

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

for  
Barnstable High School  
744 West Main 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 26 2020



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



November 12, 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  
Barnstable High School  
744 West Main 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 Barnstable High School located at 744 West Main 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

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## 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.

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## 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.

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### 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 Barnstable High School is a two-story, concrete, brick, and wood structure. The building was reportedly constructed in 1957 and has undergone several renovations; the last renovation was reportedly completed in 1998.

## 3 Three Year Re-Inspection

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### 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

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### 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 Barnstable High School 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)**

<b>Material</b>	<b>Location</b>	<b>Reference</b>	<b>Asbestos Content</b>
Gray Mudded Pipe-Fitting Insulation	Concealed within Pipe Chases & above Fixed Ceilings	Referenced in Previous AMP (date unknown) (Sample ID: 46-10-8, 9, 11, 12, & 13)	40-80% Chrysotile
White/Gray Pipe Insulation	Concealed within Pipe Chases & above Fixed Ceilings	Referenced in Previous AMP (date unknown) (Sample ID: 46-10-21 & 27)	25-55% Chrysotile
9" x 9" Tan Streaked Floor Tile	Storage Room by Main Gym	Referenced in Previous AMP (date unknown) (Sample ID: 46-10-5)	2% Chrysotile

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)**

<b>Material</b>	<b>Location</b>	<b>Reference</b>
Yellow Carpet Glue	Auditorium, Main Offices, Library, & Room 1700	2014 Initial AMP (Sample ID: 7-12-PB-81A-B)
12" x 12" Tan & Pink Mottled Floor Tile	Stage Exit, Corridors, Classrooms, Dining Commons, Annex, Teachers' Room, Music Rooms, Knight Lecture Hall, & Main Offices	2014 Initial AMP (Sample ID: 7-12-PB-82A-B)
Black Mastic Associated with 12" x 12" Floor Tile	Stage Exit, Corridors, Classrooms, Dining Commons, Annex, Teachers' Room, Music Rooms, Knight Lecture Hall, & Main Offices	2014 Initial AMP (Sample ID: 7-12-PB-83A-C)
Yellow Stick-Pin Glue	Storage Area & behind Stage	2014 Initial AMP (Sample ID: 7-12-PB-84A)
Black Sink Undercoating	Teachers' Lounge; Room 1717; & Classrooms 1521, 1522, & 1523	2014 Initial AMP (Sample ID: 7-12-PB-85A)



<b>Material</b>	<b>Location</b>	<b>Reference</b>
Yellow Lab Tabletop Glue	Classrooms 1521, 1522, & 1523	2014 Initial AMP (Sample ID: 7-12-PB-86A-B)
Gray Sheetrock (Gypsum Wallboard)	Auditorium, Music Rooms, Knight Lecture Hall, Annex, Teachers' Room, Main Offices, Field House, Library, Dining Commons, Room 1309, & Boys' Locker Room Offices	2014 Initial AMP (Sample ID: 7-12-PB-87A-B)
White Joint Compound	Auditorium, Music Rooms, Knight Lecture Hall, Annex, Teachers' Room, Main Offices, Field House, Library, Dining Commons, Room 1309, & Boys' Locker Room Offices	2014 Initial AMP (Sample ID: 7-12-PB-88A-B)
Gray Grout Associated with 12" x 12" Ceramic Floor Tile	Entrance Vestibule near 1310 & Main Entrance; & Hallway outside Main Offices	2014 Initial AMP (Sample ID: 7-12-PB-90A-B)
Gray Glue Associated with 12" x 12" Ceramic Floor Tile	Entrance Vestibule near 1310 & Main Entrance; & Hallway outside Main Offices	2014 Initial AMP (Sample ID: 7-12-PB-91A-B)
White Skim Coat Ceiling Plaster	Room 1421; Guest Locker Room & Locker Room; & above Tectum Ceiling	2014 Initial AMP (Sample ID: 7-12-PB-92A-C)
Gray Rough Coat Ceiling Plaster	Room 1421; Guest Locker Room & Locker Room; & above Tectum Ceiling	2014 Initial AMP (Sample ID: 7-12-PB-93A-C)
Gray Mudset Associated with 1" x 1" Ceramic Floor Tile	Locker Rooms & Restrooms	2014 Initial AMP (Sample ID: 7-12-PB-94A-B)
Gray Grout Associated with 1" x 1" Ceramic Floor Tile	Locker Rooms & Restrooms	2014 Initial AMP (Sample ID: 7-12-PB-95A-B)
2' x 4' White/Yellow Tectum Ceiling Panels	Locker Rooms	2014 Initial AMP (Sample ID: 7-12-PB-96A-B)
White Grout Associated with 4" Ceramic Wall Tile	Boys' Locker Rooms & Restrooms	2014 Initial AMP (Sample ID: 7-12-PB-97A-B)
Gray Mudset Associated with 4" Ceramic Wall Tile	Boys' Locker Rooms & Restrooms	2014 Initial AMP (Sample ID: 7-12-PB-98A-B)
Brown Carpet Glue	Library	2017 AMP Update (Sample ID: 7-19-PB-09A-C)

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

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### 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*.

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### 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) 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.

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## 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.

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## 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**

<b>Material</b>	<b>Location</b>	<b>Estimated Quantity</b>	<b>Estimated Contractor Cost</b>
Gray Mudded Pipe-Fitting Insulation	Concealed within Pipe Chases & above Fixed Ceilings	Unknown	\$25-\$30/EA
White/Gray Pipe Insulation	Concealed within Pipe Chases & above Fixed Ceilings	Unknown	\$25-\$30/LF
9" x 9" Tan Streaked Floor Tile	Storage Room by Main Gym	150 SF	\$2,500 (Lump Sum)

EA = Each; LF = Linear Feet; SF=Square Feet

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

**Table 4  
Asbestos Training Cost Estimates**

<b>Training Course</b>	<b>Estimated Cost</b>
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**

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### Existing Records Checklist

## Existing Records Checklist

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

School Building: Barnstable High School

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	Yes	Yes
2	Three Year Re-Inspection (First and All Subsequent Inspections)	Yes	2014 2017
3	Parents and Teachers Notifications (Annually Since Last Re-Inspection)	Yes	Yes
4	Designated Person Identification and Proper Training	Yes	Yes
5	Designated Person Periodic Surveillance (Once Every Six Months)	Yes	Yes
6	Maintenance Staff Awareness Training Records	Yes	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)	No	Yes

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**

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### Re-Inspection Form 1

School: Barnstable High School  
 Address 744 West Main Street, Hyannis, MA

Date(s) of Original Inspection: 1989  
 Date(s) of Subsequent Re-Inspections: 2013, 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					
46-10-8, 9, 11, 12, & 13	40-80% Chrysotile	Gray Mudded Pipe-Fitting Insulation	TSI	F	5	Concealed within Pipe Chases & above Fixed Ceilings	
46-10-21 & 27	25-55% Chrysotile	White/Gray Pipe Insulation	TSI	F	5	Concealed within Pipe Chases & above Fixed Ceilings	
46-10-5	2% Chrysotile	9" x 9" Tan Streaked Floor Tile	Misc.	NF	5	Storage Room by Main Gym	

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**

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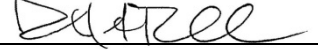
### Re-Inspection Form 2

School: Centerville Elementary School

 Date of Re-Inspection: August 26, 2020

 Homogeneous Material: Gray Mudded Pipe-Fitting Insulation

 Sample ID Number: 46-10-8, 9, 11, 12, & 13



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
Concealed within Pipe Chases & above Fixed Ceilings	F	Unknown	5	ACBM with potential for damage	Routine cleaning is not recommended within concealed locations.  Maintain under O&M Program	Ongoing
Were additional samples of this ACBM collected? No					Date of Management Planner Review: <u>November 12, 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: _____						

School: Centerville Elementary School

 Date of Re-Inspection: August 26, 2020

 Homogeneous Material: White/Gray Pipe Insulation

 Sample ID Number: 46-10-21 & 27

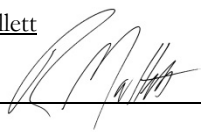

ACBM RE-INSPECTION FINDINGS					MANAGEMENT PLANNER RECOMMENDATIONS	
ACBM Location(s) by Assessment Category	Friability	Estimated Quantity	Assessment Category	Physical Description	Recommended Response Action(s)	Date Action Completed
Concealed within Pipe Chases & above Fixed Ceilings	F	Unknown	5	ACBM with potential for damage	Routine cleaning is not recommended within concealed locations  Maintain under O&M Program	Ongoing
Were additional samples of this ACBM collected? No					Date of Management Planner Review: <u>November 12, 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: _____						

School: Centerville Elementary School

 Date of Re-Inspection: August 26, 2020

 Homogeneous Material: 9" x 9" Tan Streaked Floor Tile

 Sample ID Number: 46-10-5

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
Storage Room by Main Gym	NF	150 SF	5	ACBM with potential for damage	Maintain under O&M Program	Ongoing
Were additional samples of this ACBM collected? No					Date of Management Planner Review: <u>November 12, 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**

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### Previously Sampled Materials Laboratory Reports

**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](mailto:cinnaslab@EMSL.com)

EMSL Order: 041324587

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: 09/12/13 9:15 AM  
 Analysis Date: 9/12/2013  
 Collected: 7/12/2013

Project: **Barnstable Public Schools 20121793.A1E-Barnstable High School**

## 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
7-12-PB-81A 041324587-0001	Auditorium - carpet glue	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
7-12-PB-81B 041324587-0002	Main office - carpet glue	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
7-12-PB-82A 041324587-0003	Stage exit - 12x12 tan mottled floor tile	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
7-12-PB-82B 041324587-0004	Corridor-rear - 12x12 tan mottled floor tile	Brown/Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
7-12-PB-83A 041324587-0005	Stage exit - associated mastic	Black Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
7-12-PB-83B 041324587-0006	Corridor-rear - associated mastic	Black Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
7-12-PB-83C 041324587-0007	Main office-copy rm - associated mastic	Black Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
7-12-PB-84A 041324587-0008	Behind stage-storage - stick pin glue	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected

Analyst(s)

*McLaughlin Paul (21)**William Nguyen (16)*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 03036, PA ID# 68-00367

Initial report from 09/12/2013 23:18:18



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EMSL Order:	041324587
CustomerID:	ENVI54
CustomerPO:	
ProjectID:	

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

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 Analysis Date: 9/12/2013  
 Collected: 7/12/2013

Project: **Barnstable Public Schools 20121793.A1E-Barnstable High School**

## 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
7-12-PB-85A 041324587-0009	1717 - sink undercoating	Black Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
7-12-PB-85B 041324587-0010	1717 - sink undercoating	Black Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
7-12-PB-86A 041324587-0011	1523 - lab table top glue	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
7-12-PB-86B 041324587-0012	1523 - lab table top glue	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
7-12-PB-87A 041324587-0013	1300 - sheetrock	Gray Fibrous Homogeneous	60% Cellulose	40% Non-fibrous (other)	None Detected
7-12-PB-87B 041324587-0014	- sheetrock	Gray/White Fibrous Homogeneous	65% Cellulose	35% Non-fibrous (other)	None Detected
7-12-PB-88A 041324587-0015	1309 - joint compound	White Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
7-12-PB-88B 041324587-0016	- joint compound	White Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected

Analyst(s)

*McLaughlin Paul (21)*  
*William Nguyen (16)*

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 03036, PA ID# 68-00367

Initial report from 09/12/2013 23:18:18

**EMSL Analytical, Inc.**

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<http://www.EMSL.com>[cinnaslab@EMSL.com](mailto:cinnaslab@EMSL.com)

EMSL Order: 041324587

CustomerID: ENVI54

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ProjectID:

Attn: **Dustin Diedricksen**  
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 Collected: 7/12/2013

Project: **Barnstable Public Schools 20121793.A1E-Barnstable High School**

## 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
7-12-PB-88C 041324587-0017	Lower office - joint compound	White Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
7-12-PB-90A 041324587-0018	Entrance near 1310 - 12x12 ceramic floor tile grout	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
7-12-PB-90B 041324587-0019	Entrance near 1310 - 12x12 ceramic floor tile grout	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
7-12-PB-91A 041324587-0020	Entrance near 1310 - 12x12 ceramic floor tile glue	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
7-12-PB-91B 041324587-0021	Entrance near 1310 - 12x12 ceramic floor tile glue	Gray Non-Fibrous Homogeneous	10% Cellulose	90% Non-fibrous (other)	None Detected
7-12-PB-92A 041324587-0022	Room 1421 small locker room - ceiling plaster-skim	White Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
7-12-PB-92B 041324587-0023	Locker room above textured ceiling - ceiling plaster-skim	White Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
7-12-PB-92C 041324587-0024	Locker room above textured ceiling - ceiling plaster-skim	Gray/White Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected

Analyst(s)

McLaughlin Paul (21)

William Nguyen (16)

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 03036, PA ID# 68-00367

Initial report from 09/12/2013 23:18:18

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 Analysis Date: 9/12/2013  
 Collected: 7/12/2013

Project: **Barnstable Public Schools 20121793.A1E-Barnstable High School**

## 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
7-12-PB-93A 041324587-0025	Room 1421 visiting locker room - ceiling plaster-rough coat	Gray Fibrous Homogeneous	5% Cellulose	95% Non-fibrous (other)	None Detected
7-12-PB-93B 041324587-0026	Main boys locker room - ceiling plaster-rough coat	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
7-12-PB-93C 041324587-0027	Main boys locker room - ceiling plaster-rough coat	Gray Non-Fibrous Homogeneous	5% Cellulose	95% Non-fibrous (other)	None Detected
7-12-PB-94A 041324587-0028	Boys locker rooms - ceramic floor tile mudset	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
7-12-PB-94B 041324587-0029	Boys locker rooms - ceramic floor tile mudset	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
7-12-PB-95A 041324587-0030	Boys locker rooms - 1" ceramic floor tile grout	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
7-12-PB-95B 041324587-0031	Boys locker rooms - 1" ceramic floor tile grout	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
7-12-PB-96A 041324587-0032	Boys locker rooms - 2x4 tectum ceiling panels	White/Yellow Fibrous Homogeneous	75% Cellulose	25% Non-fibrous (other)	None Detected

Analyst(s)

McLaughlin Paul (21)

William Nguyen (16)

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 03036, PA ID# 68-00367

Initial report from 09/12/2013 23:18:18

**EMSL Analytical, Inc.**

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EMSL Order: 041324587

CustomerID: ENVI54

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ProjectID:

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

Phone: (860) 646-2469  
 Fax: (888) 838-1160  
 Received: 09/12/13 9:15 AM  
 Analysis Date: 9/12/2013  
 Collected: 7/12/2013

Project: **Barnstable Public Schools 20121793.A1E-Barnstable High School**

## 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
7-12-PB-96B 041324587-0033	Boys locker rooms - 2x4 tectum ceiling panels	White/Yellow Fibrous Homogeneous	80% Cellulose	20% Non-fibrous (other)	None Detected
7-12-PB-97A 041324587-0034	Locker rooms/ some restrooms - 4" ceramic wall tile grout	White Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
7-12-PB-97B 041324587-0035	Locker rooms/ some restrooms - 4" ceramic wall tile grout	White Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
7-12-PB-98A 041324587-0036	Locker rooms/ some restrooms - 4" ceramic wall tile mudset	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
7-12-PB-98B 041324587-0037	Locker rooms/ some restrooms - 4" ceramic wall tile mudset	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected

Analyst(s)

*McLaughlin Paul (21)**William Nguyen (16)*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 03036, PA ID# 68-00367

Initial report from 09/12/2013 23:18:18



SAMPLE LOG FOR ASBESTOS BULKS

Sheet 1 of 4

Project Name: Barnstable Public Schools  
Building: Barnstable ~~Intermediate~~ High School

Project No. 20121793 AIE  
Project Manager: Dustin D

Sample ID	Sample Location	Material	Result (%)
7-12 PB 81A	Auditorium	Carpet glue	RECEIVED EMSL CINNAMINSON, NJ 2013 SEP 12 A 10:41
B	Main office		
<del>6</del>	<del>near Reception</del>		
82A	Stage exit	12" x 12" Tan mottle Floor tile	
B	Corridor - rear by	Pink	
<del>6</del>	<del>Area office - copy room</del>	gray	
83A	} Jam	Associated mottle	
B			
C			
84A	Behind stage - storage	Stack pin glue	100% 0
85A	↑	Smth Undercutting	
<del>8</del>		<del>177 177</del>	
86A	1523	LAB Tally Tile glue	140% 0
B			

Analysis Method:  PLM  Other

Turnaround Time 48 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.

No POINT COUNTING.

Special Instructions: Stop analysis on first positive sample in each homogeneous set of samples unless otherwise noted. Do not layer samples unless indicated. ~~EMSL 100 Point Count all samples of content < 4%, positive stop on all point counts.~~

~~On samples collected which are not in the chain of custody from the project area by PLM~~

Samples collected by: Paul Bateman Date: 7/12/13 Time: \_\_\_\_\_

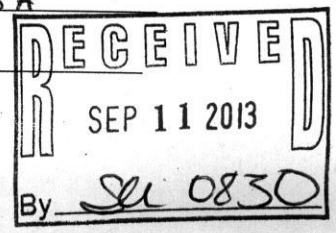
Samples [Rec'd][Sent by] [Paul Bateman II] ~~BLD~~ Date: [7/1/13] [9/4/13] Time: [9/10/13 PM]

Samples Received by: AK EMSL Date: 9/12/13 Time: 9:15A

Shipped To:  EMSL State MA  Other \_\_\_\_\_

Method of Shipment:  Ed Ex  Other Drop off

drop box







041324587

SAMPLE LOG FOR ASBESTOS BULKS

Sheet 2 of 4

Project Name: Barnstable Public Schools

Project No. 20121793-AIE

Building: Barnstable High School

Project Manager: Dustin D

Sample ID	Sample Location	Material	Result (%)
7-12 PB 87A	1309	Shed roof	RECEIVED EMSL CINNAMINSON, NJ 2013 SEP 12 A 10:41
B	<del>Locker room white</del>	<del>Shed roof</del>	
88A	1309	Grout compound	
B	Lower room office		
90A	Entrance room 1310	12" x 12" Ceramic Floor tile grout	
B	<del>Entrance room 1310</del>	<del>12" x 12" Ceramic Floor tile grout</del>	
91A		glue	
B	<del>Entrance room 1310</del>	<del>glue</del>	
92A	Room - 1421 Locker room	Ceiling Plaster - Shims	5,000 SF
B	Locker room above	Plaster ceiling	
C			

Analysis Method:  PLM  Other

Turnaround Time 48 Hours

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. ~~EMSL 400 Point Count all samples of content < 4% positive stop on all point counts.~~

~~Samples marked \* which come out < 1% PLM or Van - PLM~~ by PLM

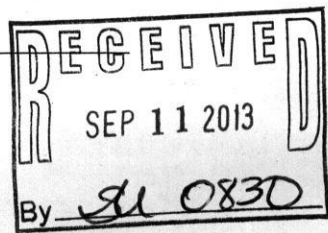
Samples collected by: Paul Bateman Date: 7/12/13 Time: \_\_\_\_\_

Samples [Rec'd] [Sent by] [Paul Bateman] Date: [7/1/13] [9/10/13] Time: PM

Samples Received by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Shipped To:  EMSL State MA  Other \_\_\_\_\_

Method of Shipment:  Ex  Other PROP OFF





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041324587

2013 SEP 11 10 42  
SAMPLE LOG FOR ASBESTOS BULKS

Sheet 3 of 4

Project Name: Burns Falls Public Schools

Project No. 20121793-AIE

Building: School

Project Manager: Dustin D

Sample ID	Sample Location	Material	Result (%)
7-12 PB 93A	Room - Mt. Visiting Locker room	Ceiling Plank	5,000 SK
B	Main Boy Locker room	rough	↓
C	↓	2" cont	↓
94A	Boys locker room 5' 11"	Ceramic floor tile Mosaic	
B			
<del>6</del>	<del>visiting locker</del>	<del>1" floor tile</del>	
95A		1" Ceramic floor tile grout	
B			
C			
96A	Boys locker room 2nd	Textured Ceiling panel	10,000 SK
B			
C			
97A	Locker room / boys restroom	4" Ceramic wall tile grout	5,000 SK
B			
C			

Analysis Method:  PLM  Other

Turnaround Time 48 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.

~~On samples indicated which come out ≤ 1% Asbestos. Please perform TEM/No.~~

Samples collected by: Paul Bakeman Date: 7/12/13 Time: \_\_\_\_\_

Samples [Rec'd][Sent by] [Paul BA] [LD] Date: [7/1/13] [9/10/13] Time: \_\_\_\_\_

Samples Received by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Shipped To:  EMSL State MA  Other \_\_\_\_\_

Method of Shipment:  Fed Ex  Other \_\_\_\_\_

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SEP 11 2013  
By JK 0830







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EMSL Order: 041722573

Customer ID: ENVI54

Customer PO: 20150090.A8E

Project ID:

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

**Phone:** (617) 778-3750

**Fax:** (888) 838-1160

**Received Date:** 08/01/2017 9:30 AM

**Analysis Date:** 08/03/2017 - 08/07/2017

**Collected Date:** 07/19/2017

**Project:** Barnstable Public Schools / 20150090.A8E / Various Locations -Barnstable, MA

## 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
7-19-PB-01A <small>041722573-0001</small>	Horace Mann Charter Public School - Bathroom off Gym Hall - Ceiling Plaster - Skim Coat	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
7-19-PB-01B <small>041722573-0002</small>	Horace Mann Charter Public School - Bathroom off Gym Hall - Ceiling Plaster - Skim Coat	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
7-19-PB-01C <small>041722573-0003</small>	Horace Mann Charter Public School - Bathroom off Gym Hall - Ceiling Plaster - Skim Coat	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
7-19-PB-02A <small>041722573-0004</small>	Horace Mann Charter Public School - Bathroom off Gym Hall - Ceiling Plaster - Rough Coat	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
7-19-PB-02B <small>041722573-0005</small>	Horace Mann Charter Public School - Bathroom off Gym Hall - Ceiling Plaster - Rough Coat	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
7-19-PB-02C <small>041722573-0006</small>	Horace Mann Charter Public School - Bathroom off Gym Hall - Ceiling Plaster - Rough Coat	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
7-19-PB-03A <small>041722573-0007</small>	Horace Mann Charter Public School - Bathroom off Gym Hall - Brown Grout with 1x1 Ceramic Floor Tiles	Brown Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
7-19-PB-03B <small>041722573-0008</small>	Horace Mann Charter Public School - Gym Office - Brown Grout with 1x1 Ceramic Floor Tiles	Brown Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
7-19-PB-04A <small>041722573-0009</small>	Horace Mann Charter Public School - Bathroom off Gym Hall - Mudset with 1x1 Ceramic Floor Tiles	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
7-19-PB-04B <small>041722573-0010</small>	Horace Mann Charter Public School - Gym Office - Mudset with 1x1 Ceramic Floor Tiles	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

Initial report from: 08/07/2017 11:06:36



# EMSL Analytical, Inc.

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**EMSL Order:** 041722573  
**Customer ID:** ENVI54  
**Customer PO:** 20150090.A8E  
**Project ID:**

## 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
7-19-PB-05A 041722573-0011	Horace Mann Charter Public School - Main Hall - Cellulose 1x1 Pore Ceiling Tiles	Brown Fibrous Homogeneous	98% Cellulose	2% Non-fibrous (Other)	None Detected
7-19-PB-05B 041722573-0012	Horace Mann Charter Public School - Gym - Cellulose 1x1 Pore Ceiling Tiles	Brown Fibrous Homogeneous	98% Cellulose	2% Non-fibrous (Other)	None Detected
7-19-PB-06A 041722573-0013	Horace Mann Charter Public School - Main Hall - Brown Glue Daubs associated with 1x1 Pore Ceiling Tiles	Brown Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
7-19-PB-06B 041722573-0014	Horace Mann Charter Public School - Gym - Brown Glue Daubs associated with 1x1 Pore Ceiling Tiles	Brown Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
7-19-PB-07A 041722573-0015	Horace Mann Charter Public School - Lobby - 2x2 Ceiling Tiles	Gray Fibrous Homogeneous	45% Cellulose 50% Min. Wool	5% Non-fibrous (Other)	None Detected
7-19-PB-07B 041722573-0016	Horace Mann Charter Public School - Lobby - 2x2 Ceiling Tiles	Gray Fibrous Homogeneous	60% Cellulose 35% Min. Wool	5% Non-fibrous (Other)	None Detected
7-19-PB-08A 041722573-0017	Horace Mann Charter Public School - Hallway to Gym - 2x4 Ceiling Tiles	Gray Fibrous Homogeneous	50% Cellulose 40% Min. Wool	10% Non-fibrous (Other)	None Detected
7-19-PB-08B 041722573-0018	Horace Mann Charter Public School - Hallway to Gym - 2x4 Ceiling Tiles	Gray Fibrous Homogeneous	55% Cellulose 40% Min. Wool	5% Non-fibrous (Other)	None Detected
7-19-PB-09A 041722573-0019	Barnstable High School Library - Brown Carpet Glue	Brown/Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
7-19-PB-09B 041722573-0020	Barnstable High School Library - Brown Carpet Glue	Brown/Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
7-19-PB-09C 041722573-0021	Barnstable High School Library - Brown Carpet Glue	Brown Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
7-19-PB-10A 041722573-0022	Cape Cod Collaborative School - Custodial Area by Cafeteria - Sheetrock	Gray Non-Fibrous Homogeneous	3% Glass	97% Non-fibrous (Other)	None Detected
7-19-PB-10B 041722573-0023	Cape Cod Collaborative School - Hall By Room T - Sheetrock	Gray Non-Fibrous Homogeneous	3% Glass	97% Non-fibrous (Other)	None Detected
7-19-PB-10C 041722573-0024	Cape Cod Collaborative School - Main Bathrooms by Office - Sheetrock	Gray Non-Fibrous Homogeneous	5% Cellulose 3% Glass	92% Non-fibrous (Other)	None Detected
7-19-PB-11A 041722573-0025	Cape Cod Collaborative School - Custodial Area by Cafeteria - Joint Compound	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

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**EMSL Order:** 041722573  
**Customer ID:** ENVI54  
**Customer PO:** 20150090.A8E  
**Project ID:**

## 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
7-19-PB-11B 041722573-0026	Cape Cod Collaborative School - Hall by Room T - Joint Compound	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
7-19-PB-11C 041722573-0027	Cape Cod Collaborative School - Main Bathrooms by Office - Joint Compound	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
7-19-PB-12A 041722573-0028	Cape Cod Collaborative School - Custodial Area - 12x12 Black Mottled Floor Tiles	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
7-19-PB-12B 041722573-0029	Cape Cod Collaborative School - Bathrooms - 12x12 Black Mottled Floor Tiles	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
7-19-PB-13A 041722573-0030	Cape Cod Collaborative School - Custodial Area - Associated Yellow Mastic	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
7-19-PB-13B 041722573-0031	Cape Cod Collaborative School - Bathrooms - Associated Yellow Mastic	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
7-19-PB-14A 041722573-0032	Cape Cod Collaborative School - Main Hallway - 12x12 Tan Mottled Floor Tiles	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
7-19-PB-14B 041722573-0033	Cape Cod Collaborative School - Main Hallway - 12x12 Tan Mottled Floor Tiles	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
7-19-PB-15A 041722573-0034	Cape Cod Collaborative School - Cafeteria - Associated Yellow Mastic	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
7-19-PB-15B 041722573-0035	Cape Cod Collaborative School - Cafeteria - Associated Yellow Mastic	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
7-19-PB-16A 041722573-0036	Cape Cod Collaborative School - Custodial Area - 2x4 Smooth Ceiling Tiles	Brown Fibrous Homogeneous	98% Min. Wool	2% Non-fibrous (Other)	None Detected
7-19-PB-16B 041722573-0037	Cape Cod Collaborative School - Custodial Area - 2x4 Smooth Ceiling Tiles	Brown Fibrous Homogeneous	98% Min. Wool	2% Non-fibrous (Other)	None Detected
7-19-PB-17A 041722573-0038	Cape Cod Collaborative School - Hallway - 2x4 Pore Striation Pattern Ceiling Tiles	Gray Fibrous Homogeneous	50% Cellulose 40% Min. Wool	10% Non-fibrous (Other)	None Detected

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**EMSL Order:** 041722573  
**Customer ID:** ENVI54  
**Customer PO:** 20150090.A8E  
**Project ID:**

## 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
7-19-PB-17B 041722573-0039	Cape Cod Collaborative School - Classrooms - 2x4 Pore Striation Pattern Ceiling Tiles	Gray Fibrous Homogeneous	45% Cellulose 50% Min. Wool	5% Non-fibrous (Other)	None Detected
7-19-PB-18A 041722573-0040	Cape Cod Collaborative School - Hallway - 4" Gray Base Cove	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
7-19-PB-18B 041722573-0041	Cape Cod Collaborative School - Classrooms - 4" Gray Base Cove	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
7-19-PB-19A 041722573-0042	Cape Cod Collaborative School - Hallway - Tan Glue with 4" Gray Base Cove	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
7-19-PB-19B 041722573-0043	Cape Cod Collaborative School - Hallway - Tan Glue with 4" Gray Base Cove	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
7-19-PB-20A 041722573-0044	Cape Cod Collaborative School - Hallway - 1x1 Ceramic Wall Tile Grout - White	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
7-19-PB-20B 041722573-0045	Cape Cod Collaborative School - Hallway - 1x1 Ceramic Wall Tile Grout - White	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
7-19-PB-21A 041722573-0046	Cape Cod Collaborative School - Hallway - 1x1 Ceramic Wall Tile Glue	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
7-19-PB-21B 041722573-0047	Cape Cod Collaborative School - Hallway - 1x1 Ceramic Wall Tile Glue	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
7-19-PB-22A 041722573-0048	Cape Cod Collaborative School - Classrooms Windows - Interior Window Glazing Compound - Gray	Gray Non-Fibrous Homogeneous		96% Non-fibrous (Other)	4% Chrysotile
7-19-PB-22B 041722573-0049	Cape Cod Collaborative School - Classrooms Windows - Interior Window Glazing Compound - Gray				Positive Stop (Not Analyzed)
7-19-PB-23A 041722573-0050	Cape Cod Collaborative School - Portable Classrooms - Sheetrock	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

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**Customer ID:** ENVI54  
**Customer PO:** 20150090.A8E  
**Project ID:**

## 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
7-19-PB-23B 041722573-0051	Cape Cod Collaborative School - Library - Sheetrock	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
7-19-PB-23C 041722573-0052	Cape Cod Collaborative School - Classrooms 5 /6 - Sheetrock	Gray Non-Fibrous Homogeneous	4% Cellulose 2% Glass	94% Non-fibrous (Other)	None Detected
7-19-PB-24A 041722573-0053	Cape Cod Collaborative School - Portable Classrooms - Joint Compound	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
7-19-PB-24B 041722573-0054	Cape Cod Collaborative School - Library - Joint Compound	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
7-19-PB-24C 041722573-0055	Cape Cod Collaborative School - Classrooms 5 /6 - Joint Compound	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
7-19-PB-25A 041722573-0056	Cape Cod Collaborative School - Hall to Portables - 12x12 Tan Mottled Floor Tiles	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
7-19-PB-25B 041722573-0057	Cape Cod Collaborative School - Hall to Portables - 12x12 Tan Mottled Floor Tiles	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
7-19-PB-26A 041722573-0058	Cape Cod Collaborative School - Hall to Portables - Associated Yellow Mastic	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
7-19-PB-26B 041722573-0059	Cape Cod Collaborative School - Hall to Portables - Associated Yellow Mastic	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
7-19-PB-27A 041722573-0060	Cape Cod Collaborative School - Woodshop in Portables - 12x12 Tan Floor Tiles	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
7-19-PB-27B 041722573-0061	Cape Cod Collaborative School - Woodshop in Portables - 12x12 Tan Floor Tiles	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
7-19-PB-28A 041722573-0062	Cape Cod Collaborative School - Woodshop in Portables - Associated Yellow Mastic	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

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**EMSL Order:** 041722573  
**Customer ID:** ENVI54  
**Customer PO:** 20150090.A8E  
**Project ID:**

## 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
7-19-PB-28B <i>041722573-0063</i>	Cape Cod Collaborative School - Woodshop in Portables - Associated Yellow Mastic	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
7-19-PB-29A <i>041722573-0064</i>	Cape Cod Collaborative School - Rear Bathroom - Near Room 8 - Mudset with 1x1 Ceramic Floor Tiles	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
7-19-PB-29B <i>041722573-0065</i>	Cape Cod Collaborative School - Rear Bathroom - Near Room 8 - Mudset with 1x1 Ceramic Floor Tiles	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
7-19-PB-30A <i>041722573-0066</i>	Cape Cod Collaborative School - Classroom 7 - 1x1 Pore Ceiling Tiles	Brown Fibrous Homogeneous	98% Min. Wool	2% Non-fibrous (Other)	None Detected
7-19-PB-30B <i>041722573-0067</i>	Cape Cod Collaborative School - Classroom 7 - 1x1 Pore Ceiling Tiles	Brown Fibrous Homogeneous	98% Min. Wool	2% Non-fibrous (Other)	None Detected
7-19-PB-31A <i>041722573-0068</i>	Cape Cod Collaborative School - Hallway - 2x4 Pore and Striation Pattern Ceiling Tiles	Gray Fibrous Homogeneous	45% Cellulose 45% Min. Wool	10% Non-fibrous (Other)	None Detected
7-19-PB-31B <i>041722573-0069</i>	Cape Cod Collaborative School - Hallway - 2x4 Pore and Striation Pattern Ceiling Tiles	Gray Fibrous Homogeneous	50% Cellulose 45% Min. Wool	5% Non-fibrous (Other)	None Detected

Analyst(s)

*Stephen Severn (38)*

*Zackary Carbee (30)*

Benjamin Ellis, Laboratory Manager  
or Other Approved Signatory

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Samples analyzed by EMSL Analytical, Inc. South Portland, ME

Initial report from: 08/07/2017 11:06:36

041722573



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EnviroScience, LLC

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

**ASBESTOS BULK SAMPLE CHAIN OF CUSTODY**

Sheet \_\_\_ of \_\_\_

Project Name: Barnstable Public Schools

Project No. 20150090.A8E

Site Address: Various Locations- Barnstable, MA

Project Manager: Dustin Diedricksen

Building Name/Number: Horace Mann ES/HS/CCC Collaborative/Waldorf

Total # of Samples: **68** (69) AC

Sample ID (01A-Initials-Date)	Material Type	Sample Location	Comments/ Quantities
<b>Horace Mann Charter Public School</b>			
7-19-PB-01A	Ceiling plaster-skim coat	Bathroom off gym hall	500 SF
7-19-PB-01B	Ceiling plaster-skim coat	Bathroom off gym hall	500 SF
7-19-PB-01C	Ceiling plaster-skim coat	Bathroom off gym hall	500 SF
7-19-PB-02A	Ceiling plaster-rough coat	Bathroom off gym hall	500 SF
7-19-PB-02B	Ceiling plaster-rough coat	Bathroom off gym hall	500 SF
7-19-PB-02C	Ceiling plaster-rough coat	Bathroom off gym hall	500 SF
7-19-PB-03A	Brown Grout with 1" x 1" ceramic floor tiles	Bathroom off gym hall	500 SF
7-19-PB-03B	Brown Grout with 1" x 1" ceramic floor tiles	Gym office	500 SF
7-19-PB-04A	Mudset with 1" x 1" ceramic floor tiles	Bathroom off gym hall	500 SF
7-19-PB-04B	Mudset with 1" x 1" ceramic floor tiles	Gym office	500 SF
7-19-PB-05A	Cellulose 1' x 1' pore ceiling tiles	Main Hall	5,000 SF
7-19-PB-05B	Cellulose 1' x 1' pore ceiling tiles	Gym	5,000 SF
7-19-PB-06A	Brown glue daubs associated with 1' x 1' pore ceiling tiles	Main Hall	5,000 SF
7-19-PB-06B	Brown glue daubs associated with 1' x 1' pore ceiling tiles	Gym	5,000 SF
7-19-PB-07A	2' x 2' ceiling tiles	Lobby	200 SF
7-19-PB-07B	2' x 2' ceiling tiles	Lobby	200 SF
7-19-PB-08A	2' x 4' ceiling tiles	Hallway to gym	1,000 SF
7-19-PB-08B	2' x 4' ceiling tiles	Hallway to gym	1,000 SF
<b>Barnstable High School</b>			
7-19-PB-09A	Brown carpet glue	Library	5,000 SF
7-19-PB-09B	Brown carpet glue	Library	5,000 SF
7-19-PB-09C	Brown carpet glue	Library	5,000 SF
<b>Cape Cod Collaborative School</b>			

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 CHINA  
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7-19-PB-10A	Sheetrock	Custodial area by Cafeteria	5,000 SF
7-19-PB-10B	Sheetrock	Hall By room T	5,000 SF
7-19-PB-10C	Sheetrock	Main Bathrooms by office	5,000 SF
7-19-PB-11A	Joint Compound	Custodial area by Cafeteria	5,000 SF
7-19-PB-11B	Joint Compound	Hall By room T	5,000 SF
7-19-PB-11C	Joint Compound	Main Bathrooms by office	5,000 SF
7-19-PB-12A	12" x 12" black mottled floor tiles	Custodial area	600 SF
7-19-PB-12B	12" x 12" black mottled floor tiles	Bathrooms	600 SF
7-19-PB-13A	Associated yellow mastic	Custodial area	600 SF
7-19-PB-13B	Associated yellow mastic	Bathrooms	600 SF
7-19-PB-14A	12" x 12" Tan mottled floor tiles	Main Hallway	15,000 SF
7-19-PB-14B	12" x 12" tan mottled floor tiles	Main Hallway	15,000 SF
7-19-PB-15A	Associated yellow mastic	Cafeteria	15,000 SF
7-19-PB-15B	Associated yellow mastic	Cafeteria	15,000 SF
7-19-PB-16A	2' x 4' smooth ceiling tiles	Custodial area	500 SF
7-19-PB-16B	2' x 4' smooth ceiling tiles	Custodial area	500 SF
7-19-PB-17A	2' x 4' pore striation pattern ceiling tiles	Hallway	10,000 SF
7-19-PB-17B	2' x 4' pore striation pattern ceiling tiles	Classrooms	10,000 SF
7-19-PB-18A	4" gray base cove	Hallway	1,500 LF
7-19-PB-18B	4" gray base cove	Classrooms	1,500 LF
7-19-PB-19A	Tan glue with 4" gray base cove	Hallway	1,500 LF
7-19-PB-19B	Tan glue with 4" gray base cove	Classrooms	1,500 LF
7-19-PB-20A	1" x 1" ceramic wall tile grout-white	Hallway	1,500 SF
7-19-PB-20B	1" x 1" ceramic wall tile grout-white	Hallway	1,500 SF
7-19-PB-21A	1" x 1" ceramic wall tile glue	Hallway	1,500 SF
7-19-PB-21B	1" x 1" ceramic wall tile glue	Hallway	1,500 SF
7-19-PB-22A	Interior window glazing compound-gray	Classroom windows	2,000 LF
7-19-PB-22B	Interior window glazing compound-gray	Classroom windows	2,000 LF
<b>Waldorf Elementary School</b>			

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7-19-PB-23A	Sheetrock	Portable classrooms	5,000 SF.
7-19-PB-23B	Sheetrock	Library	5,000 SF
7-19-PB-23C	Sheetrock	Classrooms 5/6	5,000 SF
7-19-PB-24A	Joint Compound	Portable classrooms	5,000 SF
7-19-PB-24B	Joint Compound	Library	5,000 SF
7-19-PB-24C	Joint Compound	Classrooms 5/6	5,000 SF
7-19-PB-25A	12" x 12" Tan mottled floor tiles	Hall to portables	400 SF
7-19-PB-25B	12" x 12" tan mottled floor tiles	Hall to portables	400 SF
7-19-PB-26A	Associated yellow mastic	Hall to portables	400 SF
7-19-PB-26B	Associated yellow mastic	Hall to portables	400 SF
7-19-PB-27A	12" x 12" Tan floor tiles	Woodshop in portables	750 SF
7-19-PB-27B	12" x 12" tan floor tiles	Woodshop in portables	750 SF
7-19-PB-28A	Associated yellow mastic	Woodshop in portables	750 SF
7-19-PB-28B	Associated yellow mastic	Woodshop in portables	750 SF
7-19-PB-29A	Mudset with 1" x 1" ceramic floor tiles	Rear bathroom-near room 8	500 SF
7-19-PB-29B	Mudset with 1" x 1" ceramic floor tiles	Rear bathroom-near room 8	500 SF
7-19-PB-30A	1' x 1' pore ceiling tiles-no glue	Classroom 7	1,000 SF
7-19-PB-30B	1' x 1' pore ceiling tiles-no glue	Classroom 7	1,000 SF
7-19-PB-31A	2' x4' pore and striation pattern ceiling tiles	Hallway	1,500 SF
7-19-PB-31B	2' x4' pore and striation pattern ceiling tiles	Hallway	1,500 SF

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 400 SF  
 400 SF  
 400 SF  
 400 SF  
 750 SF  
 750 SF

Analysis Method:  PLM  Other

**NO TEM - PLM only**

Turnaround Time 5 day

**One Week**

Based on the turnaround time indicated above, analyses are due to EnviroScience on or before this date: \_\_\_\_\_ . Please call EnviroScience if analyses will not be completed for requested t/a/t at (617) 282-4675.

Email Results to: ddiedricksen@fando.com Do Not Mail Hard Copy Report FAX Results to: 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. Do not point count. ~~IF NOB, analyze all samples are all negative by PLM, analyze only the "A" sample (see method sheet) (PLM only) IF NOB, on a [ ] t. Analyze a maximum of [ ] samples by TEM.~~

**NO TEM please**

Samples Collected by: Paul Bateman Date: 7/19/17

Samples Sent by: Paul Bateman Date: 7/19/17 Time: \_\_\_\_\_

Shipped To:  EMSL NJ  Other \_\_\_\_\_

Method of Shipment:  Fed Ex  Lab Drop Off  Other \_\_\_\_\_

*Handwritten signature and date: 8-17 9:30*

## Appendix E

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### Newly Installed Materials Safety Data Sheets

**To be Provided by LEA**

## Appendix F

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### Sample 6-Month Periodic Surveillance Form

### Sample 6- Month Periodic Surveillance Form

Local Education Agency (LEA): Barnstable Public Schools

Facility Name: Barnstable High School

Date of Surveillance: \_\_\_\_\_

#### ACBM Damage Report

Asbestos-Containing Building Material	Location	Previous Condition	Present Condition	Change in Condition (Yes/No)	Estimated Damaged Quantity	Comments
Gray Mudded Pipe-Fitting Insulation	Concealed within Pipe Chases& above Fixed Ceilings	IA				
White/Gray Pipe Insulation	Concealed within Pipe Chases& above Fixed Ceilings	IA				
9" x 9" Tan Streaked Floor Tile	Storage Room by Main Gym	G				

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**

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### 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**

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### Fuss & O'Neill Asbestos Accreditations & Certifications



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

Michael Flanagan  
Director

Asbestos Inspector

ROBERT C. MALLET

Eff. Date 06/01/20

Exp. Date 06/01/21

AI900557

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

bosnew 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

20-2958-106-402379

Certificate Number

January 06, 2020

Examination Date

January 06, 2021

Expiration Date

Training Director

16 Upton Drive, Wilmington, MA 01887

Telephone 978.658.5272

[www.ieetrains.com](http://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

www.ieetrains.com

**INSTITUTE FOR ENVIRONMENTAL EDUCATION**