Lead Clearance Inspection

37-39 Green Street
Middletown, Connecticut

Nehemiah Housing Corporation, Inc.

Middletown, Connecticut

December 7, 2010

FUSS & O'NEILL
Disciplines to Deliver

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

Project No. 20072210.A2E

FUSS & O'NEILL
EnviroScience, LLC

Disciplines to Deliver

December 7, 2010

Mr. Michael Taylor, Executive Director
Nehemiah Housing Corporation, Inc.
668 Main Street
Middletown, CT 06457

RE: Lead Clearance Inspection
37-39 Green Street
Middletown, Connecticut
Fuss & O'Neill EnviroScience Project No. 20072210.A2E

Dear Mr. Taylor:

Enclosed is the report for the lead-based paint clearance sampling for the two-family home located at 37-39 Green Street in Middletown, Connecticut. Included are the sample logs and results.

If you have any questions regarding the contents of this report, do not hesitate to contact us.

Sincerely,

David T. Kohl
Project Manager

DTK/kr

146 Hartford Road
Manchester, CT
06040

t (860) 646-2469
f (860) 533-5143

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Massachusetts
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FUSS & O'NEILL
EnviroScience, LLC

Table of Contents

Lead Clearance Inspection
Nehemiah Housing Corporation, Inc.

1 Introduction

On November 16, 2010, Fuss and O'Neill EnviroScience LLC's (EnviroScience) Connecticut certified lead inspector Kathleen Morgan conducted an interior visual inspection of the two-family home, collected wipe samples of the interior, conducted an exterior visual inspection, and collected soil samples of the exterior of the residence located at 37-39 Green Street in Middletown, Connecticut. The wipe samples were collected from horizontal surfaces in each interior lead remediation work area in first floor unit, designated 37 Green Street and the second floor unit, designated 39 Green Street. There were no interior common areas. Wipe samples were analyzed to determine if lead dust levels on surfaces were less than re-occupancy levels allowed after a lead remediation project, as provided by the U.S. Department of Housing and Urban Development (HUD). Soil samples were collected from bare soil areas to determine if lead in soil levels exceeded HUD criteria. The residence is currently vacant.

2 Testing Procedures and Equipment

Dust wipe samples were collected from locations delineated on our sample log.

2.1 Data Collection

A. A description of the sample location is recorded. (Floor samples should not be taken in the middle of the room.)

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

C. Surface area measurements are recorded fro wipe samples.

2.2 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.

2.3 Soil Sampling Method

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. Note: the 2-foot (or drip line) interval is essential for buildings since this is the area where the highest lead in soil levels are likely to be found.

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 (0.5") 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.

3 Results

The clearance criteria for lead dust wipe samples for HUD are:

<40 micrograms of lead per square foot (ug/ft^2) for floors
<250 ug/ft^2 for window sills
<400 ug/ft^2 for window wells

The attached results of the dust wipe analyses, for 37 Green Street, Middletown, Connecticut, indicate that dust levels of lead were below their respective standards **and interior clearance was achieved.**

The attached results of the dust wipe analyses, for 39 Green Street, Middletown, Connecticut, indicate that dust levels of lead were below their respective standards **and interior clearance was achieved.**

Under HUD and State of CTDPH clearance protocols, composite soil samples from bare areas should be collected to ascertain if hazardous levels of lead in soil, which could have been generated by the remediation activities, exist on the property. Soil samples were collected from the drip line, approximately 2 feet from the foundation, and the midyard, in accordance with the above soil sampling protocol. The sample results were compared to the HUD/EPA standard for bare soil in residential sites in non-play areas which is 1200 mg/kg. Sample results were also compared to the CTDPH s standard for bare residential soil of 400 mg/kg which is identical to EPA's standard for children's play areas. It is CTDPH's position that any area of bare soil is a potential play area on a residential property. HUD has taken the position that whichever standard is the strictest should be the one followed during the clearance process. The sample, at the drip line (54 mg/kg) and midyard (<40 mg/kg) were below HUD and CTDPH standards. **Exterior clearance was achieved.** Please refer to *Appendix A* for laboratory analytical results.

Report prepared by Kathleen Morgan.

Reviewed by:

David T. Kohl
Project Manager

Robert L. May, Jr.
Vice President

Appendix A

Laboratory Results and Chain of Custody

EMSL Analytical, Inc.
307 West 38th Street, New York, NY 10018
Phone: (212) 290-0051 Fax: (212) 290-0058 Email: [illegible]

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

Fax: (413) 647-0018 Phone: (860) 646-2469
Project: **20072210.AIE/ NEHEMIAH HOUSING / 37 GREEN STREET / MIDDLETOWN, CT**

Customer ID: ENVI54
Customer PO:
Received: 11/17/10 10:41 AM
EMSL Order: 031031705
EMSL Proj:

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

Client Sample Description	Lab ID	Collected	Analyzed	Area Sampled	Lead Concentration
1116KM 01	0001	11/16/2010	11/18/2010	144 in²	<10 µg/ft²
Site: LIVINGROOM ENTRY WAY WINDOW / FLOOR					
1116KM 02	0002	11/16/2010	11/18/2010	105 in²	<14 µg/ft²
Site: LIVINGROOM ENTRY WAY WINDOW / SILL					
1116KM 03	0003	11/16/2010	11/18/2010	144 in²	12 µg/ft²
Site: KITCHEN / FLOOR					
1116KM 04	0004	11/16/2010	11/18/2010	105 in²	<14 µg/ft²
Site: KITCHEN / SILL					
1116KM 05	0005	11/16/2010	11/18/2010	144 in²	<10 µg/ft²
Site: BEDROOM / FLOOR					
1116KM 06	0006	11/16/2010	11/18/2010	117.25 in²	13 µg/ft²
Site: BEDROOM / SILL					
1116KM 07	0007	11/16/2010	11/18/2010	144 in²	<10 µg/ft²
Site: BEDROOM / FLOOR					
1116KM 08	0008	11/16/2010	11/18/2010	119 in²	<12 µg/ft²
Site: BEDROOM / SILL					
1116KM 09	0009	11/16/2010	11/18/2010	n/a	<10 µg/wipe
Site: FIELD BLANK					

Initial report from 11/18/2010 21:23:54

M. Apfeldorfer

Miron Apfeldorfer, Laboratory Manager
or other approved signatory

Reporting limit is 10 ug/wipe. The QC data associated with these sample results included in this report meet the method quality control requirements, unless specifically indicated otherwise. 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.

* slight modifications to methods applied Samples received in good condition unless otherwise noted. Quality Control Data associated with this sample set is within acceptable limits, unless otherwise noted

Samples analyzed by EMSL Analytical, Inc. 307 West 38th Street, New York NY AIHA-LAP, LLC-ELLAP Lab 102581

EMSL Analytical, Inc.
307 West 38th Street, New York, NY 10018
Phone: (212) 290-0051 Fax: (212) 290-0058 Email: [illegible]

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

Fax: (413) 647-0018 Phone: (860) 646-2469
Project: **20072210.AIE/ HEHEMIAH HOUSING / 39 GREEN STREET / MIDDLETOWN, CT/ 2ND FLOOR APT**

Customer ID: ENVI54
Customer PO:
Received: 11/17/10 10:41 AM
EMSL Order: 031031680

EMSL Proj:

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

Client Sample Description	Lab ID	Collected	Analyzed	Area Sampled	Lead Concentration
1116KM 12	0001	11/16/2010	11/18/2010	144 in²	<10 µg/ft²
	Site: LIVINGROOM / FLOOR				
1116KM 13	0002	11/16/2010	11/18/2010	105 in²	<14 µg/ft²
	Site: LIVINGROOM / SILL				
1116KM 14	0003	11/16/2010	11/18/2010	144 in²	<10 µg/ft²
	Site: KITCHEN / FLOOR				
1116KM 15	0004	11/16/2010	11/18/2010	105 in²	<14 µg/ft²
	Site: KITCHEN / SILL				
1116KM 16	0005	11/16/2010	11/18/2010	144 in²	<10 µg/ft²
	Site: BEDROOM / FLOOR				
1116KM 17	0006	11/16/2010	11/18/2010	105 in²	<14 µg/ft²
	Site: BEDROOM / WILL				
1116KM 18	0007	11/16/2010	11/18/2010	144 in²	<10 µg/ft²
	Site: BEDROOM / FLOOR				
1116KM 19	0008	11/16/2010	11/18/2010	119 in²	<12 µg/ft²
	Site: BEDROOM / SILL				

Initial report from 11/18/2010 21:22:53

M. Apfeldorfer

Miron Apfeldorfer, Laboratory Manager
or other approved signatory

Reporting limit is 10 ug/wipe. The QC data associated with these sample results included in this report meet the method quality control requirements, unless specifically indicated otherwise. 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.

* slight modifications to methods applied Samples received in good condition unless otherwise noted. Quality Control Data associated with this sample set is within acceptable limits, unless otherwise noted

Samples analyzed by EMSL Analytical, Inc. 307 West 38th Street, New York NY AIHA-LAP, LLC-ELLAP Lab 102581

FUSS & O'NEILL
EnviroScience, LLC 031031705

795 North Mountain Road, Newington, CT 06111
www.fando.com
(860) 953-2700 Fax (860) 953-3263

SAMPLE LOG FOR LEAD WIPES

Sheet No. 1 of 1

Project Name: Nehemiah Housing
Building: 37 Green St, Middletown, CT
Project Number: 2007 2210 . A1E
Project Manager: D. Kohl

Sample ID Number	Sample Location/Building	Surface Component	Surface Sq. Ft	Result (ug/ft)	Lab Number
1116KM01	① Living Room - Entry way	Floor	1		
2	↓ window	Sill	3.5" x 30"		
3	Kitchen ②	Floor	1		
4	↓	Sill	3.5" x 30"		
5	Bedroom ④	Floor	1		
6	↓	Sill	3.5" x 33.5"		
7	Bedroom ⑤	Floor	1		
8	↓	Sill	3.5" x 34"		
9	Blank	—	—		

Analysis Method: EPA SW-846 3050(MOD.)
Wipe Media: ☒ ASTM ☐ Non ASTM
Turnaround Time: 72 hrs

Based on the turnaround time indicated above, analyses are due to Fuss & O'Neill EnviroScience on or before this date: ________
Please call the Fuss & O'Neill EnviroScience laboratory at 860-953-2700 if analyses will be late.

Fax Results To: Fuss & O'Neill EnviroScience Laboratory at 413-647-6018

Special Instructions: ________________________________

Samples Collected By: KMorgan Date: 11/16/10 Time: PM
Samples Rec'd/Sent By: [signature] Date: 11/17 Time: ________
Samples Received By: ________ Date: ________ Time: ________

Shipped To: ☒ EMSL (State) ________ ☐ Other ________

Method of Shipment: ☒ Fed Ex. ☐ UPS Overnight ☐ UPS Ground ☐ Other 2010 NOV 17 10:41

FUSS & O'NEILL EnviroScience, LLC 031031680

www.fando.com

795 North Mountain Road, Newington, CT 06111

(860) 953-2700 Fax (860) 953-5203

2nd Floor Apt SAMPLE LOG FOR LEAD WIPES

Sheet No. 1 of 1

Project Name: Nehemiah Housing
Building: 39 Green St Middletown, CT

Project Number: 20072010, A1E
Project Manager: D. Kohl

Sample ID Number	Sample Location/Building	Surface Component	Sq. Ft	Result (ug/ft)	Lab Number
1116KM12	Living Room ①	Floor	1		
13	↓	Sill (B1)	3.5" x 30"		
14	Kitchen ②	Floor	1		
15	↓	Sill (B1)	3.5" x 30"		
16	Bedroom ④	Floor	1		
17	↓	Sill (C)	3.5" x 30"		
18	Bedroom ⑤	Floor	1		
19	↓	Sill (D1)	3.5" x 34"		

Analysis Method: EPA SW-846 3050(MOD.) ☑
Wipe Media ☒ ASTM ☐ Non ASTM

Turnaround Time 72

Based on the turnaround time indicated above, analyses are due to Fuss & O'Neill EnviroScience on or before this date:______
Please call the Fuss & O'Neill EnviroScience laboratory at 860-953-2700 if analyses will be late.

Fax Results To: Fuss & O'Neill EnviroScience Laboratory at 413-647-0018

2010 NOV 17 10:41

Special Instructions: ______

Samples Collected By: K. Morgan Date: 11/16/10 Time: PM
Samples Rec'd/Sent By: [signature] Date: 11/16 Time: 1041
Samples Received By: ______ Date: ______ Time: ______

Shipped To: ☒ EMSL (State) ______ ☐ Other ______

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

EMSL Analytical, Inc.
307 West 38th Street, New York, NY 10018
Phone: (212) 290-0463 Fax: (212) 290-0459 Email: manhattan@emsl.com

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

Fax: (413) 647-0018 Phone: (860) 646-2469
Project: **20072210.A1E/ NEHEMIAH HOUSE / 37-39 GREEN STREET / MIDDLETOWN, CT**

Customer ID: ENVI54
Customer PO:
Received: 11/17/10 10:40 AM
EMSL Order: 031031679

EMSL Proj:

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

Client Sample Description	*Lab ID*	*Collected*	*Analyzed*	*Lead Concentration*
1116KM 10	*0001*	11/17/2010	11/18/2010	54 mg/Kg
	Site: DRIPLINE ON BLDG			
1116KM 11	*0002*	11/17/2010	11/18/2010	<40 mg/Kg
	Site: MID YARD - BACK			

Initial report from 11/18/2010 21:51:50

M. Apfeldorfer

Miron Apfeldorfer, Laboratory Manager
or other approved signatory

Reporting limit is 40 mg/kg. The QC data associated with these sample results included in this report meet the method quality control requirements, unless specifically indicated otherwise. 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.

* slight modifications to methods applied Samples received in good condition unless otherwise noted. Quality Control Data associated with this sample set is within acceptable limits, unless otherwise noted

Samples analyzed by EMSL Analytical, Inc. 307 West 38th Street, New York NY AIHA-LAP, LLC--ELLAP Lab 102581, NYS ELAP 11506

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

031031679

SAMPLE LOG FOR LEAD SOIL

Sheet No. 1 of 1

Project Name: NEHEMIAH HOUSING
Project Number: 20072210.A1E
Building: 37-39 GREEN ST, MIDDLETOWN, CT
Project Manager: DAVID KOHL

Sample ID Number	Sample Location/Building	Soil Condition	Result (%)	Lab Number
1116KM10	Dripline on Bldg	Composite		
11	Mid yard - back	Composite		

Analysis Method: EPA-SW-846-3050-7420
Turnaround Time 72 HOURS

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

Based on the turnaround time indicated above, analyses are due to Fuss & O'Neill EnviroScience on or before this date: _____.
Please call the Fuss & O'Neill EnviroScience laboratory at 860-953-2700 if analyses will be late. 2010 NOV 17 10:40

Fax Results To: Fuss & O'Neill EnviroScience Laboratory at 413-647-0018

Special Instructions: _____

Samples Collected By: KMorgan Date: 11/16/10 Time: PM
Samples Rec'd/Sent By: _____ Date: _____ Time: _____
Samples Received By: _____ Date: 11/17 Time: 1090

Shipped To: XXXX EMSL (State) _____ ☐ Other _____

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

(SEE REVERSE FOR DIAGRAM)

I:\Lead\Lead Forms\Lead Soil_Sample Log 0407.doc

Appendix B

Site Diagrams

FUSS & O'NEILL
EnviroScience, LLC

146 Hartford Road, Manchester, CT 06040

www.fando.com

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

Project Name: Nehemiah Housing

Project Number: 20072210.A1E

Address: 37 Green St Middletown, CT

Project Manager: D. Fehl

Floor: 1st

Room:

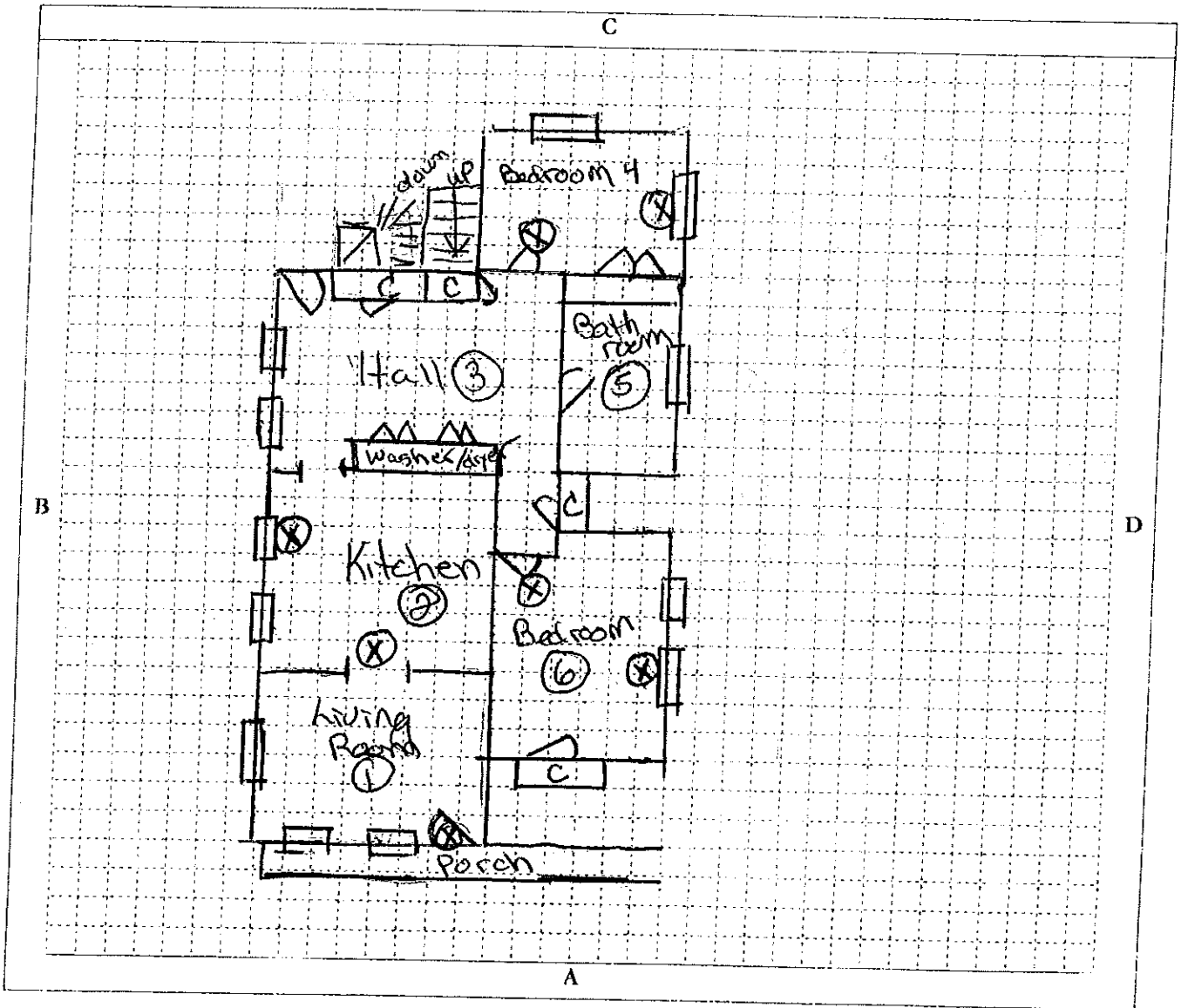
Apt. #/Bldg #: 37

Page 1 of 1

Number of Doors:

No. of Windows:

Diagram of: 1st Floor Apt #37



(#) Room Number Door Window

Page ____ of ____

FUSS & O'NEILL
EnviroScience, LLC

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146 Hartford Road, Manchester, CT 06040

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

Project Name: Naborhood Housing

Project Number: 20072210.A1E

Project Manager: D. Kahl

Address: 39 Green St, Middletown, CT

Apt. #/Bldg #: 39

Floor: 2nd

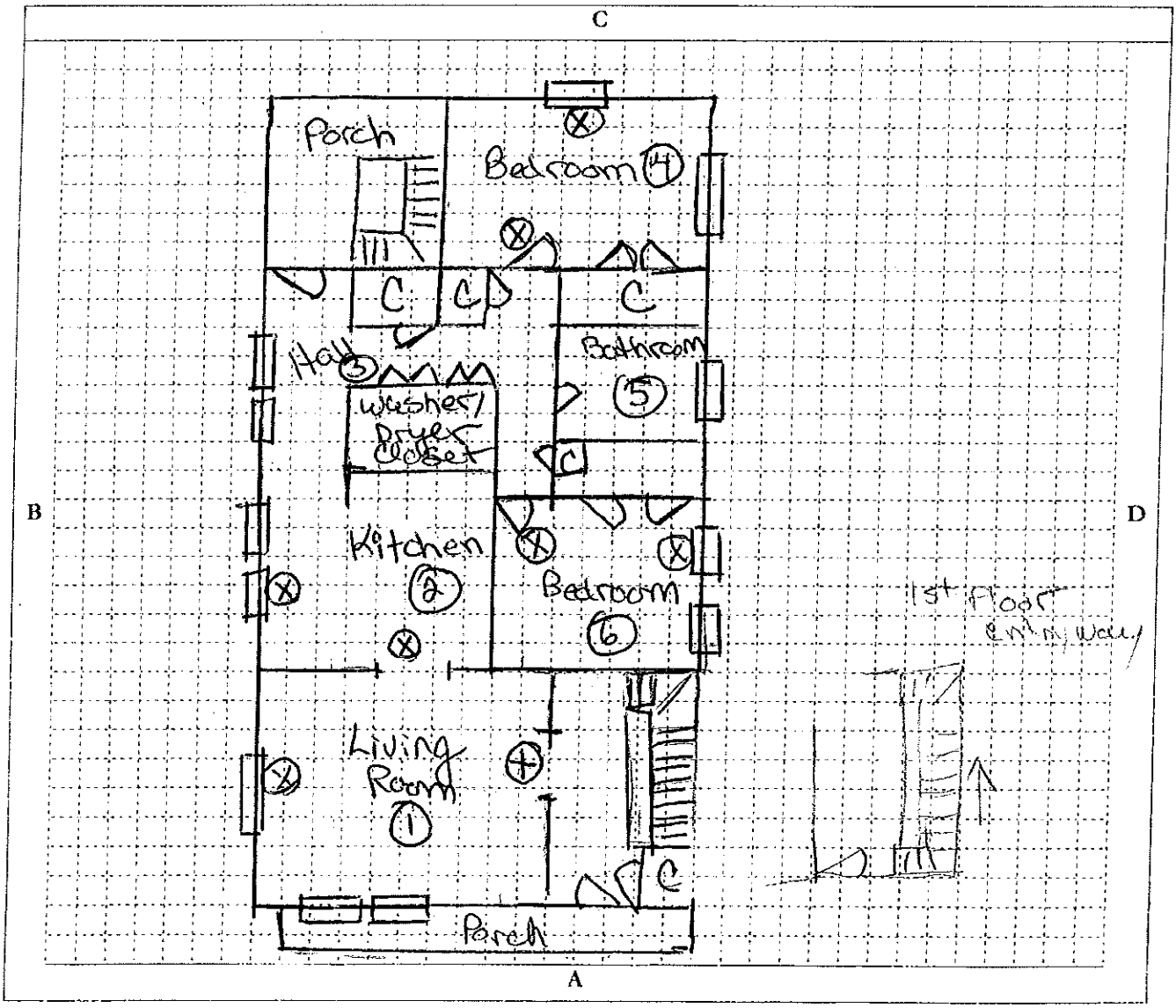
Room: _____

Page _____ of _____

Number of Doors: _____

No. of Windows: _____

Diagram of: 2nd Floor apt #39



(#) Room Number Door Window

Page _____ of _____

FUSS & O'NEILL
EnviroScience, LLC

www.fando.com

146 Hartford Road, Manchester, CT 06040

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

Project Name: Nehemiah Housing

Project Number: 20070210.A1E

Project Manager: D. Kohl

Address: 37-39 Green St, Middletown, CT

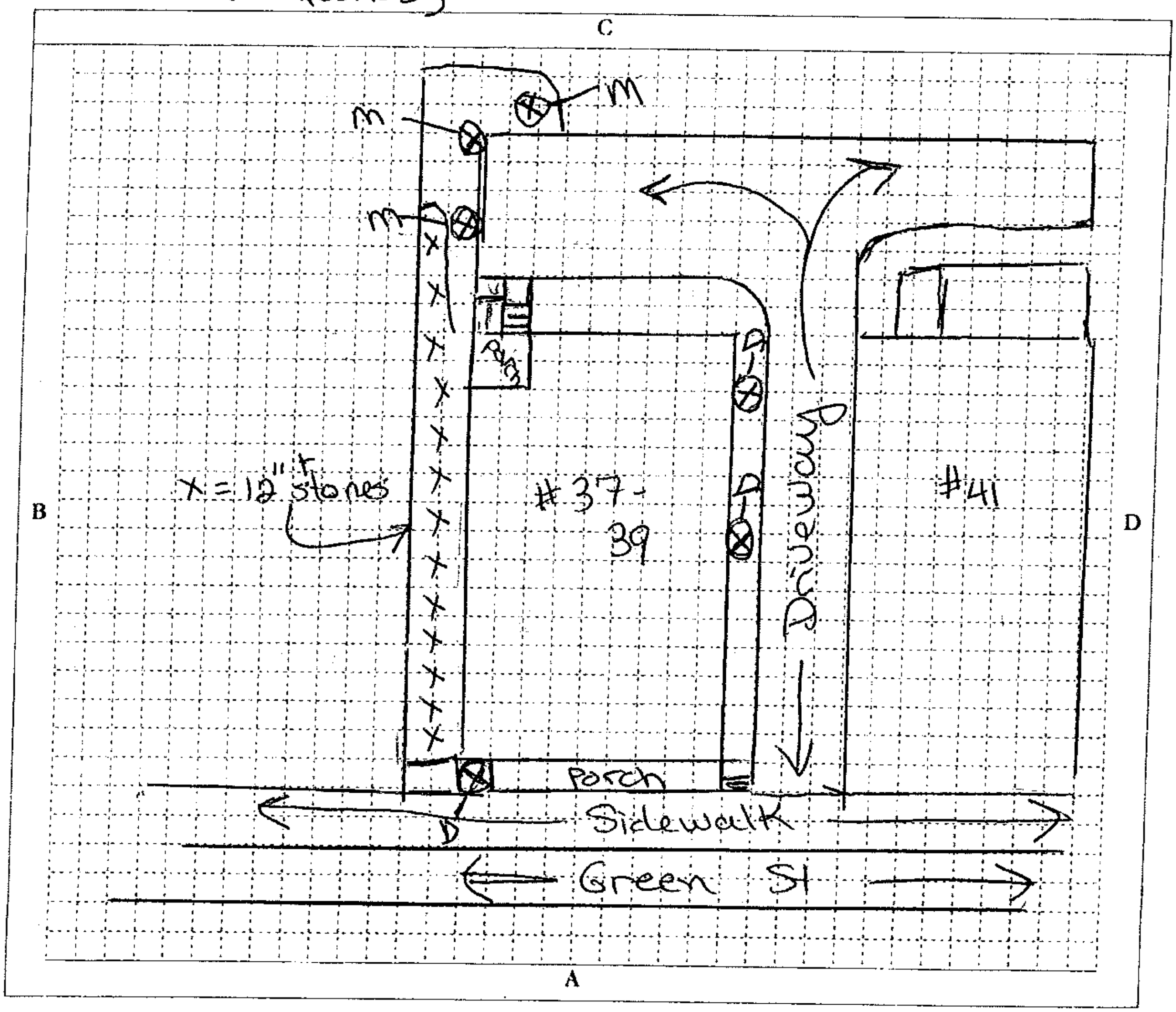
Apt. #/Bldg #: 37 + 39

Floor: ______ **Room:** ______

Page 1 **of** 1

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

Diagram of: Soil Samples + locations (Composites)



(#) Room Number — Door — Window

Page ______ of ______

Soil samples: X = 12"+ stones
D = Dripline
M = mid-yard