

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

for  
Sandwich High School

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

**Sandwich Public School District**  
Sandwich, Massachusetts

February 2017



**FUSS & O'NEILL**  
EnviroScience, LLC

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**FUSS & O'NEILL**  
EnviroScience, LLC

February 28, 2017

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

**RE: Three-Year AHERA Re-Inspection and Management Plan Update  
Sandwich High School  
365 Quaker Meeting House Road, East Sandwich, MA**  
Fuss & O'Neill EnviroScience Project No. 20160762.A1E

Dear Mr. Nelson:

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

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

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

Sincerely,

Dustin A. Diedricksen  
Senior Project Manager

DAD/so

Enclosure

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# 1 Introduction

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## 1.1 Background

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

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

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

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

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## 1.2 Local Education Agency (LEA) Responsibilities

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

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

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

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### 1.3 Key Personnel

A. Local Education Agency (LEA):

LEA: Sandwich Public School District  
Address: 33 Water Street  
Sandwich, Massachusetts 02563  
Phone: (508) 888-1054

B. Designated Person:

Designated Person: Mr. Jonathan Nelson  
Head of Facilities and Grounds  
Address: 33 Water Street  
Sandwich, Massachusetts 02563  
Phone: (508) 888-3312

C. Asbestos Consultant:

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

D. Asbestos Inspector:

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

E. Asbestos Management Planner:

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

## 2 Building and Mechanical System Description

The 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 within the ceiling plenums and the wall chases.

Two Cleaver Brooks gas-fired, hot-water boilers provide heat for the 3<sup>rd</sup> floor. These boilers are located at the 3<sup>rd</sup> floor mechanical space. Heat is transfer via pipes located within the ceiling plenum and the 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 December 29, 2016, Mr. Robert Mallett of Fuss & O'Neill EnviroScience, LLC (EnviroScience) performed the re-inspection.

During the re-inspection, EnviroScience conducted the following required tasks:

1. A visual re-inspection and reassessment of all known friable or assumed ACBM.
2. A visual re-inspection of ACBM that was previously considered non-friable to determine if the present condition of the material has become friable.
3. Identification and assessment of any newly-identified homogeneous area that contains friable ACBM since the last inspection or re-inspection.

## 4 Re-Inspection Report

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### 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 are stored.

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

### 4.2 Re-Inspection Summary

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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 1A**, identifies previous inspection data gathered during the initial AHERA inspection and subsequent re-inspection (see *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 1B**, is used to list all known or assumed asbestos-containing materials that were previously unidentified (See *Appendix C*). It also lists the ACBM in areas newly-acquired by the school for student use either permanently or temporarily.

The third EPA form, **Re-Inspection Form 2**, was used to provide information and justification regarding re-assessment of the ACBM (see *Appendix D*). This form also provides response action recommendations, including a tentative schedule for completing response actions that recommend removal or repair.

Thirty-two bulk samples were collected during this re-inspection. Identified ACBM can be found in Table 1 and identified non-ACBM can be found in Table 2. Refer to *Appendix E* for a copy of the asbestos laboratory analytical report and chain-of-custody form.

Bulk samples were last collected during the 2012 re-inspection. The results can be found in Table 1 or Table 2, respectively. Refer to *Appendix F* for a copy of the asbestos laboratory results from the 2012 re-inspection.

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 locations of the materials.

**Table 1  
Asbestos-Containing Building Materials (ACBM)**

| <b>Material</b>                               | <b>Location</b>   | <b>Reference</b>   | <b>Asbestos Content</b> |
|---|---|--|-------------------------|
| Black Mastic on Structural Steel Columns      | 1976 Building, Exterior Walls (within masonry & beneath cork)   | AMP<br>July 2012<br>Prepared by Cardno ATC (Sample ID 16A) | 20%<br>Chrysotile       |
| Expansion-Joint Caulking                      | 1976 Building Expansion Joints  | AMP<br>July 2012<br>Prepared by Cardno ATC (Sample ID 10A) | 10%<br>Chrysotile       |
| Tan Vinyl Sheet Flooring                      | Classrooms C320-C324, C336, & C337; Band Practice Rooms P1, P2, & P3; Music Storage Room; & Chorus Room | AMP<br>July 2012<br>Prepared by Cardno ATC (Sample ID 08A) | 30%<br>Chrysotile       |
| Brown Vinyl Sheet Flooring                    | Auditorium Projector Room & Vault   | AMP<br>July 2012<br>Prepared by Cardno ATC (Sample ID 12A) | 30%<br>Chrysotile       |
| Gray Fiber-Reinforced Cement Fume Hood Panels | Classrooms C321 & C336; Prep Rooms C321/C322, C323/C324, & C336/C337                                    | AMP<br>July 2012<br>Prepared by Cardno ATC (Sample ID 09A) | 25%<br>Chrysotile       |
| Pink Sink Coating                             | Room D154   | AMP<br>July 2012<br>Prepared by Cardno ATC (Sample ID 15A) | 5%<br>Chrysotile        |



| Material  | Location   | Reference   | Asbestos Content  |
|---|--|---|-------------------|
| Red Duct Sealant                                      | Classrooms C321 & C336; Prep Rooms C321/C322, C323/C324, & C336/C337 | AMP<br>July 2012<br>Prepared by<br>Cardno ATC<br>(Sample ID<br>11A)                                     | 5%<br>Chrysotile  |
| White Generator Breaching Insulation                  | 3 <sup>rd</sup> Floor Mechanical Space                               | AMP<br>January 2017<br>Prepared by<br>EnviroScience<br>(Sample ID<br>11C-RCM-<br>1229)                  | 60%<br>Chrysotile |
| Gray Fiber-Reinforced Table (Corrugated Panel Bottom) | Classroom C323 Greenhouse  | Asbestos<br>Inspection<br>Report<br>November 2016<br>Prepared by<br>EnviroScience<br>(01A-RCM-<br>1108) | 18%<br>Chrysotile |
| Gray Fiber-Reinforced Table (Side Board)              | Classroom C323 Greenhouse  | Asbestos<br>Inspection<br>Report<br>November 2016<br>Prepared by<br>EnviroScience<br>(02A-RCM-<br>1108) | 20%<br>Chrysotile |
| Brown Sill-to-Wall Caulking                           | Classroom C323 Greenhouse  | Asbestos<br>Inspection<br>Report<br>November 2016<br>Prepared by<br>EnviroScience<br>(06A-RCM-<br>1108) | 2%<br>Chrysotile  |

| Material                | Location                  | Reference  | Asbestos Content |
|-------------------------|---------------------------|--|------------------|
| Gray Screw-Head Sealant | Classroom C323 Greenhouse | Asbestos Inspection Report<br>November 2016<br>Prepared by EnviroScience<br>(08A-RCM-1108) | 2%<br>Chrysotile |

Using the EPA protocol, samples of the following suspect materials were collected and analyzed. The analytical results indicated that these materials are **non-ACBM**:

**Table 2**  
**Non-Asbestos-Containing Building Materials (Previous Re-Inspections)**

| Material   | Location  | Reference   |
|--|---|---|
| Joint Compound                                     | A, B, C, & D-Wing Classrooms, Offices, Bathrooms, & Storage Spaces  | AMP<br>July 2012<br>Prepared by Cardno ATC.<br>(Sample IDs 01A-01C)   |
| Spray-On Fireproofing                              | 1976 Building Ceiling Plenums   | AMP<br>July 2012<br>Prepared by Cardno ATC.<br>(Sample IDs 02A-02C)<br>&<br>AMP<br>January 2017<br>Prepared by EnviroScience<br>(Sample IDs 09A-09D-RCM-1229) |
| Gypsum Wallboard                                   | A, B, C, & D-Wing Classrooms, Offices, Bathrooms, & Storage Spaces  | AMP<br>July 2012<br>Prepared by Cardno ATC.<br>(Sample IDs 03A & 03B)   |
| Yellow Mastic Associated with Vinyl Sheet Flooring | Classrooms C320-C324, C336, & C337;<br>Band Practice Rooms P1, P2, & P3;<br>Music Storage Room; Chorus Room; &<br>Auditorium Projector Room & Vault | AMP<br>July 2012<br>Prepared by Cardno ATC.<br>(Sample IDs 05A & 05B)   |

| Material   | Location   | Reference  |
|--|--|--|
| 12" x 12" Tan Mottled Floor Tile                   | A, B, C, & D-Wing Classrooms, Offices, Bathrooms, & Storage Spaces (Except Classrooms C320-C324, C336, & C337; Band Practice Rooms P1, P2, & P3; Music Storage Room; Chorus Room; & Auditorium Projector Room & Vault) | AMP<br>July 2012<br>Prepared by Cardno ATC.<br>(Sample IDs 06A & 06B)<br>&<br>AMP<br>January 2017<br>Prepared by<br>EnviroScience<br>(Sample IDs 04A & 04B-RCM-1229) |
| 12" x 12" Purple Mottled Floor Tile                |  | AMP<br>January 2017<br>Prepared by<br>EnviroScience<br>(Sample IDs 02A & 02B-RCM-1229)   |
| 12" x 12" Yellow Mottled Floor Tile                |  | AMP<br>January 2017<br>Prepared by<br>EnviroScience<br>(Sample IDs 03A & 03B-RCM-1229)   |
| 12" x 12" Blue Mottled Floor Tile                  |  | AMP<br>January 2017<br>Prepared by<br>EnviroScience<br>(Sample IDs 07A & 07B-RCM-1229)   |
| 12" x 12" Green Mottled Floor Tile                 |  | AMP<br>January 2017<br>Prepared by<br>EnviroScience<br>(Sample IDs 08A & 08B-RCM-1229)   |
| Yellow Mastic Associated with 12" x 12" Floor Tile |  | AMP<br>July 2012<br>Prepared by Cardno ATC.<br>(Sample IDs 07A & 07B)  |

| <b>Material</b>                                     | <b>Location</b>  | <b>Reference</b>  |
|---|--|---|
| Tan Mastic Associated with 12" x 12" Floor Tile     | A, B, C, & D-Wing Classrooms, Offices, Bathrooms, & Storage Spaces (Except Classrooms C320-C324, C336, & C337; Band Practice Rooms P1, P2, & P3; Music Storage Room; Chorus Room; & Auditorium Projector Room & Vault) | AMP<br>January 2017<br>Prepared by EnviroScience<br>(Sample IDs 06A & 06B-RCM-1229) |
| White Sink Coating                                  | A, B, C, & D-Wing Classrooms   | AMP<br>July 2012<br>Prepared by Cardno ATC.<br>(Sample IDs 13A & 13B)               |
| Black Sink Coating                                  |  | AMP<br>July 2012<br>Prepared by Cardno ATC.<br>(Sample IDs 14A & 14B)               |
| Black Lab Counter Top                               | Classrooms C320-C337   | AMP<br>July 2012<br>Prepared by Cardno ATC.<br>(Sample IDs 17A & 17B)               |
| Brown Cove Base Mastic                              | A, B, C, & D-Wing Classrooms, Offices, Bathrooms, & Storage Spaces   | AMP<br>July 2012<br>Prepared by Cardno ATC.<br>(Sample IDs 18A & 18B)               |
| Gray Duct Sealant                                   | A, B, C, & D-Wing Classrooms, Offices, Bathrooms, & Storage Spaces   | AMP<br>July 2012<br>Prepared by Cardno ATC.<br>(Sample IDs 19A & 19B)               |
| 2' x 4' White (Faux 2' x 2') Suspended Ceiling Tile | A, B, C, & D-Wing Classrooms, Offices, Bathrooms, & Storage Spaces   | AMP<br>January 2017<br>Prepared by EnviroScience<br>(Sample IDs 01A & 01B-RCM-1229) |
| 2' x 4' White Gypsum Suspended Ceiling Tile         | Woodshop & Kitchens 1 & 2  | AMP<br>January 2017<br>Prepared by EnviroScience<br>(Sample IDs 05A & 05B-RCM-1229) |

| Material                        | Location                          | Reference  |
|---------------------------------|-----------------------------------|--|
| White Textured Ceiling Material | Boys & Girls Locker Room Showers  | AMP<br>January 2017<br>Prepared by<br>EnviroScience<br>(Sample IDs 10A & 10E-RCM-1229) |
| White Joint Compound            | Boys & Girls Locker Room Ceilings | AMP<br>January 2017<br>Prepared by<br>EnviroScience<br>(Sample IDs 12A & 12B-RCM-1229) |
| White Gypsum Ceiling Panel      | Boys & Girls Locker Room Ceilings | AMP<br>January 2017<br>Prepared by<br>EnviroScience<br>(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

The following newly identified suspect ACBM have been identified in the building:

- 2' x 4' White (Faux 2' x 2") Suspended Ceiling Tile;
- 12" x 12" Purple Mottled Floor Tile;
- 12" x 12" Yellow Mottled Floor Tile;
- 12" x 12" Tan Mottled Floor Tile;
- 12" x 12" Blue Mottled Floor Tile;
- 12" x 12" Green Mottled Floor Tile;
- Tan Mastic Associated with 12" x 12" Floor Tile;
- 2' x 4' White Gypsum Suspended Ceiling Tile;
- White Textured Ceiling Material; and
- White Generator Breaching Insulation.

These materials have been added to Table 1 or Table 2 as identified/assumed ACBM or identified non-ACBM, respectively.

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.

Safety Data Sheets must be obtained and kept with the AHERA documentation for any newly-installed materials in order to meet AHERA requirements. These sheets must demonstrate that asbestos-containing materials were not installed in the building. We recommend that Safety Data Sheets for newly-installed materials be inserted into *Appendix G*.

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## 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 and/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 Asbestos Management Plan Update

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### 5.1 Recommended Response Actions

Based on the inspection report, physical walk-through inspection, and existing ACBM conditions, the following response actions are recommended:

1. Removal – Not Applicable
2. Repair – Not Applicable
3. Enclosure – Not Applicable
4. Encapsulation – Not Applicable

5. Operations and Maintenance (O & M) - All remaining ACBM

A successful O & M Program includes the following elements:

- A. Cleaning: All areas of the school where friable ACBM or assumed friable ACBM are present should be cleaned at least once after completion of the initial inspection. Additional cleaning may be necessary if the Asbestos Management Planner makes a written recommendation indicating the methods and frequency of such cleaning.
- B. O & M Activities: The LEA shall ensure that the procedures described below are followed to protect building occupants from O & M activities that may disturb known or assumed ACBM:
1. Restrict entry into the area either by physically isolating or by scheduling.
  2. Post asbestos warning signs to prevent entry by unauthorized persons.
  3. Deactivate or temporarily shut off or divert the air-handling system to the area.
  4. Use proper work practices and engineering controls, such as wet methods, protective clothing, High Efficiency Particulate Air (HEPA) vacuums, mini-enclosures/glove bags, etc. to inhibit fiber migration.
  5. Place asbestos debris and other contaminated materials into a sealed, leak-tight container for disposal.
- C. Minor Fiber Release Episode: The LEA shall ensure that the procedures described below are followed in the event of a minor fiber release episode (i.e., disturbance of less than or equal to 3 linear/square feet of friable ACBM):
1. Saturate the debris using wet method.
  2. Place the debris in a sealed, leak-tight container and clean the area.
  3. Repair the area of damaged ACBM with materials such as asbestos-free spackling, plaster or insulation or seal with an encapsulant.
- D. Major Fiber Release Episode: The LEA shall ensure that the procedures described below are followed in the event of a major fiber release episode (i.e., disturbance of greater than 3 linear/square feet of friable ACBM):
1. Restrict entry into the area and post asbestos warning signs.
  2. Deactivate or temporarily shut off or divert the air handling system from the area to prevent fiber migration.
  3. The response action for any major fiber release episode must be prepared by EPA-accredited Asbestos Project Designers and conducted by EPA-accredited personnel.
  4. The LEA shall notify the MADLS of any major fiber release episode within twenty-four hours of its occurrence and, if necessary, provide written notification as required by applicable federal and/or state regulations.

## 5.2 Periodic Surveillance

At least once every six months after an AMP is implemented, the LEA will conduct periodic surveillance in the school that contains ACBM or assumed ACBM. The person conducting periodic surveillance will visually inspect all areas in the school where ACBM have been identified in the AMP, and record the date of surveillance, their name, and any changes in the ACBM condition; this information shall then be submitted to the LEA's Designated Person for inclusion in the AMP.

Please see *Appendix H* for the sample 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.

Please see *Appendix I* 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 is as follows:

**Table 3**  
**Abatement Cost Estimates**

| Material                                     | Location  | Quantity      | Estimated Contractor Cost |
|--|---|---------------|---------------------------|
| Black Mastic on Structural Steel Columns     | 1976 Building, Exterior Walls (within masonry & beneath cork)   | Unknown       | \$20.00/LF                |
| 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; & Chorus Room | 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                  |



| Material  | Location                               | Quantity | Estimated Contractor Cost |
|---|--|----------|---------------------------|
| 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                  |

## 6 EPA Accreditation Requirements

The EPA accreditations and the MADLS Asbestos Inspector and Management Planner certifications for Mr. Robert Mallett and Mr. Dustin Diedricksen are provided in *Appendix J*.

Report prepared by Environmental Technician, Robert Mallett.

Reviewed by:



Dustin A. Diedricksen  
Senior Project Manager

## Appendix A

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### Existing Records Checklist

## Existing Records Checklist

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

School Building: Sandwich High School

The following documentation is required to be present in both the LEA's office, as well as in a centralized location in the school administrative office. The information included in this checklist will be verified to be present and complete as part of three-year re-inspection.

| DOCUMENTATION |   | LOCATION |            |
|---------------|---|----------|------------|
|               |   | 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     | 2012, 2015 |
| 3             | Parents and Teachers Notifications (Annually Since Last Re-Inspection)                                    | No       | No         |
| 4             | Designated Person Identification and Proper Training (Person Must Be Named and Have Appropriate Training) | Yes      | Yes        |
| 5             | Designated Person Periodic Surveillance (Once Every Six Months)   | No       | No         |
| 6             | Maintenance Staff Awareness Training Records  | Yes      | Yes        |
| 7             | Outside Vendor Awareness Notification   | No       | No         |
| 8             | Asbestos Warning Signs and Labels (Required Posting in Boiler Rooms and Mechanical Spaces Only)           | No       | No         |
| 9             | Response Action Records (Includes Any Abatement Conducted Since Last 3-Year Re-Inspection)                | No       | No         |

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

Inspector (LEA Office): Robert Mallett

Date: December 29, 2016

Inspector (School): Robert Mallett

Date: December 29, 2016

## Appendix B

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### Re-Inspection Form 1A

School: Sandwich High School  
 Address 365 Quaker Meeting House Road, Sandwich, MA

Date(s) of Original Inspection: Unknown  
 Date(s) of Subsequent Re-Inspections: 2012 & 2015

| Homogeneous Material |                  |   | Material Category | Friability | Assessment Category (1-7) | Recorded Locations  | Response Actions Taken/Renovations/Other Comments |
|----------------------|------------------|---|-------------------|------------|---------------------------|---|---|
| Sample Number        | Asbestos Content | Material Description                                  |                   |            |                           |   |   |
| 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         | 6                         | Classrooms C320-C324, C336, & C337; Band Practice Rooms P1, P2, & P3; Music Storage Room; & Chorus Room |   |
| 12A                  | 30% Chrysotile   | Brown Vinyl Sheet Flooring                            | Misc.             | NF         | 6                         | Auditorium Projector Room & Vault   |   |
| 09A                  | 25% Chrysotile   | Gray Fiber-Reinforced Cement Fume Hood Panel          | Misc.             | NF         | 6                         | 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   |   |

School: Sandwich High School  
 Address 365 Quaker Meeting House Road, Sandwich, MA

Date(s) of Original Inspection: Unknown  
 Date(s) of Subsequent Re-Inspections: 2012 & 2015

| Homogeneous Material |                  |  | Material Category | Friability | Assessment Category (1-7) | Recorded Locations        | Response Actions Taken/Renovations/Other Comments |
|----------------------|------------------|--|-------------------|------------|---------------------------|---------------------------|---|
| Sample Number        | Asbestos Content | Material Description                     |                   |            |                           |                           |   |
| 02A-RCM-1108         | 20% Chrysotile   | Gray Fiber-Reinforced Table (Side Board) | Misc.             | NF         | 5                         | Classroom C323 Greenhouse |   |
| 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: Robert Mallett Date: January 10, 2017

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

Friability: F = Friable, NF = Non-Friable

AHERA Assessment Categories:

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

## Appendix C

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### Re-Inspection Form 1B

School: Sandwich High School

Date(s) of Original AHERA Inspection: Unknown

Address: 365 Quaker Meeting House Road, Sandwich, MA

Date(s) of Re-Inspection: 2012 & 2015

| Homogeneous Material |                                      | Asbestos Content (%) | Material Category | Estimated Quantity (SF/LF) | Friability | Assessment Category (1-7) | Recorded Locations of Material for Each Assessment Category |
|----------------------|--------------------------------------|----------------------|-------------------|----------------------------|------------|---------------------------|---|
| Sample Number        | Material Description                 |                      |                   |                            |            |                           |   |
| 11C-RCM-1229         | White Generator Breeching Insulation | 60% Chrysotile       | TSI               | 25 LF                      | F          | 6                         | 3 <sup>rd</sup> Floor Mechanical Space                      |
| 06A-RCM-1108         | Brown Sill-to-Wall Caulking          | 2% Chrysotile        | Misc.             | 5 LF                       | NF         | 5                         | Classroom C323 Greenhouse                                   |
| 08A-RCM-1108         | Gray Screw-Head Sealant              | 2% Chrysotile        | Misc.             | 25 EA                      | NF         | 5                         | Classroom C323 Greenhouse                                   |

Inspected by: Robert Mallett Date: December 29, 2016

Material Category: TSI = Thermal System Insulation, S = Surfacing, M = Miscellaneous

LF = Linear Feet; SF = Square Feet

Friability: F = Friable, NF = Non-Friable

AHERA Assessment Categories:

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



## Appendix D

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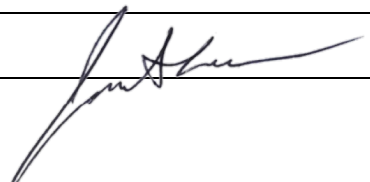
### Re-Inspection Form 2

School: Sandwich High School

Date of Re-Inspection: December 29, 2016

Homogeneous Material: Black Mastic on Structural Steel Columns

Sample ID Number: 16A

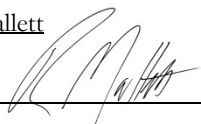
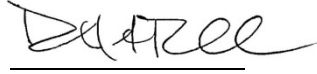
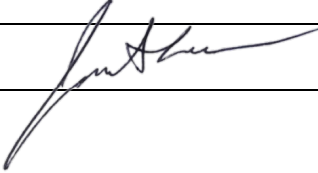
| ACBM RE-INSPECTION FINDINGS  |            |                    |                     |                                | MANAGEMENT PLANNER RECOMMENDATIONS   |                       |
|--|------------|--------------------|---------------------|--------------------------------|--|-----------------------|
| ACBM Location(s) by Assessment Category  | Friability | Estimated Quantity | Assessment Category | Physical Description           | Recommended Response Action(s)   | Date Action Completed |
| 1976 Building, Exterior Walls<br>(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? <b>No</b>  |            |                    |                     |                                | Date of Management Planner Review: <u>February 28, 2017</u>  |                       |
| Inspector's Name: <u>Robert Mallett</u><br>Inspector Signature: <br>Accreditation #/State: <u>AI900557/MA</u><br>Expiration Date: <u>06/01/2017</u> |            |                    |                     |                                | Management Planner Name: <u>Dustin Diedricksen</u><br>Management Planner Signature: <br>Accreditation #/State: <u>AP900425/MA</u><br>Expiration Date: <u>04/05/2017</u> |                       |
| I, the LEA's Designated Person, have read and understood the recommendations made above: _____<br>Date: <u>6/30/2017</u>   |            |                    |                     |                                |   |                       |

School: Sandwich High School

Date of Re-Inspection: December 29, 2016

Homogeneous Material: Expansion-Joint Caulking

Sample ID Number: 10A

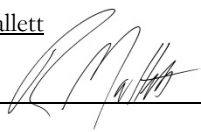
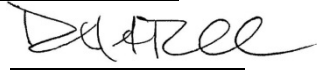
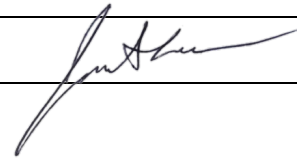
| ACBM RE-INSPECTION FINDINGS  |            |                    |                     |                                | MANAGEMENT PLANNER RECOMMENDATIONS   |                       |
|--|------------|--------------------|---------------------|--------------------------------|--|-----------------------|
| ACBM Location(s) by Assessment Category  | Friability | Estimated Quantity | Assessment Category | Physical Description           | Recommended Response Action(s)   | Date Action Completed |
| 1976 Building Expansion Joints   | NF         | Unknown            | 5                   | ACBM with Potential for Damage | Maintain under O&M Program   | Ongoing               |
| Were additional samples of this ACBM collected? <b>No</b>  |            |                    |                     |                                | Date of Management Planner Review: <u>February 28, 2017</u>  |                       |
| Inspector's Name: <u>Robert Mallett</u><br>Inspector Signature: <br>Accreditation #/State: <u>AI900557/MA</u><br>Expiration Date: <u>06/01/2017</u> |            |                    |                     |                                | Management Planner Name: <u>Dustin Diedricksen</u><br>Management Planner Signature: <br>Accreditation #/State: <u>AP900425/MA</u><br>Expiration Date: <u>04/05/2017</u> |                       |
| I, the LEA's Designated Person, have read and understood the recommendations made above: _____<br>Date: <u>6/30/2017</u>   |            |                    |                     |                                |   |                       |

School: Sandwich High School

Date of Re-Inspection: December 29, 2016

Homogeneous Material: Tan Vinyl Sheet Flooring

Sample ID Number: 08A



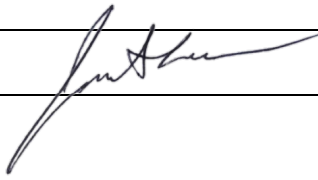
| ACBM RE-INSPECTION FINDINGS  |            |                    |                     |  | MANAGEMENT PLANNER RECOMMENDATIONS   |                       |
|--|------------|--------------------|---------------------|--|--|-----------------------|
| ACBM Location(s) by Assessment Category  | Friability | Estimated Quantity | Assessment Category | Physical Description                       | Recommended Response Action(s)   | Date Action Completed |
| Classrooms C320-C324, C336, C337, Band Practice Rooms P1, P2, & P3, Music Storage Room, & Chorus Room  | NF         | 5,500 SF           | 6                   | ACBM with Potential for Significant Damage | Maintain under O&M Program   | Ongoing               |
| Were additional samples of this ACBM collected? <b>No</b>  |            |                    |                     |  | Date of Management Planner Review: <u>February 28, 2017</u>  |                       |
| Inspector's Name: <u>Robert Mallett</u><br>Inspector Signature: <br>Accreditation #/State: <u>AI900557/MA</u><br>Expiration Date: <u>06/01/2017</u> |            |                    |                     |  | Management Planner Name: <u>Dustin Diedricksen</u><br>Management Planner Signature: <br>Accreditation #/State: <u>AP900425/MA</u><br>Expiration Date: <u>04/05/2017</u> |                       |
| I, the LEA's Designated Person, have read and understood the recommendations made above: <br>Date: <u>6/30/2017</u>                             |            |                    |                     |  |  |                       |

School: Sandwich High School

Date of Re-Inspection: December 29, 2016

Homogeneous Material: Brown Vinyl Sheet Flooring

Sample ID Number: 12A



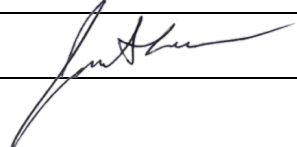
| ACBM RE-INSPECTION FINDINGS  |            |                    |                     |  | MANAGEMENT PLANNER RECOMMENDATIONS   |                       |
|--|------------|--------------------|---------------------|--|--|-----------------------|
| ACBM Location(s) by Assessment Category  | Friability | Estimated Quantity | Assessment Category | Physical Description                       | Recommended Response Action(s)   | Date Action Completed |
| Auditorium Project Room & Vault  | NF         | 250 SF             | 6                   | ACBM with Potential for Significant Damage | Maintain under O&M Program   | Ongoing               |
| Were additional samples of this ACBM collected? <b>No</b>  |            |                    |                     |  | Date of Management Planner Review: <u>February 28, 2017</u>  |                       |
| Inspector's Name: <u>Robert Mallett</u><br>Inspector Signature: <br>Accreditation #/State: <u>AI900557/MA</u><br>Expiration Date: <u>06/01/2017</u> |            |                    |                     |  | Management Planner Name: <u>Dustin Diedricksen</u><br>Management Planner Signature: <br>Accreditation #/State: <u>AP900425/MA</u><br>Expiration Date: <u>04/05/2017</u> |                       |
| I, the LEA's Designated Person, have read and understood the recommendations made above: <br>Date: <u>6/30/2017</u>                             |            |                    |                     |  |  |                       |

School: Sandwich High School

Date of Re-Inspection: December 29, 2016

Homogeneous Material: Gray Fiber-Reinforced Cement Fume Hood Panel

Sample ID Number: 09A

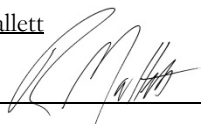
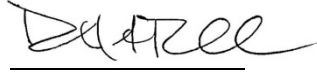
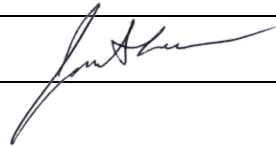
| ACBM RE-INSPECTION FINDINGS  |            |                    |                     |  | MANAGEMENT PLANNER RECOMMENDATIONS   |                       |
|--|------------|--------------------|---------------------|--|--|-----------------------|
| ACBM Location(s) by Assessment Category  | Friability | Estimated Quantity | Assessment Category | Physical Description                       | Recommended Response Action(s)   | Date Action Completed |
| Classrooms C321 & C336, Prep Rooms C321/C322, C323/C324, & C336/C337   | NF         | 9 EA               | 6                   | ACBM with Potential for Significant Damage | Maintain under O&M Program   | Ongoing               |
| Were additional samples of this ACBM collected? <b>No</b>  |            |                    |                     |  | Date of Management Planner Review: <u>February 28, 2017</u>  |                       |
| Inspector's Name: <u>Robert Mallett</u><br>Inspector Signature: <br>Accreditation #/State: <u>AI900557/MA</u><br>Expiration Date: <u>06/01/2017</u> |            |                    |                     |  | Management Planner Name: <u>Dustin Diedricksen</u><br>Management Planner Signature: <br>Accreditation #/State: <u>AP900425/MA</u><br>Expiration Date: <u>04/05/2017</u> |                       |
| I, the LEA's Designated Person, have read and understood the recommendations made above: _____<br>Date: <u>6/30/2017</u>   |            |                    |                     |  |   |                       |

School: Sandwich High School

Date of Re-Inspection: December 29, 2016

Homogeneous Material: Pink Sink Coating

Sample ID Number: 15A



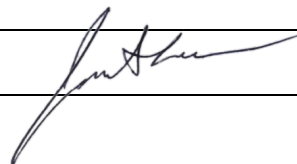
| ACBM RE-INSPECTION FINDINGS  |            |                    |                     |                                | MANAGEMENT PLANNER RECOMMENDATIONS   |                       |
|--|------------|--------------------|---------------------|--------------------------------|--|-----------------------|
| ACBM Location(s) by Assessment Category  | Friability | Estimated Quantity | Assessment Category | Physical Description           | Recommended Response Action(s)   | Date Action Completed |
| Room D154  | NF         | 1 EA               | 5                   | ACBM with Potential for Damage | Maintain under O&M Program   | Ongoing               |
| Were additional samples of this ACBM collected? <b>No</b>  |            |                    |                     |                                | Date of Management Planner Review: <u>February 28, 2017</u>  |                       |
| Inspector's Name: <u>Robert Mallett</u><br>Inspector Signature: <br>Accreditation #/State: <u>AI900557/MA</u><br>Expiration Date: <u>06/01/2017</u> |            |                    |                     |                                | Management Planner Name: <u>Dustin Diedricksen</u><br>Management Planner Signature: <br>Accreditation #/State: <u>AP900425/MA</u><br>Expiration Date: <u>04/05/2017</u> |                       |
| I, the LEA's Designated Person, have read and understood the recommendations made above: <br>Date: <u>6/30/2017</u>                             |            |                    |                     |                                |  |                       |

School: Sandwich High School

Date of Re-Inspection: December 29, 2016

Homogeneous Material: Red Duct Sealant

Sample ID Number: 11A

| ACBM RE-INSPECTION FINDINGS  |            |                    |                     |                                | MANAGEMENT PLANNER RECOMMENDATIONS   |                       |
|--|------------|--------------------|---------------------|--------------------------------|--|-----------------------|
| ACBM Location(s) by Assessment Category  | Friability | Estimated Quantity | Assessment Category | Physical Description           | Recommended Response Action(s)   | Date Action Completed |
| Classrooms C321 & C336, Prep Rooms C321/C322, C323/C324, & C336/C337   | NF         | 60 LF              | 5                   | ACBM with Potential for Damage | Maintain under O&M Program   | Ongoing               |
| Were additional samples of this ACBM collected? <b>No</b>  |            |                    |                     |                                | Date of Management Planner Review: <u>February 28, 2017</u>  |                       |
| Inspector's Name: <u>Robert Mallett</u><br>Inspector Signature: <br>Accreditation #/State: <u>AI900557/MA</u><br>Expiration Date: <u>06/01/2017</u> |            |                    |                     |                                | Management Planner Name: <u>Dustin Diedricksen</u><br>Management Planner Signature: <br>Accreditation #/State: <u>AP900425/MA</u><br>Expiration Date: <u>04/05/2017</u> |                       |
| I, the LEA's Designated Person, have read and understood the recommendations made above: _____<br>Date: <u>6/30/2017</u>   |            |                    |                     |                                |   |                       |



School: Sandwich High School

 Date of Re-Inspection: December 29, 2016

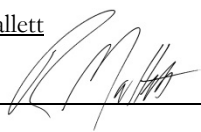
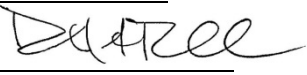
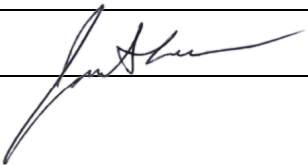
 Homogeneous Material: White Generator Breeching Insulation

 Sample ID Number: 11C-RCM-1229

| ACBM RE-INSPECTION FINDINGS                                |            |                    |                     |  | MANAGEMENT PLANNER RECOMMENDATIONS   |                       |
|--|------------|--------------------|---------------------|--|--|-----------------------|
| ACBM Location(s) by Assessment Category                    | Friability | Estimated Quantity | Assessment Category | Physical Description                       | Recommended Response Action(s)   | Date Action Completed |
| 3 <sup>rd</sup> Floor Mechanical Space                     | F          | 25 LF              | 6                   | ACBM with Potential for Significant Damage | <p>No damaged, friable TSI was observed at the time of re-inspection.</p> <p>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.</p> <p>Initial cleaning in area of breeching shall be made immediately following appropriate worker training (Fall 2017).</p> <p>Maintain under O&amp;M Program</p> | Fall 2017             |
| Were additional samples of this ACBM collected? <b>Yes</b> |            |                    |                     |  | Date of Management Planner Review: <u>February 28, 2017</u>  |                       |

School: Sandwich High School

Date of Re-Inspection: December 29, 2016

|   |   |
|---|---|
| <p>Inspector's Name: <u>Robert Mallett</u></p> <p>Inspector Signature: </p> <p>Accreditation #/State: <u>AI900557/MA</u></p> <p>Expiration Date: <u>06/01/2017</u></p> | <p>Management Planner Name: <u>Dustin Diedricksen</u></p> <p>Management Planner Signature: </p> <p>Accreditation #/State: <u>AP900425/MA</u></p> <p>Expiration Date: <u>04/05/2017</u></p> |
| <p>I, the LEA's Designated Person, have read and understood the recommendations made above: </p> <p>Date: <u>6/30/2017</u></p>                                       |   |

School: Sandwich High School

 Date of Re-Inspection: December 29, 2016

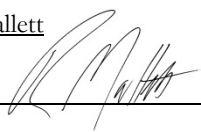
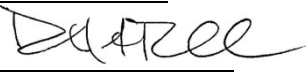
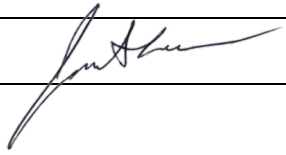
 Homogeneous Material: Gray Fiber-Reinforced Table (Corrugated Bottom)

 Sample ID Number: 01A-RCM-1108

| ACBM RE-INSPECTION FINDINGS                               |            |                    |                     |                                | MANAGEMENT PLANNER RECOMMENDATIONS   |                       |
|---|------------|--------------------|---------------------|--------------------------------|--|-----------------------|
| ACBM Location(s) by Assessment Category                   | Friability | Estimated Quantity | Assessment Category | Physical Description           | Recommended Response Action(s)   | Date Action Completed |
| Classroom C323 Greenhouse                                 | NF         | 250 SF             | 5                   | ACBM with Potential for Damage | <p>No suspect visible dust or debris was observed at the time of re-inspection.</p> <p>Initial cleaning is recommended in the Classroom C323 Greenhouse to account for (historical) table modifications. All cleaning must be performed by a person who is at least qualified as an asbestos associated project worker, and HEPA-vacuuming and wet-cleaning methods are required.</p> <p>Initial cleaning shall be made immediately following appropriate worker training (Fall 2017).</p> <p>Maintain under O&amp;M Program</p> | Fall 2017             |
| Were additional samples of this ACBM collected? <b>No</b> |            |                    |                     |                                | Date of Management Planner Review: <u>February 28, 2017</u>  |                       |

School: Sandwich High School

Date of Re-Inspection: December 29, 2016

|   |   |
|---|---|
| <p>Inspector's Name: <u>Robert Mallett</u></p> <p>Inspector Signature: _____ </p> <p>Accreditation #/State: <u>AI900557/MA</u></p> <p>Expiration Date: <u>06/01/2017</u></p> | <p>Management Planner Name: <u>Dustin Diedricksen</u></p> <p>Management Planner Signature: _____ </p> <p>Accreditation #/State: <u>AP900425/MA</u></p> <p>Expiration Date: <u>04/05/2017</u></p> |
| <p>I, the LEA's Designated Person, have read and understood the recommendations made above: _____ </p> <p>Date: <u>6/30/2017</u></p>                                       |   |

School: Sandwich High School

 Date of Re-Inspection: December 29, 2016

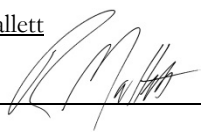
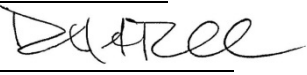
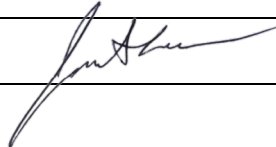
 Homogeneous Material: Gray Fiber-Reinforced Table (Side Board)

 Sample ID Number: 02A-RCM-1108

| ACBM RE-INSPECTION FINDINGS                               |            |                    |                     |                                | MANAGEMENT PLANNER RECOMMENDATIONS   |                       |
|---|------------|--------------------|---------------------|--------------------------------|--|-----------------------|
| ACBM Location(s) by Assessment Category                   | Friability | Estimated Quantity | Assessment Category | Physical Description           | Recommended Response Action(s)   | Date Action Completed |
| Classroom C323 Greenhouse                                 | NF         | 100 SF             | 5                   | ACBM with Potential for Damage | <p>No suspect visible dust or debris was observed at the time of re-inspection.</p> <p>Initial cleaning is recommended in the Classroom C323 Greenhouse to account for (historical) table modifications. All cleaning must be performed by a person who is at least qualified as an asbestos associated project worker, and HEPA-vacuuming and wet-cleaning methods are required.</p> <p>Initial cleaning shall be made immediately following appropriate worker training (Fall 2017).</p> <p>Maintain under O&amp;M Program</p> | Fall 2017             |
| Were additional samples of this ACBM collected? <b>No</b> |            |                    |                     |                                | Date of Management Planner Review: <u>February 28, 2017</u>  |                       |

School: Sandwich High School

Date of Re-Inspection: December 29, 2016

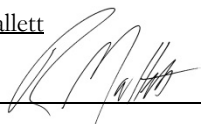
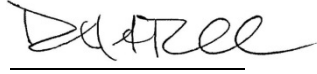
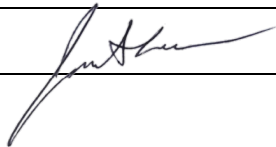
|  |  |
|--|--|
| <p>Inspector's Name: <u>Robert Mallett</u></p> <p>Inspector Signature: <u></u></p> <p>Accreditation #/State: <u>AI900557/MA</u></p> <p>Expiration Date: <u>06/01/2017</u></p> | <p>Management Planner Name: <u>Dustin Diedricksen</u></p> <p>Management Planner Signature: <u></u></p> <p>Accreditation #/State: <u>AP900425/MA</u></p> <p>Expiration Date: <u>04/05/2017</u></p> |
| <p>I, the LEA's Designated Person, have read and understood the recommendations made above: <u></u></p> <p>Date: <u>6/30/2017</u></p>                                       |  |

School: Sandwich High School

Date of Re-Inspection: December 29, 2016

Homogeneous Material: Brown Sill-to-Wall Caulking

Sample ID Number: 06A-RCM-1108

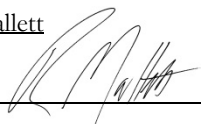
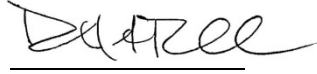
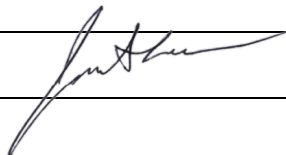
| ACBM RE-INSPECTION FINDINGS  |            |                    |                     |                                | MANAGEMENT PLANNER RECOMMENDATIONS   |                       |
|--|------------|--------------------|---------------------|--------------------------------|--|-----------------------|
| ACBM Location(s) by Assessment Category  | Friability | Estimated Quantity | Assessment Category | Physical Description           | Recommended Response Action(s)   | Date Action Completed |
| Classroom C323<br>Greenhouse   | NF         | 5 LF               | 5                   | ACBM with Potential for Damage | Maintain under O&M Program   | Ongoing               |
| Were additional samples of this ACBM collected? <b>No</b>  |            |                    |                     |                                | Date of Management Planner Review: <u>February 28, 2017</u>  |                       |
| Inspector's Name: <u>Robert Mallett</u><br>Inspector Signature: <br>Accreditation #/State: <u>AI900557/MA</u><br>Expiration Date: <u>06/01/2017</u> |            |                    |                     |                                | Management Planner Name: <u>Dustin Diedricksen</u><br>Management Planner Signature: <br>Accreditation #/State: <u>AP900425/MA</u><br>Expiration Date: <u>04/05/2017</u> |                       |
| I, the LEA's Designated Person, have read and understood the recommendations made above: <br>Date: <u>6/30/2017</u>                             |            |                    |                     |                                |  |                       |

School: Sandwich High School

Date of Re-Inspection: December 29, 2016

Homogeneous Material: Gray Screw-Head Sealant

Sample ID Number: 08A-RCM-1108

| ACBM RE-INSPECTION FINDINGS  |            |                    |                     |                                | MANAGEMENT PLANNER RECOMMENDATIONS   |                       |
|--|------------|--------------------|---------------------|--------------------------------|--|-----------------------|
| ACBM Location(s) by Assessment Category  | Friability | Estimated Quantity | Assessment Category | Physical Description           | Recommended Response Action(s)   | Date Action Completed |
| Classroom C323<br>Greenhouse   | NF         | 25 EA              | 5                   | ACBM with Potential for Damage | Maintain under O&M Program   | Ongoing               |
| Were additional samples of this ACBM collected? <b>No</b>  |            |                    |                     |                                | Date of Management Planner Review: <u>February 28, 2017</u>  |                       |
| Inspector's Name: <u>Robert Mallett</u><br>Inspector Signature: <br>Accreditation #/State: <u>AI900557/MA</u><br>Expiration Date: <u>06/01/2017</u> |            |                    |                     |                                | Management Planner Name: <u>Dustin Diedricksen</u><br>Management Planner Signature: <br>Accreditation #/State: <u>AP900425/MA</u><br>Expiration Date: <u>04/05/2017</u> |                       |
| I, the LEA's Designated Person, have read and understood the recommendations made above: _____<br>Date: <u>6/30/2017</u>   |            |                    |                     |                                |   |                       |



## Appendix E

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### Asbestos Laboratory Analytical Report and Chain-of-Custody Form



# EMSL Analytical, Inc.

5 Constitution Way, Unit A Woburn, MA 01801

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

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

EMSL Order: 131700081

Customer ID: ENVI54

Customer PO: 20160762.A1E-15

Project ID:

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

**Phone:** (617) 778-3750

**Fax:** (888) 838-1160

**Received Date:** 12/30/2016 9:17 AM

**Analysis Date:** 01/09/2017

**Collected Date:** 12/29/2016

**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  | Description  | Appearance                      | Non-Asbestos                   |                          | Asbestos      |
|---|--|---------------------------------|--------------------------------|--------------------------|---------------|
|   |  |                                 | % Fibrous                      | % Non-Fibrous            | % Type        |
| 01A-RCM-1229<br><small>131700081-0001</small> | Classroom C320 - 2'x4' White Faux 2'x2' Suspended Ceiling Tile | Gray/White Fibrous Homogeneous  | 40% Cellulose<br>40% Min. Wool | 20% Non-fibrous (Other)  | None Detected |
| 01B-RCM-1229<br><small>131700081-0002</small> | B-Wing Hallway - 2'x4' White Faux 2'x2' Suspended Ceiling Tile | Gray/White Fibrous Homogeneous  | 40% Cellulose<br>40% Min. Wool | 20% Non-fibrous (Other)  | None Detected |
| 02A-RCM-1229<br><small>131700081-0003</small> | Classroom C325 - 12"x12" Purple Mottled Floor Tile             | Purple Non-Fibrous Homogeneous  |                                | 100% Non-fibrous (Other) | None Detected |
| 02B-RCM-1229<br><small>131700081-0004</small> | Classroom C329 - 12"x12" Purple Mottled Floor Tile             | Purple Non-Fibrous Homogeneous  |                                | 100% Non-fibrous (Other) | None Detected |
| 03A-RCM-1229<br><small>131700081-0005</small> | Classroom C325 - 12"x12" Yellow Mottled Floor Tile             | Yellow Non-Fibrous Homogeneous  |                                | 100% Non-fibrous (Other) | None Detected |
| 03B-RCM-1229<br><small>131700081-0006</small> | Classroom C329 - 12"x12" Yellow Mottled Floor Tile             | Yellow Non-Fibrous Homogeneous  |                                | 100% Non-fibrous (Other) | None Detected |
| 04A-RCM-1229<br><small>131700081-0007</small> | Classroom C325 - 12"x12" Tan Mottled Floor Tile                | Beige Non-Fibrous Homogeneous   |                                | 100% Non-fibrous (Other) | None Detected |
| 04B-RCM-1229<br><small>131700081-0008</small> | Classroom C329 - 12"x12" Tan Mottled Floor Tile                | Beige Non-Fibrous Homogeneous   |                                | 100% Non-fibrous (Other) | None Detected |
| 05A-RCM-1229<br><small>131700081-0009</small> | Woodshop - 2'x4' White Gypsum Suspended Ceiling Tile           | Brown/White Fibrous Homogeneous | 60% Cellulose                  | 40% Non-fibrous (Other)  | None Detected |
| 05B-RCM-1229<br><small>131700081-0010</small> | Kitchen #1 - 2'x4' White Gypsum Suspended Ceiling Tile         | Brown/White Fibrous Homogeneous | 60% Cellulose                  | 40% Non-fibrous (Other)  | None Detected |
| 06A-RCM-1229<br><small>131700081-0011</small> | Classroom C325 - Tan Mastic Associated with 12"x12" Floor Tile | Tan Non-Fibrous Homogeneous     |                                | 100% Non-fibrous (Other) | None Detected |
| 06B-RCM-1229<br><small>131700081-0012</small> | Classroom C329 - Tan Mastic Associated with 12"x12" Floor Tile | Tan Non-Fibrous Homogeneous     |                                | 100% Non-fibrous (Other) | None Detected |
| 07A-RCM-1229<br><small>131700081-0013</small> | A/V Storage - 12"x12" Blue Mottled Floor Tile                  | Blue Non-Fibrous Homogeneous    |                                | 100% Non-fibrous (Other) | None Detected |
| 07B-RCM-1229<br><small>131700081-0014</small> | 2nd Floor C-Wing Hallway - 12"x12" Blue Mottled Floor Tile     | Blue Non-Fibrous Homogeneous    |                                | 100% Non-fibrous (Other) | None Detected |

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



# EMSL Analytical, Inc.

5 Constitution Way, Unit A Woburn, MA 01801

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

<http://www.EMSL.com> / [bostonlab@emsl.com](mailto:bostonlab@emsl.com)

**EMSL Order:** 131700081  
**Customer ID:** ENVI54  
**Customer PO:** 20160762.A1E-15  
**Project ID:**

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

| Sample                         | Description   | Appearance                          | Non-Asbestos                               |                          | Asbestos       |
|--------------------------------|---|-------------------------------------|--|--------------------------|----------------|
|                                |   |                                     | % Fibrous                                  | % Non-Fibrous            | % Type         |
| 08A-RCM-1229<br>131700081-0015 | 2nd Floor D-Wing<br>Computer Classroom<br>- 12"x12" Green<br>Mottled Floor Tile | Green<br>Non-Fibrous<br>Homogeneous |  | 100% Non-fibrous (Other) | None Detected  |
| 08B-RCM-1229<br>131700081-0016 | Classroom D263 -<br>12"x12" Green<br>Mottled Floor Tile                         | Green<br>Non-Fibrous<br>Homogeneous |  | 100% Non-fibrous (Other) | None Detected  |
| 09A-RCM-1229<br>131700081-0017 | 2nd Floor Mechanical<br>Space - Gray<br>Spray-Applied<br>Fireproofing           | Gray<br>Fibrous<br>Homogeneous      | 25% Min. Wool<br>10% Glass                 | 65% Non-fibrous (Other)  | None Detected  |
| 09B-RCM-1229<br>131700081-0018 | 3rd Floor Mechanical<br>Space - Gray<br>Spray-Applied<br>Fireproofing           | Gray<br>Fibrous<br>Homogeneous      | 25% Min. Wool<br>10% Glass                 | 65% Non-fibrous (Other)  | None Detected  |
| 09C-RCM-1229<br>131700081-0019 | Woodshop - Gray<br>Spray-Applied<br>Fireproofing                                | Gray<br>Fibrous<br>Homogeneous      | 25% Min. Wool<br>10% Glass                 | 65% Non-fibrous (Other)  | None Detected  |
| 09D-RCM-1229<br>131700081-0020 | Stage Storage - Gray<br>Spray-Applied<br>Fireproofing                           | Gray<br>Fibrous<br>Homogeneous      | 25% Min. Wool<br>10% Glass                 | 65% Non-fibrous (Other)  | None Detected  |
| 10A-RCM-1229<br>131700081-0021 | Boys Locker Room<br>Showers - White<br>Textured Ceiling<br>Material             | White<br>Non-Fibrous<br>Homogeneous |  | 100% Non-fibrous (Other) | None Detected  |
| 10B-RCM-1229<br>131700081-0022 | Boys Locker Room<br>Showers - White<br>Textured Ceiling<br>Material             | White<br>Non-Fibrous<br>Homogeneous |  | 100% Non-fibrous (Other) | None Detected  |
| 10C-RCM-1229<br>131700081-0023 | Boys Locker Room<br>Showers - White<br>Textured Ceiling<br>Material             | White<br>Non-Fibrous<br>Homogeneous |  | 100% Non-fibrous (Other) | None Detected  |
| 10D-RCM-1229<br>131700081-0024 | Girls Locker Room<br>Showers - White<br>Textured Ceiling<br>Material            | White<br>Non-Fibrous<br>Homogeneous |  | 100% Non-fibrous (Other) | None Detected  |
| 10E-RCM-1229<br>131700081-0025 | Girls Locker Room<br>Showers - White<br>Textured Ceiling<br>Material            | White<br>Non-Fibrous<br>Homogeneous |  | 100% Non-fibrous (Other) | None Detected  |
| 11A-RCM-1229<br>131700081-0026 | 3rd Floor Mechanical<br>Space - White<br>Generator Breeching<br>Insulation      | White<br>Fibrous<br>Homogeneous     | 20% Cellulose<br>10% Synthetic<br>2% Glass | 68% Non-fibrous (Other)  | <1% Chrysotile |
| 11B-RCM-1229<br>131700081-0027 | 3rd Floor Mechanical<br>Space - White<br>Generator Breeching<br>Insulation      | White<br>Fibrous<br>Homogeneous     | 20% Cellulose<br>10% Synthetic<br>2% Glass | 68% Non-fibrous (Other)  | None Detected  |
| 11C-RCM-1229<br>131700081-0028 | 3rd Floor Mechanical<br>Space - White<br>Generator Breeching<br>Insulation      | White<br>Fibrous<br>Homogeneous     | 20% Synthetic                              | 20% Non-fibrous (Other)  | 60% Chrysotile |
| 12A-RCM-1229<br>131700081-0029 | Boys Locker Room<br>(Ceiling) - White Joint<br>Compound                         | White<br>Non-Fibrous<br>Homogeneous |  | 100% Non-fibrous (Other) | None Detected  |

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



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

<http://www.EMSL.com> / [bostonlab@emsl.com](mailto:bostonlab@emsl.com)

**EMSL Order:** 131700081  
**Customer ID:** ENVI54  
**Customer PO:** 20160762.A1E-15  
**Project ID:**

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

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

Analyst(s)

Michael Mink (32)

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



**Asbestos Bulk Sample Chain-of-Custody**

Sheet 1 of 1

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

**Building Name/Number:** Sandwich High School **Project Manager:** D Diedricksen

**Site Address:** 365 Quaker Meeting House Road, Sandwich, MA **Total # of Samples:** 32

| Sample ID<br>(#-Initials-Date) | Material Type<br>(Size, Color, Description, Material) | Sample Location                                 | Comments/<br>Quantities |
|--------------------------------|---|---|-------------------------|
| 01A-RCM-1229                   | 2' x 4' White Faux 2' x 2' Suspended Ceiling Tile     | Classroom C320                                  |                         |
| 01B-RCM-1229                   | 2' x 4' White Faux 2' x 2' Suspended Ceiling Tile     | B-Wing Hallway                                  |                         |
| 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                                  |                         |
| 05A-RCM-1229                   | 2' x 4' White Gypsum Suspended Ceiling Tile           | Woodshop  |                         |
| 05B-RCM-1229                   | 2' x 4' White Gypsum Suspended Ceiling Tile           | Kitchen # 1                                     |                         |
| 06A-RCM-1229                   | Tan Mastic Associated with 12" x 12" Floor Tile       | Classroom C325                                  |                         |
| 06B-RCM-1229                   | Tan Mastic Associated with 12" x 12" Floor Tile       | Classroom C329                                  |                         |
| 07A-RCM-1229                   | 12" x 12" Blue Mottled Floor Tile                     | A/V Storage                                     |                         |
| 07B-RCM-1229                   | 12" x 12" Blue Mottled Floor Tile                     | 2 <sup>nd</sup> Floor C-Wing Hallway            |                         |
| 08A-RCM-1229                   | 12" x 12" Green Mottled Floor Tile                    | 2 <sup>nd</sup> 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                       | 3 <sup>rd</sup> 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                        |                         |
| 10C-RCM-1229                   | White Textured Ceiling Material                       | Boys Locker Room Showers                        |                         |
| 10D-RCM-1229                   | White Textured Ceiling Material                       | Girls Locker Room Showers                       |                         |

**RECEIVED**  
DEC 30 2016  
By [Signature] 9:17

EMSL fx  
7952 1926 1570



**FUSS & O'NEILL**  
EnviroScience, LLC

EMSL Customer No. ENVI54

www.fando.com

50 Redfield Street, Suite 100, Boston, MA 02122

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

|              |                                      |                            |  |
|--------------|--------------------------------------|----------------------------|--|
| 10E-RCM-1229 | White Textured Ceiling Material      | Girls Locker Room Showers  |  |
| 11A-RCM-1229 | White Generator Breeching Insulation | 3rd Floor Mechanical Space |  |
| 11B-RCM-1229 | White Generator Breeching Insulation | 3rd 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) |  |

**Analysis Method:**  PLM  TEM  Other \_\_\_\_\_ Turnaround Time: 1-week

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

**Email Results to:** ddiedricksen & rmallett@fando.com **Do Not Mail Hard Copy Report** **FAX Results to:** 888-838-1160.

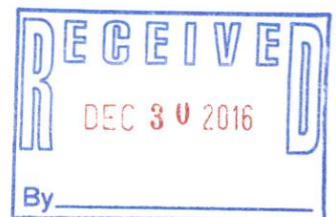
**Special Instructions:** Stop analysis on first positive sample in each homogeneous set of samples unless otherwise noted. Do not layer samples unless indicated. Do not point count. ~~If NOB group samples are ALL negative by PLM, analyze the sample denoted with a star (★) by TEM NOB on a [ ] turnaround time. Analyze a MAXIMUM of [ ] samples by TEM in noted order.~~

**Samples Collected by:** [Signature] **Date:** 12/29/16

**Samples Sent by:** [Signature] **Date:** 12/29/16 **Time:** PM

**Shipped To:**  EMSL MA  Other \_\_\_\_\_

**Method of Shipment:**  Fed Ex  Lab Drop Off  Other \_\_\_\_\_



## Appendix F

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### 2012 Re-Inspection Asbestos Laboratory Results

# ProScience Analytical Services, Inc.

Client Name: ATC Associates, Inc., Woburn  
 PO #: N/A  
 Client Project #: 60.43378.0001  
 Client Reference: Sandwich High School, Sandwich, MA  
 Method: EPA/600/R-93/116

**Batch: B82498**  
 Date Sampled: 7/19/2012  
 Date Received: 7/27/2012  
 Date Analyzed: 7/29/2012  
 Date of Report: 7/31/2012

| Sample ID   | Color | Asbestos % |     |     |     |     |     | Non-Asbestos % |     |     |     |     |     |     |
|---|-------|------------|-----|-----|-----|-----|-----|----------------|-----|-----|-----|-----|-----|-----|
|   |       | CHR        | AMO | CRO | ACT | TRE | ANT | FBG            | MNW | CEL | HAR | SYN | OTH | NON |
| 01A   | White | 0          | 0   | 0   | 0   | 0   | 0   | 0              | 0   | 0   | 0   | 0   | 0   | 100 |
| Description: Joint Compound   |       |            |     |     |     |     |     |                |     |     |     |     |     |     |
| Location: 323   |       |            |     |     |     |     |     |                |     |     |     |     |     |     |
| Comments: <span style="float: right;">Is asbestos present? No. Analyzed: Yes</span> |       |            |     |     |     |     |     |                |     |     |     |     |     |     |

| Sample ID   | Color | Asbestos % |     |     |     |     |     | Non-Asbestos % |     |     |     |     |     |     |
|---|-------|------------|-----|-----|-----|-----|-----|----------------|-----|-----|-----|-----|-----|-----|
|   |       | CHR        | AMO | CRO | ACT | TRE | ANT | FBG            | MNW | CEL | HAR | SYN | OTH | NON |
| 01B   | White | 0          | 0   | 0   | 0   | 0   | 0   | 0              | 0   | 0   | 0   | 0   | 0   | 100 |
| Description: Joint Compound   |       |            |     |     |     |     |     |                |     |     |     |     |     |     |
| Location: A209  |       |            |     |     |     |     |     |                |     |     |     |     |     |     |
| Comments: <span style="float: right;">Is asbestos present? No. Analyzed: Yes</span> |       |            |     |     |     |     |     |                |     |     |     |     |     |     |

| Sample ID   | Color | Asbestos % |     |     |     |     |     | Non-Asbestos % |     |     |     |     |     |     |
|---|-------|------------|-----|-----|-----|-----|-----|----------------|-----|-----|-----|-----|-----|-----|
|   |       | CHR        | AMO | CRO | ACT | TRE | ANT | FBG            | MNW | CEL | HAR | SYN | OTH | NON |
| 01C   | White | 0          | 0   | 0   | 0   | 0   | 0   | 0              | 0   | 0   | 0   | 0   | 0   | 100 |
| Description: Joint Compound   |       |            |     |     |     |     |     |                |     |     |     |     |     |     |
| Location: Library   |       |            |     |     |     |     |     |                |     |     |     |     |     |     |
| Comments: <span style="float: right;">Is asbestos present? No. Analyzed: Yes</span> |       |            |     |     |     |     |     |                |     |     |     |     |     |     |

| Sample ID   | Color | Asbestos % |     |     |     |     |     | Non-Asbestos % |     |     |     |     |     |     |
|---|-------|------------|-----|-----|-----|-----|-----|----------------|-----|-----|-----|-----|-----|-----|
|   |       | 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: Spray-on Fireproofing  |       |            |     |     |     |     |     |                |     |     |     |     |     |     |
| Location: Library   |       |            |     |     |     |     |     |                |     |     |     |     |     |     |
| Comments: <span style="float: right;">Is asbestos present? No. Analyzed: Yes</span> |       |            |     |     |     |     |     |                |     |     |     |     |     |     |

| Sample ID   | Color | Asbestos % |     |     |     |     |     | Non-Asbestos % |     |     |     |     |     |     |
|---|-------|------------|-----|-----|-----|-----|-----|----------------|-----|-----|-----|-----|-----|-----|
|   |       | CHR        | AMO | CRO | ACT | TRE | ANT | FBG            | MNW | CEL | HAR | SYN | OTH | NON |
| 02B   | Gray  | 0          | 0   | 0   | 0   | 0   | 0   | 0              | 20  | 60  | 0   | 5   | 0   | 15  |
| Description: Spray-on Fireproofing  |       |            |     |     |     |     |     |                |     |     |     |     |     |     |
| Location: 3rd Fl., Mechanical Rm.   |       |            |     |     |     |     |     |                |     |     |     |     |     |     |
| Comments: <span style="float: right;">Is asbestos present? No. Analyzed: Yes</span> |       |            |     |     |     |     |     |                |     |     |     |     |     |     |

| Sample ID   | Color | Asbestos % |     |     |     |     |     | Non-Asbestos % |     |     |     |     |     |     |
|---|-------|------------|-----|-----|-----|-----|-----|----------------|-----|-----|-----|-----|-----|-----|
|   |       | 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: Spray-on Fireproofing  |       |            |     |     |     |     |     |                |     |     |     |     |     |     |
| Location: 3rd Fl., Mechanical Rm.   |       |            |     |     |     |     |     |                |     |     |     |     |     |     |
| Comments: <span style="float: right;">Is asbestos present? No. Analyzed: Yes</span> |       |            |     |     |     |     |     |                |     |     |     |     |     |     |



# ProScience Analytical Services, Inc.

Client Name: ATC Associates, Inc., Woburn  
 PO #: N/A  
 Client Project #: 60.43378.0001  
 Client Reference: Sandwich High School, Sandwich, MA  
 Method: EPA/600/R-93/116

**Batch: B82498**  
 Date Sampled: 7/19/2012  
 Date Received: 7/27/2012  
 Date Analyzed: 7/29/2012  
 Date of Report: 7/31/2012

| Sample ID   | Color | Asbestos % |     |     |     |     |     | Non-Asbestos % |     |     |     |     |     |  |
|---|-------|------------|-----|-----|-----|-----|-----|----------------|-----|-----|-----|-----|-----|--|
|   |       | 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                                     |
| Description: Sheetrock<br>Location: Comp. Rm. B220<br>Comments: |       |            |     |     |     |     |     |                |     |     |     |     |     | Is asbestos present? No. Analyzed: Yes |

| Sample ID  | Color | Asbestos % |     |     |     |     |     | Non-Asbestos % |     |     |     |     |     |  |
|--|-------|------------|-----|-----|-----|-----|-----|----------------|-----|-----|-----|-----|-----|--|
|  |       | CHR        | AMO | CRO | ACT | TRE | ANT | FBG            | MNW | CEL | HAR | SYN | OTH | NON                                    |
| 03B  | Multi | 0          | 0   | 0   | 0   | 0   | 0   | 0              | 0   | 5   | 0   | 0   | 0   | 95                                     |
| Description: Sheetrock<br>Location: Library<br>Comments: |       |            |     |     |     |     |     |                |     |     |     |     |     | Is asbestos present? No. Analyzed: Yes |

| Sample ID   | Color  | Asbestos % |     |     |     |     |     | Non-Asbestos % |     |     |     |     |     |   |
|---|--------|------------|-----|-----|-----|-----|-----|----------------|-----|-----|-----|-----|-----|---|
|   |        | CHR        | AMO | CRO | ACT | TRE | ANT | FBG            | MNW | CEL | HAR | SYN | OTH | NON                                     |
| 04A   | Yellow | 30         | 0   | 0   | 0   | 0   | 0   | 0              | 0   | 0   | 0   | 0   | 0   | 70                                      |
| Description: Yellow Linoleum<br>Location: Training Rm.<br>Comments: |        |            |     |     |     |     |     |                |     |     |     |     |     | Is asbestos present? Yes. Analyzed: Yes |

| Sample ID   | Color | Asbestos % |     |     |     |     |     | Non-Asbestos % |     |     |     |     |     |              |
|---|-------|------------|-----|-----|-----|-----|-----|----------------|-----|-----|-----|-----|-----|--------------|
|   |       | 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: Yellow Linoleum<br>Location: Training Rm.<br>Comments: |       |            |     |     |     |     |     |                |     |     |     |     |     | Analyzed: No |

| Sample ID  | Color  | Asbestos % |     |     |     |     |     | Non-Asbestos % |     |     |     |     |     |  |
|--|--------|------------|-----|-----|-----|-----|-----|----------------|-----|-----|-----|-----|-----|--|
|  |        | 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: Yellow Mastic on Yellow Linoleum<br>Location: Training Rm.<br>Comments: |        |            |     |     |     |     |     |                |     |     |     |     |     | Is asbestos present? No. Analyzed: Yes |

| Sample ID  | Color  | Asbestos % |     |     |     |     |     | Non-Asbestos % |     |     |     |     |     |  |
|--|--------|------------|-----|-----|-----|-----|-----|----------------|-----|-----|-----|-----|-----|--|
|  |        | CHR        | AMO | CRO | ACT | TRE | ANT | FBG            | MNW | CEL | HAR | SYN | OTH | NON                                    |
| 05B  | Yellow | 0          | 0   | 0   | 0   | 0   | 0   | 0              | 0   | 0   | 0   | 0   | 0   | 100                                    |
| Description: Yellow Mastic on Yellow Linoleum<br>Location: Training Rm.<br>Comments: |        |            |     |     |     |     |     |                |     |     |     |     |     | Is asbestos present? No. Analyzed: Yes |

# ProScience Analytical Services, Inc.

Client Name: ATC Associates, Inc., Woburn  
 PO #: N/A  
 Client Project #: 60.43378.0001  
 Client Reference: Sandwich High School, Sandwich, MA  
 Method: EPA/600/R-93/116

**Batch:** B82498  
 Date Sampled: 7/19/2012  
 Date Received: 7/27/2012  
 Date Analyzed: 7/29/2012  
 Date of Report: 7/31/2012

| Sample ID  | Color | Asbestos % |     |     |     |     |     | Non-Asbestos % |     |     |     |     |     |  |
|--|-------|------------|-----|-----|-----|-----|-----|----------------|-----|-----|-----|-----|-----|--|
|  |       | CHR        | AMO | CRO | ACT | TRE | ANT | FBG            | MNW | CEL | HAR | SYN | OTH | NON                                    |
| 06A  | Tan   | 0          | 0   | 0   | 0   | 0   | 0   | 0              | 0   | 0   | 0   | 0   | 0   | 100                                    |
| Description: Tan 12" Floor Tile<br>Location: Guidance Storage<br>Comments: |       |            |     |     |     |     |     |                |     |     |     |     |     | Is asbestos present? No. Analyzed: Yes |

| Sample ID  | Color | Asbestos % |     |     |     |     |     | Non-Asbestos % |     |     |     |     |     |  |
|--|-------|------------|-----|-----|-----|-----|-----|----------------|-----|-----|-----|-----|-----|--|
|  |       | CHR        | AMO | CRO | ACT | TRE | ANT | FBG            | MNW | CEL | HAR | SYN | OTH | NON                                    |
| 06B  | Tan   | 0          | 0   | 0   | 0   | 0   | 0   | 0              | 0   | 0   | 0   | 0   | 0   | 100                                    |
| Description: Tan 12" Floor Tile<br>Location: Elec. Rm. A216<br>Comments: |       |            |     |     |     |     |     |                |     |     |     |     |     | Is asbestos present? No. Analyzed: Yes |

| Sample ID   | Color  | Asbestos % |     |     |     |     |     | Non-Asbestos % |     |     |     |     |     |  |
|---|--------|------------|-----|-----|-----|-----|-----|----------------|-----|-----|-----|-----|-----|--|
|   |        | CHR        | AMO | CRO | ACT | TRE | ANT | FBG            | MNW | CEL | HAR | SYN | OTH | NON                                    |
| 07A   | Yellow | 0          | 0   | 0   | 0   | 0   | 0   | 0              | 0   | 0   | 0   | 0   | 0   | 100                                    |
| Description: Yellow Mastic on Tan 12" Floor Tile<br>Location: Guidance Storage<br>Comments: |        |            |     |     |     |     |     |                |     |     |     |     |     | Is asbestos present? No. Analyzed: Yes |

| Sample ID   | Color  | Asbestos % |     |     |     |     |     | Non-Asbestos % |     |     |     |     |     |  |
|---|--------|------------|-----|-----|-----|-----|-----|----------------|-----|-----|-----|-----|-----|--|
|   |        | CHR        | AMO | CRO | ACT | TRE | ANT | FBG            | MNW | CEL | HAR | SYN | OTH | NON                                    |
| 07B   | Yellow | 0          | 0   | 0   | 0   | 0   | 0   | 0              | 0   | 0   | 0   | 0   | 0   | 100                                    |
| Description: Yellow Mastic on Tan 12" Floor Tile<br>Location: Elec. Rm. A216<br>Comments: |        |            |     |     |     |     |     |                |     |     |     |     |     | Is asbestos present? No. Analyzed: Yes |

| Sample ID   | Color | Asbestos % |     |     |     |     |     | Non-Asbestos % |     |     |     |     |     |   |
|---|-------|------------|-----|-----|-----|-----|-----|----------------|-----|-----|-----|-----|-----|---|
|   |       | CHR        | AMO | CRO | ACT | TRE | ANT | FBG            | MNW | CEL | HAR | SYN | OTH | NON                                     |
| 08A   | Tan   | 30         | 0   | 0   | 0   | 0   | 0   | 0              | 0   | 0   | 0   | 0   | 0   | 70                                      |
| Description: Tan Sheet Floor<br>Location: C320<br>Comments: |       |            |     |     |     |     |     |                |     |     |     |     |     | Is asbestos present? Yes. Analyzed: Yes |

| Sample ID   | Color | Asbestos % |     |     |     |     |     | Non-Asbestos % |     |     |     |     |     |              |
|---|-------|------------|-----|-----|-----|-----|-----|----------------|-----|-----|-----|-----|-----|--------------|
|   |       | CHR        | AMO | CRO | ACT | TRE | ANT | FBG            | MNW | CEL | HAR | SYN | OTH | NON          |
| 08B   |       | 0          | 0   | 0   | 0   | 0   | 0   | 0              | 0   | 0   | 0   | 0   | 0   | 0            |
| Description: Tan Sheet Floor<br>Location: C337<br>Comments: |       |            |     |     |     |     |     |                |     |     |     |     |     | Analyzed: No |

# ProScience Analytical Services, Inc.

Client Name: ATC Associates, Inc., Woburn  
 PO #: N/A  
 Client Project #: 60.43378.0001  
 Client Reference: Sandwich High School, Sandwich, MA  
 Method: EPA/600/R-93/116

**Batch:** B82498  
 Date Sampled: 7/19/2012  
 Date Received: 7/27/2012  
 Date Analyzed: 7/29/2012  
 Date of Report: 7/31/2012

| Sample ID  | Color | Asbestos % |     |     |     |     |     | Non-Asbestos % |     |     |     |     |     |     |
|--|-------|------------|-----|-----|-----|-----|-----|----------------|-----|-----|-----|-----|-----|-----|
|  |       | CHR        | AMO | CRO | ACT | TRE | ANT | FBG            | MNW | CEL | HAR | SYN | OTH | NON |
| 09A  | Black | 25         | 0   | 0   | 0   | 0   | 0   | 0              | 0   | 0   | 0   | 0   | 0   | 75  |
| Description: Red Transite Hood   |       |            |     |     |     |     |     |                |     |     |     |     |     |     |
| Location: 322 Prep   |       |            |     |     |     |     |     |                |     |     |     |     |     |     |
| Comments: <span style="float: right;">Is asbestos present? Yes. Analyzed: Yes</span> |       |            |     |     |     |     |     |                |     |     |     |     |     |     |

| Sample ID   | Color | Asbestos % |     |     |     |     |     | Non-Asbestos % |     |     |     |     |     |     |
|---|-------|------------|-----|-----|-----|-----|-----|----------------|-----|-----|-----|-----|-----|-----|
|   |       | 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: <span style="float: right;">Analyzed: No</span> |       |            |     |     |     |     |     |                |     |     |     |     |     |     |

| Sample ID  | Color | Asbestos % |     |     |     |     |     | Non-Asbestos % |     |     |     |     |     |     |
|--|-------|------------|-----|-----|-----|-----|-----|----------------|-----|-----|-----|-----|-----|-----|
|  |       | 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  |
| Description: Expansion Joint Caulking  |       |            |     |     |     |     |     |                |     |     |     |     |     |     |
| Location: Elec. Rm. by B129 Office   |       |            |     |     |     |     |     |                |     |     |     |     |     |     |
| Comments: <span style="float: right;">Is asbestos present? Yes. Analyzed: Yes</span> |       |            |     |     |     |     |     |                |     |     |     |     |     |     |

| Sample ID   | Color | Asbestos % |     |     |     |     |     | Non-Asbestos % |     |     |     |     |     |     |
|---|-------|------------|-----|-----|-----|-----|-----|----------------|-----|-----|-----|-----|-----|-----|
|   |       | 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                        |       |            |     |     |     |     |     |                |     |     |     |     |     |     |
| Comments: <span style="float: right;">Analyzed: No</span> |       |            |     |     |     |     |     |                |     |     |     |     |     |     |

| Sample ID  | Color | Asbestos % |     |     |     |     |     | Non-Asbestos % |     |     |     |     |     |     |
|--|-------|------------|-----|-----|-----|-----|-----|----------------|-----|-----|-----|-----|-----|-----|
|  |       | CHR        | AMO | CRO | ACT | TRE | ANT | FBG            | MNW | CEL | HAR | SYN | OTH | NON |
| 11A  | Red   | 5          | 0   | 0   | 0   | 0   | 0   | 0              | 0   | 0   | 0   | 0   | 0   | 95  |
| Description: Red Duct Sealant  |       |            |     |     |     |     |     |                |     |     |     |     |     |     |
| Location: G Wing - 3rd Floor   |       |            |     |     |     |     |     |                |     |     |     |     |     |     |
| Comments: <span style="float: right;">Is asbestos present? Yes. Analyzed: Yes</span> |       |            |     |     |     |     |     |                |     |     |     |     |     |     |

| Sample ID   | Color | Asbestos % |     |     |     |     |     | Non-Asbestos % |     |     |     |     |     |     |
|---|-------|------------|-----|-----|-----|-----|-----|----------------|-----|-----|-----|-----|-----|-----|
|   |       | CHR        | AMO | CRO | ACT | TRE | ANT | FBG            | MNW | CEL | HAR | SYN | OTH | NON |
| 11B   |       | 0          | 0   | 0   | 0   | 0   | 0   | 0              | 0   | 0   | 0   | 0   | 0   | 0   |
| Description: Red Duct Sealant                             |       |            |     |     |     |     |     |                |     |     |     |     |     |     |
| Location: G Wing - 3rd Floor                              |       |            |     |     |     |     |     |                |     |     |     |     |     |     |
| Comments: <span style="float: right;">Analyzed: No</span> |       |            |     |     |     |     |     |                |     |     |     |     |     |     |

# ProScience Analytical Services, Inc.

Client Name: ATC Associates, Inc., Woburn  
 PO #: N/A  
 Client Project #: 60.43378.0001  
 Client Reference: Sandwich High School, Sandwich, MA  
 Method: EPA/600/R-93/116

Batch: **B82498**  
 Date Sampled: 7/19/2012  
 Date Received: 7/27/2012  
 Date Analyzed: 7/29/2012  
 Date of Report: 7/31/2012

| Sample ID  | Color | Asbestos % |     |     |     |     |     | Non-Asbestos % |     |     |     |     |     |   |
|--|-------|------------|-----|-----|-----|-----|-----|----------------|-----|-----|-----|-----|-----|---|
|  |       | CHR        | AMO | CRO | ACT | TRE | ANT | FBG            | MNW | CEL | HAR | SYN | OTH | NON                                     |
| 12A  | Brown | 30         | 0   | 0   | 0   | 0   | 0   | 0              | 0   | 2   | 0   | 0   | 0   | 68                                      |
| Description: Brown Sheet Floor<br>Location: Auditorium Projection Rm.<br>Comments: |       |            |     |     |     |     |     |                |     |     |     |     |     | Is asbestos present? Yes. Analyzed: Yes |

| Sample ID   | Color | Asbestos % |     |     |     |     |     | Non-Asbestos % |     |     |     |     |     |              |
|---|-------|------------|-----|-----|-----|-----|-----|----------------|-----|-----|-----|-----|-----|--------------|
|   |       | CHR        | AMO | CRO | ACT | TRE | ANT | FBG            | MNW | CEL | HAR | SYN | OTH | NON          |
| 12B   |       | 0          | 0   | 0   | 0   | 0   | 0   | 0              | 0   | 0   | 0   | 0   | 0   | 0            |
| Description: Brown Sheet Floor<br>Location: Vault D151<br>Comments: |       |            |     |     |     |     |     |                |     |     |     |     |     | Analyzed: No |

| Sample ID  | Color | Asbestos % |     |     |     |     |     | Non-Asbestos % |     |     |     |     |     |  |
|--|-------|------------|-----|-----|-----|-----|-----|----------------|-----|-----|-----|-----|-----|--|
|  |       | 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                                     |
| Description: White Sink Coating<br>Location: D145<br>Comments: |       |            |     |     |     |     |     |                |     |     |     |     |     | Is asbestos present? No. Analyzed: Yes |

| Sample ID   | Color | Asbestos % |     |     |     |     |     | Non-Asbestos % |     |     |     |     |     |  |
|---|-------|------------|-----|-----|-----|-----|-----|----------------|-----|-----|-----|-----|-----|--|
|   |       | CHR        | AMO | CRO | ACT | TRE | ANT | FBG            | MNW | CEL | HAR | SYN | OTH | NON                                    |
| 13B   | White | 0          | 0   | 0   | 0   | 0   | 0   | 0              | 0   | 20  | 0   | 0   | 0   | 80                                     |
| Description: White Sink Coating<br>Location: Prep Off C228<br>Comments: |       |            |     |     |     |     |     |                |     |     |     |     |     | Is asbestos present? No. Analyzed: Yes |

| Sample ID  | Color | Asbestos % |     |     |     |     |     | Non-Asbestos % |     |     |     |     |     |  |
|--|-------|------------|-----|-----|-----|-----|-----|----------------|-----|-----|-----|-----|-----|--|
|  |       | CHR        | AMO | CRO | ACT | TRE | ANT | FBG            | MNW | CEL | HAR | SYN | OTH | NON                                    |
| 14A  | Black | 0          | 0   | 0   | 0   | 0   | 0   | 0              | 0   | 0   | 0   | 0   | 0   | 100                                    |
| Description: Black Sink Coating<br>Location: 2nd Fl., Library<br>Comments: |       |            |     |     |     |     |     |                |     |     |     |     |     | Is asbestos present? No. Analyzed: Yes |

| Sample ID   | Color | Asbestos % |     |     |     |     |     | Non-Asbestos % |     |     |     |     |     |  |
|---|-------|------------|-----|-----|-----|-----|-----|----------------|-----|-----|-----|-----|-----|--|
|   |       | CHR        | AMO | CRO | ACT | TRE | ANT | FBG            | MNW | CEL | HAR | SYN | OTH | NON                                    |
| 14B   | Black | 0          | 0   | 0   | 0   | 0   | 0   | 0              | 0   | 0   | 0   | 0   | 0   | 100                                    |
| Description: Black Sink Coating<br>Location: 334 Prep Room<br>Comments: |       |            |     |     |     |     |     |                |     |     |     |     |     | Is asbestos present? No. Analyzed: Yes |

# ProScience Analytical Services, Inc.

Client Name: ATC Associates, Inc., Woburn  
 PO #: N/A  
 Client Project #: 60.43378.0001  
 Client Reference: Sandwich High School, Sandwich, MA  
 Method: EPA/600/R-93/116

**Batch: B82498**  
 Date Sampled: 7/19/2012  
 Date Received: 7/27/2012  
 Date Analyzed: 7/29/2012  
 Date of Report: 7/31/2012

| Sample ID | Color | Asbestos % |     |     |     |     |     | Non-Asbestos % |     |     |     |     |     |     |
|-----------|-------|------------|-----|-----|-----|-----|-----|----------------|-----|-----|-----|-----|-----|-----|
|           |       | 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 asbestos present? Yes. Analyzed: Yes

| Sample ID | Color | Asbestos % |     |     |     |     |     | Non-Asbestos % |     |     |     |     |     |     |
|-----------|-------|------------|-----|-----|-----|-----|-----|----------------|-----|-----|-----|-----|-----|-----|
|           |       | 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:

Analyzed: No

| Sample ID | Color | Asbestos % |     |     |     |     |     | Non-Asbestos % |     |     |     |     |     |     |
|-----------|-------|------------|-----|-----|-----|-----|-----|----------------|-----|-----|-----|-----|-----|-----|
|           |       | 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. Steel Column behind Cork  
 Location: 3rd Fl. Mech. Rm.  
 Comments:

Is asbestos present? Yes. Analyzed: Yes

| Sample ID | Color | Asbestos % |     |     |     |     |     | Non-Asbestos % |     |     |     |     |     |     |
|-----------|-------|------------|-----|-----|-----|-----|-----|----------------|-----|-----|-----|-----|-----|-----|
|           |       | CHR        | AMO | CRO | ACT | TRE | ANT | FBG            | MNW | CEL | HAR | SYN | OTH | NON |
| 16B       |       | 0          | 0   | 0   | 0   | 0   | 0   | 0              | 0   | 0   | 0   | 0   | 0   | 0   |

Description: Black Mastic on Struc. Steel Column behind Cork  
 Location: 3rd Fl. Mech. Rm.  
 Comments:

Analyzed: No

| Sample ID | Color | Asbestos % |     |     |     |     |     | Non-Asbestos % |     |     |     |     |     |     |
|-----------|-------|------------|-----|-----|-----|-----|-----|----------------|-----|-----|-----|-----|-----|-----|
|           |       | CHR        | AMO | CRO | ACT | TRE | ANT | FBG            | MNW | CEL | HAR | SYN | OTH | NON |
| 17A       | Multi | 0          | 0   | 0   | 0   | 0   | 0   | 0              | 0   | 0   | 0   | 0   | 0   | 100 |

Description: Lab Table Top  
 Location: 323  
 Comments:

Is asbestos present? No. Analyzed: Yes

| Sample ID | Color | Asbestos % |     |     |     |     |     | Non-Asbestos % |     |     |     |     |     |     |
|-----------|-------|------------|-----|-----|-----|-----|-----|----------------|-----|-----|-----|-----|-----|-----|
|           |       | CHR        | AMO | CRO | ACT | TRE | ANT | FBG            | MNW | CEL | HAR | SYN | OTH | NON |
| 17B       | Multi | 0          | 0   | 0   | 0   | 0   | 0   | 0              | 0   | 0   | 0   | 0   | 0   | 100 |

Description: Lab Table Top  
 Location: 324  
 Comments:

Is asbestos present? No. Analyzed: Yes

# ProScience Analytical Services, Inc.

Client Name: ATC Associates, Inc., Woburn  
 PO #: N/A  
 Client Project #: 60.43378.0001  
 Client Reference: Sandwich High School, Sandwich, MA  
 Method: EPA/600/R-93/116

**Batch: B82498**  
 Date Sampled: 7/19/2012  
 Date Received: 7/27/2012  
 Date Analyzed: 7/29/2012  
 Date of Report: 7/31/2012

| Sample ID   | Color     | Asbestos % |     |     |     |     |     | Non-Asbestos % |     |     |     |     |     |  |
|---|-----------|------------|-----|-----|-----|-----|-----|----------------|-----|-----|-----|-----|-----|--|
|   |           | CHR        | AMO | CRO | ACT | TRE | ANT | FBG            | MNW | CEL | HAR | SYN | OTH | NON                                    |
| 18A   | Dk. Brown | 0          | 0   | 0   | 0   | 0   | 0   | 0              | 0   | 0   | 0   | 0   | 0   | 100                                    |
| Description: Brown Cove Base Mastic<br>Location: 323 Teacher/Lab Station<br>Comments: |           |            |     |     |     |     |     |                |     |     |     |     |     | Is asbestos present? No. Analyzed: Yes |

| Sample ID  | Color     | Asbestos % |     |     |     |     |     | Non-Asbestos % |     |     |     |     |     |  |
|--|-----------|------------|-----|-----|-----|-----|-----|----------------|-----|-----|-----|-----|-----|--|
|  |           | CHR        | AMO | CRO | ACT | TRE | ANT | FBG            | MNW | CEL | HAR | SYN | OTH | NON                                    |
| 18B  | Dk. Brown | 0          | 0   | 0   | 0   | 0   | 0   | 0              | 0   | 0   | 0   | 0   | 0   | 100                                    |
| Description: Brown Cove Base Mastic<br>Location: 324 - Tall Cabinet<br>Comments: |           |            |     |     |     |     |     |                |     |     |     |     |     | Is asbestos present? No. Analyzed: Yes |

| Sample ID  | Color | Asbestos % |     |     |     |     |     | Non-Asbestos % |     |     |     |     |     |  |
|--|-------|------------|-----|-----|-----|-----|-----|----------------|-----|-----|-----|-----|-----|--|
|  |       | CHR        | AMO | CRO | ACT | TRE | ANT | FBG            | MNW | CEL | HAR | SYN | OTH | NON                                    |
| 19A  | Gray  | 0          | 0   | 0   | 0   | 0   | 0   | 0              | 0   | 0   | 0   | 0   | 0   | 100                                    |
| Description: Gray Duct Sealant<br>Location: Library<br>Comments: |       |            |     |     |     |     |     |                |     |     |     |     |     | Is asbestos present? No. Analyzed: Yes |

| Sample ID  | Color | Asbestos % |     |     |     |     |     | Non-Asbestos % |     |     |     |     |     |  |
|--|-------|------------|-----|-----|-----|-----|-----|----------------|-----|-----|-----|-----|-----|--|
|  |       | CHR        | AMO | CRO | ACT | TRE | ANT | FBG            | MNW | CEL | HAR | SYN | OTH | NON                                    |
| 19B  | Gray  | 0          | 0   | 0   | 0   | 0   | 0   | 0              | 0   | 0   | 0   | 0   | 0   | 100                                    |
| Description: Gray Duct Sealant<br>Location: 3rd Fl., Mechanical Rm.<br>Comments: |       |            |     |     |     |     |     |                |     |     |     |     |     | Is asbestos present? No. Analyzed: Yes |

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

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

\* All results are in percentage.

Analyst: Dan Pine

## Appendix G

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### Newly-Installed Materials Safety Data Sheets

**To be Provided by LEA**

## Appendix H

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### Sample 6-Month Periodic Surveillance Form



### Sample 6- Month Periodic Surveillance Form

Local Education Agency (LEA): Sandwich Public School District

Facility Address: 365 Quaker Meeting House Road, Sandwich, MA

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)   |                    |                   |                              |                            |          |
| Expansion-Joint Caulking                     | 1976 Building Expansion Joints  |                    |                   |                              |                            |          |
| Tan Vinyl Sheet Flooring                     | Classrooms C320-C324, C336, & C337; Band Practice Rooms P1, P2, & P3; Music Storage Room; & Chorus Room |                    |                   |                              |                            |          |
| Brown Vinyl Sheet Flooring                   | Auditorium Projector Room & Vault   |                    |                   |                              |                            |          |
| Gray Fiber-Reinforced Cement Fume Hood Panel | Classrooms C321 & C336; Prep Rooms C321/C322, C323/C324, & C336/C337                                    |                    |                   |                              |                            |          |
| Pink Sink Coating                            | Room D154   |                    |                   |                              |                            |          |
| Red Duct Sealant                             | Classrooms C321 & C336; Prep Rooms C321/C322, C323/C324, & C336/C337                                    |                    |                   |                              |                            |          |
| White Generator Breeching Insulation         | 3 <sup>rd</sup> Floor Mechanical Space  |                    |                   |                              |                            |          |

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

Conditions: D = Damaged; F = Fair; G = Good; IA = Inaccessible; N/A = Not Applicable; SD = Significant Damage; SF = Square Feet

Surveillance conducted by: \_\_\_\_\_  
(print name) (signature)

I, the LEA's Designated Person, have read and understood the findings noted above: \_\_\_\_\_

Date: \_\_\_\_\_

# Appendix I

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## Preventive Measures

## Preventive Measures for Various Asbestos-Containing Building Materials

### A. Surfacing Materials

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

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

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

### B. Thermal System Insulation (TSI)

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

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

1. Boiler and Breeching Insulation

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

2. Pipe, Pipe Fitting, Tank, Duct & Breeching Insulations

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

### **C. Miscellaneous Materials**

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

1. Vinyl Asbestos Floor Tiles (VAT)

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

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

2. Wallboard and Joint Compound Assembly

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

3. Ceiling Tile and Glue Daubs

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

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

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

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

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

## Appendix J

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### Asbestos Inspector and Management Planner State Certifications and EPA Accreditations

**Commonwealth of Massachusetts**  
**Department of Labor Standards**

*William D. McKinney, Director*



**Asbestos Management Planner**

**DUSTIN A. DIEDRICKSEN**

Eff. Date 04/05/16

Exp. Date 04/05/17

AP900425

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

BOSR BOS-RENEW

**17**







*This is to certify that*

**Dustin A. Diedricksen**



*has completed the requisite training, and has passed an examination for  
recertification*

## **Asbestos Management Planner Refresher**

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

Course Location

Institute for Environmental Education, Inc.  
16 Upton Drive Wilmington, MA 01887

January 21, 2016

Course Dates

16-0267-136-208040

Certificate Number

January 21, 2016

Examination Date

January 21, 2017

Expiration Date

Training Director

16 Upton Drive, Wilmington, MA 01887

Telephone 978.658.5272

[www.ieetrains.com](http://www.ieetrains.com)

**INSTITUTE FOR ENVIRONMENTAL EDUCATION**

**Commonwealth of Massachusetts**  
**Department of Labor Standards**

*William D. McKinney, Director*

**Asbestos Inspector**



**ROBERT C. MALLET**

Eff. Date 05/10/16

Exp. Date 06/01/17

AI900557

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

BOSR BOS-RENEW

**17**





*This is to certify that*

**Robert C Mallett**



*has completed the requisite training, and has passed an examination for  
rec accreditation as:*

**Asbestos Inspector Refresher**

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

Course Location

Institute for Environmental Education, Inc.  
16 Upton Drive Wilmington, MA 01887

January 7, 2016

Course Dates

16-0243-106-400644

Certificate Number

January 07, 2016

Examination Date

January 07, 2017

Expiration Date

Training Director

16 Upton Drive, Wilmington, MA 01887

Telephone 978.658.5272

[www.ieetraints.com](http://www.ieetraints.com)

**INSTITUTE FOR ENVIRONMENTAL EDUCATION**