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

for Sandwich High School 365 Quaker Meeting House Road Sandwich, 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)

### Sandwich Public Schools

Sandwich, Massachusetts

Re-Inspection Date: February 2020



Fuss & O'Neill, Inc. 108 Myrtle Street, Suite 502 Quincy, MA 0217



Mr. Jonathan Nelson Director of Facilities Sandwich Public Schools 33 Water Street Sandwich, MA 02563

#### RE: Three-Year AHERA Re-Inspection & Asbestos Management Plan Update Sandwich High School 365 Quaker Meeting House Road, Sandwich, MA Fuss & O'Neill Project No. 20160762.A50

Dear Mr. Nelson:

Enclosed is the Three-Year AHERA Re-Inspection and Asbestos Management Plan Update report prepared by Fuss & O'Neill, Inc. for the Sandwich High School located at 365 Quaker Meeting House Road in Sandwich, Massachusetts (the "Site"). AHERA services were performed for Sandwich Public Schools (the "Client").

This report is an important document that must be kept on file at the school and 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,

\$700-

Dustin A. Diedricksen Associate/Department Manager

DD/rs

Enclosure

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California Connecticut Maine Massachusetts New Hampshire Rhode Island Vermont



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# 1 Introduction

### 1.1 Background

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

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

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

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

### 1.2 Local Education Agency (LEA) Responsibilities

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

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



- 4. The LEA must ensure proper accreditation for all persons who perform asbestos inspections, asbestos re-inspections, AMP development/updates, Asbestos Work Plan (AWP) development, and response actions that may disturb asbestos; this includes operations and maintenance (O&M) activities.
- 5. The LEA must provide training for all custodial and maintenance staff who regularly perform building maintenance where ACBM are present. The training must be provided upon initial hire, and refresher training must be completed annually.
- 6. The LEA must provide information (disclosure) to any workers who may perform work and may come into contact with asbestos in school buildings where ACBM or presumed ACBM are present.
- 7. The LEA must ensure that known ACBM or presumed ACBM are provided with warning labels in routine maintenance areas.
- 8. The LEA must ensure that periodic surveillance is performed at least once every six months, after AMP implementation, in all school buildings that it leases, owns, or otherwise uses that contains ACBM or presumed ACBM.
- 9. The LEA must ensure that once every three years, after an AMP is implemented, a reinspection 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 Schools
Address:	33 Water Street
	Sandwich, MA 02563
Phone:	(508) 888-1054

#### B. Designated Person:

Designated	Mr. Jonathan Nelson
Person:	Director of Facilities & Grounds
Address:	33 Water Street
	Sandwich, MA 02563
Email:	jonathan.nelson@sandwich.k12.ma.us



#### 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:	06/01/2020

E. Asbestos Management Planner:

Planner:	Dustin Diedricksen
MADLS Certification Number:	AP900425
Expiration Date:	04/16/2021

# 2 **Building Description**

The original Sandwich High School is a three-story building reportedly constructed in 1976. The A-Wing was added in 2001, and extensive interior renovations to the 1976 building were made at this time. The interior finishes appear homogenous within the two building vintages.

Three H.B. Smith gas-fired, hot-water boilers provide the 1<sup>st</sup> and 2<sup>nd</sup> floor's heat. These three boilers are located at the 2<sup>nd</sup> floor mechanical space. Heat is transferred throughout the 1<sup>st</sup> and 2<sup>nd</sup> floors via pipes located above suspended ceiling systems and within wall chases.

Two Cleaver Brooks gas-fired, hot-water boilers provide heat for the  $3^{rd}$  floor. These boilers are located at the  $3^{rd}$  floor mechanical space. Heat is transfer via pipes located above suspended ceiling systems and within wall chases.

# 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 February 27, 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 that 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 <u>re-assessment of the ACBM</u> (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 Sandwich High School at the time of this three-year re-inspection have been determined and/or assumed to be **ACBM**. Please refer to the above-mentioned re-inspection forms for specific ACBM locations.



Table 1			
Asbestos-Containing Building Materials (ACBM)			
(Previous & Current Re-Inspections)			

Material	Location	Reference	Asbestos Content
Black Mastic on Structural Steel Columns	1976 Building, Exterior Walls (within masonry & beneath cork)	AMP July 2012 Prepared by Cardno ATC (Sample ID: 16A)	20% Chrysotile
Expansion-Joint Caulking	1976 Building Expansion Joints	AMP July 2012 Prepared by Cardno ATC (Sample ID: 10A)	10% Chrysotile
Tan Vinyl Sheet Flooring	Classrooms C320-C324, C336, C337, Band Practice Rooms P1, P2, & P3, Music Storage Room, & D148	AMP July 2012 Prepared by Cardno ATC (Sample ID: 08A)	30% Chrysotile
Brown Vinyl Sheet Flooring	Auditorium Projector Room & Vault	AMP July 2012 Prepared by Cardno ATC (Sample ID: 12A)	30% Chrysotile
Gray Fiber-Reinforced Cement Fume Hood Panels	Classrooms C321 & C336; Prep Rooms C321/C322, C323/C324, & C336/C337	AMP July 2012 Prepared by Cardno ATC (Sample ID: 09A)	25% Chrysotile
Pink Sink Coating	Room D154	AMP July 2012 Prepared by Cardno ATC (Sample ID: 15A)	5% Chrysotile
Red Duct Sealant	Classrooms C321 & C336; Prep Rooms C321/C322, C323/C324, & C336/C337	AMP July 2012 Prepared by Cardno ATC (Sample ID: 11A)	5% Chrysotile
White Generator Breeching Insulation	3 <sup>rd</sup> Floor Mechanical Space	AMP January 2017 Prepared by Fuss & O'Neill (Sample ID: 11C-RCM-1229)	60% Chrysotile
Gray Fiber-Reinforced Table (Corrugated Panel Bottom)	Classroom C323 Greenhouse	Asbestos Inspection Report November 2016 Prepared by Fuss & O'Neill (Sample ID: 01A-RCM-1108)	18% Chrysotile



Material	Location	Reference	Asbestos Content
		Asbestos Inspection Report	
Gray Fiber-Reinforced	Classroom C323 Greenhouse	November 2016	
Table (Side Board)		Prepared by	20% Chrysotile
Table (Side Doard)		Fuss & O'Neill	
		(Sample ID: 02A-RCM-1108)	
		Asbestos Inspection Report	
Duesen S'II de W/ell	Classroom C323 Greenhouse	November 2016	
Brown Sill-to-Wall		Prepared by	2% Chrysotile
Caulking		Fuss & O'Neill	
		(Sample ID: 06A-RCM-1108)	
		Asbestos Inspection Report	
	Classroom C323 Greenhouse	November 2016	
Gray Screw-Head		Prepared by	2% Chrysotile
Sealant		Fuss & O'Neill	
		(Sample ID: 08A-RCM-1108)	

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
		AMP
	A, B, C, & D-Wing Classrooms,	July 2012
Joint Compound	Offices, Bathrooms, & Storage Spaces	Prepared by Cardno ATC
		(Sample IDs: 01A-01C)
		AMP
		July 2012
		Prepared by Cardno ATC
		(Sample IDs 02A-02C)
Spray-On Fireproofing	1976 Building Ceiling Plenums	&
		AMP
		January 2017
		Prepared by Fuss & O'Neill
		(Sample IDs: 09A-09D-RCM-1229)
		AMP
Cursum Wallboard	A, B, C, & D-Wing Classrooms,	July 2012
Gypsum Wallboard	Offices, Bathrooms, & Storage Spaces	Prepared by Cardno ATC
		(Sample IDs: 03A & 03B)



Material	Location	Reference
Yellow Mastic	Classrooms C320-C324, C336, & C337;	AMP
	Band Practice Rooms P1, P2, & P3;	July 2012
Associated with Vinyl	Music Storage Room; Chorus Room; &	Prepared by Cardno ATC
Sheet Flooring	Auditorium Projector Room & Vault	(Sample IDs: 05A & 05B)
		AMP
	A, B, C, & D-Wing Classrooms,	July 2012
	Offices, Bathrooms, & Storage Spaces	Prepared by Cardno ATC
12" x 12" Tan Mottled	(Except Classrooms C320-C324, C336,	(Sample IDs 06A & 06B)
Floor Tile	& C337; Band Practice Rooms P1, P2,	&
FIOOI THE	& P3; Music Storage Room; Chorus	AMP
	Room; & Auditorium Projector Room	January 2017
	& Vault)	Prepared by Fuss & O'Neill
		(Sample IDs: 04A & 04B-RCM-1229)
		AMP
12" x 12" Purple	Classrooms 1 - 3	January 2017
Mottled Floor Tile	Classfooths 1 - 5	Prepared by Fuss & O'Neill
		(Sample IDs: 02A & 02B-RCM-1229)
		AMP
12" x 12" Yellow	1 <sup>st</sup> & 2 <sup>nd</sup> Floor Classrooms	January 2017
Mottled Floor Tile	$1^{st} \propto 2^{hd}$ Floor Classfoollis	Prepared by Fuss & O'Neill
		(Sample IDs: 03A & 03B-RCM-1229)
		AMP
12" x 12" Blue Mottled	Classrooms 11, 13, & 15	January 2017
Floor Tile		Prepared by Fuss & O'Neill
		(Sample IDs: 07A & 07B-RCM-1229)
		AMP
12" x 12" Green	Gymnasium	January 2017
Mottled Floor Tile	Gynniasium	Prepared by Fuss & O'Neill
		(Sample IDs: 08A & 08B-RCM-1229)
Vellow Mastia		AMP
Yellow Mastic		July 2012
Associated with 12" x	Classrooms & Hallways	Prepared by Cardno ATC
12" Floor Tile		(Sample IDs: 07A & 07B)
	A, B, C, & D-Wing Classrooms,	
	Offices, Bathrooms, & Storage Spaces	
Tan Mastic Associated	(Except Classrooms C320-C324, C336,	AMP
with 12" x 12" Floor	& C337; Band Practice Rooms P1, P2,	January 2017
Tile	& P3; Music Storage Room; Chorus	Prepared by Fuss & O'Neill
	Room; & Auditorium Projector Room	(Sample IDs: 06A & 06B-RCM-1229)
	& Vault)	



Material	Location	Reference		
		AMP		
		July 2012		
White Sink Coating	A, B, C, & D-Wing Classrooms	Prepared by Cardno ATC		
		(Sample IDs: 13A & 13B)		
		AMP		
Black Sink Coating	C 205	July 2012		
	C205	Prepared by Cardno ATC		
		(Sample IDs: 14A & 14B)		
		AMP		
Black Lab Counter	Classes 577 (220) (227	July 2012		
Тор	Classrooms C320-C337	Prepared by Cardno ATC		
-		(Sample IDs: 17A & 17B)		
		AMP		
Brown Cove Base	A, B, C, & D-Wing Classrooms,	July 2012		
Mastic	Offices, Bathrooms, & Storage Spaces	Prepared by Cardno ATC		
		(Sample IDs: 18A & 18B)		
		AMP		
Gray Duct Sealant	A, B, C, & D-Wing Classrooms,	July 2012		
	Offices, Bathrooms, & Storage Spaces	Prepared by Cardno ATC		
		(Sample IDs: 19A & 19B)		
		AMP		
$2' \times 4'$ White (Faux	A, B, C, & D-Wing Classrooms,	January 2017		
2' x 2') Suspended	Offices, Bathrooms, & Storage Spaces	Prepared by Fuss & O'Neill		
Ceiling Tile		(Sample IDs: 01A & 01B-RCM-1229)		
		AMP		
2' x 4' White Gypsum	Wedden 9 Kitchens 1 9 2	January 2017		
Suspended Ceiling Tile	Woodshop & Kitchens 1 & 2	Prepared by Fuss & O'Neill		
		(Sample IDs: 05A & 05B-RCM-1229)		
		AMP		
White Textured Ceiling	Pour & Cida Laskar Paar Shawar	January 2017		
Material	Boys & Girls Locker Room Showers	Prepared by Fuss & O'Neill		
		(Sample IDs: 10A & 10E-RCM-1229)		
		AMP		
White Loint Courses 1	Pour & Cirls Loglary Darry Call	January 2017		
White Joint Compound	Boys & Girls Locker Room Ceilings	Prepared by Fuss & O'Neill		
		(Sample IDs: 12A & 12B-RCM-1229)		
		AMP		
White Gypsum Ceiling	Down & Cirile Laster D. C. 'l'	January 2017		
Panel	Boys & Girls Locker Room Ceilings	Prepared by Fuss & O'Neill		
		(Sample IDs: 13A & 13B-RCM-1229)		

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. <u>Cleaning</u>: 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. <u>O & M Activities</u>: 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. <u>Minor Fiber Release Episode</u>: 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. <u>Major Fiber Release Episode</u>: 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 EPAaccredited 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:

Material	Location	Estimated Quantity	Estimated Contractor Cost
Black Mastic on Structural Steel Columns	1976 Building, Exterior Walls (within masonry & beneath cork)	Unknown	\$20.00/LF
Gray Expansion-Joint Caulking	1976 Building Expansion Joints	Unknown	\$12.00/LF
Tan Vinyl Sheet Flooring	Classrooms C320-C324, C336, C337, Band Practice Rooms P1, P2, & P3, Music Storage Room, & D148	5,500 SF	\$27,500.00
Brown Vinyl Sheet Flooring	Auditorium Projector Room & Vault	250 SF	\$1,250.00
Gray Fiber-Reinforced Cement Fume Hood Panel	Classrooms C321 & C336; Prep Rooms C321/C322, C323/C324, & C336/C337	9 EA @ ~75 SF	\$6,750.00
Pink Sink Coating	Room D154	1 EA	\$250.00
Red Duct Sealant	Classrooms C321 & C336; Prep Rooms C321/C322, C323/C324, & C336/C337	60 LF	\$900.00
White Generator Breeching Insulation	3 <sup>rd</sup> Floor Mechanical Space	25 LF	\$625.00
Gray Fiber-Reinforced Table (Corrugated Panel Bottom)	Classroom C323 Greenhouse	250 SF	\$4,250.00
Gray Fiber-Reinforced Table (Side Board)	Classroom C323 Greenhouse	100 SF	\$1,700.00
Brown Sill-to-Wall Caulking	Classroom C323 Greenhouse	5 LF	\$40.00
Gray Screw-Head Sealant	Classroom C323 Greenhouse	25 EA	\$375.00

Table 3Abatement Cost Estimates

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



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

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

Table 4Asbestos Training Cost Estimates

# **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):	Sandwich Public Schools
	<u>33 Water Street</u>
	Sandwich, MA

School Building: <u>Sandwich High School</u>

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.

		LOCA	TION
	DOCUMENTATION	School	LEA Office
1	Original AHERA Operations and Maintenance Plan/Inspection Report	No	No
2	Three Year Re-Inspection (First and All Subsequent Inspections)	2015 2017	2012, 2015, 2017
3	Parents and Teachers Notifications (Annually Since Last Re-Inspection)	Yes (In Student Handbook & Website)	Yes (In Student Handbook & Website)
4	Designated Person Identification and Proper Training	Yes	Yes
5	Designated Person Periodic Surveillance (Once Every Six Months)	Yes	Yes
6	Maintenance Staff Awareness Training Records	Yes	Yes
7	Outside Vendor Awareness Notification	Yes	Yes
8	Asbestos Warning Signs and Labels (Required Posting in Boiler Rooms and Mechanical Spaces Only)	Yes	N/A
9	Response Action Records (Includes Any Abatement Conducted Since Last 3-Year Re-Inspection)	N/A	N/A

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

Inspector (LEA Office): Robert Mallett

Date: February 27, 2020

Inspector (School): <u>Robert Mallett</u>

Date: February 27, 2020



# Appendix B

Re-Inspection Form 1



Re-Inspection Form 1 – List of Previously Identified ACBM

School:Sandwich High SchoolAddress33 Water Street, Sandwich, MA

Date(s) of Original Inspection: <u>1989</u> Date(s) of Subsequent Re-Inspections: <u>2009</u>, <u>2012</u>, <u>2015</u>, <u>2017</u>, <u>& 2020</u>

	Homogeneous Material			Adaptarial			<b>Response Actions</b>
Sample Number	Asbestos Content	Material Description	Material Category	Friability	Category (1-7)	Recorded Locations	Taken/Renovations/ Other Comments
16A	20% Chrysotile	Black Mastic on Structural Steel Columns	Misc.	NF	5	1976 Building, Exterior Walls (within masonry & beneath cork)	
10A	10% Chrysotile	Expansion-Joint Caulking	Misc.	NF	5	1976 Building Expansion Joints	
08A	30% Chrysotile	Tan Vinyl Sheet Flooring	Misc.	NF	5	Classrooms C320-C324, C336, C337, Band Practice Rooms P1, P2, & P3, Music Storage Room, & D148	
12A	30% Chrysotile	Brown Vinyl Sheet Flooring	Misc.	NF	5	Auditorium Projector Room & Vault	
09A	25% Chrysotile	Gray Fiber-Reinforced Cement Fume Hood Panel	Misc.	NF	5	Classrooms C321 & C336; Prep Rooms C321/C322, C323/C324, & C336/C337	
15A	5% Chrysotile	Pink Sink Coating	Misc.	NF	5	Room D154	
11A	5% Chrysotile	Red Duct Sealant	Misc.	NF	5	Classrooms C321 & C336; Prep Rooms C321/C322, C323/C324, & C336/C337	
11C- RCM- 1229	60% Chrysotile	White Generator Breeching Insulation	TSI	F	6	3 <sup>rd</sup> Floor Mechanical Space	
01A- RCM- 1108	18% Chrysotile	Gray Fiber-Reinforced Table (Corrugated Panel Bottom)	Misc.	NF	5	Classroom C323 Greenhouse	
02A- RCM- 1108	20% Chrysotile	Gray Fiber-Reinforced Table (Side Board)	Misc.	NF	5	Classroom C323 Greenhouse	

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Re-Inspection Form 1 – List of Previously Identified ACBM

School:	Sandwich High School	Date(s) of Original Inspection: <u>1989</u>
Address	33 Water Street, Sandwich, MA	Date(s) of Subsequent Re-Inspections: 2009, 2012, 2015, 2017, & 2020

	Homogeneous Material				Assessment		Response Actions	
Sample Number	Asbestos Content	Material Description	Material Category		Category (1-7)	Recorded Locations	Taken/Renovations/ Other Comments	
06A- RCM- 1108	2% Chrysotile	Brown Sill-to-Wall Caulking	Misc.	NF	5	Classroom C323 Greenhouse		
08A- RCM- 1108	2% Chrysotile	Gray Screw-Head Sealant	Misc.	NF	5	Classroom C323 Greenhouse		

Information abstracted by: <u>Robert Mallett</u> Date: <u>February 27, 2020</u>

Material Category: TSI = Thermal System Insulation, Surf. = Surfacing, Misc. = Miscellaneous

Friability: F = Friable, NF = Non-Friable

AHERA Assessment Categories:

 $1 = Damaged \text{ or significantly damaged TSI ACM}; 2 = Damaged friable surfacing ACM}; 3 = Significantly damaged friable surfacing ACM}; 4 = Damaged or significantly damaged friable miscellaneous ACM}; 5 = ACBM with potential for damage; 6 = ACBM with potential for significant damage; 7 = Any remaining friable ACBM or friable suspected ACBM$ 



# Appendix C

Re-Inspection Form 2



School: Sandwich High School

Homogeneous Material: Black Mastic on Structural Steel Columns

Date of Re-Inspection: <u>February 27, 2020</u> Sample ID Number: <u>16A</u>

	ACBM RE-IN	<b>ISPECTION FI</b>	MANAGEMENT PLANNER RECOMMENDATIONS				
ACBM Location(s) by Assessment Category	Friability	Estimated Quantity	Assessment Category	Physical Description	Recommended Response Action(s)	Date Action Completed	
1976 Building, Exterior Walls (within masonry & beneath cork)	NF	Unknown	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>April 15, 2020</u>		
Inspector's Name: Robert Mallett Inspector Signature: Accreditation #/State: AI900557/MA Expiration Date: 06/01/2020					Management Planner Name: <u>Dustin Diedricksen</u> Management Planner Signature: <u>Accreditation #/State: AP900425/MA</u> Expiration Date: <u>04/05/2020</u>		
I, the LEA's Designated Person, have read and understood the recommendations made above:							

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School: Sandwich High School

Date of Re-Inspection: February 27, 2020

Homogeneous Material: Gray Expansion-Joint Caulking

Sample ID Number: 10A

	ACBM RE-IN	<b>NSPECTION FI</b>	MANAGEMENT PLANNER RECOMMENDATIONS			
ACBM Location(s) by Assessment Category	Friability	Estimated Quantity	Assessment Category	Physical Description	Recommended Response Action(s)	Date Action Completed
1976 Building Expansion Joints	NF	Unknown	5	ACBM with potential for damage	Maintain under O&M Program	Ongoing
Were additional samples of th	is ACBM coll	ected? No	Date of Management Planner Review: <u>April 15, 2020</u>			
Inspector's Name: <u>Robert Mallett</u> Inspector Signature:					Management Planner Name: <u>Dustin Diedricksen</u> Management Planner Signature: <u>Accreditation #/State: AP900425/MA</u> Expiration Date: <u>04/05/2020</u>	2
I, the LEA's Designated Person, have read and understood the recommendations made above:						

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School: <u>Sandwich High School</u>

Homogeneous Material: <u>Tan Vinyl Sheet Flooring</u>

Date of Re-Inspection: <u>February 27, 2020</u> Sample ID Number: <u>08A</u>

	ACBM RE-IN	SPECTION FI	MANAGEMENT PLANNER RECOMMENDATIONS				
ACBM Location(s) by Assessment Category	Friability	Estimated Quantity	Assessment Category	Physical Description	Recommended Response Action(s)	Date Action Completed	
Classrooms C320-C324, C336, C337, Band Practice Rooms P1, P2, & P3, Music Storage Room, & D148	NF	5,500 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>April 15, 2020</u>		
Inspector's Name: <u>Robert Mallett</u> Inspector Signature:					Management Planner Name: <u>Dustin Diedricksen</u> Management Planner Signature: Accreditation #/State: <u>AP900425/MA</u> Expiration Date: <u>04/05/2020</u>		
I, the LEA's Designated Person, have read and understood the recommendations made above:							



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School:	Sandwich	High	School	
	-	0		

Homogeneous Material: Brown Vinyl Sheet Flooring

Date of Re-Inspection: <u>February 27, 2020</u> Sample ID Number: <u>12A</u>

	ACBM RE-IN	<b>ISPECTION FI</b>	MANAGEMENT PLANNER RECOMMENDATIONS					
ACBM Location(s) by Assessment Category	Friability	Estimated Quantity	Assessment Category	Physical Description	Recommended Response Action(s) Date Act Complet			
Auditorium Project Room & Vault	NF	250 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>April 15, 2020</u>			
Inspector's Name: Robert Mallett       Management Planner Name: Dustin Diedricksen         Inspector Signature:       Management Planner Signature:         Accreditation #/State: AI900557/MA       Accreditation #/State: AP900425/MA         Expiration Date: 06/01/2020       Expiration Date: 04/05/2020					2			
I, the LEA's Designated Perso Date: <u>12/15/2020</u>	on, have read a	and understood	the recommendation	ons made above:	Jonte 12bd			



#### School: Sandwich High School

Homogeneous Material: Gray Fiber-Reinforced Cement Fume Hood Panel

Date of Re-Inspection: <u>February 27, 2020</u> Sample ID Number: <u>09A</u>

	ACBM RE-IN	<b>ISPECTION FI</b>	MANAGEMENT PLANNER RECOMMENDATIONS				
ACBM Location(s) by Assessment Category	Friability	Estimated Quantity	Assessment Category	Physical Description	Recommended Response Action(s) Date Action		
Classrooms C321 & C336, Prep Rooms C321/C322, C323/C324, & C336/C337	NF	9 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>April 15, 2020</u>		
Inspector's Name: Robert Mallett       Management Planner Name: Dustin Diedricksen         Inspector Signature:       Management Planner Signature:         Accreditation #/State: AI900557/MA       Accreditation #/State: AP900425/MA         Expiration Date: 06/01/2020       Expiration Date: 04/05/2020					2		
I, the LEA's Designated Person, have read and understood the recommendations made above:							



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School: <u>Sandwich High School</u> Homogeneous Material: <u>Pink Sink Coating</u> Date of Re-Inspection: <u>February 27, 2020</u> Sample ID Number: <u>15A</u>

	ACBM RE-IN	SPECTION FI	MANAGEMENT PLANNER RECOMMENDATIONS					
ACBM Location(s) by Assessment Category	Friability	Estimated Quantity	Assessment Category	Physical Description	Recommended Response Action(s) Date Action			
Room D154	NF	1 EA	5	ACBM with potential for damage	Maintain under O&M Program Ongoing			
Were additional samples of this ACBM collected? Yes					Date of Management Planner Review: <u>April 15, 2020</u>			
Inspector's Name: Robert Mallett       Management Planner Name: Dustin Diedricksen         Inspector Signature:       Management Planner Signature:         Accreditation #/State: AI900557/MA       Accreditation #/State: AP900425/MA         Expiration Date: 06/01/2020       Expiration Date: 04/05/2020					2			
I, the LEA's Designated Person, have read and understood the recommendations made above: Josef 2014 Date: 12/15/2020								



Page 7 of 13

School:	Sandwich	High	Scho	ool	
		0			

Homogeneous Material: Red Duct Sealant

Date of Re-Inspection: <u>February 27, 2020</u> Sample ID Number: <u>11A</u>

	ACBM RE-IN	ISPECTION FI	MANAGEMENT PLANNER RECOMMENDATIONS					
ACBM Location(s) by Assessment Category	Friability	Estimated Quantity	Assessment Category	Physical Description	Recommended Response Action(s) Date Action			
Classrooms C321 & C336, Prep Rooms C321/C322,	NF	60 LF	5	ACBM with potential for	Maintain under O&M Program	Ongoing		
C323/C324, & C336/C337				damage				
Were additional samples of this ACBM collected? No Date of Management Planner Review: <u>April 15, 2020</u>								
Inspector's Name: Robert Mallett       Management Planner Name: Dustin Diedricksen         Inspector Signature:       Management Planner Signature:         Accreditation #/State: AI900557/MA       Accreditation #/State: AP900425/MA					2			
Expiration Date: <u>06/01/2020</u>					Expiration Date: <u>04/05/2020</u>			
I, the LEA's Designated Person, have read and understood the recommendations made above:								



#### School: Sandwich High School

Homogeneous Material: White Generator Breeching Insulation

Date of Re-Inspection: <u>February 27, 2020</u> Sample ID Number: <u>11C-RCM-1229</u>

	ACBM RE-IN	ISPECTION FIN	DINGS		MANAGEMENT PLANNER RECOMMENDATIONS			
ACBM Location(s) by Assessment Category	Friability	Estimated Quantity	Assessment Category	Physical Description	Recommended Response Action(s) Date Act Complet			
3 <sup>rd</sup> Floor Mechanical Space	F	25 LF	6	ACBM with potential for significant damage	No damaged, friable TSI was observed at the time of re-inspection. It is recommended that periodic cleaning shall be performed at least semiannually within the 3 <sup>rd</sup> Floor Mechanical Space. 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 th	Were additional samples of this ACBM collected? No				Date of Management Planner Review: <u>April 15, 2020</u>			
Inspector's Name: <u>Robert Ma</u> Inspector Signature:					Management Planner Name: <u>Dustin Diedricksen</u> Management Planner Signature: <u>Accreditation #/State: AP900425/MA</u>	2		
Accreditation #/State: AI900557/MA       Accreditation #/State: AP900425/MA         Expiration Date: 06/01/2020       Expiration Date: 04/05/2020								
I, the LEA's Designated Perso	on, have read a	and understood th	ne recommendatio	ons made above:	Jonto Dela			
Date: <u>12/15/2020</u>		_						

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#### School: Sandwich High School

Homogeneous Material: Gray Fiber Reinforced Table (Corrugated Bottom)

Date of Re-Inspection: <u>February 27, 2020</u> Sample ID Number: <u>01A-RCM-1108</u>

	ACBM RE-IN	NSPECTION F	INDINGS		MANAGEMENT PLANNER RECOMMENDATIONS			
ACBM Location(s) by Assessment Category	Friability	Estimated Quantity	Assessment Category	Physical Description	Recommended Response Action(s) Date Action			
Classroom C323 Greenhouse	NF	250 SF	5	ACBM with potential for damage	Maintain under O&M Program Ongoin			
Were additional samples of this ACBM collected? No					Date of Management Planner Review: <u>April 15, 2020</u>			
Inspector's Name: <u>Robert Ma</u> Inspector Signature: Accreditation #/State: <u>AI900</u> Expiration Date: <u>06/01/2020</u>	557/MA				Management Planner Name: <u>Dustin Diedricksen</u> Management Planner Signature: Accreditation #/State: <u>AP900425/MA</u> Expiration Date: <u>04/05/2020</u>	2		
I, the LEA's Designated Person, have read and understood the recommendations made above:								

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#### School: Sandwich High School

Homogeneous Material: Gray Fiber-Reinforced Table (Side Board)

Date of Re-Inspection: <u>February 27, 2020</u> Sample ID Number: <u>02A-RCM-1108</u>

	ACBM RE-IN	<b>ISPECTION FI</b>	MANAGEMENT PLANNER RECOMMENDATIONS					
ACBM Location(s) by Assessment Category	Friability	Estimated Quantity	Assessment Category	Physical Description	Recommended Response Action(s) Date Action			
Classroom C323 Greenhouse	NF	100 SF	5	ACBM with potential for damage	Maintain under O&M Program	Ongoing		
Were additional samples of this ACBM collected? No					Date of Management Planner Review: <u>April 15, 2020</u>			
Inspector's Name: <u>Robert Ma</u> Inspector Signature: Accreditation #/State: <u>AI900</u> Expiration Date: <u>06/01/2020</u>	557/MA	40-			Management Planner Name: <u>Dustin Diedricksen</u> Management Planner Signature: Accreditation #/State: <u>AP900425/MA</u> Expiration Date: <u>04/05/2020</u>	2		
I, the LEA's Designated Person, have read and understood the recommendations made above:								

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School:	Sandwich High School

Homogeneous Material: Brown Sill-to-Wall Caulking

Date of Re-Inspection: <u>February 27, 2020</u> Sample ID Number: <u>06A-RCM-1108</u>

	ACBM RE-IN	SPECTION F	INDINGS		MANAGEMENT PLANNER RECOMMENDATIONS			
ACBM Location(s) by Assessment Category	Friability	Estimated Quantity	Assessment Category	Physical Description	Recommended Response Action(s) Date Action			
Classroom C323 Greenhouse	NF	5 LF	5	ACBM with potential for damage	Maintain under O&M Program	Ongoing		
Were additional samples of th	is ACBM coll	ected? No	Date of Management Planner Review: <u>April 15, 2020</u>					
Inspector's Name: <u>Robert Ma</u> Inspector Signature: Accreditation #/State: <u>AI900</u> Expiration Date: <u>06/01/2020</u>	557/MA	HA-			Management Planner Name: <u>Dustin Diedricksen</u> Management Planner Signature: Accreditation #/State: <u>AP900425/MA</u> Expiration Date: <u>04/05/2020</u>	2		
I, the LEA's Designated Perso Date: <u>12/15/2020</u>	on, have read :	and understood	the recommendation	ons made above:	Jantos 26d			



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School: San	<u>dwich High Schoo</u>	<u>)</u>		
* *	11 110	0	<b>.</b> .	

Homogeneous Material: Gray Screw-Head Sealant

Date of Re-Inspection: <u>February 27, 2020</u> Sample ID Number: <u>08A-RCM-1108</u>

	ACBM RE-IN	ISPECTION FI	MANAGEMENT PLANNER RECOMMENT	DATIONS				
ACBM Location(s) by Assessment Category	Friability	Estimated Quantity	Assessment Category	Physical Description	Recommended Response Action(s) Date Act Complet			
Classroom C323 Greenhouse	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>April 15, 2020</u>			
Inspector's Name: Robert Mallett       Management Planner Name: Dustin Diedricksen         Inspector Signature:       Management Planner Signature:         Accreditation #/State: AI900557/MA       Accreditation #/State: AP900425/MA         Expiration Date: 06/01/2020       Expiration Date: 04/05/2020					2			
I, the LEA's Designated Perso Date: <b>12/15/2020</b>	on, have read a	and understood	the recommendation	ons made above:	Jontes 26d			



# Appendix D

Previously Sampled Materials Laboratory Reports

# ProScience Analytical Services, Inc.

Client Name: PO #:	ATC Associates, Inc., N N/A	Woburn											ampled:	7	<b>B8249</b> 7/19/201	
Client Project # Client Referend Method:	#: 60.43378.0001 ce: Sandwich High School, EPA/600/R-93/116	Sandwich	, MA									Date A	eceived nalyzed f Report	7	/27/20 /29/20 //31/20	
<b></b>			Asbestos %						Non-Asbestos %							
	Sample ID	Color	CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW		HAR	SYN	OTH	NO	
	01A	White	0	0	0	0	0	0	0	0	0	0	0	0	10	
Description: Location: Comments:	Joint Compound 323	Is asbestos present? No. Analyzed: Yes														
r			Asbestos %						Non-Asbestos %							
	Sample ID	Calar	CUP	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	ОТН	NO	
	01B	Color White	CHR 0		0		0	0	0	0	0	0	0	0	100	
Description: Location: Comments:	Joint Compound A209	Is asbestos present? No. Analyzed: Yes														
r			Asbestos %						Non-Asbestos %							
	Sample ID	Color	CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NO	
	01C	White	0	0	0	0	0	0	0	0	0	0	0	0	100	
Description: Location: Comments:	Joint Compound .ibrary Is asbestos present? No. Analyzed: Yes															
<b></b>			Asbestos %						Non-Asbestos %							
	Sample ID	Color	CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON	
	02A	Gray	0	0	0	0	0	0	0	60	0	0	0	0	40	
Description: Location: Comments:	Spray-on Fireproofing Library									ls asbes	tos pres	sent? No	). A	nalyzed	: Yes	
			Asbestos %							Non-Asbestos %						
		Color	CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	ОТН	NON	
	Sample ID 02B	Gray	0	0	0	0	0	0	0	20	60	0	5	0	15	
Description: Location: Comments:	Spray-on Fireproofing 3rd Fl., Mechanical Rm.									Is asbes	stos pre	sent? No	). А	nalyzed	: Yes	
			Asbestos %						Non-Asbestos %							
	Sample ID	Color	CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON	
	02C	Gray	0	0	0	0	0	0	0	60	0	0	0	0	40	
Description: Location: Comments:	Spray-on Fireproofing 3rd Fl., Mechanical Rm.									Is asbes	stos pre	sent? No	). Ai	nalyzed:	Yes	

	ATC Associates, Inc., V N/A : 60.43378.0001 e: Sandwich High School, EPA/600/R-93/116		МА									Date A		וד וד וד	38249 19/201 27/201 29/201 31/201
					Asbes	stos %					10000000000	-Asbest			
	Sample ID	Color	CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
	03A	White	0	0	0	0	0	0	0	0	2	0	0	0	98
	Sheetrock Comp. Rm. B220									Is asbes	stos pre	sent? No	р. А	nalyzed	: Yes
					Achor	stos %					Non	-Asbest	os %		
	Sample ID	Color	CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
	03B	Multi	0		0	0	0	0	0	0	5	0	0	0	95
	Sheetrock Library									ls asbes	tos pres	sent? No	). A	nalyzed	: Yes
											Maria	Asheat			
	Sample ID	0.1	OUD	1 4140	$= \sum_{i=1}^{n} (A_{i_1,i_2,\ldots,i_{i_{i_1}},i_{i_1},\ldots,i_{i_{i_{i_{i_{i_{i_{i_{i_{i_{i_{i_{i_{i$	stos %	TOF	ANT	FBG	MNW	CEL	-Asbest HAR	SYN	OTH	NON
	Sample ID 04A	Color Yellow	CHR 30	AMO 0	CRO 0	ACT 0	TRE 0	ANT 0	0	0	0 0	0	0	0	70
Location: Comments:	Training Rm.									ls asbes	tos pres	sent? Ye	s. A	nalyzed	Yes
				a son syn r	Asbes	stos %					Non-	Asbesto	os %		
	Sample ID	Color	CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
	04B		0	0	0	0	0	0	0	0	0	0	0	0	0
Description: Location: Comments:	Yellow Linoleum Training Rm.												A	nalyzed	: No
					. L Margaret	stos %	11.6	la den seran A set seran			Non	-Asbest	os %		
	Sample ID	Color	CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
	05A	Yellow	0	0	0	0	0	0	0	0	0	0	0	0	100
Description: Location: Comments:	Yellow Mastic on Yellow Training Rm.	Linoleum								Is asbes	stos pre	sent? No	р. А	nalyzed	Yes
			188 M24 200	939.8 W	Ashe	stos %	anga ar ar	17 - 14 - 29			Nor	-Asbest	06 %		
	ele ID	Color	CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
	Sample ID 05B	Yellow	0	0	0	0	0	0	0	0	0	0	0	0	100
Description: Location:	Yellow Mastic on Yellow Training Rm.	NUMBER OF STREET									•				Yes

Client Name:	ATC Associates In I														
PO #:	ATC Associates, Inc., \ N/A	Noburn										Bato	h:		B824
Client Project #													Sampleo		7/19/2
	ce: Sandwich High School,	Sandulah										Date	Receive	d: ·	7/27/2
lethod:	EPA/600/R-93/116	Sanuwich	, MA										Analyzed		7/29/2
												Date	of Repor	t: ·	7/31/20
	0				Asbe	stos %			1		No	n-Asbe	stos %		
	Sample ID 06A	Color	CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW			_	OTH	NC
<b></b>		Tan	0	0	0	0	0	0	0	0	0	0	0	0	10
Description: Location:	Tan 12" Floor Tile														
Comments:	Guidance Storage														
ooninents.										Is asbe	estos pr	esent? I	No.	Analyze	d: Ye
	Sample ID	Color	CUD		1.0 Crai 9112.9	stos %			-			n-Asbes		1	1
	06B	Tan	CHR 0	AMO 0	CRO 0	ACT 0	TRE 0	ANT 0	FBG 0	MNW 0	CEL 0	HAR	SYN	ОТН 0	10
Description:	Tan 12" Floor Tile			<u> </u>				1 0			<u> </u>				1 10
Location:	Elec. Rm. A216														
Comments:										Is asbes	stos nre	sent? N	~ /	Analyzed	· Va
										13 4300				analyzee	. 10
					Asbe	stos %		· · · · · · · · · · · · · · · · · · ·	· · · · ·		Non	-Asbes	tos %		
	Comula ID	Color	CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NO
	Sample ID				A CONTRACTOR OF										
Description:	07A Yellow Mastic on Tan 12'	Yellow	0	0	0	0	0	0	0	0	0	0	0	0	100
Description: Location: Comments:	07A	Yellow	0				0	and the second se		0 Is asbes	1			0 Inalyzed	1
Location:	07A Yellow Mastic on Tan 12'	Yellow	0		0		0	and the second se			tos pres	sent? No	р. А		1
Location:	07A Yellow Mastic on Tan 12'	Yellow	0		0	0	0 TRE	and the second se			tos pres		o. A os %	nalyzed	100 : Yes
Location:	07A Yellow Mastic on Tan 12' Guidance Storage	Yellow " Floor Tile	0	0	0 Asbe	0 stos %		0		s asbes	tos pres Non-	sent? No	р. А		: Yes
Location: Comments:	07A Yellow Mastic on Tan 12' Guidance Storage Sample ID 07B	Yellow Floor Tile Color Yellow	0 CHR 0	0 AMO	0 Asbe CRO	0 stos % ACT	TRE	0 ANT	FBG	s asbes	tos pres Non- CEL	sent? No Asbest HAR	o. A os % SYN	nalyzed	: Yes
Location:	07A Yellow Mastic on Tan 12' Guidance Storage Sample ID	Yellow Floor Tile Color Yellow	0 CHR 0	0 AMO	0 Asbe CRO	0 stos % ACT	TRE	0 ANT	FBG	s asbes	tos pres Non- CEL	sent? No Asbest HAR	o. A os % SYN	nalyzed	: Yes
Location: Comments: Description:	07A Yellow Mastic on Tan 12' Guidance Storage Sample ID 07B Yellow Mastic on Tan 12'	Yellow Floor Tile Color Yellow	0 CHR 0	0 AMO	0 Asbe CRO	0 stos % ACT	TRE	0 ANT	FBG 0	s asbes	tos pres Non CEL 0	Asbest HAR 0	o. A os % SYN 0	nalyzed	: Yes NOI 100
Location: Comments: Description: Location:	07A Yellow Mastic on Tan 12' Guidance Storage Sample ID 07B Yellow Mastic on Tan 12'	Yellow Floor Tile Color Yellow	0 CHR 0	0 AMO	Asbe CRO 0	0 stos % ACT 0	TRE	0 ANT	FBG 0	Is asbes	Non CEL 0	Asbest HAR 0	o. A os % SYN 0	nalyzed OTH 0	: Yes NON 100
Location: Comments: Description: Location: Comments:	07A Yellow Mastic on Tan 12' Guidance Storage Sample ID 07B Yellow Mastic on Tan 12'' Elec. Rm. A216	Yellow Floor Tile Color Yellow Floor Tile	0 CHR 0	0 AMO 0	Asbe CRO 0	0 stos % ACT 0	TRE 0	0 ANT 0	FBG 0	MNW 0 s asbes	Non- CEL 0 tos pres	Asbest HAR 0 sent? No	o. A os % SYN 0 o. A	nalyzed OTH 0 nalyzed:	: Yes NON 100 : Yes
Location: Comments: Description: Location: Comments:	07A Yellow Mastic on Tan 12' Guidance Storage Sample ID 07B Yellow Mastic on Tan 12'' Elec. Rm. A216 Sample ID	Yellow Floor Tile Color Yellow	0 CHR 0	0 AMO	Asbe CRO 0	0 stos % ACT 0	TRE	0 ANT	FBG 0	MNW 0 s asbes	Non- CEL 0 tos pres	Asbest HAR 0 sent? No Asbest HAR	o. A os % SYN 0 o. A os % SYN	nalyzed OTH 0 nalyzed: OTH	: Yes NON 100
Location: Comments: Description: Location: Comments:	07A Yellow Mastic on Tan 12" Guidance Storage Sample ID 07B Yellow Mastic on Tan 12" Elec. Rm. A216 Sample ID 08A	Yellow Floor Tile Color Yellow Floor Tile Color	0 CHR 0 CHR	0 AMO 0	Asbe CRO 0 Asbe	0 stos % ACT 0	TRE 0 TRE	0 ANT 0	FBG 0 FBG	MNW 0 s asbes	Non- CEL 0 tos pres	Asbest HAR 0 sent? No	o. A os % SYN 0 o. A	nalyzed OTH 0 nalyzed:	: Yes NON 100
Location: Comments: Description: Location: Comments: Description:	07A Yellow Mastic on Tan 12' Guidance Storage Sample ID 07B Yellow Mastic on Tan 12'' Elec. Rm. A216 Sample ID 08A Tan Sheet Floor	Yellow Floor Tile Color Yellow Floor Tile Color	0 CHR 0 CHR	0 AMO 0	Asbe CRO 0 Asbe	0 stos % ACT 0	TRE 0 TRE	0 ANT 0	FBG 0 FBG	MNW 0 s asbes	Non- CEL 0 tos pres	Asbest HAR 0 sent? No Asbest HAR	o. A os % SYN 0 o. A os % SYN	nalyzed OTH 0 nalyzed: OTH	: Yes
Location: Comments: Description: Location: Comments: Description: Location:	07A Yellow Mastic on Tan 12" Guidance Storage Sample ID 07B Yellow Mastic on Tan 12" Elec. Rm. A216 Sample ID 08A	Yellow Floor Tile Color Yellow Floor Tile Color	0 CHR 0 CHR	0 AMO 0	Asbe CRO 0 Asbe	0 stos % ACT 0	TRE 0 TRE	0 ANT 0	FBG 0 FBG 0	s asbes MNW 0 s asbes MNW 0	Non- CEL 0 tos pres	Asbest HAR 0 Asbest HAR 0	o. A os % SYN 0 os % SYN 0	nalyzed OTH 0 nalyzed: OTH 0	: Yes NON 100 : Yes NON 70
Location: Comments: Description: Location: Comments: Description:	07A Yellow Mastic on Tan 12' Guidance Storage Sample ID 07B Yellow Mastic on Tan 12'' Elec. Rm. A216 Sample ID 08A Tan Sheet Floor	Yellow Floor Tile Color Yellow Floor Tile Color	0 CHR 0 CHR	0 AMO 0	Asbe CRO 0 Asbe	0 stos % ACT 0	TRE 0 TRE	0 ANT 0	FBG 0 FBG 0	MNW 0 s asbes	Non- CEL 0 tos pres	Asbest HAR 0 Asbest HAR 0	o. A os % SYN 0 os % SYN 0	nalyzed OTH 0 nalyzed: OTH	: Yes NON 100 : Yes NON 70
Location: Comments: Description: Location: Comments: Description: Location:	07A Yellow Mastic on Tan 12' Guidance Storage Sample ID 07B Yellow Mastic on Tan 12'' Elec. Rm. A216 Sample ID 08A Tan Sheet Floor	Yellow Floor Tile Color Yellow Floor Tile Color	0 CHR 0 CHR	0 AMO 0	Asbe CRO 0 Asbe	o stos % ACT 0	TRE 0 TRE	0 ANT 0	FBG 0 FBG 0	s asbes MNW 0 s asbes MNW 0	Non- CEL 0 tos pres Non- CEL 0	Asbest HAR 0 sent? No Asbest HAR 0	o. A os % SYN 0 o. A os % SYN 0 ss. A	nalyzed OTH 0 nalyzed: OTH 0	: Yes NON 100 : Yes NON 70
Location: Comments: Description: Location: Comments: Description: Location: Comments:	07A Yellow Mastic on Tan 12" Guidance Storage Sample ID 07B Yellow Mastic on Tan 12" Elec. Rm. A216 Sample ID 08A Tan Sheet Floor C320	Yellow Floor Tile Color Yellow Floor Tile Color	0 CHR 0 CHR	0 AMO 0	Asbe CRO 0 Asbe CRO 0	o stos % ACT 0	TRE 0 TRE	0 ANT 0	FBG 0 FBG 0	s asbes MNW 0 s asbes MNW 0	Non- CEL 0 tos pres Non- CEL 0	Asbest HAR 0 Asbest HAR 0	o. A os % SYN 0 o. A os % SYN 0 ss. A	nalyzed OTH 0 nalyzed: OTH 0	: Yes NON 100 : Yes NON 70
Location: Comments: Description: Location: Comments: Description: Location: Comments:	07A Yellow Mastic on Tan 12' Guidance Storage Sample ID 07B Yellow Mastic on Tan 12'' Elec. Rm. A216 Sample ID 08A Tan Sheet Floor	Yellow Floor Tile Color Yellow Floor Tile Color Tan	0 CHR 0	0 AMO 0	Asbe CRO 0 Asbes CRO 0	tos %	TRE 0 TRE 0	0 ANT 0	FBG 0 FBG 0	MNW 0 s asbes MNW 0 s asbes	Non- CEL 0 tos pres Non- CEL 0	Asbest HAR 0 Asbest HAR 0 sent? Ye Asbest	o. A os % SYN 0 os % SYN 0 es. A os %	nalyzed OTH 0 nalyzed: nalyzed:	: Yes NON 100 : Yes NON 70 Yes
Location: Comments: Description: Location: Comments: Description: Location: Comments:	07A Yellow Mastic on Tan 12" Guidance Storage Sample ID 07B Yellow Mastic on Tan 12" Elec. Rm. A216 Sample ID 08A Tan Sheet Floor C320 Sample ID 08B	Yellow Floor Tile Color Yellow Floor Tile Color Tan	0 CHR 0 CHR 30	0 AMO 0 AMO 0	Asbee CRO 0 Asbees CRO CRO	o stos % ACT 0 stos % ACT	TRE 0 TRE 0	0 ANT 0 ANT 0	FBG 0 FBG 0 FBG	MNW 0 s asbes MNW 0 s asbes MNW	Non- CEL 0 tos pres Non- CEL 0 Non- CEL	Asbest HAR 0 Asbest HAR 0 Sent? Ye Asbest HAR	o. A SYN 0 0 0 0 SYN 0 SYN 0 SYN 0 SYN	nalyzed OTH 0 nalyzed: 0 nalyzed: 0 TH	: Yes NON 100 : Yes NON
Location: Comments: Description: Location: Comments: Description: Location: Comments:	07A Yellow Mastic on Tan 12' Guidance Storage Sample ID 07B Yellow Mastic on Tan 12" Elec. Rm. A216 Sample ID 08A Tan Sheet Floor C320	Yellow Floor Tile Color Yellow Floor Tile Color Tan	0 CHR 0 CHR 30	0 AMO 0 AMO 0	Asbee CRO 0 Asbees CRO CRO	o stos % ACT 0 stos % ACT	TRE 0 TRE 0	0 ANT 0 ANT 0	FBG 0 FBG 0 FBG	MNW 0 s asbes MNW 0 s asbes MNW	Non- CEL 0 tos pres Non- CEL 0 Non- CEL	Asbest HAR 0 Asbest HAR 0 Sent? Ye Asbest HAR	o. A SYN 0 0 0 0 SYN 0 SYN 0 SYN 0 SYN	nalyzed OTH 0 nalyzed: 0 nalyzed: 0 TH	: Yes NOI 100 : Yes NON

	Client Name:	ATC Associates, Inc., W	le hum												_	
	PO #:	N/A	oburn										Batch		E	382498
	Client Project #												Date Sa	-		19/2012
	Client Reference	ce: Sandwich High School,	Sandwich	. MA									Date Re			27/2012
	Method:	EPA/600/R-93/116		,									Date Ar			/29/2012
1													Date of	кероп:	7	/31/2012
						Asbes	stos %	e.	10			Non	-Asbest	os %		
		Sample ID 09A	Color	CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
		USA	Black	25	0	0	0	0	0	0	0	0	0	0	0	75
	Description:	Red Transite Hood														
	Location:	322 Prep														
	Comments:										Is asbe	stos pre	sent? Ye	es. A	nalyzed	: Yes
					V. ar grades	Ashes	stos %			[		Non	-Asbest	os %		
		Sample ID	Color	CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
		09B		0	0	0	0	0	0	0	0	0	0	0	0	0
	Description:	Red Transite Hood											-			
	Location:	322 Prep														
	Comments:													А	nalyzed	: No
1				per ser es	La superior	Achor	stos %	·	<u></u>			Non	Asbest	05 %		
		Sample ID	Color	CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
		10A	Tan	10	0	0	0	0	0	0	0	0	0	0	0	90
1																
	Description:	Expansion Joint Caulking								•						
	Location: Comments:	Elec. Rm. by B129 Office									ls asbes	tos pres	sent? Ye	s. A	nalyzed	: Yes
	oomments.															
1				a dand	1997 - 19	Ashee	stos %		• • • • •			Non	Asbest	ns %		
		Sample ID	Color	CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
		10B		0	0	0	0	0	0	0	0	0	0	0	0	0
	Description:	Expansion Joint Caulking														
	Location:	Elec. Rm. by B129 Office												A	nalyzed	i: No
	Comments:															
-				1999 - 1997 - 19	and the second second	Ashes	stos %	- 	1.1.14.2			Non	-Asbest	05 %		
	All shifts		Color	CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
		Sample ID	Red	5	0	0	0	0	0	0	0	0	0	0	0	95
		11A														
	Description:	Red Duct Sealant														
	Location:	G Wing - 3rd Floor									Is ashe	stos pre	sent? Ye	es. A	nalyzed	l: Yes
	Comments:											p.0				
ļ						Seva La se	4 0/	Stephen and				Nor	-Asbest	00 %		
			_		ANO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
		Sample ID	Color	CHR 0		0				0	0	0	0	0	0	0
		11B		0	U					l	1000	Star Sec. 1				
	Description:	Red Duct Sealant														
	Location:	G Wing - 3rd Floor												A	nalyzed	: No
		-														
	Comments:															

Client Name: PO #: Client Project #: Client Reference Method:	ATC Associates, Inc., V N/A 60.43378.0001 : Sandwich High School, EPA/600/R-93/116		, MA									Date Date	c <b>h:</b> Sample Receive Analyze of Repo	d: :d: :d:	<b>B82498</b> 7/19/2012 7/27/2012 7/29/2012 7/31/2012
				1	Asbe	stos %			1		No	n-Asbe	stos %		
S	ample ID	Color	CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW					NON
	12A	Brown	30	. 0	0	0	0	0	0	0	2	0	0	0	68
	Brown Sheet Floor Auditorium Projection Rm									ls asb	estos pr	esent?	Yes.	Analyzed	d: Yes
					Asha	stos %			1		No	n-Asbes	stos %		
S	ample ID	Color	CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	0.000	HAR		OTH	NON
	12B		0	0	0	0	0	0	0	0	0	0	0	0	0
	Brown Sheet Floor /ault D151			_									,	Analyzed	l: No
			9	. Seal also	Asbe	stos %	an ar st	(x x,)			Non	-Asbes	tos %		
S	ample ID	Color	CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
	13A	White	0	0	0	0	0	0	0	0	20	0	0	0	80
Location: [ Comments:	D145									ls asbes	stos pres	sent? N	o. A	Analyzed	: Yes
			1210		Asbe	stos %	ALL SALES				Non	Asbest	os %		
S	ample ID	Color	CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
	13B	White	0	0	0	0	0	0	0	0	20	0	0	0	80
and the second	White Sink Coating Prep Off C228									ls asbes	itos pres	ent? No	р. А	nalyzed:	Yes
					the state of the s	stos %					Non	Asbest	os %		
S	ample ID	Color	CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
	14A	Black	0	0	0	0	0	0	0	0	0	0	0	0	100
New dimensional programming the	Black Sink Coating 2nd Fl., Library									ls asbes	stos pres	sent? No	р. А	nalyzed:	Yes
				station and a	Ashes	tos %		- 25 <b>,7</b> 8,3 3			Ner	Achert	on 9/		
	ample ID	Color	CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	-Asbest HAR	OS %	OTH	NON
3	14B	Black	0	0	0	0	0	0	0	0	0 0	0	0	0	100
	Black Sink Coating 334 Prep Room									ls asbes	itos pres	ent? No	. Ai	nalyzed:	Yes

Client Name:	ATC Associates, Inc., V N/A	Voburn										Batch	:	E	382498
PO #: Client Project #												Date Sa			19/2012
	ce: Sandwich High School,	o										Date Re		7/	27/2012
Method:	EPA/600/R-93/116	Sandwich,	MA									Date Ar			/29/2012
Mourou	217000000-000110											Date of	Report:	7/	/31/2012
					Asbes	tos %			<b></b>		Non	-Asbest	05 %		
	Sample ID	Color	CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
	15A	Pink	5	0	0	0	0	0	0	0	0	0	0	0	95
Description:	Pink Sink Coating														
Location:	D154														
Comments:										Is asbes	stos pre	sent? Ye	es. A	nalyzed	: Yes
		-													
				1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	Asbes	tos %		1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -			Non	-Asbest	os %		
	Sample ID	Color	CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
	15B		0	0	0	0	0	0	0	0	0	0	0	0	0
Description:	Pink Sink Coating														
Location:	D154											·			
Comments:													Α	nalyzed	: No
			a gran wa		Asbes	itos %					Non	Asbest	os %		
	Sample ID	Color	CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
	16A	Black	20	0	0	0	0	0	0	0	0	0	0	0	80
Description:	Black Mastic on Struc. S	teel Colum	n behind	Cork											
Location:	3rd Fl. Mech. Rm.														
Comments:										ls asbes	tos pres	sent? Ye	s. A	nalyzed	l: Yes
				an an the second se	A 1 SCHOOL STOCK 1 MILL	stos %	and a star of					Asbest		OTU	
	Sample ID	Color	CHR	AMO	CRO	ACT	TRE	ANT 0	FBG 0	MNW 0	CEL 0	HAR 0	SYN 0	OTH 0	NON 0
	16B		0	0	0	0	0	U	U	U	U	0	0	U	
Description:	Black Mastic on Struc. S	teel Colum	n behind	Cork											
Location:	3rd Fl. Mech. Rm.														I: No
Comments:										,			A	nalyzed	. NO
<b></b>					CONTRACTOR IN A	ACT	TRE	ANT	FBG	MNW	CEL	-Asbest HAR	OS %	ОТН	NON
	Sample ID	Color	CHR 0	AMO 0	CRO 0		0		0	0	0	0	0	0	100
	17A	Multi	0	U										ALC: NO.	
Description:	Lab Table Top		54. 1												
Location:	323									le acho	etne nro	sent? No	n 4	nalyzed	: Yes
Comments:										13 2306	stoa pre				
								a ann an a			New	n-Asbest	08 %		
			an a		ALC: NUMBER OF STREET	stos %	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
	Sample ID	Color	CHR	AMO	CRO	ACT 0	0		0	0	OEL	0	0	0	100
	17B	Multi	0	0					1	100 B.	1				
Description:	: Lab Table Top														
Location:	324									is ashe	stos pre	sent? No	b. A	nalyzed	: Yes
Comments:										10 0000					
	A														

PO #: N/A Client Project #: 60. Client Reference: Sat	A 43378.0001 ndwich High School,		MA									Date Sar Date Ree Date Ana	ceived: alyzed:	7/1 7/2 7/2	<b>32498</b> 9/2012 7/2012 9/2012 9/2012 31/2012
					Ashaa	4 9/					Non	Achosto	e %		
0				4110	11111111111		TDE	ANT	FBG	MNW	CONCAL STREET		1972 - 1987-12 <sub>1997-1</sub>	OTH	NON
							And the second second	CALL STREET		Bern Hardenberger	and the second s	A CONTRACTOR OF THE	Construction of the	0	100
Description: Brow	n Cove Base Mastic			U						Is asbes	stos pres	sent? No	. Aı	nalyzed:	Yes
						4 B/					Non	Asbest	os %		
Se					2 Maturitary		TPE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
			and the second s				Constantine of the			the subscription of the second	0	0	0	0	100
		:								ls asbes	itos pres	sent? No	. A	nalyzed:	Yes
			and the s	an a	Asbe	stos %					Non	Asbest	os %		
Sam	nle ID	Color	CHR	AMO	-	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
		Gray	0	0	0	0	0	0	0	0	0	0	0	0	100
										Is asbes	stos pres	sent? No	. А	nalyzed	: Yes
			- 2 - 1	STREET, SAME	Asbe	stos %	N.Y.M.	0.01%			Non	Asbest	os %		
		Color	CHR	AMO	Sector Se	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
			0	0	0	0	·0	0	0	0	0	0	0	0	100
Location: 3rd Comments: Asbestos Codes:	FI., Mechanical Rm.	MO = Amosite	Wool	CEL = C	ellulose	HA	R = Hair			molite	ANT = . TH = Other	Anthophyllit NC	: N = Non-F	ibrous Mine	erals
	PO #: N// Client Project #: 60. Client Reference: Sa Method: EP Description: Brow Location: 323 T Comments: Description: Brow Location: 324 Comments: Sam 18 Description: Brow Location: 324 Comments: Sam 10 Description: Gray Location: Libr Comments: Sam 1 Description: Gray Location: Libr Comments: Sam	PO #: N/A Client Project #: 60.43378.0001 Client Reference: Sandwich High School, Method: EPA/600/R-93/116 Sample ID 18A Description: Brown Cove Base Mastic Location: 323 Teacher/Lab Station Comments: Sample ID 18B Description: Brown Cove Base Mastic Location: 324 - Tall Cabinet Comments: Sample ID 19A Description: Gray Duct Sealant Location: Library Comments: Sample ID 19B Description: Gray Duct Sealant Location: 3rd FL, Mechanical Rm. Comments:	PO #: N/A Client Project #: 60.43378.0001 Client Reference: Sandwich High School, Sandwich, Method: EPA/600/R-93/116 Sample ID Color 18A pk. Brown Description: Brown Cove Base Mastic Location: 323 Teacher/Lab Station Comments: Sample ID Color 18B pk. Brown Description: Brown Cove Base Mastic Location: 324 - Tall Cabinet Comments: Sample ID Color 19A Gray Description: Gray Duct Sealant Location: Library Comments: Comments: Sample ID Color 19B Gray Description: Gray Duct Sealant Location: Jibrary Comments: Abbesto Codes: CHR = Chrysotile AMO = Amosile NWY = Mineral	PO #: N/A Client Project #: 60.43378.0001 Client Reference: Sandwich High School, Sandwich, MA Method: EPA/600/R-93/116 Sample ID Color CHR 18A Dk. Browr 0 Description: Brown Cove Base Mastic Location: 323 Teacher/Lab Station Comments: Sample ID Color CHR 18B Dk. Browr 0 Description: Brown Cove Base Mastic Location: 324 - Tall Cabinet Comments: Sample ID Color CHR 19A Gray 0 Description: Gray Duct Sealant Location: Library Comments: Sample ID Color CHR 19B Gray 0 Description: Gray Duct Sealant Location: Library Comments: Comments: Comments: Comments: Comments: Comments: Color CHR 19B Gray 0 Description: Gray Duct Sealant Location: Jibrary Comments: Comments: Comments: Comments: Comments: Comments: CHR = Chrysoile AMO = Amosite MVW = Mineral Wool	PO #: N/A Client Project #: 60.43378.0001 Client Reference: Sandwich High School, Sandwich, MA Method: EPA/600/R-93/116 Sample ID Color CHR AMO 18A pk. Browr 0 0 Description: Brown Cove Base Mastic Location: 323 Teacher/Lab Station Comments: Sample ID Color CHR AMO 18B pk. Browr 0 0 Description: Brown Cove Base Mastic Location: 324 - Tall Cabinet Comments: Sample ID Color CHR AMO 19A Gray 0 0 Description: Gray Duct Sealant Location: Library Comments: Sample ID Color CHR AMO 19B Gray 0 0 Description: Gray Duct Sealant Location: Jrd FL, Mechanical Rm. Comments:	PO #: N/A Client Project #: 60.43378.0001 Client Reference: Sandwich High School, Sandwich, MA Method: EPA/600/R-93/116 Sample ID Color CHR AMO CRO 18A pk. Browr 0 0 0 Description: Brown Cove Base Mastic Location: 323 Teacher/Lab Station Comments: Sample ID Color CHR AMO CRO 18B pk. Browr 0 0 0 Description: Brown Cove Base Mastic Location: 324 - Tall Cabinet Comments: Sample ID Color CHR AMO CRO 19A Gray 0 0 0 Description: Gray Duct Sealant Location: Library Comments: Sample ID Color CHR AMO CRO 19B Gray 0 0 0 Description: Gray Duct Sealant Location: Jray Duct Sealant Location: 3rd Fl., Mechanical Rm. Comments: Abbetos Codes: CHR = Chrysotile AMO = Amosite NWW = Mineral Wool CRO - Colordotite CHR = Chrysotile AMO = Amosite NWW = Mineral Wool CRO - Colordotite CRO = Crodidotite CRO = Crodid	PO #:         N/A           Client Project #:         60.43378.0001           Client Reference:         Sample ID           Color         CHR           AMO         CRO           Asbestos %           Sample ID         Color           18A         pk. Brown           0         0           Description:         Brown Cove Base Mastic           Location:         323 Teacher/Lab Station           Comments:         Color           CHR         AMO           CRO         ACT           18B         pk. Brown           0         0           Description:         Brown Cove Base Mastic           Location:         324 - Tall Cabinet           Comments:         Color           Sample ID         Color           Sample ID         Color           Color         Asbestos %           Sample ID         Color           Color         HR           MO         RO           Description:         Gray Duct Sealant           Location:         Library           Comments:         Color           Color         CHR           Sample ID	PO #:         N/A           Client Project #:         60.43378.0001           Client Reference:         Sandwich High School, Sandwich, MA           Method:         EPA/600/R-93/116           Sample ID         Color         CHR         Asbestos %           Sample ID         Color         CHR         AMO         CRO         ACT         TRE           18A         pk. Brown         0<	PO #:         N/A           Client Project #:         60.43378.0001           Client Reference:         Sandwich High School, Sandwich, MA           Method:         EPA/600/R-93/116           Sample ID         Color         CHR         AMO         CRO         ACT         TRE         ANT           18A         pk. Brown         0 <td>PO #:       N/A         Client Project #:       60.43378.0001         Client Reference:       Sandwich High School, Sandwich, MA         Method:       EPA/600/R-93/116         Sample ID       Color       CHR       AMO       CRO       ACT       TRE       ANT       FBG         18A       Dk. Brown       0</td> <td>PO #:         N/A           Client Reference:         Sandwich High School, Sandwich, MA           Method:         EPA/600/R-93/116           Sample ID         Color         CHR         AMO         CRO         ACT         TRE         ANT         FBG         MNW           18A         pk. Brown         0</td> <td>Souther         N/A           Client Project #:         60.43378.0001           Client Reference:         Samble ID           Color         CHR           Abbestos %         Non-           Sample ID         Color           Color         CHR           18A         Dk. Brown           Description:         Brown Cove Base Mastic           Location:         323 Teacher/Lab Station           Comments:         Is asbestos %           Non-         Sample ID           Color         CHR           Abbestos %         Non           Sample ID         Color           CHR         AMO CRO           Asbestos %         Non           Sample ID         Color           CHR         AMO CRO           Asbestos %         Non           Cocation:         324 - Tail Cabinet           Comments:         Is asbestos %           Sample ID         Color           CHR         AMO CRO           19A         Gray           O         O           Description:         Gray Duct Sealant           Location:         3rd FL, Mechanical Rm.           Ibrary         <td< td=""><td>PO #:       N/A       Date Sar       Date Sar         Client Project #:       60.43378.0001       Sandwich, MA       Date Arr         Method:       EPA/600/R-93/118       Date Sar       Date Arr         Sample ID       Color       CHR       AMO       CRO       ACT       TRE       ANT       FBG       MNW       CEL       HAR         18A       pk. Brown       0</td><td>PO #:         N/A         Date Sampled: Date Received: Date Analyzed: Date Analyzed:</td><td>Sample ID         Color         CHR         AMO         CRO         ACT         TRE         ANT         PBG         MNW         CEL         HAR         SYN         OTH           Ident References:         Sample ID         Color         CHR         Abbestos %         Non-Asbestos %         Ote A nalyzet:         7/2           Ident References:         Sample ID         Color         CHR         AMO         CRO         ACT         TRE         ANT         PBG         MNW         CEL         HAR         SYN         OTH           Isa         Sample ID         Color         CHR         AMO         CRO         ACT         TRE         ANT         PBG         MNW         CEL         HAR         SYN         OTH         Asbestos %         Non-Asbestos %</td></td<></td>	PO #:       N/A         Client Project #:       60.43378.0001         Client Reference:       Sandwich High School, Sandwich, MA         Method:       EPA/600/R-93/116         Sample ID       Color       CHR       AMO       CRO       ACT       TRE       ANT       FBG         18A       Dk. Brown       0	PO #:         N/A           Client Reference:         Sandwich High School, Sandwich, MA           Method:         EPA/600/R-93/116           Sample ID         Color         CHR         AMO         CRO         ACT         TRE         ANT         FBG         MNW           18A         pk. Brown         0	Souther         N/A           Client Project #:         60.43378.0001           Client Reference:         Samble ID           Color         CHR           Abbestos %         Non-           Sample ID         Color           Color         CHR           18A         Dk. Brown           Description:         Brown Cove Base Mastic           Location:         323 Teacher/Lab Station           Comments:         Is asbestos %           Non-         Sample ID           Color         CHR           Abbestos %         Non           Sample ID         Color           CHR         AMO CRO           Asbestos %         Non           Sample ID         Color           CHR         AMO CRO           Asbestos %         Non           Cocation:         324 - Tail Cabinet           Comments:         Is asbestos %           Sample ID         Color           CHR         AMO CRO           19A         Gray           O         O           Description:         Gray Duct Sealant           Location:         3rd FL, Mechanical Rm.           Ibrary <td< td=""><td>PO #:       N/A       Date Sar       Date Sar         Client Project #:       60.43378.0001       Sandwich, MA       Date Arr         Method:       EPA/600/R-93/118       Date Sar       Date Arr         Sample ID       Color       CHR       AMO       CRO       ACT       TRE       ANT       FBG       MNW       CEL       HAR         18A       pk. Brown       0</td><td>PO #:         N/A         Date Sampled: Date Received: Date Analyzed: Date Analyzed:</td><td>Sample ID         Color         CHR         AMO         CRO         ACT         TRE         ANT         PBG         MNW         CEL         HAR         SYN         OTH           Ident References:         Sample ID         Color         CHR         Abbestos %         Non-Asbestos %         Ote A nalyzet:         7/2           Ident References:         Sample ID         Color         CHR         AMO         CRO         ACT         TRE         ANT         PBG         MNW         CEL         HAR         SYN         OTH           Isa         Sample ID         Color         CHR         AMO         CRO         ACT         TRE         ANT         PBG         MNW         CEL         HAR         SYN         OTH         Asbestos %         Non-Asbestos %</td></td<>	PO #:       N/A       Date Sar       Date Sar         Client Project #:       60.43378.0001       Sandwich, MA       Date Arr         Method:       EPA/600/R-93/118       Date Sar       Date Arr         Sample ID       Color       CHR       AMO       CRO       ACT       TRE       ANT       FBG       MNW       CEL       HAR         18A       pk. Brown       0	PO #:         N/A         Date Sampled: Date Received: Date Analyzed: Date Analyzed:	Sample ID         Color         CHR         AMO         CRO         ACT         TRE         ANT         PBG         MNW         CEL         HAR         SYN         OTH           Ident References:         Sample ID         Color         CHR         Abbestos %         Non-Asbestos %         Ote A nalyzet:         7/2           Ident References:         Sample ID         Color         CHR         AMO         CRO         ACT         TRE         ANT         PBG         MNW         CEL         HAR         SYN         OTH           Isa         Sample ID         Color         CHR         AMO         CRO         ACT         TRE         ANT         PBG         MNW         CEL         HAR         SYN         OTH         Asbestos %         Non-Asbestos %

C

EMSL Order: 131700081 **EMSL** Analytical, Inc. Customer ID: ENVI54 5 Constitution Way, Unit A Woburn, MA 01801 Customer PO: 20160762.A1E-15 Tel/Fax: (781) 933-8411 / (781) 933-8412 Project ID: http://www.EMSL.com / bostonlab@emsl.com Attention: Dustin Diedricksen Phone: (617) 778-3750 Fuss & O'Neill EnviroScience, LLC Fax: (888) 838-1160 146 Hartford Road Received Date: 12/30/2016 9:17 AM Manchester, CT 06040 Analysis Date: 01/09/2017 Collected Date: 12/29/2016 Project: 20160762.A1E Task 15 / Sandwich Public Schools, 3-Yr AHERA Re-Inspections / Sandwich High School - 365 Quaker Meeting House Road, Sandwich, MA

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

Sample			Non-Asbes	stos	Asbestos
Sample	Description	Appearance	% Fibrous	% Non-Fibrous	% Type
01A-RCM-1229	Classroom C320 - 2'x4' White Faux 2'x2' Suspended Ceiling	Gray/White Fibrous Homogeneous	40% Cellulose 40% Min. Wool	20% Non-fibrous (Other)	None Detected
	Tile	Homogeneous			
01B-RCM-1229	B-Wing Hallway -	Gray/White	40% Cellulose	20% Non-fibrous (Other)	None Detected
131700081-0002	2'x4' White Faux 2'x2' Suspended Ceiling	Fibrous Homogeneous	40% Min. Wool		
	Tile				
02A-RCM-1229	Classroom C325 - 12"x12" Purple	Purple Non-Fibrous		100% Non-fibrous (Other)	None Detected
131700081-0003	Mottled Floor Tile	Homogeneous			
02B-RCM-1229	Classroom C329 - 12"x12" Purple	Purple Non-Fibrous		100% Non-fibrous (Other)	None Detected
131700081-0004	Mottled Floor Tile	Homogeneous			
03A-RCM-1229	Classroom C325 - 12"x12" Yellow	Yellow Non-Fibrous		100% Non-fibrous (Other)	None Detected
131700081-0005	Mottled Floor Tile	Homogeneous			
03B-RCM-1229	Classroom C329 - 12"x12" Yellow	Yellow Non-Fibrous		100% Non-fibrous (Other)	None Detected
131700081-0006	Mottled Floor Tile	Homogeneous			
04A-RCM-1229	Classroom C325 - 12"x12" Tan Mottled	Beige Non-Fibrous		100% Non-fibrous (Other)	None Detected
131700081-0007	Floor Tile	Homogeneous			
04B-RCM-1229	Classroom C329 - 12"x12" Tan Mottled	Beige Non-Fibrous		100% Non-fibrous (Other)	None Detected
131700081-0008	Floor Tile	Homogeneous			
05A-RCM-1229	Woodshop - 2'x4'	Brown/White	60% Cellulose	40% Non-fibrous (Other)	None Detected
131700081-0009	White Gypsum Suspended Ceiling	Fibrous Homogeneous			
	Tile				
05B-RCM-1229	Kitchen #1 - 2'x4'	Brown/White	60% Cellulose	40% Non-fibrous (Other)	None Detected
131700081-0010	White Gypsum Suspended Ceiling Tile	Fibrous Homogeneous			
06A-RCM-1229	Classroom C325 -	Tan		100% Non-fibrous (Other)	None Detected
131700081-0011	Tan Mastic Associated with 12"x12" Floor Tile	Non-Fibrous Homogeneous			
06B-RCM-1229	Classroom C329 -	Tan		100% Non-fibrous (Other)	None Detected
131700081-0012	Tan Mastic Associated with 12"x12" Floor Tile	Non-Fibrous Homogeneous			
07A-RCM-1229	A/V Storage - 12"x12" Blue Mottled Floor	Blue Non-Fibrous		100% Non-fibrous (Other)	None Detected
131700081-0013	Tile	Homogeneous			
07B-RCM-1229	2nd Floor C-Wing Hallway - 12"x12"	Blue Non-Fibrous		100% Non-fibrous (Other)	None Detected
131700081-0014	Blue Mottled Floor Tile	Homogeneous			

Report amended: 01/09/2017 12:09:20 Replaces initial report from: 01/09/2017 11:08:36 Reason Code: Data Entry-Results Changed



Tel/Fax: (781) 933-8411 / (781) 933-8412 http://www.EMSL.com / bostonlab@emsl.com 
 EMSL Order:
 131700081

 Customer ID:
 ENVI54

 Customer PO:
 20160762.A1E-15

 Project ID:
 Environmentation

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

			Non-Asbes	stos	Asbestos
Sample	Description	Appearance	% Fibrous	% Non-Fibrous	% Туре
08A-RCM-1229 131700081-0015	2nd Floor D-Wing Computer Classroom - 12"x12" Green Mottled Floor Tile	Green Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
08B-RCM-1229	Classroom D263 - 12"x12" Green Mottled Floor Tile	Green Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
09A-RCM-1229	2nd Floor Mechanical	Gray	25% Min. Wool	65% Non-fibrous (Other)	None Detected
131700081-0017	Space - Gray Spray-Applied Fireproofing	Fibrous Homogeneous	10% Glass		
09B-RCM-1229	3rd Floor Mechanical	Gray	25% Min. Wool	65% Non-fibrous (Other)	None Detected
131700081-0018	Space - Gray Spray-Applied Fireproofing	Fibrous Homogeneous	10% Glass		
09C-RCM-1229	Woodshop - Gray Spray-Applied Fireproofing	Gray Fibrous Homogeneous	25% Min. Wool 10% Glass	65% Non-fibrous (Other)	None Detected
09D-RCM-1229	Stage Storage - Gray	Gray	25% Min. Wool	65% Non-fibrous (Other)	None Detected
131700081-0020	Spray-Applied Fireproofing	Fibrous Homogeneous	10% Glass		
10A-RCM-1229	Boys Locker Room Showers - White	White Non-Fibrous		100% Non-fibrous (Other)	None Detected
131700081-0021	Textured Ceiling Material	Homogeneous			
10B-RCM-1229	Boys Locker Room Showers - White	White Non-Fibrous		100% Non-fibrous (Other)	None Detected
131700081-0022	Textured Ceiling Material	Homogeneous			
10C-RCM-1229	Boys Locker Room Showers - White	White Non-Fibrous		100% Non-fibrous (Other)	None Detected
131700081-0023	Textured Ceiling Material	Homogeneous			
10D-RCM-1229	Girls Locker Room	White		100% Non-fibrous (Other)	None Detected
131700081-0024	Showers - White Textured Ceiling Material	Non-Fibrous Homogeneous			
10E-RCM-1229	Girls Locker Room	White		100% Non-fibrous (Other)	None Detected
131700081-0025	Showers - White Textured Ceiling Material	Non-Fibrous Homogeneous			
11A-RCM-1229	3rd Floor Mechanical	White	20% Cellulose	68% Non-fibrous (Other)	<1% Chrysotile
131700081-0026	Space - White Generator Breeching Insulation	Fibrous Homogeneous	10% Synthetic 2% Glass		
11B-RCM-1229	3rd Floor Mechanical	White	20% Cellulose	68% Non-fibrous (Other)	None Detected
131700081-0027	Space - White Generator Breeching Insulation	Fibrous Homogeneous	10% Synthetic 2% Glass		
11C-RCM-1229	3rd Floor Mechanical Space - White	White Fibrous	20% Synthetic	20% Non-fibrous (Other)	60% Chrysotile
131700081-0028	Generator Breeching Insulation	Homogeneous			
12A-RCM-1229	Boys Locker Room (Ceiling) - White Joint	White Non-Fibrous		100% Non-fibrous (Other)	None Detected
131700081-0029	Compound	Homogeneous			



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

			Non-Asbe	stos	Asbestos
Sample	Description	Appearance	% Fibrous	% Non-Fibrous	% Туре
12B-RCM-1229 131700081-0030	Boys Locker Room (Ceiling) - White Joint Compound	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
13A-RCM-1229 131700081-0031	Boys Locker Room (Ceiling) - White Gypsum Ceiling Panel	Brown/Gray Fibrous Homogeneous	60% Cellulose	40% Non-fibrous (Other)	None Detected
13B-RCM-1229	Boys Locker Room (Ceiling) - White Gypsum Ceiling	Gray Fibrous Homogeneous	3% Cellulose 2% Glass	95% Non-fibrous (Other)	None Detected
131100001-0032	Panel	riomogeneous			

Analyst(s)

Michael Mink (32)

- P.A.

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

Report amended: 01/09/2017 12:09:20 Replaces initial report from: 01/09/2017 11:08:36 Reason Code: Data Entry-Results Changed

OrderID: 131700081

#### 131700081

Asbestos Bulk Sample Chain-of-Custody

EMSL Customer No. ENVI54

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

www.fando.com

Sheet <u>1</u> of <u>1</u>

50 Redfield Street, Suite 100, Boston, MA 02122

FUSS & O'NEILL EnviroScience, LLC

Sandwich Public Schools, 3-Yr AHERA Re-Inspections Project No.: 20160762.A1E Task: 15 Project Name: Building Name/Number: Sandwich High School Project Manager: D Diedricksen 365 Quaker Meeting House Road, Sandwich, MA Total # of Samples: Site Address: \_\_\_\_ 32 Sample ID Material Type Comments/ Sample Location (#-Initials-Date) (Size, Color, Description, Material) Quantities 2' x 4' White Faux 2' x 2' Suspended 01A-RCM-1229 Classroom C320 Ceiling Tile 2' x 4' White Faux 2' x 2' Suspended 01B-RCM-1229 **B-Wing Hallway** Ceiling Tile 02A-RCM-1229 12" x 12" Purple Mottled Floor Tile Classroom C325 02B-RCM-1229 12" x 12" Purple Mottled Floor Tile Classroom C329 03A-RCM-1229 12" x 12" Yellow Mottled Floor Tile Classroom C325 03B-RCM-1229 12" x 12" Yellow Mottled Floor Tile Classroom C329 04A-RCM-1229 12" x 12" Tan Mottled Floor Tile Classroom C325 04B-RCM-1229 12" x 12" Tan Mottled Floor Tile Classroom C329 2' x 4' White Gypsum Suspended 05A-RCM-1229 Woodshop Ceiling Tile 2' x 4' White Gypsum Suspended 05B-RCM-1229 Kitchen #1 Ceiling Tile Tan Mastic Associated with 12" x 12" 06A-RCM-1229 Classroom C325 Floor Tile Tan Mastic Associated with 12" x 12" 06B-RCM-1229 Classroom C329 Floor Tile 07A-RCM-1229 12" x 12" Blue Mottled Floor Tile A/V Storage 07B-RCM-1229 12" x 12" Blue Mottled Floor Tile 2nd Floor C-Wing Hallway 08A-RCM-1229 12" x 12" Green Mottled Floor Tile 2nd Floor D-Wing Computer Classroom 08B-RCM-1229 12" x 12" Green Mottled Floor Tile Classroom D263 09A-RCM-1229 Gray Spray-Applied Fireproofing 2<sup>nd</sup> Floor Mechanical Space 09B-RCM-1229 Gray Spray-Applied Fireproofing 3rd Floor Mechanical Space 09C-RCM-1229 Gray Spray-Applied Fireproofing Woodshop 09D-RCM-1229 Gray Spray-Applied Fireproofing Stage Storage 10A-RCM-1229 White Textured Ceiling Material Boys Locker Room Showers 10B-RCM-1229 White Textured Ceiling Material Boys Locker Room Showers 12 10C-RCM-1229 White Textured Ceiling Material Boys Locker Room Showers DEC 3 U 2016 10D-RCM-1229 White Textured Ceiling Material Girls Locker Room Showers

Page 1 Of 2

EMSL Fx

7952 1926 1520

9:17

#### 131700081

EMSL Customer No. ENVI54

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

Turnaround Time: \_\_\_\_1-week

www.fando.com

50 Redfield Street, Suite 100, Boston, MA 02122

Analysis Method: 🛛 PLM 🗌 TEM

FUSS & O'NEILL EnviroScience, LLC

10E-RCM-1229	White Textured Ceiling Material	Girls Locker Room Showers	
11A-RCM-1229	White Generator Breeching Insulation	3 <sup>rd</sup> Floor Mechanical Space	
11B-RCM-1229	White Generator Breeching Insulation	3 <sup>rd</sup> Floor Mechanical Space	
11C-RCM-1229	White Generator Breeching Insulation	3rd Floor Mechanical Space	
12A-RCM-1229	White Joint Compound	Boys Locker Room (Ceiling)	
12B-RCM-1229	White Joint Compound	Boys Locker Room (Ceiling)	
13A-RCM-1229	White Gypsum Ceiling Panel	Boys Locker Room (Ceiling)	
13B-RCM-1229	White Gypsum Ceiling Panel	Boys Locker Room (Ceiling)	

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

Other \_\_\_\_\_

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

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

Samples Collected by:	Mallet		Date: 12/29/16
Samples Sent by:		Date: 12/29/16	Time: PM
Shipped To: EMSL MA	Other		
Method of Shipment: 🛛 Fed Ex	□ Lab Drop Off	Other	





# Appendix E

Newly Installed Materials Safety Data Sheets

To be Provided by LEA



# Appendix F

Sample 6-Month Periodic Surveillance Form



#### Sample 6- Month Periodic Surveillance Form

Local Education Agency (LEA): Sandwich Public Schools

Facility Name: <u>Sandwich High School</u>

Date of Surveillance:

#### ACBM Damage Report

Asbestos-Containing Building Material	Location	Previous Condition	Present Condition	Change in Condition (Yes/No)	Estimated Damaged Quantity	Comments
Black Mastic on Structural Steel Columns	1976 Building, Exterior Walls (within masonry & beneath cork)	IA				
Expansion-Joint Caulking	1976 Building Expansion Joints	G/IA				
Tan Vinyl Sheet Flooring	Classrooms C320-C324, C336, C337, Band Practice Rooms P1, P2, & P3, Music Storage Room, & D148	G				
Brown Vinyl Sheet Flooring	Auditorium Projector Room & Vault	G				
Gray Fiber-Reinforced Cement Fume Hood Panel	Classrooms C321 & C336; Prep Rooms C321/C322, C323/C324, & C336/C337	G				
Pink Sink Coating	Room D154	G				
Red Duct Sealant	Classrooms C321 & C336; Prep Rooms C321/C322, C323/C324, & C336/C337	G				
White Generator Breeching Insulation	3 <sup>rd</sup> Floor Mechanical Space	G				
Gray Fiber-Reinforced Table (Corrugated Panel Bottom)	Classroom C323 Greenhouse	G				



Asbestos-Containing Building Material	Location	Previous Condition	Present Condition	Change in Condition (Yes/No)	Estimated Damaged Quantity	Comments
Gray Fiber-Reinforced Table (Side Board)	Classroom C323 Greenhouse	G				
Brown Sill-to-Wall Caulking	Classroom C323 Greenhouse	G				
Gray Screw-Head Sealant	Classroom C323 Greenhouse	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)



# 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. <u>Sprayed-Applied Fireproofing</u>
  - 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.
  - 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. <u>Please note that the repair/removal can only be performed</u> by a licensed abatement contractor.
- 2. <u>Ceiling and Wall Plasters</u>
  - 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. <u>Boiler and Breeching Insulation</u>
  - 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. <u>Please note that the repair/removal can only be performed by a licensed</u> <u>abatement contractor</u>.
- 2. <u>Pipe, Pipe Fitting, Tank, Duct & Breeching Insulations</u>
  - 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.
     <u>Please note that the repair/removal can only be performed by a licensed</u> <u>abatement contractor</u>.

#### 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. <u>Vinyl Asbestos Floor Tiles (VAT)</u>

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:

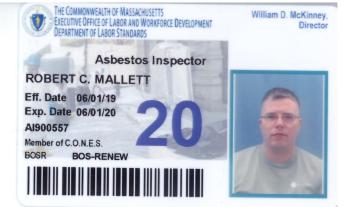


- a) Do not sand, grind, or abrade the tiles. Stripping of VAT should be done as infrequently as possible. When stripping becomes necessary, follow the appropriate work practices. <u>Never perform dry stripping</u>.
- b) During spray-buffing or burnishing the floor, operate the machine at the lowest 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. <u>Please note that the repair/removal can only be performed by a licensed abatement contractor</u>.
- 2. <u>Wallboard and Joint Compound Assembly</u>
  - a) Since a number of different homogeneous assemblies may exist in a building, sheetrock/joint compound must be assumed to be ACBM unless sample results prove otherwise. If any specific areas are going to be disturbed, samples of the material in that area should be collected and analyzed.
  - b) Reduce the likelihood of fiber release by avoiding cutting or drilling holes through the sheetrock panels.
- 3. <u>Ceiling Tile and Glue Daubs</u>
  - 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. <u>Asbestos Cement Panels, Window/Door Caulking and Glazing Compounds</u>
  - a) Maintain asbestos cement panels and window/door caulking and glazing compounds in undamaged condition.
- 5. <u>Carpet Glue, Blackboard/Tack Board Glue, Floor Tile Mastic, Cove Base, and Mastic</u>
  - 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





This is to certify that

# Robert C Mallett



has completed the requisite training, and has passed an examination for Asbestos Inspector Refresher eaccreditation as:

pursuant to Title II of the Toxic Substance Control Act, 15 U.S.C. 2646

**Course Location** 

January 6, 2020 **Course Dates**  20-2958-106-402379

Certificate Number

Institute for Environmental Education 16 Upton Drive Wilmington, MA 01887

January 06, 2021 Examination Date

January 06, 2020

Expiration Date

www.ieetrains.com

Telephone 978.658.5272

16 Upton Drive, Wilmington, MA 01987

**INSTITUTE FOR ENVIRONMENTAL EDUCATION** 

**Training Director** W entergy





This is to certify that

# **Dustin A Diedricksen**



has completed the requisite training, and has passed an examination for reaccreditation

pursuant to Title II of the Toxic Substance Control Act, 15 U.S.C. 2646 Asbestos Management Planner Refresher

**Course Location** 

Institute for Environmental Education

16 Upton Drive Wilmington, MA 01887

December 18, 2019

**Examination Date** 

Training Director

Wendergt

www.ieetrains.com

Telephone 978.658.5272

16 Upton Drive, Wilmington, MA 01887

December 18, 2019

December 18, 2020

19-2404-136-402162 Certificate Number

**Course Dates** 

Expiration Date

INSTITUTE FOR ENVIRONMENTAL EDUCATION





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