

Three-Year Asbestos Hazard Emergency Response Act Re-Inspection & Asbestos Management Plan Update

for
School Administration Building
230 South Street
Hyannis, Massachusetts

For Compliance with
Commonwealth of Massachusetts Department of Labor Standards (MADLS)
Asbestos Containing Materials in Schools Regulation (453 CMR 6.00)
and
EPA Asbestos Hazard Emergency Response Act
(Title 40 CFR, Part 763, Subpart E)

Barnstable Public Schools
Barnstable, Massachusetts

August 2020



Fuss & O'Neill, Inc.
108 Myrtle Street, Suite 502
Quincy, MA 02171



November 9, 2020

Mr. David Kanyock
Director of Facilities
Barnstable Public Schools
835 Falmouth Road
Barnstable, MA 02601

**RE: Three-Year AHERA Re-Inspection & Asbestos Management Plan Update
School Administration Building
230 South Street, Hyannis, MA**
Fuss & O'Neill Reference No. 20150090.C90

Dear Mr. Kanyock:

Enclosed is the Three-Year AHERA Re-Inspection and Asbestos Management Plan Update report prepared by Fuss & O'Neill, Inc. for the School Administration Building located at 230 South Street in Hyannis, Massachusetts (the "Site"). AHERA services were performed for Barnstable Public Schools (the "Client").

This report is an important document that must be kept on file at the school as well as at a central location where the Asbestos Management Plans are maintained.

If you should have any questions regarding this report, please do not hesitate to contact me. Thank you for this opportunity to have served your environmental needs.

Sincerely,

Dustin A. Diedricksen
Associate / Department Manager

DD/rs

Enclosure

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1 Introduction

1.1 Background

The Clean Air Act required the United States Environmental Protection Agency (EPA) to develop standards to address the potential health risks associated with adverse effects of asbestos exposure as an indoor contaminant. In October 1986, the EPA promulgated the Asbestos Hazard Emergency Response Act (AHERA) located at Title 40 CFR, Part 763, Subpart E.

The AHERA regulations require that local education agencies (LEAs) conduct inspections of each school building that they lease, own, or otherwise use as a school building to identify friable (easily crumbled or crushed to powder by hand pressure) and non-friable asbestos-containing building materials (ACBM) locations. The original inspections were required to have been completed prior to October 12, 1988.

AHERA also requires that buildings leased or acquired on or after October 12, 1988 that are to be used as a school building, shall be inspected for friable and non-friable ACBM prior to use as a school building. In the event of an emergency use of a building that has not been inspected for ACBM, the building shall be inspected within 30 days after commencement of such use.

The regulatory requirements remain in effect for a private or public school system, a church-affiliated school of any denomination, a school dedicated to the education of children with special needs, or a charter school. In the Commonwealth of Massachusetts, the Department of Labor Standards (MADLS) is responsible for AHERA regulation enforcement.

1.2 Local Education Agency (LEA) Responsibilities

The LEA is responsible for compliance with the AHERA regulation. The following responsibilities must be followed:

1. The LEA must designate a person to ensure that all AHERA requirements are properly implemented. The LEA's Designated Person must receive adequate training to perform their duties.
2. The LEA must ensure that the Asbestos Management Plan(s) (AMP) are maintained in a central location and at each facility. AMP and pertinent documentation shall be available for inspection or review at all times.
3. The LEA must inform all workers, building occupants, and legal representatives (as appropriate) in writing at least once per school year about asbestos-related activities and the availability of the AMP for each school building.

4. The LEA must ensure proper accreditation for all persons who perform asbestos inspections, asbestos re-inspections, AMP development/updates, Asbestos Work Plan (AWP) development, and response actions that may disturb asbestos; this includes operations and maintenance (O&M) activities.
5. The LEA must provide training for all custodial and maintenance staff who regularly perform building maintenance where ACBM are present. The training must be provided upon initial hire, and refresher training must be completed annually.
6. The LEA must provide information (disclosure) to any workers who may perform work and may come into contact with asbestos in school buildings where ACBM or presumed ACBM are present.
7. The LEA must ensure that known ACBM or presumed ACBM are provided with warning labels in routine maintenance areas.
8. The LEA must ensure that periodic surveillance is performed at least once every six months, after AMP implementation, in all school buildings that it leases, owns, or otherwise uses that contains ACBM or presumed ACBM.
9. The LEA must ensure that once every three years, after an AMP is implemented, a re-inspection is performed at each school building that it leases owns or otherwise uses that contains ACBM or presumed ACBM.

Refer to above-mentioned regulation for full requirements and responsibilities.

1.3 Key Personnel

A. Local Education Agency (LEA):

LEA: Barnstable Public Schools
Address: 230 South Street
Hyannis, MA 02601
Phone: (508) 862-4953

B. Designated Person:

Designated Person: Mr. Michael Lambros
Address: Deputy Director of Facilities
835 Falmouth Road
Barnstable, Massachusetts 02601
Phone: (508) 790-6490

C. Asbestos Consultant:

Firm: Fuss & O'Neill, Inc.
Address: 108 Myrtle Street, Suite 502
Quincy, MA 02171
Phone: (617) 282-4675

D. Asbestos Inspector:

Inspector: Robert Mallett
MADLS Certification Number: AI900557
Expiration Date: 06/01/2021

E. Asbestos Management Planner:

Planner: Dustin Diedricksen
MADLS Certification Number: AP900425
Expiration Date: 04/05/2021

2 Building Description

The School Administration Building is a three-and-a-half story, concrete-and-brick structure that includes a partially finished basement. Interior finishes include carpet and resilient floor coverings (on concrete) and (original) plaster and (newer) gypsum wallboard walls & ceilings. The hip roof and the dormers are covered with slate shingles.

3 Three Year Re-Inspection

3.1 Re-Inspection Procedures

This three-year AHERA re-inspection was conducted in accordance with EPA requirements of the AHERA regulation, Title 40 CFR, Part 763, Section 763.85 (b).

On August 26, 2020, Fuss & O'Neill, Inc. (Fuss & O'Neill) representative, Mr. Robert Mallett, performed the re-inspection.

During the re-inspection, Fuss & O'Neill conducted the following required tasks:

1. A visual re-inspection and reassessment of all known friable or Assumed ACBM.
2. A visual re-inspection of ACBM that was previously considered non-friable to determine if the present condition of the material has become friable.

3. Identification and assessment of any newly identified homogeneous area that contains friable ACBM since the last inspection or re-inspection.

4 Re-Inspection Report

4.1 Review of Existing Records

An important part of this AHERA re-inspection involved researching prior documentation, which is required to be present at the school as well as at the central recordkeeping location where AMP and pertinent documentation are stored.

Refer to *Appendix A* for the existing records checklist.

4.2 Re-Inspection Summary

The on-site portion of the re-inspection was documented on forms modeled after examples provided by the EPA and reviewed with the MADLS. The first form, **Re-Inspection Form 1**, identifies previous inspection data gathered during the initial AHERA inspection and subsequent re-inspection (refer to *Appendix B*). This form is useful to reference response actions (if any), which have been performed since the last inspection, as well as identifies the last known conditions of ACBM in the building. It additionally provides the inspector a “quick glance” reference when performing the re-inspection.

The second EPA form, **Re-Inspection Form 2**, is used to provide information and justification regarding re-assessment of the ACBM (refer to *Appendix C*). This form also provides response action recommendations, including a tentative schedule for completing response actions that recommend removal or repair.

Previous bulk sampling results can be found in Table 1 and Table 2. Refer to *Appendix D* for previously sampled materials laboratory reports.

Using EPA protocol and criteria, the following materials existing in the School Administration Building at the time of this three-year re-inspection have been determined and/or assumed to be **ACBM**. Please refer to the above-mentioned re-inspection forms for specific ACBM locations.

**Table 1
Asbestos-Containing Building Materials (ACBM)
(Previous & Current Re-Inspections)**

Material	Location	Reference	Asbestos Content
Black Slater's Mud*	Slate Roof	2014 Initial AMP (Sample ID: 49DD-01A)	15% Chrysotile
Older (Black) Sealant on Copper Flashing*	4 th Floor Dormers	2014 Initial AMP (Sample ID: 49DD-02A)	10% Chrysotile
Concealed (White) Caulking at Brick Molding Beneath Aluminum Frames*	C-Side Louver at Basement Level	2014 Initial AMP (Sample ID: 49DD-05 A)	9.5% Chrysotile
Bottom (Tan) Caulking at Aluminum Dormer Frame & Slate*	4 th Floor Dormers	2014 Initial AMP (Sample ID: 49DD-06 A)	10.8% Chrysotile
Exterior (White) Door Caulking*	B-Side & D-Side Exterior Doors	2014 Initial AMP (Sample ID: 49DD-07 A)	19.5% Chrysotile
Exterior (Brown) Window Caulking*	Typical Window at 4 th Floor Dormers	2014 Initial AMP (Sample ID: 49DD-08A)	3% Chrysotile
Exterior (Brown) Louver Caulking*	C-Side Louver at Basement Level	2014 Initial AMP (Sample ID: 49DD-09A)	5% Chrysotile
Old (Black) Perimeter Flashing (Bottom Layer)*	Mechanical Roof	2014 Initial AMP (Sample ID: 49DD-10A)	10% Chrysotile
Black Roof-Drain Sealant*	Mechanical Roof	2014 Initial AMP (Sample ID: 49DD-11A)	10% Chrysotile

Material	Location	Reference	Asbestos Content
Newer (Black) Perimeter Flashing (Top Layer)*	Mechanical Roof	2014 Initial AMP (Sample ID: 49DD-12A)	5% Chrysotile
White Door System Window Glazing Compound*	D-Side Door	2014 Initial AMP (Sample ID: 49DD-15A)	2% Chrysotile
Brown Window Frame Outer Trim Caulking*	Exterior	2014 Initial AMP (Sample ID: 909LD-01)	3% Chrysotile
Brown Window Frame Inner Assembly Caulking*	Exterior	2014 Initial AMP (Sample ID: 909LD-02)	3% Chrysotile
White Floor Paper	Assumed beneath All Original Hardwood Flooring	Previously Identified as ACM (Referenced in EnviroScience's Limited Hazardous Building Materials Inspection Report dated January 7, 2013; Sample ID: F3)	33% Chrysotile

***Denotes material type is not applicable to AHERA requirements; samples collected as part of a NESHAP inspection prior to building envelope renovations. Results included for informational purposes, only.**

Using the EPA protocol, samples of the following suspect materials were collected and analyzed. The analytical results indicated that these materials are **non-ACBM**:

Table 2
Non-Asbestos-Containing Building Materials
(Previous & Current Re-Inspections)

Material	Location	Reference
Black Patch-Sealant on Copper Flashing	4 th Floor Dormers	2014 Initial AMP (Sample ID: 49DD-03 A-C)
Black Roofing Felt beneath Slate	Slate Roof	2014 Initial AMP (Sample ID: 49DD-04 A-C)
Black Top-Layer Built-Up Roofing (Tar/Gravel)	Mechanical Roof	2014 Initial AMP (Sample ID: 49DD-13 A-B)
Black Felt Layers Associated with Built-Up Roofing	Mechanical Roof	2014 Initial AMP (Sample ID: 49DD-14 A-B)
Wall Plaster (White Skim & Gray Rough Coats)	Boiler Room; 1 st , 2 nd , & 3 rd Floor Stairwells	2014 Initial AMP (Sample ID: 711DD-01D-G); (Sample ID: 711DD-02D-G)
White Wall & Ceiling Plaster Skim Coat	4 th Floor Open Area	Laboratory Report Dated 12/8/2012 (Sample ID: 1205-JH-01A – 01C)
Gray Wall & Ceiling Plaster Rough Coat	4 th Floor Open Area	Laboratory Report Dated 12/8/2012 (Sample ID: 1205-JH-02A – 02C)
Gray Gypsum Wallboard	4 th Floor Open Area	Laboratory Report Dated 12/8/2012 (Sample ID: 1205-JH-03A & 03B)
White Joint Compound	4 th Floor Open Area	Laboratory Report Dated 12/8/2012 (Sample ID: 1205-JH-04A – 04C)
Black Felt Mastic beneath Carpet Glue & Leveling Compound	4 th Floor Hallway	Laboratory Report Dated 12/8/2012 (Sample ID: 1205-JH-05A & 05B)
Gray Leveling Compound	4 th Floor Open Area	Laboratory Report Dated 12/8/2012 (Sample ID: 1205-JH-06A & 06B)
Yellow Carpet Adhesive	4 th Floor Open Area	Laboratory Report Dated 12/8/2012 (Sample ID: 1205-JH-07A & 07B)
White Flue Patch Cement	Boiler Room	2014 Initial AMP (Sample ID: 711DD-16)

Material	Location	Reference
Tan Adhesive Associated with Cork Insulation Board	Coal Room adjacent to Boiler	2014 Initial AMP (Sample ID: 711DD-17 A-B)
Yellow Carpet Adhesive	Basement Hallway	2014 Initial AMP (Sample ID: 711DD-07C)
Gray Rough Dot 2' x 2' ACT	Basement Conference Room	2014 Initial AMP (Sample ID: 711DD-18 A-B)
White Drywall	1 st Floor Front Stairway, 2 nd Floor School Attorney Office, & 2 nd Floor Partition	2014 Initial AMP (Sample ID: 711DD-03 D-F)
White Joint Compound	Basement Hallway, 1 st Floor Stairwell, 2 nd Floor School Attorney Office, & 2 nd Floor Partition	2014 Initial AMP (Sample ID: 711DD-04 D-G)
White Fissure & Dot 2' x 4' ACT	3 rd Floor B/C Corner Office	2014 Initial AMP (Sample ID: 711DD-19 A-B)
Tan/White Ceiling Drywall with Battens	2 nd Floor Hall	2014 Initial AMP (Sample ID: 711DD-20 A-B)
Brown Stone-Pattern Linoleum Flooring	Basement Closet & Men's and Women's Restrooms in Basement, 1 st , & 2 nd Levels	Laboratory Report Dated 12/8/2012 (Sample ID: 1205-JH-08A & 08B)
Light Brown Mastic Associated with Brown Stone-Pattern Linoleum Flooring	Basement Closet & Men's and Women's Restrooms in Basement, 1 st , & 2 nd Levels	Laboratory Report Dated 12/8/2012 (Sample ID: 1205-JH-09A & 09B)
4" Tan Vinyl Baseboard	Basement Closet & Men's and Women's Restrooms in Basement, 1 st , & 2 nd Levels	Laboratory Report Dated 12/8/2012 (Sample ID: 1205-JH-10A & 10B)
Yellow Mastic Associated with 4" Tan Vinyl Baseboard	Basement Closet & Men's and Women's Restrooms in Basement, 1 st , & 2 nd Levels	Laboratory Report Dated 12/8/2012 (Sample ID: 1205-JH-11A & 11B)
12" x 12" White with Tan Streak Floor Tile	4 th Floor Room B/C & Room C/D	Laboratory Report Dated 12/8/2012 (Sample ID: 1205-JH-12A & 12B)

Mr. Dustin Diedricksen reviewed the information obtained during this re-inspection. Mr. Diedricksen is an EPA-accredited and MADLS-Certified Asbestos Management Planner.

4.3 Newly Identified or Re-sampled ACBM Materials

No newly identified suspect ACBM were identified in the building during this re-inspection.

AHERA regulations pertain to interior identified or Assumed ACBM and limited exterior ACBM. AHERA regulations do include ACBM located on exterior porticos, covered walkways, and mechanical equipment used to condition interior building air.

Any suspect ACBM encountered during renovation/demolition/maintenance activities that is not specifically identified in the AMP as a non-ACBM should be assumed to contain asbestos unless sample results indicate otherwise.

Safety Data Sheets (SDS) should be obtained and kept with the AHERA documentation for any newly installed materials in order to meet AHERA requirements. These SDS must demonstrate that asbestos-containing materials (ACM) were not installed in the building. We recommend that SDS for newly installed materials be inserted into *Appendix E*.

4.4 Physical Assessment of ACBM

During inspection, suspect ACBM were separated into three EPA categories: Thermal System Insulation (TSI), Surfacing ACBM, and Miscellaneous ACBM. TSI includes all materials used to prevent heat loss/ gain or water condensation on mechanical systems. Examples of TSI are pipe and fitting insulations, boiler insulation, and duct insulation. Surfacing ACBM is commonly used for fireproofing, decorative, and acoustical applications. Miscellaneous ACBM include all ACBM not listed in TSI or surfacing, such as sheet flooring, vinyl asbestos flooring, ceiling tiles, and construction mastics/adhesives.

Finally, ACBM were quantified in linear feet or square feet, depending on the nature of the material.

The ACBM identified during the inspection (and still remaining in the school building) were re-assessed using the MADLS and AHERA guidelines for assessment of ACBM. The following assessment categories are listed:

- 1 Damaged or significantly damaged TSI ACM
- 2 Damaged friable surfacing ACM
- 3 Significantly damaged friable surfacing ACM
- 4 Damaged or significantly damaged friable miscellaneous ACM
- 5 ACBM with potential for damage
- 6 ACBM with potential for significant damage
- 7 Any remaining friable ACBM or friable suspected ACBM

Material locations, assessments, and recommended response actions are listed in the re-inspection forms.

5 Management Plan Update

5.1 Recommended Response Actions

Based on the inspection report, the physical walk-through inspection, and the existing ACBM conditions, the following response actions are recommended:

1. Removal – Not Applicable
2. Repair - Not Applicable
3. Enclosure – Not Applicable
4. Encapsulation – Not Applicable
5. Operations and Maintenance (O & M) - All remaining ACBM

A successful O & M Program includes the following elements:

- A. Cleaning: All areas of the school where friable ACBM or assumed friable ACBM are present should be cleaned at least once after completion of this re-inspection. Additional cleaning may be necessary if the Asbestos Management Planner makes a written recommendation indicating the methods and frequency of such cleaning.
- B. O & M Activities: The LEA shall ensure that the procedures described below are followed to protect building occupants from O & M activities that may disturb known or Assumed ACBM:
 1. Restrict entry into the area either by physically isolating or by scheduling.
 2. Post asbestos warning signs to prevent entry by unauthorized persons.
 3. Deactivate or temporarily shut off or divert the air-handling system to the area.
 4. Use proper work practices and engineering controls, such as wet methods, protective clothing, High Efficiency Particulate Air (HEPA) vacuums, mini-enclosures/glove bags, etc. to inhibit fiber migration.
 5. Place asbestos debris and other contaminated materials into a sealed, leak-tight container for disposal.
- C. Minor Fiber Release Episode: The LEA shall ensure that the procedures described below are followed in the event of a minor fiber release episode (i.e., disturbance of less than or equal to 3 linear/square feet of friable ACBM):
 1. Saturate the debris using wet methods.
 2. Place the debris in a sealed, leak-tight container and clean the area.

3. Repair the area of damaged ACBM with materials such as asbestos-free spackling, plaster or insulation or seal with an encapsulant.
- D. **Major Fiber Release Episode:** The LEA shall ensure that the procedures described below are followed in the event of a major fiber release episode (i.e., disturbance of greater than 3 linear/square feet of friable ACBM):
1. Restrict entry into the area and post asbestos warning signs.
 2. Deactivate or temporarily shut off or divert the air handling system from the area to prevent fiber migration.
 3. The response action for any major fiber release episode must be prepared by EPA-accredited Asbestos Project Designers and conducted by EPA-accredited personnel.
 4. The LEA shall notify the MADLS of any major fiber release episode within twenty-four hours of its occurrence and, if necessary, provide written notification as required by applicable federal and/or state regulations.

5.2 Periodic Surveillance

At least once every six months after an AMP is implemented, the LEA will conduct periodic surveillance in the school that contains ACBM or Assumed ACBM. The person conducting periodic surveillance will visually inspect all areas in the school where ACBM have been identified in the AMP, and record the date of surveillance, their name, and any changes in the ACBM condition; this information shall then be submitted to the LEA's Designated Person for inclusion in the AMP.

Refer to *Appendix F* for the Sample 6-Month Periodic Surveillance Form that may be used for conducting periodic surveillance.

5.3 Preventive Measures

The LEA shall institute appropriate preventive measures to eliminate the reasonable likelihood that ACBM will become damaged, deteriorated, and/or delaminated.

Refer to *Appendix G* for preventive measures designed for various types of ACBM that may exist in the school.

5.4 Abatement (Removal) Cost Estimates

Costs for abatement (removal) of all ACBM in the building are as follows:

**Table 3
Abatement Cost Estimates**

Material	Location	Estimated Quantity	Estimated Contractor Cost
White Floor Paper (concealed beneath hardwood flooring)	Assumed beneath All Original Hardwood Flooring	Unknown	\$8/SF

SF=Square Feet

Asbestos training costs for custodial and maintenance workers (under O&M Program) are as follows:

**Table 4
Asbestos Training Cost Estimates**

Training Course	Estimated Cost
Two-Hour Asbestos Awareness Training (Annual)	\$75/Person/Year
Asbestos Coordinator/LEA Designated Person Initial Training	\$250/Person
Asbestos Coordinator/LEA Designated Person Annual Refresher Training	\$200/Person/Year
Asbestos Operations & Maintenance Initial Training	\$300/Person
Asbestos Operations & Maintenance Annual Refresher Training	\$150/Person/Year
Three-Year Re-Inspections & AMP Updates	\$3,000 - 3,500

6 EPA Accreditation Requirements

EPA accreditations and MADLS Asbestos Inspector and Asbestos Management Planner certifications for Mr. Mallett and Mr. Diedricksen are provided in *Appendix H*.



Report prepared by Environmental Analyst, Robert Mallett.

Reviewed by:

A handwritten signature in black ink, appearing to read 'D. A. Diedricksen'.

Dustin A. Diedricksen
Associate / Department Manager

Appendix A

Existing Records Checklist

Existing Records Checklist

Local Education Agency (LEA): Barnstable Public Schools
835 Falmouth Road
Barnstable, MA 02601

School Building: School Administration Building

The following documentation is required to be present at both the LEA's office and at a centralized location in the school administrative office. The information included in this checklist will be verified to be present and complete as part of three-year re-inspection.

DOCUMENTATION		LOCATION	
		School	LEA Office
1	Original AHERA Operations and Maintenance Plan/Inspection Report	No	Yes
2	Three Year Re-Inspection (First and All Subsequent Inspections)	No	2014 2017
3	Parents and Teachers Notifications (Annually Since Last Re-Inspection)	Yes (In Student Handbook)	Yes (In Student Handbook)
4	Designated Person Identification and Proper Training	Yes	Yes
5	Designated Person Periodic Surveillance (Once Every Six Months)	No	Yes
6	Maintenance Staff Awareness Training Records	No	Yes
7	Outside Vendor Awareness Notification	Yes	Yes
8	Asbestos Warning Signs and Labels (Required Posting in Boiler Rooms and Mechanical Spaces Only)	N/A	N/A
9	Response Action Records (Includes Any Abatement Conducted Since Last 3-Year Re-Inspection)	N/A	N/A

Comments: Items marked "No" indicate not present/available at the time of this inspection.

Inspector (LEA Office): Robert Mallett

Date: August 26, 2020

Inspector (School): Robert Mallett

Date: August 26, 2020

Appendix B

Re-Inspection Form 1

School: School Administration Building
 Address: 230 South Street, Hyannis, MA

Date(s) of Original Inspection: 2014
 Date(s) of Subsequent Re-Inspections: 2017, 2020

Homogeneous Material			Material Category	Friability	Assessment Category (1-7)	Recorded Locations	Response Actions Taken/Renovations/Other Comments
Sample Number	Asbestos Content	Material Description					
F3	33% Chrysotile	White Floor Paper	Misc.	NF	5	Assumed beneath All Original Hardwood Flooring	Exploratory investigations required to determine extent of (concealed) floor paper beneath hardwood flooring prior to potential disturbance (e.g., flooring replacement, coring, etc.)

Information abstracted by: Robert Mallett Date: August 26, 2020

Material Category: TSI = Thermal System Insulation, Surf. = Surfacing, Misc. = Miscellaneous

Friability: F = Friable, NF = Non-Friable

AHERA Assessment Categories:

1 = Damaged or significantly damaged TSI ACM; 2 = Damaged friable surfacing ACM; 3 = Significantly damaged friable surfacing ACM; 4 = Damaged or significantly damaged friable miscellaneous ACM; 5 = ACBM with potential for damage; 6 = ACBM with potential for significant damage; 7 = Any remaining friable ACBM or friable suspected ACBM

Appendix C

Re-Inspection Form 2

School: School Administration Building
 Homogeneous Material: White Floor Paper

 Date of Re-Inspection: August 26, 2020
 Sample ID Number: F3

ACBM RE-INSPECTION FINDINGS					MANAGEMENT PLANNER RECOMMENDATIONS	
ACBM Location(s) by Assessment Category	Friability	Estimated Quantity	Assessment Category	Physical Description	Recommended Response Action(s)	Date Action Completed
Assumed beneath All Original Hardwood Flooring	NF	Unknown	5	ACBM with potential for damage	Exploratory investigations required to determine extent of (concealed) floor paper beneath hardwood flooring prior to potential disturbance (e.g., flooring replacement, coring, etc.). Maintain under O&M Program	Ongoing
Were additional samples of this ACBM collected? No					Date of Management Planner Review: <u>November 9, 2020</u>	
Inspector's Name: <u>Robert Mallett</u> Inspector Signature: _____ Accreditation #/State: <u>AI900557/MA</u> Expiration Date: <u>06/01/2021</u>					Management Planner Name: <u>Dustin Diedricksen</u> Management Planner Signature: _____ Accreditation #/State: <u>AP900425/MA</u> Expiration Date: <u>04/05/2021</u>	
I, the LEA's Designated Person, have read and understood the recommendations made above: _____ Date: _____						

Appendix D

Previously Sampled Materials Laboratory Reports

**EMSL Analytical, Inc.**

7 Constitution Way, Suite 107, Woburn, MA 01801

Phone/Fax: (781) 933-8411 / (781) 933-8412

bostonlab@emsl.com

EMSL Order: 131202118

CustomerID: ENVI54

CustomerPO:

ProjectID:

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

Phone: (860) 646-2469
 Fax: (888) 838-1160
 Received: 05/08/12 9:40 AM
 Analysis Date: 5/9/2012
 Collected: 4/9/2012

Project: **20120379.A1E/Town of Barnstable; School Administration Building**

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 and/or EPA 600/M4-82-020 Method(s) using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
49DD-01A 131202118-0001	ROOF - SLATER'S MUD	Black Fibrous Heterogeneous		85% Non-fibrous (other)	15% Chrysotile
49DD-01B 131202118-0002	ROOF - SLATER'S MUD				Stop Positive (Not Analyzed)
49DD-01C 131202118-0003	ROOF - SLATER'S MUD				Stop Positive (Not Analyzed)
49DD-02A 131202118-0004	4TH FLOOR DORMERS - OLDER FLASHING SEALANT ON COPPER	Black Non-Fibrous Homogeneous		90% Non-fibrous (other)	10% Chrysotile
49DD-02B 131202118-0005	4TH FLOOR DORMERS - OLDER FLASHING SEALANT ON COPPER				Stop Positive (Not Analyzed)
49DD-02C 131202118-0006	4TH FLOOR DORMERS - OLDER FLASHING SEALANT ON COPPER				Stop Positive (Not Analyzed)

Analyst(s)

Renaldo Drakes (17)

Steve Grise (8)

Renaldo Drakes, Laboratory Manager
or other approved signatory

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 Samples analyzed by EMSL Analytical, Inc. Woburn, MA NVLAP Lab Code 101147-0, CT PH-0315, MA AA000188, RI AAL-10773 and VT AL357102

Initial report from 05/09/2012 17:59:30



EMSL Analytical, Inc.

7 Constitution Way, Suite 107, Woburn, MA 01801

Phone/Fax: (781) 933-8411 / (781) 933-8412

bostonlab@emsl.com

EMSL Order: 131202118

CustomerID: ENVI54

CustomerPO:

ProjectID:

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

Phone: (860) 646-2469
Fax: (888) 838-1160
Received: 05/08/12 9:40 AM
Analysis Date: 5/9/2012
Collected: 4/9/2012

Project: **20120379.A1E/Town of Barnstable; School Administration Building**

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 and/or EPA 600/M4-82-020 Method(s) using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
49DD-03A 131202118-0007	4TH FLOOR DORMERS - BLACK PATCH SEALANT AT COPPER FLASHING	Black Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
49DD-03B 131202118-0008	4TH FLOOR DORMERS - BLACK PATCH SEALANT AT COPPER FLASHING	Black Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
49DD-03C 131202118-0009	4TH FLOOR DORMERS - BLACK PATCH SEALANT AT COPPER FLASHING	Black Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
49DD-04A 131202118-0010	ROOF - BLACK ROOFING FELT UNDERNEATH SLATE	Black Fibrous Heterogeneous	85% Cellulose	15% Non-fibrous (other)	None Detected
49DD-04B 131202118-0011	ROOF - BLACK ROOFING FELT UNDERNEATH SLATE	Brown Fibrous Heterogeneous	85% Cellulose	15% Non-fibrous (other)	None Detected

Analyst(s)

Renaldo Drakes (17)

Steve Grise (8)

Renaldo Drakes, Laboratory Manager
or other approved signatory

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Project: 20120379.A1E/Town of Barnstable; School Administration Building

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 and/or EPA 600/M4-82-020 Method(s) using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
49DD-04C 131202118-0012	ROOF - BLACK ROOFING FELT UNDERNEATH SLATE	Brown Fibrous Homogeneous	85% Cellulose	15% Non-fibrous (other)	None Detected
49DD-05A 131202118-0013	C SIDE EXTERIOR - LOWER CAULKING AT BRICK MOLDING	White Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
49DD-05B 131202118-0014	C SIDE EXTERIOR - LOWER CAULKING AT BRICK MOLDING	White Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
49DD-05C 131202118-0015	C SIDE EXTERIOR - LOWER CAULKING AT BRICK MOLDING	White Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
49DD-06A 131202118-0016	4TH FLOOR EXTERIOR - BOTTOM CAULK AT ALUMINUM DORMER FRAME & SLATE	Tan Non-Fibrous Heterogeneous	2% Fibrous (other)	98% Non-fibrous (other)	None Detected

Recommend T.E.M Analysis

Analyst(s)

Renaldo Drakes (17)

Steve Grise (8)

Renaldo Drakes, Laboratory Manager
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 Samples analyzed by EMSL Analytical, Inc. Woburn, MA NVLAP Lab Code 101147-0, CT PH-0315, MA AA000188, RI AAL-10773 and VT AL357102

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Project: **20120379.A1E/Town of Barnstable; School Administration Building**

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 and/or EPA 600/M4-82-020 Method(s) using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
49DD-06B 131202118-0017	4TH FLOOR EXTERIOR - BOTTOM CAULK AT ALUMINUM DORMER FRAME & SLATE	Tan Non-Fibrous Homogeneous	2% Fibrous (other)	98% Non-fibrous (other)	None Detected
Recommend T.E.M Analysis					
49DD-07A 131202118-0018	B DOOR EXTERIOR - WHITE EXTERIOR CAULKING	White Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
49DD-07B 131202118-0019	D DOOR EXTERIOR - WHITE EXTERIOR CAULKING	White Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
49DD-08A 131202118-0020	4TH FLOOR DORMER - BROWN EXTERIOR WINDOW CAULKING (TOP LAYER)	Gray Non-Fibrous Homogeneous		97% Non-fibrous (other)	3% Chrysotile

Analyst(s)

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EMSL Order:	131202118
CustomerID:	ENVI54
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ProjectID:	

Attn: Bob May Fuss & O'Neill EnviroScience, LLC 146 Hartford Road Manchester, CT 06040	Phone: (860) 646-2469 Fax: (888) 838-1160 Received: 05/08/12 9:40 AM Analysis Date: 5/9/2012 Collected: 4/9/2012
Project: 20120379.A1E/Town of Barnstable; School Administration Building	

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 and/or EPA 600/M4-82-020 Method(s) using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
49DD-08B 131202118-0021	A EXTERIOR BASEMENT - BROWN EXTERIOR WINDOW CAULKING (TOP LAYER)				Stop Positive (Not Analyzed)
49DD-08C 131202118-0022	B SIDE 1ST FLOOR - BROWN EXTERIOR WINDOW CAULKING (TOP LAYER)				Stop Positive (Not Analyzed)
49DD-09A 131202118-0023	C SIDE LOUVER - BROWN CAULKING (TOP)	Gray Non-Fibrous Heterogeneous		95% Non-fibrous (other)	5% Chrysotile
49DD-09B 131202118-0024	C SIDE LOUVER - BROWN CAULKING (TOP)				Stop Positive (Not Analyzed)
49DD-10A 131202118-0025	MECHANICAL ROOF - OLD PERIMETER FLASHING (BOTTOM) - BLACK	Black Non-Fibrous Homogeneous		90% Non-fibrous (other)	10% Chrysotile

Analyst(s)
 Renaldo Drakes (17)
 Steve Grise (8)


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146 Hartford Road
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Phone: (860) 646-2469
Fax: (888) 838-1160
Received: 05/08/12 9:40 AM
Analysis Date: 5/9/2012
Collected: 4/9/2012

Project: **20120379.A1E/Town of Barnstable; School Administration Building**

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 and/or EPA 600/M4-82-020 Method(s) using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
49DD-10B 131202118-0026	MECHANICAL ROOF - OLD PERIMETER FLASHING (BOTTOM) - BLACK				Stop Positive (Not Analyzed)
49DD-11A 131202118-0027	MECHANICAL ROOF - BLACK ROOF DRAIN CAULKING SEALANT	Black Non-Fibrous Homogeneous		90% Non-fibrous (other)	10% Chrysotile
49DD-11B 131202118-0028	MECHANICAL ROOF - BLACK ROOF DRAIN CAULKING SEALANT				Stop Positive (Not Analyzed)
49DD-12A 131202118-0029	MECHANICAL ROOF - TOP PERIMETER FLASHING (NEWER) - BLACK	Black Non-Fibrous Homogeneous		95% Non-fibrous (other)	5% Chrysotile
49DD-12B 131202118-0030	MECHANICAL ROOF - TOP PERIMETER FLASHING (NEWER) - BLACK				Stop Positive (Not Analyzed)

Analyst(s)

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 Analysis Date: 5/9/2012
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Project: **20120379.A1E/Town of Barnstable; School Administration Building**

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 and/or EPA 600/M4-82-020 Method(s) using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
49DD-13A 131202118-0031	MECHANICAL ROOF - TOP LAYER BUILT-UP ROOFING (TAR & GRAVEL)	Black Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
49DD-13B 131202118-0032	MECHANICAL ROOF - TOP LAYER BUILT-UP ROOFING (TAR & GRAVEL)	Black Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
49DD-14A 131202118-0033	MECHANICAL ROOF - FELT LAYERS -BUILT-UP ROOFING	Black Non-Fibrous Heterogeneous	65% Cellulose	35% Non-fibrous (other)	None Detected
49DD-14B 131202118-0034	MECHANICAL ROOF - FELT LAYERS -BUILT-UP ROOFING	Black Non-Fibrous Homogeneous	40% Cellulose	60% Non-fibrous (other)	None Detected
49DD-15A 131202118-0035	D SIDE DOOR - WHITE (EXT.) WINDOW GLAZING COMPOUND	White Non-Fibrous Homogeneous		98% Non-fibrous (other)	2% Chrysotile
49DD-15B 131202118-0036	D SIDE DOOR - WHITE (EXT.) WINDOW GLAZING COMPOUND				Stop Positive (Not Analyzed)

Analyst(s)

Renaldo Drakes (17)

Steve Grise (8)

Renaldo Drakes, Laboratory Manager
or other approved signatory

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CustomerPO:
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Attn: **Bob May**
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146 Hartford Road
Manchester, CT 06040

Phone: (860) 646-2469
Fax: (888) 838-1160
Received: 05/08/12 9:40 AM
Analysis Date: 5/15/2012
Collected: 4/9/2012

Project: 20120379.A1E/Town of Barnstable; School Administration Building

**Test Report: Asbestos Analysis of Non-Friable Organically Bound Materials by TEM
via EPA/600/R-93/116 Section 2.5.5.1**

SAMPLE ID	DESCRIPTION	APPEARANCE	% MATRIX MATERIAL	% NON-ASBESTOS FIBERS	ASBESTOS TYPES
49DD-03A 131202118-0007	4TH FLOOR DORMERS - BLACK PATCH SEALANT AT COPPER FLASHING	Black Non-Fibrous Homogeneous	100	None	No Asbestos Detected
49DD-05A 131202118-0013	C SIDE EXTERIOR - LOWER CAULKING AT BRICK MOLDING	White Non-Fibrous Homogeneous	90.5	None	9.5% Chrysotile
49DD-06A 131202118-0016	4TH FLOOR EXTERIOR - BOTTOM CAULK AT ALUMINUM DORMER FRAME & SLATE	White Non-Fibrous Homogeneous	89.2	None	10.8% Chrysotile
49DD-07A 131202118-0018	B DOOR EXTERIOR - WHITE EXTERIOR CAULKING	White Non-Fibrous Homogeneous	80.5	None	19.5% Chrysotile
49DD-13A 131202118-0031	MECHANICAL ROOF - TOP LAYER BUILT-UP ROOFING (TAR & GRAVEL)	Black Non-Fibrous Homogeneous	100	None	No Asbestos Detected
49DD-14A 131202118-0033	MECHANICAL ROOF - FELT LAYERS -BUILT-UP ROOFING	Black Fibrous Homogeneous	100	None	No Asbestos Detected

Analyst(s)

Renaldo Drakes (6)

Renaldo Drakes, Laboratory Manager
or other approved signatory

This laboratory is not responsible for % asbestos in total sample when the residue only is submitted for analysis. The above report relates only to the items tested. This report may not be reproduced, except in full, without written approval by EMSL Analytical, Inc. Samples received in good condition unless otherwise noted. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample.
Samples analyzed by EMSL Analytical, Inc. Woburn, MA

Initial report from 05/15/2012 19:08:52



FUSS & O'NEILL
EnviroScience, LLC

www.fando.com

50 Redfield St, Suite 100 Boston, MA 02122

(617)282-4675 Fax (617)0282-8253

SAMPLE LOG FOR ASBESTOS BULKS

Sheet 1 of 3

Project Name: TOWN OF BARNSTABLE Project No. 20120379.AIE

Building: SCHOOL ADMINISTRATION BUILDING Project Manager: Bob May

Sample ID	Sample Location	Material	Result (%)
1 49DD-01A	ROOF	SLATER'S MUD	
2 -01B	↓	↓	
3 -01C	↓	↓	
4 49DD-02A	4TH FLOOR DORMERS	OLDER FLASHING SEALANT ON COPPER	
5 -02B	↓	↓	
6 -02C	↓	↓	
7 49DD-03A		BLACK PATCH SEALANT AT COPPER FLASHING	
8 -03B	↓	↓	
9 -03C	↓	↓	
10 49DD-04A	ROOF	BLACK ROOFING FELT UNDERNEATH SLATE	
11 -04B	↓	↓	
12 -04C	↓	↓	

Analysis Method: PLM SM 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: 860-812-2228.

Special Instruction: 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 asbestos content <4%, positive stop on all point counts.

NO POINT COUNTING

Samples collected by: A.D. Date: 4/7/12 Time: PM

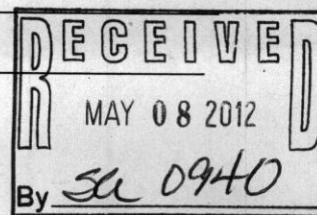
Samples [Rec'd][Sent by] [A.D.] Date: [5/7] Time: PM

Samples Received by: _____ Date: _____ Time: _____

Shipped To: EMSL State MA Other

Method of Shipment: Fed Ex UPS Overnight UPS Ground Other

FedEx # 797997669671





FUSS & O'NEILL
EnviroScience, LLC

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50 Redfield St, Suite 100 Boston, MA 02122

(617)282-4675 Fax (617)0282-8253

SAMPLE LOG FOR ASBESTOS BULKS

Sheet 2 of 3

Project Name: TOWN OF BARNSTABLE Project No. 2920379.AIE

Building: SCHOOL ADMIN BUILDING Project Manager: PEG MAY

Sample ID	Sample Location	Material	Result (%)
13 25 49DD-05A	C SIDE EXTERIOR	LOUVER CAULKING AT	SAME AS OLD ALL
26 14 -05B	↓	BRICK MOLDING ↓	WINDOWS
27 15 -05C	↓	↓	
28 16 49DD-06A	4TH FLOOR EXTERIOR	BOTTOM CAULK AT	
29 17 -06B	↓	↓ ALUMINUM DORMER FRAME + SLATE	
30 18 49DD-07A	B DOOR EXTERIOR	WHITE EXTERIOR CAULKING	
31 19 -07B	A DOOR EXTERIOR	↓	
32 20 49DD-08A	4TH FLOOR DORMER	BROWN EXTERIOR WINDOW CAULKING	(TOP LAYER)
33 21 -08B	A EXTERIOR BASEMENT	↓	
34 22 -08C	A SIDE 1ST FLOOR	↓	
35 23 49DD-09A	C SIDE LOUVER	BROWN CAULKING (TOP)	
36 24 -09B	↓	↓	

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: 860-812-2228.

Special Instruction: 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 asbestos content <4%, positive stop on all point counts. NO POINT COUNT

Samples collected by: D.D. Date: 4/7/12 Time: PM

Samples [Rec'd][Sent by] [DD] Date: [5/7] Time: PM

Samples Received by: _____ Date: _____ Time: _____

Shipped To: EMSL State MA Other _____

Method of Shipment: Fed Ex UPS Overnight UPS Ground Other





FUSS & O'NEILL
EnviroScience, LLC

131202118

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(617)282-4675 Fax (617)0282-8253

SAMPLE LOG FOR ASBESTOS BULKS

Sheet 3 of 3

Project Name: TOWN OF BARNSTABLE Project No. 20120379 A1E
Building: SCHOOL ADMIN. BUILDING Project Manager: BOB MAY

Sample ID	Sample Location	Material	Result (%)
13 ²⁵ 49DD-10A	MECHANICAL ROOF	OLD PERIMETER FLASHING (BOTTOM)	BLACK
14 ²⁶ -10B	↓	↓	
15 ²⁷ 49DD-11A		BLACK ROOF DRAIN CAULKING SEAMANT	
16 ²⁸ -11B		↓	
17 ²⁹ 49DD-12A		TOP PERIMETER FLASHING (NEWER)	BLACK
18 ³⁰ -12B		↓	
19 ³¹ 49DD-13A		TOP LAYER BUILT-UP ROOFING (TART)	GRAVEL
20 ³² -13B		↓	
21 ³³ 49DD-14A		FELT LAYERS - BUILT-UP ROOFING	
22 ³⁴ -14B		↓	
23 ³⁵ 49DD-15A		D SIDE DOOR	WHITE (EXT.) WINDOW GLAZING
24 ³⁶ -15B	↓	↓	

Analysis Method: PLM Other Turnaround Time 24 Hour

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Special Instruction: 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 asbestos content <4%, positive stop on all point counts.

NO POINT COUNTING

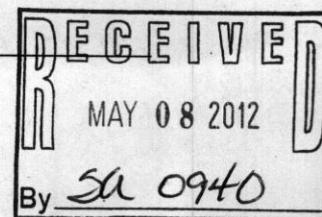
Samples collected by: A.D. Date: 4/9/12 Time: PM

Samples [Rec'd][Sent by] [AS] Date: [5/7] Time: PM

Samples Received by: _____ Date: _____ Time: _____

Shipped To: EMSL State MA Other _____

Method of Shipment: Fed Ex UPS Overnight UPS Ground Other _____





EMSL Analytical, Inc.

7 Constitution Way, Suite 107, Woburn, MA 01801

Phone/Fax: (781) 933-8411 / (781) 933-8412

bostonlab@emsl.com

EMSL Order: 131205884

CustomerID: ENVI54

CustomerPO:

ProjectID:

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

Phone: (860) 646-2469
Fax: (888) 838-1160
Received: 12/06/12 10:05 AM
Analysis Date: 12/8/2012
Collected: 12/5/2012

Project: **20120379.A2E / Barnstable School Admin Building**

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 and/or EPA 600/M4-82-020 Method(s) using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
1205-JH-01A 131205884-0001	Open Area - plaster wall skim	White Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
1205-JH-01B 131205884-0002	Open Area - plaster wall skim	White Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
1205-JH-01C 131205884-0003	Open Area - plaster ceiling	White Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
1205-JH-02A 131205884-0004	Open Area - plaster wall rough	Gray Non-Fibrous Homogeneous	<1% Hair	100% Non-fibrous (other)	None Detected
1205-JH-02B 131205884-0005	Open Area - plaster wall rough	Gray Non-Fibrous Homogeneous	<1% Hair	100% Non-fibrous (other)	None Detected
1205-JH-02C 131205884-0006	Open Area - plaster ceiling	Gray Non-Fibrous Homogeneous	<1% Hair	100% Non-fibrous (other)	None Detected
1205-JH-03A 131205884-0007	Open Area - drywall	Gray/Tan Fibrous Heterogeneous	10% Cellulose 2% Glass	88% Non-fibrous (other)	None Detected
1205-JH-03B 131205884-0008	Open Area - drywall	Gray Fibrous Heterogeneous	5% Cellulose 2% Glass	93% Non-fibrous (other)	None Detected

Analyst(s)

Kevin Pine (11)
Steve Grise (21)

Renaldo Drakes, Laboratory Manager
or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Woburn, MA NVLAP Lab Code 101147-0, CT PH-0315, MA AA000188, RI AAL-10773 and VT AL357102

Initial report from 12/08/2012 16:47:11



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EMSL Order: 131205884

CustomerID: ENVI54

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Attn: **Bob May**
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Phone: (860) 646-2469
Fax: (888) 838-1160
Received: 12/06/12 10:05 AM
Analysis Date: 12/8/2012
Collected: 12/5/2012

Project: **20120379.A2E / Barnstable School Admin Building**

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 and/or EPA 600/M4-82-020 Method(s) using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
1205-JH-03C 131205884-0009	Office open area - drywall	Tan/White Fibrous Heterogeneous	10% Cellulose	90% Non-fibrous (other)	None Detected
1205-JH-04A 131205884-0010	Open area - joint compound	White Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
1205-JH-04B 131205884-0011	Open area - joint compound	White Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
1205-JH-04C 131205884-0012	Office open area - joint compound	White Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
1205-JH-05A 131205884-0013	Hallway - residual black felt mastic beneath carpet glue & leveling compound	Black Fibrous Homogeneous	70% Cellulose	30% Non-fibrous (other)	None Detected
1205-JH-05B 131205884-0014	Hallway - residual black felt mastic beneath carpet glue & leveling compound	Black Fibrous Homogeneous	70% Cellulose	30% Non-fibrous (other)	None Detected
1205-JH-06A 131205884-0015	Open area - grey leveling compound	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected

Analyst(s)

Kevin Pine (11)
Steve Grise (21)

Renaldo Drakes, Laboratory Manager
or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Woburn, MA NVLAP Lab Code 101147-0, CT PH-0315, MA AA000188, RI AAL-10773 and VT AL357102

Initial report from 12/08/2012 16:47:11



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Phone: (860) 646-2469
Fax: (888) 838-1160
Received: 12/06/12 10:05 AM
Analysis Date: 12/8/2012
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Project: **20120379.A2E / Barnstable School Admin Building**

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 and/or EPA 600/M4-82-020 Method(s) using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
1205-JH-06B 131205884-0016	Open area - grey leveling compound	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
1205-JH-07A 131205884-0017	Open area - yellow carpet adhesive	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
1205-JH-07B 131205884-0018	Open area - yellow carpet adhesive	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
1205-JH-08A 131205884-0019	Women's room - brown stone pattern linoleum flooring	Gray/Tan Fibrous Heterogeneous	20% Cellulose	80% Non-fibrous (other)	None Detected
1205-JH-08B 131205884-0020	Men's room - brown stone pattern linoleum flooring	Gray/Tan Fibrous Heterogeneous	20% Cellulose	80% Non-fibrous (other)	None Detected
1205-JH-09A 131205884-0021	Women's room - light brown mastic a/w brown stone pattern linoleum flooring	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
1205-JH-09B 131205884-0022	Men's room - light brown mastic a/w brown stone pattern linoleum flooring	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected

Analyst(s)

Kevin Pine (11)
Steve Grise (21)

Renaldo Drakes, Laboratory Manager
or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Woburn, MA NVLAP Lab Code 101147-0, CT PH-0315, MA AA000188, RI AAL-10773 and VT AL357102

Initial report from 12/08/2012 16:47:11



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Phone: (860) 646-2469
Fax: (888) 838-1160
Received: 12/06/12 10:05 AM
Analysis Date: 12/8/2012
Collected: 12/5/2012

Project: **20120379.A2E / Barnstable School Admin Building**

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 and/or EPA 600/M4-82-020 Method(s) using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
1205-JH-10A 131205884-0023	Women's room - 4" tan vinyl baseboard	Tan Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
1205-JH-10B 131205884-0024	Men's room - 4" tan vinyl baseboard	Tan Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
1205-JH-11A 131205884-0025	Women's room - Yellow mastic a/w 4' tan vinyl baseboard	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
1205-JH-11B 131205884-0026	Men's room - Yellow mastic a/w 4' tan vinyl baseboard	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
1205-JH-12A 131205884-0027	Room B/C - 12x12 white w/tan streaks floor tile	White Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
1205-JH-12B 131205884-0028	Room A/D - 12x12 white w/tan streaks floor tile	White Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
1205-JH-13A 131205884-0029	Room B/C - Black mastic a/w 12x12 white w/tan streak floor tile	Black Non-Fibrous Homogeneous		90% Non-fibrous (other)	10% Chrysotile

Analyst(s)

Kevin Pine (11)
Steve Grise (21)

Renaldo Drakes, Laboratory Manager
or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Woburn, MA NVLAP Lab Code 101147-0, CT PH-0315, MA AA000188, RI AAL-10773 and VT AL357102

Initial report from 12/08/2012 16:47:11



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Attn: **Bob May**
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Phone: (860) 646-2469
Fax: (888) 838-1160
Received: 12/06/12 10:05 AM
Analysis Date: 12/8/2012
Collected: 12/5/2012

Project: **20120379.A2E / Barnstable School Admin Building**

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 and/or EPA 600/M4-82-020 Method(s) using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
1205-JH-13B 131205884-0030	Room B/C - Black mastic a/w 12x12 white w/tan streak floor tile				Stop Positive (Not Analyzed)
1205-JH-13C 131205884-0031	Room A/D - Black mastic a/w 12x12 white w/tan streak floor tile				Stop Positive (Not Analyzed)
1205-JH-14A 131205884-0032	Room C/D - Red caulk a/w chimney	Red Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
1205-JH-14B 131205884-0033	Room C/D - Red caulk a/w chimney	Red Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
1205-JH-15A 131205884-0034	Open area - Tan construction adhesive residual	Tan Non-Fibrous Homogeneous		97% Non-fibrous (other)	3% Chrysotile
1205-JH-15B 131205884-0035	Open area - Tan construction adhesive residual				Stop Positive (Not Analyzed)

Analyst(s)

Kevin Pine (11)
Steve Grise (21)

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Samples analyzed by EMSL Analytical, Inc. Woburn, MA NVLAP Lab Code 101147-0, CT PH-0315, MA AA000188, RI AAL-10773 and VT AL357102

Initial report from 12/08/2012 16:47:11



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EnviroScience, LLC

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131205884

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(617) 282-4675 Fax (617) 282-8253

SAMPLE LOG FOR ASBESTOS BULKS

Sheet 1 of 3

Project Name: Barnstable School Admin Building Project No. 20120379.A2E

Building: Barnstable School Admin Building Project Manager: Bob May

Sample ID	Sample Location	Material	Result (%)
1 1205JH-01A	Open Area	Plaster wall skin	
2 -01B	↓	↓ ↓ ↓	
3 -01C	↓	↓ ceiling ↓	
4 -02A	↓	↓ wall Rough ↓	
5 -02B	↓	↓ ↓ ↓	
6 -02C	↓	↓ ceiling ↓	
7 -03A	↓	Drywall	
8 -03B	↓	↓	
9 -03C	office D/A	↓	
10 -04A	open area	Joint compound	
11 -04B	↓	↓	
12 -04C	office D/A	↓	

Analysis Method: PLM Other
 SW 12/6/12

Turnaround Time 48 HR

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

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

Special Instruction: Stop at first positive in each set. Do not point count.

Samples collected by: JH Date: 12/5/12 Time: AM

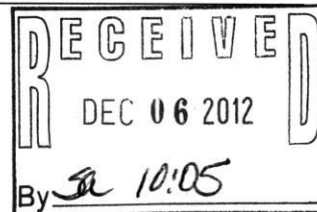
Samples [Rec'd][Sent by] [JH] Date: [12/5/12] Time: PM

Samples Received by: _____ Date: _____ Time: _____

Shipped To: EMSL State MA

Other _____

Method of Shipment: Fed Ex UPS Overnight UPS Ground Other



FedEx# 7980 0726 0747



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SAMPLE LOG FOR ASBESTOS BULKS

Sheet 2 of 3

Project Name: Barnstable School Admin Building Project No. 20120379.A2E

Building: Barnstable School Admin Building Project Manager: Bob May

Sample ID	Sample Location	Material	Result (%)
13 1205JH-05A	Hall way	Residual black felt mastic beneath carpet glue + leveling compound	
14 -05B	↓		
15 -06A	open area	Grey leveling compound	
16 -06B	↓		
17 -07A	open area	Yellow carpet adhesive	
18 -07B	↓		
19 -08A	women's Room	Brown stone Pattern Linoleum Flooring	
20 -08B	men's ↓		
21 -09A	women's ↓	Light Brown mastic A/W Brown stone pattern Linoleum flooring	
22 -09B	men's ↓		
23 -10A	women's ↓	4" Tan Vinyl Baseboard	
24 -10B	men's ↓		

Analysis Method: PLM Other

Turnaround Time 48 HR

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

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

Special Instruction: Stop at first positive in each set. Do not point count.

Samples collected by: JH Date: 12/5/12 Time: AM

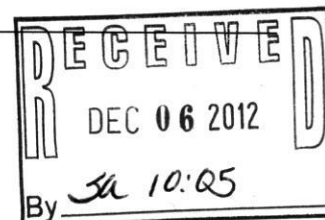
Samples [Rec'd][Sent by] [JH] Date: [12/5/12] Time: PM

Samples Received by: _____ Date: _____ Time: _____

Shipped To: EMSL State MA

Other _____

Method of Shipment: Fed Ex UPS Overnight UPS Ground Other





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SAMPLE LOG FOR ASBESTOS BULKS

Sheet 3 of 3Project Name: Barnstable School Admin Building Project No. 20120379.A2EBuilding: Barnstable School Admin Building Project Manager: Bob May

Sample ID	Sample Location	Material	Result (%)
25 1205JH-11A	women's Room	Yellow mastic Adh 4" Tan vinyl Baseboard	
26 -11B	men's ↓	↓	
27 -12A	Room B/C	12x12 white w/Tan streaks Floor Tile	
28 -12B	Room A/D	↓	
29 -13A	Room B/C	Black mastic Adh 12x12 white w/Tan	
30 -13B	↓	streaks Floor Tile	
31 -13C	Room A/D	↓	
32 -14A	Room C/D	Red caulk Adh chimney	
33 -14B	↓	↓	
34 -15A	open area	Tan construction Adhesive	
35 -15B	↓	(Residual) ↓	
X			

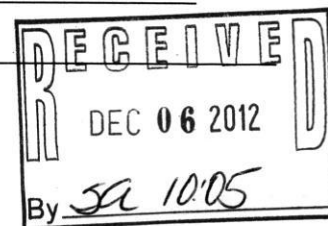
Analysis Method: PLM OtherTurnaround Time 48 HR

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

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

Special Instruction: Stop at first positive in each set. Do not point count.Samples collected by: JH Date: 12/5/12 Time: AMSamples [Rec'd][Sent by] [JH] Date: [JH] Time: PM

Samples Received by: _____ Date: _____ Time: _____

Shipped To: EMSL State MA Other _____Method of Shipment: Fed Ex UPS Overnight UPS Ground Other

**EMSL Analytical, Inc.**

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EMSL Order:	131303012
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ProjectID:	

Attn: **Dustin Diedricksen**
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146 Hartford Road
Manchester, CT 06040


Phone: (860) 646-2469
 Fax:
 Received: 07/17/13 4:20 PM
 Analysis Date: 7/18/2013
 Collected: 7/11/2013

Project: **20120379.A1E / Barnstable School Admin Building**

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
711DD-01D <i>131303012-0001</i>	Boiler Rm; Basement Wall; A Side - Skim Coat Plaster	White Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
711DD-01E <i>131303012-0002</i>	3rd FI Stairwell - Skim Coat Plaster	White Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
711DD-01F <i>131303012-0003</i>	1st FI Stairwell - Skim Coat Plaster	White Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
711DD-01G <i>131303012-0004</i>	2nd FI Stairwell - Skim Coat Plaster	White Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
711DD-02D <i>131303012-0005</i>	Boiler Room; A Side - Rough Coat Plaster	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
711DD-02E <i>131303012-0006</i>	3rd FI Stairwell - Rough Coat Plaster	Gray/White Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
711DD-02F <i>131303012-0007</i>	1st FI Stairwell - Rough Coat Plaster	White Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
711DD-02G <i>131303012-0008</i>	2nd FI Stairwell - Rough Coat Plaster	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected

Analyst(s)
 Kevin Pine (17)
 Steve Grise (8)


 Renaldo Drakes, Laboratory Manager
 or other approved signatory

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 Samples analyzed by EMSL Analytical, Inc. Woburn, MA NVLAP Lab Code 101147-0, CT PH-0315, MA AA000188, RI AAL-107T3 and VT AL357102

Initial report from 07/18/2013 10:48:30

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EMSL Order:	131303012
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CustomerPO:	
ProjectID:	

Attn: Dustin Diedricksen Fuss & O'Neill EnviroScience, LLC 146 Hartford Road Manchester, CT 06040	Phone: (860) 646-2469 Fax: Received: 07/17/13 4:20 PM Analysis Date: 7/18/2013 Collected: 7/11/2013
Project: 20120379.A1E / Barnstable School Admin Building	

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
711DD-16 <i>131303012-0009</i>	Boiler Room; A Side - Patch Flue Cement	White Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
711DD-17A <i>131303012-0010</i>	Coal Room adj Boiler - Tan Adh a/w Cork Insulation	Brown Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
711DD-17B <i>131303012-0011</i>	Coal Room adj Boiler - Tan Adh a/w Cork Insulation	Tan Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
711DD-04D <i>131303012-0012</i>	Basement Hallway - Joint Compound	White Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
711DD-04E <i>131303012-0013</i>	1st Fl Stairway - Joint Compound	White Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
711DD-04F <i>131303012-0014</i>	2nd Fl Attourney Office - Joint Compound	White Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
711DD-04G <i>131303012-0015</i>	2nd Fl Partition - Joint Compound	White Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
711DD-07C <i>131303012-0016</i>	Basement Hallway - Yellow Carpet Adhesive	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected

Analyst(s)
 Kevin Pine (17)
 Steve Grise (8)


 Renaldo Drakes, Laboratory Manager
 or other approved signatory

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 Samples analyzed by EMSL Analytical, Inc. Woburn, MA NVLAP Lab Code 101147-0, CT PH-0315, MA AA000188, RI AAL-10773 and VT AL357102

Initial report from 07/18/2013 10:48:30

**EMSL Analytical, Inc.**

7 Constitution Way, Suite 107, Woburn, MA 01801

Phone/Fax: (781) 933-8411 / (781) 933-8412

bostonlab@emsl.com


EMSL Order:	131303012
CustomerID:	ENVI54
CustomerPO:	
ProjectID:	

Attn: Dustin Diedricksen Fuss & O'Neill EnviroScience, LLC 146 Hartford Road Manchester, CT 06040	Phone: (860) 646-2469 Fax: Received: 07/17/13 4:20 PM Analysis Date: 7/18/2013 Collected: 7/11/2013
Project: 20120379.A1E / Barnstable School Admin Building	

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	
711DD-18A <i>131303012-0017</i>	Basement Conference Rm - Rough Dot 2x2 ACT	Gray Fibrous Homogeneous	50% Cellulose 30% Min. Wool	20% Non-fibrous (other)	None Detected	
711DD-18B <i>131303012-0018</i>	Basement Conference Rm - Rough Dot 2x2 ACT	Gray Fibrous Homogeneous	50% Cellulose 30% Min. Wool	20% Non-fibrous (other)	None Detected	
711DD-03D <i>131303012-0019</i>	1st FI Front Stairway - Drywall	White Non-Fibrous Homogeneous	Sample appears to be joint compound.		100% Non-fibrous (other)	None Detected
711DD-03E <i>131303012-0020</i>	2nd FI School Attourney Office - Drywall	Gray/Tan Fibrous Heterogeneous	10% Cellulose	90% Non-fibrous (other)	None Detected	
711DD-03F <i>131303012-0021</i>	2nd FI Partition - Drywall	Brown/Tan Fibrous Homogeneous	10% Cellulose 2% Glass	88% Non-fibrous (other)	None Detected	
711DD-19A <i>131303012-0022</i>	3rd FI B/C Corner Office - White Fissure & Dot 2x4 ACT	Gray Fibrous Homogeneous	50% Cellulose 30% Min. Wool	20% Non-fibrous (other)	None Detected	
711DD-19B <i>131303012-0023</i>	3rd FI B/C Corner Office - White Fissure & Dot 2x4 ACT	Gray Fibrous Homogeneous	50% Cellulose 30% Min. Wool	20% Non-fibrous (other)	None Detected	

Analyst(s)
 Kevin Pine (17)
 Steve Grise (8)


 Renaldo Drakes, Laboratory Manager
 or other approved signatory

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 Samples analyzed by EMSL Analytical, Inc. Woburn, MA NVLAP Lab Code 101147-0, CT PH-0315, MA AA000188, RI AAL-10773 and VT AL357102

Initial report from 07/18/2013 10:48:30



EMSL Analytical, Inc.

7 Constitution Way, Suite 107, Woburn, MA 01801

Phone/Fax: (781) 933-8411 / (781) 933-8412

bostonlab@emsl.com

EMSL Order:	131303012
CustomerID:	ENVI54
CustomerPO:	
ProjectID:	


Attn: Dustin Diedricksen Fuss & O'Neill EnviroScience, LLC 146 Hartford Road Manchester, CT 06040	Phone: (860) 646-2469 Fax: Received: 07/17/13 4:20 PM Analysis Date: 7/18/2013 Collected: 7/11/2013
Project: 20120379.A1E / Barnstable School Admin Building	

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
711DD-20A 131303012-0024	2nd Fl Hall - Ceiling Drywall w/ Baltons	Tan/White Fibrous Heterogeneous	10% Cellulose	90% Non-fibrous (other)	None Detected
711DD-20B 131303012-0025	2nd Fl Hall - Ceiling Drywall w/ Baltons	White Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected

Sample appears to be joint compound.

Analyst(s) _____
 Kevin Pine (17)
 Steve Grise (8)


 Renaldo Drakes, Laboratory Manager
 or other approved signatory

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 Samples analyzed by EMSL Analytical, Inc. Woburn, MA NVLAP Lab Code 101147-0, CT PH-0315, MA AA000188, RI AAL-107T3 and VT AL357102

Initial report from 07/18/2013 10:48:30



FUSS & O'NEILL
EnviroScience, LLC

131303012

www.fando.com

50 Redfield St, Suite 100, Boston, MA 02122

(617) 282-4675 Fax (617) 282-8253

Sample Log for Asbestos Bulks

Sheet 1 of 2

Project Name: Barnstable School Admin Building - ASHERA Project No. 20120379.A1E

Building: BARNSTABLE SCHOOL ADMIN BUILDING Project Manager: AD

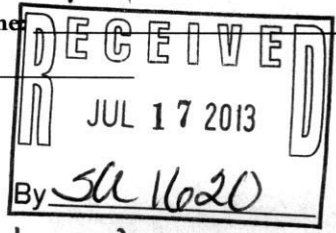
Sample ID	Sample Location	Material	Comments
1 711DD-01D	Basement Boiler Room wall - Aside	Skim coat plaster	
2 -01E	3rd floor stairwell	"	
3 -01F	1st floor stairwell	"	
4 -01G	2nd floor stairwell	"	
5 711DD-02D	Boiler Room - Aside	Rough coat plaster	
6 -02E	3rd floor stairwell	"	
7 -02F	1st floor stairwell	"	
8 -02G	2nd floor stairwell	"	
9 711DD-16	Boiler Room - Aside	Patch - five cement	< 1 ² ft
10 711DD -17A	Coal Room - Adj. Boiler	tan adhesive w/ cork insulation	≈ 150 ² ft
11 711DD -17B	coal Room - Adj Boiler	"	"
12 711DD-04D	Basement hallway	Joint compound	

13-711DD-04E 1st floor STAIRWAY JOINT COMPOUND Turnaround Time 6 HOUR
 Analysis Method: PLM TEM
 14-711DD-04F 2nd floor A. Horney office joint compound
 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 (866) 646-2469.
 15-711DD-04G 2nd floor partition joint compound
 Fax Results to the EnviroScience Laboratory at: 888-838-1160.

Special Instruction: Stop at first positive in each set. Do not point count. Do not analyze samples not on this chain.

Samples Collected By: DD/cun Date: 7/11/13 Time: AM
 Samples Sent By: DD Date: 7/16/13 Time: PM
 Samples Received by: _____ Date: _____ Time: _____

Shipped To: EMSL State MA Other _____
 Method of Shipment: Fed Ex UPS Overnight UPS Ground Other DROP OFF



W-IN



FUSS & O'NEILL
EnviroScience, LLC

131303012

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(617) 282-4675 Fax (617) 282-8253

Sample Log for Asbestos Bulks

Sheet 2 of 2

Project Name: Barnstable School Admin Building - AHRA Project No. 20120379.A1E

Building: BARNSTABLE SCHOOL ADMIN BUILDING Project Manager: D.D

Sample ID	Sample Location	Material	Comments
16 711DD-07C	Basement Hallway	Yellow carpet adhesive	
17 711DD-18A	Basement conference Rm.	Rough ting dot 2x2 ACT	
18 -18B			
19 711DD-03D	1st Floor Front Stairway	Drywall	
20 -03E	2nd floor school attorney office	Drywall	
21 -03F	2nd floor partition	Drywall	
22 711DD-19A	3rd flr. B/C corner office	white fissured dot 2x4 ACT	
23 -19B	"	"	
24 711DD-20A	2nd floor Hall by	ceiling Drywall w/ battens	
25 -20B	"	"	

Analysis Method: PLM TEM Turnaround Time 6 Hour

Based on the turnaround time indicated above, analyses are due to EnviroScience on or before this date: 7/17/13. 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 Instruction: Stop at first positive in each set. Do not point count. Do not analyze samples not on this chain.

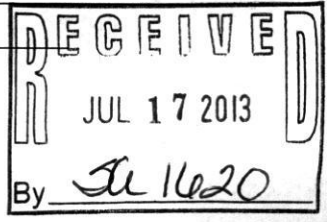
Samples Collected By: D.D. Date: 7/11/13 Time: pm

Samples Sent By: A.D. Date: 7/16/13 Time: pm

Samples Received by: _____ Date: _____ Time: _____

Shipped To: EMSL State MA Other _____

Method of Shipment: Fed Ex UPS Overnight UPS Ground Other Drop Off



**EMSL Analytical, Inc.**

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<http://www.EMSL.com>bostonlab@emsl.com

EMSL Order:	131303984
CustomerID:	ENVI54
CustomerPO:	
ProjectID:	

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

Phone: (860) 646-2469
 Fax: (888) 838-1160
 Received: 09/09/13 6:25 PM
 Analysis Date: 9/10/2013
 Collected: 9/9/2013

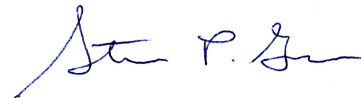
Project: 20120379.A1E / Town of Barnstable; Barnstable School Administration Building

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
909LD-01 131303984-0001	Window Frame Outer Trim - Caulking; Brown	Black Fibrous Homogeneous		97% Non-fibrous (other)	3% Chrysotile
909LD-02 131303984-0002	Window Frame Inner Assembly - Caulking; Brown	Black Fibrous Homogeneous	5% Cellulose	92% Non-fibrous (other)	3% Chrysotile

Analyst(s)

 Fievel Lam (2)



 Steve Grise, Laboratory Manager
 or other approved signatory

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 Samples analyzed by EMSL Analytical, Inc. Woburn, MA NVLAP Lab Code 101147-0, CT PH-0315, MA AA000188, RI AAL-107T3 and VT AL357102

Initial report from 09/10/2013 12:29:45



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(617) 282-4675 Fax (617) 282-8253

Sample Log for Asbestos Bulks

Sheet 1 of 1

Project Name: Town of Barnstable Project No. 20120379 AIE

Building: Barnstable School Administration Building Project Manager: D. Dedrickson

Sample ID	Sample Location	Material	Comments
90960-01	Window Frame Outer Trim	Caotking - Brown	
90960-02	Window Frame - Inner Assembly	~ ~	

9/10/13

Analysis Method: PLM TEM

Turnaround Time 6 Hr.

Based on the turnaround time indicated above, analyses are due to EnviroScience on or before this date: 9/10/13 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 Instruction: Stop at first positive in each set. Do not point count. Do not analyze samples not on this chain.
No Stop Positive.

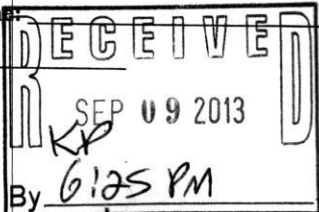
Samples Collected By: Lou Davis Date: _____ Time: _____

Samples Sent By: _____ Date: _____ Time: _____

Samples Received by: _____ Date: _____ Time: _____

Shipped To: EMSL State _____ Other _____

Method of Shipment: Fed Ex UPS Overnight UPS Ground Other _____



By G. J. S. PM
Walker

Appendix E

Newly Installed Materials Safety Data Sheets

To be Provided by LEA

Appendix F

Sample 6-Month Periodic Surveillance Form

Sample 6- Month Periodic Surveillance Form

Local Education Agency (LEA): Barnstable Public Schools
 Facility Name: School Administration Building
 Date of Surveillance: _____

ACBM Damage Report

Asbestos-Containing Building Material	Location	Previous Condition	Present Condition	Change in Condition (Yes/No)	Estimated Damaged Quantity	Comments
White Floor Paper	Assumed beneath All Original Hardwood Flooring	IA				

Conditions: D = Damaged; F = Fair; G = Good; IA = Inaccessible; N/A = Not Applicable; SD = Significant Damage; SF = Square Feet

Surveillance conducted by: _____
(print name) (signature)

I, the LEA's Designated Person, have read and understood the findings noted above: _____

Date: _____

Appendix G

Preventive Measures

Preventive Measures for Various Asbestos-Containing Building Materials

A. Surfacing Materials

“Surfacing Materials” means materials in a school building that are applied by spray, trowel, or otherwise applied to surfaces. These include sprayed-applied fireproofing materials on structural members, ceiling and wall plasters, or other materials applied to surfaces for acoustical, fireproofing, or other purposes.

Surfacing Materials are generally considered friable and can release asbestos fibers if damaged by impact, air erosion, vibration, and/or water intrusion. When properly implemented, the following procedures will reduce the potential for fiber release:

1. Sprayed-Applied Fireproofing
 - a) Identify the materials and post warning signs on the laid-in or glued-in ceiling tile. If the decking is not covered, place the sign on the wall.
 - b) Maintain the materials in intact state and undamaged condition. During winter, pigeons, squirrels and other rodents tend to roost in boiler/machine rooms and dislodge sprayed-applied fireproofing on the decking. Prevent such possibilities.
 - c) Prevent water leakage. If the material is significantly damaged, removal is the best option. For minor damage, enclosure is a temporary solution. Encapsulation of damaged sprayed-on fireproofing material is not recommended.
 - d) Train the custodial people who are responsible for care and maintenance of surfacing materials. Please note that the repair/removal can only be performed by a licensed abatement contractor.

2. Ceiling and Wall Plasters
 - a) Identify the materials and post asbestos warning signs.
 - b) Maintain the materials in intact state and undamaged condition. Avoid storing/stacking on/near the materials to reduce contact damage.
 - c) Prevent water leakage. If the material is significantly damaged, removal is the best option. For minor damage, repair or enclosure is a temporary solution.
 - d) Train the custodial people who are responsible for care and maintenance of surfacing materials.

B. Thermal System Insulation (TSI)

“Thermal System Insulation (TSI)” means insulating materials applied to pipes, pipe fittings, boilers, breechings, tanks, ducts, or other components to prevent process heat loss or gain, water condensation, or for other purposes (e.g., fire door insulation core).

TSI are generally considered friable ACBM. This means they can be easily damaged, increasing the potential for fiber release. When properly implemented, the following procedures will reduce the potential for fiber release:

1. Boiler and Breeching Insulation
 - a) Identify the locations and label the boiler. Warning signs should be posted outside the boiler room.
 - b) Reduce the likelihood of fiber release by ensuring that the insulation is not damaged. Avoid storing/stacking on/near the boiler to reduce contact damage.
 - c) Maintain the insulation in intact state and undamaged condition. Repair damaged areas as soon as possible to prevent further deterioration. If repair is not feasible due to extensive damage/deterioration, remove the material.
 - d) Train the custodial people who are responsible for care and maintenance of TSI. Please note that the repair/removal can only be performed by a licensed abatement contractor.

2. Pipe, Pipe Fitting, Tank, Duct & Breeching Insulations
 - a) Identify the locations and label the materials. Warning signs should be posted outside of rooms that have TSI materials.
 - b) Reduce the likelihood of fiber release by ensuring that the materials are not damaged. Avoid storing/stacking near the materials to reduce contact damage.
 - c) Maintain all TSI materials in intact state and undamaged condition. Inspect the protective jackets for damage. Repair damaged areas as soon as possible to prevent further deterioration. If repair is not feasible due to extensive damage/deterioration, remove the material.
 - d) Train the custodial people who are responsible for care and maintenance of TSI. Please note that the repair/removal can only be performed by a licensed abatement contractor.

C. Miscellaneous Materials

“Miscellaneous Materials” are the other ACBM in a school building that are not categorized as Surfacing Materials or TSI. These include floor tiles, floor tile and carpet mastics, gypsum wallboard and joint compound, ceiling tiles, glue daubs, asbestos cement panels, cove base and associated glue, window/door caulking and glazing compounds, etc. The following maintenance procedures are recommended for these materials:

1. Vinyl Asbestos Floor Tiles (VAT)

Vinyl Asbestos Floor Tiles (VAT) are considered non-friable, however routine maintenance procedures such as spray-buffing, burnishing, wet scrubbing, and stripping can generate asbestos fibers. Following procedures, when properly implemented, will reduce the potential of fiber release:

- a) Do not sand, grind, or abrade the tiles. Stripping of VAT should be done as infrequently as possible. When stripping becomes necessary, follow the appropriate work practices. Never perform dry stripping.
- b) During spray-buffing or burnishing the floor, operate the machine at the lowest workable speed and use the least abrasive pad. Use a wet mop for routine cleaning whenever possible.
- c) Routinely check whether chair and desk glides are in good condition and replace when necessary. Worn glides can gouge the floor and cause fiber release.
- d) Place carpets/floor mats in all entrances to reduce abrasion of floor tiles by sand and pebbles. During winter, have parking lots and walkways swept to the extent possible to avoid the tracking of salt and ice-melting compounds into the school by the students.
- e) Train the custodial people who are responsible for care and maintenance of VAT. Please note that the repair/removal can only be performed by a licensed abatement contractor.

2. Wallboard and Joint Compound Assembly

- a) Since a number of different homogeneous assemblies may exist in a building, sheetrock/joint compound must be assumed to be ACM unless sample results prove otherwise. If any specific areas are going to be disturbed, samples of the material in that area should be collected and analyzed.
- b) Reduce the likelihood of fiber release by avoiding cutting or drilling holes through the sheetrock panels.

3. Ceiling Tile and Glue Daubs

- a) Reduce the likelihood of fiber release by limiting access to the space above the ceiling tiles. Maintain the ceiling tiles in undamaged condition. Replace any damaged or water-stained tile.
- b) If the ceiling tiles are non-asbestos, collect samples and analyze the glue daubs to identify asbestos-content before disturbing the tiles.

4. Asbestos Cement Panels, Window/Door Caulking and Glazing Compounds

- a) Maintain asbestos cement panels and window/door caulking and glazing compounds in undamaged condition.

5. Carpet Glue, Blackboard/Tack Board Glue, Floor Tile Mastic, Cove Base, and Mastic

- a) Reduce the likelihood of fiber release by leaving materials in place.
- b) Maintain materials in good condition. Collect samples and analyze to identify asbestos-content before disturbing.

Appendix H

Fuss & O'Neill Asbestos Accreditations & Certifications



Asbestos Inspector

ROBERT C. MALLETT

Eff. Date 06/01/20

Exp. Date 06/01/21

AI900557

Member of C.O.N.E.S.

bosrnew BOS-renew

21





This is to certify that

Robert C Mallett



*has completed the requisite training, and has passed an examination for
reaccreditation as:*

Asbestos Inspector Refresher

pursuant to Title II of the Toxic Substance Control Act, 15 U.S.C. 2646

Course Location

Institute for Environmental Education
16 Upton Drive Wilmington, MA 01887

January 6, 2020

Course Dates

January 06, 2020

Examination Date

20-2958-106-402379

Certificate Number

January 06, 2021

Expiration Date

Training Director

16 Upton Drive, Wilmington, MA 01887

Telephone 978.658.5272

www.ieetrains.com

INSTITUTE FOR ENVIRONMENTAL EDUCATION



THE COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF LABOR AND WORKFORCE DEVELOPMENT
DEPARTMENT OF LABOR STANDARDS

Michael Flanagan
Interim Director

Asbestos Management Planner

DUSTIN A. DIEDRICKSEN

Eff. Date 04/16/20

Exp. Date 04/16/21

AP900425

Member of C.O.N.E.S.

BOSR BOS-RENEW

21





This is to certify that

Dustin A Diedricksen

*has completed the requisite training, and has passed an examination for
reaccreditation*

Asbestos Management Planner Refresher

pursuant to Title II of the Toxic Substance Control Act, 15 U.S.C. 2646

Course Location

Institute for Environmental Education
16 Upton Drive Wilmington, MA 01887

December 18, 2019

Course Dates

19-2404-136-402162

Certificate Number

December 18, 2019

Examination Date

December 18, 2020

Expiration Date

Training Director

16 Upton Drive, Wilmington, MA 01887

Telephone 978.658.5272

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INSTITUTE FOR ENVIRONMENTAL EDUCATION