

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

for
Forestdale School

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)

Sandwich Public School District
Sandwich, Massachusetts

March 2017



FUSS & O'NEILL
EnviroScience, LLC

Fuss & O'Neill EnviroScience, LLC
50 Redfield Street, Suite 100
Boston, MA 02122



March 2, 2017

Mr. Jonathan Nelson
Facilities and Grounds
Sandwich Public School District
33 Water Street
Sandwich, MA 02563

**RE: Three-Year AHERA Re-Inspection and Management Plan Update
Forestdale School
151 Route 130, Sandwich, MA**
Fuss & O'Neill EnviroScience, LLC No. 20160762.A1E

Dear Mr. Nelson:

Enclosed is the Three-Year AHERA Re-Inspection and Management Plan Update report prepared by Fuss & O'Neill EnviroScience, LLC for the Forestdale School located at 151 Route 130 in Sandwich, Massachusetts. AHERA services were performed for Sandwich Public School District (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,

A handwritten signature in black ink that reads 'D. A. DIEDRICKSEN'.

Dustin A. Diedricksen
Senior Project Manager

50 Redfield Street
Suite 100
Boston, MA
02122
t 617.282.4675
800.286.2469
f 617.282.8253

DD/so

Enclosure

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Connecticut
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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 (LEA) 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 any building leased or acquired on or after October 12, 1988, which is 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

- A. 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 Plans (AMP) are maintained in a central location as well as at each facility; these 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: | Sandwich Public School District |
| Address: | 33 Water Street
Sandwich, Massachusetts 02563 |
| Phone: | (508) 888-1054 |
- B. Designated Person:
- | | |
|----------|--|
| Person: | Mr. Jonathan Nelson |
| Address: | Head of Facilities and Grounds
33 Water Street
Sandwich, Massachusetts 02563 |
| Phone: | (508) 888-3312 |

C. Asbestos Consultant Data

Firm: Fuss & O'Neill EnviroScience, LLC
Address: 50 Redfield Street, Suite 100
Boston, MA 02122
Phone: (617)-282-4675
Fax: (617)-282-8253

D. Asbestos Inspector

Inspector: Robert Mallett
MADLS Certification Number: AI900557
Expiration Date: 06/01/2017

E. Asbestos Management Planner:

Planner: Dustin Diedricksen
MADLS Certification Number: AP900425
Expiration Date: 04/05/2017

2 Building and Mechanical System Description

The Forestdale School is a two-story building reportedly constructed in 1989; portable classrooms were reportedly added in 1999.

Two Weil-McLain gas-fired, hot-water boilers provide heat to the building. Hot water is transferred via a closed-loop system through the ceiling plenum to unit ventilators throughout the building.

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 December 28, 2016, Mr. Robert Mallett of Fuss & O'Neill EnviroScience, LLC (EnviroScience) performed the re-inspection.

A. During the re-inspection, EnviroScience 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 Existing Records Review

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

Please see *Appendix A* for the checklist for existing records.

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.

Eighteen bulk samples were collected during this re-inspection. The results can be found in Table 1. Refer to *Appendix B* for a copy of the asbestos laboratory analytical results and chain-of-custody form.

Bulk samples were last collected during the 2012 re-inspection. The results can be found in Table 1. Refer to *Appendix C* for a copy of the 2012 re-inspection asbestos laboratory results.

Using EPA protocol and criteria, none of the materials existing in the building at the time of this three-year re-inspection have been determined or assumed to be **ACBM**.

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 1
Non-Asbestos-Containing Building Materials**

Homogeneous Material	Location(s)	Reference & Sample Number
Joint Compound	Original Building, 1 st & 2 nd Floor Classrooms, Hallways, Offices, & Storage Rooms	AMP July 2012 Prepared by Cardno ATC. (Sample IDs 01A-01G)
Gypsum Wallboard	Original Building, 1 st & 2 nd Floor Classrooms, Hallways, Offices, & Storage Rooms	AMP July 2012 Prepared by Cardno ATC. (Sample IDs 02A & 02B)

Homogeneous Material	Location(s)	Reference & Sample Number
2' x 2' Ceiling Tile	Original Building, 1 st & 2 nd Floor Classrooms	AMP July 2012 Prepared by Cardno ATC. (Sample IDs 03A & 03B)
Yellow Mastic Associated with Black Cove Base	Original Building, 1 st & 2 nd Floor Classrooms, Hallways, Offices, & Storage Rooms	AMP July 2012 Prepared by Cardno ATC. (Sample IDs 04A & 04B)
Gray Sink Coat	Original Building & 1 st & 2 nd Floor Classrooms	AMP July 2012 Prepared by Cardno ATC. (Sample IDs 05A & 05B)
Black Sink Coat	Original Building & 1 st & 2 nd Floor Classrooms	AMP July 2012 Prepared by Cardno ATC. (Sample IDs 06A & 06B)
12" x 12" White Mottled Floor Tile	Original Building, 1 st & 2 nd Floor Hallways & Classrooms	AMP July 2012 Prepared by Cardno ATC. (Sample IDs 07A & 07B)
Black Mastic Associated with 12" x 12" Floor Tile	Original Building, 1 st & 2 nd Floor Hallways & Classrooms	AMP July 2012 Prepared by Cardno ATC. (Sample IDs 08A & 08B)
Yellow Mastic Associated with Gray Carpet	Original Building & 1 st & 2 nd Floor Classrooms	AMP July 2012 Prepared by Cardno ATC. (Sample IDs 09A & 09B)
Counter Top	Classrooms 210 & 220	AMP July 2012 Prepared by Cardno ATC. (Sample IDs 11A & 11B)
Black Side Light & Partition Wall Window Glazing Compound	Original Building & 2 nd Floor Lobby	AMP July 2012 Prepared by Cardno ATC. (Sample IDs 12A & 12B)
2' x 4' White Fissure & Dot Suspended Ceiling Tile	Portable Classrooms: Classrooms, Bathrooms, & Hallway	AMP January 2017 Prepared by EnviroScience (Sample IDs 01A & 01B-RCM-1228)

Homogeneous Material	Location(s)	Reference & Sample Number
6" Gray Vinyl Baseboard	Portable Classrooms: Classrooms, Bathrooms, & Hallway	AMP January 2017 Prepared by EnviroScience (Sample IDs 02A & 02B- RCM-1228)
Yellow Adhesive Associated with 6" Vinyl Baseboard	Portable Classrooms: Classrooms, Bathrooms, & Hallway	AMP January 2017 Prepared by EnviroScience (Sample IDs 03A & 03B- RCM-1228)
Gray Gypsum Wallboard	Portable Classrooms: Classrooms, Bathrooms, & Hallway	AMP January 2017 Prepared by EnviroScience (Sample IDs 04A & 04B- RCM-1228)
12" x 12" White with Blue Splotch Floor Tile	Portable Classrooms: Bathrooms, & Hallway	AMP January 2017 Prepared by EnviroScience (Sample IDs 05A & 05B- RCM-1228)
Black Mastic Associated with 12" x 12" Floor Tile	Portable Classrooms: Bathrooms, & Hallway	AMP January 2017 Prepared by EnviroScience (Sample IDs 06A & 06B- RCM-1228)
Yellow Carpet Glue	Portable Classrooms: Classrooms	AMP January 2017 Prepared by EnviroScience (Sample IDs 07A & 07B- RCM-1228)
1' x 1' White Fissure & Dot Ceiling Tile (Glued)	Classroom 112	AMP January 2017 Prepared by EnviroScience (Sample IDs 08A & 08B- RCM-1228)
Brown Glue Daub Associated with 1' x 1' White Fissure & Dot Ceiling Tile	Classroom 112	AMP January 2017 Prepared by EnviroScience (Sample IDs 09A & 09B- RCM-1228)

AMP = AHERA Management Plan

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

Nine new suspect ACBMs were identified 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. In accordance with EPA National Emission Standards for Hazardous Air Pollutants (NESHAP), samples of these and other exterior suspect ACM must be collected and analyzed for asbestos content prior to disturbance.

Safety Data Sheets (SDS) must 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 were not installed in the building. We recommend that SDS for newly-installed materials be inserted into *Appendix D*.

4.4 ACBM Physical Assessment

During inspection, suspect ACBM were separated into three EPA categories. These categories are thermal system insulation (TSI), surfacing ACBM, and miscellaneous ACBM. TSI includes all materials used to prevent heat loss or 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 materials include all ACBM not listed in TSI or surfacing, such as linoleum, vinyl asbestos flooring, ceiling tiles, and construction mastics/adhesives.

Based on bulk sample results and building construction date, the Forestdale School has been determined not to contain ACBM at the time of this three-year re-inspection. Therefore, physical assessments were not required.

5 Management Plan Update

5.1 Recommended Response Actions

Based on the inspection report, physical walk-through inspection, and 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. O & M - Not Applicable

5.2 Periodic Surveillance

At least once every six months after a management plan 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, record the date of surveillance, their name, and any changes in the ACBM condition and submit the record to the LEA Designated Person for inclusion in the AMP.

Based on bulk sample results and building construction date, the Forestdale School has been determined not to contain ACBM at the time of this three-year re-inspection. Therefore, six month periodic surveillance is not required.

Safety Data Sheets (SDS) must 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 were not installed in the building.

5.3 Preventive Measures

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

Based on bulk sample results and building construction date, the Forestdale School has been determined not to contain ACBM at the time of this three-year re-inspection. Therefore, preventative measures in regards to ACBM are not required.

Safety Data Sheets (SDS) must 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 were not installed in the building.

6 EPA Accreditation Requirements

The MADLS certifications and EPA accreditations for the individuals (Mr. Dustin Diedricksen and Mr. Robert Mallett) involved in performing the re-inspection and updating the AMP are provided in *Appendix E*.

Report prepared by Environmental Technician, Robert Mallett.

Reviewed by:



Dustin A. Diedricksen
Senior Project Manager

Appendix A

Existing Records Checklist

Existing Records Checklist

Local Education Agency (LEA): Sandwich Public School District
33 Water Street
Sandwich, MA 02563

School Building: Forestdale School

The following documentation is required to be present in both the LEA's office, as well as in 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	
		LEA Office	School
1.	Original AHERA Inspection/Management Plan	No	No
2.	Three Year Re-Inspections	2012, 2015	2012, 2015
3.	Notifications to Parents/Guardians and Teachers (yearly since last re-inspection)	No	No
4.	Designated Person Identified and Proper Training (person must be named and have appropriate training)	Yes	Yes
5.	Designated Person Periodic Surveillance (every six months since last re-inspection)	N/A	N/A
6.	Record of Awareness Training for Maintenance Staff	Yes	Yes
7.	Outside Vendor Awareness Notification	No	No
8.	Warning Signs and Labels (required posting in Boiler room and mechanical spaces only)	N/A	N/A
9.	Record of Response Actions (includes any abatement done since last re-inspection)	N/A	N/A

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

Inspector (LEA Office): Robert Mallett

Date: December 28, 2016

Inspector (School): Robert Mallett

Date: December 28, 2016

Appendix B

Asbestos Laboratory Analytical Results and Chain-of-Custody Form



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: 131700084

Customer ID: ENVI54

Customer PO: 20160762.A1E-15

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: 12/30/2016 9:17 AM

Analysis Date: 01/09/2017

Collected Date: 12/28/2016

Project: 20160762.A1E Task 15 / Sandwich Public Schools, 3-Yr AHERA Re-Inspections / Forestdale School - 151
Route 130, Sandwich, 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-1228 <small>131700084-0001</small>	Portable Classrooms, Hallway - 2'x4' White Fissure & Dot Suspended Ceiling Tile	Gray/White Fibrous Homogeneous	60% Cellulose 20% Min. Wool	20% Non-fibrous (Other)	None Detected
01B-RCM-1228 <small>131700084-0002</small>	Portable Classrooms, Hallway - 2'x4' White Fissure & Dot Suspended Ceiling Tile	Gray/White Fibrous Homogeneous	60% Cellulose 20% Min. Wool	20% Non-fibrous (Other)	None Detected
02A-RCM-1228 <small>131700084-0003</small>	Portable Classrooms, Hallway - 6" Gray Vinyl Baseboard	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
02B-RCM-1228 <small>131700084-0004</small>	Portable Classrooms, Hallway - 6" Gray Vinyl Baseboard	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
03A-RCM-1228 <small>131700084-0005</small>	Portable Classrooms, Hallway - Yellow Adhesive Associated with 6" Vinyl Baseboard	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
03B-RCM-1228 <small>131700084-0006</small>	Portable Classrooms, Hallway - Yellow Adhesive Associated with 6" Vinyl Baseboard	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
04A-RCM-1228 <small>131700084-0007</small>	Portable Classrooms, Hallway - Gray Gypsum Wallboard	Brown/White Fibrous Homogeneous	60% Cellulose	40% Non-fibrous (Other)	None Detected
04B-RCM-1228 <small>131700084-0008</small>	Portable Classrooms, Hallway - Gray Gypsum Wallboard	Brown/White Fibrous Homogeneous	60% Cellulose	40% Non-fibrous (Other)	None Detected
05A-RCM-1228 <small>131700084-0009</small>	Portable Classrooms, Hallway - 12"x12" White with Blue Spotch Floor Tile	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
05B-RCM-1228 <small>131700084-0010</small>	Portable Classrooms, Hallway - 12"x12" White with Blue Spotch Floor Tile	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
06A-RCM-1228 <small>131700084-0011</small>	Portable Classrooms, Hallway - Black Mastic Associated with 12"x12" Floor Tile	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
06B-RCM-1228 <small>131700084-0012</small>	Portable Classrooms, Hallway - Black Mastic Associated with 12"x12" Floor Tile	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

Initial report from: 01/09/2017 14:26:44



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: 131700084
Customer ID: ENVI54
Customer PO: 20160762.A1E-15
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
07A-RCM-1228 <small>131700084-0013</small>	Portable Classrooms, Classroom 1 - Yellow Carpet Glue	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
07B-RCM-1228 <small>131700084-0014</small>	Portable Classrooms, Classroom 2 - Yellow Carpet Glue	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
08A-RCM-1228 <small>131700084-0015</small>	Classroom 112 - 1'x1' White Fissure & Dot Glued Ceiling Tile	Gray/White Fibrous Homogeneous	60% Cellulose 20% Min. Wool	20% Non-fibrous (Other)	None Detected
08B-RCM-1228 <small>131700084-0016</small>	Classroom 112 - 1'x1' White Fissure & Dot Glued Ceiling Tile	Gray/White Fibrous Homogeneous	60% Cellulose 20% Min. Wool	20% Non-fibrous (Other)	None Detected
09A-RCM-1228 <small>131700084-0017</small>	Classroom 112 - Brown Glue Daub Associated with 1'x1' Ceiling Tile	Brown Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
09B-RCM-1228 <small>131700084-0018</small>	Classroom 112 - Brown Glue Daub Associated with 1'x1' Ceiling Tile	Brown Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

Analyst(s)

Michael Mink (18)

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-107T3, VT AL998919, Maine Bulk Asbestos BA039

Initial report from: 01/09/2017 14:26:44



Asbestos Bulk Sample Chain-of-Custody

Sheet ___ of ___

Project Name: Sandwich Public Schools, 3-Yr AHERA Re-Inspections Project No.: 20160762.A1E Task: 15

Building Name/Number: Forestdale School Project Manager: D Diedricksen

Site Address: 151 Route 130,u Sandwich, MA Total # of Samples: 18

Sample ID (#-Initials-Date)	Material Type (Size, Color, Description, Material)	Sample Location	Comments/ Quantities
01A-RCM-1228	2' x 4' White Fissure & Dot Suspended Ceiling Tile	Portable Classrooms, Hallway	
01B-RCM-1228	2' x 4' White Fissure & Dot Suspended Ceiling Tile	Portable Classrooms, Hallway	
02A-RCM-1228	6" Gray Vinyl Baseboard	Portable Classrooms, Hallway	
02B-RCM-1228	6" Gray Vinyl Baseboard	Portable Classrooms, Hallway	
03A-RCM-1228	Yellow Adhesive Associated with 6" Vinyl Baseboard	Portable Classrooms, Hallway	
03B-RCM-1228	Yellow Adhesive Associated with 6" Vinyl Baseboard	Portable Classrooms, Hallway	
04A-RCM-1228	Gray Gypsum Wallboard	Portable Classrooms, Hallway	
04B-RCM-1228	Gray Gypsum Wallboard	Portable Classrooms, Hallway	
05A-RCM-1228	12" x 12" White with Blue Splotch Floor Tile	Portable Classrooms, Hallway	
05B-RCM-1228	12" x 12" White with Blue Splotch Floor Tile	Portable Classrooms, Hallway	
06A-RCM-1228	Black Mastic Associated with 12" x 12" Floor Tile	Portable Classrooms, Hallway	
06B-RCM-1228	Black Mastic Associated with 12" x 12" Floor Tile	Portable Classrooms, Hallway	
07A-RCM-1228	Yellow Carpet Glue	Portable Classrooms, Classroom 1	
07B-RCM-1228	Yellow Carpet Glue	Portable Classrooms, Classroom 2	
08A-RCM-1228	1' x 1' White Fissure & Dot Glued Ceiling Tile	Classroom 112	
08B-RCM-1228	1' x 1' White Fissure & Dot Glued Ceiling Tile	Classroom 112	
09A-RCM-1228	Brown Glue Daub Associated with 1' x 1' Ceiling Tile	Classroom 112	
09B-RCM-1228	Brown Glue Daub Associated with 1' x 1' Ceiling Tile	Classroom 112	

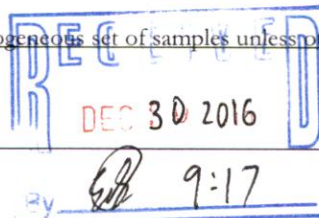
Analysis Method: PLM TEM Other _____ Turnaround Time: 1-week

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: [Signature] Date: 12/28/16



7992 1926 1570

Appendix C

2012 Re-Inspection Asbestos Laboratory Results

ProScience Analytical Services, Inc.

Client Name: ATC Associates, Inc., Woburn
 PO #: N/A
 Client Project #: N/A
 Client Reference: Forestdale School
 Method: EPA/600/R-93/116

Batch: B82058
 Date Sampled: N/A
 Date Received: 7/5/2012
 Date Analyzed: 7/6/2012
 Date of Report: 7/10/2012

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
01A	White	0	0	0	0	0	0	0	0	0	0	0	0	100
Description: Joint compound														
Location: Throughout														
Comments:		Is asbestos present? No. Analyzed: Yes												

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
01B	White	0	0	0	0	0	0	0	0	0	0	0	0	100
Description: Joint compound														
Location: Throughout														
Comments:		Is asbestos present? No. Analyzed: Yes												

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
01C	White	0	0	0	0	0	0	0	0	0	0	0	0	100
Description: Joint compound														
Location: Throughout														
Comments:		Is asbestos present? No. Analyzed: Yes												

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
01D	White	0	0	0	0	0	0	0	0	0	0	0	0	100
Description: Joint compound														
Location: Throughout														
Comments:		Is asbestos present? No. Analyzed: Yes												

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
01E	White	0	0	0	0	0	0	0	0	0	0	0	0	100
Description: Joint compound														
Location: Throughout														
Comments:		Is asbestos present? No. Analyzed: Yes												

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
01F	White	0	0	0	0	0	0	0	0	0	0	0	0	100
Description: Joint compound														
Location: Throughout														
Comments:		Is asbestos present? No. Analyzed: Yes												

ProScience Analytical Services, Inc.

Client Name: ATC Associates, Inc., Woburn
 PO #: N/A
 Client Project #: N/A
 Client Reference: Forestdale School
 Method: EPA/600/R-93/116

Batch: B82058
 Date Sampled: N/A
 Date Received: 7/5/2012
 Date Analyzed: 7/6/2012
 Date of Report: 7/10/2012

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
01G	White	0	0	0	0	0	0	0	0	0	0	0	0	100
Description: Joint compound Location: Throughout Comments:														
Is asbestos present? No. Analyzed: Yes														

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
02A	Multi	0	0	0	0	0	0	TR	0	5	0	0	0	95
Description: Gypsum board Location: Throughout Comments:														
Is asbestos present? No. Analyzed: Yes														

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
02B	Multi	0	0	0	0	0	0	TR	0	2	0	0	0	98
Description: Gypsum board Location: Throughout Comments:														
Is asbestos present? No. Analyzed: Yes														

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
03A	Multi	0	0	0	0	0	0	0	20	60	0	0	0	20
Description: 2'x2' Ceiling tile Location: Throughout Comments:														
Is asbestos present? No. Analyzed: Yes														

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
03B	Multi	0	0	0	0	0	0	0	20	60	0	0	0	20
Description: 2'x2' Ceiling tile Location: Throughout Comments:														
Is asbestos present? No. Analyzed: Yes														

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
04A	Yellow	0	0	0	0	0	0	0	0	0	0	0	0	100
Description: Yellow mastic assoc. w/black CB Location: Throughout Comments:														
Is asbestos present? No. Analyzed: Yes														

ProScience Analytical Services, Inc.

Client Name: ATC Associates, Inc., Woburn
 PO #: N/A
 Client Project #: N/A
 Client Reference: Forestdale School
 Method: EPA/600/R-93/116

Batch: B82058
 Date Sampled: N/A
 Date Received: 7/5/2012
 Date Analyzed: 7/6/2012
 Date of Report: 7/10/2012

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
04B	Yellow	0	0	0	0	0	0	0	0	0	0	0	0	100
Description: Yellow mastic assoc. w/black CB Location: Throughout Comments: Is asbestos present? No. Analyzed: Yes														

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
05A	Gray	0	0	0	0	0	0	0	0	25	0	0	0	75
Description: Gray sink coat Location: Room 116 Comments: Is asbestos present? No. Analyzed: Yes														

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
05B	Gray	0	0	0	0	0	0	0	0	25	0	0	0	75
Description: Gray sink coat Location: Room 116 Comments: Is asbestos present? No. Analyzed: Yes														

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
06A	Black	0	0	0	0	0	0	0	0	0	0	0	0	100
Description: Black sink coat Location: Room 235 Comments: Is asbestos present? No. Analyzed: Yes														

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
06B	Black	0	0	0	0	0	0	0	0	0	0	0	0	100
Description: Black sink coat Location: Room 228A Comments: Is asbestos present? No. Analyzed: Yes														

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
07A	White	0	0	0	0	0	0	0	0	0	0	0	0	100
Description: 12"x12" White floor tile Location: Throughout Comments: Is asbestos present? No. Analyzed: Yes														

ProScience Analytical Services, Inc.

Client Name: ATC Associates, Inc., Woburn
 PO #: N/A
 Client Project #: N/A
 Client Reference: Forestdale School
 Method: EPA/600/R-93/116

Batch: B82058
 Date Sampled: N/A
 Date Received: 7/5/2012
 Date Analyzed: 7/6/2012
 Date of Report: 7/10/2012

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
07B	White	0	0	0	0	0	0	0	0	0	0	0	0	100
Description: 12"x12" White floor tile														
Location: Throughout														
Comments: Is asbestos present? No. Analyzed: Yes														

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
08A	Black	0	0	0	0	0	0	0	0	10	0	0	0	90
Description: Black mastic assoc. w/white FT														
Location: Throughout														
Comments: Is asbestos present? No. Analyzed: Yes														

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
08B	Black	0	0	0	0	0	0	0	0	10	0	0	0	90
Description: Black mastic assoc. w/white FT														
Location: Throughout														
Comments: Is asbestos present? No. Analyzed: Yes														

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
09A	Yellow	0	0	0	0	0	0	0	0	0	0	0	0	100
Description: Yellow mastic assoc. w/gray carpet														
Location: Throughout														
Comments: Is asbestos present? No. Analyzed: Yes														

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
09B	Yellow	0	0	0	0	0	0	0	0	0	0	0	0	100
Description: Yellow mastic assoc. w/gray carpet														
Location: Throughout														
Comments: Is asbestos present? No. Analyzed: Yes														

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
10A	Gray	0	0	0	0	0	0	0	0	0	0	0	0	100
Description: Gray levelling compound														
Location: Classroom														
Comments: Is asbestos present? No. Analyzed: Yes														

ProScience Analytical Services, Inc.

Client Name: ATC Associates, Inc., Woburn
 PO #: N/A
 Client Project #: N/A
 Client Reference: Forestdale School
 Method: EPA/600/R-93/116

Batch: B82058
 Date Sampled: N/A
 Date Received: 7/5/2012
 Date Analyzed: 7/6/2012
 Date of Report: 7/10/2012

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
10B	Gray	0	0	0	0	0	0	0	0	0	0	0	0	100
Description: Gray leveling compound Location: Classroom Comments: Is asbestos present? No. Analyzed: Yes														

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
11A	Black	0	0	0	0	0	0	0	0	0	0	0	0	100
Description: Counter top Location: Room 210 Comments: Is asbestos present? No. Analyzed: Yes														

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
11B	Black	0	0	0	0	0	0	0	0	5	0	0	0	95
Description: Counter top Location: Room 220 Comments: Is asbestos present? No. Analyzed: Yes														

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
12A	Black	0	0	0	0	0	0	0	0	5	0	0	0	95
Description: Black caulk Location: Side light window Comments: Is asbestos present? No. Analyzed: Yes														

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
12B	Black	0	0	0	0	0	0	0	0	5	0	0	0	95
Description: Black caulk Location: Side light window Comments: Is asbestos present? No. Analyzed: Yes														

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
13A	White	5	0	0	0	0	0	0	0	0	0	0	0	95
Description: White caulk Location: Exterior window Comments: Is asbestos present? Yes. Analyzed: Yes														

ProScience Analytical Services, Inc.

Client Name: ATC Associates, Inc., Woburn
 PO #: N/A
 Client Project #: N/A
 Client Reference: Forestdale School
 Method: EPA/600/R-93/116

Batch: B82058
 Date Sampled: N/A
 Date Received: 7/5/2012
 Date Analyzed: 7/6/2012
 Date of Report: 7/10/2012

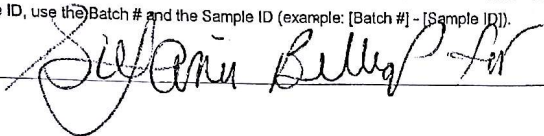
Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
13B		0	0	0	0	0	0	0	0	0	0	0	0	0
Description: White caulk Location: Exterior window Comments:														Analyzed: No

Asbestos Codes: CHR = Chrysotile AMO = Amosite CRO = Crocidolite ACT = Actinolite TRE = Tremolite ANT = Anthophyllite
 Non-Asbestos Codes: FBG = Fiberglass MNW = Mineral Wool CEL = Cellulose HAR = Hair SYN = Synthetic OTH = Other NON = Non-Fibrous Minerals

Note: To create a unique lab sample ID, use the Batch # and the Sample ID (example: [Batch #] - [Sample ID]).

* All results are in percentage.

Analyst: Dan Pine



Appendix D

Newly-Installed Materials Safety Data Sheets

To be Provided by LEA

Appendix E

EnviroScience State Certifications and EPA Accreditations

Commonwealth of Massachusetts
Department of Labor Standards

William D. McKinney, Director

Asbestos Inspector



ROBERT C. MALLET

Eff. Date 05/10/16

Exp. Date 06/01/17

AI900557

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

BOSR BOS-RENEW

17





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, Inc.
16 Upton Drive Wilmington, MA 01887

January 7, 2016

Course Dates

16-0243-106-400644

Certificate Number

January 07, 2016

Examination Date

January 07, 2017

Expiration Date

Training Director

16 Upton Drive, Wilmington, MA 01887

Telephone 978.658.5272

www.ieetrains.com

INSTITUTE FOR ENVIRONMENTAL EDUCATION

Commonwealth of Massachusetts
Department of Labor Standards

William D. McKinney, Director



Asbestos Management Planner

DUSTIN A. DIEDRICKSEN

Eff. Date 04/05/16

Exp. Date 04/05/17

AP900425

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

BOSR BOS-RENEW

17





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, Inc.
16 Upton Drive Wilmington, MA 01887

January 21, 2016

Course Dates

16-0267-136-208040

Certificate Number

January 21, 2016

Examination Date

January 21, 2017

Expiration Date

Training Director

16 Upton Drive, Wilmington, MA 01887

Telephone 978.658.5272

www.ieetrains.com

INSTITUTE FOR ENVIRONMENTAL EDUCATION

