

ENVIRONMENTAL REVIEW REPORT

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

Applicant # 1676

**504 Barrack Hill Road
Ridgefield, Connecticut**

December 5, 2014

Prepared for:

**Quisenberry Arcari Architects, LLC
318 Main Street
Farmington, Connecticut**

Prepared by:

**Stephen Ball
294 White Deer Rocks Road
Woodbury, Connecticut**

**STATUTORY CHECKLIST [§58.35(a) activities]
for Categorical Exclusions and Environmental Assessments**

Note: Review of the items on this checklist is required for both Categorical Exclusions under Sec. 58.35(a) and projects requiring an Environmental Assessment under Sec. 58.36. If no compliance with any of the items is required, a Categorical Exclusion [58.35(a)] may become "exempt" under the provisions of Sec. 58.34 (a) (12). In such cases attach the completed Statutory Checklist to a written determination of the exemption. Projects requiring an Environmental Assessment under Sec. 58.36 cannot be determined to be exempt even if no compliance with Statutory Checklist items is found. Three items listed at Sec. 58.6 are applicable to all projects, including those determined to be exempt.

**Project Name and Identification/Location: Forras Residence #1676
504 Barrack Hill Road Ridgefield, CT**

Area of Statutory or Regulatory Compliance	Not Applicable to This Project	Consultation Required*	Review Required*	Permits Required*	Determination of consistency Approvals, Permits Obtained*	Conditions and/or Mitigation Actions Required	Provide compliance documentation. Additional material may be attached.
Document Laws and authorities listed at 24 CFR Sec. 58.5							
1. Historic Properties [58.5(a)] [Section 106 of NHPA]	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Consulted with State Historic Preservation Office (SHPO) See attached No Effect letter dated 6/18/14.
2. Floodplain Management [58.5(b)] [EO 11988] [24 CFR 55]	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Flood Insurance Map Community Panel # 09001C0208F 6/18/2010 See attached FIRMLET. Located in Zone X.
3. Wetland Protection [58.5 (b)]	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Anticipated impacts on wetlands minimal due to majority of activities limited to pre-storm building footprint. See attached National Wetlands Mapper.
4. Coastal Zone Management [58.5(c)] [CGS 22a-100(b)]	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Project is not within Coastal Zone Boundry. Spoke with George Wisker at DEEP and was total there is no map for Ridgefield, CT.
5. Water Quality – Aquifers [58.5(d)] [40 CFR 149] Clean Water Act 1977 Safe Drinking Water Act 1974	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Water Quality – N/A Project does not involving on-site water and sewer facilities nor is it located in a sole source aquifer zone.
6. Endangered Species [58.5(e)] [16 U.S.C. 1531 et seq.] [CGS 26-310]	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	NOT LOCATED AT WATERFRONT PROPERTIES WITH SANDY BEACHES - consult with Department of Interior Fish and Wildlife Database – See attached Department of Interior Fish and Wildlife report dated November 4, 2014.
7. Wild and Scenic Rivers [58.5 (f)] [16 U.S.C. 1271 et seq.]	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Eightmile River is only designated wild & scenic river within program area running through Lyme, Salem and East Haddam, CT (rivers.gov; November 2012) This project is not proximal to any listed Wild and Scenic Rivers.
8. Air Quality [58.5(g)] [42 U.S.C. 7401 et seq.]	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Clean Air Act, State Implementation Plan, HUD & EPA Regulations; in general, residential rehabilitation exempted w/no quantifiable increase in air pollution. Project is solely residential rehabilitation with no quantifiable increase in air pollution.

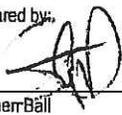
Area of Statutory or Regulatory Compliance	Not Applicable to This Project	Consultation Required*	Review Required*	Permits Required*	Determination of consistency Approvals, Permits Obtained*	Conditions and/or Mitigation Actions Required	Provide compliance documentation. Additional material may be attached.
9. Farmland Protection [58.5(h)]	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Agricultural land use conversion not anticipated. Adverse effects to agricultural resources are not anticipated; clearly defined urban areas. Location not considered protected farmland
Manmade Hazards: 10 A. Thermal Explosive [58.5(i)]	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A for projects that do not add density
10 B. Noise [58.5(i)]	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Not applicable to project – restoration of structure substantially as it existed prior to Super Storm Sandy.
10 C. Airport Clear Zones [58.5 (i)]	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Not applicable - Two (2) FAA designated Commercial Service airports in program area: Tweed New Haven Regional and Groton-New London. This property is not located in an Airport Clear Zone.
10 D. Toxic Sites [58.5 (i)(2)(i)]	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The site has no known toxic history based on the attached Toxix Site Certification. The site: 1) is not listed on EPA Superfund National Priorityies or CERCLA list. 2) is not located within 3,000ft of a toxic or solid waste landfill. 3) is not known to have an underground storage tank (which is not an underground storage fuel tank). 4) is not known or suspected to be contaminated by radioactive chemicals or radioactive materials.
11. Environmental Justice [58.5(i)]	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Executive Order 12898 Program activities do not anticipate high & adverse human health and environmental effects on minority or low-income populations;
Document Laws and authorities listed at Sec. 58.6 and other potential environmental concerns							
12 A. Flood Insurance [58.6(a) & (b)]	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Flood Insurance Map Community Panel # 09001C0208F 6/18/2010 See attached FIRMLET Flood insurance not required.
12 B. Coastal Barriers [58.6(c)]	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Property is not in a Coastal Management Zone.
12 C. Airport Clear Zone Notification [58.6(d)]	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Not applicable - Two (2) FAA designated Commercial Service airports in program area: Tweed New Haven Regional and Groton-New London. The project does not involve the purchase or sale of an existing property in an airport clear zone.
13. A Solid Waste Disposal [42 U.S.C. S3251 et seq.] and [42 U.S.C. 6901-6987 eq seq.]	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Resource Conservation and Recovery Act and Solid Waste Disposal Act; - Residential rehabilitation activities are not expected to affect the capacities of solid waste disposal services.

Area of Statutory or Regulatory Compliance	Not Applicable to This Project	Consultation Required*	Review Required*	Permits Required*	Determination of consistency Approvals, Permits Obtained*	Conditions and/or Mitigation Actions Required	Provide compliance documentation. Additional material may be attached.
13 B. Fish and Wildlife [U.S.C. 661-666c]	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Fish and Wildlife Coordination Act: Program activities will not result in impounding, diverting, deepening, channelizing or modification of any stream or body of water; not a water control project.
13 C. Lead-Based Paint [24 CFR Part 35] and [40 CFR 745.80 Subpart E]	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	No Lead paint found - See attached Limited Hazardous Materials Inspection Report from Fuss & O'Neill EnviroScience LLC dated October 2014. No action required.
13 D. Asbestos	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Asbestos found – See attached Limited Hazardous Materials Inspection Report from Fuss & O'Neill EnviroScience LLC dated October 2014. and follow recommendations listed in report. Compliance will include measures to minimize risk of exposure and when necessary abate any hazardous materials
13 E. Radon [50.3 (i) 1]	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Radon concentration less than 4 picocuries per liter of air and are below regulatory levels. See attached Limited Hazardous Materials Inspection Report from Fuss & O'Neill EnviroScience LLC dated October 2014. No action required.
13 F. Mold	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	No Mold Found - See attached Limited Hazardous Materials Inspection Report from Fuss & O'Neill EnviroScience LLC dated October 2014. No action required.
Other: State or Local 14 A. Flood Management Certification [CGS 25-68]	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Based on FEMA Map # 09001C0208F 6/18/2010 Flood Management Certification through General Permit for CDBG-DR program activities with DEEP is not required.
14 B. Structures, Dredging & Fill Act [CGS 22a-359 through 22a-363f]	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Not applicable – this project is not waterward of the Coastal Jurisdiction Line.
14 C. Tidal Wetlands Act [CGS 22a-28 through 22a-35]	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Not located in Title wetlands
14 D. Local inland wetlands/watercourses [CGS 22a-42]	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Not located in wetlands. See attached wetlands maps from the Town of Ridgefield.
14 E. Various Municipal Zoning Approvals	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Only Local Building Permits required.

DETERMINATION:

- This project converts to Exempt, per §58.349a(12), because it does not require any mitigation for compliance with any listed statutes or authorities, nor requires any formal permit or license. Funds may be drawn down for this (now) EXEMPT project; OR
- This project cannot convert to Exempt because one or more statutes/authorities requires consultation or litigation. Complete consultation/mitigation requirements, publish NOI/ROF and obtain Authority to Use Grant Funds (HUD 7015.16) per §58.70 and 58.71 before drawing down funds; OR
- The unusual circumstances of this project may result in a significant environmental impact. This project requires preparation of an Environmental Assessment (EA). Prepare the EA according to 24 CFR Part 58 Subpart E.

Prepared by:


Stepherr Bäll

11/7/14

Date

Responsible Entity or designee Signature:


Hermia Delaire, CDBG-DR Program Manager

11/20/2014
Date

Photo Documentation



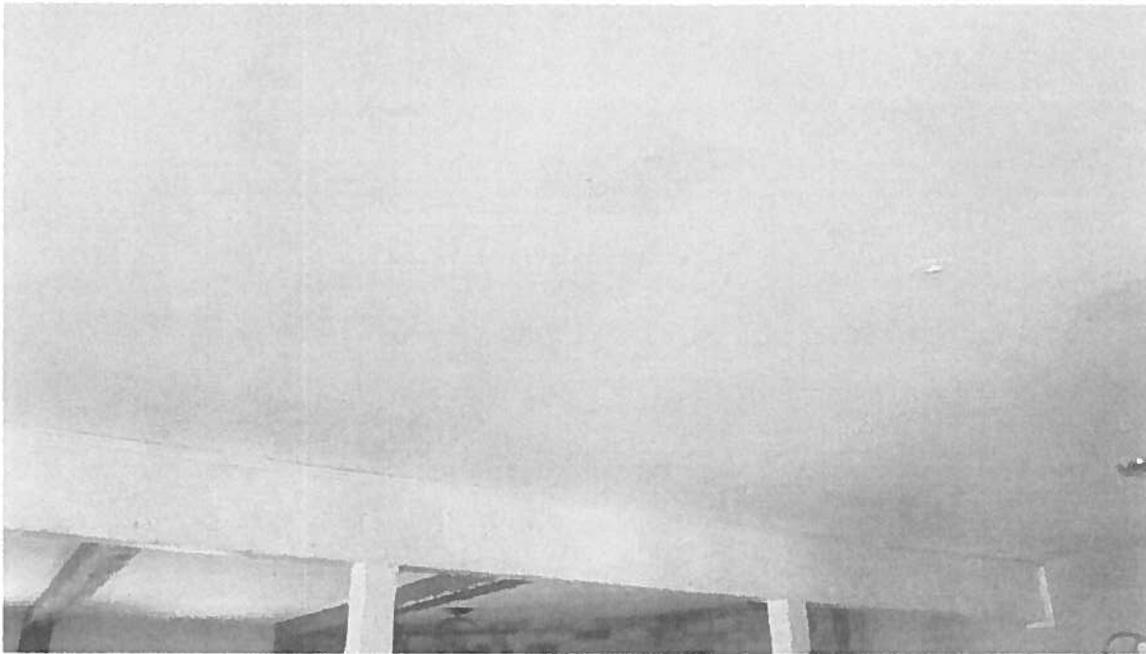
318 Main Street
Farmington, CT 06032

860 677.4594
860 677.8534 Fax



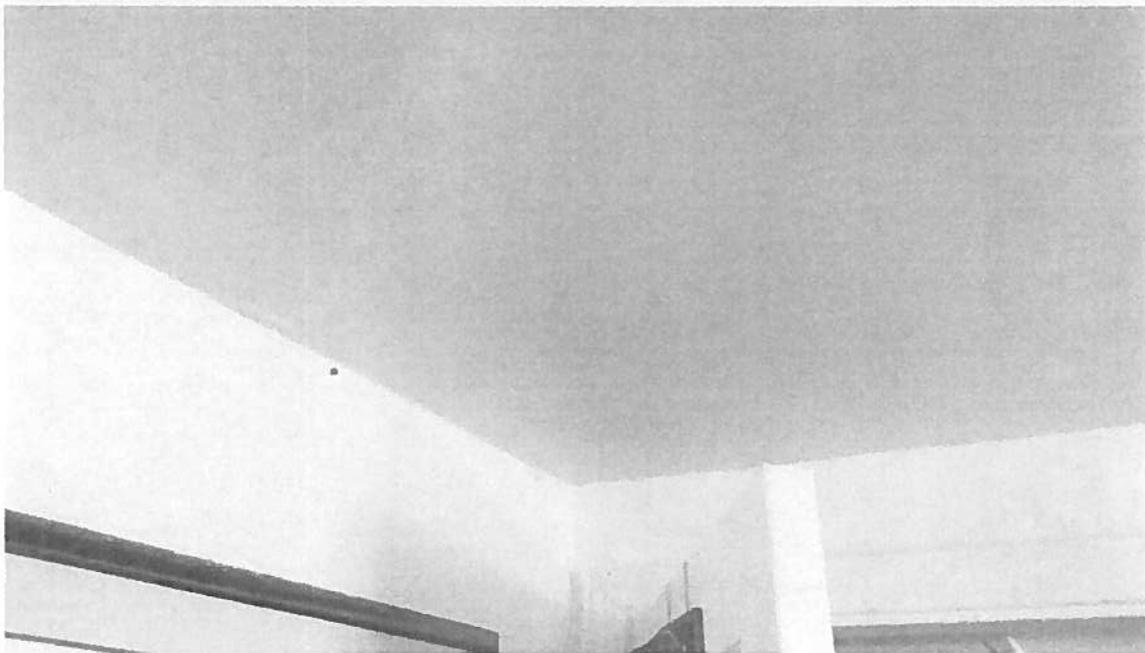
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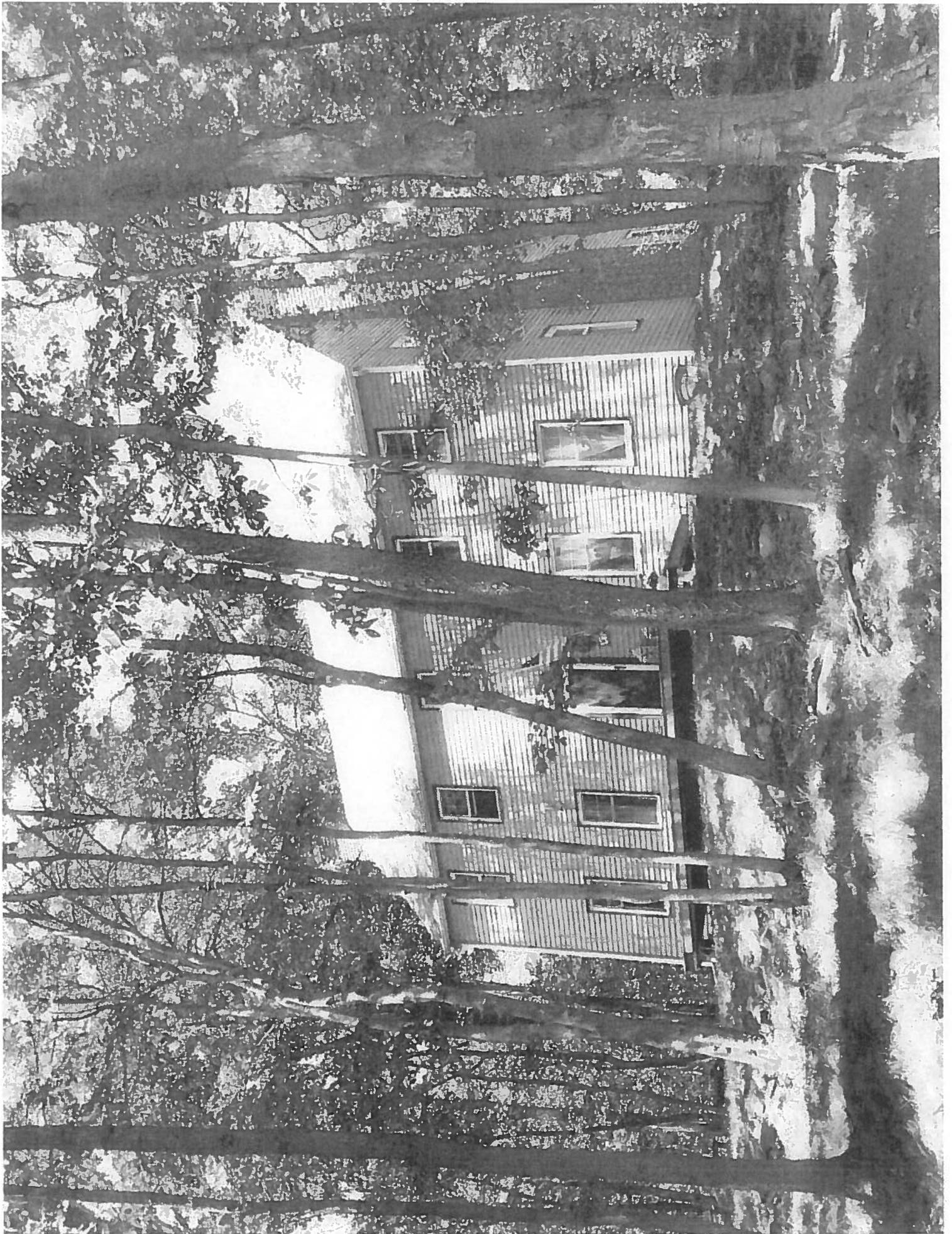
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Farmington, CT 06032

860 677.4594
860 677.8534 Fax



The Assessor's office is responsible for the maintenance of records on the ownership of properties. Assessments are computed at 70% of the estimated market value of real property at the time of the last revaluation which was 2012.



Ridgefield Connecticut

Ridgefield Town Hall
 400 Main Street
 Ridgefield, CT 06071
 Phone: 203.431.2700
 Fax: 203.431.2722

Information on the Property Records for the Municipality of Ridgefield was last updated on 8/6/2014.

Parcel Information

Location:	504 BARRACK HILL RD	Property Use:	Residential	Primary Use:	Residential
Unique ID:	B100033	Map Block Lot:	B10-0033	Acres:	2.70
490 Acres:	0.00	Zone:	RAA	Volume / Page:	851/ 680
Developers Map / Lot:	2108 15/15	Census:	2456		

Value Information

Fireplaces:	3	Heating:	Baseboard	Fuel:	Heat Pump
Cooling Percent:	0%	Basement Finished Area:	0	Basement Garages:	0
Roof Material:	Asphalt Arch Shingles	Siding:	Clapboards		

Special Features

Chimneys	2
Detailed Fireplaces	1
Partial/No Basement	1234

Attached Components

Type:	Construction:	Year Built:	Area:
Deck	Wood	1970	562
Garage	Frame	1970	576
Porch	Enclosed	1970	210

332,000

MATCH 6-9

E 392,700

64

B10035
TC 5444
TC 7411
TC 8576 2.28 AC

127.79

31.25

41.77

32.75

36.83

B10082

111.03

319.91

201.92

232.96

210.01

190.53

978.60
190.53

524

B10031
TC 2110
TC 5972
TC 8923

510

B10032
TC 2110

530

B10084
TC 6038

28.59

505.81

645.55

B10030
TC 5972

2.000 AC

2.400 AC

288.92

2.300 AC

2.700 AC

2.515 AC

150.00

153.97

TC 205

22.35





Department of Economic and
Community Development

Connecticut
still revolutionary

1676
LR

June 18, 2014

Hermia M. Delaire, Program Manager
CDBG-Sandy Disaster Recovery Program
Department of Housing
505 Hudson Street
Hartford, CT 06106

received
6-24-14

RE: 504 Barrack Hill Road, Ridgefield, CT

Dear Ms. Delaire:

The State Historic Preservation Office (SHPO) has reviewed the above-named project. In the opinion of the SHPO, the proposed undertaking will have no effect upon the state's cultural resources.

This office appreciates the opportunity to have reviewed and commented upon the project.

We recommend that the responsible federal agency provide concerned citizens with the opportunity to review and comment upon the proposed undertaking in accordance with the National Historic Preservation Act of 1966.

For further information, please contact Julie Carmelich at (860) 256-2762.

Sincerely:

Daniel T. Forrest
State Historic Preservation Officer

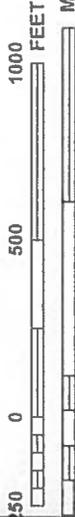
State Historic Preservation Office

One Constitution Plaza | Hartford, CT 06103 | P: 860.256.2800 | Cultureandtourism.org

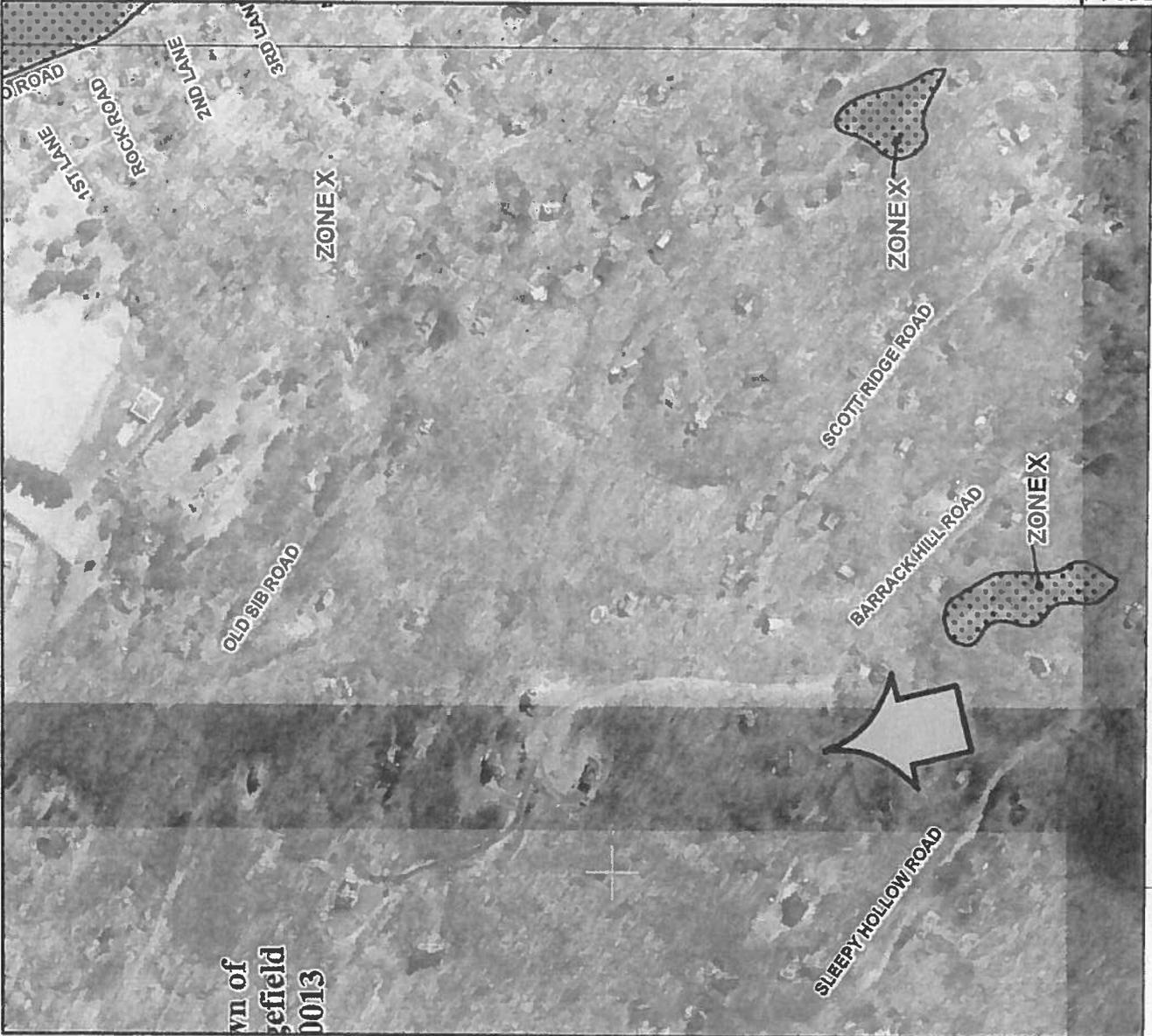
An Affirmative Action/Equal Opportunity Employer An Equal Opportunity Lender



MAP SCALE 1" = 500'



Town of
Fairfield
0013



NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0208F

FIRM
FLOOD INSURANCE RATE MAP
FAIRFIELD COUNTY,
CONNECTICUT
(ALL JURISDICTIONS)

PANEL 208 OF 626
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:
COMMUNITY NUMBER 080013
PANEL NUMBER 0208
SUFFIX F

Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.



MAP NUMBER
09001C0208F
EFFECTIVE DATE
JUNE 18, 2010

Federal Emergency Management Agency

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



U.S. Fish and Wildlife Service

National Wetlands Inventory

504 Barrack Hill
Rd. Ridgefield CT

Nov 4, 2014



Wetlands

- Freshwater Emergent
- Freshwater Forested/Shrub
- Estuarine and Marine Deepwater
- Estuarine and Marine
- Freshwater Pond
- Lake
- River/Stream
- Other

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

User Remarks:



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



Consultation Tracking Number: 05E1NE00-2015-SLI-0086

November 04, 2014

Project Name: Forras Residence

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). 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: Forras Residence

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 Tracking Number: 05EINE00-2015-SLI-0086

Project Type: Federal Grant / Loan Related

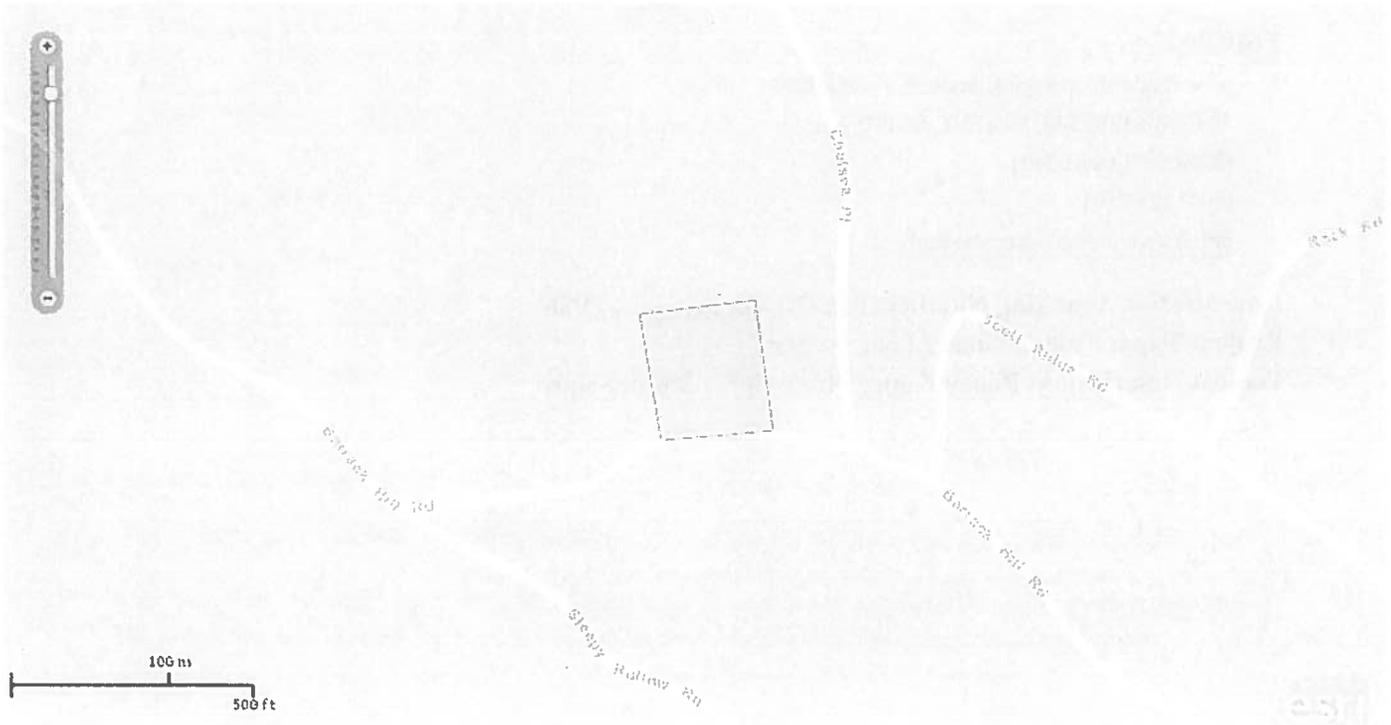
Project Description: Repair damage from Super Storm Sandy



United States Department of Interior
Fish and Wildlife Service

Project name: Forras Residence

Project Location Map:



Project Coordinates: MULTIPOLYGON (((-73.5415832 41.3160526, -73.5407136 41.316134, -73.5405849 41.3154003, -73.5414222 41.3153435, -73.5415832 41.3160526)))

Project Counties: Fairfield, CT



United States Department of Interior
Fish and Wildlife Service

Project name: Forras Residence

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.

Reptiles	Status	Has Critical Habitat	Condition(s)
Bog Turtle (<i>Clemmys muhlenbergii</i>) Population: northern	Threatened		



United States Department of Interior
Fish and Wildlife Service

Project name: Forras Residence

Critical habitats that lie within your project area

There are no critical habitats within your project area.

STEPHEN BALL
294 White Deer Rocks Road
Woodbury, Connecticut 06798

November 6, 2014

Thomas R. Chapman
New England Ecological Services Field Office
70 Commercial Street Suite 300
Concord, NH 330

Identified endangered species – 504 Barack Hill Road, Ridgefield, Connecticut

Dear Mr. Chapman:

While preparing an Environmental Review for a CDBG Disaster Relief grant funding project, we conducted an IPAC query for the property known as 504 Barack Hill Road, Ridgefield, Connecticut. The review identified the Bog Turtle as an endangered species. The property at 504 Barack Hill Road, Ridgefield will be renovated due to damage caused by Super Storm Sandy. I have attached a map to site, Projected Scope of Work & Magnitude of Cost from the Architect, the Assessors Card with photo of property, and a copy of the U.S. Department of Interior Fish and Wildlife Service IPAC query for 504 Barack Hill Road, Ridgefield , CT.

We do not feel there will be any impact on the identified endanger species – Bog Turtle. The location is a developed residential area. The site is 2.7 acres. The building repairs are within the current footprint of the building. Based on our review, we are requesting a letter of clearance to proceed with the identified repairs to 504 Barack Hill Road, Ridgefield , CT.

Should you have any questions or require any additional information, feel free to call me at (203) 509-7231.

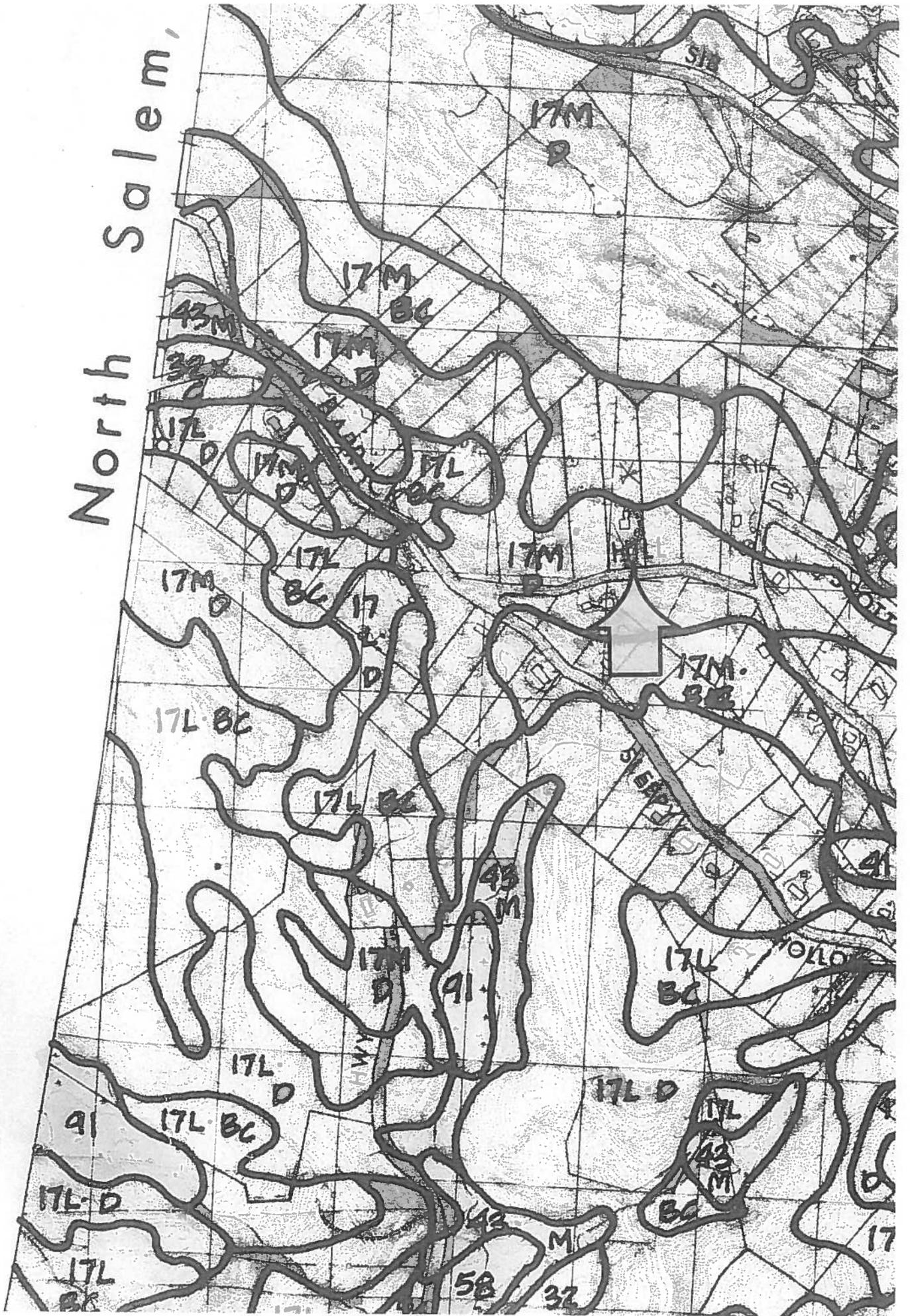
Thanks,



Stephen Ball

Enc.

North Salem,



392,000

SECTION 24

2 000,000

64

B10035

TC 5444

TC 7411

TC 8576 2.28 AC

150.37

319.91

201.92

252.99

250.00

B10082
111.05

96.85

127.75

244.20

81.77

33

190.53

978.60
190.53

924

B10031

TC 2110

TC 5972

TC 8923

758.82

910

B10032

TC 2110

1500

1500

B10034

TC 6038

28.59

2.514 AC

505.81

B10030
TC 5972

645.85

2.000 AC

2.400 AC

2.300 AC

2.700 AC

150.00

155.97

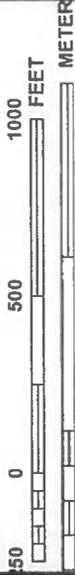
TC 2064



22.33



MAP SCALE 1" = 500'



wn of
gefield
0013



NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0208F

FIRM
FLOOD INSURANCE RATE MAP
FAIRFIELD COUNTY,
CONNECTICUT
(ALL JURISDICTIONS)

PANEL 208 OF 626
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS
COMMUNITY NUMBER 090013
TOWN OF RIDGEFIELD, TOWN OF
PANEL SUFFIX 0208 F

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MAP NUMBER
09001C0208F
EFFECTIVE DATE
JUNE 18, 2010

Federal Emergency Management Agency

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

**Limited Hazardous Materials Building
Inspection Report**

Storm Sandy Residential Rehabilitation Project
504 Barrack Hill Road
Ridgefield, Connecticut

Quisenberry Arcari Architects, LLC
Farmington, Connecticut

October 2014



FUSS & O'NEILL

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



FUSS & O'NEILL
EnviroScience, LLC

October 7, 2014

Mr. Thomas Arcari
Principal
Quisenberry Arcari Architects LLC
318 Main Street
Farmington, CT 06032

**RE: Limited Hazardous Materials Building Inspection
Storm Sandy Residential Rehabilitation Project
504 Barrack Hill Road, Ridgefield, Connecticut**
Fuss & O'Neill EnviroScience Project No. 20140277.D3E
Quisenberry Arcari Project No. 1346-40

Dear Mr. Arcari:

Enclosed is the report for the limited hazardous materials building inspection performed at 504 Barrack Hill Road in Ridgefield, Connecticut.

The initial inspection was performed on September 2, 2014, and September 22, 2014, by Fuss & O'Neill EnviroScience, LLC state-licensed inspectors and included an asbestos inspection, testing for lead-based paint, airborne radon gas assessment, mold assessment, and assessments for PCB-containing light ballasts and mercury hazards.

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

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

Sincerely,

Kevin McCarthy
Project Manager

Timothy M. Downey
Senior Project Manager

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Enclosure

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Limited Hazardous Materials Inspection Report Quisenberry Arcari Architects LLC 504 Barrack Hill Road, Ridgefield, Connecticut

Appendices

APPENDIX A	FUSS & O'NEILL ENVIROSCIENCE STATE LICENSES, CERTIFICATIONS AND ACCREDITATIONS
APPENDIX B	ASBESTOS LAB REPORT AND CHAIN-OF-CUSTODY FORMS
APPENDIX C	LEAD PAINT TESTING PROCEDURES AND EQUIPMENT
APPENDIX D	LEAD TESTING FIELD DATA SHEETS
APPENDIX E	AIRBORNE RADON GAS ASSESSMENT RESULTS AND CHAIN-OF- CUSTODY FORM

1 Introduction

On September 2, 2014 and September 22, 2014, Fuss & O'Neill EnviroScience, LLC (EnviroScience) Environmental Technicians, Mr. Robert Hobbins and Mr. James Blum, performed a limited hazardous materials building inspection of the residential structure located at 504 Barrack Hill Road in Ridgefield, Connecticut (the "Site"). Mr. Hobbins and Mr. Blum are State of Connecticut-licensed Asbestos Consultants - Inspectors and Certified Lead Paint Inspectors. The residential structure was occupied at the time and date of the inspection. Refer to *Appendix A* for EnviroScience state licenses, certifications, and accreditations.

This inspection was performed in response to the planned renovations to damaged or impacted building areas caused by Superstorm Sandy, as identified in the *Draft Residence Rehabilitation Letter* dated June 2, 2014, provided by Quisenberry Arcari Architects. The limited inspection consisted of the following:

- An inspection for asbestos-containing materials (ACM) associated with the scheduled roof replacement, window and louver replacement, siding replacement, structural repairs, and crawlspace improvements, interior finish replacements;
- Testing of painted surfaces for lead-based paint (LBP);
- An evaluation of fluorescent light fixtures for polychlorinated biphenyls (PCB)-containing light ballasts;
- An inventory of light tubes/lamps and devices for mercury;
- Airborne radon gas assessment; and
- A mold assessment.

2 Asbestos Inspection

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

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

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

During this inspection, suspect ACM were separated into three EPA categories. These categories are: thermal system insulation (TSI), surfacing ACM, and miscellaneous ACM. TSI includes all materials used to prevent heat loss or gain or water condensation on mechanical systems. Examples of TSI are pipe

insulation, boiler insulation, duct insulation, and mudded pipe fitting insulations. Surfacing ACM includes all ACM that is applied by spray, trowel, or otherwise applied to an existing surface. Surfacing ACM is commonly used for fireproofing, decorative, and acoustical applications. Miscellaneous materials include all ACM not listed in thermal or surfacing, such as linoleum, vinyl asbestos flooring, and ceiling tiles.

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

2.1 Methodology

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

1. Surfacing Materials (SURF) (e.g., plaster, spray-applied fireproofing, etc.) were collected in a randomly distributed manner representing each homogenous area based on the overall quantity represented by the sampling as follows:
 - a. Three samples collected from each homogenous area that is less than or equal to (\leq) 1,000 square feet.
 - b. Five samples collected from each homogenous area that is greater than ($>$) 1,000 square feet, but less than or equal to 5,000 square feet.
 - c. Seven samples collected from each homogenous area that is greater than ($>$) 5,000 square feet.
2. Thermal System Insulation (TSI) (e.g., pipe insulation, tank insulation, etc.) was collected in a randomly distributed manner representing each homogenous area. Three bulk samples were collected as representative of each homogeneous material type, and sent to laboratory for asbestos analysis. Also, a minimum of one sample of any patching material (less than 6 linear of square feet) applied to TSI was collected.
3. Miscellaneous Materials (MISC) (e.g., floor tile, gaskets, construction mastics, etc.) had a minimum of two samples collected as representative of each homogenous material type. Sampling was conducted in a manner sufficient to determine asbestos content of the homogenous material as determined by the Asbestos Inspector. If materials identified were of (significant) minimal quantity, only a single sample was collected.

The Asbestos Consultant – Inspector collected samples and prepared proper chain-of-custody forms for transmission of samples to an accredited asbestos analytical laboratory for analysis by Polarized Light Microscopy (PLM). The sampling locations, material type, quantity, sample identification, and asbestos content are identified by bulk sample analysis in *Table 1* of the “Results” section. *Table 2* presents the suspect ACM that were identified as not containing asbestos. Suspect materials on the Site not listed in the following *Table 1* should be considered suspect ACM until sample results indicate otherwise. Refer to *Appendix B* for the asbestos lab report and chain-of-custody forms.

2.2 Results

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

Table 1
Asbestos-Containing Materials

Location	Material Type	Asbestos Content	Estimated Quantity	Sample No.
Living Room, adjacent to Kitchen	Textured Wall Coating	2% Chrysotile	500 SF	090401BH01A
Main Floor	Taping/Joint Compound	2% Chrysotile	10,000 SF <i>(Includes associated sheetrock)</i>	0904BH03A
Main Building Roof System	Black Vent Pipe Tar	6% Chrysotile	5 SF	0904BH05A
	Chimney Flashing/Tar	Assumed <i>(Material inaccessible for sampling)</i>	10 SF	N/A

Notes: N/A = Not Applicable; SF = Square Feet

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

Table 2
Non-Asbestos-Containing Materials

Location	Material Type	Sample No.
Building Exterior	Concrete Foundation	0904BH01A-B
Main Building Roof System	Top & Bottom Roof Shingle Layers and Base Sheet	0904BH02A-B, 03A-B, 04A-B
Garage Roof System	Roof Shingles and Base Sheet	0904BH06A-B, 07A-B
Building Exterior	White Paper behind Wood Siding	0904BH08A-B
Main Floor	Sheetrock	0922BH02A-B
Kitchen	White Sheet Flooring and Associated Yellow and Gray Glues	0922BH05A-B, 06A-B, 07A-B

2.3 Discussion

The EPA and the State of Connecticut Department of Public Health (CTDPH) define any material that contains greater than one percent (>1%) asbestos, utilizing PLM as ACM. Materials that are identified as “none detected” are specified as not containing asbestos.

2.4 Conclusions

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

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

Basement/Crawlspace—The crawlspace located under the main floor of the residence was not accessible at the time of the inspection. Any suspect materials encountered during renovations such as; pipe insulation, mudded pipe fitting insulation, and damp-proofing/tars/mastics must be considered ACM until laboratory analysis proves otherwise.

Sheetrock and Taping/Joint Compound — The Taping/Joint Compound was identified as ACM (2% asbestos); the composite sample of the sheetrock and taping/joint compound was identified as non-ACM (less than 1% asbestos). These materials must be removed under controlled conditions (negative air, critical barriers, water, decon, etc.) to comply with CTDPH Standards for Asbestos Abatement requirements. Note that once the abated materials are outside the residence, they may be disposed as general construction/demolition waste.

Roof Chimney Flashing — The roof flashing was inaccessible at the time of the inspection and is assumed to contain asbestos (> 1%).

Since this asbestos inspection was limited to proposed renovations based on scope of work provided by Quisenberry Arcari Architects, we recommend conducting a supplemental inspection of hidden and inaccessible areas (behind walls/beneath fixed floors, exterior foundation, etc.) prior to demolition/renovation activities that may disturb these areas. Any suspect material encountered during demolition/renovation activities that is not identified in this report as being non-ACM, should be presumed to be ACM until sample collection and analysis indicate otherwise.

3 Lead-Based Paint Testing

On September 2, 2014, EnviroScience's Environmental Technicians Mr. Hobbins and Mr. Blum performed comprehensive lead paint testing within the Site structure. The purpose of the testing was for compliance with EPA's Renovation, Repair, and Painting Rule (RRP) located at Title 40 CFR, Parts 745.80 through 92, and the US Department of Housing and Urban Development (HUD) Lead-Safe Housing Rule (Title 24 CFR, Part 35, Subparts B-R).

3.1 Methodology

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

For the purpose of this testing, various interior and exterior building components representing the initial painting history of the building, and any building-wide repainting by the owners/managers of these building components were tested. Individual repainting efforts are not discoverable in such a limited testing program. The purpose of this testing was to identify patterns and trends in the painting history of the buildings to determine if representative sample collection and analysis using the EPA Toxicity Characteristic Leaching Procedure (TCLP) is required for the anticipated demolition debris prior to off-site disposal.

The structure is constructed of exterior wood siding with metal/wood window and door systems. The interior walls and ceiling are constructed of sheetrock with both wood and concrete floors. The building was occupied at the time and date of the testing; however, no children under the age of six were present within the residence at time and date of the inspection.

3.2 XRF Testing Results

The testing indicated consistent painting trends throughout the building interior and exterior. No painted building components were determined to contain toxic levels of lead (greater than 1.0 milligrams of lead per square centimeter [mg/cm²] of paint).

Refer to *Appendix D* for the lead testing field data sheets and diagrams.

3.3 Conclusions and Recommendations

None of the coated building components observed and tested were determined to be coated with toxic levels of lead in paint. Due to the absence of identified lead paint, sample collection of the anticipated waste stream for analysis using the TCLP method was neither conducted, nor required. No lead hazards were identified, and therefore, a risk assessment was not performed.

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

If a specific component or surface is not identified as having been tested as part of this limited inspection, it should be presumed to contain lead paint until tested. Contractor's should be aware that the threshold limit of 1.0 mg/cm² for purposes of EPA RRP requirements is not recognized by the Occupational Safety

and Health Administration (OSHA) and worker exposures are still subject to the Lead in Construction regulation (Title 29 CFR, Part 1926.62).

4 Assessment of PCB-Containing Fluorescent Ballasts

Fluorescent light ballasts manufactured prior to 1979 may contain capacitors that contain PCBs. Ballasts installed as late as 1985 may contain PCB capacitors. Fluorescent light ballasts that are not labeled as "No-PCBs" must be assumed to contain PCBs unless proven otherwise by quantitative analytical testing. Capacitors in fluorescent light ballasts labeled as non-PCB-containing may contain diethylhexyl phthalate (DEHP). DEHP was the primary substitute to replace PCBs for small capacitors in fluorescent lighting ballasts in use until 1991. DEHP is a toxic substance, a suspected carcinogen and is listed under the EPA Resource Conservation and Recovery Act (RCRA) and the Superfund law as a hazardous waste. Therefore, Superfund liability exists for land filling both PCB and DEHP-containing light ballasts. These listed materials are considered hazardous waste under RCRA, and require special handling and disposal requirements.

On September 2, 2014, EnviroScience representative Mr. Hobbins performed a visual inspection of representative fluorescent light fixtures to identify possible PCB-containing ballasts. The inspection involved visually inspecting labels on representative light ballasts to identify dates of manufacture and labels indicating "No PCB's". Ballasts manufactured after 1991 were not listed as a PCB or DEHP-containing ballast, and not quantified for disposal. Ballasts without a label indicating "No PCB's" are presumed to be PCB waste, and must be segregated for proper removal, packaging, transport and disposal as PCB waste. Ballasts with date labels indicating manufacture prior to 1991 that indicate "No PCB's" are presumed to contain DEHP and must be segregated for proper removal, packaging, transport, and disposal as non-PCB hazardous waste. The disposal requirements are slightly varied, and costs are slightly less for DEHP than for PCB-containing light ballasts.

4.1 Results

Several of the light fixtures that were examined were labeled with neither the manufacturer's information, nor a "No PCB's" label. However during the inspection, some types of light ballasts were labeled with a "No PCB's" label. Therefore there is a mixture of assumed PCB-containing and non-PCB-containing light ballasts within the building areas inspected. .

The light ballasts observed in the building were labeled with either the manufacturer's information, or a "No PCBs" label. The light ballasts labeled with the manufacturer's information are assumed to contain PCBs and the light ballasts labeled "No PCBs" are assumed to contain DEHP.

4.2 Conclusions and Recommendations

If the renovation activities will disturb the materials, the ballasts not labeled “No PCBs” should properly be recycled as PCB-containing and the remaining ballast labeled “No PCBs” ballasts should be properly recycled as assumed DEHP.

5 Assessment of Mercury-Containing Devices

Fluorescent lamps/tubes are presumed to contain mercury vapor, which is a hazardous substance to both human health and the environment. Thermostatic controls and electrical switch gear may contain a vial or bulb of mercury associated with the control. Mercury-containing equipment is regulated for proper disposal by the EPA RCRA hazardous waste regulations. Mercury lamps according to the EPA are considered a universal waste requiring all fluorescent lamps/tubes to be recycled or disposed as hazardous waste.

On September 2, 2014, EnviroScience’s representative Mr. Robert Hobbins performed a visual in-place inventory of mercury amps/tubes, thermostats, and mercury switches.

5.1 Conclusions

No fluorescent light bulbs/tubes, thermostats, switches, or gauges were observed within accessible and visible areas of the Site structure. No further action regarding mercury-containing devices is required.

6 Mold Visual Assessment

On September 2, 2014, EnviroScience representative Mr. Hobbins performed a visual assessment for the presence of suspect mold and water intrusion.

6.1 Observations

No suspected mold growth or evidence of water intrusion was observed on building materials within the structure at the time of the inspection.

7 Airborne Gas Radon Information, Sampling and Procedure

7.1 Radon Facts and Health Effects

Radon is a naturally-occurring radioactive gas produced by the natural breakdown (decay) of uranium, which is naturally-occurring in soil and rock throughout the US. Radon gas travels through soil and enters buildings through cracks and other penetrations in building foundations. Eventually the gas itself decays

into radioactive particles (decay products) that can become trapped in the lungs during human respiration. As these particles in turn decay they release small bursts of radiation, which can damage lung tissue and lead to lung cancer over the course of a person's lifespan.

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

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

Again, radon is a known human carcinogen. Prolonged exposure to elevated radon concentrations causes an increased risk of lung cancer. Like other environmental pollutants, there is some uncertainty about the magnitude of radon health risks. However, scientists are more certain about radon risks than risks from most other cancer-causing environmental pollutants as estimates of radon risk are based on studies of cancer in humans (underground miners). Additional studies on more typical, non-occupationally exposed, populations are underway.

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

7.2 Airborne Radon Sampling

From September 2, 2014, to September 4, 2014, EnviroScience representatives deployed passive radon detection canisters in limited areas within the Site building. The canisters were retrieved at least 48 hours, but not later than 96 hours later. The canisters were supplied by Radon Testing Corporation of America (RTCA).

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

Sample analysis was performed by RTCA and the results are included in *Appendix E*.

7.3 Airborne Radon Quality Assurance Procedure

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

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

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

7.4 Airborne Radon Analytical Results

Four canisters, including one duplicate and one blank, were placed in target locations within the structure during sampling that was performed September 2, 2014, to September 4, 2014. The concentrations of radon in the samples during the assessment ranged from 0.2 pCi/L to 0.3 pCi/L. The EPA recommended action level for radon is 4.0 pCi/L.

Table 3 lists the locations and analytical results of quality control duplicate tests for September 2, 2014, to September 4, 2014.

Table 3
Duplicate Samples Results: September 2, 2014 – September 4, 2014

Location	Canister Numbers	Radon Concentration (pCi/Liter)			Relative Percent Difference (RPD, %)
		Sample	Sample Duplicate	Sample Average	
Living Room–Piano	2343286 & 22314108	0.2	0.2	0.2	Percent Difference Not Needed (No Concentrations above 4.0 pCi/Liter)

Note Duplicate testing results were satisfactory.

In *Table 4* below, the locations and results of quality control blank tests are listed September 2, 2014, to September 4, 2014.

Table 4
Blank Samples Results: September 2, 2014 – September 4, 2014

Location	Canister Number	Radon Concentration (pCi/Liter)
Dining Room	2343195	0.3

Note Blank testing results were satisfactory

In *Table 5* below, the locations, canister numbers, and radon concentrations are listed for the airborne radon assessment conducted on September 2, 2014, to September 4, 2014.

Table 5
Radon Sampling Results – September 2, 2014 – September 4, 2014

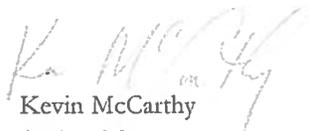
Location	Canister Numbers	Radon Concentration (pCi/Liter)
Living Room–Piano	2343286	0.2
Dining Room	2313922	0.2

7.5 Conclusions and Recommendations

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

Report prepared by Environmental Technician Robert Hobbins.

Reviewed by:


Kevin McCarthy
Project Manager


Timothy M. Downey
Senior Project Manager

Appendix A

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

0001088 FP **PRSRY T5 0 0564 06040
 JOHN R. HOBBS
 C/O FUSS & O'NEILL ENVROSCIENCE, LLC
 146 HARTFORD ROAD
 MANCHESTER CT 06040

Dear Licensed Certified Professional,
 Attached you will find your validated license/certification for the coming year. Should you have any questions about your license/certification renewal, please do not hesitate to write or call.
 Department of Public Health (800) 520-7803
 P.O. Box 34880
 H.S. 11200A
 Hartford, CT 06114-0280
<http://www.dph.state.ct.us>

John A. Hobbins
 JOHN A. HOBBS, MD, MPH, MPA, COMMISSIONER
 DEPARTMENT OF PUBLIC HEALTH

INSTRUCTIONS:

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STATE OF CONNECTICUT
 DEPARTMENT OF PUBLIC HEALTH
 PURSUANT TO THE PROVISIONS OF THE GENERAL STATUTES OF CONNECTICUT
 THE BOARD OF ASBESTOS CONSULTANTS HAS GRANTED
 TO THE BEARER THE FOLLOWING AS A:

ASBESTOS CONSULTANT - INSERION

NAME: JOHN R. HOBBS
 LICENSE NO. 000700
 CURRENT THROUGH 01/31/15
 VALIDATION NO. 03-700702

John A. Hobbins
 JOHN A. HOBBS, MD, MPH, MPA, COMMISSIONER
 DEPARTMENT OF PUBLIC HEALTH

EMPLOYER'S COPY
 STATE OF CONNECTICUT
 DEPARTMENT OF PUBLIC HEALTH
 NAME: JOHN R. HOBBS
 LICENSE NO. 000700
 CURRENT THROUGH 01/31/15
 VALIDATION NO. 03-700702

John A. Hobbins
 JOHN A. HOBBS, MD, MPH, MPA, COMMISSIONER
 DEPARTMENT OF PUBLIC HEALTH

WALLET CARD
 STATE OF CONNECTICUT
 DEPARTMENT OF PUBLIC HEALTH
 NAME: JOHN R. HOBBS
 LICENSE NO. 000700
 CURRENT THROUGH 01/31/15
 VALIDATION NO. 03-700702

John A. Hobbins
 JOHN A. HOBBS, MD, MPH, MPA, COMMISSIONER
 DEPARTMENT OF PUBLIC HEALTH

Fuss & O'Neill EnviroScience, LLC

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

This is to certify that

John Robert Hobbins

XXX-XX-6853

has successfully completed the

4 Hr. Asbestos Inspector Refresher
Asbestos Accreditation under TSCA Title II
40 CFR Part 763


John Rowinski, Principal Instructor

September 3, 2014
Date of Course

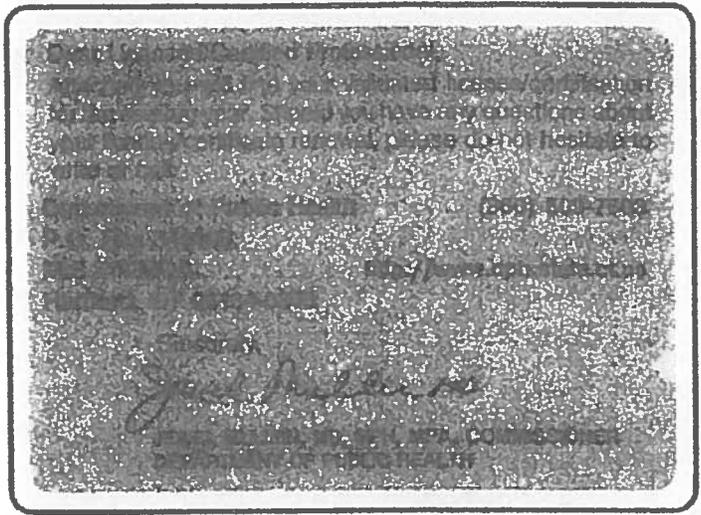
September 3, 2014
Examination Date


Robert L. May, Jr., Training Manager

AI-R-09/14-6
Certificate Number

September 3, 2015
Expiration Date

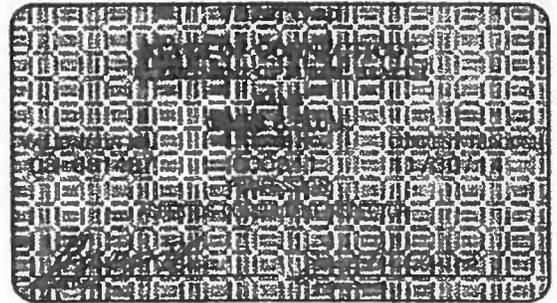
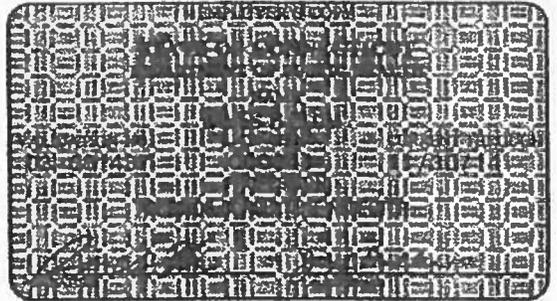
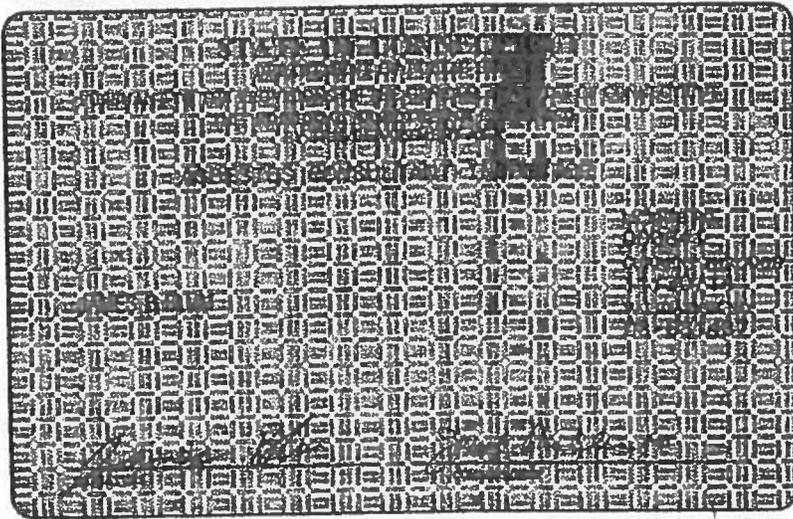
0001672 FP **PRSR TO 0 1664 06040
JAMES B BLUM
FUSS & O'NEILL ENVIROSCIENCE LLC
146 HARTFORD RD
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Fuss & O'Neill EnviroScience, LLC

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

This is to certify that

James Blum

xxx-xx-1625

has successfully completed the

4 Hr. Asbestos Inspector Refresher
Asbestos Accreditation under TSCA Title II
40 CFR Part 763


John Rowinski, Principal Instructor

September 3, 2014
Date of Course

September 3, 2014
Examination Date


Robert L. May, Jr., Training Manager

AI-R-09/14-2
Certificate Number

September 3, 2015
Expiration Date

Appendix B

Asbestos Lab Report and Chain-of-Custody Forms

OrderID: 041425893



FUSS & O'NEILL
EnviroScience, LLC

04/1425893

www.fando.com

146 Hartford Road, Manchester, CT 06040

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

SAMPLE LOG FOR ASBESTOS BULKS

Sheet 1 of 2

Project Name: Storm Sandy Residential Rehab--504 Barrack Hill Road, Ridgefield, CT Project No. 20140277_D3E

Building: 504 Barrack Hill Road Project Manager: K. McCarthy

Sample ID	Sample Location	Material	Result (%)
0904BH01A	Exterior Building	Concrete foundation	NONE DETECTED
0904BH 01B	Exterior Building	Concrete foundation	
0904BH 02A	Main Building Roof	Top Roof shingle	
0904BH 02B	Main Building Roof	Top Roof shingle	
0904BH 03A	Main Building Roof	Bottom Roof shingle	
0904BH 03B	Main Building Roof	Bottom Roof shingle	
0904BH 04A	Main Building Roof	Base Sheet	
0904BH 04B	Main Building Roof	Base Sheet	
0904BH 04C	Main Building Roof	Base Sheet	
0904BH 05A	Main Building Roof	Black Tar on Vent Pipe	6% Chrysotile
0904BH 05B	Main Building Roof	Black Tar on Vent Pipe	1

2014 SEP - 6
 CINNAMON, N.Y.

Analysis Method: PLM Other

Turnaround Time 24 hour

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

Fax Results to the EnviroScience Laboratory at: 888-838-1160.

Special Instructions: Stop analysis on first positive sample in each homogeneous set of samples unless otherwise noted Do not layer samples unless indicated. EPA 400 Point Count all samples of content <4%, positive stop on all point counts.

Samples collected by: R. Hoffman Date: 09-4-14 Time: _____

Samples [Rec'd][Sent by] [BH] Date: [9-5] Time: _____

Samples Received by: DOB fx Date: 9-6-14 Time: 1045A

Shipped To: EMSL State NJ Other _____

Method of Shipment: FedEx Other _____

19

OrderID: 041425893



FUSS & O'NEILL
EnviroScience, LLC

011425893

www.fando.com

146 Hartford Road, Manchester, CT 06040

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

SAMPLE LOG FOR ASBESTOS BULK

Sheet 2 of 2

Project Name: Storm Sandy Residential Rehab-504 Barrack Hill Road, Ridgefield, CT Project No. 20140277.D3E

Building: 504 Barrack Hill Road Project Manager: K. McCarthy

Sample ID	Sample Location	Material	Result (%)
0904BH 06A	Garage Roof	Roof Shingle	None DETECTED
0904BH 06B	Garage Roof	Roof Shingle	
0904BH 06C	Garage Roof	Roof Shingle	
0904BH 07A	Garage Roof	Base Sheet	
0904BH 07B	Garage Roof	Base Sheet	
0904BH 07C	Garage Roof	Base Sheet	
0904BH 08A	Exterior Building	Paper Behind Siding	
0904BH 08B	Exterior Building	Paper Behind Siding	

Analysis Method: PLM Other

Turnaround Time 24 hour

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

Fax Results to the EnviroScience Laboratory at: 888-838-1160.

Special Instructions: Stop analysis on first positive sample in each homogeneous set of samples unless otherwise noted. Do not layer samples unless indicated. EPA 400 Point Count all samples of content <4% positive stop on all point counts.

Samples collected by: B. Hill Date: 9-4-14 Time:

Samples [Rec'd][Sent by] [BA] Date: [9-5] Time:

Samples Received by: Date: Time:

Shipped To: EMSL State NJ Other

Method of Shipment: FedEx Other

2014 SEP - 6 A 11: 09
CINNAMINSON, N.J.



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

EMSL Order: 041425893
 CustomerID: ENV154
 CustomerPO: 20140277.D3E
 ProjectID:

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

Phone: (860) 646-2469
 Fax: (888) 838-1160
 Received: 09/06/14 10:45 AM
 Analysis Date: 9/8/2014
 Collected: 9/4/2014

Project: Storm Sandy Residential Rehab / 504 Barrack Hill Road, Ridgefield, CT / 20140277.D3E

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
0904BH01A 041425893-0001	Exterior Building - Concrete Foundation	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
0904BH01B 041425893-0002	Exterior Building - Concrete Foundation	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
0904BH02A 041425893-0003	Main Building Roof - Top Roof Shingle	Various Fibrous Heterogeneous	20% Glass	80% Non-fibrous (other)	None Detected
0904BH02B 041425893-0004	Main Building Roof - Top Roof Shingle	White/Black Fibrous Homogeneous	20% Glass	80% Non-fibrous (other)	None Detected
0904BH03A 041425893-0005	Main Building Roof - Bottom Roof Shingle	Gray/Black Fibrous Heterogeneous	15% Glass	85% Non-fibrous (other)	None Detected
0904BH03B 041425893-0006	Main Building Roof - Bottom Roof Shingle	Gray/Black Fibrous Homogeneous	15% Glass	85% Non-fibrous (other)	None Detected
0904BH04A 041425893-0007	Main Building Roof - Base Sheet	Black Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
0904BH04B 041425893-0008	Main Building Roof - Base Sheet	Black Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected

Analyst(s)

Juli Patel (7)
 Shane Feret (11)

Stephen Siegel, CIH, Laboratory Manager
 or other approved signatory

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 Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ NVLAP Lab Code 101048-0, AIHA-LAP, LLC-IHLAP Lab 100194, NYS ELAP 10872, NJ DEP 03038, PA ID# 68-00367

Initial report from 09/08/2014 08:02:58



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200 Route 130 North, Cinnaminson, NJ 08077
 Phone/Fax: (800) 220-3875 / (856) 786-5974
 http://www.EMSL.com cinnaslab@EMSL.com

EMSL Order: 041425893
 CustomerID: ENVI54
 CustomerPO: 20140277.D3E
 ProjectID:

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

Phone: (860) 646-2469
 Fax: (888) 838-1160
 Received: 08/06/14 10:45 AM
 Analysis Date: 9/8/2014
 Collected: 9/4/2014

Project: Storm Sandy Residential Rehab / 504 Barrack Hill Road, Ridgefield, CT / 20140277.D3E

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
0904BH04C 041425893-0009	Main Building Roof - Base Sheet	Black Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
0904BH05A 041425893-0010	Main Building Roof - Black Tar on Vent Pipe	Black Non-Fibrous Homogeneous		94% Non-fibrous (other)	6% Chrysotile
0904BH05B 041425893-0011	Main Building Roof - Black Tar on Vent Pipe				Stop Positive (Not Analyzed)
0904BH06A 041425893-0012	Garage Roof - Roof Shingle	Various Fibrous Heterogeneous	20% Glass	80% Non-fibrous (other)	None Detected
0904BH06B 041425893-0013	Garage Roof - Roof Shingle	Various Fibrous Heterogeneous	20% Glass	80% Non-fibrous (other)	None Detected
0904BH06C 041425893-0014	Garage Roof - Roof Shingle	Gray/Black Fibrous Homogeneous	25% Glass	75% Non-fibrous (other)	None Detected
0904BH07A 041425893-0015	Garage Roof - Base Sheet	Black Fibrous Homogeneous	95% Cellulose	5% Non-fibrous (other)	None Detected
0904BH07B 041425893-0016	Garage Roof - Base Sheet	Black Fibrous Homogeneous	95% Cellulose	5% Non-fibrous (other)	None Detected
0904BH07C 041425893-0017	Garage Roof - Base Sheet	Black Fibrous Homogeneous	80% Cellulose	20% Non-fibrous (other)	None Detected

Analyst(s)

Jull Patel (7)
 Shane Feret (11)

Stephen Siegel
 Stephen Siegel, CIH, Laboratory Manager
 or other approved signatory

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

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<http://www.EMSL.com> cinnaslab@EMSL.com

EMSL Order: 041425893
 CustomerID: ENV154
 CustomerPO: 20140277.D3E
 ProjectID:

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

Phone: (860) 646-2469
 Fax: (888) 838-1160
 Received: 09/06/14 10:45 AM
 Analysis Date: 9/8/2014
 Collected: 9/4/2014

Project: Storm Sandy Residential Rehab / 504 Barrack Hill Road, Ridgefield, CT / 20140277.D3E

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
0904BH08A 041425893-0018	Exterior Building - Paper Behind Siding	White/Red Fibrous Homogeneous	90% Cellulose	10% Non-fibrous (other)	None Detected
0904BH08B 041425893-0019	Exterior Building - Paper Behind Siding	Brown/White Fibrous Homogeneous	80% Cellulose	20% Non-fibrous (other)	None Detected

Analyst(s)

Juli Patel (7)
 Shane Ferst (11)

Stephen Slegel, CIH, Laboratory Manager
 or other approved signatory

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

Initial report from 09/08/2014 08:02:58



FUSS & O'NEILL
EnviroScience, LLC

www.fando.com

56 Quarry Road, Trumbull, CT 06611

041427850

Phone 203-374-3748 Fax 203-374-4391

SAMPLE LOG FOR ASBESTOS BULKS

Sheet 1 of 1

Project Name: Storm Sandy Residential Rehab-504 Barrack Hill Rd, Ridgefield, CT Project No. 20140277.D3E

Building: 504 Barrack Hill Rd, Ridgefield, CT Project Manager: K. McCarthy

Sample ID	Sample Location	Material
0922BH01A	Living Room at Kitchen	White Textured/Stucco Wall Coating
0922BH01B	Living Room at Kitchen	White Textured/Stucco Wall Coating
0922BH01C	Living Room at Kitchen	White Textured/Stucco Wall Coating
0922BH02A	Main Floor	Light Grey/Tan Sheetrock
0922BH02B	Main Floor	Light Grey/Tan Sheetrock
0922BH03A	Main Floor	Tan Taping/Joint Compound
0922BH03B	Main Floor	Tan Taping/Joint Compound
0922BH04	Main Floor	Sheetrock & Taping/Joint Compound Composite
0922BH05A	Kitchen	White Sheet Flooring
0922BH05B	Kitchen	White Sheet Flooring
0922BH06A	Kitchen	Yellow Glue on Sheet Flooring
0922BH06B	Kitchen	Yellow Glue on Sheet Flooring
0922BH07A	Kitchen	Grey Glue on Sheet Flooring
0922BH07B	Kitchen	Grey Glue on Sheet Flooring

14 SEP 23 AM 10:33
 C. W. HINSON, III

Analysis Method: PLM Other

Turnaround Time 24 hour

Based on the turnaround time indicated above, analyses are due to EnviroScience on or before this date: _____ Please call the EnviroScience Laboratory if analyses will be late at 203-374-3748.

Fax Results to the EnviroScience Laboratory at: 888-838-1160.

Special Instructions: Stop analysis on first positive sample in each homogeneous set of samples unless otherwise noted. Do not layer samples unless indicated. No point count.

Samples collected by: B. Hollman Date: 9-22-14 Time: _____

Samples [Rec'd][Sent by] | BH | | Date: | 9-22 | | Time: _____

Samples Received by: AK EMSL PK Date: 9/23/14 Time: 0930

Shipped To: EMSL State NJ Other _____

Method of Shipment: Fed Ex Other _____

14 BE



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 http://www.EMSL.com cinnasblab@EMSL.com

EMSL Order: 041427850
 CustomerID: ENV154
 CustomerPO: 20140277.D3E
 ProjectID:

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

Phone: (860) 646-2469
 Fax: (888) 838-1160
 Received: 09/23/14 9:30 AM
 Analysis Date: 9/23/2014
 Collected: 9/22/2014

Project: Storm Sandy Residential Rehab / 504 Barrack Hill Rd, Ridgefield, CT / 20140277.D3E

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
0922BH01A 041427850-0001	Living Room at Kitchen - White Textured/Stucco Wall Coating	White Non-Fibrous Homogeneous		98% Non-fibrous (other)	2% Chrysotile
0922BH01B 041427850-0002	Living Room at Kitchen - White Textured/Stucco Wall Coating				Stop Positive (Not Analyzed)
0922BH01C 041427850-0003	Living Room at Kitchen - White Textured/Stucco Wall Coating				Stop Positive (Not Analyzed)
0922BH02A 041427850-0004	Main Floor - Light Grey/Tan Sheetrock	Gray Fibrous Homogeneous	15% Cellulose	85% Non-fibrous (other)	None Detected
0922BH02B 041427850-0005	Main Floor - Light Grey/Tan Sheetrock	Gray Fibrous Homogeneous	15% Cellulose	85% Non-fibrous (other)	None Detected
0922BH03A 041427850-0006	Main Floor - Tan Taping/Joint Compound	Tan Non-Fibrous Homogeneous		98% Non-fibrous (other)	2% Chrysotile
0922BH03B 041427850-0007	Main Floor - Tan Taping/Joint Compound				Stop Positive (Not Analyzed)
0922BH04 041427850-0008	Main Floor - Sheetrock & Taping/Joint Compound Composite	Brown/Tan/White Fibrous Heterogeneous	20% Cellulose	80% Non-fibrous (other)	<1% Chrysotile

Analyst(s)

Andrew Castellano (4)
 Jillian Yurick (7)

Stephen Siegel, CIH, Laboratory Manager
 or other approved signatory

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 Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ NVLAP Lab Code 101048-0, AIHA-LAP, LLC-IHLAP Lab 100194, NYS ELAP 10672, NJ DEP 03036, PA ID# 66-00367

Initial report from 09/23/2014 18:03:19



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<http://www.EMSL.com> cinnasblab@EMSL.com

EMSL Order: 041427850
 CustomerID: ENVI54
 CustomerPO: 20140277.D3E
 ProjectID:

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

Phone: (860) 646-2469
 Fax: (888) 838-1160
 Received: 09/23/14 9:30 AM
 Analysis Date: 9/23/2014
 Collected: 9/22/2014

Project: Storm Sandy Residential Rehab / 504 Barrack Hill Rd, Ridgefield, CT / 20140277.D3E

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
0922BH05A 041427850-0009	Kitchen - White Sheet Flooring	White Fibrous Homogeneous	20% Cellulose	80% Non-fibrous (other)	None Detected
0922BH05B 041427850-0010	Kitchen - White Sheet Flooring	White Non-Fibrous Homogeneous	35% Cellulose	65% Non-fibrous (other)	None Detected
0922BH06A 041427850-0011	Kitchen - Yellow Glue on Sheet Flooring	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
0922BH06B 041427850-0012	Kitchen - Yellow Glue on Sheet Flooring	Brown/Yellow Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
0922BH07A 041427850-0013	Kitchen - Grey Glue on Sheet Flooring	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
0922BH07B 041427850-0014	Kitchen - Grey Glue on Sheet Flooring	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected

Analyst(s)

Andrew Castellano (4)
 Jillian Yurick (7)

Stephen Siegel, CIH, Laboratory Manager
 or other approved signatory

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 Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ NVLAP Lab Code 101048-0, AIHA-LAP, LLC-IHLAP Lab 100194, NYS ELAP 10872, NJ DEP 03038, PA ID# 88-00387

Initial report from 09/23/2014 18:03:19

Appendix C

Lead Paint Testing Procedures and Equipment

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

Testing Procedures and Equipment

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

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

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

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

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

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

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

Radiation Monitoring Device LPA Analyzer 1

30-Second Standard Mode Reading Description	Substrate	Threshold (mg/cm ²)
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 ²)	Inconclusive Range (mg/cm ²)
Readings not corrected for substrate bias on any substrate.	Brick	1.0	None
	Concrete	1.0	None
	Drywall	1.0	None
	Metal	1.0	None
	Plaster	1.0	None
	Wood	1.0	None

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

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

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

Appendix D

Lead Testing Field Data Sheets



LEAD INSPECTION COVER SHEET

Inspector's Information

Inspector's Name: Robert Hobbins License Number: 2156
 XRF Model: LPA - 1A Serial Number: 1377
 Date of Inspection: September 4, 2014 Project Number: 20140277.D3E

Property Information

Building Address: 504 Barrack Hill Road
 (Street)
Ridgefield CT Age of Property: N/A
 (City) (State)

Describe Structure:

Interior sheetrock ceilings/walls with wood floors. Vinyl and wood door/window systems. Exterior wood siding

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

Multiple Family Dwelling

Single Family Dwelling

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

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

XRF Calibration Check

Calibration Paint Film Used: NIST 1.02 mg/cm² Manufacturer's Standard 1.0 mg/cm²
 Calibration Check Limits Used: RMD (0.7 to 1.3 mg/cm² inclusive)
 Scitex MAP4 (0.6 to 1.2 mg/cm² inclusive)

	Hour	First Reading	Second Reading	Third Reading	Average
First Check	1405	1.0	1.2	1.0	1.06
Second Check	1530	0.9	1.1	1.1	1.03
Third Check	1640	1.2	1.2	1.1	1.16
Fourth Check					



FUSS & O'NEILL

Prepared By

Date

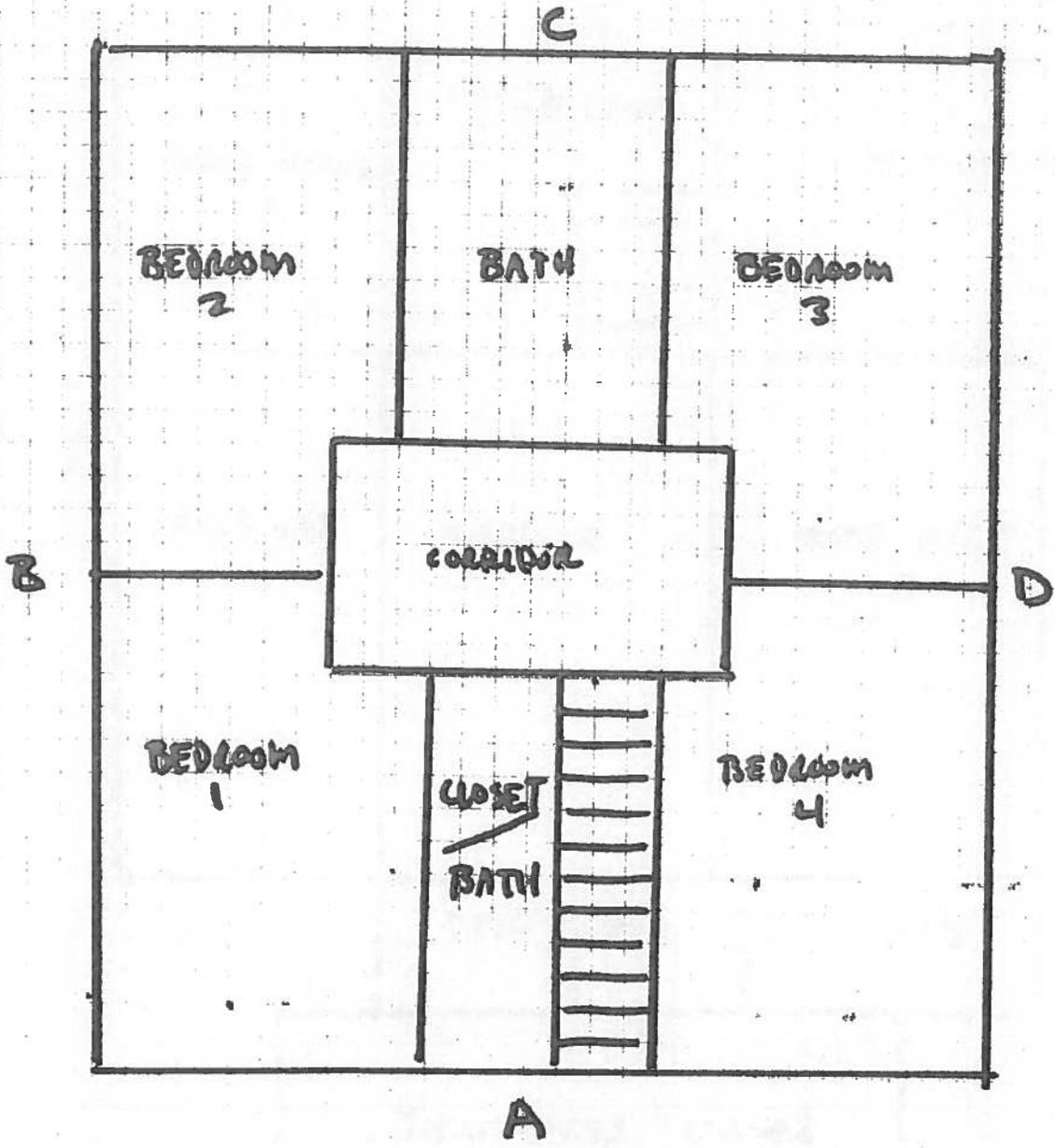
Checked By

Date

Project No

2ND FLOOR

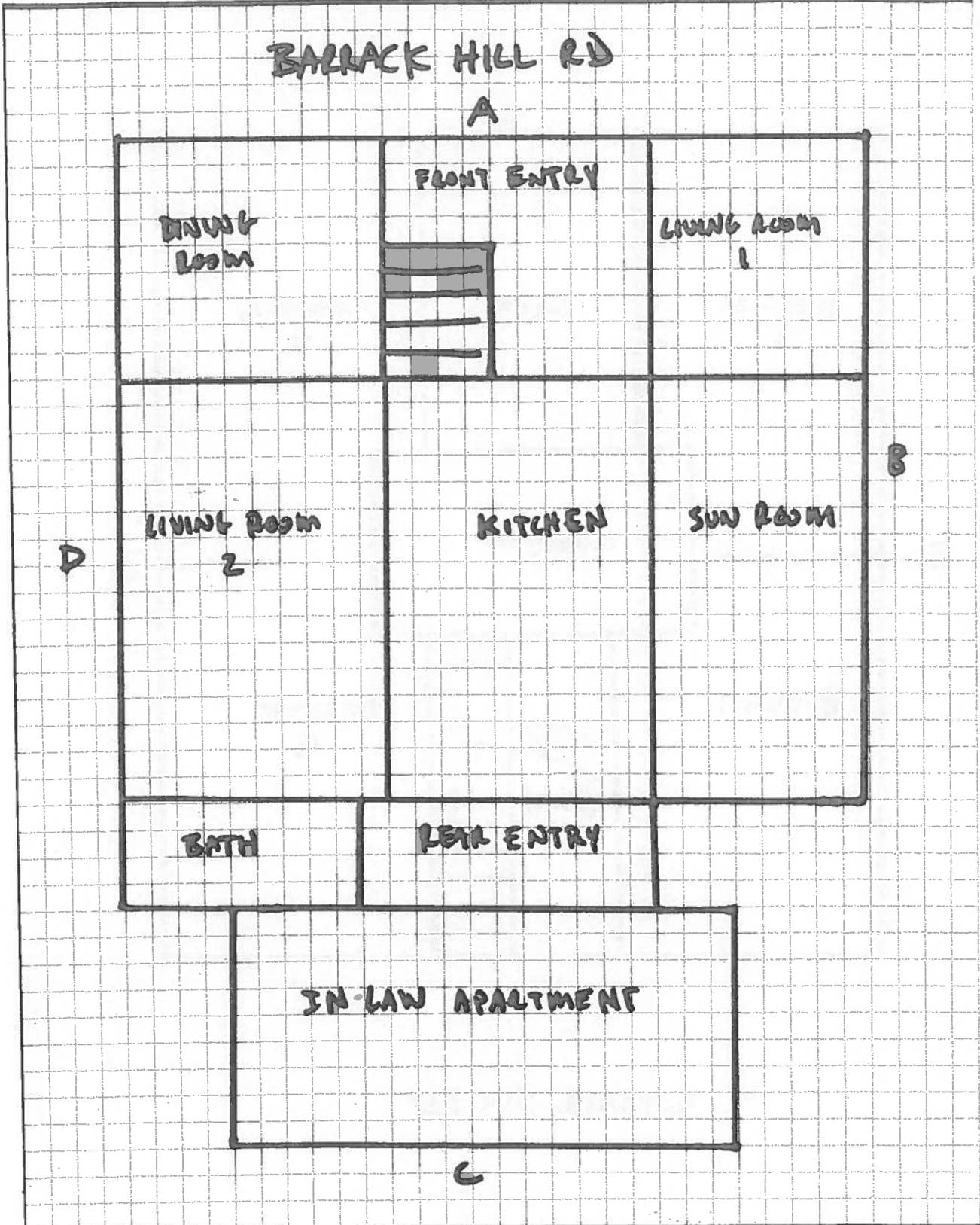
Sheet No
of



BALLACK HILL RD



MAIN FLOOR





XRF FIELD DATA SHEET - INTERIOR ROOM

Address: 504 Barrack Hill Rd, Ridgefield, CT Apt. #: _____
 Floor: Main Room: Back Entry Page _____ of _____
 Project Name: 504 Barrack Hill Rd Project Number: 20140277.D3E

Project Manager: K. McCarthy (If Positive - Check All That Apply) * Substrate Type: Metal = M, Wood = W, Plaster = P,
 Sheetrock = S, Concrete = C, Brick = B, N/A = Not Accessible; N/C = Not Coated; COV = Covered; VR = Vinyl Replacement

Side	Surface	XRF Readings	POS	Substrate	Defective	Chewable	Friction	Impact	Comments
	Floor								<u>Stairs</u>
	Baseboards	<u>0.0</u>		<u>W</u>					
A	Wall	<u>0.2</u>		<u>SR</u>					<u>TOP stringer 2.2 W</u>
B	Wall	<u>0.1</u>		<u>SR</u>					<u>stringer 0.1 W</u>
C	Wall	<u>0.1</u>		<u>SR</u>					
D	Wall	<u>0.0</u>		<u>SR</u>					
	Chair rail								
	Ceiling	<u>-0.0</u>		<u>SR</u>					
	Crown Molding								
	Door	<u>0.5</u>		<u>W</u>					
	Casing	<u>0.7</u>		<u>W</u>					
	Jamb	<u>-0.0</u>		<u>W</u>					
	Door								
	Casing								
	Jamb								
	Window Trim								
	Sill								
	Sash								
	Well								
	Cabinet Base								
	Door Exterior								
	Door Interior								
	Walls								
	Shelves <u>NC</u>								
	Shelf Supports	<u>0.1</u>		<u>W</u>					
	Radiator								
	Wall Molding								
A									
B		<u>0.0</u>		<u>SR</u>					
C									
D		<u>-0.1</u>		<u>SR</u>					

Notes: _____



XRF FIELD DATA SHEET - INTERIOR ROOM

Address: 504 Barrack Hill Rd, Ridgefield, CT Apt. #: _____
 Floor: UPPU Room: INLOW OFF Page _____ of _____
 Project Name: 504 Barrack Hill Rd Project Number: 20140277.D3E

Project Manager: K. McCarthy (If Positive - Check All That Apply) * Substrate Type: Metal = M, Wood = W, Plaster = P,
 Sheetrock = S, Concrete = C, Brick = B, N/A = Not Accessible; N/C = Not Coated; COV = Covered; VR = Vinyl Replacement

Side	Surface	XRF Readings	POS	Substrate	Defective	Chewable	Friction	Impact	Comments
	Floor								
	Baseboards								
A	Wall	0.2		SR					
B	Wall	0.2		↓					
C	Wall	0.1		↓					
D	Wall	0.1		↓					
	Chair rail								
	Ceiling	0.2		SR					
	Crown Molding								
	Door	-0.1		W					
	Casing	0.4		W					
	Jamb	-0.2		W					
	Door								
	Casing								
	Jamb								
	Window Trim	0.3		W					
	Sill	-0.1		W					
	Sash	-0.2		✓					
	Well	0.0		✓					
	Cabinet Base								
	Door Exterior								
	Door Interior								
	Walls								
	Shelves								
	Shelf Supports								
	Radiator	NC							
	Wall Molding								
A		-0.0		SR					
B		-0.1		SR					
C									
D		0.0		SR					
		-0.1		SR					
	Beam	0.2		W					

Notes: _____



XRF FIELD DATA SHEET - INTERIOR ROOM

Address: 504 Barrack Hill Rd, Ridgefield, CT Apt. #: _____
 Floor: main Room: Living Room 2 Page _____ of _____
 Project Name: 504 Barrack Hill Rd Project Number: 20140277.D3E

Project Manager: K. McCarthy (If Positive - Check All That Apply) * Substrate Type: Metal = M, Wood = W, Plaster = P, Sheetrock = S, Concrete = C, Brick = B, N/A = Not Accessible; N/C = Not Coated; COV = Covered; VR = Vinyl Replacement

Side	Surface	XRF Readings	POS	Substrate	Defective	Chewable	Friction	Impact	Comments
	Floor								
	Baseboards	0.1		W					Handrail 0.4 W
A	Wall	-0.0		SR					POST -0.0 W
B	Wall	0.5		stucco					Balkster -0.1 W
C	Wall	-0.1		stucco					
D	Wall	-0.1		SR					
	Chair rail								
	Ceiling	0.1		SR					
	Crown Molding								
	Door	-0.1		W					
	Casing	-0.0		W					
	Jamb	-0.0		W					
	Door								
	Casing								
	Jamb								
	Window Trim	0.2		W					
	Sill	0.2		W					
	Sash	-0.0		W					
	Well	0.1		W					
	Cabinet Base								
	Door Exterior								
	Door Interior								
	Walls								
	Shelves								
	Shelf Supports								
	Radiator	NC							
	Wall Molding								
A									
B									
C									
D									
	beams	0.1		W					

Notes: _____



XRF FIELD DATA SHEET - INTERIOR ROOM

Address: 504 Barrack Hill Rd, Ridgefield, CT Apt. #: _____
 Floor: 2nd Room: Bedroom 1 Page _____ of _____
 Project Name: 504 Barrack Hill Rd Project Number: 20140277.D3E

Project Manager: K. McCarthy (If Positive - Check All That Apply) * Substrate Type: Metal = M, Wood = W, Plaster = P, Sheetrock = S, Concrete = C, Brick = B, N/A = Not Accessible; N/C = Not Coated; COV = Covered; VR = Vinyl Replacement

Side	Surface	XRF Readings	POS	Substrate	Defective	Chewable	Friction	Impact	Comments
	Floor								
	Baseboards	0.1		W					
A	Wall	0.3		SR					Fireplace mantle 0.4
B	Wall	0.1		SR					
C	Wall	0.1		SR					
D	Wall	0.2		SR					
	Chair rail	0.3		W					
	Ceiling	0.1		SR					
	Crown Molding	0.2		W					
	Door	0.1		W					
	Casing	0.0		W					
	Jamb	0.0		W					
	Door	0.2		W					MASTER BATH / CLOSE
	Casing								
	Jamb								A - 0.0 SR
	Window Trim	0.0		W					B 0.2
	Sill	0.1		W					C 0.2
	Sash <u>NC</u>			V					D 0.1
	Well <u>NC</u>			V					BR 0.2 W
	Cabinet Base								Ceiling 0.2 SR
	Door Exterior								
	Door Interior								Door 0.2 W
	Walls								DT 0.0 W
	Shelves								
	Shelf Supports								Window Trim - 0.1 W
	Radiator								Sill - 0.2 W
	Wall Molding								
A									
B									
C									
D									

Notes: _____



XRF FIELD DATA SHEET - INTERIOR ROOM

Address: 504 Barrack Hill Rd, Ridgefield, CT Apt. #: _____

Floor: Bedroom 4 Room: 2nd Page _____ of _____

Project Name: 504 Barrack Hill Rd Project Number: 20140277.D3E

Project Manager: K. McCarthy (If Positive - Check All That Apply) * Substrate Type: Metal = M, Wood = W, Plaster = P, Sheetrock = S, Concrete = C, Brick = B, N/A = Not Accessible; N/C = Not Coated; COV = Covered; VR = Vinyl Replacement

Side	Surface	XRF Readings	POS	Substrate	Defective	Chewable	Friction	Impact	Comments
	Floor								
	Baseboards	0.1		W					
A	Wall	0.1		SR					
B	Wall	0.1							
C	Wall	0.3							
D	Wall	0.1							
	Chair rail								
	Ceiling	0.1		SR					
	Crown Molding								
	Door	0.2		W					
	Casing	0.0		W					
	Jamb	0.3		W					
	Door								
	Casing								
	Jamb								
	Window Trim	0.0		W					
	Sill	0.0		W					
	Sash NC			V					
	Well NC			V					
	Cabinet Base								
	Door Exterior								
	Door Interior								
	Walls								
	Shelves								
	Shelf Supports								
	Radiator								
	Wall Molding								
A									Inaccessible
B									
C									
D									

Notes: _____

Appendix E

Airborne Radon Gas Assessment Results and Chain-of-Custody Form



FUSS & O'NEILL
EnviroScience, LLC

Radon Testing Summary Sheet

Contact/Phone #: Bob Hobbins/203-374-3748 x3526
 Project #: 20140277.D3E
 Building: 504 Barrack Hill Rd
 Address: 504 Barrack Hill Rd
Ridgefield, CT 06877

Placed by: B. Hobbins
 Retrieved by: J. Blum
 Start Date: 9-2-14
 Stop Date: 9-4-14
 Weather at Placement: Sunny - 85°

email results to jhobbins@fando.com

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

REMOVE THIS PORTION AND AFFIX TO TEST INFORMATION FORM
2343286

REMOVE THIS PORTION AND KEEP FOR YOUR RECORDS
2343286

Client
RADON TESTING CORP. OF AMERICA

REMOVE THIS PORTION AND AFFIX TO TEST INFORMATION FORM
2313922

REMOVE THIS PORTION AND KEEP FOR YOUR RECORDS
2313922

Client
RADON TESTING CORP. OF AMERICA

Start Time: 1412
 Stop Time: 1412
 Identifier: _____

Living Room - Piano

Start Time: 1415
 Stop Time: _____
 Identifier: 1415

Dining Room

Start Time: _____
 Stop Time: _____
 Identifier: _____

Start Time: _____
 Stop Time: _____
 Identifier: _____

Start Time: _____
 Stop Time: _____
 Identifier: _____

REMOVE THIS PORTION AND AFFIX TO TEST INFORMATION FORM
2314108

REMOVE THIS PORTION AND KEEP FOR YOUR RECORDS
2314108

Client
RADON TESTING CORP. OF AMERICA

REMOVE THIS PORTION AND AFFIX TO TEST INFORMATION FORM
2343195

REMOVE THIS PORTION AND KEEP FOR YOUR RECORDS
2343195

Client
RADON TESTING CORP. OF AMERICA

necessary. Please
 Start Time: 1412
 Stop Time: 1412
 Identifier: _____

Living Room - Piano - D

Start Time: _____
 Stop Time: _____
 Identifier: _____

Dining Room - B

Start Time: _____
 Stop Time: _____
 Identifier: _____

Start Time: _____
 Stop Time: _____
 Identifier: _____

Start Time: _____
 Stop Time: _____
 Identifier: _____



Site Radon Inspection Report

Date : 09/05/2014

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

Client: Unknown- 20140277.D3E
Test Location: 504 Barrack Hill Rd.
Ridgefield, CT 06877-

Individual Canister Results

Canister ID# :	2313922	Test Start :	09/02/2014 @ 14:15
Canister Type :	Charcoal Canister 3 inch	Test Stop :	09/04/2014 @ 14:15
Location :	Dining Rm	Received:	09/05/2014 @ 15:51
Radon Level :	0.2 pCi/L	Analyzed:	09/05/2014 @ 10:23
Error for Measurement is: ±	0.2 pCi/L		

Canister ID# :	2314108	Test Start :	09/02/2014 @ 14:12
Canister Type :	Charcoal Canister 3 inch	Test Stop :	09/04/2014 @ 14:12
Location :	Living Rm-Piano D	Received:	09/05/2014 @ 15:51
Radon Level :	0.2 pCi/L	Analyzed:	09/05/2014 @ 10:23
Error for Measurement is: ±	0.2 pCi/L		

Canister ID# :	2343195	Test Start :	09/02/2014 @ 14:15
Canister Type :	Charcoal Canister 3 inch	Test Stop :	09/04/2014 @ 14:15
Location :	Dining Room-B	Received:	09/05/2014 @ 15:51
Radon Level :	0.3 pCi/L	Analyzed:	09/05/2014 @ 10:23
Error for Measurement is: ±	0.2 pCi/L		

Canister ID# :	2343286	Test Start :	09/02/2014 @ 14:12
Canister Type :	Charcoal Canister 3 inch	Test Stop :	09/04/2014 @ 14:12
Location :	Living Rm-Piano	Received:	09/05/2014 @ 15:51
Radon Level :	0.2 pCi/L	Analyzed:	09/05/2014 @ 10:23
Error for Measurement is: ±	0.2 pCi/L		



Andreas C. George

Andreas C. George
Radon Measurement Specialist

NJ MES 11089

Dante Galan

Dante Galan
Laboratory Director

NRSB ARL0001
NYS ELAP ID: 10806
PADEP ID: 0346
NJDEP ID: NY933
NJ MEB 90036
FL DOH RB1609
IL ID: RNI2000201

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

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



Site Radon Inspection Report

Date : 09/05/2014

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

Client: Unknown- 20140277.D3E
Test Location: 504 Barrack Hill Rd.
Ridgefield, CT 06877-
Individual Canister Results

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

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

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

For New York clients: If the radon level of one or more testing devices is equal to or exceeds 20 pCi/L please contact the New York State Department of Health, Bureau of Environmental Radiation Protection, for technical advice and assistance at 518-402-7556 or toll free 1-800-458-1158.

PLEDGE OF ASSURED QUALITY

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



Andreas C. George

Andreas C. George
Radon Measurement Specialist

NJ MES 11089

Dante Galan

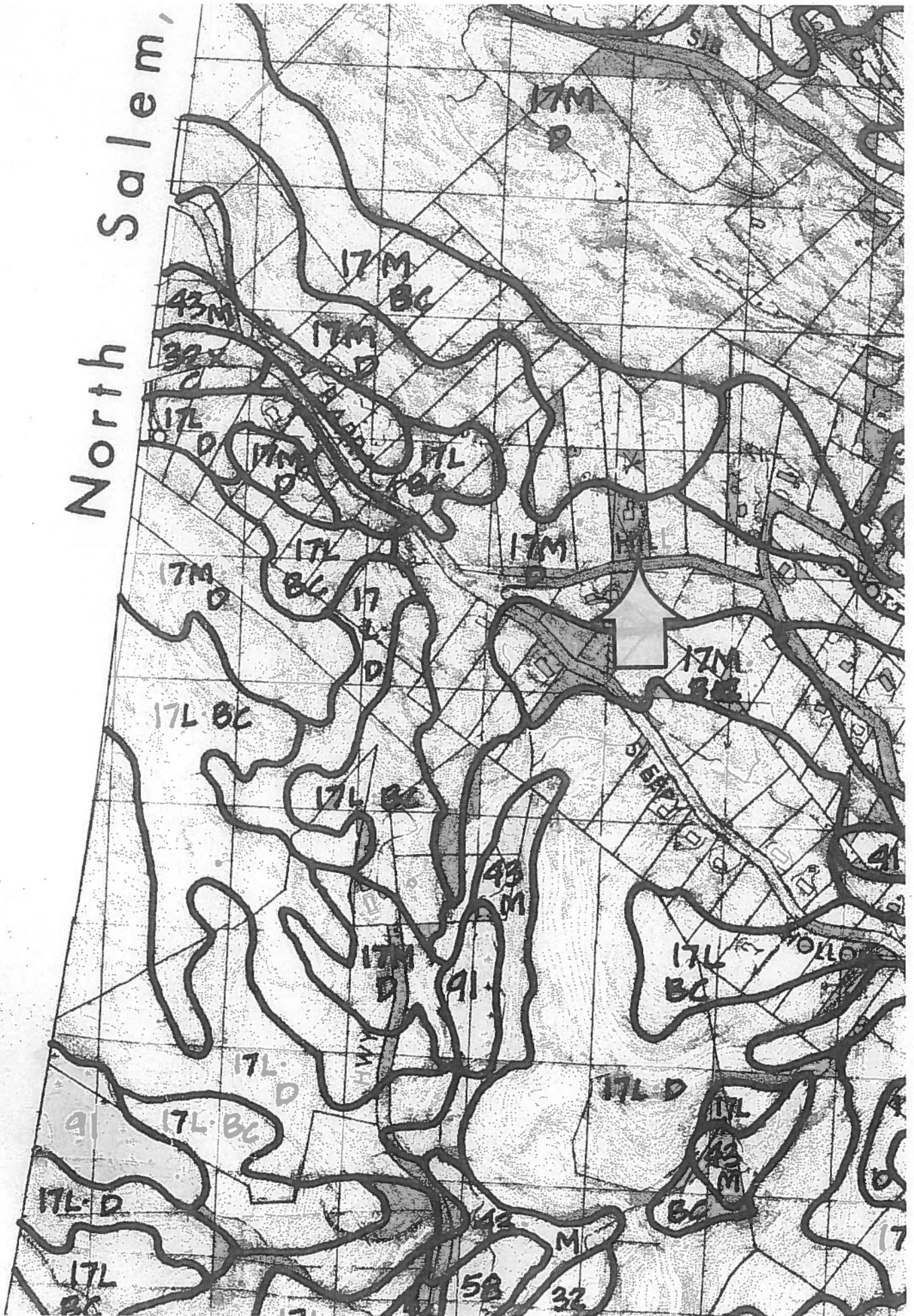
Dante Galan
Laboratory Director

NRSB ARL0001
NYS ELAP ID: 10808
PADEP ID: 0346
NJDEP ID: NY933
NJ MEB 90036
FL DOH RB1809
IL ID: RNI2000201

(914)345-3380
FAX (914)345-8548

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

North Salem,



POORLY DRAINED, VERY POORLY DRAINED
 ALLUVIAL AND FLOOD PLAIN SOILS

CODE / NUMBER

NAME

NEW SYMBOLS

43 ---- L c	LEICESTER
43 M --- R n	LEICESTER-RIDGEBURY-WHITMAN
43X --- L c	LEICESTER
58 --- R o	ALLUVIAL LANDS
91 --- A b	PEATS AND MUCKS
92 --- C e	PEATS AND MUCKS
98 --- R d	RIDGEBURY
98 X -- R n	RIDGEBURY
461 } R b	RAYPOLE
463 }	RAYNHAM
466 --- W d	WALPOLE
823 --- S b	SACO
853 --- P s/R o (3/21/84)	LIMERICK

NOTE

The soil boundaries shown or not precisely define soil are size. For an accurate definition soil surveys by qualified soil

