

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

for
Barnstable-West Barnstable Elementary School
2463 West Main Street
West Barnstable, Massachusetts

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

Barnstable Public Schools
Barnstable, Massachusetts

August 2020



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



November 12, 2020

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

**RE: Three-Year AHERA Re-Inspection & Asbestos Management Plan Update
Barnstable-West Barnstable Elementary School
2463 West Main Street, West Barnstable, 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-West Barnstable Elementary School located at 2463 West Main Street in West Barnstable, Massachusetts (the "Site"). AHERA services were performed for Barnstable Public Schools (the "Client").

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

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

Sincerely,

Dustin A. Diedricksen
Associate / Department Manager

DD/rs

Enclosure

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1 Introduction

1.1 Background

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

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

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

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

1.2 Local Education Agency (LEA) Responsibilities

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

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

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

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

1.3 Key Personnel

A. Local Education Agency (LEA):

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

B. Designated Person:

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

C. Asbestos Consultant:

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

D. Asbestos Inspector:

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

E. Asbestos Management Planner:

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

2 Building Description

The West Barnstable Elementary School was constructed in the 1960s. The school is a one-story, concrete, brick, steel, and wood structure.

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-West Barnstable Elementary 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	Crawlspaces, Pipe Chases, & above Fixed Ceilings	1989 Initial AMP (Sample ID: 46-11-23, 3,5,12,13,16,17)	5-60% Chrysotile
White/Gray Pipe Insulation	Crawlspaces, Pipe Chases, & above Fixed Ceilings	1989 Initial AMP (Sample ID: 46-11-1, 2, 10, 14, 15)	20-35% Chrysotile
White Vibration Isolator	Crawlspaces (associated with Air Handler Units)	2017 AMP Update (Sample ID: 09A-NM-20171227)	30% Chrysotile
9" x 9" Black Streaked Floor Tile	Offices across from Main Offices, Bathroom near Custodial Area/Loading Dock, Kitchen Offices & Bathroom, Teachers' Room, Staff Work Room, Storage by Auditorium, & Gymnasium Storage	1989 Initial AMP (Sample ID: 46-11-23)	3% Chrysotile
Black Sink Undercoating	Classrooms 2 – 13	2014 AMP Update (Sample ID: 7-12-PB-70A)	8% 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
White Skim Coat Ceiling Plaster	Classrooms, Offices, Restrooms, Corridors, & Kitchen	2014 AMP Update (Sample ID:7-12-PB-65A-C)
Gray Rough Coat Ceiling Plaster	Classrooms, Offices, Restrooms, Corridors, & Kitchen	2014 AMP Update (Sample ID:7-12-PB-66A-C)
White Skim Coat Wall Plaster	Classrooms, Offices, Restrooms, Corridors, & Kitchen	2014 AMP Update (Sample ID:7-12-PB-67A-C)

Material	Location	Reference
Gray Rough Coat Wall Plaster	Classrooms, Offices, Restrooms, Corridors, & Kitchen	2014 AMP Update (Sample ID:7-12-PB-68A-C)
Brown Cove Base Glue	Cafeteria, Corridors, Classroom, & Offices	2014 AMP Update (Sample ID:7-12-PB-69A-B)
Gray Sheetrock	Corridors, Restrooms, & Portable Buildings	2014 AMP Update (Sample ID:7-12-PB-71A-C)
White Joint Compound	Corridors, Restrooms, & Portable Buildings	2014 AMP Update (Sample ID:7-12-PB-72A-C)
Yellow Carpet Glue	Portable Classrooms	2014 AMP Update (Sample ID:7-12-PB-73A-B)
Gray Composite Window Mudset	Classrooms, Offices, Cafeteria, Kitchen, Front Lobby, & Gymnasium	2014 AMP Update (Sample ID:7-12-PB-74A-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	Crawlspaces, Pipe Chases, & above Fixed Ceilings	275 EA	\$7,000
White/Gray Pipe Insulation	Crawlspaces, Pipe Chases, & above Fixed Ceilings	500 LF	\$10,000
White Vibration Isolator	Crawlspaces (associated with Air Handler Units)	5 EA	\$1,000
9" x 9" Black Streaked Floor Tile	Offices across from Main Offices & Bathroom near Custodial Area/Loading Dock; Kitchen Offices & Bathroom; Storage by Auditorium; & Gymnasium Storage	950 SF	\$4,300
Sink Undercoating	Classrooms 2 - 13	10 EA	\$1,250

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

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

**Table 4
Asbestos Training Cost Estimates**

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	\$200/Person/Year

Training Course	Estimated Cost
Annual Refresher Training	
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

Existing Records Checklist

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

School Building: Barnstable-West Barnstable Elementary 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)	No	Yes

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

Inspector (LEA Office): Robert Mallett

Date: August 26, 2020

Inspector (School): Robert Mallett

Date: August 26, 2020

Appendix B

Re-Inspection Form 1

School: Barnstable-West Barnstable Elementary School
 Address: 2463 West Main Street, West Barnstable, MA

Date(s) of Original Inspection: 1989
 Date(s) of Subsequent Re-Inspections: 2013, 2017, 2020

Homogeneous Material			Material Category	Friability	Assessment Category (1-7)	Recorded Locations	Response Actions Taken/Renovations/Other Comments
Sample Number	Asbestos Content	Material Description					
46-11-23, 3,5,12,13, 16,17	5-60% Chrysotile	Gray Mudded Pipe-Fitting Insulation	TSI	F	5	Crawlspaces, Pipe Chases, & above Fixed Ceilings	Extensive Abatement within Crawlspace – Summer 2018 Abatement Documented
46-11-1, 2, 10, 14, 15	20-35% Chrysotile	White/Gray Pipe Insulation	TSI	F	5	Crawlspaces, Pipe Chases, & above Fixed Ceilings	Extensive Abatement within Crawlspace – Summer 2018 Abatement Documented
09A-NM-20171227	30% Chrysotile	White Vibration Isolator	Misc.	NF	5	Crawlspace	
46-11-23	3% Chrysotile	9” x 9” Black Streaked Floor Tile	Misc.	NF	5	Offices across from Main Offices, Bathroom near Custodial Area/Loading Dock, Kitchen Offices & Bathroom, Storage by Auditorium, & Gymnasium Storage	Floor tile abated from Teacher’s Room & Staff Work Room –Summer 2018 Abatement Documented
7-12-PB-70A	8% Chrysotile	Black Sink Undercoating	Misc.	NF	5	Classrooms 2 - 13	

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-West Barnstable Elementary School

Date of Re-Inspection: August 26, 2020

Homogeneous Material: Gray Mudded Pipe-Fitting Insulation

Sample ID Number: 46-11-23, 3, 5, 12, 13, 16, 17

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
Crawlspaces, Pipe Chases, & above Fixed Ceilings	F	275 EA	5	ACBM with potential for damage	<p>No damaged, friable TSI or suspect debris was observed at the time of re-inspection at these locations</p> <p>Periodic cleaning is not recommended within concealed or restricted-access, crawlspace areas</p> <p>Maintain under O&M Program</p>	Ongoing
Were additional samples of this ACBM collected? No					Date of Management Planner Review: <u>November 12, 2020</u>	
Inspector's Name: <u>Robert Mallett</u> Inspector Signature: _____ Accreditation #/State: <u>AI900557/MA</u> Expiration Date: <u>06/01/2021</u>					Management Planner Name: <u>Dustin Diedricksen</u> Management Planner Signature: _____ Accreditation #/State: <u>AP900425/MA</u> Expiration Date: <u>04/05/2021</u>	
I, the LEA's Designated Person, have read and understood the recommendations made above: _____ Date: _____						

School: Barnstable-West Barnstable Elementary School

 Date of Re-Inspection: August 26, 2020

 Homogeneous Material: White/Gray Pipe Insulation

 Sample ID Number: 46-11-1, 2, 10, 14, 15

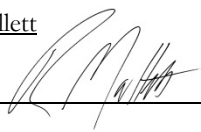

ACBM RE-INSPECTION FINDINGS					MANAGEMENT PLANNER RECOMMENDATIONS	
ACBM Location(s) by Assessment Category	Friability	Estimated Quantity	Assessment Category	Physical Description	Recommended Response Action(s)	Date Action Completed
Crawlspaces, Pipe Chases, & above Fixed Ceilings	F	500 LF	5	ACBM with potential for damage	No damaged, friable TSI or suspect debris was observed at the time of re-inspection at these locations Periodic cleaning is not recommended within concealed or restricted-access, crawlspace areas Maintain under O&M Program	Ongoing
Were additional samples of this ACBM collected? No					Date of Management Planner Review: <u>November 12, 2020</u>	
Inspector's Name: <u>Robert Mallett</u> Inspector Signature: _____ Accreditation #/State: <u>AI900557/MA</u> Expiration Date: <u>06/01/2021</u>					Management Planner Name: <u>Dustin Diedricksen</u> Management Planner Signature: _____ Accreditation #/State: <u>AP900425/MA</u> Expiration Date: <u>04/05/2021</u>	
I, the LEA's Designated Person, have read and understood the recommendations made above: _____ Date: _____						

School: Barnstable-West Barnstable Elementary School

 Date of Re-Inspection: August 26, 2020

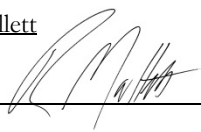
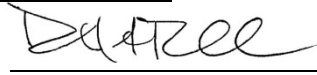
 Homogeneous Material: White Vibration Isolator

 Sample ID Number: 09A-NM-20171227

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
Crawlspaces (associated with Air Handling Units)	NF	5 EA	6	ACBM with potential for significant damage	Maintain under O&M Program	Ongoing
Were additional samples of this ACBM collected? No					Date of Management Planner Review: <u>November 12, 2020</u>	
Inspector's Name: <u>Robert Mallett</u> Inspector Signature: _____  Accreditation #/State: <u>AI900557/MA</u> Expiration Date: <u>06/01/2021</u>					Management Planner Name: <u>Dustin Diedricksen</u> Management Planner Signature: _____  Accreditation #/State: <u>AP900425/MA</u> Expiration Date: <u>04/05/2021</u>	
I, the LEA's Designated Person, have read and understood the recommendations made above: _____ Date: _____						

School: Barnstable-West Barnstable Elementary School
 Homogeneous Material: 9" x 9" Black Streaked Floor Tile

 Date of Re-Inspection: August 26, 2020
 Sample ID Number: 46-11-23


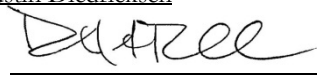
ACBM RE-INSPECTION FINDINGS					MANAGEMENT PLANNER RECOMMENDATIONS	
ACBM Location(s) by Assessment Category	Friability	Estimated Quantity	Assessment Category	Physical Description	Recommended Response Action(s)	Date Action Completed
Offices across from Main Offices & Bathroom near Custodial Area/Loading Dock; Kitchen Offices & Bathroom; Storage by Auditorium; & Gymnasium Storage	NF	950 SF	5	ACBM with potential for damage	Maintain under O&M Program	Ongoing
Were additional samples of this ACBM collected? No					Date of Management Planner Review: <u>November 12, 2020</u>	
Inspector's Name: <u>Robert Mallett</u> Inspector Signature:  Accreditation #/State: <u>AI900557/MA</u> Expiration Date: <u>06/01/2021</u>					Management Planner Name: <u>Dustin Diedricksen</u> Management Planner Signature:  Accreditation #/State: <u>AP900425/MA</u> Expiration Date: <u>04/05/2021</u>	
I, the LEA's Designated Person, have read and understood the recommendations made above: _____ Date: _____						

School: Barnstable-West Barnstable Elementary School

 Date of Re-Inspection: August 26, 2020

 Homogeneous Material: Black Sink Undercoating

 Sample ID Number: 7-12-PB-70A

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
Classrooms 2 - 13	NF	10 EA	5	ACBM with potential for damage	Maintain under O&M Program	Ongoing
Were additional samples of this ACBM collected? No					Date of Management Planner Review: <u>November 12, 2020</u>	
Inspector's Name: <u>Robert Mallett</u> Inspector Signature: _____  Accreditation #/State: <u>AI900557/MA</u> Expiration Date: <u>06/01/2021</u>					Management Planner Name: <u>Dustin Diedricksen</u> Management Planner Signature: _____  Accreditation #/State: <u>AP900425/MA</u> Expiration Date: <u>04/05/2021</u>	
I, the LEA's Designated Person, have read and understood the recommendations made above: _____ Date: _____						

Appendix D

Previously Sampled Materials Laboratory Reports

**EMSL Analytical, Inc.**

200 Route 130 North, Cinnaminson, NJ 08077

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

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

EMSL Order: 041324591

CustomerID: ENVI54

CustomerPO:

ProjectID:

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

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

Project: 20121793.A1E / Barnstable Public Schools - West Barnstable Elementary School

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
7-12-PB-65A 041324591-0001	Rear corridor outside café & gym - ceiling plaster skim coat	White Fibrous Homogeneous	65% Cellulose	35% Non-fibrous (other)	None Detected
7-12-PB-65B 041324591-0002	Class 6 - ceiling plaster skim coat	White Fibrous Homogeneous	75% Cellulose	25% Non-fibrous (other)	None Detected
7-12-PB-65C 041324591-0003	Class 4 - ceiling plaster skim coat	White Fibrous Homogeneous	80% Cellulose	20% Non-fibrous (other)	None Detected
7-12-PB-66A 041324591-0004	Rear corridor outside café & gym - ceiling plaster rough coat	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
Sample contains Vermiculite.					
7-12-PB-66B 041324591-0005	Class 6 - ceiling plaster rough coat	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
Sample contains vermiculite.					
7-12-PB-66C 041324591-0006	Class 4 - ceiling plaster rough coat	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
Sample contains vermiculite					
7-12-PB-67A 041324591-0007	Kitchen storage areas - wall plaster skim coat	White Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected

Analyst(s)

Brittany Brown (12)

Patrick Carr (9)

Justine Schenck (6)

Stephen Siegel, CIH, Laboratory Manager
or other approved signatory

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

Initial report from 09/12/2013 14:48:38

**EMSL Analytical, Inc.**

200 Route 130 North, Cinnaminson, NJ 08077

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

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

EMSL Order: 041324591

CustomerID: ENVI54

CustomerPO:

ProjectID:

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

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

Project: 20121793.A1E / Barnstable Public Schools - West Barnstable Elementary School

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
7-12-PB-67B 041324591-0008	Health office - wall plaster skim coat	White Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
7-12-PB-67C 041324591-0009	Teachers room - wall plaster skim coat	White Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
7-12-PB-68A 041324591-0010	Kitchen storage areas - wall plaster rough coat	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
Vermiculite and Soil are known problem matrices and negative results cannot be guaranteed. Additional analysis such as CARB 435 milling prep or ASTM Draft Soil Sieving is recommended for proper quantification of asbestos in vermiculite and soil.					
7-12-PB-68B 041324591-0011	Health office - wall plaster rough coat	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
Vermiculite and Soil are known problem matrices and negative results cannot be guaranteed. Additional analysis such as CARB 435 milling prep or ASTM Draft Soil Sieving is recommended for proper quantification of asbestos in vermiculite and soil.					
7-12-PB-68C 041324591-0012	Teachers room - wall plaster rough coat	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
Vermiculite and Soil are known problem matrices and negative results cannot be guaranteed. Additional analysis such as CARB 435 milling prep or ASTM Draft Soil Sieving is recommended for proper quantification of asbestos in vermiculite and soil.					
7-12-PB-69A 041324591-0013	Teacher rooms - 6" brown basecove glue	Brown Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
7-12-PB-69B 041324591-0014	- 6" brown basecove glue	Brown Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected

Analyst(s)

Brittany Brown (12)

Patrick Carr (9)

Justine Schenck (6)

Stephen Siegel, CIH, Laboratory Manager
or other approved signatory

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

Initial report from 09/12/2013 14:48:38

**EMSL Analytical, Inc.**

200 Route 130 North, Cinnaminson, NJ 08077

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

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

EMSL Order: 041324591

CustomerID: ENVI54

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ProjectID:

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

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

Project: 20121793.A1E / Barnstable Public Schools - West Barnstable Elementary School

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
7-12-PB-70A 041324591-0015	Classroom #7 - sink undercoating	Black Non-Fibrous Homogeneous		92% Non-fibrous (other)	8% Chrysotile
7-12-PB-70B 041324591-0016	Classroom #6 - sink undercoating				Stop Positive (Not Analyzed)
7-12-PB-71A 041324591-0017	Restrooms by gym/ café - sheetrock	Gray Fibrous Homogeneous	15% Cellulose	85% Non-fibrous (other)	None Detected
7-12-PB-71B 041324591-0018	Restrooms by gym/ café - sheetrock	Gray Fibrous Homogeneous	15% Cellulose	85% Non-fibrous (other)	None Detected
7-12-PB-71C 041324591-0019	Custodians office - sheetrock	Brown/Gray Fibrous Homogeneous	15% Cellulose	85% Non-fibrous (other)	None Detected
7-12-PB-72A 041324591-0020	Restrooms by gym/ café - joint compound	White Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
7-12-PB-72B 041324591-0021	Restrooms by gym/ café - joint compound	White Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
7-12-PB-72C 041324591-0022	Custodians office - joint compound	White Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
7-12-PB-73A 041324591-0023	Custodians office - carpet glue	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected

Analyst(s)

Brittany Brown (12)

Patrick Carr (9)

Justine Schenck (6)

Stephen Siegel, CIH, Laboratory Manager
or other approved signatory

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

Initial report from 09/12/2013 14:48:38

**EMSL Analytical, Inc.**

200 Route 130 North, Cinnaminson, NJ 08077

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

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

EMSL Order: 041324591

CustomerID: ENVI54

CustomerPO:

ProjectID:

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

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

Project: 20121793.A1E / Barnstable Public Schools - West Barnstable Elementary School

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
7-12-PB-73B 041324591-0024	P #1 - carpet glue	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
7-12-PB-74A 041324591-0025	Back room - composite window mudset	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
7-12-PB-74B 041324591-0026	Back room - composite window mudset	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
7-12-PB-75A 041324591-0027	Portable - 1x1 floor tile under plywood and 1x1 new FT speckled	Beige Fibrous Homogeneous		97% Non-fibrous (other)	3% Chrysotile
7-12-PB-75B 041324591-0028	Portable - 1x1 floor tile under plywood and 1x1 new FT speckled				Stop Positive (Not Analyzed)
7-12-PB-76A 041324591-0029	Portable - associated mastic	Black Fibrous Homogeneous		96% Non-fibrous (other)	4% Chrysotile

Analyst(s)

Brittany Brown (12)

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Stephen Siegel, CIH, Laboratory Manager
or other approved signatory

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

Initial report from 09/12/2013 14:48:38



041324591

29

SAMPLE LOG FOR ASBESTOS BULKS

Sheet 1 of 3

Project Name: Burnsville Public Schools
Building: West Burnsville Elementary School

Project No. 20121793-AIE
Project Manager: Dustin D

Sample ID	Sample Location	Material	Result (%)
7-12 PB 65 A	Rear Corridor outside entry gym	Ceiling Plaster Skin Cont	
B	Class 6		
C	14		
66A		Ceiling Plaster - rough Cont	
B			
C			
67A	Kitchen Storage Area	Wall Plaster Skin Cont	
B	Work area		
C	Teacher room		
68A	} SAME	Wall Plaster - rough Cont	
B			
C			
69A	Teacher room	6" Brown Base low yld 94% Brown	
B			
C			

RECEIVED
EMSL
CINNAMINSON, NJ
2013 SEP 12 A 10:40

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.

NO POINT COUNTING

Special Instructions: Stop analysis on first positive sample in each homogeneous set of samples unless otherwise noted. Do not layer samples unless indicated.

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

Samples [Rec'd][Sent by] Paul Bateman DDLD Date: 7/12/13 Time: 9/4/13 9/10/13 PM

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

Shipped To: EMSL State MA Other _____

Method of Shipment: Ex Other Drop Off

drop box

RECEIVED
SEP 11 2013
By AK 0830



001324591

SAMPLE LOG FOR ASBESTOS BULKS

Sheet 2 of 3

Project Name: Burnsville Public Schools

Project No. 20121793-AIE

Building: West Burnsville Elementary School

Project Manager: Dustin D

Sample ID	Sample Location	Material	Result (%)
7. PB 70A	Class room # 7	Link Undercoating	RECEIVED EMSL CINNANMINSON, NJ 2013 SEP 12 A 10:40
B	6		

71A	Restrooms by gym/calc	Sheetrock	
B			
C	Custodian's office		
72A	JAMEAL 71A-6	Joint Compound	
B			
C			
73A	Custodian's office	Carpet glue	4/1000 SF
B	Public #1		
C	#2		
74A	Bedroom	Composite Window Mudset	
B			
C			

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.

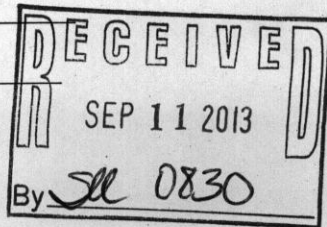
Samples collected by: Paul Bateman Date: 7/12/13 Time: _____

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

Samples Received by: _____ Date: _____ Time: _____

Shipped To: EMSL State MA Other _____

Method of Shipment: Fed Ex Other DROP OFF





041324591

SAMPLE LOG FOR ASBESTOS BULKES

Sheet 3 of 3

Project Name: Barnstable Public Schools

Project No. 20121793-AIE

Building: West Barnstable Elementary School

Project Manager: Dustin D

Sample ID	Sample Location	Material	Result (%)
7-17 PB 75A	Portable	1 1/2" f/om tile	100 SF
B	↓	under plywood and 1 1/2" min FT speckles	
76A		Associated mortar	
77A			

RECEIVED
EMSL
CINNAMINSON, NJ
2013 SEP 12 AM 10:40

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 < 40%

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

Samples [Rec'd][Sent by] PLM BA LD Date: 7/1/13 9/10/13 Time: PM

Samples Received by: _____ Date: _____ Time: _____

Shipped To: EMSL State MA Other _____

Method of Shipment: Fed Ex Other Drop OFF

RECEIVED
SEP 11 2013
By 300 0830



EMSL Analytical, Inc.

5 Constitution Way, Unit A Woburn, MA 01801

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

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

EMSL Order: 131705834

Customer ID: ENVI54

Customer PO: 20150090.B1E.10

Project ID:

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

Phone: (617) 778-3750

Fax: (888) 838-1160

Received Date: 12/28/2017 9:15 AM

Analysis Date: 01/03/2018

Collected Date: 12/27/2017

Project: 20150090.B1E Task 10 / Barnstable-West Barnstable Elementary School - Roof Renovation / BWB / 2463 Main St. West Barnstable, MA

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
01A-NM-20171227 <small>131705834-0001</small>	Roof - Black & Grey Asphaltic Shingle	Gray/Black Fibrous Homogeneous	10% Glass	90% Non-fibrous (Other)	None Detected
01B-NM-20171227 <small>131705834-0002</small>	Roof - Black & Grey Asphaltic Shingle	Black Fibrous Homogeneous	10% Glass	90% Non-fibrous (Other)	None Detected
02A-NM-20171227 <small>131705834-0003</small>	Roof - Black Roofing Paper	Black Fibrous Homogeneous	60% Cellulose	40% Non-fibrous (Other)	None Detected
02B-NM-20171227 <small>131705834-0004</small>	Roof - Black Roofing Paper	Black Fibrous Homogeneous	10% Cellulose	90% Non-fibrous (Other)	None Detected
03A-NM-20171227 <small>131705834-0005</small>	Roof - Black Shingle Adhesive	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
03B-NM-20171227 <small>131705834-0006</small>	Roof - Black Shingle Adhesive	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
04A-NM-20171227 <small>131705834-0007</small>	Roof - Black Flashing Sealant	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
04B-NM-20171227 <small>131705834-0008</small>	Roof - Black Flashing Sealant	Black Non-Fibrous Homogeneous	10% Cellulose	87% Non-fibrous (Other)	3% Chrysotile
05A-NM-20171227 <small>131705834-0009</small>	Roof Duct Supply - Black Penetration Sealant	Black Fibrous Homogeneous	30% Cellulose	70% Non-fibrous (Other)	None Detected
05B-NM-20171227 <small>131705834-0010</small>	Roof Duct Supply - Black Penetration Sealant	Black Fibrous Homogeneous	15% Cellulose	85% Non-fibrous (Other)	None Detected
06A-NM-20171227 <small>131705834-0011</small>	Roof Exhaust Pipes - Black Pipe Sealant	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
06B-NM-20171227 <small>131705834-0012</small>	Roof Exhaust Pipes - Black Pipe Sealant	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
07A-NM-20171227 <small>131705834-0013</small>	Roof - Black Moisture Barrier Paper Underneath Roof Paper	Black Fibrous Homogeneous	5% Glass	95% Non-fibrous (Other)	None Detected
07B-NM-20171227 <small>131705834-0014</small>	Roof - Black Moisture Barrier Paper Underneath Roof Paper	Black Fibrous Homogeneous	10% Glass	90% Non-fibrous (Other)	None Detected
08A-NM-20171227 <small>131705834-0015</small>	Boiler Room - White / Tan Boiler Insulation Wrap	White Fibrous Homogeneous	80% Glass	20% Non-fibrous (Other)	None Detected

Initial report from: 01/03/2018 10:21:17



EMSL Analytical, Inc.

5 Constitution Way, Unit A Woburn, MA 01801

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

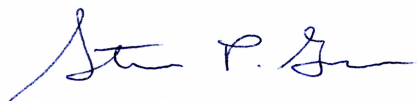
<http://www.EMSL.com> / bostonlab@emsl.com

EMSL Order: 131705834
Customer ID: ENVI54
Customer PO: 20150090.B1E.10
Project ID:

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
08B-NM-20171227 <small>131705834-0016</small>	Boiler Room - White / Tan Boiler Insulation Wrap	White Fibrous Homogeneous	80% Glass	20% Non-fibrous (Other)	None Detected
08C-NM-20171227 <small>131705834-0017</small>	Boiler Room - White / Tan Boiler Insulation Wrap	White Fibrous Homogeneous	80% Glass	20% Non-fibrous (Other)	None Detected
09A-NM-20171227 <small>131705834-0018</small>	Basement Mechanical / Crawl Space - White Duct Vibration Dampener	White Fibrous Homogeneous	30% Cellulose	40% Non-fibrous (Other)	30% Chrysotile
09B-NM-20171227 <small>131705834-0019</small>	Basement Mechanical / Crawl Space - White Duct Vibration Dampener				Positive Stop (Not Analyzed)

Analyst(s) _____
 Elizabeth Stutts (10)
 Michael Mink (8)


 Steve Grise, Laboratory Manager
 or Other Approved Signatory

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 Samples analyzed by EMSL Analytical, Inc. Woburn, MA NVLAP Lab Code 101147-0, CT PH-0315, MA AA000188, RI AAL-139, VT AL998919, Maine Bulk Asbestos LB-0039

Initial report from: 01/03/2018 10:21:17

108 Myrtle Street, Suite 502, Quincy, MA 02171

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

Asbestos Bulk Sample Chain-of-Custody Form

Sheet ___ of ___

Project Name: Barnstable-West Barnstable Elementary School – Roof Renovation **Project No.:** 20150090.B1E **Task:** 10

Building Name/Number: BWB **Project Manager:** Dustin Diedricksen

Site Address: 2463 Main Street, West Barnstable, MA **Total # of Samples:** 19

Sample ID (#-Initials-Date)	Material Type (Size, Color, Description, Material)	Sample Location	Comments/Quantities
01A-NM-20171227	Black & Grey Asphaltic Shingle	Roof	
01B-NM-20171227	Black & Grey Asphaltic Shingle	Roof	
02A-NM-20171227	Black Roofing Paper	Roof	
02B-NM-20171227	Black Roofing Paper	Roof	
03A-NM-20171227	Black Shingle Adhesive	Roof	
03B-NM-20171227	Black Shingle Adhesive	Roof	
04A-NM-20171227	Black Flashing Sealant	Roof	
04B-NM-20171227	Black Flashing Sealant	Roof	
05A-NM-20171227	Black Penetration Sealant	Roof Duct Supply	
05B-NM-20171227	Black Penetration Sealant	Roof Duct Supply	
06A-NM-20171227	Black Pipe Sealant	Roof Exhaust Pipes	
06B-NM-20171227	Black Pipe Sealant	Roof Exhaust Pipes	
07A-NM-20171227	Black Moisture Barrier Paper	Roof	Underneath roof paper
07B-NM-20171227	Black Moisture Barrier Paper	Roof	
08A-NM-20171227	White/Tan Boiler Insulation Wrap	Boiler Room	
08B-NM-20171227	White/Tan Boiler Insulation Wrap	Boiler Room	
08C-NM-20171227	White/Tan Boiler Insulation Wrap	Boiler Room	
09A-NM-20171227	White Duct Vibration Dampener	Basement Mechanical/Crawl Space	
09B-NM-20171227	White Duct Vibration Dampener	Basement Mechanical/Crawl Space	

Analysis Method: PLM TEM Other _____ **Turnaround Time:** 72 Hour

Please call EnviroScience at (617) 282-4675 if analyses will not be completed for requested turnaround time listed above.

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 group samples are ALL negative by PLM, analyze the sample denoted with a star (★) by

TEM NOB on a 72 Hour turnaround time. Analyze a MAXIMUM of 3 samples by TEM in noted order.

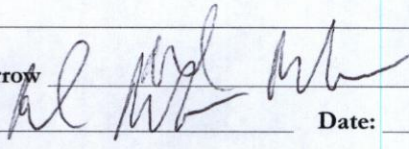
EMSL Fx
7953
5357
0619

RECEIVED
DEC 28 2017
By [Signature] 9:15

108 Myrtle Street, Suite 502, Quincy, MA 02171

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

Samples Collected by: Neal McMorrow



Date: 12/27/2017

Samples Sent by: Neal McMorrow

Date: 12/27/2017

Time: PM

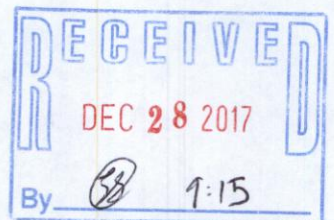
Shipped To: EMSL

Other

Method of Shipment: Fed Ex

Lab Drop Off

Other



Appendix E

Newly Installed Materials Safety Data Sheets

To be Provided by LEA

Appendix F

Sample 6-Month Periodic Surveillance Form



Sample 6- Month Periodic Surveillance Form

Local Education Agency (LEA): Barnstable Public Schools
 Facility Name: Barnstable-West Barnstable Elementary 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	Crawlspaces, Pipe Chases, & above Fixed Ceilings	G				
White/Gray Pipe Insulation	Crawlspaces, Pipe Chases, & above Fixed Ceilings	G				
White Vibration Isolator	Crawlspace	G				
9" x 9" Black Streaked Floor Tile	Offices across from Main Offices, Bathroom near Custodial Area/Loading Dock, Kitchen Offices & Bathroom, Storage by Auditorium, & Gymnasium Storage	G				
Black Sink Undercoating	Classrooms 2 - 13	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

Preventive Measures for Various Asbestos-Containing Building Materials

A. Surfacing Materials

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

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

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

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

B. Thermal System Insulation (TSI)

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

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

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

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

C. Miscellaneous Materials

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

1. Vinyl Asbestos Floor Tiles (VAT)

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

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

2. Wallboard and Joint Compound Assembly

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

3. Ceiling Tile and Glue Daubs

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

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

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

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

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

Appendix H

Fuss & O'Neill Asbestos Accreditations & Certifications



Asbestos Inspector

ROBERT C. MALLET

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