

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

for
Centerville Elementary School
658 Bay Lane
Centerville, 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
Centerville Elementary School
658 Bay Lane, Centerville, 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 Centerville 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

108 Myrtle Street
Suite 502
Quincy, MA
02171
t 617.282.4675
800.286.2469
f 617.481.5885

www.fando.com

California
Connecticut
Maine
Massachusetts
New Hampshire
Rhode Island
Vermont

Table of Contents

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

| | | |
|----------|---|-----------|
| 1 | Introduction | 1 |
| 1.1 | Background | 1 |
| 1.2 | Local Education Agency (LEA) Responsibilities | 1 |
| 1.3 | Key Personnel..... | 2 |
| 2 | Building Description | 3 |
| 3 | Three Year Re-Inspection..... | 3 |
| 3.1 | Re-Inspection Procedures | 3 |
| 4 | Re-Inspection Report..... | 4 |
| 4.1 | Review of Existing Records | 4 |
| 4.2 | Re-Inspection Summary..... | 4 |
| 4.3 | Newly Identified or Re-sampled ACBM Materials | 7 |
| 4.4 | Physical Assessment of ACBM | 7 |
| 5 | Management Plan Update | 8 |
| 5.1 | Recommended Response Actions..... | 8 |
| 5.2 | Periodic Surveillance | 9 |
| 5.3 | Preventive Measures..... | 10 |
| 5.4 | Abatement (Removal) Cost Estimates | 10 |
| 6 | EPA Accreditation Requirements | 11 |

Appendices

End of Report

| | |
|------------|---|
| APPENDIX A | EXISTING RECORDS CHECKLIST |
| APPENDIX B | RE-INSPECTION FORM 1 |
| APPENDIX C | RE-INSPECTION FORM 2 |
| APPENDIX D | PREVIOUSLY SAMPLED MATERIALS LABORATORY REPORTS |
| APPENDIX E | NEWLY INSTALLED MATERIALS SAFETY DATA SHEETS |
| APPENDIX F | SAMPLE 6-MONTH PERIODIC SURVEILLANCE FORM |
| APPENDIX G | PREVENTIVE MEASURES |
| APPENDIX H | FUSS & O'NEILL ASBESTOS ACCREDITATIONS & CERTIFICATIONS |

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 Centerville 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 Centerville 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 | Guidance Office, Restrooms, Offices, Classrooms (above ceilings), Kitchen Storage, Custodian's Room, Pipe Chases, & Crawlspace | 2013 Initial AMP (Sample ID: 7-12-PB-46A) | 3% Chrysotile |
| White/Gray Pipe Insulation | Crawlspace, Pipe Chases, & Kitchen Storage Room | 2013 Initial AMP (Sample ID: 7-12-PB-60A, 8-21-PB-03A) | 10% Chrysotile, 18% Amosite |
| 9" x 9" Tan Streaked Floor Tile | Guidance Office underneath Carpet, Storage Room off Kitchen, & 2 nd Floor Storage Room (by Girls' Restroom); Classrooms: 20-25 | 2013 Initial AMP (Sample ID: 7-12-PB-50A) | 5% Chrysotile |
| Gray Interior Window Glazing Compound | Kitchen, Cafeteria, Gymnasium, Restrooms, Offices, Staff Lounge, Guidance Office, Library, & Stairwells; Classrooms: 1, 2, 4, 6, 8, 11, 12, & 14-27 | 2013 Initial AMP (Sample ID: 7-12-PB-57A) | 2% Chrysotile |
| Black Sink Undercoating | Restrooms & Health Office; Classrooms: 1-6, 8, 11, 12, & 14-27 | 2013 Initial AMP (Sample ID: 7-12-PB-58A) | 2% Chrysotile |
| Gray Fiber-Reinforced Cement Panel | Classroom Door Panels, Hallway Door Panels, Curtainwalls, & Exterior Soffits | 2018 Supplemental Sampling (Sample ID: 06A & 06B-RCM-0117) | 10% 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 |
|--|--|--|
| 12" x 12" Yellow Wall Tile | Cafeteria | 2013 Initial AMP (Sample ID: 7-12-PB-45A-B) |
| 2' x 4' Gray Suspended Ceiling Tile | Guidance Office, Offices, Corridors, Restrooms, Library, & Hallways; Classrooms: 1, 2, 3, 4, 5, 6, 8, 11, 12, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, & 27 | 2013 Initial AMP (Sample ID: 7-12-PB-47A-B) |
| Brown Residual Cove Base Glue | Guidance Office, Offices, & Library; Classrooms: 1, 2, 3, 4, 5, 6, 8, 11, 12, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, & 28 | 2013 Initial AMP (Sample ID: 7-12-PB-48A-B) |
| Yellow Carpet Glue | Guidance Office & Main Office | 2013 Initial AMP (Sample ID: 7-12-PB-49A-B) |
| Black Mastic Associated with 9" x 9" Tan Streaked Floor Tile | Guidance Office underneath Carpet, Storage Room off Kitchen, & 2 nd Floor Storage Room (By Girls' Restroom); Classrooms: 17, 20, 21, 22, 23, 24, & 25 | 2013 Initial AMP (Sample ID: 7-12-PB-51A-B) |
| 12" x 12" White/Tan Mottled Floor Tile | Gym Stage & Corridors, Offices, & Staff Room; Classrooms: 1, 2, 3, 4, 5, 6, 7, 11, 12, 15, 16, 18, 19, 26 & 27 | 2013 Initial AMP (Sample ID: 7-12-PB-52A-B) |
| Yellow Mastic Associated with 12" x 12" White/Tan Mottled Floor Tile | Gym Stage & Corridors, Offices, & Staff Room; Classrooms: 1, 2, 3, 4, 5, 6, 7, 11, 12, 15, 16, 18, 19, 26 & 27 | 2013 Initial AMP (Sample ID: 7-12-PB-53A-B) |
| Gray Sheetrock | Staff Lounge, Offices, Staff Room, & Library; Classrooms: 1, 2, 3, 4, 5, 6, 8, 11, 12, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, & 27 | 2013 Initial AMP (Sample ID: 7-12-PB-54A-B) |
| White Joint Compound Associated with Sheetrock | Staff Lounge, Offices, Staff Room, & Library; Classrooms: 1, 2, 3, 4, 5, 6, 8, 11, 12, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, & 27 | 2013 Initial AMP (Sample ID: 7-12-PB-55A-B) |
| Gray Interior Window Caulking Compound | Kitchen, Cafeteria, Gymnasium, Restrooms, Offices, Staff Lounge, Guidance Office, Library, & Stairwells; Classrooms: 1, 2, 4, 6, 8, 11, 12, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, & 27 | 2013 Initial AMP (Sample ID: 7-12-PB-56A-B) |

| Material | Location | Reference |
|---|--|--|
| Brown Glue Daubs Associated with 1' x 1' Ceiling Tile | Cafeteria, Lobby, Offices, Loading Dock, & Restrooms; Classrooms: 1, 2, 3, 4, 5, 6, 8, 11, 12, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, & 27 | 2013 Initial AMP (Sample ID: 7-12-PB-59A-B) |
| Gray Tank Insulation | Boiler Room | 2013 Initial AMP (Sample ID: 7-12-PB-61A-C) |
| Gray/Red Boiler Breeching Insulation | Boiler Room | 2013 Initial AMP (Sample ID: 7-12-PB-62A-C) |
| White Wall & Ceiling Plaster-Skim Coat | Custodian's Office | 2013 Initial AMP (Sample ID: 7-12-PB-63A-C) |
| Gray Wall & Ceiling Plaster-Rough (Base) Coat | Custodian's Office | 2013 Initial AMP (Sample ID: 7-12-PB-64A-C) |

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 | Guidance Office, Restrooms, Offices, Classrooms (above ceilings), Kitchen Storage, Custodian's Room, Pipe Chases, & Crawlspace | 75 EA | \$3,000 |
| White/Gray Pipe Insulation | Crawlspace, Pipe Chases, & Kitchen Storage Room | 250 LF | \$7,000 |
| 9" x 9" Tan Streaked Floor Tile | Guidance Office underneath Carpet, Storage Room off Kitchen, & 2 nd Floor Storage Room (by Girls' Restroom); Classrooms: 20-25 | 8,000 SF | \$27,000 |
| Gray Interior Window Glazing Compound | Kitchen, Cafeteria, Gymnasium, Restrooms, Offices, Staff Lounge, Guidance Office, Library, & Stairwells; Classrooms: 1, 2, 4, 6, 8, 11, 12, & 14-27 | 8,000 LF | \$40,000 |
| Black Sink Undercoating | Restrooms & Health Office; Classrooms: 1-6, 8, 11, 12, & 14-27 | 25 EA | \$3,750 |
| Gray Fiber-Reinforced Cement Panel | Classroom Door Panels, Hallway Door Panels, Curtainwalls, & Exterior Soffits | 1,000 SF | \$20,000 |

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 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

Existing Records Checklist

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

School Building: Centerville 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: Centerville Elementary School
 Address: 658 Bay Lane, Centerville, 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 | | | | | |
| 7-12-PB-46A | 3% Chrysotile | Gray Mudded Pipe-Fitting Insulation | TSI | F | 5 | Classrooms (above ceilings), Pipe Chases, & Crawlspace | Damaged insulation observed at crawlspaces in 2017 was abated in 2018 & abatement documented |
| 7-12-PB-46A | 3% Chrysotile | Gray Mudded Pipe-Fitting Insulation | TSI | F | 6 | Guidance Office, Restrooms, Offices, Kitchen Storage, & Custodian's Room | |
| 7-12-PB-60A | 10% Chrysotile | White/Gray Pipe Insulation | TSI | F | 5 | Crawlspaces & Pipe Chases, | Damaged insulation observed at crawlspaces in 2017 was abated in 2018 & abatement documented |
| 7-12-PB-60A | 10% Chrysotile | White/Gray Pipe Insulation | TSI | F | 6 | Kitchen Storage Room | |
| 7-12-PB-50A | 5% Chrysotile | 9" x 9" Tan Streaked Floor Tile | Misc. | NF | 5 | Guidance Office underneath Carpet, Storage Room off Kitchen, & 2 nd Floor Storage Room (by Girls' Restroom); Classrooms: 20-25 | |
| 7-12-PB-57A | 2% Chrysotile | Gray Interior Window Glazing Compound | Misc. | NF | 5 | Kitchen, Cafeteria, Gymnasium, Restrooms, Offices, Staff Lounge, Guidance Office, Library, & Stairwells; Classrooms: 1, 2, 4, 6, 8, 11, 12, & 14-27 | |
| 7-12-PB-58A | 2% Chrysotile | Black Sink Undercoating | Misc. | NF | 5 | Restrooms & Health Office; Classrooms: 1-6, 8, 11, 12, & 14-27 | |

School: Centerville Elementary School
 Address: 658 Bay Lane, Centerville, 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 | | | | | |
| 06A-RCM-0117 | 10% Chrysotile | Gray Fiber-Reinforced Cement Panel | Misc. | NF | 6 | Classroom Door Panels, Hallway Door Panels, Curtainwalls, & Exterior Soffits | |

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: Centerville Elementary School

Date of Re-Inspection: August 26, 2020

Homogeneous Material: Gray Mudded Pipe-Fitting Insulation

Sample ID Number: 7-12-PB-46A

| 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 (above ceilings), Pipe Chases, & Crawlspace | F | 65 EA | 5 | ACBM with potential for damage | Periodic cleaning is not recommended within crawlspace (with dirt floors) & concealed/inaccessible locations Maintain under O&M Program | Ongoing |
| Were additional samples of this ACBM collected? No | | | | | Date of Management Planner Review: <u>November 12, 2020</u> | |
| Inspector's Name: <u>Robert Mallett</u> Inspector Signature: _____ Accreditation #/State: <u>AI900557/MA</u> Expiration Date: <u>06/01/2021</u> | | | | | Management Planner Name: <u>Dustin Diedricksen</u> Management Planner Signature: _____ Accreditation #/State: <u>AP900425/MA</u> Expiration Date: <u>04/05/2021</u> | |
| I, the LEA's Designated Person, have read and understood the recommendations made above: _____ Date: _____ | | | | | | |



School: Centerville Elementary School

Date of Re-Inspection: August 26, 2020

Homogeneous Material: Gray Mudded Pipe-Fitting Insulation

Sample ID Number: 7-12-PB-46A

| 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 |
| Guidance Office, Restrooms, Offices, Kitchen Storage, & Custodian's Room | F | 10 EA | 6 | ACBM with potential for significant damage | It is recommended that periodic cleaning shall be performed at least semiannually at these locations. All cleaning must be performed by a person who is at least qualified as an Asbestos-Associated Project Worker and HEPA-vacuuming and wet-cleaning methods are required. Maintain under O&M Program | Ongoing |
| Were additional samples of this ACBM collected? No | | | | | Date of Management Planner Review: <u>November 12, 2020</u> | |
| Inspector's Name: <u>Robert Mallett</u> Inspector Signature: _____ Accreditation #/State: <u>AI900557/MA</u> Expiration Date: <u>06/01/2021</u> | | | | | Management Planner Name: <u>Dustin Diedricksen</u> Management Planner Signature: _____ Accreditation #/State: <u>AP900425/MA</u> Expiration Date: <u>04/05/2021</u> | |
| I, the LEA's Designated Person, have read and understood the recommendations made above: _____ Date: _____ | | | | | | |

School: Centerville Elementary School

 Date of Re-Inspection: August 26, 2020

 Homogeneous Material: White/Gray Pipe Insulation

 Sample ID Number: 7-12-PB-60A; 8-21-PB-03A



| 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 |
| Main Crawlspace, Small Crawlspace, & Pipe Chases | F | 1,000 LF | 5 | ACBM with potential for damage | Periodic cleaning is not recommended within crawlspaces (with dirt floors) & concealed/inaccessible locations Maintain under O&M Program | Ongoing |
| Were additional samples of this ACBM collected? No | | | | | Date of Management Planner Review: <u>November 12, 2020</u> | |
| Inspector's Name: <u>Robert Mallett</u> Inspector Signature: _____ Accreditation #/State: <u>AI900557/MA</u> Expiration Date: <u>06/01/2021</u> | | | | | Management Planner Name: <u>Dustin Diedricksen</u> Management Planner Signature: _____ Accreditation #/State: <u>AP900425/MA</u> Expiration Date: <u>04/05/2021</u> | |
| I, the LEA's Designated Person, have read and understood the recommendations made above: _____ Date: _____ | | | | | | |

School: Centerville Elementary School

 Date of Re-Inspection: August 26, 2020

 Homogeneous Material: White/Gray Pipe Insulation

 Sample ID Number: 7-12-PB-60A; 8-21-PB-03A



| 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 |
| Kitchen Storage Room | F | 25 LF | 6 | ACBM with potential for significant damage | <p>No damaged, friable TSI or suspect debris was observed at the time of inspection at this location. It is recommended that periodic cleaning shall be performed at least semiannually at this location. All cleaning must be performed by a person who is at least qualified as an Asbestos-Associated Project Worker and HEPA-vacuuming and wet-cleaning methods are required.</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: Centerville Elementary School

 Date of Re-Inspection: August 26, 2020

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

 Sample ID Number: 7-12-PB-50A

| 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 |
| Guidance Office underneath Carpet, Storage Room off Kitchen, & 2 nd Floor Storage Room (by Girls' Restroom); Classrooms: 20-25 | NF | 8,000 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: <u>November 12, 2020</u> | |
| Inspector's Name: <u>Robert Mallett</u> Inspector Signature: _____  Accreditation #/State: <u>AI900557/MA</u> Expiration Date: <u>06/01/2021</u> | | | | | Management Planner Name: <u>Dustin Diedricksen</u> Management Planner Signature: _____  Accreditation #/State: <u>AP900425/MA</u> Expiration Date: <u>04/05/2021</u> | |
| I, the LEA's Designated Person, have read and understood the recommendations made above: _____ Date: _____ | | | | | | |

School: Centerville Elementary School

 Date of Re-Inspection: August 26, 2020

 Homogeneous Material: Gray Interior Window Glazing Compound

 Sample ID Number: 7-12-PB-57A

| 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 |
| Kitchen, Cafeteria, Gymnasium, Restrooms, Offices, Staff Lounge, Guidance Office, Library, & Stairwells; Classrooms: 1, 2, 4, 6, 8, 11, 12, & 14-27 | NF | 8,000 LF | 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: Centerville Elementary School

 Date of Re-Inspection: August 26, 2020

 Homogeneous Material: Black Sink Undercoating

 Sample ID Number: 7-12-PB-58A

| 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 |
| Restrooms & Health Office; Classrooms: 1-6, 8, 11, 12, & 14-27 | NF | 25 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: _____ | | | | | | |

School: Centerville Elementary School

 Date of Re-Inspection: August 26, 2020

 Homogeneous Material: Gray Fiber-Reinforced Cement Panel

 Sample ID Number: 06A-RCM-0117

| 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 Door Panels, Hallway Door Panels, Curtainwalls, & Exterior Soffits | NF | 1,000 SF | 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: _____ | | | | | | |

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: | 041324586 |
| 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: 9/15/2013
 Collected: 7/12/2013

Project: 20121793.A1E / Barnstable Public Schools: Centerville 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-45A 041324586-0001 | Cafeteria - 1'x1' Wall Tile | Yellow Fibrous Homogeneous | 85% Cellulose | 15% Non-fibrous (other) | None Detected |
| 7-12-PB-45B 041324586-0002 | Cafeteria - 1'x1' Wall Tile | Brown/White Fibrous Homogeneous | 80% Cellulose | 20% Non-fibrous (other) | None Detected |
| 7-12-PB-46A 041324586-0003 | Guidance Office - Mudded Insulation | Gray Fibrous Homogeneous | 60% Min. Wool | 37% Non-fibrous (other) | 3% Chrysotile |
| 7-12-PB-46B 041324586-0004 | Custodian's Office - Mudded Insulation | | | | Stop Positive (Not Analyzed) |
| 7-12-PB-46C 041324586-0005 | Crawl Space - Mudded Insulation | | | | Stop Positive (Not Analyzed) |
| 7-12-PB-47A 041324586-0006 | Guidance Office - 2'x4' Ceiling Tile | Gray Fibrous Homogeneous | 60% Cellulose 30% Min. Wool | 10% Non-fibrous (other) | None Detected |
| 7-12-PB-47B 041324586-0007 | Hallway - 2'x4' Ceiling Tile | Gray Fibrous Homogeneous | 50% Cellulose 25% Min. Wool | 25% Non-fibrous (other) | None Detected |
| 7-12-PB-48A 041324586-0008 | Guidance Office - Base Cove Glue, Residual, Brown | Brown Non-Fibrous Homogeneous | | 100% Non-fibrous (other) | None Detected |
| 7-12-PB-48B 041324586-0009 | Guidance Office - Base Cove Glue, Residual, Brown | Brown Non-Fibrous Homogeneous | | 100% Non-fibrous (other) | None Detected |

Analyst(s)
 McLaughlin Paul (22)
 William Nguyen (17)

Stephen Siegel, CIH, Laboratory Manager
 or other approved signatory

EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Samples received in good condition unless otherwise noted. Estimated accuracy, precision and uncertainty data available upon request. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Reporting limit is 1%
 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 09/16/2013 07:31:00

**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: | 041324586 |
| 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: 9/15/2013
 Collected: 7/12/2013

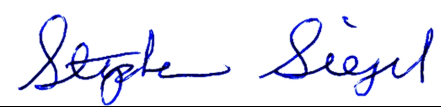
Project: 20121793.A1E / Barnstable Public Schools: Centerville Elementary School

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-49A 041324586-0010 | Guidance Office - Carpet Glue | Yellow Non-Fibrous Homogeneous | | 100% Non-fibrous (other) | None Detected |
| 7-12-PB-49B 041324586-0011 | Guidance Office - Carpet Glue | Yellow Non-Fibrous Homogeneous | | 100% Non-fibrous (other) | None Detected |
| 7-12-PB-50A 041324586-0012 | Guidance Office Under Carpet - 9"x9" Tan Streaked Floor Tile | Gray Non-Fibrous Homogeneous | | 95% Non-fibrous (other) | 5% Chrysotile |
| 7-12-PB-50B 041324586-0013 | Classroom 21 Under Carpet - 9"x9" Tan Streaked Floor Tile | | | | Stop Positive (Not Analyzed) |
| 7-12-PB-51A 041324586-0014 | Guidance Office - Mastic Associated w/ 9"x9" Tan Streaked Floor Tile | Black Non-Fibrous Homogeneous | | 100% Non-fibrous (other) | None Detected |
| 7-12-PB-51B 041324586-0015 | Classroom 21 - Mastic Associated w/ 9"x9" Tan Streaked Floor Tile | Black Non-Fibrous Homogeneous | | 100% Non-fibrous (other) | None Detected |
| 7-12-PB-52A 041324586-0016 | Gym: Stage - 1'x1' White/Tan Mottled Floor Tile | Gray/White Non-Fibrous Homogeneous | | 100% Non-fibrous (other) | None Detected |

Analyst(s)

 McLaughlin Paul (22)
 William Nguyen (17)


 Stephen Siegel, CIH, Laboratory Manager
 or other approved signatory

EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Samples received in good condition unless otherwise noted. Estimated accuracy, precision and uncertainty data available upon request. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Reporting limit is 1%
 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 09/16/2013 07:31:00

**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: | 041324586 |
| CustomerID: | ENVI54 |
| CustomerPO: | |
| ProjectID: | |

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

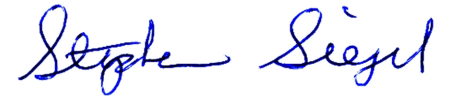
Phone: (860) 646-2469
 Fax: (888) 838-1160
 Received: 09/12/13 9:15 AM
 Analysis Date: 9/15/2013
 Collected: 7/12/2013

Project: 20121793.A1E / Barnstable Public Schools: Centerville 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-52B 041324586-0017 | Corridor - 1'x1' White/Tan Mottled Floor Tile | Gray/White Non-Fibrous Homogeneous | | 100% Non-fibrous (other) | None Detected |
| 7-12-PB-53A 041324586-0018 | Gym: Stage - Glue Associated w/ 1'x1' White/Tan Mottled Floor Tile | Yellow Non-Fibrous Homogeneous | | 100% Non-fibrous (other) | None Detected |
| 7-12-PB-53B 041324586-0019 | Gym: Stage - Glue Associated w/ 1'x1' White/Tan Mottled Floor Tile | Yellow Non-Fibrous Homogeneous | | 100% Non-fibrous (other) | None Detected |
| 7-12-PB-54A 041324586-0020 | Staff Lounge - SHEETROCK | Gray Fibrous Homogeneous | 10% Cellulose | 90% Non-fibrous (other) | None Detected |
| 7-12-PB-54B 041324586-0021 | Classroom 26 - SHEETROCK | Gray Fibrous Homogeneous | 5% Cellulose | 95% Non-fibrous (other) | None Detected |
| 7-12-PB-55A 041324586-0022 | Staff Lounge - Joint Compound | Gray Non-Fibrous Homogeneous | | 100% Non-fibrous (other) | None Detected |
| 7-12-PB-55B 041324586-0023 | Classroom 26 - Joint Compound | White Non-Fibrous Homogeneous | | 100% Non-fibrous (other) | None Detected |

Analyst(s)
 McLaughlin Paul (22)
 William Nguyen (17)


 Stephen Siegel, CIH, Laboratory Manager
 or other approved signatory

EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Samples received in good condition unless otherwise noted. Estimated accuracy, precision and uncertainty data available upon request. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Reporting limit is 1%
 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 09/16/2013 07:31:00

**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: | 041324586 |
| CustomerID: | ENVI54 |
| CustomerPO: | |
| ProjectID: | |

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

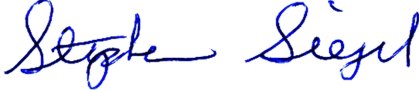
Phone: (860) 646-2469
 Fax: (888) 838-1160
 Received: 09/12/13 9:15 AM
 Analysis Date: 9/15/2013
 Collected: 7/12/2013

Project: 20121793.A1E / Barnstable Public Schools: Centerville 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-56A 041324586-0024 | Staff Lounge - Interior Window Caulking Compound | Gray Non-Fibrous Homogeneous | | 100% Non-fibrous (other) | None Detected |
| 7-12-PB-56B 041324586-0025 | Guidance Office - Interior Window Caulking Compound | Gray/White Non-Fibrous Homogeneous | | 100% Non-fibrous (other) | None Detected |
| 7-12-PB-57A 041324586-0026 | Staff Lounge - Interior Window Glazing Compound | Gray Non-Fibrous Homogeneous | | 98% Non-fibrous (other) | 2% Chrysotile |
| 7-12-PB-57B 041324586-0027 | Guidance Office - Interior Window Glazing Compound | | | | Stop Positive (Not Analyzed) |
| 7-12-PB-58A 041324586-0028 | Classroom 21 - Sink Undercoating | Black Non-Fibrous Homogeneous | | 98% Non-fibrous (other) | 2% Chrysotile |
| 7-12-PB-58B 041324586-0029 | Teacher/Staff Lounge - Sink Undercoating | | | | Stop Positive (Not Analyzed) |
| 7-12-PB-59A 041324586-0030 | Classroom 2 - Glue Daub w/ 1'x1' Ceiling Tile | Brown Non-Fibrous Homogeneous | | 100% Non-fibrous (other) | None Detected |
| 7-12-PB-59B 041324586-0031 | 2nd Floor: Restroom - Glue Daub w/ 1'x1' Ceiling Tile | Brown Non-Fibrous Homogeneous | | 100% Non-fibrous (other) | None Detected |

Analyst(s)
 McLaughlin Paul (22)
 William Nguyen (17)


 Stephen Siegel, CIH, Laboratory Manager
 or other approved signatory

EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Samples received in good condition unless otherwise noted. Estimated accuracy, precision and uncertainty data available upon request. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Reporting limit is 1%
 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 09/16/2013 07:31:00



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: | 041324586 |
| 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: 9/15/2013
 Collected: 7/12/2013

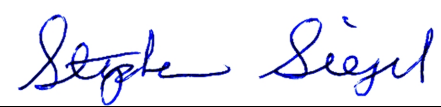
Project: 20121793.A1E / Barnstable Public Schools: Centerville Elementary School

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-60A 041324586-0032 | Crawl Space - Pipe Insulation | White Fibrous Homogeneous | | 90% Non-fibrous (other) | 10% Chrysotile |
| 7-12-PB-61A 041324586-0033 | Boiler Room - Tank Insulation | Gray Non-Fibrous Homogeneous | 40% Min. Wool | 60% Non-fibrous (other) | None Detected |
| 7-12-PB-61B 041324586-0034 | Boiler Room - Tank Insulation | Gray Non-Fibrous Homogeneous | 40% Min. Wool | 60% Non-fibrous (other) | None Detected |
| 7-12-PB-61C 041324586-0035 | Boiler Room - Tank Insulation | Gray Fibrous Homogeneous | 40% Min. Wool 10% Glass | 50% Non-fibrous (other) | None Detected |
| 7-12-PB-62A 041324586-0036 | Boiler Room - Breeching Insulation | Gray/Red Fibrous Heterogeneous | 15% Cellulose 30% Min. Wool | 55% Non-fibrous (other) | None Detected |
| 7-12-PB-62B 041324586-0037 | Boiler Room - Breeching Insulation | Gray/Red Fibrous Homogeneous | 20% Cellulose 15% Min. Wool | 65% Non-fibrous (other) | None Detected |
| 7-12-PB-62C 041324586-0038 | Boiler Room - Breeching Insulation | Gray/Red Fibrous Homogeneous | 40% Cellulose 35% Min. Wool | 25% Non-fibrous (other) | None Detected |
| 7-12-PB-63A 041324586-0039 | Custodian's Office - Wall/Ceiling Plaster, Skim Coat | White Non-Fibrous Homogeneous | | 100% Non-fibrous (other) | None Detected |

Analyst(s)

 McLaughlin Paul (22)
 William Nguyen (17)


 Stephen Siegel, CIH, Laboratory Manager
 or other approved signatory

EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Samples received in good condition unless otherwise noted. Estimated accuracy, precision and uncertainty data available upon request. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Reporting limit is 1%
 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 09/16/2013 07:31:00

**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: | 041324586 |
| 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: 9/15/2013
 Collected: 7/12/2013

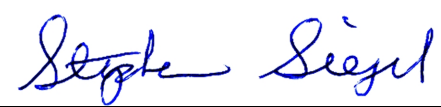
Project: 20121793.A1E / Barnstable Public Schools: Centerville Elementary School

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-63B 041324586-0040 | Custodian's Office - Wall/Ceiling Plaster, Skim Coat | White Non-Fibrous Homogeneous | | 100% Non-fibrous (other) | None Detected |
| 7-12-PB-63C 041324586-0041 | Custodian's Office - Wall/Ceiling Plaster, Skim Coat | Tan/White/Green Non-Fibrous Homogeneous | | 100% Non-fibrous (other) | None Detected |
| 7-12-PB-64A 041324586-0042 | Custodian's Office - Wall/Ceiling Plaster, Rough Coat | Gray Non-Fibrous Homogeneous | | 100% Non-fibrous (other) | None Detected |
| 7-12-PB-64B 041324586-0043 | Custodian's Office - Wall/Ceiling Plaster, Rough Coat | Gray Non-Fibrous Homogeneous | | 100% Non-fibrous (other) | None Detected |
| 7-12-PB-64C 041324586-0044 | Custodian's Office - Wall/Ceiling Plaster, Rough Coat | Gray Fibrous Homogeneous | 3% Cellulose | 97% Non-fibrous (other) | None Detected |

Analyst(s)

 McLaughlin Paul (22)
 William Nguyen (17)


 Stephen Siegel, CIH, Laboratory Manager
 or other approved signatory

EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Samples received in good condition unless otherwise noted. Estimated accuracy, precision and uncertainty data available upon request. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Reporting limit is 1%
 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 09/16/2013 07:31:00



041324586

Dave Hanyush

44

SAMPLE LOG FOR ASBESTOS BULKS

Sheet 1 of 4

Project Name: Burnsville Public Schools

Project No. 20121793-AIE

Building: Centerville Elementary School

Project Manager: Dustin D

| Sample ID | Sample Location | Material | Result (%) |
|------------------|-----------------|-----------------------------------|------------|
| 7-12 PB 45A | Cafeteria | 1'x11 wall tile | |
| B | | | |
| _____ | | | |
| 46A | guidance office | Muddled insulation | |
| B | Cafeteria Pan | | |
| C | Crawl Space | | |
| 47A | guidance office | 2'x4' Ceiling tile | |
| B | Hallway | | |
| C | | | |
| _____ | | | |
| 49A | guidance office | Base coat glaz - Brown - Residual | |
| B | | | |
| C | | | |
| _____ | | | |
| 49A | guidance office | Carpet glaz | |
| B | | | |
| C | | | |
| _____ | | | |

RECEIVED
ENSL
CINNAMINSON, NJ
2013 SEP 12 AID: 43

Analysis Method: PLM Other

Turnaround Time 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. ~~ENSL 100 Point Count all samples of content < 4%, positive stop on all point counts.~~

~~On Samples Analyzed which came out < 1% Asbestos, the Analyst should be notified by email.~~

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

Samples [Rec'd][Sent by] [Paul Bateman LD] Date: [7/12/13 || 9/10/13] Time: _____

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

Shipped To: EMSL State MA Other _____

Method of Shipment: Insured Other _____

drop box

RECEIVED
SEP 11 2013
By JM 0830



SAMPLE LOG FOR ASBESTOS BULKS

Sheet ___ of ___

Project Name: Burns Falls Public Schools

Project No. 20121793 AIE

Building: Centralville Elementary School

Project Manager: Dustin D

| Sample ID | Sample Location | Material | Result (%) |
|----------------------|---|--|---|
| 7-h PB 501 B | Guidance office under Class 21 Carpet | 9" x 9" Tan structured floor tile | 100% SEP 12 10 43 RECEIVED EMSL CINNAMINSON, NJ |
| 51A B | Guidance office 21 | Associated material | |
| 52A B | gym - stage Corridor | 1' x 1' White / Tan mottled floor tile | |
| 53A B | gym stage | Associated glass | |
| 54A B | Staff lounge Class 26 | Sheetrock | |

Analysis Method: PLM Other

Turnaround Time 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. ~~EMSL 100 Point Count all samples of content < 1%, positive stop on all point counts.~~

~~on samples touched which come out of ACM or non-ACM~~

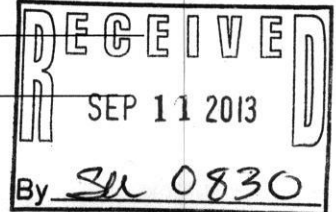
Samples collected by: Paul Bateman Date: 7/12/13 Time: _____

Samples [Rec'd][Sent by] [Paul Bateman || LD] Date: [7/12/13 || 9/10/13] Time: _____

Samples Received by: _____ Date: _____ Time: _____

Shipped To: EMSL State MA Other _____

Method of Shipment: Fed Ex Other _____





SAMPLE LOG FOR ASBESTOS BULKS

Sheet ___ of ___

Project Name: Barnstable Public Schools

Project No. 20121793 AIE

Building: Conkville Elementary School

Project Manager: Dustin D

| Sample ID | Sample Location | Material | Result (%) |
|-------------------------|----------------------|-----------------------------------|--|
| 7-12 PB SS A | Staff Lounge | Joint compound | RECEIVED EMSL GANNAMINSON, NJ SEP 12 AM 10:43 |
| B | Class 26 | | |
| 7-12 PB SS B | Class 26 | Joint compound | |
| 56A | Staff Lounge | Inter Window Curing Compound | |
| 56B | Gardens | | |
| 56C | Class 26 | Joint compound | |
| 57A | Staff Lounge | Inter Window glazing compound | |
| 57B | Gardens | | |
| 57C | Class 26 | Joint compound | |
| 58A | Class 21 | Sink Undercutting | |
| B | Teacher/Staff Lounge | | |
| 58C | Class 21 | Joint compound | |
| 59A | Classroom #2 | glw darkly with ipi ceiling tiles | 50005 |
| B | 2nd Fl restrooms | | |
| 59C | Class 21 | Joint compound | |

Analysis Method: PLM Other

Turnaround Time 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. ~~EMSL 100 Point Chain of Custody all samples of content < 4%, positive stop on all point counts.~~

~~On samples marked * which come out of AC... Please perform TEM/ALB~~

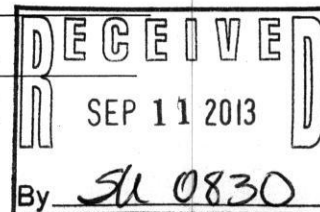
Samples collected by: Paul Bateman Date: 7/12/13 Time: by Paul

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

Samples Received by: _____ Date: _____ Time: _____

Shipped To: EMSL State MA Other _____

Method of Shipment: Fed Ex Other Drop Off





SAMPLE LOG FOR ASBESTOS BULKS

Sheet ___ of ___

Project Name: Burnsville Public Schools

Project No. 20121793-AIE

Building: Centerville Elementary School

Project Manager: Dustin D

| Sample ID | Sample Location | Material | Result (%) | | |
|-------------|--------------------|---------------------------------|------------|----------------------|--------|
| 7-12 PB 60A | Fault Spool | Pipe insulation | 1,000 LF | | |
| 61 A | Boiler room | Tank insulation | 80 SF | | |
| B | ↓ | ↓ | ↓ | | |
| C | | | | | |
| 62A | | | | Preaching insulation | 300 SF |
| B | | | | | |
| C | | | | | |
| 63A | Custodian's office | CC Wall/Ceiling Plaster | 900 SF | | |
| B | ↓ | CC Shim coat | ↓ | | |
| C | | WC | | | |
| 64A | | CC Wall/Ceiling plaster - rooms | | ↓ | |
| B | CC Cont | | | | |
| C | WC | | | | |

RECEIVED
EMSL
CINNAMINSON, NJ
2013 SEP 12 A 10:43

Analysis Method: PLM Other

Turnaround Time 24 hours

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

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

Special Instructions: Stop analysis on first positive sample in each homogeneous set of samples unless otherwise noted. Do not layer samples unless indicated. ~~For 100 Point Count all samples of content < 1% positive stop on all positive counts.~~

On samples marked * which come out < 1% ACM or Non-ACM by PLM. Please perform TEM/No.

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

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

Samples Received by: _____ Date: _____ Time: _____

Shipped To: EMSL State NY Other _____

Method of Shipment: Fed Ex Other _____

RECEIVED
SEP 11 2013
By JL 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: 131800449

Customer ID: ENVI54

Customer PO: 20150090.B5E

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: 01/23/2018 9:21 AM

Analysis Date: 01/25/2018

Collected Date: 01/17/2018

Project: 20150090.B5E / Barnstable Public Schools - Abatement Project Design Support / Hyannis West ES & Centerville ES / 549 West Main St, Hyannis & 658 Bay Lane, Centerville, 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-RCM-0117 <small>131800449-0001</small> | Pipe Tunnel Behind Boiler - Tan Cloth Pipe Wrap | Gray/Tan Fibrous Homogeneous | 90% Cellulose | 10% Non-fibrous (Other) | <1% Chrysotile |
| <i>Sample has small amount of attached positive material.</i> | | | | | |
| 01B-RCM-0117 <small>131800449-0002</small> | Pipe Tunnel @ Base of Stairs - Tan Cloth Pipe Wrap | Gray/Tan Fibrous Homogeneous | 90% Cellulose | 10% Non-fibrous (Other) | None Detected |
| 02A-RCM-0117 <small>131800449-0003</small> | Pipe Tunnel @ Base of Stairs - Black Fiberglass Insulation | Black Non-Fibrous Homogeneous | 2% Glass | 98% Non-fibrous (Other) | None Detected |
| 02B-RCM-0117 <small>131800449-0004</small> | Pipe Tunnel Behind Boiler - Black Fiberglass Insulation | Black Non-Fibrous Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| 03A-RCM-0117 <small>131800449-0005</small> | Pipe Tunnel @ Base of Stairs - Gray Mudded Pipe-Fitting Insulation Associated with 10" Pipe | Gray Fibrous Homogeneous | 20% Min. Wool | 80% Non-fibrous (Other) | None Detected |
| 03B-RCM-0117 <small>131800449-0006</small> | Pipe Tunnel @ Base of Stairs - Gray Mudded Pipe-Fitting Insulation Associated with 10" Pipe | Gray Fibrous Homogeneous | 20% Min. Wool | 80% Non-fibrous (Other) | None Detected |
| 03C-RCM-0117 <small>131800449-0007</small> | Pipe Tunnel @ Base of Stairs - Gray Mudded Pipe-Fitting Insulation Associated with 10" Pipe | Gray Fibrous Homogeneous | 40% Min. Wool | 60% Non-fibrous (Other) | None Detected |
| 04A-RCM-0117 <small>131800449-0008</small> | Pipe Tunnel @ Base of Stairs - Gray Mudded Pipe-Fitting Insulation Associated with < 2" Pipe | Gray Fibrous Homogeneous | 20% Min. Wool | 80% Non-fibrous (Other) | None Detected |
| 04B-RCM-0117 <small>131800449-0009</small> | Pipe Tunnel @ Base of Stairs - Gray Mudded Pipe-Fitting Insulation Associated with < 2" Pipe | Gray Fibrous Homogeneous | 20% Min. Wool | 80% Non-fibrous (Other) | None Detected |
| 04C-RCM-0117 <small>131800449-0010</small> | Pipe Tunnel @ Base of Stairs - Gray Mudded Pipe-Fitting Insulation Associated with < 2" Pipe | Gray Fibrous Homogeneous | 40% Min. Wool | 60% Non-fibrous (Other) | None Detected |
| 05A-RCM-0117 <small>131800449-0011</small> | Boiler Room - Tan Mudded Pipe-Fitting Insulation Associated with Pipe on the Ground | Tan Fibrous Homogeneous | 5% Synthetic | 95% Non-fibrous (Other) | None Detected |

Initial report from: 01/25/2018 16:08:28



EMSL Analytical, Inc.

5 Constitution Way, Unit A Woburn, MA 01801

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

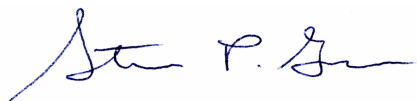
<http://www.EMSL.com/bostonlab@emsl.com>

EMSL Order: 131800449
Customer ID: ENVI54
Customer PO: 20150090.B5E
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 |
| 05B-RCM-0117 <small>131800449-0012</small> | Boiler Room - Tan Mudded Pipe-Fitting Insulation Associated with Pipe on the Ground | Tan Fibrous Homogeneous | 5% Synthetic | 95% Non-fibrous (Other) | None Detected |
| 05C-RCM-0117 <small>131800449-0013</small> | Boiler Room - Tan Mudded Pipe-Fitting Insulation Associated with Pipe on the Ground | Tan Fibrous Homogeneous | 10% Cellulose | 90% Non-fibrous (Other) | None Detected |
| 06A-RCM-0117 <small>131800449-0014</small> | Side Lite Infill - Gray Fiber-Reinforced Cement Panel | Gray Fibrous Homogeneous | | 90% Non-fibrous (Other) | 10% Chrysotile |
| 06B-RCM-0117 <small>131800449-0015</small> | Side Lite Infill - Gray Fiber-Reinforced Cement Panel | | | | Positive Stop (Not Analyzed) |

Analyst(s) _____
 Elizabeth Stutts (9)
 Kevin Pine (5)


 Steve Grise, Laboratory Manager
 or Other Approved Signatory

EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Samples received in good condition unless otherwise noted. Estimated accuracy, precision and uncertainty data available upon request. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Reporting limit is 1%

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: 01/25/2018 16:08:28



Asbestos Bulk Sample Chain-of-Custody Form Sheet ___ of ___

Project Name: Barnstable Public Schools - Abatement Project Design Support Project No.: 2015090.13SE Task: _____

Building Name/Number: Hyannis West ES & Centerville ES Project Manager: D Diedricksen

Site Address: 549 West Main St, Hyannis & 658 Bay Lane, Centerville, MA Total # of Samples: 15

| Sample ID (#-Initials-Date) | Material Type (Size, Color, Description, Material) | Sample Location | Comments/ Quantities |
|--------------------------------|--|------------------------------|-------------------------|
| 01A-RCM-0117 | Tan Cloth Pipe Wrap | Pipe Tunnel Behind Boiler | Hyannis West |
| 01B-RCM-0117 | Tan Cloth Pipe Wrap | Pipe Tunnel @ Base of Stairs | Hyannis West |
| 02A-RCM-0117 | Black Fiberglass Insulation Mastic | Pipe Tunnel @ Base of Stairs | Hyannis West |
| 02B-RCM-0117 | Black Fiberglass Insulation Mastic | Pipe Tunnel Behind Boiler | Hyannis West |
| 03A-RCM-0117 | Gray Mudded Pipe-Fitting Insulation Associated with 10" Pipe | Pipe Tunnel @ Base of Stairs | Hyannis West |
| 03B-RCM-0117 | Gray Mudded Pipe-Fitting Insulation Associated with 10" Pipe | Pipe Tunnel @ Base of Stairs | Hyannis West |
| 03C-RCM-0117 | Gray Mudded Pipe-Fitting Insulation Associated with 10" Pipe | Pipe Tunnel @ Base of Stairs | Hyannis West |
| 04A-RCM-0117 | Gray Mudded Pipe-Fitting Insulation Associate with < 2" Pipe | Pipe Tunnel @ Base of Stairs | Hyannis West |
| 04B-RCM-0117 | Gray Mudded Pipe-Fitting Insulation Associate with < 2" Pipe | Pipe Tunnel @ Base of Stairs | Hyannis West |
| 04C-RCM-0117 | Gray Mudded Pipe-Fitting Insulation Associate with < 2" Pipe | Pipe Tunnel @ Base of Stairs | Hyannis West |
| 05A-RCM-0117 | Tan Mudded Pipe-Fitting Insulation Associated with Pipe on the Ground | Boiler Room | Hyannis West |
| 05B-RCM-0117 | Tan Mudded Pipe-Fitting Insulation Associated with Pipe on the Ground | Boiler Room | Hyannis West |
| 05C-RCM-0117 | Tan Mudded Pipe-Fitting Insulation Associated with Pipe on the Ground | Boiler Room | Hyannis West |
| 06A-RCM-0117 | Gray Fiber-Reinforced Cement Panel | Side Lite Infill | Centerville |
| 06B-RCM-0117 | Gray Fiber-Reinforced Cement Panel | Side Lite Infill | Centerville |

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 & rmallett @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.

Samples Collected by: Date: 01/17/2018 ^{2018 RM} 01/22/18

Samples Sent by: Date: 01/22/2018 Time: PM

Shipped To: EMSL Other _____

Method of Shipment: Fed Ex Lab Drop Off Other _____

REC'D 119:21
EMSL-BOSTON
JAN 23 2018
EMSLFX 795384429331

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: Centerville 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 | Guidance Office, Restrooms, Offices, Classrooms (above ceilings), Custodian's Room, Pipe Chases, & Crawlspace | G | | | | |
| White/Gray Pipe Insulation | Pipe Chases | G | | | | |
| 9" x 9" Tan Streaked Floor Tile | Guidance Office underneath Carpet, Storage Room off Kitchen, & 2 nd Floor Storage Room (by Girls' Restroom); Classrooms: 20-25 | G | | | | |
| Gray Interior Window Glazing Compound | Kitchen, Cafeteria, Gymnasium, Restrooms, Offices, Staff Lounge, Guidance Office, Library, & Stairwells; Classrooms: 1, 2, 4, 6, 8, 11, 12, & 14-27 | G | | | | |
| Black Sink Undercoating | Restrooms & Health Office; Classrooms: 1-6, 8, 11, 12, & 14-27 | G | | | | |
| Gray Fiber-Reinforced Cement Panel | Classroom Door Panels, Hallway Door Panels, Curtainwalls, & Exterior Soffits | 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



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

Michael Flanagan
Director

Asbestos Inspector

ROBERT C. MALLET

Eff. Date 06/01/20

Exp. Date 06/01/21

AI900557

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

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