EnviroScience Consultants inc.
Environmental Engineering ❖ Industrial Hygiene ❖ Laboratory Services

Office Locations:
Newington, CT
Fairfield, CT
Boston, MA

January 31, 2005

BUSINESS FILE

Mr. Hans Baumhauer
Director of Business Services
Bourne Public Schools
36 Sandwich Road
Bourne, MA 02532

RE: 3-Year AHERA Asbestos Re-inspection and Management Plan Update
Maintenance and Storage Buildings at Peebles Elementary School, Bourne, MA
EnviroScience Project No. 04-329.10

Dear Mr. Baumhauer:

Enclosed is the report of the three-year AHERA asbestos re-inspection and management plan update conducted by EnviroScience Consultants, Inc. (EnviroScience) at the Maintenance and Storage Buildings at the Peebles Elementary School. This report is an important document that must be kept on file at the school as well as at a central location where all the Management Plans are preserved.

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

Sincerely,

Robert L. May, Jr.
Manager, Hazardous Materials

RLM:

Enclosure

F:\Park\04-329.10g2

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ASBESTOS HAZARD EMERGENCY RESPONSE ACT THREE-YEAR ASBESTOS RE-INSPECTION AND MANAGEMENT PLAN UPDATE FOR

PEEBLES ELEMENTARY SCHOOL MAINTENANCE AND STORAGE BUILDINGS BOURNE, MASSACHUSETTS

PERFORMED BY

ENVIROSCIENCE CONSULTANTS, INC.
50 REDFIELD STREET
BOSTON, MASSACHUSETTS, 02122

For Compliance with
EPA Asbestos Hazard Emergency Response Act
(40 CFR Part 763)

August, 2004

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1.0 INTRODUCTION

1.1 Background

The Clean Air Act of 1997 required the United States Environmental Protection Agency (USEPA) to develop standards to address the potential health aspects associated with adverse effects of asbestos exposure as an indoor contaminant. In October 1986 the USEPA promulgated the Asbestos Hazard Emergency Response Act (AHERA).

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

Any building leased or acquired on or after October 12, 1988, that 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 are still in full force and effect for any 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 Division of Occupational Safety (DOS) Asbestos and Lead Program is responsible for enforcement of the AHERA regulations.

1.2 Local Education Agency (LEA) Responsibilities

A. The LEA is responsible for compliance with AHERA regulation 40 CFR Part 763. The following responsibilities must be adhered to. (Refer to above mentioned regulation for full requirements and responsibilities):

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 his/her 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 in writing at least once each 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 activities that may disturb asbestos.

5. The LEA must provide training for all custodial and maintenance staff who regularly perform building maintenance where asbestos containing building materials (ACBM) are present. The training must be provided upon initial hire as well as updated annually.

6. The LEA must provide information (disclosure) to any workers who may perform short-term work and come in 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 a management plan is in effect, 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 a management plan is in effect, a re-inspection is performed in all school buildings that it leases owns or otherwise uses that contains ACBM or presumed ACBM.

1.3 Accreditation

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

Designated Person:	Mr. Hans Baumhauer Director of Business Services
Address:	36 Sandwich Road Bourne, Massachusetts 02532
Phone:	(508)-759-0660
Fax:	(508)-759-1107

C. Asbestos Consultant Data

Firm:	EnviroScience Consultants, Inc.
Address:	50 Redfield Street
	Boston, Massachusetts 02122
Phone:	(617) 282-4675
Fax:	(617) 282-8253

D. Asbestos Inspector

Inspector:	Mr. David Horne
Accreditation Number:	AI041182
State of Accreditation:	Massachusetts
Expiration Date:	October 31, 2005

E. Asbestos Management Planner:

Planner:	Mr. Robert May
Accreditation Number:	AP041719
State of Accreditation:	Massachusetts
Expiration Date:	March 24, 2005

1.4 Inspection History and Schedule

A. Original AHERA Inspection Management Plan

Report Date:	April 20, 1989
Prepared By:	EnviroScience Consultants, Inc.
Address:	Newington, Connecticut

B. Three year Re-Inspections

1. September 1994 prepared by EnviroScience Consultants, Inc
2. August 1998 prepared EnviroScience Consultants,Inc
3. July 2001 prepared by EnviroScience Consultants,Inc
4. August 2004 prepared by EnviroScience Consultants,Inc
5. Scheduled next Re-inspection August 2007

2.0 THREE YEAR RE-INSPECTION

2.1 Re-inspection Procedures

This three-year asbestos re-inspection of the maintenance buildings on the site of the Peebles School was conducted in accordance with the requirements of the following regulations:

- United States Environmental Protection Agency (USEPA) Asbestos Hazard Emergency Response Act (AHERA) regulation (40 CFR Part 763, Section 763.85 (b)).

Mr. David Horne of EnviroScience Consultants, Inc. (EnviroScience) performed the re-inspection on August 28, 2003. Mr. Horne is an accredited Asbestos Inspector in the Commonwealth of Massachusetts (License No. AI41182).

A. During the re-inspection, the following required tasks were performed:

1. A visual re-inspection and reassessment of all friable known or assumed asbestos-containing building materials (ACBM).

2. A visual re-inspection of ACBM that was previously considered non-friable to determine if the present condition of the material has made it friable.

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

2.2 Limited Building Description

The Maintenance Building is a one level wood frame structure, which includes three bays with overhead doors, a boiler room and a restroom. The Storage Building is a two level structure of three truck bays on the lower level and storage space on the upper level. The total gross area of the Maintenance Building is approximately 1,200 square feet. The total gross area of the Storage Building is 2,030 square feet.

One heater in each building provides forced hot air through ductwork.

No renovation or construction had been performed since the last inspection.

3.0 RE-INSPECTION REPORT

3.1 Review of Existing Records

An important part of this AHERA re-inspection involved checking documentation that was required to be present at the building being inspected as well as at the central location where all management plans are preserved.

Due to attrition, the LEA was newly appointed and annual notification to parents and school employees lapsed. Annual training for school custodial employees occurred during the week of the inspections.

Please see Appendix A for details of our findings.

3.2 Re-inspection Summary

The on-site portion of the re-inspection was documented on forms modeled after examples provided by the United States Environmental Protection Agency (USEPA). The first form, **Re-inspection Form 1A,** abstracts inspection data gathered during the initial AHERA inspection (see Appendix B). This form is useful to reference response actions (if any) which have been performed since the last inspection. 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 (ACM) 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 reassessment of the ACBM (see Appendix D). This form also provides response action recommendations including a tentative schedule for completing response actions that recommended removal or repair.

Using the USEPA protocol and criteria, the following materials existing at the time of this 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 identified on these forms.

Homogeneous Material	Reference	Location(s)
9"x9" VAT	B2	Maintenance building restroom
Transite ceiling paneling	B1	Storage building left side garage bay
9"x9" VAT and mastic	B2	First floor storage area and restroom
Sheetrock and joint compound	B3	Center and right garage bays, first floor walls and ceilings

3.3 Newly Identified or Re-sampled ACBM Materials

No newly identified materials were determined and/or assumed to be **ACBM.**

The following areas could not be inspected because of inaccessibility:

Location	Area(s)	Possible ACM
Throughout the building	Behind walls and ceilings	Pipe insulation/mudded insulation on pipe

Location	Area(s)	Possible ACM
		fittings

Any suspect material encountered during renovation/demolition that is not specifically identified in this report as a non-ACM should be assumed to contain asbestos unless sample results prove otherwise. AHERA inspections Do not satisfy the requirements for the U.S. EPA survey requirements for compliance with the National Emission Standards for Hazardous Air Pollutants (NESHAP). A NESHAP survey should be performed prior to renovation Or other planned disturbance within building.

The information obtained during this re-inspection was transmitted to Mr. Robert May, an accredited Management Planner, so that response actions relative to the condition of the ACBM could be designed. Mr. May is a licensed Asbestos Management Planner in the Commonwealth of Massachusetts (License No. AP041719).

3.4 Physical Assessment of ACBMs

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

Finally, all ACBM were quantified in linear and/or square footage depending on the nature of the material.

All ACBM identified during the inspection and still remaining in the school were reassessed using the AHERA guidelines for assessment of ACBM. The assessment categories are listed as follows:

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

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

4.0 MANAGEMENT PLAN UPDATE

4.1 Recommended Response Actions

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

Operations and Maintenance (O & M)

All remaining ACBM in the school shall be placed in an Operations and Maintenance (O & M) Program. The condition of such materials will be monitored until all the ACBM have been removed from the building. A successful O & M Program include the following elements:

a) Cleaning: All areas of the school where friable ACBM or friable suspected ACBM assumed to be ACM are present shall be cleaned at least once after the completion of the initial inspection. Additional cleaning may be necessary if the Management Planner makes a written recommendation indicating 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 any O & M activities that may disturb known or assumed ACM:

1. Restrict entry into the area either by physically isolating or by scheduling.
2. Post warning signs to prevent entry by unauthorized persons.
3. Shut off or temporarily modify the air-handling system.
4. Use proper work practices and engineering controls such as wet methods, protective clothing, HEPA-vacuums, mini enclosures/glove bags etc., to inhibit spread of fibers.
5. Place all asbestos debris and other contaminated materials in a sealed, leak-tight container for eventual disposal.

c) 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 3 linear/square feet or less of friable ACM):

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 more than 3 linear/square feet of friable ACBM):

1. Restrict entry into the area and post warning signs.
2. Shut off or temporarily modify the air handling system to prevent spread of fibers to other areas of the school.
3. **The response for any major fiber release episode must be designed by persons accredited to design response actions and conducted by persons accredited to conduct response actions.**
4. The LEA shall notify the Massachusetts Department of Labor and Workforce Development 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.

4.2 Periodic Surveillance

At least once every six (6) months after a management plan is in place, the LEA shall conduct periodic surveillance in the school that contains ACBM or assumed to contain ACM. The person conducting periodic surveillance shall visually inspect all areas in the school that have been identified in the management plan as having ACBM, record the date of surveillance, his/her name, and any changes in the condition of the materials and submit the record to the LEA Designated Person for inclusion in the management plan.

Please see Appendix E for Periodic Surveillance Form that may be used for conducting periodic surveillance.

4.3 Preventive Measures

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

Please see Appendix F for preventive measures designed for various types of ACM that may exist in the school.

5.0 EPA CERTIFICATION REQUIREMENTS

The certificates and the licenses for the individuals (David Horne and Bob May) involved in performing the re-inspection and updating the management plan are provided in Appendix G.

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APPENDIX A

CHECKLIST FOR EXISTING RECORDS

CHECKLIST FOR EXISTING RECORDS

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

School Building: Peebles Maintenance Buildings

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

	DOCUMENTATION	LOCATION	
		School	LEA Office
1.	Original AHERA Inspection/Management Plan	Not seen	No
2.	Three year Re-inspection (First)	Not seen	No
3.	Three year Re-inspection (Second)	Not seen	No
4.	Three year Re-inspection (Third)	Not seen	Yes
5.	Notifications to Parents/Guardians and Teachers (yearly since last re-inspection)	Not seen	No
6.	Designated Person Identified and Proper Training (person must be named and have appropriate training)	Not seen	No
7.	Designated Person Periodic Surveillance (every six months since last re-inspection)	Not seen	No
8.	Record of Awareness Training for Maintenance Staff	Not seen	Yes
9.	Outside Vendor Awareness Notification	Not seen	No
10.	Warning Signs and Labels (required posting in Boiler room and mechanical spaces only)	Not seen	No
11.	Record of Response Actions (includes any abatement done since last re-inspection)	Not seen	Yes (N\A)

Inspector: David C. Horne Date: August 28, 2004

APPENDIX B

RE-INSPECTION FORM 1A

RE-INSPECTION FORM 1 (A) – List of ACBM Asbestos-Containing Materials

School: Peebles Maintenance \Storage Building **Date(s) of Original Inspection:** September 1988
Address: 70 Trowbridge Road, Bourne, MA **Date(s) of Subsequent Re-Inspections:** 10/94,4/98,7/01

Sample Number	Material Description	Material Category	Friability	Assessment Category (1-7)	Recorded locations	Response actions taken/ renovations/other comments
B1	Transite Ceiling Paneling	Misc.	No	5	Left side Garage Bay	O&M
B2	9" x 9" VAT and mastic	Misc.	No	5	Bathroom	O&M
B2	9" x 9" VAT and mastic	Misc.	No	5	First Floor Storage Area	O&M
B3	Sheetrock and Joint Compound	Surfacing	Yes	5	Center and Right Garage Bays, First Floor Walls and Ceiling	O&M

LF= Linear feet, SF= Square feet

Information abstracted by: David C. Horne **Date:** August 28, 2004

AHERA assessment category:
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 ACMB, 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 1B

APPENDIX D

RE-INSPECTION FORM 2

RE-INSPECTION FORM 2 - Findings and Management Planner Recommendations

School: Peebles Maintenance \Storage Building **Date(s) of Original Inspection:** September 1988
Address: 70 Trowbridge Road, Bourne, MA **Date of Re-Inspection:** August 28, 2004

Homogeneous Material: Transite Ceiling Paneling **ID Number:** B1

RE-INSPECTION FINDINGS FOR ACBM				MANAGEMENT PLANNER RECOMMENDATIONS	
Location(s) of ACBM by Assessment Category	**Quantity**	**Assessment category**	**Assessment Description**	**Response Action(s)**	**Schedule**
Left side Garage Bay	192 S.F.	5	Good	Continue O & M	Continue
Were additional samples of this ACBM collected? No				Date of Management Planner review: January 2005	
Inspector's name: David C. Horne Inspector's signature: David C Horne Accreditation #/State: MA AI041182 Expiration date: 10\31\05				Management Planner name: Robert L. May, Jr. Management Planner signature: Robt L. May Accreditation #/State: MA AP071719 Expiration date: 3\24\05	
I, the LEA's Designated Person, have read and understood the recommendations made above:_____ Date:_____					

LF= Linear feet, SF= Square feet

AHERA assessment category:
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 ACMB, 5 = ACBM with potential for damage, 6 = ACBM with potential for significant damage,
7 = Any remaining friable ACBM or friable suspected ACBM

RE-INSPECTION FORM 2 - Findings and Management Planner Recommendations

School: Peebles Maintenance \Storage Building **Date(s) of Original Inspection:** September 1988
Address: 70 Trowbridge Road, Bourne, MA **Date of Re-Inspection:** August 28, 2004

Homogeneous Material: 9" x 9" Vat & Mastic **ID Number:** B2

RE-INSPECTION FINDINGS FOR ACBM				MANAGEMENT PLANNER RECOMMENDATIONS	
Location(s) of ACBM by Assessment Category	**Quantity**	**Assessment category**	**Assessment Description**	**Response Action(s)**	**Schedule**
First Floor Storage Area	300 S.F.	5	Good	Continue O & M	Continue
Were additional samples of this ACBM collected? No				Date of Management Planner review: January 2005	
Inspector's name: David C. Horne Inspector's signature: David C Horne Accreditation #/State: MA AI041182 Expiration date: 10\31\05				Management Planner name: Robert L. May, Jr. Management Planner signature: Robt L. May Accreditation #/State: MA AP071719 Expiration date: 3\24\05	
I, the LEA's Designated Person, have read and understood the recommendations made above:_____ Date:_____					

LF= Linear feet, SF= Square feet

AHERA assessment category:
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 ACMB, 5 = ACBM with potential for damage, 6 = ACBM with potential for significant damage,
7 = Any remaining friable ACBM or friable suspected ACBM

RE-INSPECTION FORM 2 - Findings and Management Planner Recommendations

School: Peebles Maintenance \Storage Building **Date(s) of Original Inspection:** September 1988
Address: 70 Trowbridge Road, Bourne, MA **Date of Re-Inspection:** August 28, 2004

Homogeneous Material: 9" x 9" Vat & Mastic **ID Number:** B2

RE-INSPECTION FINDINGS FOR ACBM				MANAGEMENT PLANNER RECOMMENDATIONS	
Location(s) of ACBM by Assessment Category	**Quantity**	**Assessment category**	**Assessment Description**	**Response Action(s)**	**Schedule**
First Floor Restroom	40 S.F.	5	Good	Continue O & M	Continue
Second Restroom	35 S.F.	5	Good	Continue O & M	
Were additional samples of this ACBM collected? No				Date of Management Planner review: January 2005	
Inspector's name: David C. Horne Inspector's signature: David C Horne Accreditation #/State: MA AI041182 Expiration date: 10\31\05				Management Planner name: Robert L. May, Jr. Management Planner signature: Robert L. May Accreditation #/State: MA AP071719 Expiration date: 3\24\05	
I, the LEA's Designated Person, have read and understood the recommendations made above:_____ Date:_____					

LF= Linear feet, SF= Square feet

AHERA assessment category:
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 ACMB, 5 = ACBM with potential for damage, 6 = ACBM with potential for significant damage,
7 = Any remaining friable ACBM or friable suspected ACBM

RE-INSPECTION FORM 2 - Findings and Management Planner Recommendations

School: Peebles Maintenance \Storage Building **Date(s) of Original Inspection:** September 1988
Address: 70 Trowbridge Road, Bourne, MA **Date of Re-Inspection:** August 28, 2004

Homogeneous Material: Sheetrock and Joint Compound **ID Number:** B3

RE-INSPECTION FINDINGS FOR ACBM				MANAGEMENT PLANNER RECOMMENDATIONS	
Location(s) of ACBM by Assessment Category	**Quantity**	**Assessment category**	**Assessment Description**	**Response Action(s)**	**Schedule**
Center and Right Garage Bays, First Floor Walls and Ceilings	6000 S.F.	5	Good	Continue O & M	Continue
Were additional samples of this ACBM collected? No				Date of Management Planner review: January 2005	
Inspector's name: David C. Horne Inspector's signature: David C Horne Accreditation #/State: MA AI041182 Expiration date: 10\31\05				Management Planner name: Robert L. May, Jr. Management Planner signature: Robert L. May Accreditation #/State: MA AP071719 Expiration date: 3\24\05	
I, the LEA's Designated Person, have read and understood the recommendations made above:_____ Date:_____					

LF= Linear feet, SF= Square feet

AHERA assessment category:
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 ACMB, 5 = ACBM with potential for damage, 6 = ACBM with potential for significant damage,
7 = Any remaining friable ACBM or friable suspected ACBM

APPENDIX E

PERIODIC SURVEILLANCE FORM

PERIODIC SURVEILLANCE FORM – List of ACBM Asbestos-Containing Materials

School: Peebles Maintenance \Storage Building
Address: 70 Trowbridge Road, Bourne, MA

Date(s) of Original Inspection: September 1988
Date(s) of Subsequent Re-Inspections: 10/94,4/98,7/01

Periodic Inspection Date:_____ **Conducted By:**_____

Asbestos Containing Material	Location	Previous Condition	Present Condition	Change in Condition (Yes/No)	Quantity Damaged	Comments
Transite Ceiling Paneling	Left side Garage Bay					
9" x 9" VAT and mastic	Bathroom					
9" x 9" VAT and mastic	First Floor Storage Area					
Sheetrock and Joint Compound	Center and Right Garage Bays, First Floor Walls and Ceiling					

LF= Linear feet, SF= Square feet

AHERA assessment category:
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 ACMB, 5 = ACBM with potential for damage, 6 = ACBM with potential for significant damage,
7 = Any remaining friable ACBM or friable suspected ACBM

APPENDIX F

PREVENTIVE MEASURES

PREVENTIVE MEASURES
FOR VARIOUS ASBESTOS-CONTAINING MATERIALS

A. SURFACING MATERIALS

"Surfacing Materials" means materials in a school building that are sprayed-on, troweled-on, or otherwise applied to surfaces. These include sprayed-on 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. The following procedures, when properly implemented, will reduce the potential for fiber release:

1. Sprayed-on fire-proofing

   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-on 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 plaster

   a) Identify the materials and post 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 is generally considered friable ACM. This means it can be easily damaged, increasing the potential for fiber release. The following procedures, when properly implemented, 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-fittings, tank and duct insulation

   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.

3. Fire door

   a) Identify the locations and label the materials.
   b) Since there may be a number of different types of fire doors throughout a building, fire door cores must be considered to have asbestos-containing interior insulation unless sample result prove otherwise. Prior to performing any maintenance on any door (lock change, drilling, etc.), the door should be surveyed by qualified personnel to rule out the existence of an asbestos core.
   c) 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 all other asbestos-containing materials in a school building that do not fall under the categories of Surfacing Materials or TSI. These include floor tiles, floor tile and carpet mastic, gypsum wallboard and joint compound, ceiling tiles, glue daubs, transite panels, laboratory counter tops, wallbase and associated glue, window 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 there may exist a number of different homogeneous assemblies in a building, all sheetrock/joint compound must be assumed to be ACBM unless sample result prove otherwise. If any specific areas are going to be disturbed, the material in that area should be sampled.
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 area above the ceiling tiles. Maintain the ceiling tiles in undamaged condition. Replace any damaged or water-stained tile.

b) If the ceiling tiles are negative for asbestos, sample and analyze the glue daubs to ascertain whether these are asbestos-containing before the tiles are replaced.

4. Transite Panels, Laboratory Counter Tops, Window Caulking and Glazing Compounds

a) Reduce the likelihood of fiber release.
b) Maintain transite panels, lab tabletops and window caulking and glazing compounds in undamaged condition.

5. Carpet Glue, Blackboard/ Tack Board Glue, Sink Undercoating, Floor Tile Mastic, Baseboard and Mastic

a) Reduce the likelihood of fiber release by leaving base cove and carpets in place.
b) Maintain carpets and base cove in good condition. Sample and analyze the glue and the mastic to ascertain whether these are asbestos-containing if the renovation activities are going to impact the carpet and the baseboard.

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APPENDIX G

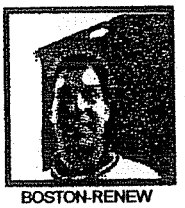
AHERA CERTIFICATES

Commonwealth of Massachusetts
Division of Occupational Safety
Robert J. Prezioso, Commissioner
Asbestos Inspector

DAVID C. HORNE

Eff. Date 11/01/04
Exp. Date 10/31/05
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Member of C.O.N.E.S.
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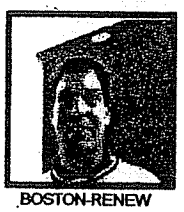
BOSTON-RENEW

Commonwealth of Massachusetts
Division of Occupational Safety
Robert J. Prezioso, Commissioner
Asbestos Management Planner

DAVID C. HORNE

Eff. Date 11/01/04
Exp. Date 10/31/05
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BOSTON-RENEW

LICENSED LEAD INSPECTOR



COMMONWEALTH OF MASSACHUSETTS

ISSUED TO	DAVID HORNE
	PRIVATE LEAD INSPECTOR
ID NUMBER	I3297
EXPIRATION DATE	06/01/2005
SIGNATURE	David C Horne

Commonwealth of Massachusetts
Division of Occupational Safety
Robert J. Prezioso, Deputy Director
Asbestos Inspector

ROBERT L. MAY JR

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Exp. Date 03/24/05
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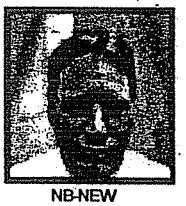
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Commonwealth of Massachusetts
Division of Occupational Safety
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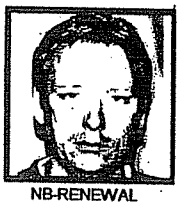
NB-NEW

Commonwealth of Massachusetts
Division of Occupational Safety
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