

**Asbestos Hazard Emergency Response Act
Three-Year Asbestos Re-Inspection and
Management Plan Update**
for
Bourne High School

For Compliance with
EPA Asbestos Hazard Emergency Response Act
(Title 40 CFR Part 763, Subpart E)

Bourne Public Schools
Bourne, Massachusetts

September 26, 2014



FUSS & O'NEILL
EnviroScience, LLC

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

September 26, 2014

Mr. Edward Donoghue
Director of Business Services
Bourne Public Schools
36 Sandwich Road
Bourne, Massachusetts 02532

**RE: Three-Year AHERA Asbestos Re-inspection and Management Plan Update
Bourne High School
75 Waterhouse Road, Bourne, MA**
Fuss & O'Neill EnviroScience Project No. 20121141.A9E

Dear Mr. Donoghue

Enclosed is the three-year AHERA asbestos re-inspection and management plan update report prepared by Fuss & O'Neill EnviroScience, LLC at the Bourne High School located at 75 Waterhouse Road in Bourne, Massachusetts. The re-inspection was performed for Bourne Public Schools (the "Client"). This report is an important document that must be kept on file at the school, as well as at a central location where the Asbestos Management Plans are maintained.

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

Sincerely,



Dustin A. Diedricksen
Project Manager

DD/ftc

Enclosure

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1 Introduction

1.1 Background

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

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

AHERA also requires that buildings leased or acquired on or after October 12, 1998 that are to be used as a school building shall be inspected for friable and non-friable ACBM prior to use as a school building. In the event of an emergency use of a building that has not been inspected for ACBM, the building shall be inspected within 30 days after commencement of such use.

The regulatory requirements remain in effect for private or public school systems, 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 enforcement of the AHERA regulations.

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 of the AHERA requirements are properly implemented. The Designated Person must receive adequate training to perform their duties.
 2. The LEA must ensure that management plans are maintained in a central location, as well as at each facility, and such plans and records are available for inspection or review at all times.
 3. The LEA must inform all workers, building occupants or their legal representative in writing at least once per school year about asbestos-related activities, and the availability of the AHERA management plans for the school buildings.
 4. The LEA must ensure proper accreditation for all persons who perform asbestos inspections, asbestos re-inspections, develop/update management plans, develop response

actions, and perform required response actions including operations and maintenance (O&M) activities that may disturb asbestos.

5. The LEA must provide training for all custodial and maintenance staff who regularly perform building maintenance where ACM are present. The training must be provided upon initial hire, as well as annual updates.
6. The LEA must provide information (disclosure) to any workers who may perform short-term work and may come into contact with asbestos in school buildings where ACM or presumed ACM are present.
7. The LEA must ensure that known ACM or presumed ACM 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 management plan implementation, in all school buildings that it leases, owns, or otherwise uses that contains ACM or presumed ACM.
9. The LEA must ensure that once every three years, after a management plan is implemented, a re-inspection is performed at each school building that it leases owns or otherwise uses that contains ACM or presumed ACM.

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

1.3 Key Personnel

A. Local Education Agency (LEA)

LEA: Bourne Public Schools
Address: 36 Sandwich Road
Bourne, Massachusetts 02532
Phone: (508)-759-0660
Fax: (508)-759-1107

B. Designated Person: Mr. Edward Donahue
Director of Business Services
Address: 36 Sandwich Road
Bourne, Massachusetts 02122
Phone: (617)-282-4675
Fax: (617)-282-8253

C. Asbestos Consultant Data

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

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

D. Asbestos Inspector

Inspector: Robert Mallett
MADLS Certification Number: AI900557
Expiration Date: 06/02/2015

E. Asbestos Management Planner:

Planner: Dustin Diedricksen
MADLS Certification Number: AP900425
Expiration Date: 04/28/2015

2 Building and Mechanical System Description

Bourne High School is a three-level concrete and masonry structure that was reportedly constructed in 1959-60. An addition was reportedly completed in 1990-91. The addition included a new auditorium, a library, a music room, a technical education room, and other classrooms along one side of the main building. Building areas include three floors of classrooms, offices, auditorium, a library, two gymnasiums, kitchen, cafeteria, and two boiler rooms with associated crawlspaces. The area of this facility is approximately 83,300 square feet of space.

Three hot water boilers provide perimeter heating through unit ventilators in the various classrooms and other areas.

3 Three Year Re-Inspection

3.1 Re-inspection Procedures

This three-year asbestos re-inspection was conducted in accordance with EPA requirements of the AHERA regulation, Title 40 CFR, Part 763, Section 763.85 (b).

On August 22, 2014, Mr. Robert Mallett of Fuss & O'Neill EnviroScience, LLC (EnviroScience) performed the re-inspection.

- A. During the re-inspection, EnviroScience conducted the following required tasks:
1. A visual re-inspection and reassessment of all known friable or assumed ACBM.
 2. A visual re-inspection of ACBM that was previously considered non-friable to determine if the present condition of the material has become friable.

3. Identification and assessment of any newly-identified homogeneous area that contained friable ACBM since the last inspection or re-inspection.

4 Re-Inspection Report

4.1 Review of Existing Records

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

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

4.2 Re-inspection Summary

The on-site portion of the re-inspection was documented on forms modeled after examples provided by the EPA and reviewed with the MADLS. 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 2**, was used to provide information and justification regarding re-assessment of the ACBM (see *Appendix C*). This form also provides response action recommendations, including a tentative schedule for completing response actions that recommend removal or repair.

No bulk samples were collected during this re-inspection.

Using EPA protocol and criteria, the following materials existing in Bourne High School at the time of this three-year re-inspection have been determined and/or assumed to be **ACBM**. Please refer to the abovementioned Re-inspection Forms for specific locations of the materials.

Table 1
Asbestos-Containing Building Materials

HOMOGENEOUS MATERIAL	LOCATION(S)	REFERENCE	ASBESTOS CONTENT
Pipe Fitting Insulations	Pipe Tunnels, Gymnasium, Boys Locker Room behind Cubicle, Janitor's Chemical Storage Room, First Floor Men's Bathroom near West Exit (across from Cafeteria), A Wing Classrooms above Ceilings, B Wing Classrooms above Ceilings, Janitor's Office in Basement, Janitor's Closet next to 12C, Alarm Vault across from Elevator, Office Materials Storage Room Near Elevator in Basement, Duct Vault/ Storage across from Gymnasium, B Wing Janitor's Closet near Boy's Bathroom, Girls Locker Room, Girl's Storage Closet next to Locker Room, Janitor's Closet on 2 nd Floor across from Elevator, Closet 17C, C Wing Classrooms above Ceilings, & Concealed Chases & above Fixed Ceilings	EnviroScience Sample Report August 2009	50% Chrysotile 2% Amosite
9" x 9" Floor Tile	Classrooms 20A, - 25A Storage near 10C, Classrooms 11C, 13C & 15C, Classrooms 20C – 25C Custodian's Office, & Business Office	Presumed ACBM	Presumed ACBM
Transite Exhaust Ducts	Classrooms 22C & 24C	EnviroScience Sample Report August 2009	25% Chrysotile
Roof Drain Pipe Fitting Insulation	Girl's Locker Room, Gym Office, Biology Lab, 2 nd Floor Custodian's Room, Music Room, Custodial Closet, & Faculty Lunch Room	EnviroScience Sample Report August 2009	40% Chrysotile 5% Amosite

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)

HOMOGENEOUS MATERIAL	LOCATION(S)	REFERENCE
2' x 2' Suspended Ceiling Tile	Hallway between Gym and Cafeteria	EnviroScience Sample Report August 2009
1' x 1' Acoustic Ceiling Tile	Classrooms 10A, 12A, 14A, 17A, 19A, Health/Nurses Office, 21A, 23A, Storage between 24A and Physics, Physics, 25A & 27A, Classrooms 10B, 11B & Restroom in classroom, 12B, 14B, 16B, Computer Lab & Special Education Room (Former Home Economics Room), 1 st Floor B-Wing Hall, 22B & 23B, Classrooms 10C, 11C, 12C, Storage between 10C & 12C, 13C, 14C, 15C, 1 st Floor C-Wing Hall, 20C, 21C, 22C, 23C, 24C, Office between 24C and Physics, 25C, Book Storage C, 1 st & 2 nd Floor Floating Staircase, Men's & Women's First Floor Faculty Restrooms, Biology & Physics Classrooms	EnviroScience Sample Report August 2009
2' x 4' Fissured Suspended Ceiling Tile	D-Wing including Auditorium, Gym, Library, & Classrooms 11A, 13A, & 15A	EnviroScience Sample Report August 2009
Black Mastic associated with 12" x 12" Floor Tile	Throughout School (Classrooms, Offices & Hallways)	EnviroScience Sample Report August 2009
Small Boiler Insulation-Top Gray Layer	C-Wing Boiler Room	EnviroScience Sample Report August 2009
Smaller Boiler Insulation-Bottom White Layer	C-Wing Boiler Room	EnviroScience Sample Report August 2009
Boiler Breeching	C-Wing Boiler Room	EnviroScience Sample Report August 2009
Boiler Breeching	A-Wing Boiler Room	EnviroScience Sample Report August 2009
Hot Water Heater Breeching	Pipe Tunnel (Art Wing)	EnviroScience Sample Report August 2009
12" x 12" Brown with Brown & White Speckles Floor Tile	Throughout Hallways	EnviroScience Sample Report August 2009

HOMOGENEOUS MATERIAL	LOCATION(S)	REFERENCE
12" x 12" White with Gray & Tan Speckles Floor Tile	Room 13A, Math Department Office and Main Office	EnviroScience Sample Report August 2009
12" x 12" Gray with White Speckles Floor Tile	Language Arts Department Office and Room 20D	EnviroScience Sample Report August 2009
12" x 12" Tan with Brown & White Speckles Floor Tile	Room 26D	EnviroScience Sample Report August 2009

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 ACM Materials

No newly-identified ACMs or suspect ACMs were identified during this re-inspection.

AHERA regulations pertain to interior identified or presumed ACM and limited exterior ACM. AHERA regulations do include ACM located on exterior porticos, covered walkways, and mechanical equipment used to condition interior building air. In accordance with EPA National Emission Standards for Hazardous Air Pollutants (NESHAP), prior to disturbance, samples of these and other exterior suspect ACM must be collected and analyzed for asbestos content prior to disturbance.

4.4 Physical Assessment of ACMs

During inspection, suspect ACM were separated into three EPA categories. These categories are thermal system insulation (TSI), surfacing ACM, and miscellaneous ACM. TSI includes all materials used to prevent heat loss or gain or water condensation on mechanical systems. Examples of TSI are pipe and fitting insulations, boiler insulation, and duct insulation. Surfacing ACM is commonly used for fireproofing, decorative, and acoustical applications. Miscellaneous materials include all ACM not listed in TSI or surfacing, such as linoleum, vinyl asbestos flooring, ceiling tiles, and construction mastics/adhesives.

Finally, ACM were quantified in linear and/or square feet, depending on the nature of the material.

The ACM identified during the inspection and still remaining in the school were re-assessed using the MADLS and AHERA guidelines for assessment of ACM. The following assessment categories are listed:

- 1 Damaged or significantly damaged TSI ACM
- 2 Damaged friable surfacing ACM

- 3 Significantly damaged friable surfacing ACBM
- 4 Damaged or significantly damaged friable miscellaneous ACBM
- 5 ACBM with potential for damage
- 6 ACBM with potential for significant damage
- 7 Any remaining friable ACBM or friable suspected ACBM

Material locations, assessments, and recommended response actions are listed in the re-inspection forms.

5 Management Plan Update

5.1 Recommended Response Actions

Based on the inspection report, 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

It should be noted that only ACBM with assessments of 1 or 2 are recommended for removal or repair. The remaining ACBM should be included in the O & M Program. The condition of these ACBM will be monitored until all of the ACBM have been completely removed from the building. A successful O & M Program includes the following elements:

1. 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 Management Planner makes a written recommendation indicating the methods and frequency of such cleaning.
2. 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:
 - a. Restrict entry into the area either by physically isolating or by scheduling.
 - b. Post asbestos warning signs to prevent entry by unauthorized persons.
 - c. Deactivate or temporarily shunt the air-handling system to the area.
 - d. Use proper work practices and engineering controls, such as wet methods, protective clothing, HEPA-vacuums, mini-enclosures/glove bags, etc. to inhibit fiber migration.
 - e. Place asbestos debris and other contaminated materials into a sealed, leak-tight container for disposal.

3. Minor Fiber Release Episodes: 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):
 - a) Saturate the debris using wet method.
 - b) Place the debris in a sealed, leak-tight container and clean the area.
 - c) Repair the area of damaged ACBM with materials such as asbestos-free spackling, plaster or insulation or seal with an encapsulant.

4. 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):
 - a) Restrict entry into the area and post asbestos warning signs.
 - b) Deactivate or temporarily shunt the air handling system from the area to prevent fiber migration.
 - c) **The response action for any major fiber release episode must be prepared by EPA-accredited Asbestos Project Designers and conducted by EPA-accredited personnel.**
 - d) 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 a management plan is implemented, the LEA will conduct periodic surveillance in the school that contains ACBM or assumed ACBM. The person conducting periodic surveillance will visually inspect all areas in the school that where ACBM have been identified in the management plan, record the date of surveillance, their name, any changes in the ACBM condition and submit the record to the LEA Designated Person for inclusion in the management plan.

Please see *Appendix D* for 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 or delaminated.

Please see *Appendix E* for preventive measures designed for various types of ACBM that may exist in the school.

6 EPA Accreditation Requirements

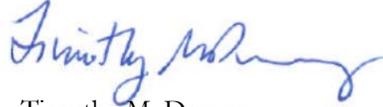
The MADLS certifications and EPA accreditations for the individuals (Robert Mallett and Dustin Diedricksen) involved in performing the re-inspection and updating the management plan are provided in *Appendix F*.

Report prepared by Environmental Technician, Mr. Robert Mallett.

Reviewed by:



Dustin A. Diedricksen
Project Manager



Timothy M. Downey
Senior Project Manager

Appendix A

Existing Records Checklist

Existing Records Checklist

Local Education Agency (LEA): Bourne Public Schools
36 Sandwich Road
Bourne, MA 02122

School Building: Bourne 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	
		LEA Office	School
1.	Original AHERA Inspection/Management Plan	1988	Yes
2.	Three year Re-inspections (List Dates)	1994, 1998, 2001, 2004, 20011	Yes
3.	Notifications to Parents/Guardians and Teachers (yearly since last re-inspection)	Yes <small>(In Student Handbook)</small>	Yes <small>(In Student Handbook)</small>
4.	Designated Person Identified and Proper Training (person must be named and have appropriate training)	Yes	Yes
5.	Designated Person Periodic Surveillance (every six months since last re-inspection)	Yes	Yes
6.	Record of Awareness Training for Maintenance Staff	Yes	Yes
7.	Outside Vendor Awareness Notification	Yes	Yes
8.	Warning Signs and Labels (required posting in Boiler room and mechanical spaces only)	Yes	Yes
9.	Record of Response Actions (includes any abatement done since last re-inspection)	Yes	Yes

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

Inspector (LEA Office): Robert Mallett

Date: August 22, 2014

Inspector (School): Robert Mallett

Date: August 22, 2014

Appendix B

Re-Inspection Form 1A

School: Bourne High School

Date(s) of Original Inspection: 1988

Address 75 Waterhouse Road, Bourne, MA

Date(s) of Subsequent Re-Inspections: 1994, 1998, 2001, 2004, 2007, 2011

Homogeneous Material			Material Category	Friability	Assessment Category (1-7)	Recorded Locations	Response Actions Taken/Renovations/Other Comments
Sample Number	Asbestos Content	Material Description					
SDH-08-11-88-05 & 721JH-07A	20% Chrysotile 30% Amosite	Pipe Fitting Insulation	TSI	F	5	Pipe Tunnels, First Floor Men's Bathroom near West Exit (across from Cafeteria), Janitor's Office in Basement, Janitor's Closet next to 12C, Alarm Vault across from Elevator, Office Materials Storage Room Near Elevator in Basement,, B-Wing Janitor's Closet near Boy's Bathroom, Girls Locker Room, Janitor's Closet on 2 nd Floor across from Elevator, Janitor's Closet on 1 st Floor across from Elevator (Room 17C)	
721JH-07A	50% Chrysotile 2% Amosite	Pipe Fitting Insulation	TSI	F	5	Gymnasium	3 Fittings removed Summer 2012; Abatement Documented
721JH-07A	50% Chrysotile 2% Amosite	Pipe Fitting Insulation	TSI	F	5	Boys Locker Room behind Cubicle	1 Fitting removed in Summer 2012; Abatement Documented
721JH-07A	50% Chrysotile 2% Amosite	Pipe Fitting Insulation	TSI	F	5	Janitor's Chemical Storage Room (next to Graphic Arts Room in Basement)	1 Fitting removed in Summer 2012; Abatement Documented
721JH-07A	50% Chrysotile 2% Amosite	Pipe Fitting Insulation	TSI	F	7	A-Wing Classrooms above Ceilings, B-Wing Classrooms above Ceilings, C-Wing Classrooms above Ceilings	Concealed
721JH-	50%	Pipe Fitting	TSI	F	5	Basement Storage across from Art Room	1 Fitting Removed 2012;

School: Bourne High School

Date(s) of Original Inspection: 1988

Address 75 Waterhouse Road, Bourne, MA

Date(s) of Subsequent Re-Inspections: 1994, 1998, 2001, 2004, 2007, 2011

Homogeneous Material			Material Category	Friability	Assessment Category (1-7)	Recorded Locations	Response Actions Taken/Renovations/Other Comments
Sample Number	Asbestos Content	Material Description					
07A	Chrysotile 2% Amosite	Insulation					Abatement Documented
721JH-07A	50% Chrysotile 2% Amosite	Pipe Fitting Insulation	TSI	F	5	Basement Art Room (Room 9) by Kiln & Closet	3 Fitting Insulations Removed 2012; Abatement Documented
721JH-07A	50% Chrysotile 2% Amosite	Pipe Fitting Insulation	TSI	F	5	Duct Vault/Storage across from Gymnasium	2 Fitting Insulations Removed Summer 2012
721JH-07A	50% Chrysotile 2% Amosite	Pipe Fitting Insulation	TSI	F	5	Girls Storage next to Locker Room	1 Fitting Insulation Removed Summer 2012; Abatement Documented
721JH-07A	50% Chrysotile 2% Amosite	Pipe Fitting Insulation	TSI	F	5	Storage Room on 2 nd Floor across from Elevator	4 Fitting Insulations Removed Summer 2012; Abatement Documented
721JH-07A	50% Chrysotile 2% Amosite	Pipe Fitting Insulation	TSI	F	5	Janitor's Closet with Slop Sink (Basement near Janitor's Office)	1 Fitting Insulation Abated & 5 Fittings Repaired 2012; Abatement Documented
Presumed ACBM	Presumed ACBM	9" x 9" Floor Tile	M	NF	5	Classrooms 10A, 12A, 17A, & 19A, Classroom 10B – 14B (B Wing Only)	Material Completely Abated Summer 2013
Presumed ACBM	Presumed ACBM	9" x 9" Floor Tile	M	NF	5	Classrooms 20A – 27A	
Presumed	Presumed	9" x 9" Floor Tile	M	NF	5	Classrooms 20B – 26B (B Wing Only) &	Completely Removed

School: Bourne High School

Date(s) of Original Inspection: 1988

Address 75 Waterhouse Road, Bourne, MA

Date(s) of Subsequent Re-Inspections: 1994, 1998, 2001, 2004, 2007, 2011

Homogeneous Material			Material Category	Friability	Assessment Category (1-7)	Recorded Locations	Response Actions Taken/Renovations/Other Comments
Sample Number	Asbestos Content	Material Description					
ACBM	ACBM					Classrooms 10C, 12C & 14C	Summer 2014; Abatement Documented
Presumed ACBM	Presumed ACBM	9" x 9" Floor Tile	M	NF	5	Storage Room near 10C, 11C, 13C, & 15C – 25C	
Presumed ACBM	Presumed ACBM	9" x 9" Floor Tile	M	NF	5	Special Education (former Home Economics Classroom)	175 SF of Loose Tile Removed (Summer 2012) as Part of Emergency Abatement; Abatement Documented
Presumed ACBM	Presumed ACBM	9" x 9" Floor Tile	M	NF	5	Business Office	
721JH-08A	25% Chrysotile	Transite Exhaust Ducts	M	NF	5	Classrooms 22C & 24C	
721JH-06A	40% Chrysotile 5% Amosite	Roof Drain Mudded Insulation on Pipe Fittings	TSI	F	5	Girl's Locker Room, Gymnasium Office, Biology Lab, 2 nd Floor Custodian's Room, Music Room, Custodial Closet, & Faculty Lunch Room	

Information abstracted by: Robert Mallett

Date: September 23, 2014

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

Friability: F = Friable, NF = Non-Friable

AHERA Assessment Categories:

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

Appendix C

Re-Inspection Form 2

School: Bourne High School

 Address: 75 Waterhouse Road, Bourne, MA

 Date(s) of Re-inspection: 8/22/14

 Homogeneous Material: Pipe Fitting Insulation

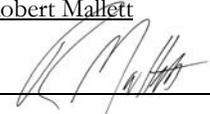
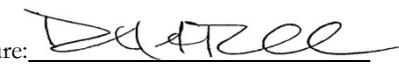
 Sample ID Number: SDH-08-11-88-05_721JH-07A

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
Pipe Tunnel, Gymnasium, Boys Locker Room behind cubicle, Janitor's Chemical Storage Room, First Floor Men's Bathroom near West Exit (across from Cafeteria), Janitor's Office in Basement, Janitor Closet next to 12C, Alarm Vault across from Elevator, Office Materials Storage Room near Elevator in Basement, Duct Vault/ Storage across from Gymnasium, B-Wing Janitor's Closet near Boy's Bathroom, Girls Locker Room, Girls Storage Closet next to Locker Room, Janitor's Closet on 2 nd Floor across from Elevator, Janitor's Closet with Slop Sink (Basement near	F	556 EA	5	TSI with Potential for Damage	Maintain in O&M Program	Ongoing

School: Bourne High School

Address: 75 Waterhouse Road, Bourne, MA

Date(s) of Re-inspection: 8/22/14

Janitor's Office)						
A-Wing, B-Wing & C-Wing Classrooms above Ceilings & Chases in walls and above Fixed Ceilings	F	15 EA accessible	7	Thermal System Insulation on Piping Fittings to Prevent Heat Transfer. This Material is in Good Condition.	Maintain in O&M Program	Ongoing
Janitor's Closet on 1 st Floor across from Elevator (Room 17C)	F	8 EA	6	Thermal System Insulation on Piping Fittings to Prevent Heat Transfer. This Material is in Good Condition.	Maintain in O&M Program	Ongoing
Were additional samples of this ACBM collected? No					Date of Management Planner Review: <u>9/22/2014</u>	
Inspector's Name: <u>Robert Mallett</u> Inspector Signature:  Accreditation #/State: <u>AI900557/ MA</u> Expiration Date: <u>6/02/2015</u>					Management Planner Name: <u>Dustin Diedricksen</u> Management Planner Signature:  Accreditation #/State: <u>AP900425/ MA</u> Expiration Date: <u>04/28/2015</u>	

School: Bourne High School

Address: 75 Waterhouse Road, Bourne, MA

Date(s) of Re-inspection: 8/22/14

I, the LEA's Designated Person, have read and understood the recommendations made above: _____

Date: _____

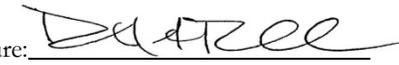
School: Bourne High School

 Address: 75 Waterhouse Road, Bourne, MA

 Date(s) of Re-inspection: 8/22/14

 Homogeneous Material: 9" x 9" Floor Tile

 Sample ID Number: Presumed ACBM

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 20A, 21A - 25A & 27A, Storage near 10C, Classrooms 11C, 13C, 15C, Classrooms 20C - 25C, Custodian's Office, Business Office	NF	7,200 SF	5	Resilient Floor Covering. This Material is in Good Condition.	Maintain in O&M Program	Ongoing
Were additional samples of this ACBM collected? No					Date of Management Planner Review: <u>9/22/2014</u>	
Inspector's Name: <u>Robert Mallett</u> Inspector Signature:  Accreditation #/State: <u>AI900557/ MA</u> Expiration Date: <u>6/02/2015</u>					Management Planner Name: <u>Dustin Diedricksen</u> Management Planner Signature:  Accreditation #/State: <u>AP900425/ MA</u> Expiration Date: <u>04/28/2015</u>	
I, the LEA's Designated Person, have read and understood the recommendations made above: _____ Date: _____						

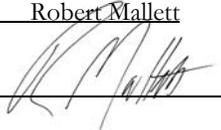
School: Bourne High School

Address: 75 Waterhouse Road, Bourne, MA

Date(s) of Re-inspection: 8/22/14

Homogeneous Material: Transite Exhaust Ducts

Sample ID Number: 721JH-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 22C & 24C	NF	156 SF	5	Fume Hood Exhaust Panels	Maintain in O&M Program	Continue
Were additional samples of this ACBM collected? No					Date of Management Planner Review: <u>8/26/2014</u>	
Inspector's Name: <u>Robert Mallett</u>					Management Planner Name: Dustin Diedricksen	
Inspector Signature: 					Management Planner Signature: 	
Accreditation #/State: <u>AI900557/ MA</u>					Accreditation #/State: <u>AP900425/ MA</u>	
Expiration Date: <u>06/02/2015</u>					Expiration Date: <u>04/28/2015</u>	
I, the LEA's Designated Person, have read and understood the recommendations made above: _____						
Date: _____						

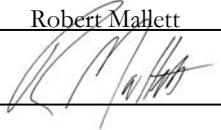
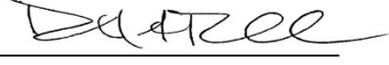
School: Bourne High School

 Address: 75 Waterhouse Road, Bourne, MA

 Date(s) of Re-inspection: 8/22/14

 Homogeneous Material: Roof Drain Pipe Fitting Insulation

 Sample ID Number: 721JH-06A

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
Girl's Locker Room, Gymnasium Office, Biology Lab, 2 nd Floor Custodian's Room, Music Room, Custodial Closet, Faculty Lunch Room	F	10 Fittings	5	Thermal System Insulation on Piping Fittings to Prevent Condensation. This Material is in Good Condition.	Maintain in O&M Program	Continue
Were additional samples of this ACBM collected? No					Date of Management Planner Review: <u>9/22/2014</u>	
Inspector's Name: <u>Robert Mallett</u> Inspector Signature:  Accreditation #/State: <u>AI900557/ MA</u> Expiration Date: <u>06/02/2015</u>					Management Planner name: Dustin Diedricksen Management Planner Signature:  Accreditation #/State: <u>AP900425/ MA</u> Expiration Date: <u>04/28/2015</u>	

School: Bourne High School

Address: 75 Waterhouse Road, Bourne, MA

Date(s) of Re-inspection: 8/22/14

I, the LEA's Designated Person, have read and understood the recommendations made above: _____

Date: _____

Appendix D

Sample 6-Month Periodic Surveillance Form

Sample 6-Month Periodic Surveillance Form

Local Education Agency (LEA): Bourne Public Schools

Facility Address: Bourne High School, 75 Waterhouse Road, Bourne, 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

Appendix E

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, transite 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. Gypsum 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. Transite Panels, Window/Door Caulking and Glazing Compounds

- a) Maintain transite 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.

Maintain materials in good condition. Collect samples and analyze to identify asbestos-content before disturbing.

Appendix F

ENVIROSCIENCE STATE CERTIFICATIONS AND EPA ACCREDITATIONS

Commonwealth of Massachusetts
Department of Labor Standards

Heather E. Rowe, Director



Asbestos Management Planner

DUSTIN A. DIEDRICKSEN

Eff. Date 04/28/14

Exp. Date 04/28/15

AP900425

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

BOSR

15





This is to certify that

Dustin A Diedricksen



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

Asbestos Management Planner Refresher

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

Course Location

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

January 24, 2014

Course Dates

14-8967-136-208040

Certificate Number

January 24, 2014

Examination Date

January 24, 2015

Expiration Date

Training Director

16 Upton Drive, Wilmington, MA 01887

Telephone 978.658.5272

www.ieetrains.com

INSTITUTE FOR ENVIRONMENTAL EDUCATION

Commonwealth of Massachusetts
Department of Labor Standards

Heather E. Rowe, Director

Asbestos Inspector



ROBERT C. MALLETT

Eff. Date 06/02/14

Exp. Date 06/02/15

A1900557

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

BOSN BOS-NEW

15





This is to certify that

Robert Mallett

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

as:

Asbestos Inspector

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

February 24-26, 2014

Course Dates

14-8947-102-260110

Certificate Number

February 26, 2014

Examination Date

February 26, 2015

Expiration Date

Training Director

16 Upton Drive, Wilmington, MA 01887

Telephone 978.658.5272

www.ieetrains.com

INSTITUTE FOR ENVIRONMENTAL EDUCATION