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

for

Barnstable Community Innovation School
165 Bearses Way
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

Project Number: 20150090.C90

November 13, 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 Community Innovation School
165 Bearses Way, 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 Community Innovation School located at 165 Bearses Way 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
	Deputy Director of Facilities
Address:	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 Community Innovation School is a two-story, concrete, brick, steel, and wood structure that was reportedly constructed in the 1950s.

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 Barnstable Community Innovation 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)

Material	Location	Reference	Asbestos Content
Gray Mudded Pipe-Fitting Insulation	Concealed within Pipe Chases	2014 Initial AMP	Assumed ACBM
White/Gray Pipe Insulation	Concealed within Pipe Chases	2014 Initial AMP	Assumed ACBM
9" x 9" Brown Streaked Floor Tile	Rear Stairwells from Gymnasium	2014 Initial AMP	Assumed ACBM
Black Mastic Associated with 9" x 9" Brown Streaked Floor Tile	Rear Stairwells from Gymnasium	2014 Initial AMP	Assumed ACBM
12" x 12" Brown/White Mottled Pattern Floor Tile	Classroom 2	2014 Initial AMP (Sample ID: 7-12-PB-32A)	3% Chrysotile
Black Mastic Associated with 12" x 12" Brown/White Mottled Pattern Floor Tile	Classroom 2	2014 Initial AMP (Sample ID: 7-12-PB-33A)	4% 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)

Material	Location	Reference
Brown Glue Daubs Associated with 12" x 12" Ceiling Tile	Main Offices, Cafeteria, Corridors, Classrooms, & Gymnasium	2014 Initial AMP (Sample ID: 7-12-PB-18A-B)
White Skim Coat Ceiling Plaster	Main Offices, Art Storage, Gymnasium Office, Library, Cafeteria, Restrooms, Hallways, & Classrooms	2014 Initial AMP & 2017 AMP Update (Sample ID: 7-12-PB-19A-C); (Sample ID: 7-19-PB-01A-C)
Gray Rough Coat Ceiling Plaster	Main Offices, Art Storage, Gymnasium Office, Library, Cafeteria, Restrooms, Hallways, & Classrooms	2014 Initial AMP & 2017 AMP Update (Sample ID: 7-12-PB-20A-C); (Sample ID: 7-19-PB-02A-C)
White Skim Coat Wall Plaster	Main Office & Health Office	2014 Initial AMP (Sample ID: 7-12-PB-21A-C)

Material	Location	Reference
Gray Rough Coat Wall Plaster	Main Office & Health Office	2014 Initial AMP (Sample ID: 7-12-PB-22A-C)
12" x 12" Tan Mottled Floor Tile	Main Office, Health Office, Classrooms, Hallways, Cafeteria, Library, & Teachers' Room	2014 Initial AMP (Sample ID: 7-12-PB-23A-B)
Gray Mastic Associated with 12" x 12" Tan Mottled Floor Tile	Main Office, Health Office, Classrooms, Hallways, Cafeteria, Library, & Teachers' Room	2014 Initial AMP (Sample ID: 7-12-PB-24A-C)
Gray Floor Leveling Compound	Main Office, Health Office, Classrooms, Hallways, Cafeteria, Library, & Teachers' Room	2014 Initial AMP (Sample ID: 7-12-PB-25A-B)
Yellow Carpet Glue	Office By Exit Stairs/Central Foyer	2014 Initial AMP (Sample ID: 7-12-PB-26A-B)
Gray Mud-Set Associated with Ceramic Floor Tile (No Grout)	Restrooms, Kitchen, & Gym Teacher's Office	2014 Initial AMP & 2017 AMP Update (Sample ID: 7-12-PB-27A-B); (Sample ID: 7-19-PB-04A –B)
Brown Grout Associated with 1" x 1" Ceramic Floor Tile	Bathroom Off of Gymnasium Hallway	2017 AMP Update (Sample ID: 7-19-PB-03A-B)
White Sheetrock (Gypsum Wallboard)	Cafeteria & Library	2014 Initial AMP (Sample ID: 7-12-PB-28A-B)
White Joint Compound	Cafeteria & Library	2014 Initial AMP (Sample ID: 7-12-PB-29A-C)
Yellow Base Cove Glue	Classrooms, Offices, Library, & Cafeteria	2014 Initial AMP (Sample ID: 7-12-PB-30A-B)
Black Composite Window Sill	Classrooms, Restrooms, Cafeteria, & Gymnasium	2014 Initial AMP (Sample ID: 7-12-PB-31A-B)
Gray Duct Caulking	Attic	2014 Initial AMP (Sample ID: 7-12-PB-34A-B)
1' x 1' Brown Cellulose Pore Ceiling Tile	Gymnasium & Main Hallway	2017 AMP Update (Sample ID: 7-19-PB-05A-B)
Brown Glue Daubs Associated with 1' x 1' Brown Cellulose Pore Ceiling Tile	Gymnasium & Main Hallway	2017 AMP Update (Sample ID: 7-19-PB-06A-B)
2' x 2' Gray Ceiling Tile	Lobby & Hallway to Gymnasium	2017 AMP Update (Sample ID: 7-19-PB-07A-B)
2' x 4' Gray Ceiling Tile	Lobby & Hallway to Gymnasium	2017 AMP Update (Sample ID: 7-19-PB-08A-B)

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) 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
Gray Mudded Pipe-Fitting Insulation	Concealed within Pipe Chases	Unknown	$25-$30/LF
White/Gray Pipe Insulation			
9" x 9" Brown Streaked Floor Tile & Associated Mastic	Rear Stairwells from Gymnasium	100 SF	$1,500
12" x 12" Brown/White Mottled Pattern Floor Tiles & Associated Mastic	Classroom 2	1,000 SF	$5,000

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:

Dustin A. Diedricksen
Associate / Department Manager

Appendix A

Existing Records Checklist

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Existing Records Checklist

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

School Building: Barnstable Community Innovation 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)	Yes	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

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School: Barnstable Community Innovation School

Address 165 Bearses Way, 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					
Assumed ACBM	Assumed ACBM	Gray Mudded Pipe-Fitting Insulation	TSI	F	5	Concealed within Pipe Chases	
Assumed ACBM	Assumed ACBM	White/Gray Pipe Insulation	TSI	F	5	Concealed within Pipe Chases	
Assumed ACBM	Assumed ACBM	9" x 9" Brown Streaked Floor Tile	Misc.	NF	5	Rear Stairwells from Gym	
Assumed ACBM	Assumed ACBM	Black Mastic Associated with 9" x 9" Brown Streaked Floor Tile	Misc.	NF	5	Rear Stairwells from Gym	
7-12-PB-32A	3% Chrysotile	12" x 12" Brown/White Mottled Pattern Floor Tile	Misc.	NF	5	Classroom 2	
7-12-PB-33A	4% Chrysotile	Black Mastic Associated with 12" x 12" Brown/White Mottled Pattern Floor Tile	Misc.	NF	5	Classroom 2	

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: Barnstable Community Innovation School
Homogeneous Material: Gray Mudded Pipe-Fitting Insulation

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

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	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: November 13, 2020	
Inspector's Name: Robert Mallett Inspector Signature: _____ Accreditation #/State: AI900557/MA Expiration Date: 06/01/2021					Management Planner Name: Dustin Diedricksen Management Planner Signature: _____ Accreditation #/State: AP900425/MA Expiration Date: 04/05/2021	
I, the LEA's Designated Person, have read and understood the recommendations made above: _____ Date: _____						

School: Barnstable Community Innovation School
Homogeneous Material: White/Gray Pipe Insulation

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

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	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: November 13, 2020	
Inspector's Name: Robert Mallett Inspector Signature: _____ Accreditation #/State: AI900557/MA Expiration Date: 06/01/2021					Management Planner Name: Dustin Diedricksen Management Planner Signature: _____ Accreditation #/State: AP900425/MA Expiration Date: 04/05/2021	
I, the LEA's Designated Person, have read and understood the recommendations made above: _____ Date: _____						

School: Barnstable Community Innovation School
Homogeneous Material: 9" x 9" Brown Streaked Floor Tile
Date of Re-Inspection: August 26, 2020
Sample ID Number: Assumed ACBM

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**
Rear Stairwell from Gymnasium	NF	100 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: November 13, 2020	
Inspector's Name: Robert Mallett Inspector Signature: _____ Accreditation #/State: AI900557/MA Expiration Date: 06/01/2021					Management Planner Name: Dustin Diedricksen Management Planner Signature: _____ Accreditation #/State: AP900425/MA Expiration Date: 04/05/2021	
I, the LEA's Designated Person, have read and understood the recommendations made above: _____ Date: _____						

School: Barnstable Community Innovation School
Date of Re-Inspection: August 26, 2020
Homogeneous Material: Black Mastic Associated with 9" x 9" Brown Streaked Floor Tile
Sample ID Number: Assumed ACBM

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**
Rear Stairwell from Gymnasium	NF	100 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: November 13, 2020	
Inspector's Name: Robert Mallett Inspector Signature: _____ Accreditation #/State: AI900557/MA Expiration Date: 06/01/2021					Management Planner Name: Dustin Diedricksen Management Planner Signature: _____ Accreditation #/State: AP900425/MA Expiration Date: 04/05/2021	
I, the LEA's Designated Person, have read and understood the recommendations made above: _____ Date: _____						

School: Barnstable Community Innovation School
Homogeneous Material: 12"x 12" Brown/White Mottled Floor Tile

Date of Re-Inspection: August 26, 2020
Sample ID Number: 7-12-PB-32A

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**
Classroom 2	NF	1,000 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: November 13, 2020	
Inspector's Name: Robert Mallett Inspector Signature: _____ Accreditation #/State: AI900557/MA Expiration Date: 06/01/2021					Management Planner Name: Dustin Diedricksen Management Planner Signature: _____ Accreditation #/State: AP900425/MA Expiration Date: 04/05/2021	
I, the LEA's Designated Person, have read and understood the recommendations made above: _____ Date: _____						

School: Barnstable Community Innovation School
Homogeneous Material: Black Mastic Associated with 12" x 12" Brown/White Mottled Floor Tile

Date of Re-Inspection: August 26, 2020
Sample ID Number: 7-12-PB-33A

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**
Classroom 2	NF	1,000 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: November 13, 2020	
Inspector's Name: Robert Mallett Inspector Signature: _____ Accreditation #/State: AI900557/MA Expiration Date: 06/01/2021					Management Planner Name: Dustin Diedricksen Management Planner Signature: _____ Accreditation #/State: AP900425/MA Expiration Date: 04/05/2021	

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

EMSL Order:	041324594
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 3:00 PM
Analysis Date:	9/13/2013
Collected:	7/12/2013

Project: **20121793.A1E / Barnstable Public Schools: Horace Mann Elementary School**

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

			Non-Asbestos				Asbestos
Sample	**Description**	**Appearance**	**%**	**Fibrous**	**%**	**Non-Fibrous**	**% Type**
7-12PB 18A *041324594-0001*	Main Office: Office - Glue Daubs w/ 1'x1' Ceiling Tiles	Brown Non-Fibrous Homogeneous			100%	Non-fibrous (other)	**None Detected**
7-12PB 18B *041324594-0002*	Main Office: Gym - Glue Daubs w/ 1'x1' Ceiling Tiles	Brown Non-Fibrous Homogeneous			100%	Non-fibrous (other)	**None Detected**
7-12PB 19A *041324594-0003*	Main Office - Ceiling Plaster, Skim Coat	Gray Fibrous Homogeneous	2%	Cellulose	98%	Non-fibrous (other)	**None Detected**
7-12PB 19B *041324594-0004*	Main Office: Art Storage - Ceiling Plaster, Skim Coat	Gray Fibrous Homogeneous	2%	Cellulose	98%	Non-fibrous (other)	**None Detected**
7-12PB 19C *041324594-0005*	Main Office: Gym Office Closet - Ceiling Plaster, Skim Coat	Gray Fibrous Homogeneous	2%	Cellulose	98%	Non-fibrous (other)	**None Detected**
7-12PB 20A *041324594-0006*	Main Office - Ceiling Plaster, Rough Coat	Gray Fibrous Homogeneous	2%	Cellulose	98%	Non-fibrous (other)	**None Detected**
7-12PB 20B *041324594-0007*	Main Office: Art Storage - Ceiling Plaster, Rough Coat	Gray Fibrous Homogeneous	2%	Cellulose	98%	Non-fibrous (other)	**None Detected**
7-12PB 20C *041324594-0008*	Main Office: Gym Office Closet - Ceiling Plaster, Rough Coat	Gray Non-Fibrous Homogeneous			100%	Non-fibrous (other)	**None Detected**

Analyst(s)

Justine Schenck (24)
Nancy Stalter (15)

Stephen Siegel, CIH, Laboratory Manager
or other approved signatory

Initial report from 09/14/2013 00:08:02

EMSL Analytical, Inc.
200 Route 130 North, Cinnaminson, NJ 08077
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http://www.EMSL.com cinnasblab@EMSL.com

EMSL Order: 041324594
CustomerID: ENVI54
CustomerPO:
ProjectID:

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Fax: (888) 838-1160
Received: 09/12/13 3:00 PM
Analysis Date: 9/13/2013
Collected: 7/12/2013

Project: **20121793.A1E / Barnstable Public Schools: Horace Mann Elementary School**

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

			Non-Asbestos			Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**		**% Non-Fibrous**	**% Type**
7-12PB 21A *041324594-0009*	Main Office - Wall Plaster, Skim Coat	White Non-Fibrous Homogeneous			100% Non-fibrous (other)	**None Detected**
7-12PB 21B *041324594-0010*	Main Office - Wall Plaster, Skim Coat	White Non-Fibrous Homogeneous			100% Non-fibrous (other)	**None Detected**
7-12PB 21C *041324594-0011*	Main Office - Wall Plaster, Skim Coat	White Non-Fibrous Homogeneous			100% Non-fibrous (other)	**None Detected**
7-12PB 22A *041324594-0012*	Main Office - Wall Plaster, Rough Coat	Gray Fibrous Homogeneous	2%	Cellulose	98% Non-fibrous (other)	**None Detected**
7-12PB 22B *041324594-0013*	Main Office - Wall Plaster, Rough Coat	Gray Fibrous Homogeneous	2%	Cellulose	98% Non-fibrous (other)	**None Detected**
7-12PB 22C *041324594-0014*	Main Office - Wall Plaster, Rough Coat	Gray Non-Fibrous Homogeneous			100% Non-fibrous (other)	**None Detected**
7-12PB 23A *041324594-0015*	Corridor Outside Custodian / Art Storage - 12"x12" Tan Mottled Pattern Floor Tile	Tan/White Non-Fibrous Homogeneous			100% Non-fibrous (other)	**None Detected**
7-12PB 23B *041324594-0016*	Corridor Outside Custodian / Art Storage - 12"x12" Tan Mottled Pattern Floor Tile	Tan/White Non-Fibrous Homogeneous			100% Non-fibrous (other)	**None Detected**

Analyst(s)

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Received:	09/12/13 3:00 PM
Analysis Date:	9/13/2013
Collected:	7/12/2013

Project: **20121793.A1E / Barnstable Public Schools: Horace Mann Elementary School**

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

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
7-12PB 24A *041324594-0017*	Corridor Outside Custodian / Art Storage - Associated Mastic	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
7-12PB 24B *041324594-0018*	Corridor Outside Custodian / Art Storage - Associated Mastic	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
7-12PB 24C *041324594-0019*	Corridor Outside Custodian / Art Storage - Associated Mastic	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
7-12PB 25A *041324594-0020*	Corridor Outside Custodian / Art Storage - Leveling Compound	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
7-12PB 25B *041324594-0021*	Corridor Outside Custodian / Art Storage - Leveling Compound	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
7-12PB 26A *041324594-0022*	Office by Exit - Carpet Glue	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
7-12PB 26B *041324594-0023*	Office by Exit - Carpet Glue	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**

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Project: **20121793.A1E / Barnstable Public Schools: Horace Mann Elementary School**

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

			Non-Asbestos				Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**		**% Non-Fibrous**		**% Type**
7-12PB 27A *041324594-0024*	Gym Technician Office - Ceramic Floor Tile (1 Type Only, No Grout)	Gray Non-Fibrous Homogeneous			100%	Non-fibrous (other)	**None Detected**
7-12PB 27B *041324594-0025*	Gym Technician Office - Ceramic Floor Tile (1 Type Only, No Grout)	Gray Non-Fibrous Homogeneous			100%	Non-fibrous (other)	**None Detected**
7-12PB 28A *041324594-0026*	Café / Lab Rooms - Sheetrock	White Fibrous Homogeneous	15%	Cellulose	85%	Non-fibrous (other)	**None Detected**
7-12PB 28B *041324594-0027*	Café / Lab Rooms - Sheetrock	White Fibrous Homogeneous	5%	Cellulose	95%	Non-fibrous (other)	**None Detected**
7-12PB 29A *041324594-0028*	Café / Lab Rooms - Joint Compound	White Non-Fibrous Homogeneous			100%	Non-fibrous (other)	**None Detected**
7-12PB 29B *041324594-0029*	Café / Lab Rooms - Joint Compound	White Non-Fibrous Homogeneous			100%	Non-fibrous (other)	**None Detected**
7-12PB 29C *041324594-0030*	Café / Lab Rooms - Joint Compound	White Non-Fibrous Homogeneous			100%	Non-fibrous (other)	**None Detected**
7-12PB 30A *041324594-0031*	Café / Lab Rooms - Yellow/Tan Base & Mastic	Yellow Non-Fibrous Homogeneous			100%	Non-fibrous (other)	**None Detected**

Analyst(s)

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Analysis Date:	9/13/2013
Collected:	7/12/2013

Project: **20121793.A1E / Barnstable Public Schools: Horace Mann Elementary School**

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

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
7-12PB 30B *041324594-0032*	Café / Lab Rooms - Yellow/Tan Base & Mastic	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
7-12PB 31A *041324594-0033*	Room 6 - Composite Window	Black Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
7-12PB 31B *041324594-0034*	Room 9 - Composite Window	Black Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
7-12PB 32A *041324594-0035*	Room 2 - 12"x12" White Mottled Floor Tile	Brown Non-Fibrous Homogeneous		97% Non-fibrous (other)	**3% Chrysotile**
7-12PB 32B *041324594-0036*	Room 2 - 12"x12" White Mottled Floor Tile				**Stop Positive (Not Analyzed)**
7-12PB 33A *041324594-0037*	Room 2 - Associated Mortar	Black Non-Fibrous Homogeneous		96% Non-fibrous (other)	**4% Chrysotile**
7-12PB 33B *041324594-0038*	Room 2 - Associated Mortar				**Stop Positive (Not Analyzed)**
7-12PB 33C *041324594-0039*	Room 2 - Associated Mortar				**Not Submitted**

Analyst(s)

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Initial report from 09/14/2013 00:08:02

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Analysis Date:	9/13/2013
Collected:	7/12/2013

Project: **20121793.A1E / Barnstable Public Schools: Horace Mann Elementary School**

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

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
7-12PB 34A *041324594-0040*	Attic - Gray Duct Caulking	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
7-12PB 34B *041324594-0041*	Attic - Gray Duct Caulking	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
7-12PB 34B *041324594-0041A*	Attic - Gray Duct Caulking	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**

Analyst(s)

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Stephen Siegel, CIH, Laboratory Manager
or other approved signatory

Initial report from 09/14/2013 00:08:02

041324594

FUSS & O'NEILL
EnviroScience, LLC

146 Hartford Road, Manchester, CT 06040 041324594 Phone (860)646-2469 Fax (860) 649-6883

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SAMPLE LOG FOR ASBESTOS BULKS

Sheet __ of 4

Project Name: Barnstable Public Schools Project No. 20121793. AIE

Building: Horace Mann Elementary School Project Manager: Dustin D

Sample ID	Sample Location	Material	Result (%)
7.12 PB 18 A	Main office	glue dabs with 1'x1'	Cellulose
B	Gym	ceiling tiles	
C	Corridor		
19 A	Cafe Main office	Ceiling Plaster - Skim Coat	
B	Art Storage		
C	Gym office closet		
20 A	Main office	Ceiling plaster scratch Coat	
B	Art Storage		
C	Gym office closet		
21 A	Main office	Wall Plaster Skim Coat	
B			
C			
22 A	Main office	Wall plaster scratch Coat	
B			
C			

RECEIVED EMSL CINNAMINSON, NJ 2013 SEP 12 A 10:49

Analysis Method: ☑ PLM ☐ Other Turnaround Time ~~24 Hr~~ 3 Day

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

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

Special Instructions: Stop analysis on first positive sample in each homogeneous set of samples unless otherwise noted. Do not layer samples unless indicated. ~~EPA 400 Point Count all samples of content <4%, positive stop on all point counts.~~ ~~Please perform TEM/PLM on samples marked * which come out <1% Asbestos or Non-Asbestos by PLM~~

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

Samples [Rec'd][Sent by] [Pmj BA][LD] Date: [7/12/13][9/10] Time: _____

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

Shipped To: ☑ EMSL State ~~MA~~ ☐ Other _____

Method of Shipment: ☑ Fed Ex ☐ Other _____

Q:\EnviroScience\Admin\FORMS\Asbestos Bulks Chain of Custody_rev 0611.doc

drop box

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041324594

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SAMPLE LOG FOR ASBESTOS BULKS

Sheet __ of __

Project Name: Barnstable Public Schools Project No. 20121793. AIE

Building: Horace Mann Elementary School Project Manager: Dustin D

Sample ID	Sample Location	Material	Result (%)
712 PB 23A	Corridor outside Custodians office 12"x12" Tan		
B	Corridor outside Art Storage	Pattern Floor tile	
C			
24A		Associated Mastic	
B	SAME		
C			
25A		Leveling Compound	
B	SAME		
C			
26A	office by Exit Stairs	Carpet tile	
B			
C			
27A	Gym Teacher office	Cream Floor tile mastic	
B		(One Type only)	No grout
C			

RECEIVED
EMSL
CINNAMINSON, NJ
2013 SEP 12 A 10:49

Analysis Method: ☒ PLM ☐ Other Turnaround Time 24hr

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

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

Special Instructions: Stop analysis on first positive sample in each homogeneous set of samples unless otherwise noted. Do not layer samples unless indicated. ~~EPA 100 Point Count all samples of content <4%, positive stop on all point counts.~~ ~~Please perform TEM on Samples marked * which come out <1% Asbestos or Non-Asbestos by PLM~~

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

Samples [Rec'd][Sent by] [Paul Bateman || LD] Date: [7/12/13 || 9:00] 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 SR 0830

041324594

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EnviroScience, LLC

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SAMPLE LOG FOR ASBESTOS BULKS

Sheet __ of __

Project Name: Barnstable Public Schools Project No. 20121793. AIE

Building: Horace Mann Elementary School Project Manager: Dustin D

Sample ID	Sample Location	Material	Result (%)
7.R PB28A	cafe	Sheetrock	
B	Library		
C			
29 A		Joint Compound	
B	Same		
C.			
30 A		Yellow/tan Base coat mastic	
B	Same		
C			
31 A	Room 9	Composite window sill	
B			
C			
32A	Room 2	12 x 12" Beige floor/mastic tile	
B		which	
C			

RECEIVED EMSL CINNAMINSON, NJ 2013 SEP 12 A 10:49

Analysis Method: ☑ PLM ☐ Other Turnaround Time [redacted] 3 Day

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

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

Special Instructions: Stop analysis on first positive sample in each homogeneous set of samples unless otherwise noted. Do not layer samples unless indicated. ~~EPA 400 Point Count all samples of content <4% positive stop on all Point Counts.~~ Please perform TEM on Samples marked * which come out <1% AChM or Non-AChM

Samples collected by: Paul Bateman **Date:** 7/12/13. **Time:** _____

Samples [Rec'd][Sent by] [Paul BA] [LO] **Date:** [7/14/13] [9/10] **Time:** _____

Samples Received by: _____ **Date:** _____ **Time:** _____

Shipped To: ☑ EMSL State [redacted] ☐ Other _____

Method of Shipment: ☑ Fed Ex ☐ Other _____

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SAMPLE LOG FOR ASBESTOS BULKS

Sheet __ of __

Project Name: Burns Latte Public Schools Project No. 20121793. AIE

Building: Horace Mann Elementary School Project Manager: Dustin D

Sample ID	Sample Location	Material	Result (%)
7.h PB33A	Associated mastic	Room 2	9003F
B.	↓	↓	↓
C.	↓	↓	↓
34A.	ATHIC	Duct Cmbing	5002F
B.			

RECEIVED
EMSL
CINNAMINSON, NJ
2013 SEP 12 A 10:49

Analysis Method: ☑ PLM ☐ Other Turnaround Time 24hr.

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

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

Special Instructions: Stop analysis on first positive sample in each homogeneous set of samples unless otherwise noted. Do not layer samples unless indicated. ~~EPA 400 Point Count all samples of content <4%, positive stop on all Point Counts.~~ Please perform TEM/No On Samples marked * which come out <1% ACm or Non-ACm by PLM

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

Samples [Rec'd] [Sent by] [PLM BA II] Date: [7/ /13 II] Time: _____

Samples Received by: _____ Date: _____ Time: _____

Shipped To: ☑ EMSL State NJ ☐ Other _____

Method of Shipment: ☑ Fed Ex ☐ Other _____

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SEP 11 2013
By SL 0830

EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077

Tel/Fax: (800) 220-3675 / (856) 786-5974

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

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

Attention:	Dustin Diedricksen	**Phone:**	(617) 778-3750
	Fuss & O'Neill EnviroScience, LLC	**Fax:**	(888) 838-1160
	146 Hartford Road	**Received Date:**	08/01/2017 9:30 AM
	Manchester, CT 06040	**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

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
7-19-PB-01A *041722573-0001*	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 *041722573-0002*	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 *041722573-0003*	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 *041722573-0004*	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 *041722573-0005*	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 *041722573-0006*	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 *041722573-0007*	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 *041722573-0008*	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 *041722573-0009*	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 *041722573-0010*	Horace Mann Charter Public School - Gym Office - Mudset with 1x1 Ceramic Floor Tiles	Gray 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

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% 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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Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% 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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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

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% 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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Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% 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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Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
7-19-PB-28B 041722573-0063	Cape Cod Collaborative School - Woodshop in Portables - Associated Yellow Mastic	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
7-19-PB-29A 041722573-0064	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 041722573-0065	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 041722573-0066	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 041722573-0067	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 041722573-0068	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 041722573-0069	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

OrderID: 041722573

041722573

Fuss & O'Neill EnviroScience EMSL Customer No. ENVI54

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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/CCCollaborative/Waldorf Total # of Samples: 68 (69) AE

Sample ID (01A-Initials-Date)	Material Type	Sample Location	Comments/ Quantities
Horace Mann Charter Public School			
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
Barnstable High School			
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
Cape Cod Collaborative School			

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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
Waldorf Elementary School			

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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

2017 AUG -1 P 10:57

Analysis Method: ☒ PLM ☐ TEM ☐ 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 samples are all negative by PLM, analyze only the "A" sample (or middle layer) by TEM NOB, on a [redacted] t/a/t. Analyze a maximum of No 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 _____

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EMSL Order:	041324594
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 3:00 PM
Analysis Date:	9/13/2013
Collected:	7/12/2013

Project: **20121793.A1E / Barnstable Public Schools: Horace Mann Elementary School**

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

			Non-Asbestos				Asbestos
Sample	**Description**	**Appearance**	**%**	**Fibrous**	**%**	**Non-Fibrous**	**% Type**
7-12PB 18A *041324594-0001*	Main Office: Office - Glue Daubs w/ 1'x1' Ceiling Tiles	Brown Non-Fibrous Homogeneous			100%	Non-fibrous (other)	**None Detected**
7-12PB 18B *041324594-0002*	Main Office: Gym - Glue Daubs w/ 1'x1' Ceiling Tiles	Brown Non-Fibrous Homogeneous			100%	Non-fibrous (other)	**None Detected**
7-12PB 19A *041324594-0003*	Main Office - Ceiling Plaster, Skim Coat	Gray Fibrous Homogeneous	2%	Cellulose	98%	Non-fibrous (other)	**None Detected**
7-12PB 19B *041324594-0004*	Main Office: Art Storage - Ceiling Plaster, Skim Coat	Gray Fibrous Homogeneous	2%	Cellulose	98%	Non-fibrous (other)	**None Detected**
7-12PB 19C *041324594-0005*	Main Office: Gym Office Closet - Ceiling Plaster, Skim Coat	Gray Fibrous Homogeneous	2%	Cellulose	98%	Non-fibrous (other)	**None Detected**
7-12PB 20A *041324594-0006*	Main Office - Ceiling Plaster, Rough Coat	Gray Fibrous Homogeneous	2%	Cellulose	98%	Non-fibrous (other)	**None Detected**
7-12PB 20B *041324594-0007*	Main Office: Art Storage - Ceiling Plaster, Rough Coat	Gray Fibrous Homogeneous	2%	Cellulose	98%	Non-fibrous (other)	**None Detected**
7-12PB 20C *041324594-0008*	Main Office: Gym Office Closet - Ceiling Plaster, Rough Coat	Gray Non-Fibrous Homogeneous			100%	Non-fibrous (other)	**None Detected**

Analyst(s)

Justine Schenck (24)
Nancy Stalter (15)

Stephen Siegel, CIH, Laboratory Manager
or other approved signatory

Initial report from 09/14/2013 00:08:02

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

EMSL Order: 041324594
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 3:00 PM
Analysis Date: 9/13/2013
Collected: 7/12/2013

Project: **20121793.A1E / Barnstable Public Schools: Horace Mann Elementary School**

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

			Non-Asbestos			Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**		**% Non-Fibrous**	**% Type**
7-12PB 21A *041324594-0009*	Main Office - Wall Plaster, Skim Coat	White Non-Fibrous Homogeneous			100% Non-fibrous (other)	**None Detected**
7-12PB 21B *041324594-0010*	Main Office - Wall Plaster, Skim Coat	White Non-Fibrous Homogeneous			100% Non-fibrous (other)	**None Detected**
7-12PB 21C *041324594-0011*	Main Office - Wall Plaster, Skim Coat	White Non-Fibrous Homogeneous			100% Non-fibrous (other)	**None Detected**
7-12PB 22A *041324594-0012*	Main Office - Wall Plaster, Rough Coat	Gray Fibrous Homogeneous	2%	Cellulose	98% Non-fibrous (other)	**None Detected**
7-12PB 22B *041324594-0013*	Main Office - Wall Plaster, Rough Coat	Gray Fibrous Homogeneous	2%	Cellulose	98% Non-fibrous (other)	**None Detected**
7-12PB 22C *041324594-0014*	Main Office - Wall Plaster, Rough Coat	Gray Non-Fibrous Homogeneous			100% Non-fibrous (other)	**None Detected**
7-12PB 23A *041324594-0015*	Corridor Outside Custodian / Art Storage - 12"x12" Tan Mottled Pattern Floor Tile	Tan/White Non-Fibrous Homogeneous			100% Non-fibrous (other)	**None Detected**
7-12PB 23B *041324594-0016*	Corridor Outside Custodian / Art Storage - 12"x12" Tan Mottled Pattern Floor Tile	Tan/White Non-Fibrous Homogeneous			100% Non-fibrous (other)	**None Detected**

Analyst(s)

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Project: **20121793.A1E / Barnstable Public Schools: Horace Mann Elementary School**

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

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
7-12PB 24A *041324594-0017*	Corridor Outside Custodian / Art Storage - Associated Mastic	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
7-12PB 24B *041324594-0018*	Corridor Outside Custodian / Art Storage - Associated Mastic	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
7-12PB 24C *041324594-0019*	Corridor Outside Custodian / Art Storage - Associated Mastic	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
7-12PB 25A *041324594-0020*	Corridor Outside Custodian / Art Storage - Leveling Compound	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
7-12PB 25B *041324594-0021*	Corridor Outside Custodian / Art Storage - Leveling Compound	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
7-12PB 26A *041324594-0022*	Office by Exit - Carpet Glue	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
7-12PB 26B *041324594-0023*	Office by Exit - Carpet Glue	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**

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Project: **20121793.A1E / Barnstable Public Schools: Horace Mann Elementary School**

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

			Non-Asbestos				Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**		**% Non-Fibrous**		**% Type**
7-12PB 27A *041324594-0024*	Gym Technician Office - Ceramic Floor Tile (1 Type Only, No Grout)	Gray Non-Fibrous Homogeneous			100%	Non-fibrous (other)	**None Detected**
7-12PB 27B *041324594-0025*	Gym Technician Office - Ceramic Floor Tile (1 Type Only, No Grout)	Gray Non-Fibrous Homogeneous			100%	Non-fibrous (other)	**None Detected**
7-12PB 28A *041324594-0026*	Café / Lab Rooms - Sheetrock	White Fibrous Homogeneous	15%	Cellulose	85%	Non-fibrous (other)	**None Detected**
7-12PB 28B *041324594-0027*	Café / Lab Rooms - Sheetrock	White Fibrous Homogeneous	5%	Cellulose	95%	Non-fibrous (other)	**None Detected**
7-12PB 29A *041324594-0028*	Café / Lab Rooms - Joint Compound	White Non-Fibrous Homogeneous			100%	Non-fibrous (other)	**None Detected**
7-12PB 29B *041324594-0029*	Café / Lab Rooms - Joint Compound	White Non-Fibrous Homogeneous			100%	Non-fibrous (other)	**None Detected**
7-12PB 29C *041324594-0030*	Café / Lab Rooms - Joint Compound	White Non-Fibrous Homogeneous			100%	Non-fibrous (other)	**None Detected**
7-12PB 30A *041324594-0031*	Café / Lab Rooms - Yellow/Tan Base & Mastic	Yellow Non-Fibrous Homogeneous			100%	Non-fibrous (other)	**None Detected**

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Project: **20121793.A1E / Barnstable Public Schools: Horace Mann Elementary School**

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

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
7-12PB 30B *041324594-0032*	Café / Lab Rooms - Yellow/Tan Base & Mastic	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
7-12PB 31A *041324594-0033*	Room 6 - Composite Window	Black Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
7-12PB 31B *041324594-0034*	Room 9 - Composite Window	Black Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
7-12PB 32A *041324594-0035*	Room 2 - 12"x12" White Mottled Floor Tile	Brown Non-Fibrous Homogeneous		97% Non-fibrous (other)	**3% Chrysotile**
7-12PB 32B *041324594-0036*	Room 2 - 12"x12" White Mottled Floor Tile				**Stop Positive (Not Analyzed)**
7-12PB 33A *041324594-0037*	Room 2 - Associated Mortar	Black Non-Fibrous Homogeneous		96% Non-fibrous (other)	**4% Chrysotile**
7-12PB 33B *041324594-0038*	Room 2 - Associated Mortar				**Stop Positive (Not Analyzed)**
7-12PB 33C *041324594-0039*	Room 2 - Associated Mortar				**Not Submitted**

Analyst(s)

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Project: **20121793.A1E / Barnstable Public Schools: Horace Mann Elementary School**

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

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
7-12PB 34A *041324594-0040*	Attic - Gray Duct Caulking	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
7-12PB 34B *041324594-0041*	Attic - Gray Duct Caulking	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
7-12PB 34B *041324594-0041A*	Attic - Gray Duct Caulking	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**

Analyst(s)

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or other approved signatory

Initial report from 09/14/2013 00:08:02

041324594

FUSS & O'NEILL
EnviroScience, LLC

146 Hartford Road, Manchester, CT 06040 041324594 Phone (860)646-2469 Fax (860) 649-6883

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SAMPLE LOG FOR ASBESTOS BULKS

Sheet __ of 4

Project Name: Barnstable Public Schools Project No. 20121793. AIE

Building: Horace Mann Elementary School Project Manager: Dustin D

Sample ID	Sample Location	Material	Result (%)
7.12 PB 18 A	Main office	glue dabs with 1'x1'	Cellulose
B	Gym	ceiling tiles	
C	Corridor		
19 A	Cafe Main office	Ceiling Plaster - Skim Coat	
B	Art Storage		
C	Gym office closet		
20 A	Main office	Ceiling plaster scratch Coat	
B	Art Storage		
C	Gym office closet		
21 A	Main office	Wall Plaster Skim Coat	
B			
C			
22 A	Main office	Wall plaster scratch Coat	
B			
C			

RECEIVED EMSL CINNAMINSON, NJ 2013 SEP 12 A 10:49

Analysis Method: ☑ PLM ☐ Other Turnaround Time ~~24 Hr~~ 3 Day

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

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

Special Instructions: Stop analysis on first positive sample in each homogeneous set of samples unless otherwise noted. Do not layer samples unless indicated. ~~EPA 400 Point Count all samples of content <4%, positive stop on all point counts.~~ ~~Please perform TEM/PLM on samples marked * which come out <1% Asbestos or Non-Asbestos by PLM~~

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

Samples [Rec'd][Sent by] [Pmj BA][LD] Date: [7/12/13][9/10] Time: _____

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

Shipped To: ☑ EMSL State ~~MA~~ ☐ Other _____

Method of Shipment: ☑ Fed Ex ☐ Other _____

Q:\EnviroScience\Admin\FORMS\Asbestos Bulks Chain of Custody_rev 0611.doc

drop box

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SAMPLE LOG FOR ASBESTOS BULKS

Sheet __ of __

Project Name: Barnstable Public Schools Project No. 20121793. AIE

Building: Horace Mann Elementary School Project Manager: Dustin D

Sample ID	Sample Location	Material	Result (%)
712 PB 23A	Corridor outside Custodians office 12"x12" Tan		
B	Corridor outside Art Storage	Pattern Floor tile	
C			
24A		Associated Mastic	
B	SAME		
C			
25A		Leveling Compound	
B	SAME		
C			
26A	office by Exit Stairs	Carpet tile	
B			
C			
27A	Gym Teacher office	Cream Floor tile mastic	
B		(One Type only)	No grout
C			

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EMSL
CINNAMINSON, NJ
2013 SEP 12 A 10:49

Analysis Method: ☒ PLM ☐ Other Turnaround Time 24hr

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

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

Special Instructions: Stop analysis on first positive sample in each homogeneous set of samples unless otherwise noted. Do not layer samples unless indicated. ~~EPA 100 Point Count all samples of content <4%, positive stop on all point counts.~~ ~~Please perform TEM on Samples marked * which come out <1% Asbestos or Non-Asbestos by PLM~~

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

Samples [Rec'd][Sent by] [Paul Bateman || LD] Date: [7/12/13 || 9:00] Time: _____

Samples Received by: _____ Date: _____ Time: _____

Shipped To: ☒ EMSL State MA ☐ Other _____

Method of Shipment: ☒ Fed Ex ☐ Other _____

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SAMPLE LOG FOR ASBESTOS BULKS

Sheet __ of __

Project Name: Barnstable Public Schools Project No. 20121793. AIE

Building: Horace Mann Elementary School Project Manager: Dustin D

Sample ID	Sample Location	Material	Result (%)
7.R PB28A	cafe	Sheetrock	
B	Library		
C			
29 A		Joint Compound	
B	Same		
C.			
30 A		Yellow/tan Base coat mastic	
B	Same		
C			
31 A	Room 9	Composite window sill	
B			
C			
32A	Room 2	12 x 12" Beige floor/mastic tile	
B		which	
C			

RECEIVED EMSL CINNAMINSON, NJ 2013 SEP 12 A 10:49

Analysis Method: ☑ PLM ☐ Other Turnaround Time [redacted] 3 Day

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

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

Special Instructions: Stop analysis on first positive sample in each homogeneous set of samples unless otherwise noted. Do not layer samples unless indicated. ~~EPA 400 Point Count all samples of content <4% positive stop on all Point Counts.~~ Please perform TEM on Samples marked * which come out <1% AChM or Non-AChM

Samples collected by: Paul Bateman **Date:** 7/12/13. **Time:** _____

Samples [Rec'd][Sent by] [Paul BA] [LO] **Date:** [7/14/13] [9/10] **Time:** _____

Samples Received by: _____ **Date:** _____ **Time:** _____

Shipped To: ☑ EMSL State [redacted] ☐ Other _____

Method of Shipment: ☑ Fed Ex ☐ Other _____

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SAMPLE LOG FOR ASBESTOS BULKS

Sheet __ of __

Project Name: Burns Latte Public Schools Project No. 20121793. AIE

Building: Horace Mann Elementary School Project Manager: Dustin D

Sample ID	Sample Location	Material	Result (%)
7.h PB33A	Associated mastic	Room 2	9003F
B.	↓	↓	↓
C.	↓	↓	↓
34A.	ATHIC	Duct Cmbing	5002F
B.			

RECEIVED
EMSL
CINNAMINSON, NJ
2013 SEP 12 A 10:49

Analysis Method: ☑ PLM ☐ Other Turnaround Time 24hr.

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

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

Special Instructions: Stop analysis on first positive sample in each homogeneous set of samples unless otherwise noted. Do not layer samples unless indicated. ~~EPA 400 Point Count all samples of content <4%, positive stop on all Point Counts.~~ Please perform TEM/No On Samples marked * which come out <1% ACm or Non-ACm by PLM

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

Samples [Rec'd] [Sent by] [PLM BA II] Date: [7/ /13 II] Time: _____

Samples Received by: _____ Date: _____ Time: _____

Shipped To: ☑ EMSL State NJ ☐ Other _____

Method of Shipment: ☑ Fed Ex ☐ Other _____

RECEIVED
SEP 11 2013
By SL 0830

Appendix E

Newly Installed Materials Safety Data Sheets

To be Provided by LEA

Appendix F

Sample 6-Month Periodic Surveillance Form

FUSS & O'NEILL

Sample 6- Month Periodic Surveillance Form

Local Education Agency (LEA): Barnstable Public Schools

Facility Name: Barnstable Community Innovation 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	IA				
White/Gray Pipe Insulation	Concealed within Pipe Chases	IA				
9" x 9" Brown Streaked Floor Tile	Rear Stairwells from Gymnasium	G				
Black Mastic Associated with 9" x 9" Brown Streaked Floor Tile	Rear Stairwells from Gymnasium	G				
12" x 12" Brown/White Mottled Pattern Floor Tile	Classroom 2	G				
Black Mastic Associated with 12" x 12" Brown/White Mottled Pattern Floor Tile	Classroom 2	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

Preventive Measures

FUSS & O'NEILL

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 ACBM 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

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

Michael Flanagan
Director

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

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

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