C	w. trim	0.0		W					
C	w. sill	-0.0		W					
D	door	-0.0		W					
D	d. trim	0.3		W					
D	d. jamb	-0.0		W					
A	cabinet	-0.1		W					
D	rail	0.0		W					Rm 13 - Stair
D	stair stringer	0.0		W					
B	wall	-0.0		S					
D		0.0		S					
C		-0.1		S					
	ledge	0.0		W					
A	lower wall	-0.0		W					

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

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XRF FIELD DATA SHEET

Address: 60 Cosey Beach **Apt. #:**

Floor: **Room:** **Page** 6 **of** 7

Project Name: Lothrop Assoc. **Project Number:** 20140320. B4E

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

Side	Surface	XRF Readings	POS	Substrate	Defective	Chewable	Friction	Impact	Comments
A	wall	-0.2		S					Rm. 14
B	↓	-0.2		S					↓
C		-0.0		S					
D		0.0		S					
	ceiling	0.1		S					
A	w. trim	0.0		W					
A	W. sill	0.0		W					
C	door	-0.1		W					
C	d. trim	0.2		W					
C	d. jamb	0.0		W					
	shelf	0.1		W					Rm 14 - closet
	↓ support	0.0		W					↓
A	wall	-0.1		S					
A	door	-0.2		W					
B	d. trim	-0.0		W					
	d. jamb	0.1		W					
	floor	-0.0		W					Rm. 14 - Exterior porch
	rail	0.1		W					↓
	ballester	-0.0		W					Rm 15
A	wall	0.0		S					↓
B	↓	-0.1		S					
C		-0.0		S					
D		-0.1		S					
	ceiling	-0.0		S					
B	door	-0.1		W					
B	door trim	-0.0		W					
B	door jamb	0.0		W					
B	siding	-0.1		Vinyl					Exterior
B	door	-0.0		M					↓
B	door trim	-0.1		W					
B	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

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XRF FIELD DATA SHEET

Address: 60 Cosey Beach Ave. East Haven **Apt. #:** ___

Floor: ___ **Room:** ___ **Page** 7 **of** 7

Project Name: Lothrop Assoc. **Project Number:** 20140370.64E

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

Side	Surface	XRF Readings	POS	Substrate	Defective	Chewable	Friction	Impact	Comments
D	Kickboard	-0.1		W					Exterior
	railing	-0.1		W					
D	w. trim	0.0		M					
	landing	0.1		W					
D	siding	0.0		W					
C	cornerboard	2.2	✓	W	yes				
C	Soffit	-0.1		W					
C	w. sill outer	-0.1		W					
C	↓ inner	0.0		W					
C	w. trim	-0.1		W					
C	kickboard	0.3		W					
C	door trim	0.1		W					
B	lattice	0.0		W					
B	support column	0.6		W					
B	rail	0.0		W					
B	balluster	-0.0		W					
B	lattice trim	0.2		W					
B	siding	-0.1		transite					
B	siding trim	4.6	✓	W	yes				
B	w. trim	3.5	✓	W	yes				
B	w. sill	2.2	✓	W	yes				
B	porch ceiling	7.1	✓	W	yes				
B	↓ joist	5.0	✓	W	yes				
A	upper door trim	1.0	✓	W	yes				
A	door jamb	-0.0		W					
A	door	-0.0		W					
A	door kickboard	-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: ___

Appendix F

Lead in Dust Sample Results and Chain of Custody Form

EMSL Analytical, Inc.
200 Route 130 North, Cinnaminson, NJ 08077
Phone/Fax: (856) 303-2500 / (856) 786-5974
http://www.EMSL.com cinnaminsonleadlab@emsl.com

EMSL Order:	201406690
CustomerID:	ENVI54
CustomerPO:	20140370
ProjectID:	

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

Phone:	(860) 646-2469
Fax:	(888) 838-1160
Received:	05/06/14 10:37 AM
Collected:	5/5/2014

Project: **20140370 / Lothrop Assoc. / 60 Casey Beach Avenue Easthaven,CT**

Test Report: Lead in Dust by Flame AAS (SW 846 3050B/7000B)*

Client Sample Description	*Lab ID*	*Collected*	*Analyzed*	*Area Sampled*	*Lead Concentration*
050514UA-34	*0001*	5/5/2014	5/6/2014	144 in²	<10 µg/ft²
	Site: Room 1-Front Desc: Floor				
050514UA-35	*0002*	5/5/2014	5/6/2014	36 in²	57 µg/ft²
	Site: Room 1-Front Desc: A,W.Sill				
050514UA-36	*0003*	5/5/2014	5/6/2014	36 in²	<40 µg/ft²
	Site: Room #1 Rear B Window Desc: W.Sill				
050514UA-37	*0004*	5/5/2014	5/6/2014	144 in²	<10 µg/ft²
	Site: Room #1 Rear Desc: Floor				
050514UA-38	*0005*	5/5/2014	5/6/2014	36 in²	<40 µg/ft²
	Site: Room #2 Desc: W.Sill				
050514UA-39	*0006*	5/5/2014	5/6/2014	144 in²	<10 µg/ft²
	Site: Room #2 Desc: Floor				
050514UA-40	*0007*	5/5/2014	5/6/2014	144 in²	<10 µg/ft²
	Site: Room #3 Desc: Floor				
050514UA-41	*0008*	5/5/2014	5/6/2014	36 in²	59 µg/ft²
	Site: Room #3 Desc: W.Sill				
050514UA-42	*0009*	5/5/2014	5/6/2014	n/a	<10 µg/wipe
	Site: Blank				
050514UA-43	*0010*	5/5/2014	5/6/2014	n/a	<10 µg/wipe
	Site: Blank				

Julie Smith - Laboratory Director
NJ-NELAP Accredited:03036
or other approved signatory

*Analysis following Lead in Dust by EMSL SOP/ Determination of Environmental Lead by FLAA. Reporting limit is 10 ug/wipe. ug/wipe = ug/ft2 x area sampled in ft2. Unless noted, results in this report are not blank corrected. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities (such as volume sampled) or analytical method limitations. Samples received in good condition unless otherwise noted. The lab is not responsible for data reported in µg/ft² which is dependant on the area provided by non-lab personnel. The test results contained within this report meet the requirements of NELAC unless otherwise noted. "<" (less than) results signifies that the analyte was not detected at or above the reporting limit. Measurement of uncertainty is available upon request. The QC data associated with the sample results included in this report meet the recovery and precision requirements established by the AIHA-LAP, unless specifically indicated otherwise

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ NELAP Certifications: NJ 03036, NY 10872, PA 68-00367, AIHA-LAP, LLC ELLAP 100194, A2LA 2845.01

Initial report from 05/07/2014 10:18:27

FUSS & O'NEILL
EnviroScience, LLC
146 Hartford Road, Manchester, CT 06040

20140669D

www.fando.com
(860) 646-2469 Fax (860) 649-6883

SAMPLE LOG FOR LEAD WIPES

Sheet No. 1 of 1

Project Name: Lathrop Assoc. Project Number: 20140370.
Building: 60 ~~Losey~~ Beach AVE East Haven, CT Project Manager: KM

	Sample ID Number	Sample Location/Building	Surface Component	Surface Sq ~~Ft~~ inch	Result (ug/ft)	Lab Number
1-	050514UA-34	Room 1 - Front	Floor	144		
2-	-35	Room 1 - Front	A, W. Sill	36		
3-	-36	~~Front~~ Room #1 Rear B, Window	W. Sill	36		
4-	-37	Room #1 - Rear	floor	144		
5-	-38	Room #2	W. Sill	36		
6-	-39	Room #2	Floor	144		
7-	-40	Room #3	floor	144		
8-	-41	Room #3	W. Sill	36		
9-	-42	Blank	NA	NA		
10-	-43	Blank	NA	NA		

Analysis Method: EPA-SW-846-3050(MOD.) Turnaround Time 24hrs
Wipe Media ☒ ASTM ☐ Non ASTM

Based on the turnaround time indicated above, analyses are due to Fuss & O'Neill EnviroScience on or before this date: 5/7/14
Please call the Fuss & O'Neill EnviroScience laboratory at 860-646-2469 if analyses will be late.

Fax Results To: Fuss & O'Neill EnviroScience Laboratory at 888-838-1160

Special Instructions: _____

Samples Collected By: William August Date: 5/5/14 Time: 1030
Samples Rec'd/Sent By: _____ Date: / Time: /
Samples Received By: _____ Date: 5/6/14 Time: 10:37am EMSL-Fx

Shipped To: ☒ EMSL (State) NJ ☐ Other _____

Method of Shipment: ☒ Fed Ex. ☐ UPS Overnight ☐ UPS Ground ☐ Other _____

Appendix G

Lead in Soil Sample Results and Chain of Custody Form

EMSL Analytical, Inc.
200 Route 130 North, Cinnaminson, NJ 08077
Phone/Fax: (856) 303-2500 / (856) 786-5974
http://www.EMSL.com cinnaminsonleadlab@emsl.com

EMSL Order:	201406671
CustomerID:	ENVI54
CustomerPO:	20140370
ProjectID:	

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

Phone:	(860) 646-2469
Fax:	(888) 838-1160
Received:	05/06/14 10:37 AM
Collected:	5/5/2014

Project: **20140370 / Lothrop Assoc. / 60 Casey Beach Avenue Easthaven,CT**

Test Report: Lead in Soils by Flame AAS (SW 846 3050B/7000B)*

Client Sample Description	*Lab ID*	*Collected*	*Analyzed*	*Lead Concentration*
050514UA-44	*0001*	5/5/2014	5/6/2014	310 mg/Kg
	Site: C-Side @ Dripline Desc: Bare			
050514UA-45	*0002*	5/5/2014	5/6/2014	170 mg/Kg
	Site: D-Side @ Dripline Desc: Bare			

Julie Smith - Laboratory Director
NJ-NELAP Accredited:03036
or other approved signatory

*Analysis following Lead in Soil/Solids by EMSL SOP/Determination of Environmental Lead by FLAA. Reporting limit is 40 mg/kg based on the minimum sample weight per our SOP. Unless noted, results in this report are not blank corrected. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities. Samples received in good condition unless otherwise noted. Results reported based on dry weight. "<" (less than) result signifies that the analyte was not detected at or above the reporting limit. Measurement of uncertainty is available upon request. The QC data associated with the sample results included in this report meet the recovery and precision requirements established by the AIHA-LAP, unless specifically indicated otherwise

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ NELAP Certifications: NJ 03036, NY 10872, PA 68-00367, AIHA-LAP, LLC ELLAP 100194, A2LA 2845.01

Initial report from 05/07/2014 09:31:41

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

20140067

SAMPLE LOG FOR LEAD SOIL

Sheet No. 1 of 1

Project Name: Lothrop Assoc
Building: 60 Cosey Beach AVE East Haven, CT

Project Number: 20140370.B4E
Project Manager: KM

Sample ID Number	Sample Location/Building	Soil Condition	Result (%)	Lab Number
1- 050514UA-44	C-Side @ drip line	Bare		
2- 1 -45	D-Side @ drip line	1		

Analysis Method: EPA-SW-846-3050-7420

Turnaround Time 24hrs

_____ Date: _____ Time: _____
_____ Date: _____ Time: _____

Based on the turnaround time indicated above, analyses are due to Fuss & O'Neill EnviroScience on or before this date: 5/7/14
Please call the Fuss & O'Neill EnviroScience laboratory at 860-646-2469 if analyses will be late.

Fax Results To: Fuss & O'Neill EnviroScience Laboratory at 888-838-1160

Special Instructions: _____

Samples Collected By: Ellen August Date: 5/5/14 Time: 1100
Samples Rec'd/Sent By: / Date: / Time: /
Samples Received By: [signature] Date: 5/7/14 Time: 10:37am EMSL-FX

Shipped To: ☒ EMSL (State) NJ ☐ Other _____

Method of Shipment: ☒ Fed Ex. ☐ UPS Overnight ☐ UPS Ground ☐ Other _____

(SEE REVERSE FOR DIAGRAM)

Appendix H

Lead in Drinking Water Sample Results and Chain of Custody Form

Date Samples Received: 05/05/14

Client Name : **Fuss & O'Neill EnviroScience**	CTL Lab No. : 0514045
Report Date : 05/08/14	PO/ Job No. : 20140370 ~~A3E~~ B4E

RESULTS OF ANALYSIS

EPA Method 200.9

Matrix Type :	**W**	**W**
CTL Sample No.:	**5990**	**5991**
Field ID :	**1st Draw**	**Flush**
	Kitchen Sink	**Kitchen Sink**
	050514UA-32	**050514UA-33**

Parameters	RL				Date Analyzed
Total Lead-mg/L	0.005	ND	ND		05/07/14

RL= Reporting Limit **ND**= Not Detected

Matrix Type: W= Water/Aqueous **S=** Soil/Solid **O=** Oil/Hydrocarbon

Stephen J. Franco
Laboratory Director PH-0547

Connecticut Testing Laboratories, Inc.
165 Gracey Avenue / Meriden, CT 06451
(203) 634-3731 (Fax) 630-1336
Certification CT-PH0547/ MA-CT035

CHAIN OF CUSTODY RECORD

Lab Tracking #: 0514045

Client: Trust 2 O'Neill Environmental LLC, 60 Gracey Beach Ave, East Haven

Project/PO # 20140370.

Sampler(s): Ulkens August (signature)

Ulkens August (print)

Requested Analyses: Lead Soluble

Quote ID

Lab Use	Field ID (please print)	Date	Time	# of Bottles	RSR Criteria	Lead Soluble	Notes
5900	050514WA -32	5/5/14	0845	1	DW	X	First Draw Kitchen
91	" -33	"	0847	1	"	X	Flush Kitchen

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Date / Time	Received By Laboratory: (Signature)	Date / Time
Ulkens August	5/5/14			M McMahon	5/5/14 12:20
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Date / Time		
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Date / Time		

Turn Around Time

24 HR* ☐ 3 Day* ☑ 5 Day ☐ — per Ulkens via phone call

48 HR* ☐ 4 Day* ☐ 10 Day ☐

*Turnaround times less than " 5 Days" may be subject to priority fee charges. CTL will not be held liable for incorrectly filled out Chain of Custody Record. Samples held for 45 days from receipt.

Connecticut Testing Laboratories, Inc.
165 Gracey Ave. / Meriden, CT 06451
Tel. (203)-634-3731 / Fax (203) 630-1336

FUSS & O'NEILL
EnviroScience, LLC

Appendix I

Airborne Radon Gas Assessment Results and Chain of Custody Form

RTCA RADON TESTING CORPORATION OF AMERICA

Site Radon Inspection Report

Date : 5/8/2014

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

Client: Lothrop Assoc
Test Location 60 Cosey Beach

East Haven, CT 06512-

Individual Canister Results

Canister ID# : 2300764
Canister Type : Charcoal Canister 3 inch
Location : Living Rm (Duplicate)
Radon Level : **0.3 pCi/L**
Error for Measurement is: ± 0.2 pCi/L

Test Start : 05/05/2014 @ 09:10
Test Stop : 05/07/2014 @ 13:48
Received: 05/08/2014 @ 09:48
Analyzed: 05/08/2014 @ 15:35

Canister ID# : 2302052
Canister Type : Charcoal Canister 3 inch
Location : Living Rm
Radon Level : **0.4 pCi/L**
Error for Measurement is: ± 0.2 pCi/L

Test Start : 05/05/2014 @ 09:10
Test Stop : 05/07/2014 @ 13:48
Received: 05/08/2014 @ 09:48
Analyzed: 05/08/2014 @ 15:35

Canister ID# : 2303044
Canister Type : Charcoal Canister 3 inch
Location : Basement
Radon Level : **0.5 pCi/L**
Error for Measurement is: ± 0.2 pCi/L

Test Start : 05/05/2014 @ 09:08
Test Stop : 05/07/2014 @ 13:49
Received: 05/08/2014 @ 09:48
Analyzed: 05/08/2014 @ 15:35

Canister ID# : 2303533
Canister Type : Charcoal Canister 3 inch
Location : Basement (Blank)
Radon Level : **0.2 pCi/L**
Error for Measurement is: ± 0.2 pCi/L

Test Start : 05/05/2014 @ 09:08
Test Stop : 05/07/2014 @ 13:49
Received: 05/08/2014 @ 09:48
Analyzed: 05/08/2014 @ 15:35

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
FL DOH RB1609

(914)345-3380
FAX (914)345-8546

2 Hayes Street, Elmsford, NY 10523
www.rtca.com

RTCA RADON TESTING CORPORATION OF AMERICA

Site Radon Inspection Report

Date : 5/8/2014

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

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

(914)345-3380
FAX (914)345-8546

2 Hayes Street, Elmsford, NY 10523
www.rtca.com

FUSS & O'NEILL
EnviroScience, LLC

5/8/14
Disciplines to Deliver
ENVIII
DE

*RTCA: These items must be included on our results pages

Radon Testing Summary Sheet

*Project Number: _____
*Client Name: Lothrop Assoc.
*Building: 60 Cosey Beach
*Site Address: East Haven, CT 06512-
_____
Contact/Phone #: _____

Placed by: EMM
Retrieved by: EMM
Start Date: 5-5-14
Stop Date: 5-7-14
Weather at Placement: Sunny
_____

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
2303044

Start Time: 9:08 am
Stop Time: 1:49 pm
Identifier: BSmt

Start Time: _____
Stop Time: _____
Identifier: _____

REMOVE THIS PORTION AND AFFIX TO TEST INFORMATION FORM
2303533

Start Time: 9:08 am
Stop Time: 1:49 pm
Identifier: BSmt
(Blank)

Start Time: _____
Stop Time: _____
Identifier: _____

REMOVE THIS PORTION AND AF TO TEST INFORMATION FORM
2302052
REMOVE THIS PORTION AND

Start Time: 9:10 am
Stop Time: 1:48 pm
Identifier: Living Rm

Start Time: _____
Stop Time: _____
Identifier: _____

REMOVE THIS PORTION AND AFFIX TO TEST INFORMATION FORM
2300764

Start Time: 9:10 am
Stop Time: 1:48 pm
Identifier: Living Rm
(Duplicate)

Start Time: _____
Stop Time: _____
Identifier: _____

Start Time: _____
Stop Time: _____
Identifier: _____

Start Time: _____
Stop Time: _____
Identifier: _____

146 Hartford Road, Manchester. CT 06040
t (860) 646-2469
f (860) 649-6883
www.FandO.com