

# **ENVIRONMENTAL REVIEW REPORT**

**Community Development Block Grant – Disaster Recovery  
Owner Occupied Rehabilitation and Rebuilding Program**

**Applicant # 1085**

**17 Elaine Road  
Milford, Connecticut**

**June 24, 2015**

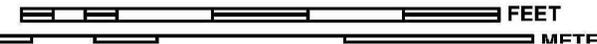
**Prepared by:**

**Diversified Technology Consultants  
2321 Whitney Avenue  
Hamden, Connecticut 06518**



MAP SCALE 1" = 500'

250 0 500 1000 FEET



**SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD**  
 The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

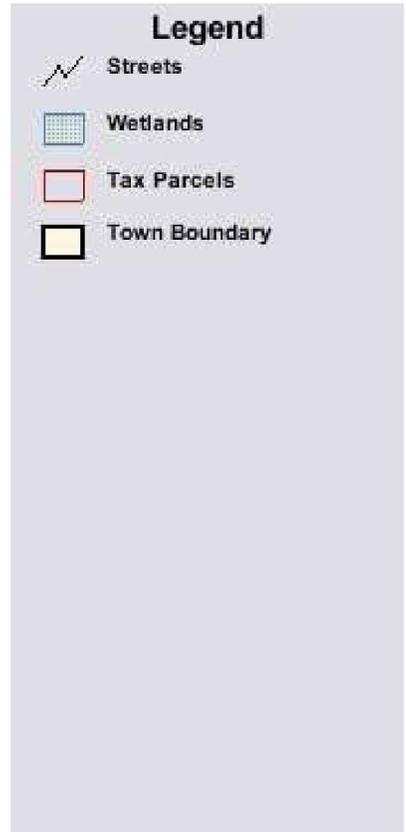
- ZONE A** No Base Flood Elevations determined.
- ZONE AE** Base Flood Elevations determined.
- ZONE AH** Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
- ZONE AO** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
- ZONE AR** Special Flood Hazard Areas formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
- ZONE A99** Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
- ZONE V** Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
- ZONE VE** Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

**FLOODWAY AREAS IN ZONE AE**  
 The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

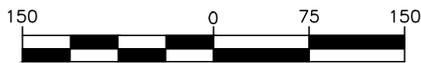
- OTHER FLOOD AREAS**
- ZONE X** Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.
- OTHER AREAS**
- ZONE X** Areas determined to be outside the 0.2% annual chance floodplain.
- ZONE D** Areas in which flood hazards are undetermined, but possible.

- COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS**
- OTHERWISE PROTECTED AREAS (OPAs)**  
 CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.
- 1% Annual Chance Floodplain Boundary
- 0.2% Annual Chance Floodplain Boundary
- Floodway boundary
- Zone D boundary
- Coastal Barrier Resource System boundary

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at [www.msc.fema.gov](http://www.msc.fema.gov)

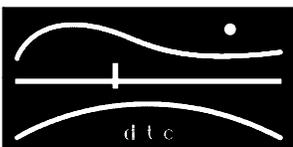


**GRAPHIC SCALE**



( IN FEET )

MAP SOURCE: TOWN OF MILFORD GIS



DIVERSIFIED TECHNOLOGY CONSULTANTS  
2321 Whitney Avenue - Hamden Center II - Hamden CT 06518  
Ph: 203 239 4200 Fax: 203 234 7376

**DEPARTMENT OF HOUSING  
COMMUNITY DEVELOPMENT BLOCK GRANT  
DISASTER RECOVERY**

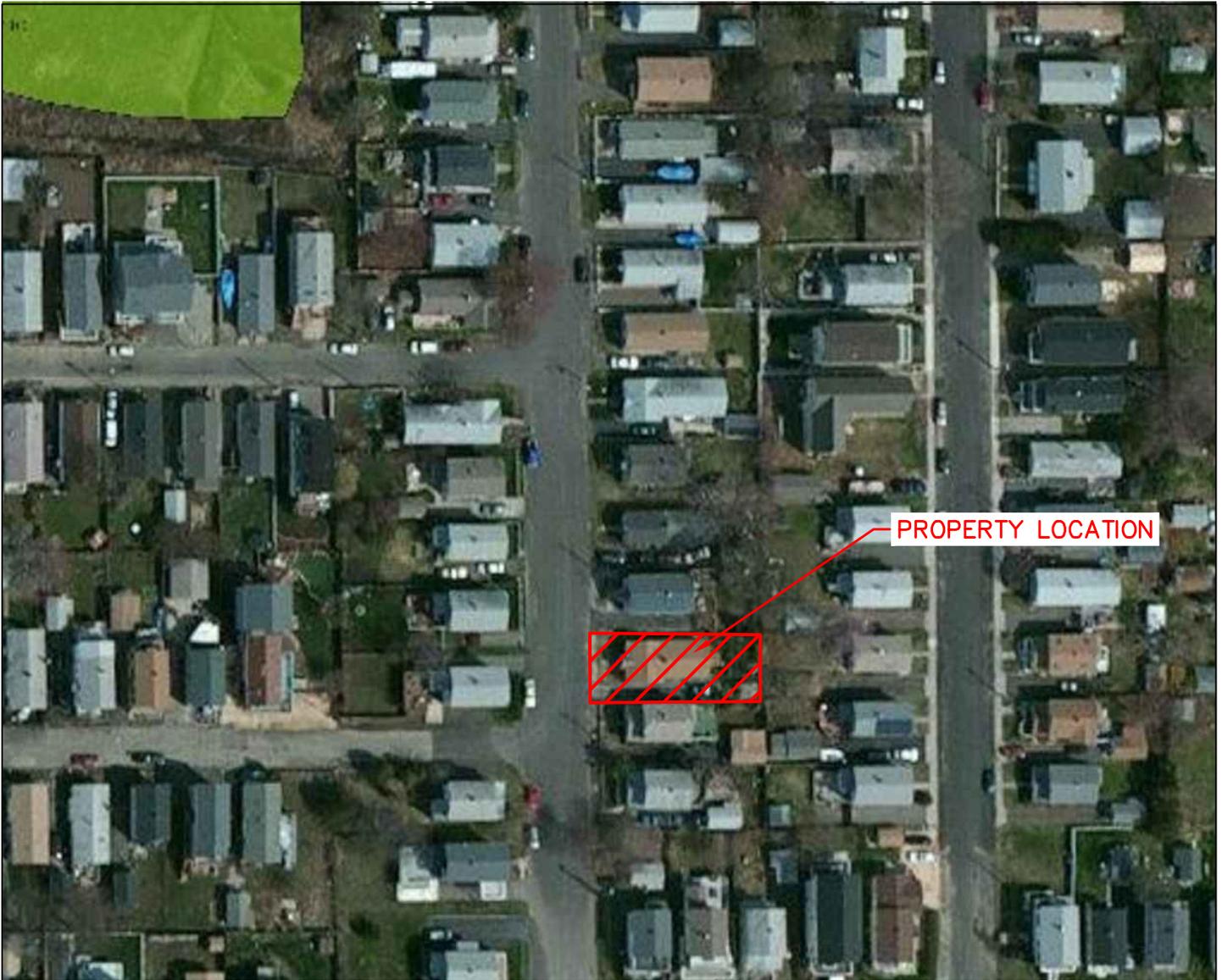
17 ELAINE ROAD  
MILFORD, CT

**ATTACHMENT 2  
TOWN GIS WETLANDS MAP**

PROJECT NUMBER: 13-449-011    APPLICANT NO: 1085

SCALE: 1"=150'    DRAWN BY: EPZ

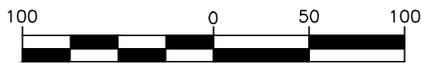
DATE: 04/20/2015    CHECKED BY: JAB



PROPERTY LOCATION

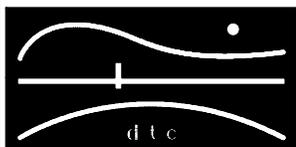
Wetlands	
	Estuarine and Marine Deepwater
	Estuarine and Marine Wetland
	Freshwater Emergent Wetland
	Freshwater Forested/Shrub Wetland
	Freshwater Pond
	Lake
	Other
	Riverine

GRAPHIC SCALE



( IN FEET )

MAP SOURCE: FWS NATIONAL WETLANDS INVENTORY



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DISASTER RECOVERY

17 ELAINE ROAD  
MILFORD, CT

ATTACHMENT 3  
FWS WETLANDS MAP

SCALE: 1"=100'

DRAWN BY: EPZ

PROJECT NUMBER: 13-449-011

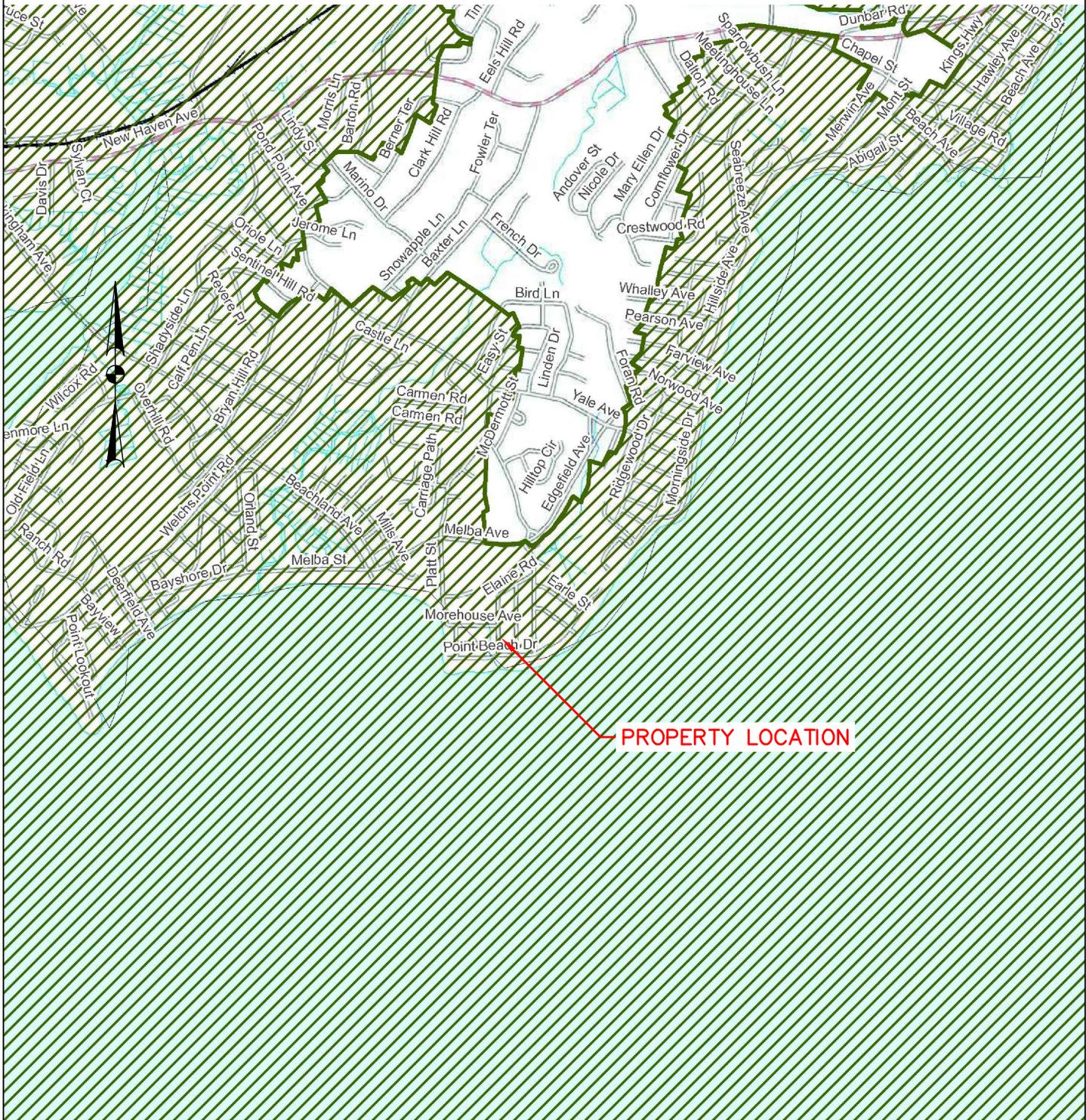
APPLICANT NO:

1085

DATE: 04/20/2015

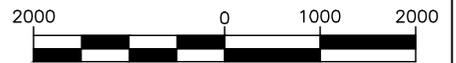
CHECKED BY: JAB

MAP SOURCE: CT DEEP

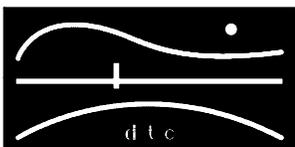


Coastal Boundary

GRAPHIC SCALE



( IN FEET )



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2321 Whitney Avenue - Hamden Center II - Hamden CT 06518  
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DISASTER RECOVERY

17 ELAINE ROAD  
MILFORD, CT

ATTACHMENT 4  
CAM AREA MAP

SCALE: 1"=2000'

DRAWN BY: EPZ

PROJECT NUMBER: 13-449-011

APPLICANT NO:

1085

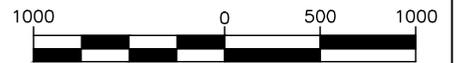
DATE: 04/20/2015

CHECKED BY: JAB

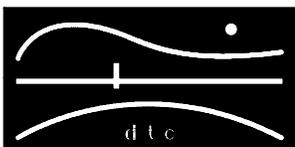


 State and Federal Listed Species and Significant Natural Communities\*

GRAPHIC SCALE



( IN FEET )



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DEPARTMENT OF HOUSING  
COMMUNITY DEVELOPMENT BLOCK GRANT  
DISASTER RECOVERY

17 ELAINE ROAD  
MILFORD, CT

ATTACHMENT 5  
NDDDB AREA MAP

SCALE: 1"=1000'

DRAWN BY: EPZ

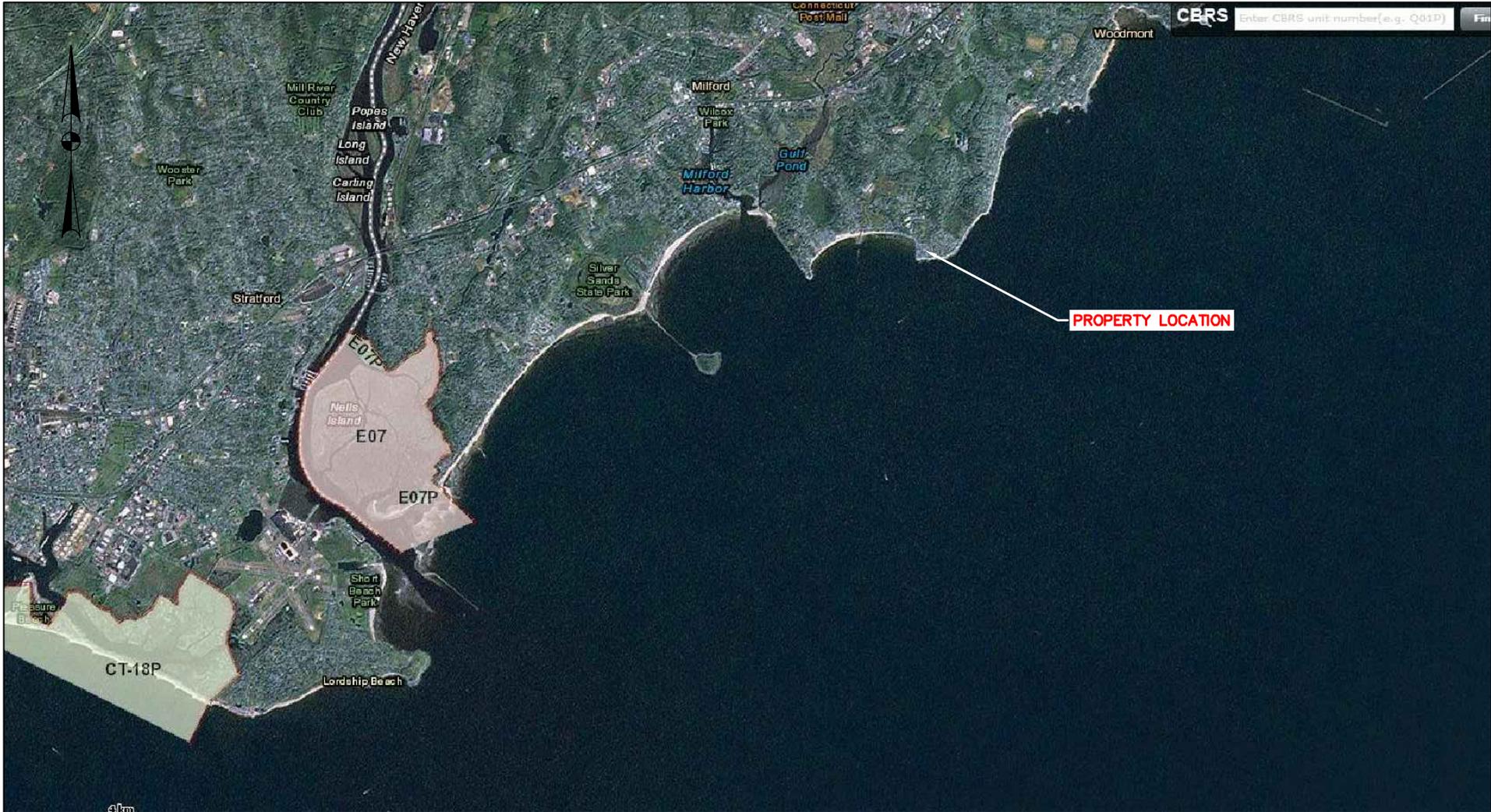
PROJECT NUMBER: 13-449-011

APPLICANT NO:

1085

DATE: 04/20/2015

CHECKED BY: JAB



MAP SOURCE: U.S. FISH AND WILDLIFE SERVICE



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 2321 Whitney Avenue - Hamden Center II - Hamden CT 06518  
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DEPARTMENT OF HOUSING  
 COMMUNITY DEVELOPMENT BLOCK GRANT  
 DISASTER RECOVERY

17 ELAINE ROAD  
 MILFORD, CT

ATTACHMENT 6  
 COASTAL BARRIER MAP

SCALE: NTS

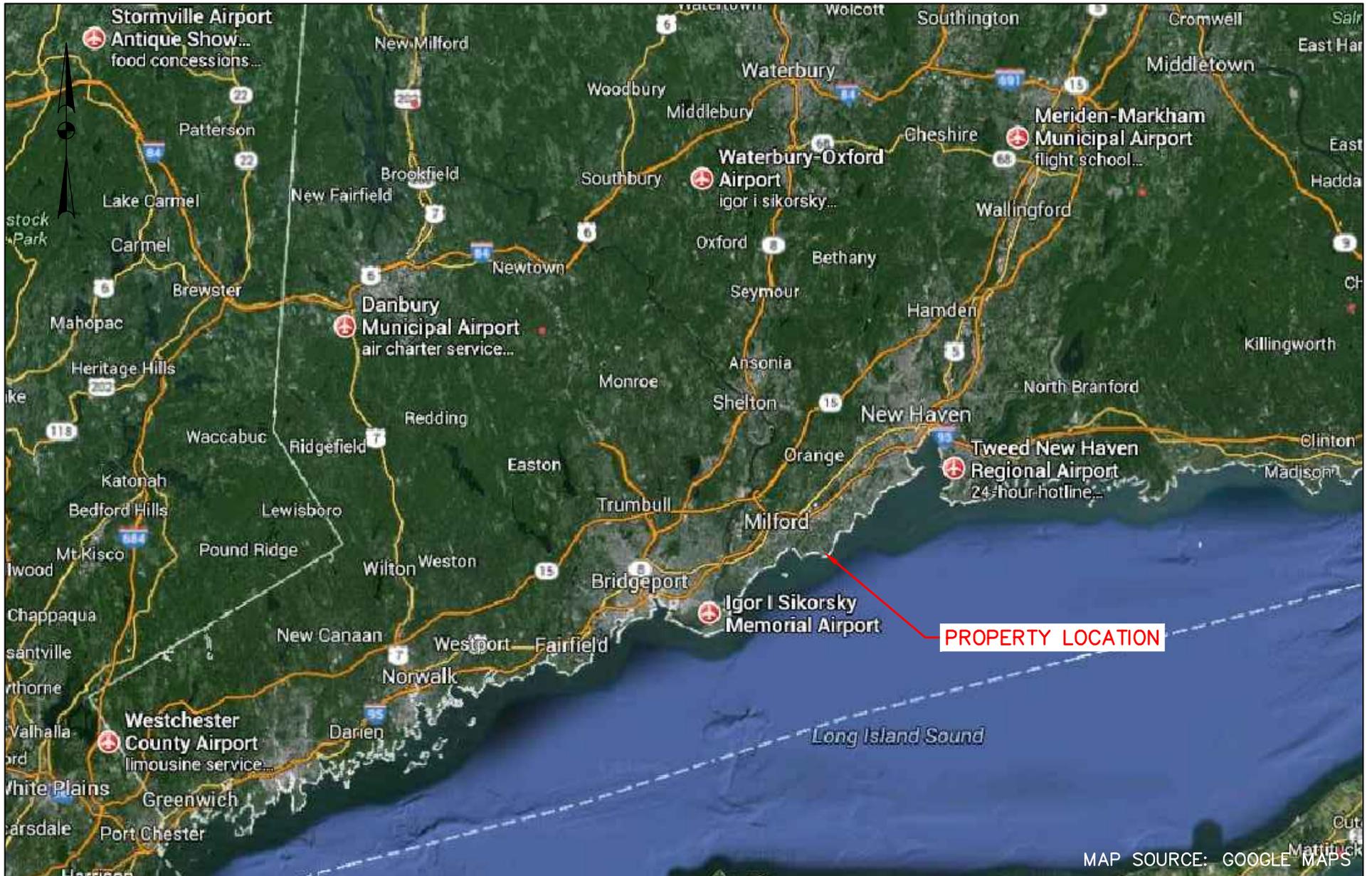
DRAWN BY: EPZ

DATE: 04/20/15

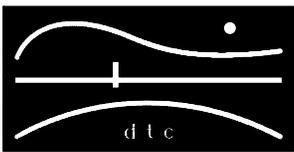
CHECKED BY: JAB

PROJECT NUMBER: 13-449-011

APPLICANT NO: 1085



MAP SOURCE: GOOGLE MAPS



DIVERSIFIED TECHNOLOGY CONSULTANTS  
 2321 Whitney Avenue - Hamden Center II - Hamden CT 06518  
 Ph: 203 239 4200 Fax: 203 234 7376

DEPARTMENT OF HOUSING  
 COMMUNITY DEVELOPMENT BLOCK GRANT  
 DISASTER RECOVERY

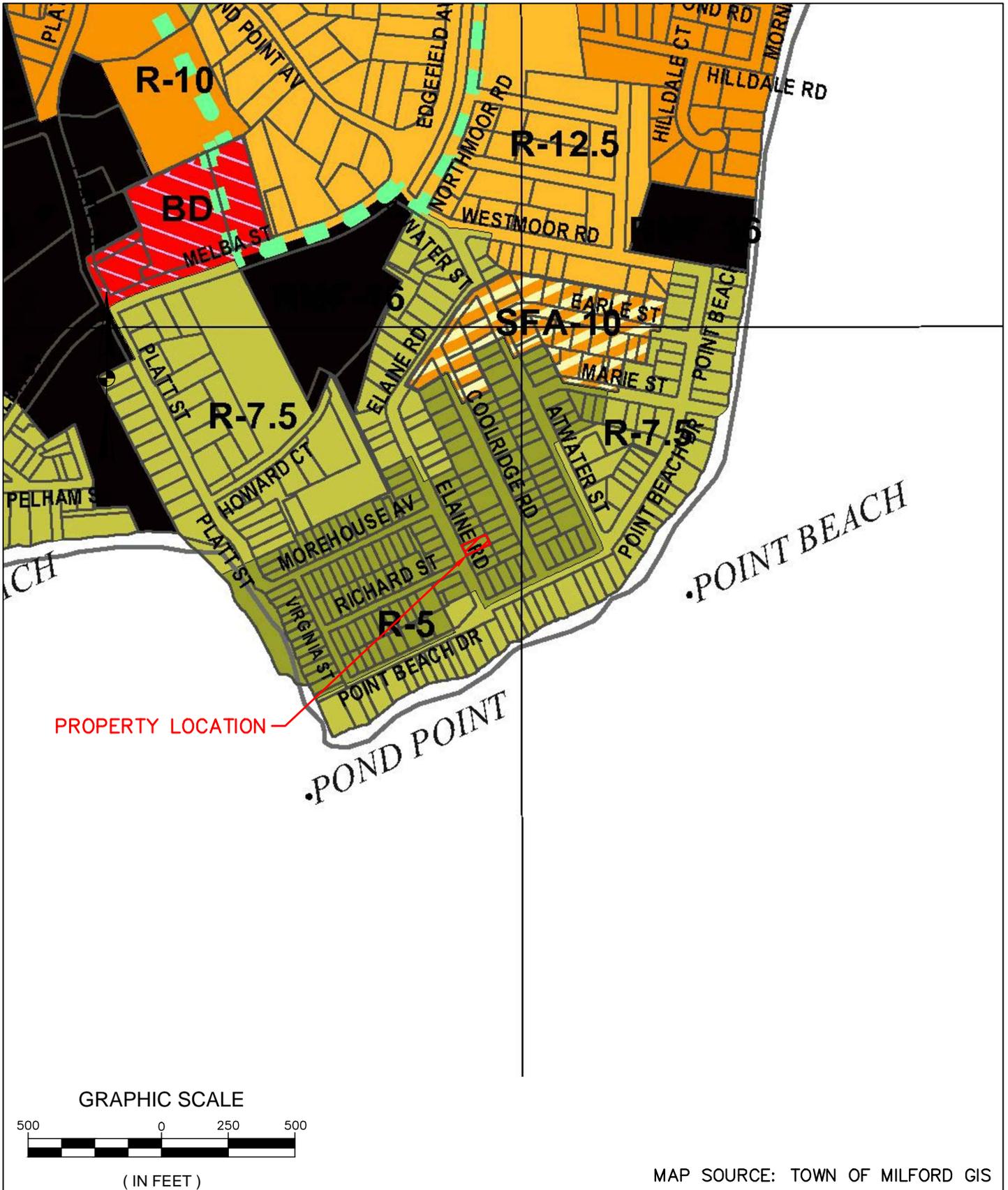
17 ELAINE ROAD  
 MILFORD, CT

ATTACHMENT 7  
 AIRPORT VICINITY MAP

SCALE: NTS	DRAWN BY: EPZ
DATE: 04/20/15	CHECKED BY: JAB

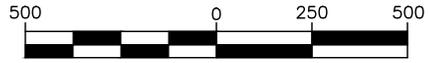
PROJECT NUMBER: 13-449-011

APPLICANT NO: 1085



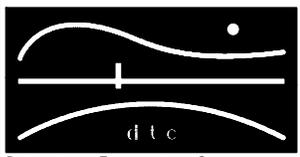
PROPERTY LOCATION

GRAPHIC SCALE



(IN FEET)

MAP SOURCE: TOWN OF MILFORD GIS



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2321 Whitney Avenue - Hamden Center II - Hamden CT 06518  
Ph: 203 239 4200 Fax: 203 234 7376

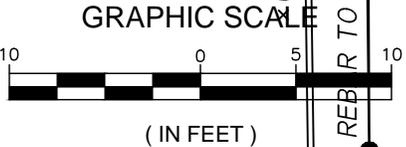
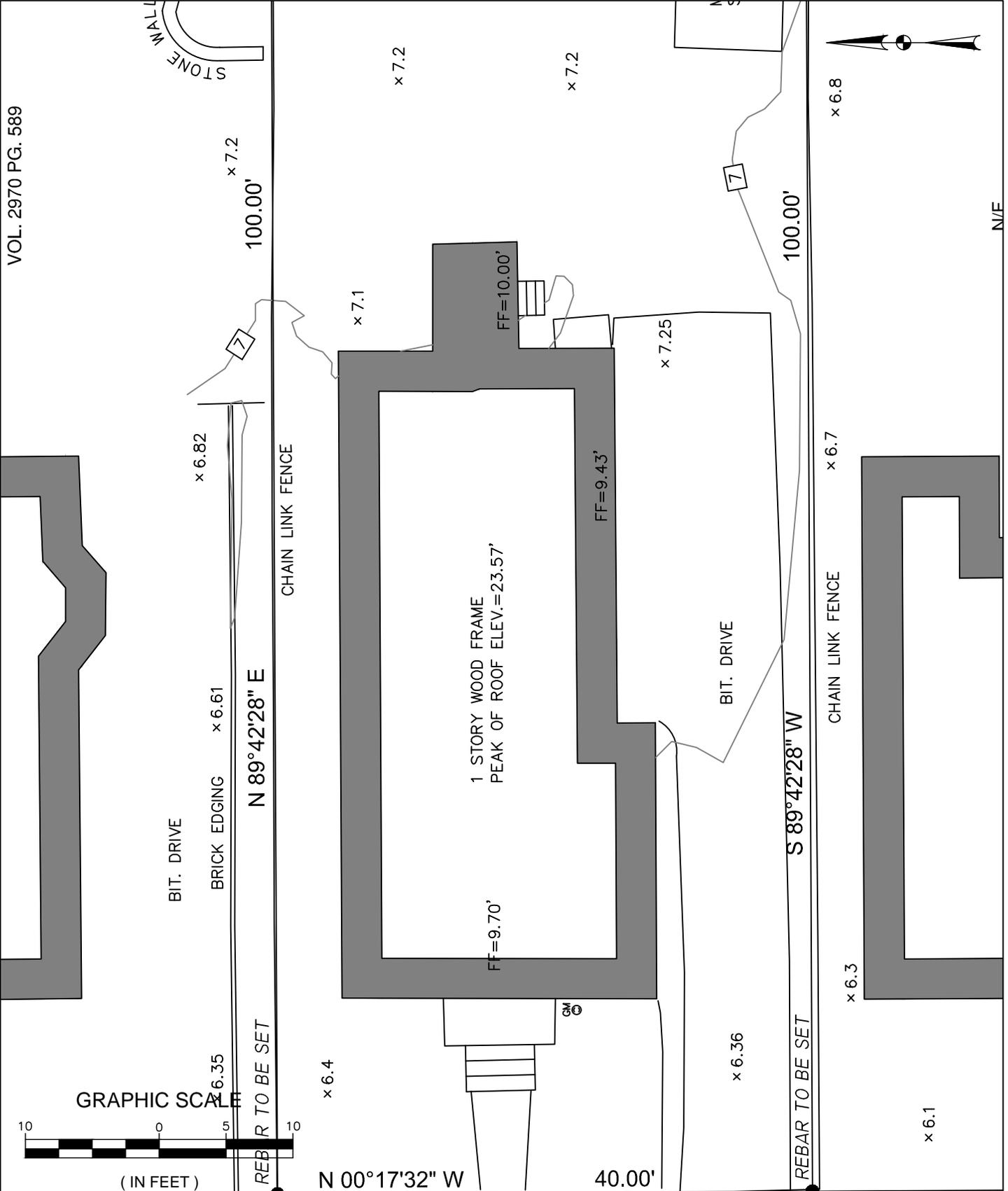
DEPARTMENT OF HOUSING  
COMMUNITY DEVELOPMENT BLOCK GRANT  
DISASTER RECOVERY

17 ELAINE ROAD  
MILFORD, CT

ATTACHMENT 8  
ZONING MAP

PROJECT NUMBER: 13-449-011    APPLICANT NO: 1085

SCALE: 1"=500'	DRAWN BY: EPZ
DATE: 04/20/2015	CHECKED BY: JAB

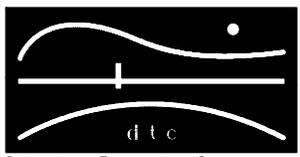


DEPARTMENT OF HOUSING  
 COMMUNITY DEVELOPMENT BLOCK GRANT  
 DISASTER RECOVERY

ATTACHMENT 9  
 SITE TOPOGRAPHY  
 MAP

17 ELAINE ROAD  
 MILFORD, CT

SCALE: 1"=50'      DRAWN BY: EPZ



PROJECT NUMBER: 13-449-011      APPLICANT NO: 1085

DATE: 04/20/2015      CHECKED BY: JAB

**Appendix B**

**DECD/SHPO/DOH Professional Certification Form**

For all General Permit Applications submitted as part of the Flood Management Certification for Disaster Recovery Activities, the following certification must be signed and sealed by a professional engineer licensed to practice in Connecticut.

Property: 17 Elaine Road, Milford, CT 06460

Application Number: 1085

"I certify that in my professional judgment, the above referenced project has been designed consistent with the Flood Management Certification for Disaster Recovery Activities as approved by DEEP and that the information is true, accurate and complete to the best of my knowledge and belief.

I understand that a false statement made in the submitted information may, pursuant to Section 22a-6 of the General Statutes, be punishable as a criminal offense under Section 53a-157b of the General Statutes, and may also be punishable under Section 22a-438 of the General Statutes."

*[Handwritten Signature]*

6/18/2015

Signature of Applicant

Date

*HERMIA DELAIRE*

*CDBG-DR  
Program Manager*

Name of Applicant (print or type)

Title

*[Handwritten Signature]*

6/18/2015

Signature of Professional Engineer

Date

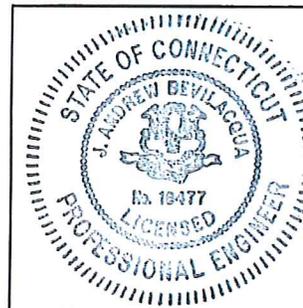
J. Andrew Belivacqua

18477

Name of Professional Engineer (print or type)

P.E. Number

Affix P.E. Stamp Here





## United States Department of the Interior



FISH AND WILDLIFE SERVICE  
New England Ecological Services Field Office  
70 COMMERCIAL STREET, SUITE 300  
CONCORD, NH 3301  
PHONE: (603)223-2541 FAX: (603)223-0104  
URL: [www.fws.gov/newengland](http://www.fws.gov/newengland)

Consultation Code: 05E1NE00-2015-SLI-0390

April 20, 2015

Event Code: 05E1NE00-2015-E-00642

Project Name: 1085 Carlino

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

### To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan ([http://www.fws.gov/windenergy/eagle\\_guidance.html](http://www.fws.gov/windenergy/eagle_guidance.html)). Additionally, wind energy projects should follow the wind energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>; <http://www.towerkill.com>; and <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment



United States Department of Interior  
Fish and Wildlife Service

Project name: 1085 Carlino

## Official Species List

### Provided by:

New England Ecological Services Field Office

70 COMMERCIAL STREET, SUITE 300

CONCORD, NH 3301

(603) 223-2541

<http://www.fws.gov/newengland>

**Consultation Code:** 05E1NE00-2015-SLI-0390

**Event Code:** 05E1NE00-2015-E-00642

**Project Type:** \*\* Other \*\*

**Project Name:** 1085 Carlino

**Project Description:** Existing house to be demolished and rebuilt due to damage from Super Storm Sandy.

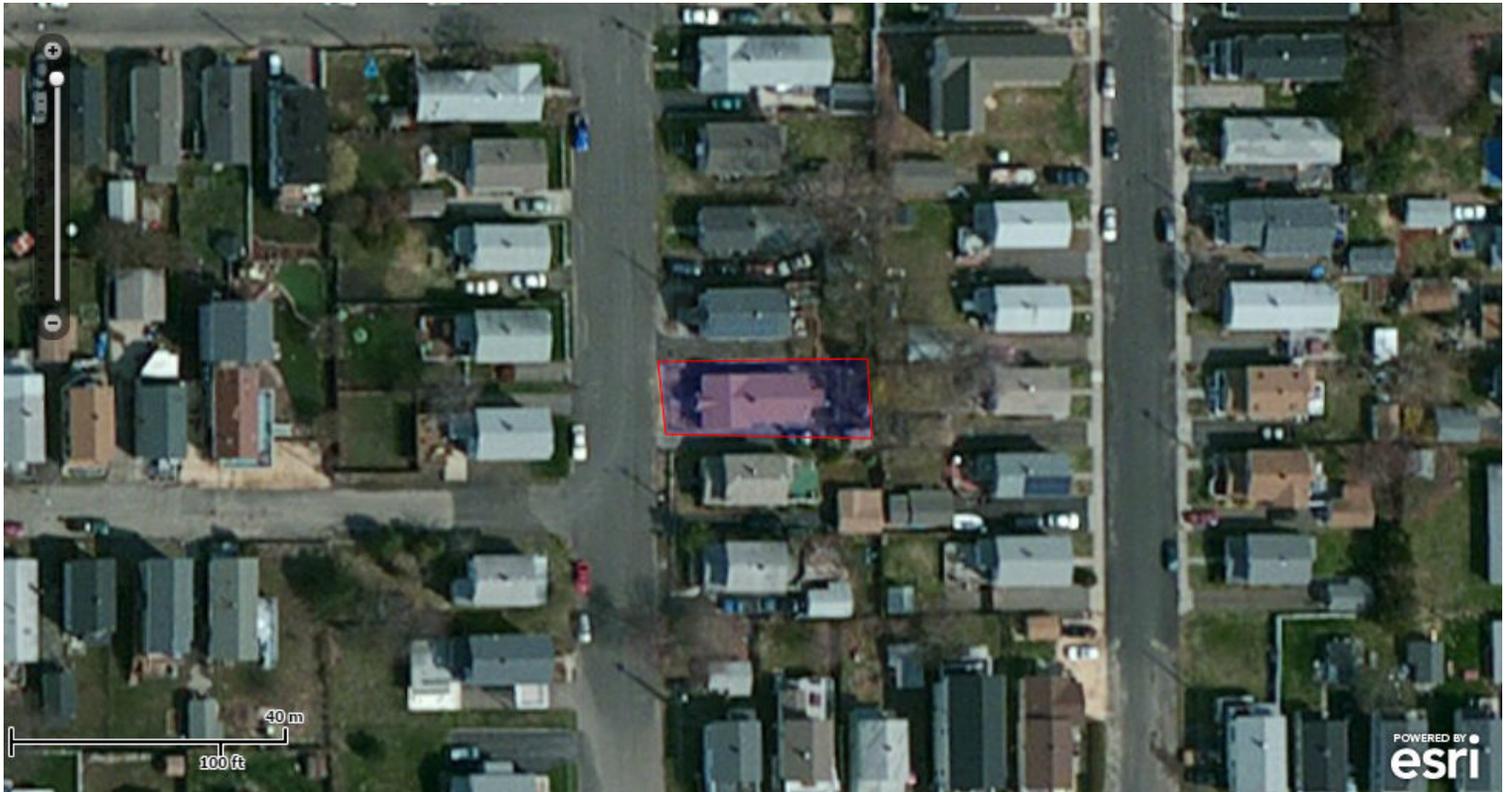
**Please Note:** The FWS office may have modified the Project Name and/or Project Description, so it may be different from what was submitted in your previous request. If the Consultation Code matches, the FWS considers this to be the same project. Contact the office in the 'Provided by' section of your previous Official Species list if you have any questions or concerns.



United States Department of Interior  
Fish and Wildlife Service

Project name: 1085 Carlino

### Project Location Map:



**Project Coordinates:** MULTIPOLYGON (((-73.0174428 41.2054788, -73.0174562 41.2055736, -73.0170916 41.2055777, -73.0170834 41.2054727, -73.0174428 41.2054788)))

**Project Counties:** New Haven, CT



United States Department of Interior  
Fish and Wildlife Service

Project name: 1085 Carlino

## Endangered Species Act Species List

There are a total of 1 threatened or endangered species on your species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Critical habitats listed under the **Has Critical Habitat** column may or may not lie within your project area. See the **Critical habitats within your project area** section further below for critical habitat that lies within your project. Please contact the designated FWS office if you have questions.

Birds	Status	Has Critical Habitat	Condition(s)
Red Knot ( <i>Calidris canutus rufa</i> )	Threatened		



United States Department of Interior  
Fish and Wildlife Service

Project name: 1085 Carlino

## **Critical habitats that lie within your project area**

There are no critical habitats within your project area.

# ChemScope INDUSTRIAL HYGIENE • ENVIRONMENTAL CHEMISTRY

15 Moulthrop Street, North Haven, CT 06473-3686 • Phone (203) 865-5605 • Fax (203) 498-1610

Scott Feulner  
Diversified Technology Consultants (DTC)  
2321 Whitney Avenue, Suite 301  
Hamden, CT 06518

Revised 7/18/2014  
5/15/2014

**SITE 011 – 17 ELAINE ROAD, MILFORD CT  
APPLICATION # 1085  
CS#183-100, 4/30/2014 and 6/27/2014**

**PROJECT SUMMARY**

Demolition or Renovation	Renovate and Raise
Scope of Inspection	All floors of first floor, entire crawlspace
CS#	CS#183-100
Date(s) of Inspection	4/30/2014 and 6/27/2014
Reports Dated	5/14/2014, 5/15/2014 and 7/18/2014
Occupied	Yes
Child <6 yrs residing	No
Heat on	Yes
Water on	Yes
Electricity on	Yes
Asbestos Inspected /Detected	Yes / Yes
Lead Inspected /Detected	Yes / Yes
Lead Risk Assessment Done	Yes
Lead Risk Assessment Done	Yes
Mold Inspected /Detected	Yes / Yes
Radon Tested /Detected $\geq 4.0$ pCi/L	No/-

Please call me if there are any questions about this report or if you need further assistance.

Thank you for calling on us.



Dan Sullivan  
Vice President, Operations

**Report Distribution:**

Scott Feulner, DTC [Scott.Feulner@teamdtc.com](mailto:Scott.Feulner@teamdtc.com)  
Curtis Graham, DTC [graham.curtis@teamdtc.com](mailto:graham.curtis@teamdtc.com)  
Michael Casey, DTC [michael.casey@teamdtc.com](mailto:michael.casey@teamdtc.com)

**File Location:**

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# ChemScope INDUSTRIAL HYGIENE • ENVIRONMENTAL CHEMISTRY

15 Moulthrop Street, North Haven, CT 06473-3686 • Phone (203) 865-5605 • Fax (203) 498-1610 • [www.chem-scope.com](http://www.chem-scope.com)

Scott Feulner  
Diversified Technology Consultants (DTC)  
2321 Whitney Avenue, Suite 301  
Hamden, CT 06518

7/18/2014

**PRE-REHABILITATION LEAD HAZARD RISK ASSESSMENT &  
LEAD BASED PAINT PRE-RENOVATION XRF SCREENING  
SITE 011 (CARLINO) – 17 ELAINE ROAD, MILFORD CT  
APPLICATION # 1085, CS#183-100, 4/30/2014 and 6/27/2014, Page 1 of 13**

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### **Attachments:**

Appendix A: XRF Lead–Based Paint Testing Results with quality evaluation sheet, 5 pages  
Appendix B: Dust Wipe and Soil Sample Analytical Data and Chain of Custody Document, 7 pages  
Appendix C: Sample Location Drawings, 2 pages  
Appendix D: Lead Hazardous Waste Evaluation Worksheet, 1 page(s)  
Appendix E: Copy of Risk Assessor's License/Certification, 2 pages  
Appendix F: Copy of Firm's Lead Activity License/Certification, 3 pages  
Appendix G: Copy of XRF Training Certificate and LPA–1 Performance Characteristics Sheet, 5 pages  
Appendix H: "LEAD SPEAK" – A Brief Glossary, 2 pages  
Appendix I: Additional Lead and Lead Safety Resource Data, 1 page

### **Report Distribution:**

Scott Feulner, DTC [Scott.Feulner@teamdtc.com](mailto:Scott.Feulner@teamdtc.com)  
Curtis Graham, DTC [graham.curtis@teamdtc.com](mailto:graham.curtis@teamdtc.com)  
Michael Casey, DTC [michael.casey@teamdtc.com](mailto:michael.casey@teamdtc.com)

### **File Location:**

NAS AAUM-Reports\LeadInsp\DS-RiskAssess\_June2014.doc

**PRE-REHABILITATION LEAD HAZARD RISK ASSESSMENT &  
LEAD BASED PAINT PRE-RENOVATION XRF SCREENING  
SITE 011 (CARLINO) – 17 ELAINE ROAD, MILFORD CT  
APPLICATION # 1085, CS#183-100, 4/30/2014 and 6/27/2014, Page 2 of 13**

**INTRODUCTION**

**EXECUTIVE SUMMARY:** As a result of the Lead Hazard Risk Assessment and the limited Lead-Based Paint Testing (Assessment) conducted on 4/29/2014 and 6/20/2014, it was found that lead-based surface coatings (paint) and lead hazards were present on the subject property as of the date of the Assessment. Lead (as defined by OSHA regulations 29 CFR 1926.62) and Lead Based Paint (as defined by USC Title 15 – Chapter 53- Toxic Substance Control) was detected on surfaces and/or components within the scope of the inspection. This will require workers disturbing Lead to be properly protected and trained including personal air sampling on the workers. The concentrations determined by the personal samples will determine the level of protection required by OSHA. (Contact us for assistance with the personal samples and further interpretation. General information is contained in the recommendations to follow.) Because lead based paint was detected, a Hazardous Waste Evaluation was done per CT DEEP regulations to determine if the waste products from the renovation are potentially a hazardous waste. The hazardous waste evaluation was done using a modified “knowledge of process” technique. This modified method resulted in the waste being **5133 mg/kg of lead**, which is considered likely to be a lead hazardous waste since it is > 100 mg/kg (the threshold for this modified method). **Both lead Dust and Lead Soil hazards are present. See dust and soil sampling results for details.**

**BUILDING DESCRIPTION:** The subject site is a single family, one-story with crawlspace, wood frame house, built in 1928, and totals approximately 1020 SF. There is a crawlspace under the main portion of the house (not including the mechanical room). At the time of our screening, there were no children under the age of six residing at this subject house and the house was not being used as a daycare facility.

**BACKGROUND:** We understand the subject house suffered damage as a result of hurricane Sandy on October 29-30, 2012 and is scheduled to be renovated and raised. We also understand that the scope of the renovation work would involve disturbance of all flooring (except hardwood), disturbance of select walls, disturbance of select ceilings all on the first floor, and re-insulation of the crawlspace. Please see attached Scope of Inspection Drawing for details.

**SCOPE OF OUR WORK:** Our work would include the following:

- A Lead Hazard Risk Assessment
- XRF Screening of Lead Based Paint of representative painted surfaces on the 1<sup>st</sup> floor. as directed by our client.
- A hazardous waste evaluation.
- A report of the findings with site drawings.

Lead paint chip and TCLP sampling are not in our scope of work.

This investigation and information provided in this report depends partly on background information provided by the client. This report is intended for the use of the client. The scope of services performed may not be appropriate for other users and any use of this report by third parties is at their sole risk. This report is intended to be used in its entirety. No excerpts may be taken to be representative of this report.

**PRE-REHABILITATION LEAD HAZARD RISK ASSESSMENT &  
LEAD BASED PAINT PRE-RENOVATION XRF SCREENING  
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**INTRODUCTION (cont)**

**QUALIFICATIONS:** The Inspection was conducted by Daniel P. Sullivan, CT DPH Certified DPH Lead Inspector/Risk Assessor #002131, Radiation Safety Training, RMD 12/2/94 and Nathan Yergeau, CT DPH Certified Lead Inspector/Risk Assessor #002225, Radiation Safety Training, RMD 3/12/2009. Dan and Nathan were assisted by Ziyang Wang. Chem Scope's DPH lead license # is CC000164.

**METHOD OF TESTING:** Spectrum Analyzer XRF (x-ray fluorescence). Instrument used: RMD LPA-1, Serial # 1647 in Quick Mode. The unit source (Cobalt 57) for unit 1647 was replaced November 2<sup>nd</sup>, 2012. The XRF detects paint in all layers down to the painted substrate. In other words if lead paint is painted over with new paint, the lead paint is still detected by this procedure. When paint is covered with metal or plastic trim such as siding or by carpet, the lead paint is usually not detectable. This instrument is registered with the State of Connecticut Dept of Energy and Environmental Protection and is Generally Licensed under the NRC. This is one of the two methods, which are approved under the CT Dept of Public Health (DPH) regulations. This is a non-destructive test.

The dust and soil samples were sent for analysis to Eastern Analytical Services (EAS), an AIHA accredited Laboratory and a CT DPH approved Environmental Laboratory in regards to this test, using Atomic Absorption analysis.

**TEST PARAMETERS FOR XRF TESTING USING THIS INSTRUMENT: OSHA 1926.62**  
*Definition:* Lead means metallic lead, all inorganic lead compounds, and organic lead soaps. Excluded from this definition are all other organic lead compounds. XRF readings of 1.0 mg/cm<sup>2</sup> or higher are lead based paint as defined by USC Title 15 – Chapter 53- Toxic Substance Control and XRF reading with any detectable amount of lead detected are defined as Lead by OSHA standard 1926.62.

**XRF CALIBRATION CHECK:** Standard Reference Material (SRM) paint film nearest to 1.0 mg/cm<sup>2</sup> within the National Institute of Standards and Technology (NIST) SRM is used to Calibrate the XRF. Calibration Readings are taken at the beginning and end of a job and every four (4) hours during the job with three (3) readings per set. The expiration date of the standard used is 7/1/20.

**QUALITY CONTROL PROCEDURES:** The XRF is used in accordance with Manufacturer's Performance Characteristics Sheet and instructions. See test data attached for details. Ten (or if <10, then the total number of tests conducted) testing combinations for re-testing from each unit are selected and checked in either 15 second or 60 second readings.

**STATEMENT ON ACCURACY:** The XRF Calibration checks were acceptable with each of the three (3) readings before, during (if applicable) and after the testing between 0.7 mg/cm<sup>2</sup> and 1.3 mg/cm<sup>2</sup>. See attached XRF data sheets for documentation of proper calibration check sequence.

**REPORT CONVENTIONS:** Rooms are sometimes given arbitrary numbers to avoid ambiguity. Please refer to the enclosed schematic drawings of the site. Samples are referenced by the side of the building they are facing, as indicated on the drawings. Side A is the street side (front), Side B is the left side, Side C is the rear and Side D is the right side.

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**INTRODUCTION (cont)**

**ONGOING MONITORING:** Ongoing monitoring is necessary in all dwellings in which LBP is known or presumed to be present. At these dwellings, the very real potential exists for LBP hazards to develop. Hazards can develop by means such as, but not limited to: the failure of lead hazard control measures; previously intact LBP becoming deteriorated; dangerous levels of lead-in-dust (dust lead) re-accumulating through friction, impact, and deterioration of paint; or, through the introduction of contaminated exterior dust and soil into the interior of the structure. Ongoing monitoring typically includes two different activities: re-evaluation and annual visual assessments. A re-evaluation is a risk assessment that includes limited soil and dust sampling and a visual evaluation of paint films and any existing lead hazard controls. Re-evaluations are supplemented with visual assessments by the Client, which should be conducted at least once a year, when the Client or its management agent (if the housing is rented in the future) receives complaints from residents about deteriorated paint or other potential lead hazards, when the residence (or if, in the future, the house will have more than one dwelling unit, any unit that turns over or becomes vacant), or when significant damage occurs that could affect the integrity of hazard control treatments (e.g., flooding, vandalism, fire). The visual assessment should cover the dwelling unit (if, in the future, the housing will have more than one dwelling unit, each unit and each common area used by residents), exterior painted surfaces, and ground cover (if control of soil-lead hazards is required or recommended). Visual assessments should confirm that all Paint with known or suspected LBP is not deteriorating, that lead hazard control methods have not failed, and that structural problems do not threaten the integrity of any remaining known, presumed or suspected LBP.

The visual assessments do not replace the need for professional re-evaluations by a certified risk assessor. The re-evaluation should include:

1. A review of prior reports to determine where lead-based paint and lead-based paint hazards have been found, what controls were done, and when these findings and controls happened;
2. A visual assessment to identify deteriorated paint, failures of previous hazard controls, visible dust and debris, and bare soil;
3. Environmental testing for lead in dust, newly deteriorated paint, and newly bare soil; and
4. A report describing the findings of the reevaluation, including the location of any lead-based paint hazards, the location of any failures of previous hazard controls, and, as needed, acceptable options for the control of hazards, the repair of previous controls, and modification of monitoring and maintenance practices.

The first reevaluation should be conducted no later than two years after completion of hazard controls, or, if specific controls or treatments are not conducted, two years from the beginning of ongoing lead-based paint monitoring and maintenance activities. Subsequent reevaluations should be conducted at intervals of two years, plus or minus 60 days. If two consecutive reevaluations are conducted two years apart without finding a lead-based paint hazard, reevaluation may be discontinued.

Please refer to your community development agency, housing authority, or other applicable agency for additional local/regional regulations and guidelines governing re-evaluation activities.

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**INTRODUCTION (cont)**

**DISCLOSURE REGULATIONS:** A copy of this complete report must be made available to new lessees (tenants) and/or must be provided to purchasers of this property under Federal law before they become obligated under any future lease or sales contract transactions (Section 1018 of Title X – found in 24 CFR Part 35 and 40 CFR Part 745), until the demolition of this property. Landlords (Lessors) and/or sellers are also required to distribute an educational pamphlet developed by the EPA entitled “*Protect Your Family From Lead in Your Home*” and include standard warning language in their leases or sales contracts to ensure that parents have the information they need to protect their children from LBP hazards.

**FUTURE REMODELING PRECAUTIONS:** It should be noted that during this Assessment, a limited number of areas were tested for the presence of LBP. All LBP, dust, and soil hazards that were identified are addressed in this report. However, LBP, dust lead hazards, and/ or soil lead hazards may be present at other locations of the property. Additional paint testing should precede any future remodeling activities that occur at any untested areas. Additional dust and/or soil sample collection and analysis should follow any hazard control activity, repair, remodeling, or renovation effort, and any other work efforts that may in any way disturb LBP and/or any lead containing materials. These Assessment activities will help the Client and owner to ensure the health and safety of the occupants and the neighborhood. Details concerning lead-safe work techniques and approved hazard control methods can be found in the HUD publication entitled: “*Guidelines for the Evaluation and Control of LBP Hazards in Housing*” ([www.hud.gov/offices/lead](http://www.hud.gov/offices/lead)). Remodeling, repair, renovation and painting at the residence beyond the scale of minor repair and maintenance activities must be conducted in accordance with the EPA’s Lead Repair, Renovation, and Painting Rule (within 40 CFR part 745); see the EPA’s website on the RRP Rule at <http://www.epa.gov/lead/pubs/renovation.htm> for the scope and requirements of that Rule. Lead-based paint abatement or lead-based paint hazard abatement at the residence must be conducted in accordance with the EPA’s Lead Abatement Rule (also within 40 CFR 745); see the EPA’s website for Lead Abatement Professionals at <http://www.epa.gov/lead/pubs/traincert.htm>.

**CONDITIONS & LIMITATIONS:** Staff of ChemScope Inc. has performed the tasks listed above requested by the our client in a thorough and professional manner consistent with commonly accepted standard industry practices, using state of the art practices and best available known technology, as of the date of the assessment. ChemScope cannot guarantee and does not warrant that this Assessment/Limited LBP Testing has identified all adverse environmental factors and/or conditions affecting the subject property on the date of the Assessment. ChemScope cannot and will not warrant that the Assessment/Limited Testing that was requested by the client will satisfy the dictates of, or provide a legal defense in connection with, any environmental laws or regulations. It is the responsibility of the client to know and abide by all applicable laws, regulations, and standards, including EPA’s Renovation, Repair and Painting regulation.

The results reported and conclusions reached by ChemScope are solely for the benefit of the client. The results and opinions in this report, based solely upon the conditions found on the property as of the date of the Assessment, will be valid only as of the date of the Assessment. ChemScope assumes no obligation to advise the client of any changes in any real or potential lead hazards at this residence that may or may not be later brought to our attention. Further conditions and limitations to this contracted report are included in the general terms and conditions supplied to the client with the contract for services.

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**INSPECTION REPORT SYNOPSIS**

**LOCATION NAME AND ADDRESS:** Site 011 (Carlino)  
17 Elaine Road, Milford CT  
Application #1085

**INSPECTION DATE(S):** 4/30/2014 and 6/27/2014

**XRF Testing Results:** Limited LBP Testing, conforming with HUD regulation 24 CFR 35.930(c), (d) was accomplished at this residence on surfaces found to have deteriorated paint and/or where it was indicated to the Assessor that planned renovation would occur. No paint chip samples were taken. On 4/30/2014, a total of 56 tests (assays) were taken at a limited number of specified surfaces on the inside and outside of the residence using a x-ray fluorescence analyzer. Deteriorated paint and areas that were specified to be disturbed during the planned renovation project were tested. Lead concentrations that meet or exceed the HUD published levels identified as being potentially dangerous (e. g., greater than or equal to 1.0 milligrams per centimeter square [ $> 1.0 \text{ mg/cm}^2$ ]) were encountered on a few interior surfaces (see list of lead based paint items listed below).

The following surface(s) and/or component(s) contained Lead as defined by OSHA regulations 29 CFR 1926.62, in addition the items in bold are Lead Based Paint as defined by USC Title 15 – Chapter 53- Toxic Substance Control:

<b>Component/Description</b>	<b>Location</b>	<b>Defective</b>
<b>White painted wooden window casings, sills, aprons, sashes, etc</b>	<b>Throughout</b>	<b>Yes</b>
<b>Off white painted wood panel walls</b>	<b>Throughout</b>	<b>Yes</b>
<b>Off white painted fiberboard ceiling</b>	<b>Throughout</b>	<b>No</b>
<b>White painted wooden wall trim</b>	<b>Living Room</b>	<b>No</b>
<b>Green painted wooden walls</b>	<b>1-6</b>	<b>Yes</b>

*OSHA 1926.62 Definition:* Lead means metallic lead, all inorganic lead compounds, and organic lead soaps. Excluded from this definition are all other organic lead compounds.

XRF readings of  $1.0 \text{ mg/cm}^2$  or higher are lead based paint as defined by USC Title 15 – Chapter 53- Toxic Substance Control and XRF reading with any detectable amount of lead detected are defined as Lead by OSHA standard 1926.62.

**LIMITATIONS OF SCREENING:** Not all painted surfaces were tested. Consequently, if a surface was not tested assume it contains Lead until proven otherwise. See attached data sheets for a list of surfaces tested.

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**INSPECTION REPORT SYNOPSIS (cont)**

**RESIDENT QUESTIONNAIRE:** A resident questionnaire was completed as part of the Assessment, to help identify particular use patterns, which may be associated with potential LBP hazards, such as opening and closing windows painted with LBP. The answers to the questionnaire were obtained during a phone interview with the owner/occupant, Joe Carlino on 6/27/2014. Following is a summary of the information obtained during the interview:

Children in the Household:	None, they have three children who visit regularly
Children's bedroom locations:	1-8, if they stay overnight
Children's eating locations:	1-5 Kitchen
Primary interior play area(s):	1-7 Office
Primary exterior play area(s):	Backyard
Toy Storage:	1-7 Office
Pets:	No
Children's blood lead testing history:	Unkown
Observed chewed surfaces:	None
Women of child bearing age:	No
Previous lead testing:	None
Most frequently used entrances:	Side D Side Foyer door
Most frequently opened windows:	All of them seasonally
Structure cooling method:	Window A/C units
Gardening – type and location(s):	Back yard
Plans for landscaping:	Yard to be torn up to excavate around house
Cleaning regiment:	Daily
Cleaning methods:	Mopping, sweeping, dusting, vacuuming
Recently completed renovations:	Repaired damage to lower walls after hurricane in 1-6, 1-7, 1-8
Demolition debris on site:	No had a dumpster
Resident(s) with work lead exposure:	None
Planned renovations:	The scope of the renovation involves raising house and removing flooring from first floor.

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**INSPECTION REPORT SYNOPSIS (cont)**

**Building Conditions Survey**

Date of Construction:	1928
Apparent Building Use:	Residential
Setting:	Residential
Front Entry Faces:	Side A, Faces West
Design:	1-Story, Ranch-Style
Construction Type:	Wood framed, wood siding
Lot Type:	Flat
Roof:	Good, no apparent roof leaks (new roof 6 yrs old)
Foundation:	Cinderblock with crawlspace (soil floor) – Note: House is scheduled to be elevated for future flood protection as part of the planned work
Front Lawn Condition:	No bare soil
Back Lawn Condition:	Approx. < 10% bare soil
Drip Line Condition:	Good – no paint chips seen
Site Evaluation:	Good – other than hurricane damage
Exterior Structural Condition:	Exterior structural is good for the house
Interior Structural Condition:	Good
Overall Building/Site Condition:	Good other than storm related damage

**PAINT CONDITION SURVEY**

Please Note: EPA and HUD have provided a specific definition for the term “deteriorated paint.” Deteriorated paint is defined as “any interior or exterior paint or other coating that is peeling, chipping, chalking or cracking, or any paint or coating located on an interior or exterior surface or fixture that is otherwise damaged or separated from the substrate.” This definition is most typically associated with surface conditions only. Usage of this term in describing conditions other than those associated with surface coatings are not known to be defined by EPA or HUD.

Continued

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INSPECTION REPORT SYNOPSIS (cont)

**Identified Deteriorated Paint, Paint Conditions, Lead Content, & Most Apparent Cause of Deterioration:**

- White painted window components, most likely causes of damage friction, age and contact damage.
- Off-white painted wood panel walls, most likely age related damage and contact damage
- Off-white painted fiberboard ceilings, most likely age related damage
- White painted wooden wall trim in the Living Room 1-8, most likely cause of damage storm related.
- Green painted wooden walls in 1-6 Laundry Area, , most likely age related damage

The remaining paint exhibited no apparent signs of deterioration, as of the date of the Assessment.

**INTERIOR DUST SAMPLING:**

A total of 9 single surface dust wipe samples were collected in an effort to help to determine the levels of lead-containing dust on the interior window sills and floors. These samples were collected from areas most likely to be lead-contaminated if lead-in-dust is present. These samples were collected in accordance with the requirements of ASTM Standard E-1728, Standard Practice for Field Collection of Settled Dust Samples Using Wipe Sampling Methods for Lead Determination by Atomic Spectrometry Techniques. EPA, HUD and State of Connecticut regulations define the following as hazardous levels for lead dust in residences: floors –  $\geq 40$  mg/ft<sup>2</sup> (micrograms per square foot); interior window sills –  $\geq 250$  mg/ft<sup>2</sup>. There is no EPA dust-lead hazard standard for window troughs. Please refer to *Appendix B – Dust Wipe Analytical Results* for the laboratory reports and to *Appendix I – Lead and Lead Safety Information and Resources* for a list of publications and resources addressing lead hazards and their health effects; both are located at the end of this report.

Eight of the nine samples collected were within acceptable levels. A summary list is given below, see attached analysis reports and drawings for details. **Samples noted in bold below exceeded HUD and CT-DPH standards and represent dust-lead hazards. These samples constitute dust-lead hazards in those rooms.**

Sample #	Date	Location	Surface	Dust Wipe Result (ug/sq ft)	CT-DPH Standard (ug/sq ft)
183-100-1D	6/27/2014	1-8 Living Room by door	Floor	BDL <12.9	40
183-100-2D	6/27/2014	1-8 Living Room	Window Sill	86.8	250
183-100-3D	6/27/2014	1-5 Kitchen	Floor	BDL <12.9	40
183-100-4D	6/27/2014	1-5 Kitchen	Window Sill	BDL <22.1	250
183-100-5D	6/27/2014	1-1 Bedroom	Floor	BDL <12.9	40
<b>183-100-6D</b>	<b>6/27/2014</b>	<b>1-1 Bedroom</b>	<b>Window Sill</b>	<b>4971.1</b>	<b>250</b>
183-100-7D	6/27/2014	1-7 Spare Bedroom	Floor	BDL <12.9	40
183-100-8D	6/27/2014	1-7 Spare Bedroom	Window Sill	BDL <32.5	250
183-100-9D	6/27/2014	1-2 Side Foyer	Floor	15.8	40
183-100-10D	6/27/2014	-	Blank	BDL <12.9	-
183-100-11D	6/27/2014	-	Blank	BDL <12.9	-

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**INSPECTION REPORT SYNOPSIS (cont)**

**SOIL SAMPLING AND LABORATORY INFORMATION:** Three (3) soil samples were collected at this residence in accordance with the requirements of ASTM Standard E-1727, Standard Practice for Field Collection of Soil Samples for Lead Determination by Atomic Spectrometry Techniques. One of the samples identified lead concentrations above the levels that EPA, HUD or CT-DPH identifies as hazardous. See the following table for a summary of the soil sampling results. Please refer to *Appendix C – Soil Sample Analytical Data* for the detailed analytical reports. Testing data in **bold face** indicates soil lead levels at or above the EPA Hazardous Levels of Lead regulations that were published on January 5, 2001.

Sample #	Date	Location	Surface	Soil Concentration (mg/kg)	CT-DPH Standard (mg/kg)
183-100-1S	6/27/2014	Side B, 2' from A/B corner	Soil 2" deep	<b>1050.3</b>	<b>400</b>
183-100-2S	6/27/2014	2' from Side D of Mech Rm, 8' Side C of house	Soil 2" deep	373.7	400
183-100-3S	6/27/2014	30' from Window 1 of 1-1	Soil 2" deep	126.6	400

**HAZARDOUS WASTE EVALUATION :** Because toxic levels of lead were detected, a Hazardous Waste Evaluation was done to determine if the waste products from the renovation are potentially a hazardous waste.

An initial hazardous evaluation was done using a modified (for XRF data as opposed to paint chip data) "knowledge of process" technique intended to approximate the method described by the CT Department of Energy and Environmental Protection (DEEP). That method is one of six methods outlined in the CT DEEP "Guidance for the Management and Disposal of Lead-Contaminated Materials Generated in the Lead Abatement, Renovation and Demolition Industries" (11/4/94) for hazardous waste evaluation. For our modified method, data gathered during the XRF inspection is used to calculate for hazardous waste vs. other methods that require TCLP (Toxicity Characteristic Leaching Procedure) testing. This method is the least expensive method of hazardous waste evaluation but has limited applicability. The other methods include the following:

- Demolish and Test (TCLP test and needs to be done during the renovation or demolition)
- Composite-Sample and Demolish (TCLP test done before the renovation and destructive testing required and challenging to do for renovations if we don't know what the waste stream is actually going to be in the dumpster)

This modified method resulted in the waste being **5133 mg/kg of lead**, which is considered likely to be a lead hazardous waste since it is > 100 mg/kg (the threshold for this modified method). Based on the findings we recommend one of the following three options:

**Option A:** Remove all of the components (hot spots) that contain lead-based paint prior to renovation. This must be done according to applicable regulations (DEEP and OSHA), by properly trained personnel using proper work practices and procedures including proper disposal as of waste as lead hazardous.

**Option B:** With additional testing costs, further evaluation of the waste could be made using TCLP testing as outlined above. There are potentially a number of possible strategies, which may be employed to assess lead-contaminated debris while attempting to minimizing disposal costs (there is no guarantee that disposal costs will be minimized with further testing). We could provide a separate proposal if needed or this could be done by other qualified persons.

**Option C:** Properly remove and dispose of all renovation debris as hazardous lead waste, excluding any asbestos containing materials which have to be disposed of as a special waste.

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**RECOMMENDATIONS**

**Lead Hazard Control Options** Lead-safe work practices and worker/occupant protection practices complying with current EPA, HUD and OSHA standards will be necessary to safely complete all work involving the disturbance of LBP coated surfaces and components. In addition, any work considered lead hazard control will enlist the use of interim control (temporary) methods and/or abatement (permanent) methods. It should be noted that all lead hazard control activities have the potential of creating additional hazards or hazards that were not present before.

Details for the listed lead hazard control options and issues surrounding occupant/worker protection practices can be found in the publication entitled: *Guidelines for the Evaluation and Control of LBP Hazards in Housing* published by HUD, the Environmental Protection Agency (EPA) lead-based paint regulations, and the Occupational Safety and Health Administration (OSHA) regulations found in its Lead in Construction Industry Standard. The associated cost estimates, unless otherwise noted, include the labor and materials to accomplish the stated activity and most additional funds typically found to be necessary to complete worker protection, site containment, and cleanup procedures. These are approximate estimates only and due to a variety of potential factors, may not accurately reflect all local cost factors. A precise estimate must be obtained from a certified LBP abatement contractor or a contractor trained in lead-safe work practices. Properly trained and/or licensed persons, as well as properly licensed firms (as mandated) should accomplish all abatement/interim control activities conducted at this residence.

**Interim controls**, as defined by HUD, means a set of measures designed to temporarily reduce human exposure to LBP hazards and/or lead containing materials. These activities include, but are not limited to: component and/or substrate repairs; paint and varnish repairs; the removal of dust-lead hazards; renovation; remodeling; maintenance; temporary containment; placement of seed, sod or other forms of vegetation over bare soil areas; the placement of at least 6 inches of an appropriate mulch material over an impervious material, laid on top of bare soil areas; the tilling of bare soil areas; extensive and specialized cleaning; and, ongoing LBP maintenance activities.

**Abatement**, as defined by HUD, means any set of measures designed to permanently eliminate LBP and/or LBP hazards. The product manufacturer and/or contractor must warrant abatement methods to last a minimum of twenty (20) years, or these methods must have a design life of at least twenty (20) years. These activities include, but are not necessarily limited to: the removal of LBP from substrates and components; the replacement of components or fixtures with lead containing materials and/or lead containing paint; the permanent enclosure of LBP with construction materials; the encapsulation of LBP with approved products; the removal or permanent covering (concrete or asphalt) of soil-lead hazards; and, extensive and specialized cleaning activities. (EPA's definition is substantively the same.)

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RECOMMENDATIONS (cont)

**CT DEEP Hazardous Waste evaluation:** Contractor generated waste from lead paint chips or component removal must be evaluated to determine if it is hazardous using one of the many techniques as described in the CT Department of Energy and Environmental Protection (DEEP) Guidance for the Management and Disposal of Lead-Contaminated Materials Generated in the Lead Abatement, Renovation and Demolition Industries" (11/4/94). This guidance document allows for homeowners to take up to 10 cubic yards to be disposed of as part of normal house hold waste (even if it contains lead). Under the household waste exclusion, in order for the waste to be exempt, the homeowner must have the means to dispose of it in a manner typical for routine household wastes: that is, either via curbside pickup, or by taking it themselves to their local transfer station.

EPA's RRP rule sets up requirements for firms and individuals performing renovations in pre-1978 housing and child-occupied facilities, such as schools and day cares. The RRP Rule requires that renovators be trained in the use of lead safe work practices, that renovators and firms be certified, that providers of renovation training be accredited, and that renovators follow specific work practice standards.

Because this is a pre-1978 house, contractors (including renovation, repair and painting workers, plumbers, electricians, HVAC professionals, etc.) working on this project must be EPA certified and trained in lead-safe work practices when conducting renovation, repair and painting activities that will disturb more than six (6) square feet of painted surfaces on the interior of a building or more than twenty (20) square feet on the exterior and all window replacements jobs. Additional information on this rule can be found at <http://www.epa.gov/lead/pubs/renovation.htm>.

**OSHA 1926.62 (worker protection):** Work that disturbs surfaces that contain Lead Based Paint (or any detectable amount of Lead) such as is the case for this work must be done according to OSHA regulation 1926.62 OSHA requires employers to conduct air sampling on workers disturbing lead to establish exposure levels to lead for those workers. The recorded levels are then compared to two different airborne concentrations in the OSHA standard: the action limit (AL) and the permissible exposure limit (PEL). Currently, the AL is set at 30 micrograms of lead per cubic meter of air ( $\mu\text{g}/\text{m}^3$ ) and the PEL is 50  $\mu\text{g}/\text{m}^3$ . At a minimum the following is required even for air sample results below the action level (this is known as Category 1):

1. Train employees
2. Conduct Exposure Monitoring (air sampling, as mentioned above)
3. Maintain Records

See details below if your sampling exceeds the standards. Chem Scope, Inc could help with compliance assistance as needed.

PRE-REHABILITATION LEAD HAZARD RISK ASSESSMENT &  
LEAD BASED PAINT PRE-RENOVATION XRF SCREENING  
SITE 011 (CARLINO) – 17 ELAINE ROAD, MILFORD CT  
APPLICATION # 1085, CS#183-100, 4/30/2014 and 6/27/2014, Page 13 of 13

RECOMMENDATIONS (cont)

**OSHA 1926.62 – Additional Details:**

Category 2: OSHA regulations require; Same as category I, plus: Provide respirator at employee request, Conduct exposure monitoring every 3 months, and Conduct blood lead monitoring when the exposure monitoring results are 30–50 ug/m<sup>3</sup> (above the action level, but below the PEL).

Category 3: OSHA Regulations require; Same as category II, plus, enforce respirator use, enforce use of protective clothing, develop monitoring every 6 months, enforce housekeeping, provide hygiene facilities and enforce washing when the exposure monitoring results are 50 ug/m<sup>3</sup> and over (above the PEL).

See separate Asbestos Pre-renovation Inspection report and Mold Assessment report for additional details.

If you have any questions or need more information please call me. Thank you for calling on us.

Sincerely,



Dan Sullivan  
Vice President, Operations

## Appendix A XRF Lead-Based Paint Testing Results

Site Name: Site 011Date of Inspection: 4/30/2014Site Address: 17 Elaine Road, Milford, CTCS# 183-100Customer Name: Diversified Technology Consultants (DTC)Customer Address: 2321 Whitney Avenue, Suite 301 / Hamden, CT 06518Work Area: Throughout Page 1 of 4Site Description: Single-Family Residential of wood frame construction, totaling ~1020 SF Year of Construction: 1928Name of Individual Doing Testing: Dan Sullivan CT DPH Lic# 2131CO-57 Date Source Installed: October 30th 2012 Software version # N/A Serial # 1647

Test #	Clock Time	NIST Calibration Standard	Results QM (mg/CM2)
1	10 <sup>22</sup> am	NIST SRM 2573 Red	1.0
2	10 <sup>23</sup> am	NIST SRM 2573 Red	1.0
3	10 <sup>24</sup> am	NIST SRM 2573 Red	1.0
65	11 <sup>14</sup> a.m.	NIST SRM 2573 Red	1.0
66	11 <sup>15</sup> a.m.	NIST SRM 2573 Red	1.0
67	11 <sup>16</sup> a.m.	NIST SRM 2573 Red	1.0
		NIST SRM 2573 Red	
		NIST SRM 2573 Red	
68	10 <sup>23</sup> am	NIST SRM 2570 White (Blank)	0.2
69	11 <sup>17</sup> am	NIST SRM 2570 White (Blank)	-0.1

Note: each entry represents a single test on the surface indicated.

- Acceptance limits for calibration are 0.7-1.3.
- 1.0 mg/cm<sup>2</sup> or higher = lead based paint (LBP)
- All values run under Quick Mode (QM), unless noted otherwise under comments above.
- Calibration std SRM 2573 has 1.0 mg/cm<sup>2</sup> of lead, expiration of std is 7/1/20.
- DEF under comments means the surface has defective lead based paint

INSPECTOR SIGNATURE/Date/REVIEWED BY/Date: Dan Sullivan, 4/30/14, DA, 5-15-14

Site Name: Site 011Date of Inspection: 4/30/2014Site Address: 17 Elaine Road, Milford, CTCS# 183-100Work Area: ThroughoutPage 2 of 4

Test # / Side	Int/Ext	Room #	Component	Defective (Y/N)	Color	Substrate	Results QM (mg/CM2)	LPB (Y/N)
5 A	Int	1-8	wall	Y	beige	SR	-0.3	N
6	"	"	"	"	"	"	-0.3	N
7	"	"	"	"	stand	wood	-0.0	N
8	"	"	"	"	"	"	-0.4	N
9	"	"	floor	"	"	"	-0.1	N
10	"	"	"	"	"	"	-0.3	N
11 A	"	"	upper trim	"	off white	wood	-0.4	N
12	"	"	"	"	"	"	-0.1	N
13	"	"	door	"	"	"	-0.2	N
14	"	"	"	"	"	"	-0.0	N
15	"	"	door frame	"	white	wood	-0.1	N
16	"	"	<sup>2w</sup> door stop	"	"	"	-0.1	N
17	"	"	door stop	"	"	"	-0.0	N
18	"	"	"	"	"	"	-0.0	N
19 B	"	"	wall	"	beige	SR	0.1	N
20	"	"	"	"	"	"	0.0	N
21 A	"	"	window casing	"	white	wood	+9.1	Y
22	"	"	"	"	"	"	9.4	Y
23	"	"	window sill	"	"	"	>9.9	Y
24	"	"	"	"	"	"	>9.9	Y
25	"	"	window apron	"	"	"	>9.9	Y
26 A	"	"	radiometer cover	N	white	metal	-0.1	N
27 C	"	"	wall trim	"	"	wood	>9.9	Y
28 A	"	1-7	wall	"	lt gray	SR	-0.3	N
29 B	"	"	wall	"	Dark gray	SR	-0.1	N
30 A	"	"	wood baseboard	Y	white	wood	-0.2	N
31 A	"	"	floor	"	stand	wood	-0.1	N

Signature: Alan SuleDate: 4/30/14

Site Name: Site 011Date of Inspection: 4/30/2014Site Address: 17 Elaine Road, Milford, CTCS# 183-100Work Area: ThroughoutPage 3 of 9

Test #/ Side	Int/Ext	Room #	Component	Defective (Y/N)	Color	Substrate	Results QM (mg/CM2)	LPB (Y/N)
32 A	Int	1-6	wall	Y	beige	SR	-0.3	N
33	"	"	ceiling	"	white	SR	0.0	N
34 A	"	"	base board	"	stain	wood	-0.1	N
35	"	"	door casing	"	"	"	-0.1	N
36	"	"	door frame	"	"	"	-0.1	N
37	"	"	door stop	"	"	"	-0.3	N
38	"	"	door	"	"	"	-0.2	N
39 D	"	"	wall	"	green	SR <sup>2w 4/30</sup> wood	1.7	Y
40	"	"	chairrail	"	white	wood	-0.0	N
41 A	"	1-6cl	wall	"	off white	wood	-0.1	N
42	"	1-5	ceiling	"	"	SR	-0.1	N
43 A	"	"	panel	"	stain	wood	-0.1	N
44	"	"	wall	"	beige	SR	-0.1	N
45 B	"	"	wall	"	off white	SR wood	> 9.9	Y
46 B	"	"	ceiling	N	"	FB	> 9.9	Y
47 D	"	"	window apron	N	"	wood	8.7	Y
48 C	"	1-4	wall	Y	pink	SR	-0.4	N
49 C	"	"	ceiling	"	white	SR	-0.2	N
50 D	"	"	base board	"	stain	wood	0.3	N
51 C	"	"	door	"	"	"	-0.3	N
52 C	"	"	door casing	"	"	"	-0.1	N
53 C	"	"	door frame	"	"	"	-0.1	N
54	"	"	door stop	"	"	"	-0.1	N
55 B	"	1-3	wall	Y	blue	SR	-0.2	N
56 A	"	1-cl	wall	"	off white	wood	-0.1	N
57 B	"	1-3	ceiling	"	"	SR	-0.3	N
58	"	1-3	wall trim	"	white	wood	-0.0	N

Signature: Jan [unclear]Date: 4/30/14



<b>EVALUATING THE QUALITY OF XRF:</b>					
Site Name: Site 011					C 18:00
Site Address: 17 Elaine Road, Milford, CT					Date: 4/30/14
	Location	Original Reading	Retest Reading	Square of Original Reading	Square of Retest Reading
1.	Interior - Room 1-8 - Wall - Side A	-0.3	-0.3	0.09	0.09
2.	Interior - Room 1-8 - Wall - Side A	0.0	-0.4	0.00	0.16
3.	Interior - Room 1-8 - Floor - Side A	-0.1	-0.3	0.01	0.09
4.	Interior - Room 1-8 - Upper Trim - Side A	-0.4	-0.1	0.16	0.01
5.	Interior - Room 1-8 - Door - Side A	-0.2	0.0	0.04	0.00
6.	Interior - Room 1-8 - Door Frame - Side A	-0.1	-0.1	0.01	0.01
7.	Interior - Room 1-8 - Door Stop - Side A	0.0	0.0	0.00	0.00
8.	Interior - Room 1-8 - Wall - Side B	0.1	0.0	0.01	0.00
9.	Interior - Room 1-8 - Window Casing - Side A	9.1	9.4	82.81	88.36
10.	Interior - Room 1-8 - Window Sill - Side A	9.9	9.9	98.01	98.01
<b>Sum of ten squared averages ("C"):</b>				<b>181.14</b>	<b>186.73</b>
<b>"C" times 0.0072 ("D"):</b>				<b>1.304208</b>	<b>1.34446</b>
<b>"D" plus 0.032 ("E"):</b>				<b>1.336208</b>	<b>1.376456</b>
<b>Square root of "E" ("F"):</b>				<b>1.15594</b>	<b>1.173224616</b>
<b>"F" times 1.645 (Retest Tolerance Limit):</b>				<b>1.9015</b>	<b>1.9300</b>
<b>Average of the ten XRF Readings:</b>				<b>1.80</b>	<b>1.81</b>
<b>Absolute difference of the two averages:</b>				<b>0.0100</b>	
<b>If the difference is less than the Retest Tolerance Limit, the inspection has passed the retest.</b>					

## Appendix B Lead in Dust and Soil Sample Analysis Reports

# ChemScope INDUSTRIAL HYGIENE • ENVIRONMENTAL CHEMISTRY

15 Moulthrop Street, North Haven, CT 06473-3686 • Phone (203) 865-5605 • Fax (203) 498-1610

Diversified Technology Consultants  
2321 Whitney Avenue, Suite 301  
Hamden CT 06518

Application #1085  
7/7/2014  
CS# 183-100

## LEAD ANALYSIS BY ATOMIC ABSORPTION

Lead dust wipe and soil samples from Site 011, 17 Elaine Road, Milford CT, collected by ChemScope, Inc., on 6/27/2014:

See attached chain of custody and EAS Analytical Services, Inc., reports for sample descriptions and analytical data; and applicable standards on reverse side of this page.

\*NOTE: The EAS Analytical Services, Inc. report provides the lead soil concentration in mg/kg which is equivalent to ppm (parts per million).

*Suzanne Cristante* or  
*Laboratory Director*  
SC

*Izabela Kremens* or  
*Quality Manager*  
IK

  
*Ronald D. Arena*  
President  
RDA

## LEAD STANDARDS AND GUIDELINES

(Revised 4/2013)

*The following are some existing known standards and guidelines as they relate to lab analysis for lead by AAS. ChemScope assumes no liability for the use of these data. All values are expressed as pure lead, Pb.*

1. Lead in Dust Standards: Connecticut DPH, EPA & HUD:

Dust-Wipe Re-Occupancy Testing:

Floors: 40 micrograms/sq ft

Sills: 250 micrograms/sq ft

Window Wells: 400 micrograms/sq ft

Toxic Level of lead in dry paint: 0.5%

\*NOTE: City of Stamford has a stricter standard of .06%

2. For Air Samples: OSHA PEL (Permissible Exposure Limit) is 50 micrograms/cubic meter and the AL (Action Level) is 30 micrograms/cubic meter.

3. For Soil: 400 PPM is considered contaminated.

*State regulations (CT DEEP RCSA 22a-133K) require lead-contaminated soil to be cleaned up to a concentration of 500 ppm in residential areas and 1,000 ppm in industrial and commercial areas. But in practice the Department of [Energy and] Environmental Protection (DEEP) and state and local health departments apply a 400 ppm standard in residential areas. DEEP has begun the process of adopting the 400 ppm standard in regulation.*

*OLR Research Report, October 11, 2006, 2006-R-0596*

4. For any material to be disposed of: the DEP and EPA Standard for TCLP lead is 5 milligrams/liter. In addition, other substances besides lead may need to be tested which are not in the scope of this test report.

5. Consumer Product Safety Commission: Lead in paint for sale 0.06%.

6. For Drinking Water Samples (First Draw and Fully Flushed samples):

State of Connecticut Action Level: 0.015 mg/l

EPA Action Level: 15 ppb

NOTE: .015 mg/l = 15 ppb



# Eastern Analytical Services, Inc.

## Wipe Sample Report

RE: CPN 183-100 - Diversified Technology Consultants (DTC) - Site 011 - Application 1085 -  
17 Elaine Road - Milford, CT

Date Collected: 06/27/2014  
Collected By: Dan Sullivan  
Date Received: 06/30/2014  
Date Analyzed: 07/01/2014  
Analyzed By: Everton Byron Barrett  
Signature:   
Analyte: Pb Dust  
Analytical Method: EPA 3050B/7000B  
NYS Lab Number: 10851

Client: Chem Scope, Inc.  
15 Moulthrop Street  
North Haven, CT 06473

Sample ID# / Lab ID#	Sample Location	Sample Notes	Concentration
183-100-1D 2296586	1-8 Living Room - Floor	Dust Wipe - 12" x 12" Area	BDL < 12.9 µg/ft <sup>2</sup>
183-100-2D 2296587	1-8 Living Room - Window Sill	Dust Wipe - 3" x 33" Area	86.8 µg/ft <sup>2</sup>
183-100-3D 2296588	1-5 Kitchen - Floor	Dust Wipe - 12" x 12" Area	BDL < 12.9 µg/ft <sup>2</sup>
183-100-4D 2296589	1-5 Kitchen - Window Sill	Dust Wipe - 3" x 28" Area	BDL < 22.1 µg/ft <sup>2</sup>
183-100-5D 2296590	1-1 Bedroom - Floor	Dust Wipe - 12" x 12" Area	BDL < 12.9 µg/ft <sup>2</sup>
183-100-6D 2296591	1-1 Bedroom - Window Sill	Dust Wipe - 3" x 27.5" Area	4971.1 µg/ft <sup>2</sup>
183-100-7D 2296592	1-7 - Floor	Dust Wipe - 12" x 12" Area	BDL < 12.9 µg/ft <sup>2</sup>
183-100-8D 2296593	1-7 - Window Sill	Dust Wipe - 3" x 19" Area	BDL < 32.5 µg/ft <sup>2</sup>
183-100-9D 2296594	1-2 - Side Foyer - Floor	Dust Wipe - 12" x 12" Area	15.8 µg/ft <sup>2</sup>

BDL = Below Detectable Limits Reporting Limit = 0.3 ppm

Liability Limited to Cost of Analysis

Results Applicable to Those Items Tested Results are Not Blank Corrected All QC within Control Limits Unless Otherwise Indicated

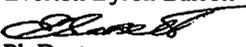
AIHA Accreditation No. 100263 Rhode Island DOH No. AAL-072T3 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AAS-2095



# Eastern Analytical Services, Inc.

## Wipe Sample Report

RE: CPN 183-100 - Diversified Technology Consultants (DTC) - Site 011 - Application 1085 -  
17 Elaine Road - Milford, CT

Date Collected: 06/27/2014  
Collected By: Dan Sullivan  
Date Received: 06/30/2014  
Date Analyzed: 07/01/2014  
Analyzed By: Everton Byron Barrett  
Signature:   
Analyte: Pb Dust  
Analytical Method: EPA 3050B/7000B  
NYS Lab Number: 10851

Client: Chem Scope, Inc.  
15 Moulthrop Street  
North Haven, CT 06473

Sample ID# / Lab ID#	Sample Location	Sample Notes	Concentration
183-100-10D 2296595	Not Applicable	Field Blank	BDL < 12.9 µg
183-100-11D 2296596	Not Applicable	Field Blank	BDL < 12.9 µg

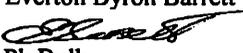
BDL = Below Detectable Limits Reporting Limit = 0.3 ppm  
Liability Limited to Cost of Analysis  
Results Applicable to Those Items Tested Results are Not Blank Corrected All QC within Control Limits Unless Otherwise Indicated  
AIHA Accreditation No. 100263 Rhode Island DOH No. AAL-072T3 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AAS-2095



# Eastern Analytical Services, Inc.

## Bulk Sample Report

RE: CPN 183-100 - Diversified Technology Consultants (DTC) - Site 011 - Application 1085 -  
17 Elaine Road - Milford, CT

Date Collected: 06/27/2014  
Collected By: Dan Sullivan  
Date Received: 06/30/2014  
Date Analyzed: 07/01/2014  
Analyzed By: Everton Byron Barrett  
Signature:   
Analyte: Pb Bulk  
Analytical Method: EPA 3050B/7000B  
NYS Lab Number: 10851

Client: Chem Scope, Inc.  
15 Moulthrop Street  
North Haven, CT 06473

Sample ID# / Lab ID#	Sample Location	Sample Notes	Concentration
183-100-1S 2296597	Side B	2 Feet from Side B at A Corner	1050.3 mg/kg 0.11 %
183-100-2S 2296598	Side C	2 Feet from Side D of Mech. Room, 8 Feet from Side C of House	373.7 mg/kg 0.04 %
183-100-3S 2296599	Side C	30 Feet from Window 1 of 1-1 Bedroom	127.6 mg/kg 0.01 %

BDL = Below Detectable Limits Reporting Limit = 0.3 ppm  
Liability Limited to Cost of Analysis

Results Applicable to Those Items Tested Results are Not Blank Corrected All QC within Control Limits Unless Otherwise Indicated Soil Samples Reported on Dry Weight Basis - Paint Samples Reported as Received  
AIHA Accreditation No. 100263 Rhode Island DOH No. AAL-072T3 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No. AAS-2095

PO#1264

CHAIN OF CUSTODY

Emailed \_\_\_\_\_  
 Faxed \_\_\_\_\_  
 Called \_\_\_\_\_  
 Logged

Site 011, Application #1085

Sample Source: 17 Elaine Road, Milford, CT

CS Job CS# 183-100

Sampled by: Dan Sullivan Date Sampled: 6/27/14 Customer Name: Diversified Technology Consultants (DTC) -

CS Sample#	Room# Client Sample#	Sample Description	Comments
183-100-1D	1-8 Living Room	Floor 12"x12" on hardwood	1.0 $\mu\text{g}/\text{ft}^2$
-2D	"	Sill 3"x33" on white painted sill	0.69 $\mu\text{g}/\text{ft}^2$
-3D	1-5 Kitchen	Floor 12"x12" on 12x12 Floor tile	1.0 $\mu\text{g}/\text{ft}^2$
-4D	"	Sill 3"x28" on wood stain sill	0.58 $\mu\text{g}/\text{ft}^2$
-5D	1-1 Bedroom	Floor 12"x12" on grey carpet floor	1.0 $\mu\text{g}/\text{ft}^2$
-6D	"	Sill 3"x27.5" on white painted sill	0.57 $\mu\text{g}/\text{ft}^2$
-7D	1-7	Floor 12"x12" on hardwood	1.0 $\mu\text{g}/\text{ft}^2$
-8D	1-7	Sill 3"x19" on white wood sill side D	0.40 $\mu\text{g}/\text{ft}^2$
-9D	1-2 Side Foyer	Floor 12"x12" on ceramic tile floor	1.0 $\mu\text{g}/\text{ft}^2$
-10D	-	Blank	-
-11D	-	Blank	-
183-100-1S	Side B	2' from Side B at A corner	2" deep
-2S	Side C	2' from Side D of Mech Rm, 8' from side of hallway	2" deep
-3S	Side C	3' from window of 1-1 Bedroom	2" deep

} Lead in Dust  
 } Lead in Soil

Sample Turnaround: 96-hr

Analysis Requested (if variable, use comment column) Lead in Dust ( $\mu\text{g}/\text{ft}^2$ ) / Lead in Soil (ppm)

Check if you want sample returned \_\_\_\_\_ (sampled will be disposed of after 30 days).

Relinquished by Dan Sullivan Date 6/27/14 Time 5:30 pm Received by Fed Ex  
 Relinquished by \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_ Received by \_\_\_\_\_

Other Special Instructions: email to sullivan.chemscope@snet.net

Result Transmittal Instructions (for Chem Scope to transmit): Tell OS for report

**FOR CHEM SCOPE, INC. TO FILL OUT IF SAMPLES ARE GOING TO OUTSIDE LAB:**

Name of Laboratory: EAS Method of Transportation to Laboratory: Fed Ex

Result Transmittal Instructions (for outside Lab to Chem Scope, Inc): PLEASE FAX RESULTS

The person submitting samples is responsible for obtaining true and representative samples, for complying with applicable regulations and for the use of the data obtained from the analysis. For example, many states have licensing and laboratory approval requirements. Please contact the individual states if you have any questions regarding specific sampling or approval requirements. For Connecticut sites, we have licensed inspectors available to collect client samples and to perform building inspections.

**Dear Laboratory Customer or Potential Customer,**

New laboratory accreditation standards require us to provide our clients information about our services to make sure that your requirements for testing are adequately defined, documented and understood. The following is for your information. Please call us if you have any questions or comments.

**Type of Samples:**

- / / PCM cassettes are routinely run by NIOSH Method 7400.
- / / Bulk materials are run by EPA Method: #600/R-93/116.

**Air Samples:** NIOSH 7400 Method counts all fibers. This method may be used for personal air samples and for finals. Two field blanks must be submitted for each set of samples. In the unlikely event that there is to be any deviation from the standard test, you will be consulted by phone before the work begins. Those clients who have not had NIOSH 582 or AHERA asbestos training courses (either supervisor or project monitor) should consult with the lab director for more information. The test parameters are further explained in the analytical report.

**Bulk materials:** sampled are analyzed by the latest EPA Method: (#600/R-93/116) which uses polarized light microscopy (PLM). When asbestos is detected and the amount is estimated to be <10%, we automatically point count the samples. When there are interfering substances present, we may use ashing, acid washing or other procedures described in the method to handle the interference. Those clients who have not had AHERA asbestos training courses (either inspector, supervisor or project designer) should consult with the lab director for more information. The test parameters are further explained in the analytical report.

**All Samples** must be clearly labeled with source name and identification number or sufficient information from the client to make this sample uniquely identified. (We will then add our notebook #, page # (batch) and unique number within the batch.) Samples must be in a clean, air tight package such as a zip loc bag. Appropriate completed paperwork must accompany the sample. Bulk and air samples may not be submitted in the same package.

As soon as available bench top results will be faxed to you and reports will then be mailed. We will retain air samples for at least three months and bulk samples for 6 months unless you advise us otherwise.

You are welcome to visit the laboratory at any time to discuss the work, monitor the work or verify our testing services. We appreciate your business and encourage any feedback regarding improving our services or our quality system. Please take a minute to complete the following survey and mail/fax it to ChemScope, Inc.

**Customer Service Survey**

To help us improve our services give your opinions to the following:

- 1- The printed laboratory report was complete and easy to understand.  YES  NO  
If no, please explain \_\_\_\_\_.
- 2- The turn around time for results met your expectations/needs.  YES  NO  
If no, please explain \_\_\_\_\_.
- 3- How likely are you to recommend ChemScope Inc. to someone?  
 Excellent  Very Good  Good  Fair  Poor
- 4- How likely are you to return to ChemScope in the future if the need arises?  
 Excellent  Very Good  Good  Fair  Poor
5. On a scale of 1 to 5 where 1 represents "Satisfied" and 5 represents "Dissatisfied", how would you rate your level of overall satisfaction.  
 1  2  3  4  5
- 6- Please add any additional comments or suggestions that would be helpful when you use our services:

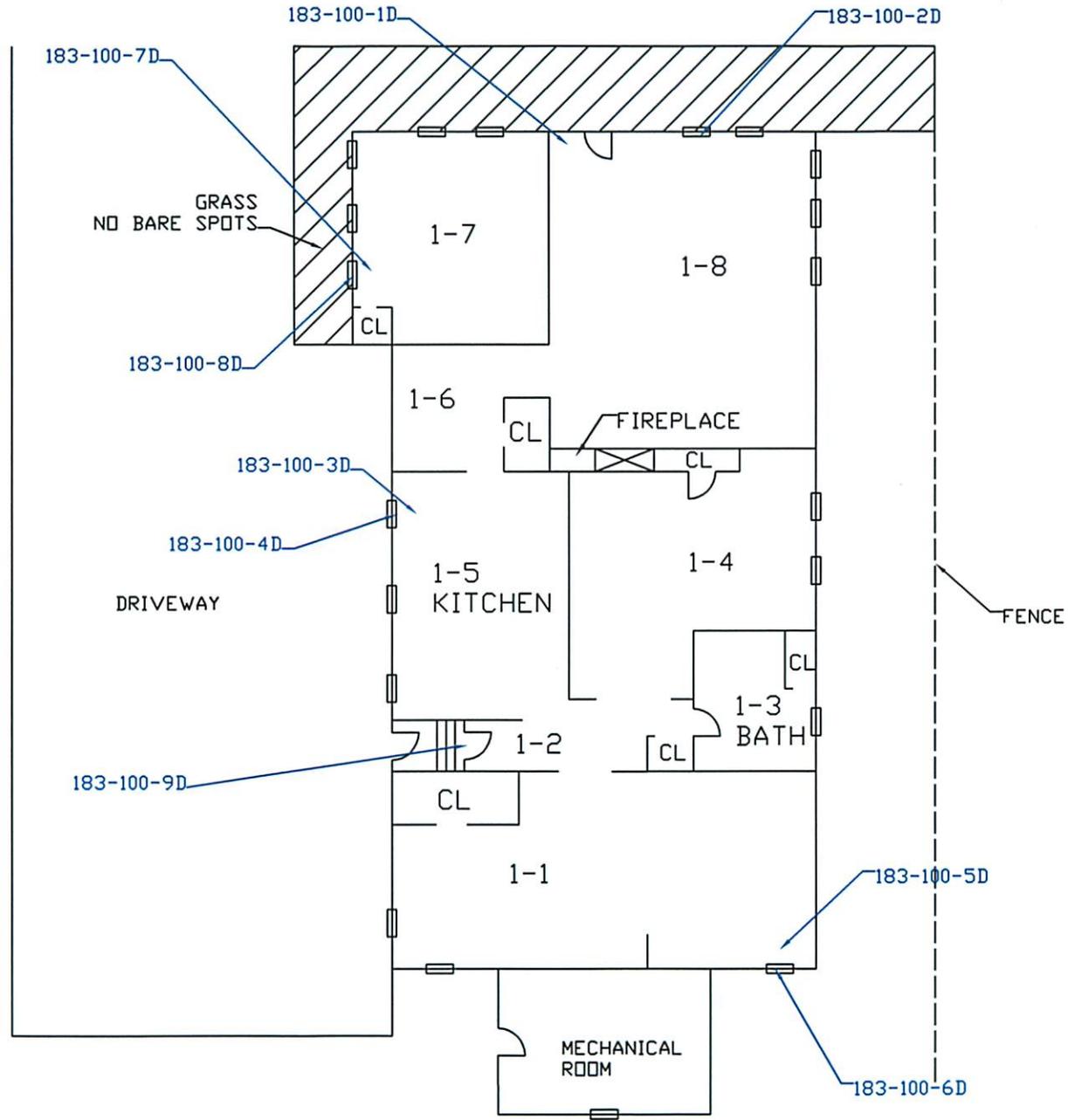
Name \_\_\_\_\_ Company \_\_\_\_\_  
Address \_\_\_\_\_ Telephone/e-mail \_\_\_\_\_

Can we contact you regarding this survey?  YES  NO

## Appendix C Sample Location Drawings

# ChemScope Inc.

Site 011  
 17 Elaine Road, Milford, CT  
 Main Floor  
 CS# 183-100, 6-27-2014



### LEGEND OF SYMBOLS

ID	LEAD DUST SAMPLE

### NOTATIONS

DRAWN BY:  
 LEIGH HONOROF

**ChemScope Inc.**

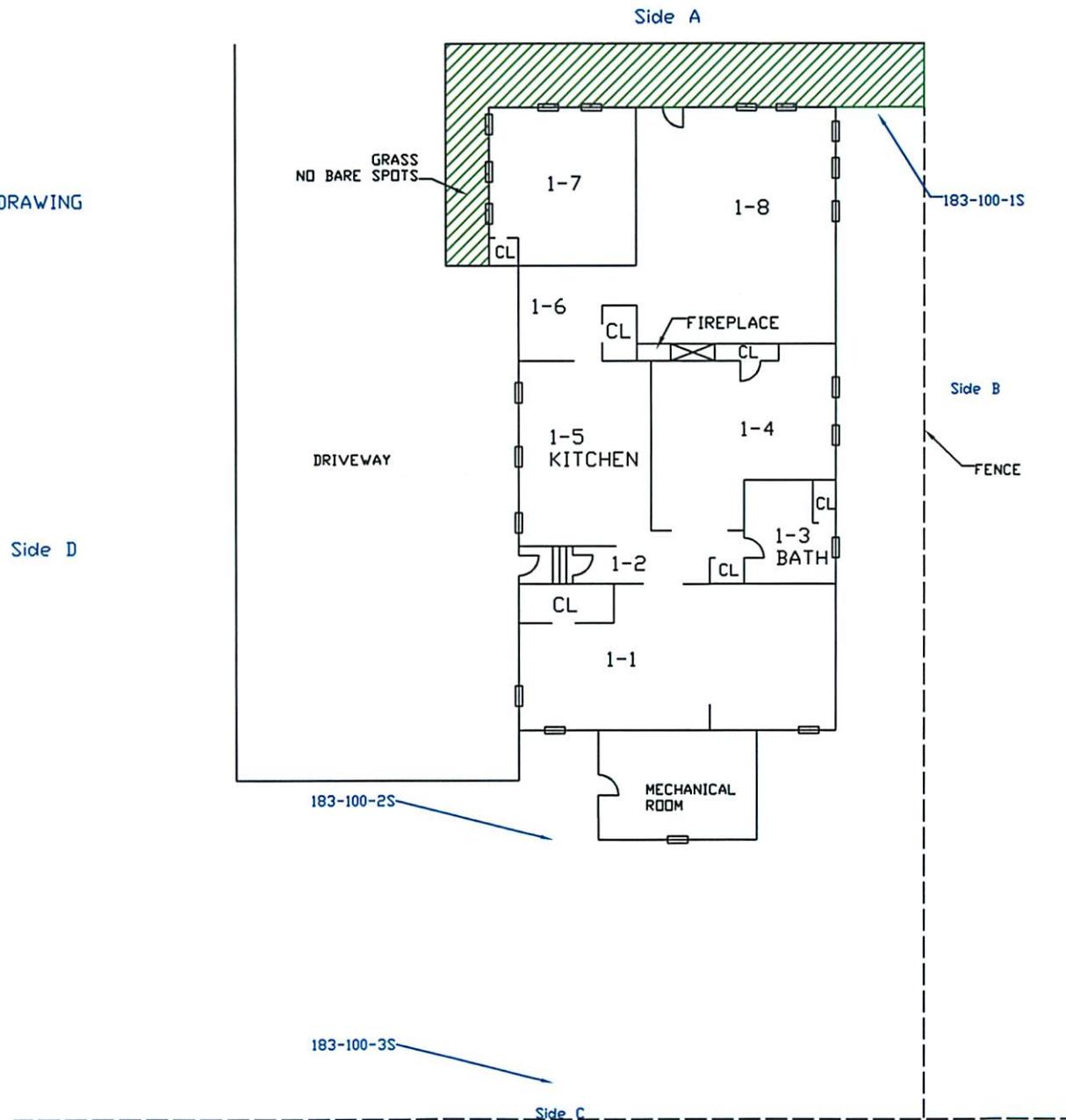
SHEET TITLE:  
**LEAD RISK ASSESSMENT**  
 17 ELAINE RD  
 MILFORD, CT  
 MAIN FLOOR

CHEMSCOPE NUMBER: CS# 183-100	DRAWING NUMBER
SCALE NOT TO SCALE	<b>1 D</b>
DATE 6/27/14	

# ChemScope Inc.

Site 011  
 17 Elaine Road, Milford, CT  
 Main Floor  
 CS# 183-100, 6-27-2014

## LEAD IN SOIL SAMPLES LOCATION DRAWING



LEGEND OF SYMBOLS	
1S	LEAD SOIL SAMPLE
	Areas of grass without bare spots

NOTATIONS

DRAWN BY:  
**LEIGH HONOROF**

**ChemScope Inc.**

SHEET TITLE:  
**LEAD RISK ASSESSMENT**  
**17 ELAINE RD**  
**MILFORD, CT**  
**MAIN FLOOR**

CHEMSCOPE NUMBER: CS# 183-100	DRAWING NUMBER
SCALE NOT TO SCALE	<b>1S</b>
DATE 6/27/14	

## Appendix D Hazardous Waste Evaluation Worksheet

Site Name: Site 011, Application # 1085  
 Site Address: 17 Elaine Road, Milford CT

CS# 183-100  
 Date: 4/30/2014

Building Component	Average XRF Readings		Material Mass g/cm <sup>2</sup>	mg Lead/kg of Mass		Component Est % of Mass	Weighting Factor	Weighting Factor x mg/kg of lead	
	w/ hot spots	w/o hot spots		w/hot spots	w/o hot spots			w/ hot spots	w/o hot spots
Painted Wood	3.56	0.00	0.6	5933.3	0.0	15	0.15	890.0	0.0
Sheetrock	0.00	0.00	0.45	0.0	0.0	30	0.30	0.0	0.0
Unpainted Wood	0.00	0.00	0.6	0.0	0.0	35	0.35	0.0	0.0
Ceiling Tile	9.9	0.00	0.35	28285.7	0.0	15	0.15	4242.9	0.0
Metal	recycle	recycle				5	0.10	0.0	0.0
						Total 100	Total*	5132.9	0.0

\*Compared to criterion of > 100 mg/kg lead - (DEEP: "Guidance for the Management and Disposal of Lead-Contaminated Materials Generated in the Lead Abatement, Renovation and Demolition Industries" (11/4/94)

A value by this method of >100 mg/kg lead indicates the material is potentially a hazardous waste.

**NOTES:**

Wood Trim 3/4" = .60 g/cm2

SR 5/8" = .45 g/cm2

Plaster (typical two coat) = 1 g/cm2

Brick (one course - 2 1/4") = 32 g/cm2

Brick (two course - 4 1/2") = 64 g/cm2

Concrete 4" = 60 g/cm2

Cinder Block 5" = 60 g/cm2

Ceramic Tile (typical floor) = 1.3 g/cm2

Ceramic Tile (typical wall) = 1.5 g/cm2

Linoleum = 0.2 g/cm2

Carpet = 0.2 g/cm2

**To get g/cm2:**

1. Weight the material and convert to grams (453 g = 1 lb)
2. Measure the material surface in CM to get cm2
3. Grams divided by CM2 = g/cm2

## Appendix E Copy of Risk Assessor's License/Certification

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 RISK ASSESSOR

DANIEL P. SULLIVAN

CERTIFICATION NO.  
002131  
CURRENT THROUGH  
04/30/15  
VALIDATION NO.  
03-790779

  
SIGNATURE

  
COMMISSIONER

CERT# L-600 - 763

**CHEMSCOPE TRAINING DIVISION**  
**LEAD INSPECTOR/RISK ASSESSOR REFRESHER**  
**8HOUR TRAINING CERTIFICATE**

**Daniel P. Sullivan**  
**15 Moulthrop Street , North Haven CT**

Has attended an 8 hour course on the subject discipline on  
11/08/2013 and has passed a written and hands on skills examination.

The above individual has successfully completed the above training course approved in accordance with the Department of Public Health Standards established pursuant to Section 20-477 of the Connecticut General Statutes.

Course syllabus includes all required topics of State of Connecticut DPH and EPA.

**Examination Date: 11/08/2013**

**Expiration Date: 11/08/2014**

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.



Ronald D. Arena or Brian Santos  
Training Director Training Manager

Chem Scope, Inc.  
15 Moulthrop Street  
North Haven CT 06473  
(203) 865-5605

**Appendix F Copy of Firm's Lead Activity License/Certification**

**STATE OF CONNECTICUT**  
**DEPARTMENT OF PUBLIC HEALTH**

PURSUANT TO THE PROVISIONS OF THE GENERAL STATUTES OF CONNECTICUT

THE INDIVIDUAL NAMED BELOW IS LICENSED  
BY THIS DEPARTMENT AS A  
**LEAD CONSULTANT CONTRACTOR**

CHEMSCOPE INC

LICENSE NO  
**000164**

CURRENT THROUGH  
**07/31/15**

VALIDATION NO.  
**03-847539**

  
SIGNATURE

  
COMMISSIONER



**Connecticut Department of  
Energy & Environmental Protection**  
79 Elm Street  
Hartford, CT 06106-5127  
[www.ct.gov/deep](http://www.ct.gov/deep)

**CHEM SCOPE, INC.**  
**15 MOULTHROP STREET**  
**NORTH HAVEN, CT 06473**

**12/30/2013**

**Dear Registrant:**

**Enclosed is a Certificate of Use for the Radioactive Materials and Industrial X-Ray Device Registration submitted by your facility to the department.**

**This certificate will serve two purposes. First, this is a way for us to acknowledge to you that your registration has been processed. Second, it is a way for our inspection staff to know that you have the appropriate registration for your radioactive materials and equipment.**

**The Radioactive Materials and Industrial X-Ray Device Registration must be renewed each year. Notification will be sent to you in the month of November prior to the expiration of this registration to renew your registration.**

**When corresponding with our office regarding your registration please use the "Application No." indicated on the certificate. This number is unique to your facility and its location.**

**If you have any questions regarding the Radioactive Materials and Industrial X-Ray Device Registration please feel free to call the Radiation Division at 860-424-3029.**

**Enclosure**



**Connecticut Department of  
Energy & Environmental Protection**  
79 Elm Street  
Hartford, CT 06106-5127  
[www.ct.gov/deep](http://www.ct.gov/deep)

# **Certificate of Use**

**Issued To**

**CHEM SCOPE, INC.**

**For**

**Radioactive Material and Industrial X-Ray Device Registration**

**Daniel C. Esty  
Commissioner**

**Site Located at:  
15 Moulthrop St,  
North Haven, CT 06473  
Reference: 0808-2014**

**Application No: 201306468  
Issue Date: 12/24/2013  
Expiration Date: 12/31/2014**

**Appendix G Copy of XRF Training Certificate and XRF Performance  
Characteristics Sheet**

# Certificate of Achievement

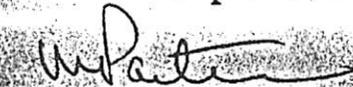
This is to certify that

Daniel P. Sullivan  
of Chem Scope

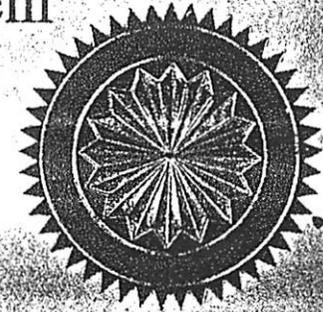
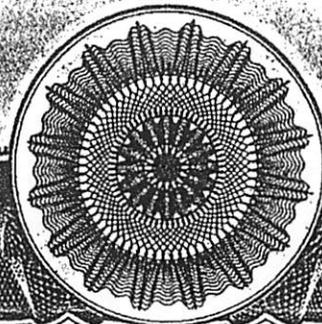
on the 2nd day of December 1994 successfully completed the factory training for

**RMD's LPA-1 Lead Paint Inspection System**

including, but not limited to, the topics of Radiation Safety  
and the Proper Use of the Instrument.



Jacob Paster, Vice-President of RMD  
44 Hunt St., Watertown, Massachusetts



## Performance Characteristic Sheet

EFFECTIVE DATE: December 1, 2006

EDITION NO.: 5

### MANUFACTURER AND MODEL:

Make: **Radiation Monitoring Devices**Model: **LPA-1**Source: **<sup>57</sup>Co**

Note: This sheet supersedes all previous sheets for the XRF instrument of the make, model, and source shown above **for instruments sold or serviced after June 26, 1995. For other instruments, see prior editions.**

### FIELD OPERATION GUIDANCE

#### OPERATING PARAMETERS:

Quick mode or 30-second equivalent standard (Time Corrected) mode readings.

#### XRF CALIBRATION CHECK LIMITS:

0.7 to 1.3 mg/cm <sup>2</sup> (inclusive)
---

#### SUBSTRATE CORRECTION:

For XRF results below 4.0 mg/cm<sup>2</sup>, substrate correction is recommended for:

Metal using 30-second equivalent standard (Time Corrected) mode readings.  
None using quick mode readings.

Substrate correction is not needed for:

Brick, Concrete, Drywall, Plaster, and Wood using 30-second equivalent standard (Time Corrected) mode readings  
Brick, Concrete, Drywall, Metal, Plaster, and Wood using quick mode readings

#### THRESHOLDS:

30-SECOND EQUIVALENT STANDARD MODE READING DESCRIPTION	SUBSTRATE	THRESHOLD (mg/cm <sup>2</sup> )
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/cm <sup>2</sup> )
Readings not corrected for substrate bias on any substrate	Brick	1.0
	Concrete	1.0
	Drywall	1.0
	Metal	1.0
	Plaster	1.0
	Wood	1.0

## BACKGROUND INFORMATION

### EVALUATION DATA SOURCE AND DATE:

This sheet is supplemental information to be used in conjunction with Chapter 7 of the HUD *Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing* ("HUD Guidelines"). Performance parameters shown on this sheet are calculated from the EPA/HUD evaluation using archived building components. Testing was conducted on approximately 150 test locations in July 1995. The instrument that performed testing in September had a new source installed in June 1995 with 12 mCi initial strength.

### OPERATING PARAMETERS:

Performance parameters shown in this sheet are applicable only when properly operating the instrument using the manufacturer's instructions and procedures described in Chapter 7 of the HUD Guidelines.

### XRF CALIBRATION CHECK:

The calibration of the XRF instrument should be checked using the paint film nearest 1.0 mg/cm<sup>2</sup> in the NIST Standard Reference Material (SRM) used (e.g., for NIST SRM 2579, use the 1.02 mg/cm<sup>2</sup> film).

If readings are outside the acceptable calibration check range, follow the manufacturer's instructions to bring the instruments into control before XRF testing proceeds.

### SUBSTRATE CORRECTION VALUE COMPUTATION :

Chapter 7 of the HUD Guidelines provides guidance on correcting XRF results for substrate bias. Supplemental guidance for using the paint film nearest 1.0 mg/cm<sup>2</sup> for substrate correction is provided:

XRF results are corrected for substrate bias by subtracting from each XRF result a correction value determined separately in each house for single-family housing or in each development for multifamily housing, for each substrate. The correction value is an average of XRF readings taken over the NIST SRM paint film nearest to 1.0 mg/cm<sup>2</sup> at test locations that have been scraped bare of their paint covering. Compute the correction values as follows:

Using the same XRF instrument, take three readings on a bare substrate area covered with the NIST SRM paint film nearest 1 mg/cm<sup>2</sup>. Repeat this procedure by taking three more readings on a second bare substrate area of the same substrate covered with the NIST SRM.

Compute the correction value for each substrate type where XRF readings indicate substrate correction is needed by computing the average of all six readings as shown below.

For each substrate type (the 1.02 mg/cm<sup>2</sup> NIST SRM is shown in this example; use the actual lead loading of the NIST SRM used for substrate correction):

$$\text{Correction value} = (1^{\text{st}} + 2^{\text{nd}} + 3^{\text{rd}} + 4^{\text{th}} + 5^{\text{th}} + 6^{\text{th}} \text{ Reading}) / 6 - 1.02 \text{ mg/cm}^2$$

Repeat this procedure for each substrate requiring substrate correction in the house or housing development.

### EVALUATING THE QUALITY OF XRF TESTING:

Randomly select ten testing combinations for retesting from each house or from two randomly selected units in multifamily housing. Use either the Quick Mode or 30-second equivalent standard (Time Corrected) Mode readings.

Conduct XRF re-testing at the ten testing combinations selected for retesting.

Determine if the XRF testing in the units or house passed or failed the test by applying the steps below.

Compute the Retest Tolerance Limit by the following steps:

Determine XRF results for the original and retest XRF readings. Do not correct the original or retest results for substrate bias. In single-family and multi-family housing, a result is defined as a single reading. Therefore, there will be ten original and ten retest XRF results for each house or for the two selected units.

Calculate the average of the original XRF result and retest XRF result for each testing combination.

Square the average for each testing combination.

Add the ten squared averages together. Call this quantity C.

Multiply the number C by 0.0072. Call this quantity D.

Add the number 0.032 to D. Call this quantity E.

Take the square root of E. Call this quantity F.

Multiply F by 1.645. The result is the Retest Tolerance Limit.

Compute the average of all ten original XRF results.

Compute the average of all ten re-test XRF results.

Find the absolute difference of the two averages.

If the difference is less than the Retest Tolerance Limit, the inspection has passed the retest. If the difference of the overall averages equals or exceeds the Retest Tolerance Limit, this procedure should be repeated with ten new testing combinations. If the difference of the overall averages is equal to or greater than the Retest Tolerance Limit a second time, then the inspection should be considered deficient.

Use of this procedure is estimated to produce a spurious result approximately 1% of the time. That is, results of this procedure will call for further examination when no examination is warranted in approximately 1 out of 100 dwelling units tested.

#### **BIAS AND PRECISION:**

Do not use these bias and precision data to correct for substrate bias. These bias and precision data were computed without substrate correction from samples with reported laboratory results less than 4.0 mg/cm<sup>2</sup> lead. The data which were used to determine the bias and precision estimates given in the table below have the following properties. During the July 1995 testing, there were 15 test locations with a laboratory-reported result equal to or greater than 4.0 mg/cm<sup>2</sup> lead. Of these, one 30-second standard mode reading was less than 1.0 mg/cm<sup>2</sup> and none of the quick mode readings were less than 1.0 mg/cm<sup>2</sup>. The instrument that tested in July is representative of instruments sold or serviced after June 26, 1995. These data are for illustrative purposes only. Actual bias must be determined on the site. Results provided above already account for bias and precision. Bias and precision ranges are provided to show the variability found between machines of the same model.

30-SECOND STANDARD MODE READING MEASURED AT	SUBSTRATE	BIAS (mg/cm <sup>2</sup> )	PRECISION* (mg/cm <sup>2</sup> )
0.0 mg/cm <sup>2</sup>	Brick	0.0	0.1
	Concrete	0.0	0.1
	Drywall	0.1	0.1
	Metal	0.3	0.1
	Plaster	0.1	0.1
	Wood	0.0	0.1
0.5 mg/cm <sup>2</sup>	Brick	0.0	0.2
	Concrete	0.0	0.2
	Drywall	0.0	0.2
	Metal	0.2	0.2
	Plaster	0.0	0.2
	Wood	0.0	0.2
1.0 mg/cm <sup>2</sup>	Brick	0.0	0.3
	Concrete	0.0	0.3
	Drywall	0.0	0.3
	Metal	0.2	0.3
	Plaster	0.0	0.3
	Wood	0.0	0.3
2.0 mg/cm <sup>2</sup>	Brick	-0.1	0.4
	Concrete	-0.1	0.4
	Drywall	-0.1	0.4
	Metal	0.1	0.4
	Plaster	-0.1	0.4
	Wood	-0.1	0.4

\*Precision at 1 standard deviation.

#### CLASSIFICATION RESULTS:

XRF results are classified as positive if they are greater than the upper boundary of the inconclusive range, and negative if they are less than the lower boundary of the inconclusive range, or inconclusive if in between. The inconclusive range includes both its upper and lower bounds. Earlier editions of this *XRF Performance Characteristic Sheet* did not include both bounds of the inconclusive range as "inconclusive." While this edition of the Performance Characteristics Sheet uses a different system, the specific XRF readings that are considered positive, negative, or inconclusive for a given XRF model and substrate remain unchanged, so previous inspection results are not affected.

#### DOCUMENTATION:

An EPA document titled *Methodology for XRF Performance Characteristic Sheets* provides an explanation of the statistical methodology used to construct the data in the sheets, and provides empirical results from using the recommended inconclusive ranges or thresholds for specific XRF instruments. For a copy of this document call the National Lead Information Center Clearinghouse at 1-800-424-LEAD. A HUD document titled *A Nonparametric Method for Estimating the 5th and 95th Percentile Curves of Variable-Time XRF Readings Based on Monotone Regression* provides supplemental information on the methodology for variable-time XRF instruments. A copy of this document can be obtained from the HUD lead web site, [www.hud.gov/offices/lead](http://www.hud.gov/offices/lead).

This XRF Performance Characteristic Sheet was developed by QuanTech, Inc., under a contract from the U.S. Department of Housing and Urban Development (HUD). HUD has determined that the information provided here is acceptable when used as guidance in conjunction with Chapter 7, Lead-Based Paint Inspection, of HUD's *Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing*.

## Appendix H "LEAD SPEAK" – A Brief Glossary

**Abatement:** A measure or set of measures designed to permanently eliminate lead-based paint hazards or lead-based paint. Abatement strategies include the removal of lead-based paint, enclosure, encapsulation, replacement of building components coated with lead-based paint, removal of lead-contaminated dust, and removal of lead-contaminated soil or overlaying of soil with a durable covering such as asphalt (grass and sod are considered interim control measures). All of these strategies require preparation; cleanup; waste disposal; post-abatement clearance testing; recordkeeping; and, if applicable, monitoring. (For full EPA definition, see 40 CFR 745.223).

**Bare soil:** Soil not covered with grass, sod, some other similar vegetation, or paving, including the sand in sandboxes.

**Chewable surface:** An interior or exterior surface painted with lead-based paint that a young child can mouth or chew. A chewable surface is the same as an “accessible surface” as defined in 42 U.S.C. 4851b(2). Hard metal substrates and other materials that cannot be dented by the bite of a young child are not considered chewable.

**Deteriorated paint:** Any paint coating on a damaged or deteriorated surface or fixture, or any interior or exterior lead-based paint that is peeling, chipping, blistering, flaking, worn, chalking, alligating, cracking, or otherwise becoming separated from the substrate.

**Dripline/foundation area:** The area within 3 feet out from the building wall and surrounding the perimeter of a building.

**Dust-lead hazard:** Surface dust in residences that contains an area or mass concentration of lead equal to or in excess of the standard established by the EPA under Title IV of the Toxic Substances Control Act. EPA standards for dust-lead hazards, which are based on wipe samples, are published at 40 CFR 745.65(b); as of the publication of this edition of these *Guidelines*, these are 40 µg/ft<sup>2</sup> on floors and 250 µg/ft<sup>2</sup> on interior windowsills. Also called lead-contaminated dust.

**Friction surface:** Any interior or exterior surface, such as a window or stair tread, subject to abrasion or friction.

**Garden area:** An area where plants are cultivated for human consumption or for decorative purposes.

**Impact surface:** An interior or exterior surface (such as surfaces on doors) subject to damage by repeated impact or contact.

**Interim controls:** A set of measures designed to temporarily reduce human exposure or possible exposure to lead-based paint hazards. Such measures include, but are not limited to, specialized cleaning, repairs, maintenance, painting, temporary containment, and the establishment and operation of management and resident education programs. Monitoring, conducted by owners, and reevaluations, conducted by professionals, are integral elements of interim control. Interim controls include dust removal; paint film stabilization; treatment of friction and impact surfaces; installation of soil coverings, such as grass or sod; and land use controls. Interim controls that disturb painted surfaces are renovation activities under EPA’s Renovation, Repair and Painting Rule.

**Lead-based paint:** Any paint, varnish, shellac, or other coating that contains lead equal to or greater than 1.0 mg/cm<sup>2</sup> as measured by XRF or laboratory analysis, or 0.5 percent by weight (5000 mg/g, 5000 ppm, or 5000 mg/kg) as measured by laboratory analysis. (Local definitions may vary.)

**Lead-based paint hazard:** A condition in which exposure to lead from lead-contaminated dust, lead-contaminated soil, or deteriorated lead-based paint would have an adverse effect on human health (as established by the EPA at 40 CFR 745.65, under Title IV of the Toxic Substances Control Act). Lead-based paint hazards include, for example, **paint-lead hazards, dust-lead hazards, and soil-lead hazards.**

**Paint-lead hazard:** Lead-based paint on a friction surface that is subject to abrasion and where a dust-lead hazard is present on the nearest horizontal surface underneath the friction surface (e.g., the window sill, or floor); damaged or otherwise deteriorated lead-based paint on an impact surface that is caused by impact from a related building component; a chewable lead-based painted surface on which there is evidence of teeth marks; or any other deteriorated lead-based paint in any residential building or child-occupied facility or on the exterior of any residential building or child-occupied facility.

**Play area:** An area of frequent soil contact by children of under age 6 as indicated by, but not limited to, such factors including the following: the presence of outdoor play equipment (e.g., sandboxes, swing sets, and sliding boards), toys, or other children's possessions, observations of play patterns, or information provided by parents, residents, care givers, or property owners.

**Soil-lead hazard:** Bare soil on residential property that contains lead in excess of the standard established by the EPA under Title IV of the Toxic Substances Control Act. EPA standards for soil-lead hazards, published at 40 CFR 745.65(c), as of the publication of this edition of these *Guidelines*, is 400 µg/g in play areas and 1,200 µg/g in the rest of the yard. Also called lead-contaminated soil.

## Appendix I Additional Lead and Lead Safety Resource

## Key Units of Measurement

**Gram (g or gm):** A unit of mass in the metric system. A nickel weighs about 1 gram, as does a 1 cube of water 1 centimeter on each side. A gram is equal to about 35/1000 (thirty-five thousandths of an ounce). Another way to think of this is that about 28.4 grams equal 1 ounce.

**µg (microgram):** A microgram is 1/1000th of a milligram. To put this into perspective, a penny weighs 2 grams. To get a microgram, you would need to divide the penny into 2 million pieces. A microgram is one of those two million pieces.

**µg/dL (microgram per deciliter):** used to measure the level of lead in children's and worker's blood to establish whether intervention is needed. A deciliter is a little less than a half a cup.

**µg/ft<sup>2</sup> (micrograms per square feet):** the unit used to express levels of lead in dust samples. All reports should report levels of lead in dust in µg/ft<sup>2</sup>.

**mg/cm<sup>2</sup> (milligrams per square centimeter):** used to report levels of lead in paint thru XRF testing.

**ppm (parts per million):** Typically used to express the concentrations of lead in soil. Can also be used to express the amount of lead in a surface coating on a mass concentration basis. This measurement can also be shown as: µg/g, mg/kg or mg/l.

**ppb (parts per billion):** Typically used to express the amount of lead found in drinking water. This measurement is also sometimes expressed as: µg/L (micrograms per liter). EPA/HUD Lead-Based Paint and Lead-Based Paint Hazard Standards

**Lead-Based Paint** (may be determined in either of two ways)

- Surface concentration (mass of lead per area) 1.0 µg/cm<sup>2</sup>
- Bulk concentration (mass of lead per volume) 0.5%, 5000 µg/g, or 5000 ppm

### Dust-thresholds for Lead-Contamination

- Floors 40 µg/ft<sup>2</sup>
- Interior Window Sills 250 µg/ft<sup>2</sup>
- Window Troughs (clearance examination only) 400 µg/ft<sup>2</sup>

### Soil-thresholds for Lead Contamination

- Play areas (used by children under age 6) 400 µg/g, or 400 ppm
- Other areas 1200 µg/g, or 1200 ppm

## Resources For Additional Information On Lead-Based Paint And Lead-Based Paint Hazards:

National Lead information Center & Clearinghouse: 1-800-424 LEAD

[www.epa.gov/lead/pubs/nlic.htm](http://www.epa.gov/lead/pubs/nlic.htm)

Centers for Disease Control and Prevention Lead Program: [www.cdc.gov/lead](http://www.cdc.gov/lead) Toll-free

CDC Contact Center: 800-CDC-INFO; TTY 888-232-6348

Consumer Product Safety Commission [www.cpsc.gov](http://www.cpsc.gov) Toll-free consumer hotline: 1-800-638-2772; TTY 301-595-7054

Environmental Protection Agency Lead Program: [www.epa.gov/lead](http://www.epa.gov/lead) 202-566-0500

HUD Office of Healthy Homes and Lead Hazard Control: [www.hud.gov/offices/lead](http://www.hud.gov/offices/lead) 202-402-7698

Connecticut Department of Public Health, Lead Poisoning Prevention Program

<http://www.ct.gov/dph/>

Hearing- or speech-challenged individuals may access the federal agency numbers above through TTY by calling the toll-free Federal Relay Service at 800-877-8339; see also

<http://www.federalrelay.us/tty>.

# ChemScope INDUSTRIAL HYGIENE • ENVIRONMENTAL CHEMISTRY

15 Moulthrop Street, North Haven, CT 06473-3686 • Phone (203) 865-5605 • Fax (203) 498-1610 • www.chem-scope.com

Scott Feulner  
Diversified Technology Consultants  
2321 Whitney Avenue, Suite 301  
Hamden CT 06518

5/14/2014

**ASBESTOS PRE-RENOVATION INSPECTION  
SITE 011 – 17 ELAINE ROAD, MILFORD CT  
APPLICATION # 1085  
CS#183-100, 4/30/2014, Page 1 of 5**

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2	Introduction
3-4	Inspection Report Synopsis
4	Limitations of Inspection
5	Recommendations

**Attachments:**

- Scope of Inspection Drawing(s), 2 page(s)
- ACM Location Drawing(s), 1 page(s)
- 5/7/2014 – PLM Certificate of Analysis Report, 8 page(s)
- Chain of Custody Document, 2 page(s)
- Sample Location Drawing(s), 2 page(s)
- CT DPH Circular Letter #2003-10, 2 page(s)

**Report Distribution:**

Scott Feulner, DTC [Scott.Feulner@teamdtc.com](mailto:Scott.Feulner@teamdtc.com)  
Curtis Graham, DTC [graham.curtis@teamdtc.com](mailto:graham.curtis@teamdtc.com)  
Michael Casey, DTC [michael.casey@teamdtc.com](mailto:michael.casey@teamdtc.com)

**File Location:**

NAS AAUM-Reports\Asblnsp\NY-PRERENO\_2014.doc

**ASBESTOS PRE-RENOVATION INSPECTION  
SITE 011 – 17 ELAINE ROAD, MILFORD CT  
APPLICATION # 1085  
CS#183-100, 4/30/2014, Page 2 of 5**

**INTRODUCTION**

**EXECUTIVE SUMMARY:** Asbestos containing materials (ACM) were detected within the scope of this inspection and will need to be properly removed (abated) and disposed of prior to renovation that would disturb these materials. Abatement work must be done by a licensed asbestos abatement contractor using proper procedures and practices with licensed and trained individuals. See Inspection Report Synopsis and Recommendation sections for further details.

**BUILDING DESCRIPTION:** The subject site is a single family, one-story with crawlspace, wood frame house, built in 1928, and totals approximately 1020 SF.

**BACKGROUND:** We understand the subject house suffered damage as a result of hurricane Sandy on October 29-30, 2012 and is scheduled to be renovated and raised. We also understand that the scope of the renovation work would involve disturbance of all flooring (except hardwood), disturbance of select walls, disturbance of select ceilings all on the first floor, and re-insulation of the crawlspace. Please see attached Scope of Inspection Drawings for details.

**SCOPE OF INSPECTION:** Asbestos Pre-Renovation Inspection at the subject house, as directed by our client.

Our work included the following:

- Collection and analysis of building materials within the scope of renovation for asbestos, as required by the regulations.
- A list with quantity, type and location of asbestos containing materials (ACM) in the scope.
- Report of the findings including ACM location drawings.

This investigation and information provided in this report depends partly on background information provided by the client. This report is intended for the use of the client. The scope of services performed may not be appropriate for other users and any use of this report by third parties is at their sole risk. This report is intended to be used in its entirety. No excerpts may be taken to be representative of this report.

**TEST PARAMETERS:** This is an Asbestos Pre-Renovation Inspection intended to identify the presence, location, and quantity of any asbestos containing building materials which are part of the Renovation for compliance with OSHA 1926.1101 (k)(2)(i) and CT DPH 19a-332a-1 through 16.

For sampling, EPA Wet Methods are used to prevent fiber release. Building materials sampled are analyzed at our laboratory by EPA method 600/R-93/116. This is currently the approved EPA Test method, which uses Polarized Light Microscopy with Dispersion Staining. The laboratory is accredited by NIST/NVLAP and AIHA, and is a Connecticut Approved Environmental Laboratory for Asbestos Analysis.

**ASBESTOS PRE-RENOVATION INSPECTION  
 SITE 011 – 17 ELAINE ROAD, MILFORD CT  
 APPLICATION # 1085  
 CS#183-100, 4/30/2014, Page 3 of 5**

**INSPECTION REPORT SYNOPSIS**

**LOCATION NAME AND ADDRESS:** Site 011, Application # 1085  
 7 Elaine Road, Milford CT

**INSPECTION DATE(S):** 4/30/2014

**QUALIFICATIONS:** The Inspection was conducted by Nathan Yergeau (assisted by Ziyang Wang):

Mr. Yergeau is certified as follows:

- EPA and State of Connecticut Accredited Asbestos Inspector, Project Monitor and Project Designer.
- State of Connecticut Licensed Asbestos Inspector/Management Planner (#000298)
- State of Connecticut Licensed Asbestos Project Monitor (#000634)
- State of Connecticut Licensed Asbestos Project Designer (#000288)

**FINDINGS:**

**The following asbestos containing materials (ACM) were detected within the Scope of the Inspection (cont):**

<u><b>MATERIAL</b></u>	<u><b>LOCATION</b></u>	<u><b>~FOOTAGE</b></u>
<b>INTERIOR:</b>		
<b>Gray hard granular ACM flue cement</b> (on wood panel wall, formerly around metal flue pipe)	1 <sup>st</sup> Floor – Kitchen	<3 SF
<b>Gray crumbly ACM sink undercoat</b> (from stainless steel sink)	1 <sup>st</sup> Floor – Kitchen	5 SF
Gray pliable linoleum on orange/black mastic on gray fibrous paper residue on <b>white/gray ACM floor tile debris</b> on plywood on white pliable non-ACM flooring with black non-ACM paper mastic on wood)	1 <sup>st</sup> Floor – Bathroom	<3 SF

**The following is a summary table of the materials that tested as non-Asbestos Containing Material (ACM) (<1%) within the Scope of Work (not already summarized above):**

<b>Location</b>	<b>Material</b>	<b>Sample #'s</b>	<b>Findings</b>
Throughout	Gray powdery sheetrock with tan fibrous paper layers with white hard brittle taping compound (from walls and ceilings)	183-100-35,36,37,38,39,40	No Asbestos Detected
Throughout	Beige hard brittle coating on brown fibrous ceiling board (on wood from under sheetrock ceiling)	183-100-3,4,5,6	No Asbestos Detected
Crawlspace	Beige fibrous paper with black tar coating (from fiberglass batt insulation)	183-100-1,2	No Asbestos Detected
1 <sup>st</sup> Floor – Bathroom	Yellow hard pliable glue (from under vinyl wall tile on sheetrock wall)	183-100-8,9	No Asbestos Detected

**ASBESTOS PRE-RENOVATION INSPECTION  
SITE 011 – 17 ELAINE ROAD, MILFORD CT  
APPLICATION # 1085  
CS#183-100, 4/30/2014, Page 4 of 5**

**INSPECTION REPORT SYNOPSIS (CONT)**

**The following is a summary table of the materials that tested as non-Asbestos Containing Material (ACM) (<1%) within the Scope of Work (not already summarized above):**

<b>Location</b>	<b>Material</b>	<b>Sample #'s</b>	<b>Findings</b>
1 <sup>st</sup> Floor – Kitchen	Off white with blue streaks linoleum with brown fibrous jute backing (on wood shelf)	183-100-10,11	No Asbestos Detected
1 <sup>st</sup> Floor – Kitchen	Blue/white self adhesive 12x12 floor tile on white 9x9 floor tile with black paper mastic on off white linoleum with gray/black fibrous backing (on wood)	183-100-14,15,16,17,18,19,20,44	No Asbestos Detected
1 <sup>st</sup> Floor – Kitchen	Beige hard brittle patch compound (on brown fibrous ceiling board)	183-100-7	No Asbestos Detected
1 <sup>st</sup> Floor – Rear Hallway	Beige pliable self adhesive linoleum (on plywood) with black fibrous paper residue (on hardwood)	183-100-21,22,23	No Asbestos Detected
1 <sup>st</sup> Floor - Bathroom	Gray pliable linoleum on orange/black mastic with gray fibrous paper residue (with white/gray floor tile residue) on wood on white pliable flooring on black paper mastic (on wood)	183-100-24,25,26,27,28,29,31,32,33,34	No Asbestos Detected
1 <sup>st</sup> Floor – Living Room	Gray soft fibrous insulation (from behind sheetrock and wood panel wall)	183-100-41,42,43	No Asbestos Detected

**LIMITATIONS OF THE INSPECTION**

It is important to note that every effort is made to detect asbestos (ACM) in the path of the renovation by our inspectors. It is not practical or prudent to demolish the entire floor, wall, and ceiling systems during an inspection. The owner should be aware of this in case suspect materials or other concealed suspect materials are uncovered during the actual renovation.

If suspect materials that were previously not accessible or not sampled during this inspection are discovered during the renovation, or if the scope of the renovation changes to include disturbance of new materials not inspected, then renovation must stop and the materials must be sampled by a CT DPH licensed asbestos inspector prior to disturbance of these materials.

The following materials/areas were not in the scope of this inspection:

1. Underneath hardwood floors
2. Window components
3. Exterior materials
4. Mechanical/heating components

**ASBESTOS PRE-RENOVATION INSPECTION  
SITE 011 – 17 ELAINE ROAD, MILFORD CT  
APPLICATION # 1085  
CS#183-100, 4/30/2014, Page 5 of 5**

**RECOMMENDATIONS**

All Asbestos Containing Materials (ACM) detected in the path of the renovation must be removed prior to disturbance of these materials during the renovation of this site.

Asbestos removal is regulated by federal and state agencies. The abatement work must be done by a licensed asbestos abatement contractor using proper procedures and practices, including containment, decontamination facilities and negative air units. Final re-occupancy testing is also required (if the building is going to be reoccupied after the asbestos removal) for removal of greater than three (3) sq ft or linear ft of ACM.

**For the ACM sink undercoat:** If the ACM sink undercoat can be removed intact then the removal does not constitute asbestos abatement as defined by Section 19a-332 of the Connecticut General Statutes. In this case, the ACM must be undamaged and non-friable and remain undamaged and non-friable during the removal. If it is determined that the ACM sink undercoat will not be removed intact, then the abatement work must be done by a licensed asbestos abatement contractor using proper procedures and practices. In any case Asbestos Containing Materials (ACM) must be properly packaged and properly disposed of. Please see attached CT DPH Circular Letter #2003-10.

**For the <3 SF of ACM flue cement and floor tile:** The work may be done as outlined in CT DPH regulations 19a-332a-10 for spot repairs. CT DPH defines a spot repair as any asbestos abatement performed within a facility involving not more than three (3) linear feet or three (3) square feet of asbestos containing material. Final re-occupancy testing is not required, as the amount of asbestos being removed is less than 3 square feet.

Notification to the DPH is required for asbestos abatement involving greater than 10 linear feet or 25 square feet of ACM when renovation or demolition activities are performed. Disposal of all ACM is regulated by EPA and the Connecticut DEEP; an EPA approved landfill must be used.

OSHA regulations 1926.1101 requires that before asbestos removal or repair work (class I, II or III work) is initiated, building owners/facility owners must notify their own employees and employers who are bidding on such work, of the quantity and location of ACM or PACM (presumed asbestos containing material) present in such areas. Also for inadvertently discovered ACM or PACM there is a 24-hour notification requirement to the owner and all employers at the site.

If you have any questions or need further information please call me.

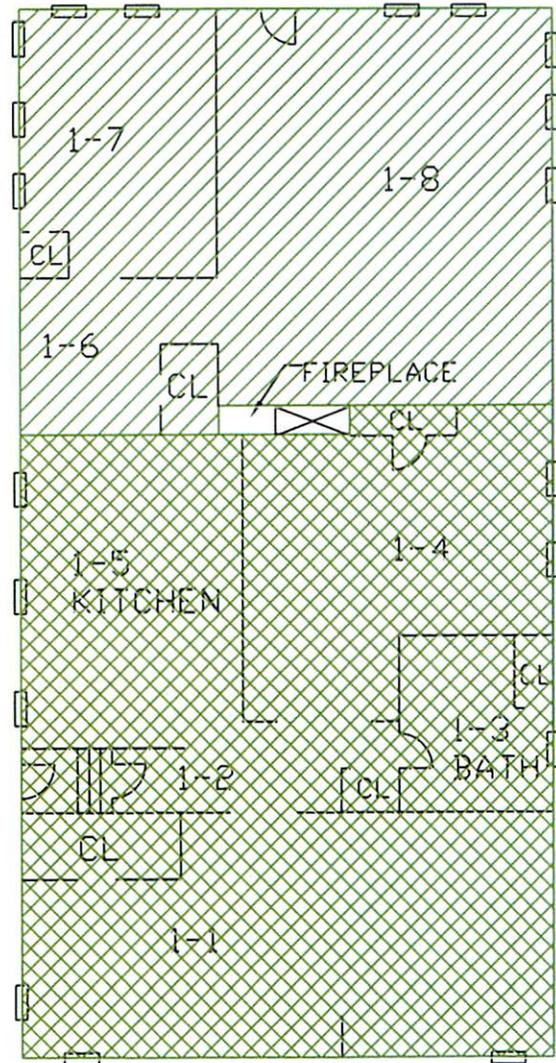
Sincerely,



Nathan Yergeau  
Assistant Field Operations Manager

# ChemScope Inc.

Site 011  
 17 Elaine Road, Milford, CT  
 Main Floor  
 CS# 183-100, 4-30-2014



## Scope of Inspection Drawing

 Location of walls to be replaced within scope of inspection

 Location of floors (except hardwood), walls, and ceilings to be replaced within scope of inspection



### LEGEND OF SYMBOLS


### NOTATIONS

DRAWN BY:  
 LEIGH HONOROF

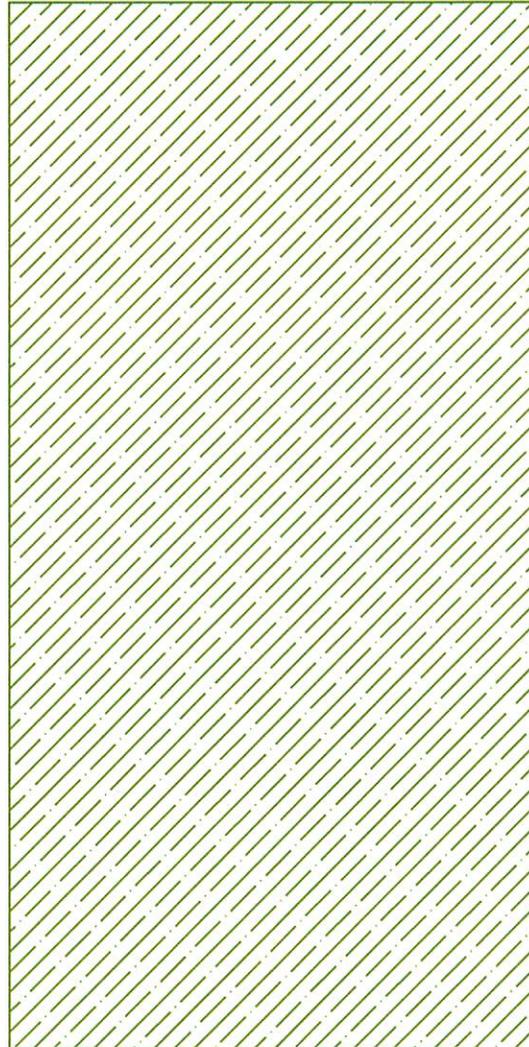
**ChemScope Inc.**

SHEET TITLE:  
 ASBESTOS, LEAD &  
 MOLD INSPECTION.  
 17 ELAINE RD  
 MILFORD, CT  
 MAIN FLOOR

CHEMSCOPE NUMBER: CS# 183-100	DRAWING NUMBER
SCALE NOT TO SCALE	<b>1</b>
DATE 4/30/14	

**ChemScope Inc.**  
Site 011  
17 Elaine Road, Milford, CT  
Crawlspace  
CS# 183-100, 4-30-2014

Scope of Inspection Drawing



 Location of crawlspace to be re-insulated within scope of inspection



LEGEND OF SYMBOLS

Symbol	Description

NOTATIONS


DRAWN BY:  
LEIGH HONOROF

**ChemScope Inc.**

SHEET TITLE:  
ASBESTOS, LEAD &  
MOLD INSPECTION  
  
17 ELAINE RD  
MILFORD, CT  
CRAWLSPACE

CHEMSCOPE NUMBER: CS# 183-100	DRAWING NUMBER <b>2</b>
SCALE NOT TO SCALE	
DATE 4/30/14	



## Certificate Of Analysis

*Diversified Technology Consultants (DTC) - Scott Feulner*  
2321 Whitney Avenue  
Suite 301  
Hamden CT 06518

5/7/2014

CS# 183-100

Page 1 of 8

*Bulk sample(s) from Site 011, Application #1085, 17 Elaine Road, Milford, CT collected by Nathan Yergeau on 4/30/2014*

*Asbestos Identification in the samples. Examination made by Polarized Light Microscopy (PLM) per EPA Test Method 600/R-93/116*

### **Sample Identification**

### **Findings (Analyzed 5/7/14)**

*183-100-1 Beige fibrous paper with black tar coating (from fiberglass batt insulation (11)) / Crawlspace*

*No Asbestos Detected  
7% Non- Fibrous Particles  
70% Volatile on Ignition  
23% Mineral Wool*

*183-100-2 Beige fibrous paper with black tar coating (from fiberglass batt insulation (12)) / Crawlspace*

*No Asbestos Detected  
11% Non- Fibrous Particles  
72% Volatile on Ignition  
17% Mineral Wool*

*183-100-3 Beige hard brittle coating (on brown fibrous ceiling board on wood from under sheetrock ceiling) / Rear Hallway*

*No Asbestos Detected  
59% Non- Fibrous Particles  
41% Volatile on Ignition*

*183-100-4 Beige hard brittle coating (on brown fibrous ceiling board on wood from under sheetrock ceiling) / Kitchen*

*No Asbestos Detected  
64% Non- Fibrous Particles  
36% Volatile on Ignition*

*183-100-5 Brown fibrous ceiling board (from sample # 3) / Rear Hallway*

*No Asbestos Detected  
8% Non- Fibrous Particles  
92% Volatile on Ignition*

Bulk sample(s) from Site 011, Application #1085, 17 Elaine Road, Milford, CT collected by Nathan Yergeau on 4/30/2014

Asbestos Identification in the samples. Examination made by Polarized Light Microscopy (PLM) per EPA Test Method 600/R-93/116

**Sample Identification**

**Findings (Analyzed 5/7/14)**

183-100-6 Brown fibrous ceiling board (from sample # 4) / Kitchen

No Asbestos Detected  
8% Non- Fibrous Particles  
92% Volatile on Ignition

183-100-7 Beige hard brittle patch compound (on brown fibrous ceiling board) / Kitchen

No Asbestos Detected  
58% Non- Fibrous Particles  
42% Volatile on Ignition  
<1% Wollastonite

183-100-8 Gray hard granular flue cement (on wood panel wall, formerly around metal flue pipe) / Kitchen

32% Chrysotile Asbestos  
58% Non- Fibrous Particles  
8% Volatile on Ignition  
2% Wollastonite

183-100-9 Yellow hard pliable glue (from under vinyl wall tile on sheetrock wall) / Bathroom

No Asbestos Detected  
60% Non- Fibrous Particles  
40% Volatile on Ignition

183-100-10 Yellow hard pliable glue (from under vinyl wall tile on sheetrock wall) / Bathroom

No Asbestos Detected  
49% Non- Fibrous Particles  
51% Volatile on Ignition

183-100-11 Gray crumbly sink undercoat (from stainless steel sink) / Kitchen

18% Chrysotile Asbestos  
71% Non- Fibrous Particles  
11% Volatile on Ignition

183-100-12 Off white with blue streaks linoleum with brown fibrous jute backing (on wood shelf) / Kitchen

No Asbestos Detected  
42% Non- Fibrous Particles  
58% Volatile on Ignition

*Bulk sample(s) from Site 011, Application #1085, 17 Elaine Road, Milford, CT collected by Nathan Yergeau on 4/30/2014*

*Asbestos Identification in the samples. Examination made by Polarized Light Microscopy (PLM) per EPA Test Method 600/R-93/116*

**Sample Identification**

**Findings (Analyzed 5/7/14)**

*183-100-13 Off white with blue streaks linoleum with brown fibrous jute backing (on wood shelf) / Kitchen*

*No Asbestos Detected  
43% Non- Fibrous Particles  
57% Volatile on Ignition*

*183-100-14 Blue/white self adhesive 12x12 floor tile (on white 9x9 floor tile with black paper mastic on off white linoleum with gray/black fibrous backing on wood) / Kitchen*

*No Asbestos Detected  
84% Non- Fibrous Particles  
16% Volatile on Ignition*

*183-100-15 Blue/white self adhesive 12x12 floor tile (on white 9x9 floor tile with black paper mastic on off white linoleum with gray/black fibrous backing on wood) / Kitchen*

*No Asbestos Detected  
85% Non- Fibrous Particles  
15% Volatile on Ignition*

*183-100-16 White 9x9 floor tile (from sample # 14) / Kitchen*

*No Asbestos Detected  
73% Non- Fibrous Particles  
27% Volatile on Ignition*

*183-100-17 White 9x9 floor tile (from sample # 15) / Kitchen*

*No Asbestos Detected  
71% Non- Fibrous Particles  
29% Volatile on Ignition*

*183-100-18 Black paper mastic (from sample # 14) / Kitchen*

*No Asbestos Detected  
22% Non- Fibrous Particles  
78% Volatile on Ignition*

*183-100-19 Black paper mastic (from sample # 15) / Kitchen*

*No Asbestos Detected  
25% Non- Fibrous Particles  
75% Volatile on Ignition*

Bulk sample(s) from Site 011, Application #1085, 17 Elaine Road, Milford, CT collected by Nathan Yergeau on 4/30/2014

Asbestos Identification in the samples. Examination made by Polarized Light Microscopy (PLM) per EPA Test Method 600/R-93/116

**Sample Identification**

**Findings (Analyzed 5/7/14)**

183-100-20 Off white linoleum with gray/black fibrous backing (from sample # 15) / Kitchen

No Asbestos Detected  
42% Non- Fibrous Particles  
58% Volatile on Ignition

183-100-21 Beige pliable self adhesive linoleum (on plywood on black fibrous paper residue on hardwood) / Rear Hallway

No Asbestos Detected  
6% Non- Fibrous Particles  
71% Volatile on Ignition  
23% Fiberglass

183-100-22 Beige pliable self adhesive linoleum (on plywood on black fibrous paper residue on hardwood) / Rear Hallway

No Asbestos Detected  
6% Non- Fibrous Particles  
71% Volatile on Ignition  
23% Fiberglass

183-100-23 Black fibrous paper residue (from sample # 21) / Rear Hallway

No Asbestos Detected  
28% Non- Fibrous Particles  
72% Volatile on Ignition

183-100-24 Gray pliable linoleum (on orange/black mastic with gray fibrous paper residue and with white/gray floor tile debris on plywood on white pliable flooring with black paper mastic on hardwood) / Bathroom

No Asbestos Detected  
7% Non- Fibrous Particles  
64% Volatile on Ignition  
29% Fiberglass

183-100-25 Gray pliable linoleum (on orange/black mastic with gray fibrous paper residue and with white/gray floor tile debris on plywood on white pliable flooring with black paper mastic on hardwood) / Bathroom

No Asbestos Detected  
7% Non- Fibrous Particles  
65% Volatile on Ignition  
28% Fiberglass

183-100-26 Orange/black mastic (from sample # 24) / Bathroom

No Asbestos Detected  
42% Non- Fibrous Particles  
58% Volatile on Ignition

Bulk sample(s) from Site 011, Application #1085, 17 Elaine Road, Milford, CT collected by Nathan Yergeau on 4/30/2014

Asbestos Identification in the samples. Examination made by Polarized Light Microscopy (PLM) per EPA Test Method 600/R-93/116

**Sample Identification**

**Findings (Analyzed 5/7/14)**

183-100-27 Orange/black mastic (from sample # 25) /  
Bathroom

No Asbestos Detected  
42% Non- Fibrous Particles  
58% Volatile on Ignition

183-100-28 Gray fibrous paper residue (from sample # 24) /  
Bathroom

No Asbestos Detected  
27% Non- Fibrous Particles  
50% Volatile on Ignition  
23% Fiberglass

183-100-29 Gray fibrous paper residue (from sample # 25) /  
Bathroom

No Asbestos Detected  
26% Non- Fibrous Particles  
52% Volatile on Ignition  
22% Fiberglass

183-100-30 White/gray floor tile debris (from sample # 24) /  
Bathroom

9% Chrysotile Asbestos (point counted)  
61% Non- Fibrous Particles  
30% Volatile on Ignition

183-100-31 White pliable flooring (from sample # 24) /  
Bathroom

No Asbestos Detected  
70% Non- Fibrous Particles  
30% Volatile on Ignition

183-100-32 White pliable flooring (from sample # 25) /  
Bathroom

No Asbestos Detected  
70% Non- Fibrous Particles  
30% Volatile on Ignition

183-100-33 Black paper mastic (from sample # 24) /  
Bathroom

No Asbestos Detected  
35% Non- Fibrous Particles  
65% Volatile on Ignition

Bulk sample(s) from Site 011, Application #1085, 17 Elaine Road, Milford, CT collected by Nathan Yergeau on 4/30/2014

Asbestos Identification in the samples. Examination made by Polarized Light Microscopy (PLM) per EPA Test Method 600/R-93/116

**Sample Identification**

**Findings (Analyzed 5/7/14)**

183-100-34 Black paper mastic (from sample # 25) / Bathroom

No Asbestos Detected  
49% Non- Fibrous Particles  
51% Volatile on Ignition

183-100-35 Gray powdery sheetrock with tan fibrous paper layers (with white hard brittle taping compound on brown fibrous ceiling board on wood from ceiling) / Kitchen

No Asbestos Detected  
77% Non- Fibrous Particles  
23% Volatile on Ignition

183-100-36 Gray powdery sheetrock with tan fibrous paper layers (with white hard brittle taping compound on wood from wall) / Front Bedroom

No Asbestos Detected  
79% Non- Fibrous Particles  
21% Volatile on Ignition

183-100-37 Gray powdery sheetrock with tan fibrous paper layers (with white hard brittle taping compound on wood from wall) / Bathroom

No Asbestos Detected  
73% Non- Fibrous Particles  
27% Volatile on Ignition

183-100-38 White hard brittle taping compound (from sample # 35) / Kitchen

No Asbestos Detected  
93% Non- Fibrous Particles  
7% Volatile on Ignition

183-100-39 White hard brittle taping compound (from sample # 36) / Front Bedroom

No Asbestos Detected  
95% Non- Fibrous Particles  
5% Volatile on Ignition

183-100-40 White hard brittle taping compound (from sample # 37) / Bathroom

No Asbestos Detected  
86% Non- Fibrous Particles  
14% Volatile on Ignition

Bulk sample(s) from Site 011, Application #1085, 17 Elaine Road, Milford, CT collected by Nathan Yergeau on 4/30/2014

Asbestos Identification in the samples. Examination made by Polarized Light Microscopy (PLM) per EPA Test Method 600/R-93/116

**Sample Identification**

**Findings (Analyzed 5/7/14)**

183-100-41 Gray soft fibrous insulation (from behind sheetrock on wood paneling wall) / Living Room

No Asbestos Detected  
14% Non- Fibrous Particles  
86% Volatile on Ignition

183-100-42 Gray soft fibrous insulation (from behind sheetrock on wood paneling wall) / Living Room

No Asbestos Detected  
22% Non- Fibrous Particles  
78% Volatile on Ignition

183-100-43 Gray soft fibrous insulation (from behind sheetrock on wood paneling wall) / Living Room

No Asbestos Detected  
19% Non- Fibrous Particles  
81% Volatile on Ignition

183-100-44 Off white linoleum with gray/black fibrous backing (from sample # 14) / Kitchen

No Asbestos Detected  
40% Non- Fibrous Particles  
60% Volatile on Ignition

**PARAMETERS  
ASBESTOS PLM ANALYSIS  
(Revised 3/22/13)**

1. *Materials which contain >1% asbestos (greater than 1%) by PLM (polarizing light microscopy) analysis are considered to be asbestos containing materials under EPA and the State of Connecticut Regulations. OSHA still regulates material with <1%. (Contact laboratory for information.) {Note: A more sensitive method is available called TEM (transmission electron microscopy). TEM may detect asbestos fibers that PLM cannot see, but the above agencies' enforcement is based on PLM analysis. Rules may differ for states other than Connecticut. It is best to check with the individual state. For example, New York State requires TEM confirmation of negative PLM results on floor tile}.*
2. *If no asbestos is detected in a sample, or if the asbestos content is less than 1% by PLM, additional samples of the same material should be submitted for confirmation. Please check with the laboratory for guidance on the number of samples needed. Sample collection in Connecticut must be by a DPH Licensed Asbestos Inspector. Many other states also require licensing.*
3. *Floor Tile Mastic: Mastic under floor tile should be separately sampled by scraping some of the mastic from the floor to avoid contamination from the floor tile.*
4. *Although Chem Scope, Inc. takes great effort to insure accuracy in the estimation of asbestos in the materials analyzed, no quantitation method is without some uncertainty. Based on independent calibration studies and comparison of Chem Scope's quantitative results with NVLAP and AIHA round robin programs we estimate our uncertainty in quantitation to be relatively small. The average relative uncertainty of the estimate is calculated to be 35% for samples that contain less than 10% asbestos. This means a estimate of 10% asbestos in a sample has a probable range of 6.5% to 13.5% while an estimate of 1% has a range of 0.65% to 1.35%.*
5. *The presence of non-asbestos components, which are recognized by the PLM analyst, is reported with the estimated amounts. This is not an exhaustive analysis for the non-asbestos materials since the primary purpose is to determine if asbestos is present and, if so, how much is present of each type of asbestos.*
6. *Results reported apply only to the sample(s) analyzed.*
7. *Special treatment of samples: Chem Scope, Inc. routinely uses gravimetric sample reduction techniques such as low temperature ashing or acid dissolution on samples like floor tile, roofing materials, glue dots, or high cellulose content samples prior to PLM analysis. These methods are used to aid in the PLM analysis and to provide better quantitative data. Layered samples, if possible, are analyzed separately as individual layers. However, in accordance with the method, if any layer contains >1% asbestos (greater than 1%) it is to be considered an asbestos containing material. All results are reported to the original sample basis.*
8. *Sample results are not corrected for blanks. Analytical blanks are run daily and if contamination is suspected the samples are rerun.*
9. *Chem Scope, Inc. performs "400 point" point counting when the asbestos content is visually estimated to be less than 10%. There is no additional charge for this analysis.*

*The Scope of Accreditation referenced in this report applies to bulk asbestos fiber analysis by PLM (Polarized Light Microscopy). Accreditation does not imply endorsement by NVLAP, NIST or any Federal or State Agency.  
This report pertains only to the samples tested and may not be reproduced in part.  
Condition of the samples at the time of receipt was acceptable unless otherwise noted on the Certificate of Analysis.  
See test parameters above and attached chain of custody form.  
We would love to hear from you. Comments? Questions? Please call or email us at chem.scope@snet.net.*

**ChemScope, Inc. is accredited by AIHA LAP, LLC LAB #100134  
NVLAP Lab Code 101061-0.**

**Connecticut Department of Public Health (DPH) Approved Environmental Lab PH 0581**

*[Signature]*  
Signature  
Analyst

*[Signature]*  
Signature  
(if applicable)  
Inspector

Authorized Signature or  
Suzanne Cristante  
Laboratory Director

Authorized Signature or  
Izabela Kremens  
Quality Manager

*[Signature]*  
Authorized Signature  
Ronald Arena  
President



**Dear Laboratory Customer or Potential Customer,**

New laboratory accreditation standards require us to provide our clients information about our services to make sure that your requirements for testing are adequately defined, documented and understood. The following is for your information. Please call us if you have any questions or comments.

**Type of Samples:**

- / / PCM cassettes are routinely run by NIOSH Method 7400.
- / / Bulk materials are run by EPA Method: #600/R-93/116.

**Air Samples:** NIOSH 7400 Method counts all fibers. This method may be used for personal air samples and for finals. Two field blanks must be submitted for each set of samples. In the unlikely event that there is to be any deviation from the standard test, you will be consulted by phone before the work begins. Those clients who have not had NIOSH 582 or AHERA asbestos training courses (either supervisor or project monitor) should consult with the lab director for more information. The test parameters are further explained in the analytical report.

**Bulk materials:** sampled are analyzed by the latest EPA Method: (#600/R-93/116) which uses polarized light microscopy (PLM). When asbestos is detected and the amount is estimated to be <10%, we automatically point count the samples. When there are interfering substances present, we may use ashing, acid washing or other procedures described in the method to handle the interference. Those clients who have not had AHERA asbestos training courses (either inspector, supervisor or project designer) should consult with the lab director for more information. The test parameters are further explained in the analytical report.

**All Samples** must be clearly labeled with source name and identification number or sufficient information from the client to make this sample uniquely identified. (We will then add our notebook #, page # (batch) and unique number within the batch.) Samples must be in a clean, air tight package such as a zip loc bag. Appropriate completed paperwork must accompany the sample. Bulk and air samples may not be submitted in the same package.

As soon as available bench top results will be faxed to you and reports will then be mailed. We will retain air samples for at least three months and bulk samples for 6 months unless you advise us otherwise.

You are welcome to visit the laboratory at any time to discuss the work, monitor the work or verify our testing services. We appreciate your business and encourage any feedback regarding improving our services or our quality system. Please take a minute to complete the following survey and mail/fax it to ChemScope, Inc.

**Customer Service Survey**

To help us improve our services give your opinions to the following:

- 1- The printed laboratory report was complete and easy to understand.  YES  NO  
If no, please explain \_\_\_\_\_.
- 2- The turn around time for results met your expectations/needs.  YES  NO  
If no, please explain \_\_\_\_\_.
- 3- How likely are you to recommend ChemScope Inc. to someone?  
 Excellent  Very Good  Good  Fair  Poor
- 4- How likely are you to return to ChemScope in the future if the need arises?  
 Excellent  Very Good  Good  Fair  Poor
5. On a scale of 1 to 5 where 1 represents "Satisfied" and 5 represents "Dissatisfied", how would you rate your level of overall satisfaction.  
 1  2  3  4  5
- 6- Please add any additional comments or suggestions that would be helpful when you use our services:

Name \_\_\_\_\_ Company \_\_\_\_\_  
Address \_\_\_\_\_ Telephone/e-mail \_\_\_\_\_

Can we contact you regarding this survey?  YES  NO







# STATE OF CONNECTICUT

## DEPARTMENT OF PUBLIC HEALTH

*Division of Environmental Health Circular Letter #2003-10*

**To: Licensed Project Designers, Licensed Asbestos Abatement Contractors and Connecticut Approved Asbestos Training Providers**

**From: Ronald Skomro, Supervising Environmental Sanitarian  
Asbestos Program**

**Date: April 7, 2003**

**Subject: Regulatory Interpretation Regarding Intact Removal of Non-Friable Asbestos-Containing Materials**

A request for regulatory interpretation was made by a licensed asbestos consultant to the Department of Public Health (DPH) concerning the applicability of the DPH regulations to activities involving intact non-friable asbestos-containing materials within a facility. This memorandum addresses the DPH response to the scenarios presented. The following is a list of those activities detailed by the consultant:

- Removal of transite panels by unbolting or unscrewing and removing the panels intact;
- Removal of transite lab-type desk tops by either unbolting or unscrewing and removing the desk top intact, or complete component removal of the entire desk;
- Removal of flexible duct connectors by either unbolting or unscrewing and removing the connector intact, or complete component removal of the entire connector and small portions of the surrounding ductwork;
- Removal of countertops, backsplashes, etc., with linoleum, panel glue, or similar materials by completely removing the entire unit intact;
- Removal of sinks with pan sealant by removing the sink intact;
- Removal of window sashes with window glazing (interior or exterior) by removing the window stops and removing the entire window sash unit intact;
- Picking up loose floor tiles that have become completely disassociated with the floor and are either whole or are slightly broken but are still not considered to be Regulated Asbestos-Containing Material (RACM);
- Picking up loose miscellaneous non-friable items such as rolls of linoleum, loose gaskets, loose shingles, etc.;
- Removal of fire doors containing insulation from their hinges intact for complete component disposal;
- Attaching framing, brackets, etc., to structures by using power actuated tools to shoot/screw/bolt fasteners through the framing, brackets, etc., and through category I non-friable ACM (e.g., floor tile or mastic, cove base, waterproofing tar-like coating, asphalt roofing, gasketing, etc.). (The use of drills or similar tools to drill pilot holes or holes through the materials is not allowed.)



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It is the interpretation of the DPH that the activities that are detailed above do not constitute asbestos abatement as defined by Section 19a-332 of the Connecticut General Statutes. Given this interpretation, such activities are not subject to DPH regulation. This interpretation is provided based upon the following understandings:

1. The asbestos-containing material is undamaged and non-friable and remains undamaged and non-friable during the removal or collection of the material. In the case of floor tile characterized as "slightly broken", a case-by-case assessment should be made to determine whether the removal of the tile constitutes asbestos abatement. The DPH shall be contacted directly when such activities are contemplated.
2. The asbestos-containing material is removed intact and without breakage or other disturbance of the material. The material is removed without the creation of a visible residue.
3. The asbestos-containing material is not subject to sanding, cutting, grinding, or abrading during the removal or collection process.
4. The asbestos-containing material does not become a RACM as defined by the asbestos National Emission Standards for Hazardous Air Pollutants (40 CFR Part 61, Subpart M).

It should be noted that asbestos-containing waste generated as a result of these activities must be disposed of as asbestos waste at an authorized waste disposal facility. Questions regarding the disposal of asbestos-containing material within the State of Connecticut should be directed to the Connecticut Department of Environmental Protections at (860) 424-3366.

This interpretation does not relieve the owner of the facility in which these activities are performed, or the operator of these activities from complying with the provisions of all other applicable federal, state, or local regulations.

# ChemScope INDUSTRIAL HYGIENE • ENVIRONMENTAL CHEMISTRY

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Scott Feulner  
Diversified Technology Consultants (DTC)  
2321 Whitney Avenue, Suite 301  
Hamden, CT 06518

5/15/2014

**PRELIMINARY MOLD ASSESSMENT  
SITE 011 – 17 ELAINE ROAD, MILFORD CT  
APPLICATION # 1085  
CS#183-100, 4/30/2014, Page 1 of 4**

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Limitations of Assessment	4

### **Attachments:**

- Scope of Assessment Drawing – 2 page(s)

### **Report Distribution:**

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### **File Location:**

D(dan):\myfilesds\mydocuments\Mold\indoorfo\_2014.doc

*This investigation and information provided in this report depends partly on background information provided by the client. This report is intended for the use of the client. The scope of services performed may not be appropriate for other users and any use of this report by third parties is at their sole risk. This report is intended to be used in its entirety. No excerpts may be taken to be representative of this report.*

*It is possible that hidden mold may be growing inside the building cavities. Some floor, wall or ceiling demolition would be needed to find hidden mold.*

**PRELIMINARY MOLD ASSESSMENT  
SITE 011 – 17 ELAINE ROAD, MILFORD CT  
APPLICATION # 1085  
CS#183-100, 4/30/2014, Page 2 of 4**

**INTRODUCTION**

**EXECUTIVE SUMMARY:** Based on our assessment, there is only mold on minor paper debris in the soil of the crawlspace. There are signs of past water damage to the ceilings and some floors of the subject house, which were dry at the time of our assessment.

**BUILDING DESCRIPTION:** The subject site is a single family, one-story with crawlspace, wood frame house, built in 1928, and totals approximately 1020 SF.

**BACKGROUND:** We understand the subject house suffered damage as a result of hurricane Sandy on October 29-30, 2012 and is scheduled to be renovated and raised. We understand the water-level reached the top of the crawlspace ceiling and water entered the house in the front portions of Rooms 1-7 and 1-8. We also understand that the scope of the renovation work would involve disturbance of all flooring (except hardwood), disturbance of select walls, disturbance of select ceilings all on the first floor, and re-insulation of the crawlspace. The homeowner had previously done removal of sheetrock walls in Rooms 1-7 and 1-8. Please see attached Scope of Inspection Drawings for details.

**INSPECTION AND TESTING:** Dan Sullivan of Chem Scope, Inc. was at the site on 4/30/2014 to conduct the subject tests. All of the doors and windows were closed at the time of our inspection. Our work included:

- Visual inspection
- Temperature/Humidity and Moisture in building materials

**SCOPE OF WORK:** Our client has hired us to do a preliminary mold assessment of the first floor and crawlspace, where there was past water damage.

**MOLD ASSESSMENT REPORT SYNOPSIS**

**Observations from Visual Inspection/temperature and humidity testing:**

We arrived on site at around 8:00 AM. It was raining at the time of our assessment. The temperature at the time of our assessment was about 43 deg F. We were let into the house by our client and the homeowner. There was no visible mold or noticable smells/odors in the subject rooms.

Rooms 1-7 and 1-8 were where most of the water inside the house was located because the floors in these rooms were sloped the water reached about the halfway mark through both rooms. We understand from the owner that he had replaced the interior sheetrock and wall insulation but did not replace an inner wall. The hardwood floors in both rooms are in good condition. The kitchen and bathroom had various layers of vinyl flooring which were in a damaged condition.

The crawlspace has a soil floor and a bare wood ceiling. There are no stored materials in the crawlspace. We understand the homeowner removed the fiberglass batt insulation, which had gotten wet during the storm. Less than 3 sq ft of batting insulation paper remains in the soil as debris. This material has visible mold. The soil is a naturally occurring place where mold is certain to be present and now wet we have to assume there is mold growth, which is not likely to become visible.

**PRELIMINARY MOLD ASSESSMENT  
SITE 011 – 17 ELAINE ROAD, MILFORD CT  
APPLICATION # 1085  
CS#183-100, 4/30/2014, Page 3 of 4**

**MOLD ASSESSMENT REPORT SYNOPSIS (cont)**

The temperature and humidity, inside vs outside was determined using a sling psychrometer. Normal dew point levels are generally considered between 10 and 21 °C (50 and 69 °F). In areas with dew points under 10 °C (50 °F), the air is considered too dry. In areas with dew points above 21 °C (69 °F), the air is considered too humid. Normal relative humidity for a house is 30-50% depending on the outdoor climate. Humidity and dew points in the house were normal for the exterior conditions that day in the house. The humidity in the crawlspace was elevated as expected given the conditions of the day and a damp soil crawlspace floor.

**Table 1 - Temperature & Humidity Results (4/30/2014)**

<b>Location</b>	<b>Dry Bulb (°F) (Room / Air Temperature)</b>	<b>Wet Bulb (°F)</b>	<b>%RH</b>	<b>Dew Point (°F)</b>
Crawlspace	49	47	86	41
1-5 Kitchen	65	57	61	51
1-1 Bedroom	64	55	56	48
1-3 Bathroom	63	57	69	53
1-7	64	57	65	52
1-8 Living Room	65	52	39	40
Exterior	43	43	100	43

A Protimeter Moisture Measurement System (Marlow England) was used to measure the amount of moisture in various surfaces and materials in terms of wood moisture equivalents (WME). This device has two pin-point probes, which are inserted in the surface and the conductivity is used to measure moisture in the material as % H<sub>2</sub>O. Moisture is important to detect potential biological growth. The normal amount of moisture in each material varies with humidity. Materials which have >30% H<sub>2</sub>O are relatively damp and may be wet enough to permit mold growth. A material with 70% H<sub>2</sub>O is very wet and likely to have mold growth. This instrument does not measure below 7% moisture, which is considered bone dry. This device was also used to test for room temperature, % relative humidity and dew point. The dew point is a measure of the absolute amount of water in the air and is more useful in comparisons than the relative humidity, which is also affected by temperature.

A Summary of the moisture readings and visual inspection is listed in Table below:

**Table 2 – Visible Mold and % Moisture in Building materials (4/29/2014)**

<b>Room / Material</b>	<b>% Moisture (WME)</b>	<b>Notes</b>
1-1 Bedroom/ Sheetrock wall 4" above floor level	7-11%	No visible mold
1-4 Bedroom/ Sheetrock wall 4" above floor level	8-10%	No visible mold
1-5 Kitchen/ Sheetrock wall 4" above floor level	9-14%	No visible mold
1-5 Kitchen/ 12x12 Floor on tile on linoleum floor on wood	8-14%	No visible mold
1-7 / Sheetrock wall 4" above floor level	8-10%	No visible mold
1-7/ Hardwood floor	8-9%	No visible mold
1-8 Living Rm/ Sheetrock wall 4" above floor level	10-18%	No visible mold
1-8 Living Rm/ Hardwood floor	8-12%	No visible mold
<b>Crawlspace/ Soil Floor</b>	<b>20-50%</b>	<b>No visible mold</b>
<b>Crawlspace/ Fg batt insulation with paper debris</b>	<b>30-50%</b>	<b>Visible Mold – &lt; 3 sq ft of debris</b>
Crawlspace/ Wood ceiling and beams	10-18%	No visible mold

**PRELIMINARY MOLD ASSESSMENT  
SITE 011 – 17 ELAINE ROAD, MILFORD CT  
APPLICATION # 1085  
CS#183-100, 4/30/2014, Page 4 of 4**

MOLD ASSESSMENT REPORT SYNOPSIS (cont)

**General Information about Mold:** EPA does not call for routinely air testing for mold in assessment. Mold is always present indoors and outdoors and is a natural and necessary part of the environment. There are no Connecticut or federal health based standards for molds. EPA and other agencies report that molds have the potential to cause health effects. The main concerns are people with allergies, asthma and compromised immune systems. There are thousands of mold species, and many are not yet identified. There is much more to learn and new information is becoming available regularly. In mold assessment, we strive to detect moisture problems that cause excessive biological growth and when appropriate, recommend a plan of corrective action. When moisture problems occur, mold growth is likely if organic materials are not promptly dried up. Hidden mold may exist which cannot be seen without demolition.

RECOMMENDATIONS

***See our separate Asbestos Pre-Renovation Inspection Report and Lead Pre-renovation XRF Screening Report for details regarding asbestos and lead present in these areas.***

In general, correction of water damage requires first eliminating the source of the water. With the house being raised there should be a great increase in the ventilation below the house, which should address the excess humidity in the crawlspace. Raising the structure and installing a concrete foundation will also address the potential for mold in the soil of the crawlspace.

No immediate work is required as a result of our assessment. We recommend making some test cuts in the lower walls of Rooms 1-7 and 1-8 to see if there is any hidden mold in these areas. If during this renovation work hidden mold is discovered, work should be stopped and the areas should be re-assessed.

**Limitations of Mold Removal:** It is well known in the industry that mold can never completely be removed from a site because of the constant presence of mold spores in the outdoor environment and the ability of molds to remain dormant within a building. If moisture problems recur, mold growth is likely.

For guidance on mold, log onto EPA.gov and search mold remediation or the state DPH web site.

Please call me if there are any questions about this report or if you need further assistance.

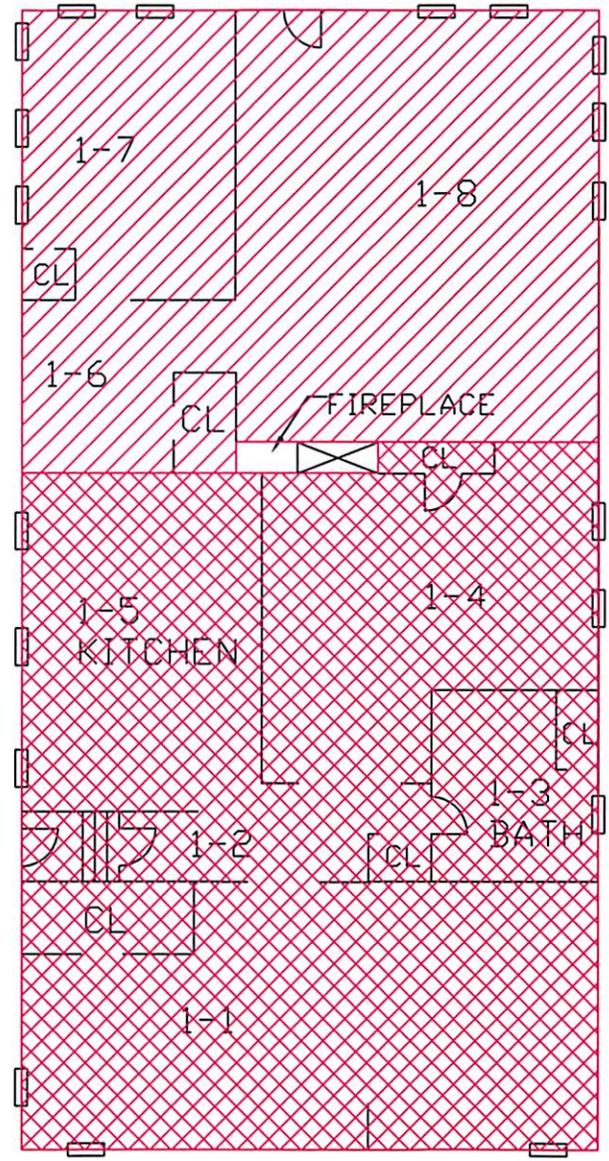
Thank you for calling on us.



Dan Sullivan  
Vice President, Operations

# ChemScope Inc.

Site 011  
 17 Elaine Road, Milford, CT  
 Main Floor  
 CS# 183-100, 4-30-2014



### Scope of Inspection Drawing

 Location of walls to be replaced within scope of inspection

 Location of floors (except hardwood), walls, and ceilings to be replaced within scope of inspection



#### LEGEND OF SYMBOLS


#### NOTATIONS

DRAWN BY:  
 LEIGH HONOROF

**ChemScope Inc.**

SHEET TITLE:  
 ASBESTOS, LEAD &  
 MOLD INSPECTION  
 17 ELAINE RD  
 MILFORD, CT  
 MAIN FLOOR

CHEMSCOPE NUMBER: CS# 183-100	DRAWING NUMBER
SCALE: NOT TO SCALE	<b>1S</b>
DATE: 4/30/14	

