Asbestos 3-Year Re-inspection Report and Updated Management Plan

Washington Elementary School
795 Wilder Street
Lowell, Massachusetts, 01851

Prepared by:

Cardno ATC
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Woburn, Massachusetts 01801

September 25, 2014

Cardno ATC Project No. 060.30634.0036

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September 25, 2014

To Whom it May Concern,

Cardno ATC was contracted by the Lowell Public School District located in Lowell, Massachusetts to perform the asbestos three-year AHERA re-inspection and provide this updated Management Plan for Washington Elementary School. The asbestos re-inspection and management plan update was performed in compliance with the AHERA Final Rule and Notice (40 CFR Part 763, Subpart E).

The enclosed asbestos re-inspection and updated management plan was completed in May and June 2014 by Cardno ATC Commonwealth of Massachusetts Department of Labor Standards (DLS) certified Asbestos Inspector Ms. Dina DelliColli, and Cardno ATC DLS certified Asbestos Management Planner Mr. J. Brendan Phelan. Copies of the appropriate licenses and certification are included in Section 11.0 of this report.

Dina DelliColli, DLS License No. AI035703
Project Manager

J. Brendan Phelan, DLS License No. AP900428
Senior Project Manager

TABLE OF CONTENTS

1.0 REVIEW OF EXISTING PAPERWORK/RECORD KEEPING

Each Local Education Agency (LEA) must keep an updated copy of the management plan in its administrative office for each school under its administrative control or direction. The plan must be available without restriction to the public school personnel and their representatives, parents, and representatives of United States Environmental Protection Agency (EPA) and the Commonwealth of Massachusetts for inspection during normal business hours.

Section 763.94 (Record-keeping) of the AHERA Final Rule (40 CFR Part 763, Subpart E) requires that the following paperwork be obtained for each *response action* and *fiber release episode* (commonly referred to as asbestos abatement activities)

- copies of all personnel accreditation's and licenses (40 CFR 763.94(b)(1), 763.94(g) and 763.94(h))
- copy of the company's (Abatement Contractor) license, (40 CFR 763.94(b)(1) and 763.94(g))
- copies of any required notifications,
- copies of disposal receipts, (40 CFR 763.94(b)(1), 763.94(g) and 763.94(h)), and
- records of the particulars of the job as to activity, location, and personnel used with their signatures, where applicable (40 CFR 763.94(b)(1), 763.94(g) and 763.94(h)).

Review of Response Action Records and Other AHERA Documentation:

Response Actions Completed by In-House Staff:

No information available for review.

Response Actions Completed by Independent Abatement Contractors:

No information available for review; any in-house records.

Six-Month Periodic Surveillance:

No information available for review.

Annual Notifications:

No information available for review; TBD with District.

The LEA plans to post the written notification for parent, teacher, and employee organizations on the District website (http://www.lowell.k12.ma.us/pages/lpsd).

2.0 2014-2015 RESPONSE ACTIONS PRIORITY LIST

High priority items include: removal of the damaged pipe insulation in the hallway by the girls room. Reportedly a work order for the removal of this material had been put in.

All identified ACBM and suspect materials assumed to be ACBM should be maintained in accordance with the school's AHERA Management Plan. The ACBM that were re-inspected and their current condition assessment are included in Section 6.0 of this report.

MANAGEMENT PLAN OPERATION COST ESTIMATE

3-Year Operation and Maintenance

3-Year AHERA Re-Inspection and Management Plan Update	$1,300.00
Training, Equipment, and Periodic Surveillance	$5,000.00
Total estimated cost for Management Plan Operation	**$6,300.00**

The following is estimated resources/cost and schedule for the abatement of high priority items.

Summer Break 2015

Removal of damaged pipe insulation (Hallway by Girls Restroom)	$1,500.00
Asbestos Consultant fees (design, monitoring, clearance)	$1,000.00
Total estimated cost for removal of High Priority Items	**$2,500.00**

3.0 AHERA INSPECTION REPORT

AHERA TERMS, ABBREVIATIONS, AND ACRONYMS

AHERA	Asbestos Hazard Emergency Response Act
Rule	40 CFR Part 763 Subpart E – Asbestos-Containing Materials in Schools Rule, including Appendices A, B, C, and D
Section	Sections 763.80 - 763.99 in the Rule
LEA	The Schools' Local Education Agency (as defined in the Rule)
Plan	The AHERA Management Plan for the School
Part	Subsections of the Plan
EPA	Environmental Protection Agency
OSHA	Occupational Safety and Health Administration
NESHAPS	National Emission Standards for Hazardous Air Pollutants
ACBM	Asbestos-containing Building Material (as defined in the Rule)
ACM	Asbestos-containing Material
Non-ACM	Non-Asbestos-containing Material
S No.	Bulk Sample Number
F	Friable
NF	Non-friable
HA	Homogeneous Area
FS	Functional Space
O&M	Operation and Maintenance Program
MIS	Miscellaneous Building Material (as defined in the Rule)
CT	Ceiling Tile
FT	Floor Tile
FBGL	Fiberglass
TSI	Thermal Systems Insulation (as defined in the Rule)
SURF	Surfacing Materials
HVAC	Heating, Ventilation, Air Conditioning System
N/A	Not Applicable
MA DLS	Massachusetts Department of Labor Standards (Formerly DOS – Division of Occupational Safety)

Other relevant terms, abbreviations, and acronyms may be found within regulations included in the Appendices.

STATEMENT OF COMPLIANCE

AHERA REINSPECTION REPORT FOR MANAGEMENT PLAN
WASHINGTON ELEMENTARY SCHOOL
795 WILDER STREET
LOWELL, MASSACHUSETTS

This school was inspected in order to comply with the Asbestos Hazard Emergency Response Act (AHERA), signed into law by President Reagan in 1986. This AHERA Re-inspection Report is based on the re-inspection and condition assessment of previously identified asbestos-containing materials. The re-inspection conducted by the Cardno ATC accredited Asbestos Inspector.

Asbestos-containing materials were classified according to guidelines in the AHERA regulations. Based on a material's asbestos content, and the condition, location, and hazard potential of the material that was sampled, Cardno ATC's accredited Asbestos Management Planner recommended a response action if deemed necessary or the material should be maintained in good condition in accordance with the existing AHERA Management Plan.

Requirements of the Asbestos Hazard Emergency Response Act, Subpart E (Asbestos-containing Materials in Schools) were complied with for the purpose of this Re-inspection Report.

The following Consultant Accreditation Page identifies the inspectors and management planners who contributed to the Plan. Also provided are the certificate numbers, signatures, and date of signature of each.

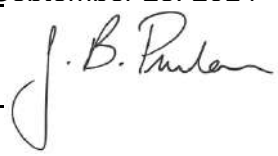
CONSULTANT ACCREDITATION

CARDNO ATC
Woburn, Massachusetts

1. ACCREDITED ASBESTOS INSPECTOR

Name	Dina DelliColli
MA DLS Accreditation Number	AI-035703 (Exp. Date 12/18/14)
Date	September 25, 2014
Signature	

2. ACCREDITED ASBESTOS MANAGEMENT PLANNER

Name	John Brendan Phelan
MA DLS Accreditation Number	AP-900428 (Exp. Date 09/16/15)
Date	September 25, 2014
Signature	

ASBESTOS RE-INSPECTION INFORMATION

1 GENERAL

"Asbestos" is the term used to describe certain fibrous silicate minerals that were formerly widely used for insulating, construction, and other purposes. Asbestos fibers were used throughout the construction industry due to their properties of non-flammability, high tensile strength, and low heat conductance. In the northeastern United States, the most commonly encountered types of asbestos are "chrysotile" and "amosite". Other types of asbestos are found in a wide variety of construction materials.

Asbestos poses a health hazard when very small asbestos fibers, approximately five micrometers in length, are released into the air and inhaled into the lungs. Once in the lungs these fibers can either be expelled or become trapped. If they become trapped the body cannot break the fibers down, and the lungs try to encase the foreign material with tissue. This process can cause scarring of the lung tissue that may ultimately result in impaired lung elasticity and subsequent chronic dysfunction. This disease is called asbestosis.

Asbestos diseases may manifest in other forms that are equally dangerous, such as mesothelioma, a form of cancer. The latency period of these diseases has been determined by medical professionals to be anywhere between ten and thirty years following exposure. For additional information regarding the health hazards of asbestos, consult Health Hazards of Asbestos, U.S. Department of Labor, Occupational Safety and Health Administration (OSHA 3040), and Guidance for Controlling Friable Asbestos-Containing Materials in Buildings, U.S. Environmental Protection Agency (EPA 560/5-83-002, March 1983). These documents are available from the regional office of the U.S. Environmental Protection Agency, Federal Office Building, 26 Federal Plaza, New York, New York 10007, 212-264-2525.

Asbestos-containing building materials (ACBM) can be categorized into two groups: (1) friable; and (2) non-friable. Friable asbestos-containing material is that which can be crumbled, pulverized, or reduced to dust or powder using hand pressure. The presence of friable ACBM creates the need for the most urgent attention, while the presence of non-friable ACBM should be documented and proper handling procedures established, in order to avoid allowing the material to deteriorate to a friable and hence potentially hazardous condition. Non-friable ACBM, as well as friable ACBM, must be assessed periodically to determine their potential for fiber release. An operation and maintenance program including preventive measures must be established to prevent disturbance of all asbestos-containing materials.

Note: The AHERA Rule differentiates between ACBM and ACM. In the remainder of this report, all asbestos-containing material, including ACBM, will be referred to by the acronym "ACM".

2 AHERA CLASSIFICATIONS

AHERA classifies asbestos-containing materials as thermal system insulation, miscellaneous materials, or surfacing materials.

a. Thermal System Insulation (TSI)

The most common asbestos-containing thermal system insulation (TSI) are the following: (1) aircell, which is an asbestos-containing paper; (2) calcite and magnesia, which are powdery fibrous silicas; and (3) preformed asbestos lagging or blocks. These types of TSI were used for many years as the insulation wrapped around pipes, boilers, ducts, and hot water tanks in order to reduce thermal heat loss and prevent condensation.

When asbestos-containing insulation and its outer wrapping are in good condition, there is minimal chance that asbestos fibers will become airborne, provided the insulation is not disturbed. Insulation that is intact may remain in place as long as its location and condition are documented, and proper education is provided to individuals who may potentially disturb the insulation and may thereby cause a fiber release episode.

If TSI is intact and in good condition, it must be maintained according to an Operations and Maintenance Program in order to monitor its condition, since the physical condition of the insulation may change, thereby increasing the potential for fiber release. If asbestos insulation is frayed, punctured, ripped, water damaged, or vandalized, a fiber release episode may occur. Whenever a fiber release occurs, the insulation should be repaired, encapsulated, enclosed, or removed in order to decrease the potential hazard to both human health and the environment.

b. Miscellaneous Materials

Floor and ceiling tiles are categorized as miscellaneous interior building materials. Of the two, ceiling tiles are the most common friable materials. Ceiling tiles may release asbestos fibers upon the slightest disturbance. Air currents from HVAC systems may also cause erosion of ceiling tiles and subsequent asbestos fiber release. Routine maintenance of pipes located above asbestos-containing ceiling tiles can possibly cause some quantity of fibers to be released due to disturbance of the tiles. Under normal conditions, non-friable miscellaneous ACM has virtually no potential for fiber release. However, if these materials are sanded drilled, broken, or otherwise structurally disturbed, they can release fibers to the air and the environment.

c. Surfacing Materials

Acoustical troweled-on-plaster and sprayed-on fireproofing are categorized as surfacing ACM. Fireproofing insulation was applied as a fluffy coating in order to provide two to four-hour fire protection, so that structural beams would not warp and collapse during a fire. Insulation of this type has a high potential to release fibers into the air upon any physical contact or by the action of air currents. Asbestos-containing plaster was also used for fireproofing and for acoustical purposes. Non-friable surfacing ACM that has a low potential for disturbance also presents a low potential for fiber release.

3 RE-INSPECTION METHODOLOGY

This school was re-inspected for ACM by a trained and licensed Cardno ATC Asbestos Inspector. The re-inspection was conducted in general accordance with 40 CFR Part 763.86 (b)(3) and included the following:

a. Visually re-inspect and reassess the condition of all friable known or assumed ACM.
b. Visually inspect the material that was previously considered non-friable ACM and touch material to determine whether it has become friable since the last inspection or re-inspection.
c. Identify any homogeneous areas with material that has become friable since the last inspection or re-inspection.
d. For each homogeneous area of newly friable material that is already assumed to be ACM, bulk samples may be collected and submitted for analysis.
e. Assess the condition of the newly friable material in areas where the samples are collected and in areas that are assumed to be ACM.
f. Re-assess the condition of friable known or assumed ACM previously identified.
g. Record the following information and submit to the LEA within 30 days of the re-inspection:
    1. The date of the re-inspection, the name and signature of the person making the re-inspection, MA license number, and any changes in the condition of known or assumed ACBM.
    2. The exact locations where samples are collected during the re-inspection, a description of the manner use to determine the sample locations, the name and signature of the person who collected the samples, and MA license number.
    3. An assessment or re-assessments made of friable material, the name and signature of the person who made the assessments, and MA license number.

The ACM and locations that were included in the re-inspection were based upon the information presented in the AHERA Re-inspection and Updated Management Plan, Washington Elementary School, 795 Wilder Street, Lowell, Massachusetts, prepared by ATC Associates Inc. and dated September 2011. The 2008 Re-inspection and Updated Management Plan, also prepared by ATC Associates, Inc., was used as reference for both the 2011 and 2014 re-inspection report. Please refer to Section 6.0 of this report for re-inspection results and current material condition assessment of the identified ACBM.

BULK SAMPLE ANALYSIS

No inspection or bulk sampling of suspect asbestos-containing materials was conducted as part of this re-inspection.

4.0 LOCAL EDUCATION AGENCY (LEA)

LEA RESPONSIBILITIES

The following list summarizes the LEA's responsibilities as denoted in the Rule. The complete text may be found at Section 763.84 of the Rule.

1. All aspects of the inspection and management plan are carried out in accordance with the Rule.

2. Custodial and maintenance staff receives proper training as required by all federal and state regulations.

3. Workers and building occupants or their legal guardians are informed at least once each school year about all asbestos-related activities that are planned or are in progress.

4. Short-term workers who may come in contact with asbestos are informed about the locations of ACM and assumed ACM.

5. Required warning labels are posted in routine maintenance areas according to Section 763.95 of the Rule.

6. Parent, teacher, and employee organizations are notified yearly of the availability of the Plan. The School maintains a copy of the Plan at the School for inspection per Section 763.93(g) of the Rule.

7. Per Section 763.84(g)(1) of the Rule, the LEA shall "Designate a person to ensure that requirements under this section are properly implemented and ensure that the designated person receives adequate training as described in Section 763.84 (g)(2)."

8. "Consider whether any conflict of interest may arise from the interrelationship among accredited personnel and whether that should influence the selection of accredited personnel to perform activities under this Subpart." (Section 763.84(h) of the Rule.)

Confirmation of Designated Person

LEA	Lowell Public Schools
School	Washington Elementary School
Address	795 Wilder Street, Lowell, Massachusetts 01851
Telephone	(978) 937-7635
Designated Person	Mr. Brian Curley
Title	Director of Facilities
Address	155 Merrimack Street, Lowell, Massachusetts
Telephone	Office: 978-674-2016 and Cell 978-423-0953
QUALIFICATIONS	
Training	AHERA Designated Person Training
Training Facility	Commonwealth of Massachusetts Division of Occupational Safety
Town, State	
Certificate Number	DP-07-044
Hours of Training	
Date of Course	May 4, 2007

ASSURANCE OF RESPONSIBILITIES ASSUMED

As the AHERA Designated Person, I shall assume responsibility to ensure that the LEA's duties are carried out as described in 40 CFR 763, Subpart E.

Date _____ **Signature of Designated Person** _____

RECOMMENDATION TO LEA

There is an increasing number of regulations regarding the handling, removal, transportation, and disposal of asbestos-containing materials. The LEA must be kept informed of and perform all response actions and other asbestos-related activities, in accordance with all federal, state, and local regulations regarding asbestos. In addition to AHERA 40 CFR Part 763 Subpart E, these regulations include, but are not limited to: 453 CMR 6.00 (Massachusetts DLS); 29 CFR 1926.1101 and 29 CFR 1910.134 (OSHA); 40 CFR Part 763, Subpart G (EPA Worker Protection); 40 CFR Part 61, Subpart M (NESHAPS); 310 CMR 7.15 (Massachusetts DEP); 49 CFR Part 100-177 (DOT); and all amendments and mandatory appendices and regulations cited within these regulations.

The regulations are meant to protect the health and safety of those working with and around asbestos, as well as building occupants. Given the LEA's responsibility to protect both human health and the environment of the school building's occupants, and the high potential liability associated with asbestos remediation projects, the LEA **MUST ENSURE** that the interests of the building's occupants are protected.

All response actions other than small-scale, short duration activities must be designed and conducted by persons accredited and licensed to conduct such activities. Design specifications should be sufficiently explicit to avoid conflicts or confusion that may arise concerning the scope of work and required procedures. It is recommended that the LEA contract a Massachusetts certified and licensed Asbestos Abatement Project Monitor to help ensure that projects are carried out safely, thoroughly, and in compliance with all applicable laws and regulations. Areas adjacent to the project should be sufficiently monitored throughout the project to provide clear documentation of project integrity. Final inspection and air clearance must be achieved as required in Section 763.90(i) of the Rule before any response action may be considered successfully completed.

The LEA must consider any conflict of interest that may potentially arise when retaining accredited designers and contractors to perform asbestos-related activities. Generally it is recommended that the LEA choose separate accredited entities: one for project design (including project oversight, clearance visual inspection, and air monitoring); and another to conduct the asbestos project according to the design. Appendix A of the Rule states that ". . . air sampling operations must be performed by qualified individuals completely independent of the abatement contractor".

5.0 PUBLIC NOTIFICATION

OCCUPANT NOTIFICATION

In accordance with Section 763.84(c) of the Rule, the LEA will notify in writing, at least once yearly, all relevant occupants of the school of all asbestos-related activities that take place at the school. Relevant occupants include, but are not limited to: building occupants or their legal guardians; staff, including teaching, administrative, custodial, maintenance, and all other personnel; all parent, teacher, employee, and administrative organizations; and/or any similar organizations at the school which serve similar functions.

Asbestos activities include, but are not limited to: inspections; response actions, including removal, encapsulation, enclosure, repair, and operation and maintenance; and post-response action activities, including periodic surveillance and reinspection. In addition, Section 763.93(g)(4) of the Rule requires the LEA to inform occupants at least once per year that the AHERA Management Plan exists and is available for review in the school's Administration Office.

In accordance with the aforementioned Sections and Section 763.93(b) of the Rule, the LEA must maintain a dated copy of all such notifications. The list of relevant groups to be notified will be added to and updated as necessary and should also be kept on file.

PLAN FOR NOTIFICATION

In accordance with Sections 763.84(c) and Sections 763.93(e)(10) and (g)(4) of the Rule, all school building occupants will be informed by written notification about all asbestos-related activities at least once every school year.

Building occupants to be notified include, but are not limited to, all students or their legal guardians, and all staff members and their committees, representatives, and organizations.

As of January 2013, building occupants at the school include the following:

- Students
- Legal guardians of students
- Staff (including teaching, custodian, maintenance,
- Administrative, and all other personnel)

The LEA may choose various methods of notification to building occupants. The method of notification, such as written notification via posted notices at the school, through publications such as a legal notice in the local newspaper, or by posting the information to the LEA website, must be documented and details of the new notification methods used must be included in the Management Plan. Copies of the annual public notice must be included in the Management Plan.

The LEA plans to post the written notification, per Section 763.93(g)(4) of the Rule, on the District website (http://www.lowell.k12.ma.us/pages/lpsd).

ACBM LOCATIONS

According to Section 763.84(d) of the Rule, the LEA must ensure that all short-term workers who may come in contact with asbestos in the school (e.g., telephone, plumbing, HVAC, electrical workers, etc.) are provided information regarding the locations of identified or assumed ACM. In addition, as required by Section 763.92(a)(i)(iii), members of the school's maintenance and custodial staff must be informed of the locations of ACM identified throughout each school building in which they work.

Please refer to Section 6.0 of this report for the locations of the previously identified ACBM and their current material condition assessment.

ASBESTOS ACTIVITIES

Prior to the start of asbestos abatement and/or associated or remediation projects, proper notifications must be made by the appropriate entities to all applicable federal, state, and local agencies and authorities. The local Health and Fire Departments are often good places to begin researching local regulations and notification requirements. Notifications may include but are not limited to the following.

1. NATIONAL EMISSIONS STANDARDS FOR HAZARDOUS AIR POLLUTANTS (NESHAPS)

NESHAPS notifications are submitted to the EPA Region I Office per 40 CFR Part 61, Subpart M. NESHAPS requires notification whenever asbestos is being removed according to the quantities involved, as follows:

a. Demolition

10 days notice for any asbestos abatement project. Notification must include friable and potentially friable ACBM

b. Renovation

10 days notice for any asbestos abatement project. Notification must include friable and potentially friable ACBM

2. MASSACHUSETTS DEPARTMENT OF LABOR STANDARDS (DLS)

The Massachusetts Department of Labor Standards (DLS) must be given proper notice when any asbestos abatement project or asbestos associated project involving more than three linear or three square feet is planned. The Commissioner of the DLS must be notified at least ten days prior to the project start date (postmark or hand delivery), or in the case of an emergency, within one working day after the project start date (DLS 453 CMR 6.00).

3. MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION (DEP)

The Massachusetts DEP requires proper notification and ten days prior notice (one day prior notice in the event of emergency) before the start date of **any and all** asbestos removal projects (310 CMR 6.00, 7.00, and/or 8.00).

*Contact the agencies denoted above or refer to the appropriate regulations for further information requiring proper notification procedures and guidelines.

6.0 ASBESTOS-CONTAINING MATERIALS RESPONSE ACTIONS

RESPONSE ACTION DETERMINATION SUMMARY

Response Action Determinations were made by using the EPA recommended method to determine the risk to human health associated with exposure to asbestos within a given ACM category. Appropriate response actions that are consistent with applicable regulations and protect human health and the environment are then recommended in order to best respond to and/or control ACM.

RESPONSE ACTION DESCRIPTIONS

Future building uses and planned renovations all should be taken into consideration when the LEA must choose among the alternative response actions recommended, or otherwise available, for reducing the hazard to human life and the environment posed by the presence of ACM. Conditions that must be taken into consideration when determining the appropriate method of treatment for ACM are location, quantity, physical condition, future uses, renovation or demolition plans, and any social, political, or economic constraints that may apply.

The following is a brief and general description of the Response Actions recommended in the Plan. The following response actions may only be undertaken in accordance with all applicable federal, state, and local regulations governing the handling and disposal of asbestos. Procedural requirements and work practices regarding small-scale, short-duration asbestos activities may be found in the O&M Section of this Plan. Refer to the Table at the end of Part V for a complete list of ACM and recommended response actions.

1. Removal

Although initially the most expensive option, removal is a permanent solution and often the most cost-effective. Removal means the complete removal and disposal of designated asbestos-containing material of any kind. If ACM debris is present, the area must be isolated and the debris cleaned up immediately. Not only are future potential hazards associated with asbestos-containing materials eliminated, operation and maintenance, repair, and periodic surveillance and inspection (as required with the options described above) become unnecessary. Future problems or costs for asbestos control are thus completely eliminated.

2. Repair

Repair is generally one of the least expensive forms of treatment. Repair means to restore a damaged area to its original intact condition. This includes making the damaged area airtight to prevent the release of fibers into the air. If ACM debris is present, the area must be isolated and the debris cleaned up immediately. All repaired ACM is incorporated into the O&M Program and repair activities must be documented in the O&M program to monitor the future condition of the material and its potential for damage. This method also leaves the leaves the ACM in the building where it will continue to age and deteriorate.

3. Encapsulation

Encapsulation is the other least expensive form of treatment. Encapsulation means the application of a material with a bonding or sealing property to prevent the release of airborne

fibers. If ACM debris is present, the area must be isolated and the debris cleaned up immediately. Encapsulated ACM is incorporated into the O&M Program and the encapsulation activities must be documented in the O&M program to monitor the future condition of the material and its potential for damage. This method also leaves the leaves the ACM in the building where it will continue to age and deteriorate.

4. Enclosure

Enclosure offers a more expensive but more secure solution for some ACM. Enclosure means creating an airtight structure around an affected area to prevent the release of airborne fibers and significantly reduce the possibility of future physical disturbance or damage to the ACM. Any damaged ACM must be repaired prior to enclosure. If ACM debris is present the area must be isolated and the debris cleaned up immediately. The enclosed area is incorporated into the O&M Program. In addition, the NESHAPS legislation requires that if future plans include activities that would disturb the ACM, the ACM must first be removed.

5. Operation & Maintenance (O&M) Program

An O&M program describes a structured plan of action to maintain ACM in a condition that protects the health and safety of the occupants in a building and provides for remedial action in the event that ACM is disturbed.

RESPONSE ACTION RECOMMENDATION / IMPLEMENTATION

Regardless of the abatement method chosen, it is important to bear in mind that any disturbance of friable asbestos-containing material can cause fibers to be released, if proper procedures and precautions are not observed.

Asbestos abatement workers licensed in Massachusetts must be employed to perform any large-scale operation (one involving greater than three square or three linear feet of asbestos). It is recommended that a Massachusetts DLS certified Asbestos Project Monitor be employed to ensure the safety of employees and building occupants and to ensure that proper work practices and procedures are followed during all phases of an abatement project. Collection of samples to determine ambient air fiber levels upon completion of a project is also required. Final inspection and air clearance must be achieved as required in Section 763.90(i) of the Rule before any response action may be considered successfully completed.

It is also recommended that ambient air fiber levels be measured before and during a project. These added precautionary measures greatly increase a school's ability to document and record pertinent data and thereby reduce its own potential liability.

RISK ASSESSMENT AND ASBESTOS CONTROL

Actual risk due to asbestos exposure cannot be quantitatively defined, nor can the relationship between an exposure and its consequential effect be estimated. The only precise quantitative statement that can be made concerning asbestos is that zero exposure will give zero risk. It is generally agreed, however, that the greater the exposure, the greater the risk.

The above consideration, combined with the fact that over time, any building material will decay and eventually most systems will be replaced by newer, more advanced and efficient systems, is the basis for the recommendation that, whenever possible, exposed friable asbestos be removed and that any remaining asbestos-containing materials be controlled with an asbestos O&M Program. Recommended control methods are outlined in the Operation and Maintenance Program in Part VII. Appendix B of the Rule should be consulted regularly as a guide for specific work practices to use for jobs that require contact with asbestos in a School. Again, bear in mind that NESHAPS regulations currently in force require the proper removal of ACM before any major renovation, repair, or demolition occurs.

SUMMARY TABLE OF ACBM

Washington Elementary School
Lowell, Massachusetts
Re-inspection Date: April 24, 2014

Location/ Functional Space	Material	Quantity Observed in 2011 3-Year Re-inspection	Quantity Observed in 2014 3-Year Re-inspection	Friable / Non-Friable	Material/ Condition Assessment Code	Comments	Response Action Recommendation
Room 1	Pipe Fitting Insulation	2 each	2 each	Friable	5	The pipe fitting insulation appears in good condition.	Maintain the material in good condition in accordance with the O&M Plan.
Hall Room 1 & 2	Pipe Fitting Insulation	3 each	N/A	N/A	N/A	Unable to locate functional space, due to functional space re-naming. No records of abatement were present in the AHERA management plan file.	Identify functional space and maintain materials in accordance with O&M Plan.
Room 2	Pipe Fitting Insulation	1 each	1 each	Friable	5	The pipe fitting insulation appears in good condition.	Maintain the material in good condition in accordance with the O&M Plan.
Room 2 Hall	Pipe Fitting Insulation	1 each	1 each	Friable	5	The pipe fitting insulation appears in good condition.	Maintain the material in good condition in accordance with the O&M Plan.
Small Room adjacent to Room 2	Pipe Fitting Insulation	Not listed	2 each	Friable	5	Suspect ACBM observed that is similar in composition to other identified ACBM. The pipe insulation fittings appear in good condition.	Maintain the material in good condition in accordance with The O&M Plan.
Room 3	Pipe Fitting Insulation	3 each	3 each	Friable	5	The pipe fitting insulation appears in good condition.	Maintain the material in good condition in accordance with the O&M Plan.
Room 3 Hall	Pipe Fitting Insulation	1 each	1 each	Friable	5	The pipe fitting insulation appears in good condition.	Maintain the material in good condition in accordance with the O&M Plan.

Material Condition/Assessment Code Definitions: According to the AHERA Regulation, 763.88 Assessment, the following categories are provided to assess the ACBM, suspected ACBM or assumed ACBM in the school building: (1) damaged or significantly damaged TSI, (2) damaged friable surfacing material, (3) significantly damaged friable surfacing material, (4) damaged or significantly damaged friable miscellaneous material, (5) ACBM with potential for damage, (6) ACBM with potential for significant damage, (7) any remaining friable known or suspect ACBM, or (8) damaged or significantly damaged non-friable ACBM (note that this category is not listed in the AHERA regulations but is provided for reference in this report.)

Location/ Functional Space	Material	Quantity Observed in 2011 3-Year Re-inspection	Quantity Observed in 2014 3-Year Re-inspection	Friable / Non-Friable	Material/ Condition Assessment Code	Comments	Response Action Recommendation
Room 4	Pipe Fitting Insulation	2 each	2 each	Friable	5	The pipe fitting insulation appears in good condition.	Maintain the material in good condition in accordance with the O&M Plan.
Room 4 Hall	Pipe Fitting Insulation	4 each	2 each	Friable	5	The number of pipe fitting insulation was re-calculated during re-inspection. The pipe fitting insulation appears in good condition.	Maintain the material in good condition in accordance with the O&M Plan.
Rear Exit Area across from door to Room 4	Pipe Fitting Insulation	Not listed	3 each	Friable	5	Suspect ACBM observed that is similar in composition to other identified ACBM. The pipe insulation fittings appear in good condition.	Maintain the material in good condition in accordance with The O&M Plan.
Room 5	Pipe Fitting Insulation	4 each	3 each	Friable	5	The pipe fitting insulation appears in good condition.	Maintain the material in good condition in accordance with the O&M Plan.
Room 5 Hall	Pipe Fitting Insulation	2 each	2 each	Friable	5	The pipe fitting insulation appears in good condition.	Maintain the material in good condition in accordance with the O&M Plan.
Office off Room 5	Pipe Fitting Insulation	Not listed	2 each	Friable	5	Suspect ACBM observed that is similar in composition to other identified ACBM. The pipe insulation fittings appear in good condition.	Maintain the material in good condition in accordance with The O&M Plan.
Room 6	Pipe Fitting Insulation	3 each	3 each	Friable	5	The pipe fitting insulation appears in good condition.	Maintain the material in good condition in accordance with the O&M Plan.
Room 7	Pipe Fitting Insulation	1 each	2 each	Friable	5	The number of pipe fitting insulation was re-calculated during re-inspection. The pipe fitting insulation appears in good condition.	Maintain the material in good condition in accordance with the O&M Plan.

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Hallway outside Room 7	Pipe Fitting Insulation	Not listed	1 each	Friable	5	Suspect ACBM observed that is similar in composition to other identified ACBM. The pipe insulation fittings appear in good condition.	Maintain the material in good condition in accordance with The O&M Plan.
Small Office Area outside Room 7, at window	Pipe Fitting Insulation	Not listed	2 each	Friable	5	Suspect ACBM observed that is similar in composition to other identified ACBM. The pipe insulation fittings appear in good condition.	Maintain the material in good condition in accordance with The O&M Plan.
Room 8	Pipe Fitting Insulation	1 each	2 each	Friable	5	The number of pipe fitting insulation was re-calculated during re-inspection. The pipe fitting insulation appears in good condition.	Maintain the material in good condition in accordance with the O&M Plan.
Small Hallway Bathroom	Pipe Fitting Insulation	Not listed	1 each	Friable	5	Suspect ACBM observed that is similar in composition to other identified ACBM. The pipe insulation fittings appear in good condition.	Maintain the material in good condition in accordance with The O&M Plan.
Hallway by Room 8, adjacent stairwell	Pipe Fitting Insulation	Not listed	1 each	Friable	5	Suspect ACBM observed that is similar in composition to other identified ACBM. The pipe insulation fittings appear in good condition.	Maintain the material in good condition in accordance with The O&M Plan.
Area outside Room 8, by exit to fire escape	Pipe Fitting Insulation	Not listed	2 each	Friable	5	Suspect ACBM observed that is similar in composition to other identified ACBM. The pipe insulation fittings appear in good condition.	Maintain the material in good condition in accordance with The O&M Plan.
Room 9	Pipe Fitting Insulation	1 each	2 each	Friable	5	The number of pipe fitting insulation was re-calculated during re-inspection. The pipe fitting insulation appears in good condition.	Maintain the material in good condition in accordance with the O&M Plan.

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Area by Room 9, at window	Pipe Fitting Insulation	Not listed	1 each	Friable	5	Suspect ACBM observed that is similar in composition to other identified ACBM. The pipe insulation fittings appear in good condition.	Maintain the material in good condition in accordance with The O&M Plan.
Learning Center (between Rooms 9 and 15)	Pipe Fitting Insulation	Not listed	2 each	Friable	5	Suspect ACBM observed that is similar in composition to other identified ACBM. The pipe insulation fittings appear in good condition.	Maintain the material in good condition in accordance with The O&M Plan.
Room 10	Pipe Fitting Insulation	1 each	2 each	Friable	5	The number of pipe fitting insulation was re-calculated during re-inspection. The pipe fitting insulation appears in good condition.	Maintain the material in good condition in accordance with the O&M Plan.
Area by Room 10, at window	Pipe Fitting Insulation	Not listed	1 each	Friable	5	Suspect ACBM observed that is similar in composition to other identified ACBM. The pipe insulation fittings appear in good condition.	Maintain the material in good condition in accordance with The O&M Plan.
Speech Room between Rooms 10 and 14	Pipe Fitting Insulation	Not listed	1 each	Friable	5	Suspect ACBM observed that is similar in composition to other identified ACBM. The pipe insulation fittings appear in good condition.	Maintain the material in good condition in accordance with The O&M Plan.
Room 12	Pipe Fitting Insulation	15 each	N/A	N/A	N/A	Unable to locate functional space, due to functional space re-naming. No records of abatement were present in the AHERA management plan file.	Identify functional space and maintain materials in accordance with O&M Plan.
Room 12	Pipe Insulation	80 LF	N/A	N/A	N/A	Unable to locate functional space, due to functional space re-naming. No records of abatement were present in the AHERA management plan file.	Identify functional space and maintain materials in accordance with O&M Plan.

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Room 13	Pipe Fitting Insulation	1 each	1 each	Friable	5	The pipe fitting insulation appears in good condition.	Maintain the material in good condition in accordance with the O&M Plan.
Room 14	Pipe Fitting Insulation	1 each	1 each	Friable	5	The pipe fitting insulation appears in good condition.	Maintain the material in good condition in accordance with the O&M Plan.
Room 15	Pipe Fitting Insulation	1 each	None	N/A	N/A	The material was not present in the functional space. No records of abatement were present in the AHERA management plan file.	None. Obtain records if available and file with AHERA management plan
Room 15	1' x 1' Gray Floor Tile	None	None	N/A	N/A	The material was not present in the functional space. No records of abatement were present in the AHERA management plan file.	None. Obtain records if available and file with AHERA management plan.
Room 15	Pipe Fitting Insulation	1 each	None	Friable	5	The material was not present in the functional space. No records of abatement were present in the AHERA management plan file.	None. Obtain records if available and file with AHERA management plan.
Room 16	1' x 1' Gray Floor Tile	None	None	N/A	N/A	The material was not present in the functional space. No records of abatement were present in the AHERA management plan file.	None. Obtain records if available and file with AHERA management plan.
Room 16	Pipe Fitting Insulation	1 each	1 each	Friable	5	The pipe fitting insulation appears in good condition.	Maintain the material in good condition in accordance with the O&M Plan.
Room 18	Pipe Fitting Insulation	2 each	N/A	N/A	N/A	Unable to locate functional space, due to functional space re-naming. No records of abatement were present in the AHERA management plan file.	Identify functional space and maintain materials in accordance with O&M Plan.

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Hall, 2nd Floor	1' x 1' Gray Floor Tile	None	None	N/A	N/A	The material was not present in the functional space. No records of abatement were present in the AHERA management plan file.	None. Obtain records if available and file with AHERA management plan.
Hall, 2nd Floor	Pipe Fitting Insulation	6 each	6 each	Friable	5	The pipe fitting insulation appears in good condition.	Maintain the material in good condition in accordance with the O&M Plan.
Main Hall 2	1' x 1' Gray Floor Tile	None	None	N/A	N/A	The material was not present in the functional space. No records of abatement were present in the AHERA management plan file.	None. Obtain records if available and file with AHERA management plan.
~~Hall Room 5 & 6~~ 1st Floor Landing	Pipe Fitting Insulation	1 each	1 each	Friable	5	The pipe fitting insulation appears in good condition.	Maintain the material in good condition in accordance with the O&M Plan.
Stairwell Landing outside Room 2	Pipe Fitting Insulation	Not listed	1 each	Friable	5	Suspect ACBM observed that is similar in composition to other identified ACBM. The pipe insulation fittings appear in good condition.	Maintain the material in good condition in accordance with The O&M Plan.
Landing 1 and 2	Pipe Fitting Insulation	2 each	N/A	N/A	N/A	Unable to locate functional space, due to functional space re-naming. No records of abatement were present in the AHERA management plan file.	Identify functional space and maintain materials in accordance with O&M Plan.
Left Landing 2	Pipe Fitting Insulation	2 each	N/A	N/A	N/A	Unable to locate functional space, due to functional space re-naming. No records of abatement were present in the AHERA management plan file.	Identify functional space and maintain materials in accordance with O&M Plan.
Left Landing 3	Pipe Fitting Insulation	2 each	N/A	N/A	N/A	Unable to locate functional space, due to functional space re-naming. No records of abatement were present in the AHERA management plan file.	Identify functional space and maintain materials in accordance with O&M Plan.

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Left Landing 4	Pipe Fitting Insulation	2 each	N/A	N/A	N/A	Unable to locate functional space, due to functional space re-naming. No records of abatement were present in the AHERA management plan file.	Identify functional space and maintain materials in accordance with O&M Plan.
Left Landing Top	Pipe Fitting Insulation	2 each	N/A	N/A	N/A	Unable to locate functional space, due to functional space re-naming. No records of abatement were present in the AHERA management plan file.	Identify functional space and maintain materials in accordance with O&M Plan.
Right Landing 2	Pipe Fitting Insulation	2 each	N/A	N/A	N/A	Unable to locate functional space, due to functional space re-naming. No records of abatement were present in the AHERA management plan file.	Identify functional space and maintain materials in accordance with O&M Plan.
Right Landing 3	Pipe Fitting Insulation	2 each	N/A	N/A	N/A	Unable to locate functional space, due to functional space re-naming. No records of abatement were present in the AHERA management plan file.	Identify functional space and maintain materials in accordance with O&M Plan.
Right Landing 4	Pipe Fitting Insulation	2 each	N/A	N/A	N/A	Unable to locate functional space, due to functional space re-naming. No records of abatement were present in the AHERA management plan file.	Identify functional space and maintain materials in accordance with O&M Plan.
Right Landing Top	Pipe Fitting Insulation	2 each	N/A	N/A	N/A	Unable to locate functional space, due to functional space re-naming. No records of abatement were present in the AHERA management plan file.	Identify functional space and maintain materials in accordance with O&M Plan.
Basement, Art Room	Pipe Fitting Insulation	Not listed	10 each	Friable	5	Suspect ACBM observed that is similar in composition to other identified ACBM. The pipe insulation fittings appear in good condition.	Maintain the material in good condition in accordance with The O&M Plan.

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Basement, Art Room	Pipe Insulation	Not listed	65 LF	Friable	5	Suspect ACBM observed that is similar in composition to other identified ACBM. The pipe insulation appears in good condition.	Maintain the material in good condition in accordance with The O&M Plan.
Basement, Small Bathroom off Art Room	Pipe Fitting Insulation	Not listed	6 each	Friable	5	Suspect ACBM observed that is similar in composition to other identified ACBM. The pipe insulation fittings appear in good condition.	Maintain the material in good condition in accordance with The O&M Plan.
Basement, Small Bathroom off Art Room	Pipe Insulation	Not listed	35 LF	Friable	5	Suspect ACBM observed that is similar in composition to other identified ACBM. The pipe insulation appears in good condition.	Maintain the material in good condition in accordance with The O&M Plan.
Basement, Music Room	Pipe Fitting Insulation	Not listed	8 each	Friable	5	Suspect ACBM observed that is similar in composition to other identified ACBM. The pipe insulation fittings appear in good condition.	Maintain the material in good condition in accordance with the O&M Plan.
Basement, Music Room	Pipe Insulation	Not listed	20 LF	Friable	1	Suspect ACBM observed that is similar in composition to other identified ACBM. The pipe insulation is damaged	Remove damaged materials and re-install non-ACBM pipe insulation. Maintain any remaining materials in accordance with the O&M Plan.
Exit at Rear of Building outside Music Room	Pipe Fitting Insulation	Not listed	5 each	Friable	1	Suspect ACBM observed that is similar in composition to other identified ACBM. The pipe fitting insulation is damaged	Remove damaged materials and re-install non-ACBM pipe fitting insulation. Maintain any remaining materials in accordance with the O&M Plan.

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Rear Hall outside of Cafeteria by Rear Exit	Pipe Fitting Insulation	Not listed	2 each	Friable	5	Suspect ACBM observed that is similar in composition to other identified ACBM. The pipe insulation fittings appear in good condition.	Maintain the material in good condition in accordance with the O&M Plan.
Stairwell – Wilder Street side	Pipe Fitting Insulation	Not listed	2 each	Friable	5	Suspect ACBM observed that is similar in composition to other identified ACBM. The pipe insulation fittings appear in good condition.	Maintain the material in good condition in accordance with the O&M Plan.
Boiler Room	Breeching	333 SF	None	N/A	N/A	The material was not present in the functional space. No records of abatement were present in the AHERA management plan file.	None. Obtain records if available and file with AHERA management plan
Boiler Room	Pipe Fitting Insulation	21 each	10 each	Friable	5	The pipe fitting insulation appears in good condition.	Maintain the material in good condition in accordance with the O&M Plan.
Boiler Room	Pipe Insulation	40 LF	40 LF	Friable	5	The pipe insulation appears in good condition.	Maintain the material in good condition in accordance with the O&M Plan.
Boiler Room Hall	1' x 1' Gray Floor Tile	None	N/A	N/A	N/A	Unable to locate functional space, due to functional space re-naming. Material was not present in 2011 re-inspection. No records of abatement were present in the AHERA management plan file.	None. Obtain records if available and file with AHERA management plan.
Boiler Room Hall	Pipe Insulation	15 lf	N/A	N/A	N/A	Unable to locate functional space, due to functional space re-naming. No records of abatement were present in the AHERA management plan file.	Identify functional space and maintain materials in accordance with O&M Plan.

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Storage Boiler Room	Pipe Fitting Insulation	3 each	5 each	Friable	5	The number of pipe fitting insulation was re-calculated during re-inspection. The pipe fitting insulation appears in good condition.	Maintain the material in good condition in accordance with the O&M Plan.
Storage Boiler Room	Pipe Insulation	27 LF	40 LF	Friable	5	The quantity of pipe insulation was re-calculated during re-inspection. The pipe insulation appears in good condition.	Maintain the material in good condition in accordance with the O&M Plan.
South West Left End	1' x 1' Gray Floor Tile	None	None	N/A	N/A	The material was not present in the functional space. No records of abatement were present in the AHERA management plan file.	None. Obtain records if available and file with AHERA management plan
South West Left End	Pipe Insulation	17 LF	N/A	N/A	N/A	Unable to locate functional space, due to functional space re-naming. No records of abatement were present in the AHERA management plan file.	Identify functional space and maintain materials in accordance with O&M Plan.
South west Right End	1' x 1' Gray Floor Tile	None	None	N/A	N/A	Unable to locate functional space, due to functional space re-naming. No records of abatement were present in the AHERA management plan file.	Identify functional space and maintain materials in accordance with O&M Plan.
South west Right End	Pipe Insulation	17 LF	N/A	N/A	N/A	Unable to locate functional space, due to functional space re-naming. No records of abatement were present in the AHERA management plan file.	Identify functional space and maintain materials in accordance with O&M Plan.
Reading Room in Basement	1' x 1' Gray Floor Tile	None	N/A	N/A	N/A	Unable to locate functional space, due to functional space re-naming. Material was not present in 2011 re-inspection. No records of abatement were present in the AHERA management plan file.	None. Obtain records if available and file with AHERA management plan.

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Reading Room in Basement	Pipe Fitting Insulation	15 each	N/A	N/A	N/A	Unable to locate functional space, due to functional space re-naming. No records of abatement were present in the AHERA management plan file.	Identify functional space and maintain materials in accordance with O&M Plan.
Reading Room in Basement	Pipe Insulation	None	N/A	N/A	N/A	Unable to locate functional space, due to functional space re-naming. Material was not present in 2011 re-inspection. No records of abatement were present in the AHERA management plan file.	None. Obtain records if available and file with AHERA management plan.
Reading Room Bathroom	Pipe Insulation	10 LF	N/A	N/A	N/A	Unable to locate functional space, due to functional space re-naming. No records of abatement were present in the AHERA management plan file.	Identify functional space and maintain materials in accordance with O&M Plan.
Reading Room Hall	Pipe Fitting Insulation	1 each	N/A	N/A	N/A	Unable to locate functional space, due to functional space re-naming. No records of abatement were present in the AHERA management plan file.	Identify functional space and maintain materials in accordance with O&M Plan.
Teacher Room Basement	Pipe Fitting Insulation	3 each	N/A	N/A	N/A	Unable to locate functional space, due to functional space re-naming. No records of abatement were present in the AHERA management plan file.	Identify functional space and maintain materials in accordance with O&M Plan.
Teacher Room Basement	Pipe Insulation	15 LF	N/A	N/A	N/A	Unable to locate functional space, due to functional space re-naming. No records of abatement were present in the AHERA management plan file.	Identify functional space and maintain materials in accordance with O&M Plan.
Boys Room Basement	Pipe Fitting Insulation	6 each	6 each	Friable	5	The pipe fitting insulation appears in good condition.	Maintain the material in good condition in accordance with the O&M Plan.

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Boys Room Basement	Pipe Insulation	130 LF	130 LF	Friable	5	The pipe insulation appears in good condition.	Maintain the material in good condition in accordance with the O&M Plan.
Girl Hall Basement	1' x 1' Gray Floor Tile	None	None	N/A	N/A	The material was not present in the functional space. No records of abatement were present in the AHERA management plan file.	None. Obtain records if available and file with AHERA management plan
Girl Hall Basement	Pipe Fitting Insulation	6 each	5 each (at perimeter under window)	Friable	5	The number of pipe fitting insulation was re-calculated during re-inspection. The pipe fitting insulation appears in good condition.	Maintain the material in good condition in accordance with the O&M Plan.
Girl Hall Basement	Pipe Insulation	60 LF	10 LF	Friable	1	The quantity of pipe insulation was re-calculated during re-inspection. The pipe insulation appears in poor condition. Reportedly a work order had been put in to remove the insulation.	Remove damaged materials and re-install non-ACBM pipe insulation. Maintain any remaining materials in accordance with the O&M Plan.
Custodial Office/Hall	1' x 1' Gray Floor Tile	None	None	N/A	N/A	The material was not present in the functional space. No records of abatement were present in the AHERA management plan file.	None. Obtain records if available and file with AHERA management plan.
Custodial Office/Hall	Pipe Insulation	None	40 LF	Friable	5	Inadvertently reported as removed in 2011 Re-Inspection. The pipe insulation appears in good condition.	Maintain the material in good condition in accordance with the O&M Plan.
Custodial Office/Hall	Pipe Fitting Insulation	5 each	5 each	Friable	5	The pipe fitting insulation appears in good condition.	Maintain the material in good condition in accordance with the O&M Plan.
Gymnasium	Pipe Fitting Insulation	15 each	9 each	Friable	5	The number of pipe fitting insulation was re-calculated during re-inspection The pipe fitting insulation appears in good condition.	Maintain the material in good condition in accordance with the O&M Plan.

Material Condition/Assessment Code Definitions: According to the AHERA Regulation, 763.88 Assessment, the following categories are provided to assess the ACBM, suspected ACBM or assumed ACBM in the school building: (1) damaged or significantly damaged TSI, (2) damaged friable surfacing material, (3) significantly damaged friable surfacing material, (4) damaged or significantly damaged friable miscellaneous material, (5) ACBM with potential for damage, (6) ACBM with potential for significant damage, (7) any remaining friable known or suspect ACBM, or (8) damaged or significantly damaged non-friable ACBM (note that this category is not listed in the AHERA regulations but is provided for reference in this report.)

Location/ Functional Space	Material	Quantity Observed in 2011 3-Year Re-inspection	Quantity Observed in 2014 3-Year Re-inspection	Friable / Non-Friable	Material/ Condition Assessment Code	Comments	Response Action Recommendation
Gymnasium	Pipe Insulation	None	None	N/A	N/A	The material was not present in the functional space. No records of abatement were present in the AHERA management plan file.	None. Obtain records if available and file with AHERA management plan.
Teachers Break Room (Literacy/ Conf. Rm/ Teacher's Lunch Rm	Pipe Fitting Insulation	1 each	1 each	Friable	5	The pipe fitting insulation appears in good condition.	Maintain the material in good condition in accordance with the O&M Plan.
Study Room	Pipe Fitting Insulation	1 each	N/A	N/A	N/A	The functional space was not identified. No records of abatement were present in the AHERA management plan file.	None. Obtain records if available and file with AHERA management plan.
Bookstore	Pipe Fitting Insulation	1 each	N/A	N/A	N/A	The functional space was not identified. No records of abatement were present in the AHERA management plan file.	None. Obtain records if available and file with AHERA management plan.
Girls Room	Pipe Fitting Insulation	15 each	15 each	Friable	5	The pipe fitting insulation appears in good condition.	Maintain the material in good condition in accordance with the O&M Plan.
Girls Room	Pipe Insulation	54 LF	54 LF	Friable	5	The pipe insulation appears in good condition.	Maintain the material in good condition in accordance with the O&M Plan.
Teachers Room 2	Pipe Fitting Insulation	1 each	N/A	N/A	N/A	The functional space was not identified. No records of abatement were present in the AHERA management plan file.	None. Obtain records if available and file with AHERA management plan. .
Teachers Room 2nd	Pipe Fitting Insulation	2 each	N/A	N/A	N/A	The functional space was not identified. No records of abatement were present in the AHERA management plan file.	None. Obtain records if available and file with AHERA management plan. .

Material Condition/Assessment Code Definitions: According to the AHERA Regulation, 763.88 Assessment, the following categories are provided to assess the ACBM, suspected ACBM or assumed ACBM in the school building: (1) damaged or significantly damaged TSI, (2) damaged friable surfacing material, (3) significantly damaged friable surfacing material, (4) damaged or significantly damaged friable miscellaneous material, (5) ACBM with potential for damage, (6) ACBM with potential for significant damage, (7) any remaining friable known or suspect ACBM, or (8) damaged or significantly damaged non-friable ACBM (note that this category is not listed in the AHERA regulations but is provided for reference in this report.)

Location/ Functional Space	Material	Quantity Observed in 2011 3-Year Re-inspection	Quantity Observed in 2014 3-Year Re-inspection	Friable / Non-Friable	Material/ Condition Assessment Code	Comments	Response Action Recommendation
Copy Room	Pipe Fitting Insulation	2 each	N/A	N/A	N/A	The functional space was not identified. No records of abatement were present in the AHERA management plan file.	None. Obtain records if available and file with AHERA management plan. .
Nurse Office	Pipe Fitting Insulation	2 each	2 each	Friable	5	The pipe fitting insulation appears in good condition.	Maintain the material in good condition in accordance with the O&M Plan.
Staff Work Room	Pipe Fitting Insulation	Not listed	1 each	Friable	5	Suspect ACBM observed that is similar in composition to other identified ACBM. The pipe insulation fittings appear in good condition.	Maintain the material in good condition in accordance with the O&M Plan.
Staff Work Room	1' x 1' Gray Floor Tile	Not listed	190 SF	Non-Friable	--	Suspect ACBM observed that is similar in composition to other identified ACBM. The floor tile appear in good condition.	Maintain the material in good condition in accordance with the O&M Plan.
Principal Office	Pipe Fitting Insulation	4 each	1 each	Friable	5	The pipe fitting insulation appears in good condition.	Maintain the material in good condition in accordance with the O&M Plan.
Admin Assistant Office, adjacent to Principal Office	Pipe Fitting Insulation	Not listed	2 each	Friable	5	Suspect ACBM observed that is similar in composition to other identified ACBM. The pipe insulation fittings appear in good condition.	Maintain the material in good condition in accordance with the O&M Plan.
Storage Closet 1	Pipe Insulation	None	N/A	N/A	N/A	Unable to locate functional space, due to functional space re-naming. Material was not present in 2011 re-inspection. No records of abatement were present in the AHERA management plan file.	None. Obtain records if available and file with AHERA management plan.

Material Condition/Assessment Code Definitions: According to the AHERA Regulation, 763.88 Assessment, the following categories are provided to assess the ACBM, suspected ACBM or assumed ACBM in the school building: (1) damaged or significantly damaged TSI, (2) damaged friable surfacing material, (3) significantly damaged friable surfacing material, (4) damaged or significantly damaged friable miscellaneous material, (5) ACBM with potential for damage, (6) ACBM with potential for significant damage, (7) any remaining friable known or suspect ACBM, or (8) damaged or significantly damaged non-friable ACBM (note that this category is not listed in the AHERA regulations but is provided for reference in this report.)

Location/ Functional Space	Material	Quantity Observed in 2011 3-Year Re-inspection	Quantity Observed in 2014 3-Year Re-inspection	Friable / Non-Friable	Material/ Condition Assessment Code	Comments	Response Action Recommendation
Storage Closet 2	Pipe Insulation	25 LF	N/A	N/A	N/A	Unable to locate functional space, due to functional space re-naming. No records of abatement were present in the AHERA management plan file.	Identify functional space and maintain materials in accordance with O&M Plan.
Attic	Pipe Insulation	650 LF	N/A	N/A	N/A	Unable to locate functional space, due to functional space re-naming. No records of abatement were present in the AHERA management plan file.	Identify functional space and maintain materials in accordance with O&M Plan.

NOTES:
SF = square feet
LF = Linear feet
Information presented in red and/or strikethrough text indicates changes in condition, quantity, or name change of functional space since the 2011 re-inspection.
-- = No assessment code is presented, as the material is a non-friable miscellaneous material in good condition

Material Condition/Assessment Code Definitions: According to the AHERA Regulation, 763.88 Assessment, the following categories are provided to assess the ACBM, suspected ACBM or assumed ACBM in the school building: (1) damaged or significantly damaged TSI, (2) damaged friable surfacing material, (3) significantly damaged friable surfacing material, (4) damaged or significantly damaged friable miscellaneous material, (5) ACBM with potential for damage, (6) ACBM with potential for significant damage, (7) any remaining friable known or suspect ACBM, or (8) damaged or significantly damaged non-friable ACBM (note that this category is not listed in the AHERA regulations but is provided for reference in this report.)

AHERA MATERIAL/CONDITION ASSESSMENT KEY FOR FUNCTIONAL SPACES

(AS FOUND IN 40 CFR 763.88(B))

1. Damaged or significantly damaged TSI.
2. Damaged friable surfacing material.
3. Significantly damaged friable surfacing material.
4. Damaged or significantly damaged friable miscellaneous material.
5. ACM with potential for damage.
6. ACM with potential for significant damage.
7. Any remaining friable known or suspect ACM.
8. Damaged or significantly damaged non-friable ACMB. Note that this category is not listed in the AHERA regulations but is provided for reference in this report.

METHOD OF RESPONSE ACTION DETERMINATION FOR SURFACING AND MISCELLANEOUS ACM

1. Friable Surfacing or Miscellaneous ACM with Significant Damage

Response Action 1: Remove – Isolate the area and clean up debris immediately. Remove ACM as soon as possible.

2. Friable Surfacing or Miscellaneous ACM with Damage and High Potential for Disturbance

Response Action 1: Remove – Isolate area and clean up immediately. Remove ACM as soon as possible.

3. Friable Surfacing or Miscellaneous ACM with Damage and Moderate Potential for Disturbance

Response Action 4: Enclose – Institute preventive measures. Repair ACM to return to airtight, intact condition, and enclose with an impermeable encasement to prevent physical disturbance. Continue with O&M.

4. Friable Surfacing or Miscellaneous ACM with Damage and Low Potential for Disturbance

Response Action 3: Encapsulate – Institute preventive measures. Repair damaged material to return to intact condition and encapsulate to reduce the possibility of fiber release. Continue with O&M.

5. Friable Surfacing or Miscellaneous ACM with No Damage and High Potential for Damage

Response Action 4: Enclose – Institute preventive measures. Enclose material to reduce effects of future disturbance. Continue with O&M.

6. Friable Surfacing or Miscellaneous ACM with No Damage and Moderate Potential for Damage

Response Action 3: Encapsulate – Institute preventive measures. Encapsulate material to reduce the possibility of fiber release. Continue with O&M.

7. Friable Surfacing or Miscellaneous ACM with No Damage and Low or no Potential for Damage

Response Action 5: O&M Program – Continue with O&M until condition factors change, requiring additional response.

8. Non-Friable Surfacing or Miscellaneous ACM

Response Action 5: O&M Program – Continue with O&M until condition factors change, requiring additional response.

METHOD OF RESPONSE ACTION DETERMINATION FOR THERMAL SYSTEM INSULATION (TSI) ACM

1. Significantly Damaged Thermal System Insulation (TSI)

Response Action 1: Remove - Isolate the area and restrict access. ACM debris should be removed and the area cleaned up immediately.

2. Damaged Thermal System Insulation with High Potential for Disturbance

Response Action 1: Remove - Institute preventive measures and remove material as soon as possible.

3. Damaged Thermal System Insulation with Moderate Potential for Disturbance

Response Action 4: Enclosure - Institute preventive measures. Repair insulation to airtight condition and enclose with an impermeable encasement to protect against further physical damage. Continue with O&M.

4. Damaged Thermal System Insulation with Low Potential for Disturbance

Response Action 2: Repair - Repair to airtight condition and take preventive measures necessary to eliminate any potential disturbance. Continue with O&M.

5. Undamaged Thermal System Insulation with High Potential for Disturbance

Response Action 1: Remove - Institute preventive measures. Remove to prevent the high possibility of disturbance to the ACM.

6. Undamaged Thermal System Insulation with Moderate Potential for Disturbance

Response Action 4: Enclose - Institute preventive measures. Enclose the ACM within an airtight barrier to prevent potential disturbance of ACM. Continue with O&M.

7. Undamaged Thermal System Insulation with Low or No Potential for Disturbance

Response Action 5: O&M - Continue with O&M.

7.0 RESPONSE ACTION DETERMINATION SUMMARY

INTRODUCTION

In compliance with the AHERA Rule, the LEA must establish and implement an Operation, Maintenance, and Repair (O&M) Program for each school that contains ACM. The purpose of an O&M program and its required periodic surveillance and re-inspection is to monitor and control the condition and location of any remaining ACM in the school and to reassess the potential for hazard to human health and the environment that the ACM poses. The following summary of Section 763.91 of the Rule highlights the LEA's responsibilities with respect to O & M for all ACM that remains in the school.

LEA RESPONSIBILITIES

1. Establish and implement an Operation, Maintenance, and Repair (O&M) Program for all material identified or assumed to be ACM, including both friable ACM and non-friable ACM with the potential to become friable due to activities performed.

2. Implement the initial cleaning of any areas containing friable ACM or assumed friable ACM that is present after the inspection has been completed and before response actions other than O & M takes place.

3. Cleaning techniques [taken directly from Section 763.91(c)(1) of the Rule] include but are not limited to:

    a. HEPA-vacuum or steam-clean all carpets.

    b. HEPA-vacuum or wet-clean all other floors and all other horizontal surfaces.

    c. Dispose of all debris, filters, mop heads, and cloths in sealed, leak-tight containers.

4. Initiate any additional cleaning recommended in the Plan.

5. Implement the following procedural techniques (taken directly from Section 763.91(d) of the Rule) for all O & M activities that involve the disturbance of friable ACM:

    a. Restrict entry into the area by persons other than those necessary to perform the maintenance project, either by physically isolating the area or by scheduling.

    b. Post signs to prevent entry by unauthorized persons.

    c. Shut off or temporarily modify the air handling system and restrict other sources of air movement.

    d. Use work practices or other controls, such as wet methods, protective clothing, HEPA vacuums, mini-enclosures, and glovebags, as necessary to inhibit the dispersal of released fibers.

    e. Clean all fixtures or other components in the immediate work area.

f. Place asbestos debris and contaminated cleaning materials in a sealed, leak-tight container.

6. Make certain that all response actions involving more than three linear or square feet of ACM will be designed by a Massachusetts accredited designer, and performed by Massachusetts accredited contractors and consultants. The Commonwealth of Massachusetts requires that proper notifications be made as necessary to the Department of Labor Standards (DLS), the Department of Environmental Protection (DEP), and/or the U.S. EPA (per NESHAPS).

7. Ensure that the following procedures (from Section 763.91(f)(1) of the Rule) are adhered to in the event of a minor fiber release episode or the falling or dislodging of three linear or square feet or less of friable ACM:

   a. Thoroughly saturate the debris using wet methods.

   b. Clean the area as described in Section 763.91(c) of the Rule.

   c. Place the asbestos debris in a sealed, leak-tight container.

   d. Repair the area of damaged ACM with materials such as asbestos-free spackling, plaster, cement, or insulation, or seal with latex paint or other encapsulant, or immediately have the appropriate response action implemented as required by Section 763.90 of the Rule.

8. Make certain that the following procedures (taken directly from Section 763.91(f)(2) of the Rule) are adhered to in the event of a major fiber release episode or the falling or dislodging of more than three linear or square feet of friable ACM:

   a. Restrict entry into the area and post signs to prevent entry by persons other than those necessary to perform the response action.

   b. Shut off or temporarily modify the air-handling system to prevent the distribution of fibers to other areas in the building.

   c. The response action for any major fiber release episode must be designed by persons accredited to conduct response actions.

9. Post warning labels immediately adjacent to all ACM or assumed ACM located in routine maintenance areas as described in Section 763.95 of the Rule.

10. Make certain the designated person and custodial and maintenance staff are properly trained in accordance with the Rule and all other applicable federal, state, and local regulations. Staff members who may disturb ACM must receive sixteen hours of training. Members of the building's maintenance or engineering staff or outside contractors (plumbers, electricians, installers, etc.) who may be required to handle or disturb ACM are required by the Massachusetts DLS to be trained by a state-certified training provider regarding proper handling procedures for asbestos.

11. Once the Plan is in effect, the LEA must implement periodic surveillance of all remaining ACM in the facility for changing condition and hazard assessment every six months after the Plan is in effect. Staff members who have completed the aforementioned sixteen-hour training can perform this.

12. Make certain that re-inspection of all remaining ACM is conducted by an accredited asbestos inspector every three years while ACM remains in the school in accordance with Section 763.85(b) of the Rule.

13. Make certain that all short-term workers (generally outside contractors) are provided with information regarding the locations of ACM and assumed ACM, per Section 763.84(d) of the Rule.

TRAINING REQUIREMENTS AND WORKER PROTECTION

In compliance with Section 763.92(a) of the Rule, all maintenance and custodial staff must receive at least two hours of asbestos awareness training prior to the implementation of the O & M Program described in this Plan. Washington Elmentary school maintenance personnel training certificates should be attached in Section 10.0.

New staff personnel must similarly be trained within sixty days of commencement of employment. In addition, personnel who will conduct activities that may result in the disturbance of ACM must receive an additional fourteen hours of training, as required by the Rule.

As described in Section 763.92(a) of the Rule, awareness training must include information regarding: the forms and uses of asbestos; the health effects associated with asbestos exposure; the locations of ACM identified throughout the school; how to recognize damage, deterioration, and delamination of ACM; the name and telephone number of the person designated by the LEA; and the availability and location of the Plan.

As described in Section 763.91(b) of the Rule, all LEA employees who perform O & M and repair activities involving ACM and who are not covered by OSHA 29 CFR 1926.1101, or are approved by Section 19 of the Occupational Safety and Health Act, are extended worker protection provided by the EPA at 40 CFR 763.121. According to the EPA's "AHERA Fact Sheet", the LEA may choose to institute the provisions of Appendix B of the Rule in the case of small-scale, short-duration projects rather than comply with the full EPA Worker Protection Rule.

PERIODIC SURVEILLANCE & RE- INSPECTION

The LEA must conduct a periodic surveillance in each building every six months after the Plan is in effect. An assigned person trained in accordance with Section 763.92(a) of the Rule shall visually inspect all areas that are identified in the Plan as ACM or assumed ACM, record the date of the surveillance, his or her name, any changes in the condition of the materials, and submit to the Designated Person a copy of such record to be included in the Plan, in accordance with Section 763.92(b) of the Rule.

At least once every three years after the plan is in effect, the school must conduct a re-inspection of all friable and non-friable, assumed and identified ACM. The re-inspection must be conducted by a Massachusetts accredited inspector and performed in accordance with Section 763.85(b) of the Rule.

Once the Plan has been approved by the Governor's Designee, the Plan is considered to be "in effect", so that the first periodic surveillance will have to occur before the expiration of six months from the "effective date." Likewise, the first re-inspection will have to take place within three years of the effective date.

It is recommended that the effective date and appropriate periodic surveillance and re-inspection dates be entered into the Plan in tabular form and also be posted to serve as a frequent schedule reminder.

WARNING SIGNS

In accordance with Section 763.95 of the Rule, the LEA is responsible to prominently place warning signs immediately adjacent to all identified or assumed, friable and non-friable ACM that is located in all routine maintenance areas in the School.

The warning signs must be readily visible and easy to read, with large print and bright color (normally black print on bright yellow background), and read as follows:

CAUTION:
ASBESTOS. HAZARDOUS.
DO NOT DISTURB WITHOUT PROPER
TRAINING AND EQUIPMENT.

The routine maintenance areas for the building covered by this Plan presently include, but are not limited to:

- All Boiler Room spaces
- All Mechanical Room spaces

PREVENTIVE MEASURES

Preventive measures include any action or actions taken in order to eliminate or reduce the possibility of disturbing ACM. All preventive measures taken must be properly recorded according to Section 763.94(b) of the Rule. Examples of precautions to take include the following:

1. Do not cut, sand, drill, break, nail into, or otherwise disturb ACM or create dust.

2. Avoid contact damage to any ACM. Remove any adjacent items that may contact ACM.

3. Keep suspended ceiling tiles in place wherever any ACM exists above them. Do not remove or displace ceiling tiles without taking the proper precautionary measures outlined in 'ACM Above Ceilings', in Part VII below.

4. Do not hang fixtures, wires, etc. from ACM.

5. Prevent water damage to ACM.

6. Do not disturb asbestos-containing materials when replacing lights, etc.

7. Do not allow doors or dividers to rub against ACM.

8. Isolate, redirect, or eliminate direct airflow onto any friable or damaged ACM.

Note: Always take proper precautions when working around ACM. Report any damaged ACM to the Designated Person **IMMEDIATELY**.

CLEANING

1. INITIAL CLEANING

Areas of the school where identified and assumed friable ACM and damaged or significantly damaged Thermal System Insulation ACM are present are required according to Section 763.91(c)(1) of the Rule to be cleaned at least once after the completion of the inspection and before the initiation of any response actions other than O & M.

2. ADDITIONAL CLEANING

In addition to initial cleaning and that which is required after any fiber release episode, the LEA is required to perform additional cleaning according to Section 763.91(c)(2) of the Rule. According to Section 763.91(c)(1) of the Rule, additional cleaning recommendations include, but are not limited to, cleaning all proximate surfaces of the areas previously identified:

a. Areas containing ACM where a suspect film or dust occurs.

b. Anytime any friable or non-friable ACM becomes damaged or significantly damaged.

c. Anytime the LEA's Designated Person determines cleaning is necessary to protect the health and environment of the building occupants.

It is important that all cleaning be completed prior to the initiation of other response actions that may be necessary. The initial cleaning will prevent or greatly reduce the possibility of further contamination within an affected area as well as surrounding areas, and reduce the possibility of exposure to school workers and all other building occupants.

CUSTODIAL AND MAINTENANCE PROCEDURES:

Personnel conducting custodial or maintenance work shall take extreme care not to disturb or damage ACM. If damage occurs or is discovered the Report of Damaged Asbestos Containing Material (Appendix D) should be completed and sent to the Asbestos Program Manager.

1. RESILIENT FLOORING MAINTENANCE:

All vinyl and asphalt-based flooring materials (e.g., tiles, sheet flooring) shall be maintained in accordance with these instructions unless the Asbestos Program Manager demonstrates that the flooring does not contain asbestos. The following work practices apply to the handling of asbestos flooring material:

- Sanding of asbestos flooring material is prohibited

- Stripping of finishes shall be conducted using *low abrasion* pads at machine speeds less than 300 revolutions per minute (rpm) and using wet methods.

- Burnishing or dry buffing may only be performed on asbestos flooring that has sufficient finish so that the pad cannot contact the asbestos flooring material.

- Low speed spray buffing is strongly recommended over the high speed burnishing process. Burnishing has a very strong potential to disturb or release asbestos fibers for reasons beyond the control of the machine operator. Uneven floor surfaces and insufficient thickness of floor finish can cause fiber releases in potentially high concentrations.

2. DRY OR SPRAY BUFFING OF RESILIENT FLOORING

Do not buff damaged flooring. Any loose or damaged flooring should be repaired or replaced before buffing is started. This procedure assumes that the floor has adequate coats of polish, and that the flooring itself will not be damaged or contacted by the buffing equipment. If any flooring damage occurs during buffing, stop work and notify DOE or the Asbestos Program Manager.

- Using scraper and water, remove all foreign matter from the finished surface (gum, tar, stickers, etc.).
- Spot or damp mop to remove stains and spills. Mix chemical cleaner or restorer with water and apply according to manufacturer's recommendations. Spot or damp mop to remove stains and spills. If dry buffing will be performed, apply restorer chemical as required.
- Allow floor to dry thoroughly.
- Spray or dry buff as appropriate:
- To spray-buff, spray small area with spray-buff solution and buff using manufacturer's recommended pad or brush at recommended RPM. Repeat procedure until entire area is spray-buffed.
- To dry buff, buff or dry burnish with manufacturer's recommended pad or brush at recommended RPM.

3. CLEANING/POLISHING OF RESILIENT FLOORING

Do not polish loose or damaged resilient flooring. Any damage should be repaired before cleaning begins using the applicable work practice(s). Stop work if any damage occurs and notify the Asbestos Program Manager.

- Mix scrubbing chemical with water as recommended by manufacturer and apply liberal amount (do not flood) using mop. Allow to soak for amount of time recommended by manufacturer. Keep floor adequately wet by reapplying cleaning solution if drying occurs. Work small areas at a time.
- Using floor scrubbing machine, manufacturer's recommended pads and operating speed, clean floor to remove embedded dirt and surface marks.

- Remove spent scrubbing solution with wet vacuum or mop.
- Rinse area using clean mop and clean rinse water. Remove water with wet vacuum or mop. Damp mop area to clean up any remaining water or streaks.

4. STRIPPING OF FLOOR WAX FROM RESILIENT FLOORING

Do not strip damaged flooring. Any loose or damaged flooring should be repaired or replaced before stripping is started. Wet stripping, if performed properly, should not cause damage to resilient flooring. If any flooring damage occurs during stripping, stop work and notify DOE or the Asbestos Program Manager. Do not dry strip, scrape, sand, or grind resilient asbestos flooring to remove any blemishes or imperfections.

- After proper mixing of stripping chemical, adequately wet floor by mop applying liberal amounts of the solution. Allow chemical to soak for amount of time recommended by manufacturer. If areas become dry, reapply solution to keep floor adequately wet.
- After wax or finish has softened, strip flooring using least abrasive pad and low speed setting (300 RPM maximum). Keep floor adequately wet during machine operation. Do not overstrip. Stop stripping when the old wax or finish is removed. Work small areas at a time.
- Remove dirty stripping solution with wet vacuum or "strip" mop.
- With "rinse" mop, apply liberal amount of clean water to area stripped and remove water with wet vacuum or mop. Repeat rinse procedures.
- If some spots of wax or finish remain, restrip those areas.
- When applying new wax or finish, do so according to manufacturer's recommendations.

ACM WASTE

Waste generated from asbestos projects must be properly stored and disposed. A minimum of a half-face negative pressure respirator and disposable clothing, with a hood and booties, are required when handling asbestos-containing materials. The following procedures must be implemented when handling asbestos-containing waste:

1. All waste must be placed in either sealed barrels or two six-mil polyethylene disposal bags. All waste containers must have two labels as required by both OSHA and the U.S. Department of Transportation (DOT). The labels are worded as follows:

   OSHA Label:

   DANGER
   CONTAINS ASBESTOS FIBERS
   AVOID CREATING DUST
   CANCER AND LUNG DISEASE HAZARD

DOT Label:

**RQ HAZARDOUSSUBSTANCE,
SOLID, NOS
ORM-E, NA 9188
(ASBESTOS)**

2. Waste must be adequately wet. Once the debris is in the barrel or disposal bag, sufficient water must be added so that there is a noticeable amount.

3. Disposal bags must be sealed to reduce airspace and make them leak-tight. Twisting and sealing with duct tape is one method to prevent leaks at the opening of the bag. All waste must be double-bagged and sealed. In the case of a glovebag, the use of one labeled bag around the glovebag is considered double-bagging. If the second bag is used to dispose of other contaminated waste and water, a third labeled bag must then be properly sealed around both.

4. Place the bags into a drum or other rigid container equipped with secure or locking ring lids and label with the same information described above.

5. The drums or container must be secured in a temporary storage area previously identified at your facility. This should be an area with limited access and preferably with a locked entry door.

6. Record the date and amount of waste placed in the temporary storage area. A log sheet should be established for this purpose.

7. Keep the temporary storage area clean by using good work practices. If any bags of waste break, clean the area using the 'Asbestos Debris Cleanup Procedures' in Part VII, and in compliance with all applicable regulations.

8. Before the temporary storage area is full or the expiration of the maximum allowable storage date, make arrangements to have the asbestos waste picked up and delivered to an approved asbestos waste disposal site.

9. Make advance arrangements with the waste disposal facility to ensure that your waste will be accepted.

10. Arrange to have the asbestos waste delivered safely to the previously identified disposal facility.

11. Receipts from both the transporter and landfill for each shipment of waste must be kept on file. Record all dates, destinations, and responsible persons involved in transporting the waste from the temporary storage area to the disposal facility previously identified in the Plan. For further information concerning storage, transportation, and disposal of asbestos-containing waste, contact the Massachusetts DEP.

8.0 SAFE WORK PRACTICES & PROCEDURES FOR ASBESTOS-CONTAINING MATERIALS

INTRODUCTION

The following safe work practices and procedures are minimum requirements and/or recommended guidelines for working with or around asbestos-containing materials. School personnel may perform Work involving three linear or square feet or less of ACM and small-scale or short-duration projects provided that they have received the required sixteen-hour asbestos O&M training.

All school employees who perform small-scale or short-duration projects must be provided with appropriate personal protective equipment. This equipment includes, at a minimum, half-face negative-pressure respirators equipped with High Efficiency Particulate Air (HEPA) filters and full-body Tyvek disposable coveralls or their equivalent. The following procedures are to be performed only after first donning this minimum personal protective equipment.

Activities which will disturb greater than three linear or three square feet of ACM must be designed and performed by persons or companies licensed in Massachusetts to perform such activities. All asbestos activities must be performed in compliance with all applicable federal, state, and local regulations. Notifications to appropriate agencies are necessary. Isolation of the affected area is usually required. All asbestos work must also be performed in such a manner as to minimize the release of asbestos fibers and protect the health and environment of all building occupants.

EQUIPMENT

In addition to protective equipment such as disposable clothing and respirators, the following equipment may be necessary to perform work involving asbestos.

1. DUCT TAPE

Heavy-gauge tape used to seal glove-bags and secure adjacent sheets of polyethylene.

2. POLYETHYLENE OR PLASTIC SHEETING

Plastic sheeting (6 - mil thick) used to seal off an area in which an asbestos project is taking place in order to prevent contamination of other areas. Also used to seal waste.

3. SURFACTANT

A chemical wetting agent added to water that improves the ability of water to penetrate asbestos-containing material.

4. DISPOSAL BAGS

Six-mil-thick bags used to dispose of asbestos-containing materials. All bags must be properly labeled according to OSHA and DOT regulations.

5. RETRACTABLE UTILITY KNIFE

Used to cut asbestos-containing materials or equipment during removal. Always use **retractable** utility knives so as not to risk puncturing glove-bags.

6. GLOVE-BAG

A pre-manufactured polyethylene bag generally used as a containment around asbestos-containing insulation on pipes or valves so that the insulation may be removed without releasing asbestos fibers into the ambient air. The glove-bag consists of a 6- to 12-mil-thick polyethylene bag fitted with long-sleeve gloves, a tool pouch and an opening for a HEPA vacuum hose and garden sprayer wand. The size, quality, style, and cost vary depending on the manufacturer.

7. WARNING SIGNS

Warning signs are posted at the entrance to the work area and at a sufficient distance so as to allow all building occupants adequate forewarning of the occurrence of an asbestos associated project. The purpose of warning signs is to keep unauthorized personnel away from the work area. The OSHA warning sign is worded as follows:

DANGER
ASBESTOS
CANCER AND LUNG DISEASE HAZARD
AUTHORIZED PERSONNEL ONLY
RESPIRATORS AND PROTECTIVE
CLOTHING ARE REQUIRED IN THIS AREA

8. HEPA VACUUM CLEANER

A High Efficiency Particulate Air (HEPA) filtered vacuum cleaner capable of trapping and retaining 99.97% of all particles larger than 0.3 microns. The HEPA vacuum cleaner is equipped with an extensive filtering system consisting of primary, secondary, and HEPA filters which trap fine particles.

9. RE-WETTABLE FIBERGLASS CLOTH

A canvas-like material impregnated with glue. The cloth is saturated with water and molded over asbestos-containing pipe and boiler insulation, and hardens as it dries. When completely dry, it is sealed with latex paint. Because the cloth contains fiberglass, it is best to wear gloves when handling this material.

10. GARDEN SPRAYER

A garden sprayer is filled with amended water and is used to wet asbestos-containing material or to lock down fibers remaining on substrate from which asbestos-containing material has been removed. When performing the glove-bag technique, a garden sprayer with a 2-3 gallon capacity is sufficient. It is best to have a hose at least six feet long. If the hose is not sufficiently long, it can be replaced or extended with flexible tubing.

11. ENCAPSULANT

A substance applied to asbestos-containing materials that controls the release of asbestos fibers. Encapsulant is applied over re-wettable fiberglass cloth, after the cloth has dried. Latex paint is suitable for this purpose. Be sure the encapsulant chosen has a fire rating appropriate to the area where it is used.

12. SPRAY BOTTLE

A spray bottle filled with water is used to wet any suspect debris.

13. SMOKE TUBES AND ASPIRATOR BULB

Used to test glove-bags for leaks and for respirator fit-testing.

14. RE-SEALABLE STORAGE BAGS

If repairs to pipe insulation are completed using the glove-bag technique, the patching material (i.e., re-wettable fiberglass cloth) must remain free of asbestos contamination. Placing the material inside a storage bag will prevent contamination.

15. RAGS, NYLON BRISTLE SCRUB BRUSHES (OR SCRUB PADS)

These items are used to clean the surface of a pipe or valve once asbestos-containing insulation has been removed. The scrub brush or pad are particularly useful when removing debris from threading. These items cannot be decontaminated and must be discarded as asbestos waste.

16. PATCHING COMPOUND (OR CEMENT)

Used to fill in cracks or holes in pipe or boiler insulation.

17. STAPLE GUN AND STAPLES

Used to temporarily secure polyethylene sheeting and glove-bags.

18. BUCKET

Preferably plastic and washable. Do not use wooden buckets. Used to catch asbestos debris and to wash equipment following use.

BOILER / PIPE INSULATION REPAIR

Boiler and pipe insulation often can be easily repaired using a patching compound and re-wettable fiberglass cloth. Follow all applicable regulations, including Massachusetts DLS 453 CMR 6.14(3) and (4), and proceed as follows.

1. Isolate and seal off the work area, as required in 453 CMR 6.14. If the repair is to pipe insulation, a glove-bag may be used instead.

2. Seal a piece of six-mil polyethylene sheeting to the floor in the immediate work area, using duct tape. If floor debris is present, first vacuum all visible debris using a HEPA vacuum.

3. Thoroughly wet damaged area with a light mist of amended water, using a spray bottle.

4. Remove any loose debris on the damaged insulation using the HEPA vacuum.

5. Prepare patching compound according to the manufacturer's instructions. Patch the hole or crack.

6. Wet a piece of re-wettable fiberglass cloth thoroughly and place over damaged area. Cover all exposed insulation.

7. Properly clean and carefully peel the polyethylene sheeting off the floor, rolling the sheet so that the contaminated side is inward. Place the sheet into a six-mil polyethylene disposal bag.

8. Place all cleanable tools in a re-sealable storage bag and take the bag to a sink to clean the tools.

9. Remove disposable suit and place in asbestos disposal bag. Double-bag all waste and dispose according to all applicable regulations.

10. Remove, clean, and store respirator.

11. When the re-wettable fiberglass cloth has dried, paint with latex (which has an appropriate fire rating), to ensure airtight seal.

NON-FRIABLE ACM

Asbestos-containing or assumed asbestos-containing materials such as transite board and transite pipe are non-friable in their undamaged state. However, routine maintenance and renovation activities can disturb non-friable ACM and cause it to become friable. When non-friable material is removed, friable asbestos-containing dust and fibers may be released. For this reason, any activities that may possibly break these non-friable materials must be undertaken with care, including the application of control methods and preventive measures.

Control methods to minimize the possibility of creating asbestos dust include using water mist to significantly reduce the release of dust and fibers, together with isolation of the area when disturbing non-friable ACM. Precautions must be taken so as not to allow non-friable materials to become broken and damaged, thereby causing fibers to be released. Cutting, sanding, abrading or drilling will also promote fiber release from non-friable ACM. As a further safety measure, personal protective clothing should be worn when disturbing these materials.

Asbestos-containing, or assumed asbestos-containing floor tiles are also non-friable in their undamaged state. Small-scale (less than three square feet) repair of these floor tiles may be performed, but the control methods for transite board described above must be applied. At no time should any amount of floor tiles be sanded, drilled, broken, or otherwise damaged. Large-scale repair and/or removal of floor tiles will require plans to be designed by a Massachusetts licensed designer. In this event, a simplified containment system may be constructed for the ACM locations.

Note: Refer to 'Preventive Measures, in Part VII above, and Appendix B of the Rule for additional information regarding appropriate work practices.

GLOVE-BAG TECHNIQUE

The glove-bag technique is primarily used to remove or repair asbestos- insulated pipes or valves. This procedure requires two people. Follow all applicable regulations and proceed as follows.

1. MATERIALS NEEDED

a. Glove-bag
b. Two garden sprayers
c. Surfactant
d. Duct tape
e. Disposal bags
f. Retractable utility knife
g. Scrub brush or scrub pad, rags
h. Re-wettable fiberglass cloth
i. Re-sealable storage bags
j. Heavy-duty hand stapler and staples
k. Polyethylene sheeting
l. Asbestos warning signs
m. Smoke tubes
n. Aspirator bulb
o. HEPA vacuum cleaner
p. Bucket of water
q. Disposable clothing
r. Half-face negative pressure respirator
s. Bridging encapsulant
t. Spray bottle

2. PREPARATION ACTIVITIES

a. All persons not immediately involved in glove-bag activities must be excluded from the work area. Sufficient physical barriers must be installed to limit access to the work area for the duration of the glove-bag operation.

b. All employees who perform glove-bag operations must be provided with appropriate personal protective equipment, at a minimum, half-face negative pressure respirators equipped with HEPA filters and full-body disposable Tyvek suits or equivalent.

c. All moveable objects must be removed from the work area. Any reusable items that may previously have been contaminated with asbestos must be HEPA-vacuumed and/or wet-wiped. Non-moveable objects may be sealed with six-mil polyethylene sheeting and duct tape.

d. Check the integrity of the pipe insulation. If the insulation is loose, damaged, or if it is believed that cutting into the insulation will worsen its condition, do not proceed. Old, deteriorated pipe insulation may become loose during the repair or removal process, generating airborne asbestos fibers.

e. Gather all necessary tools and supplies. Use the garden sprayers to mix the surfactant, water, and encapsulant separately according to the manufacturers' guidelines.

f. Cut two pieces of re-wettable fiberglass cloth to cap the ends of the insulation. The inner diameter should be one-half inch smaller than the diameter of the pipe itself (not the insulation). The outer diameter of the cap should be about three inches longer than the diameter of the pipe insulation. Cut a slit through one side of the cap. Cut additional pieces of cloth in strips to be used as a patch if necessary. Place pieces in the re-sealable storage bag.

g. Seal off the work area and post asbestos warning signs, as required by DLS 453 CMR 6.14.

h. Put on the negative pressure respirator and perform negative and positive pressure checks. Put on the disposable clothing.

i. Adhere six-mil polyethylene sheeting to the floor in the immediate work area with duct tape.

j. Place two layers of duct tape around the pipe at each end where the glove-bag will be attached. Determine the distance by holding the glove-bag up to the pipe to determine the length. The duct tape serves two purposes: (1) it provides a good surface on which to seal the ends of the glove-bag; and (2) it minimizes the possibility of releasing fibers when the tape is removed.

k. With the retractable utility knife, cut from the top of the glove-bag down the side seams so as to create incisions approximately twelve inches long.

l. Run duct tape horizontally along one of the top flaps for reinforcement.

m. Place the utility knife, rags, nylon scrub brush or scrub pad, and re-wettable fiberglass cloth into a re-sealable storage bag and place them in the tool pouch of the glove-bag.

n. Place the glove-bag around the section of pipe to be worked on and staple the top together with staples approximately one inch apart.

o. Fold the stapled section over and tape it horizontally to the glove-bag with short pieces of duct tape.

p. Lift up the glove-bag so that the bottoms of the side incisions are flush against the bottom of the pipe insulation. There should be adequate room at the top of the glove-bag to reach over the top of the pipe. If the glove-bag is not lifted up and taped, there may be insufficient room to cut the top of the pipe insulation. Seal all seams, holes, cracks, etc. securely with duct tape.

q. Poke a hole at the top of the glove-bag large enough to allow the end of the smoke tube to be inserted.

r. Pre-cut a few pieces of duct tape and set aside for sealing the holes and any leaks. If a hole is not already provided, tape a portion of the bag below the gloves and cut a cross slit. Insert HEPA vacuum hose and reseal bag around hose securely with duct tape.

s. Holding the smoke tube into a wastebasket, carefully snip off both ends of the smoke tube using a pair of scissors. Eye protection should be worn to protect against stray pieces of glass. Place one end of the smoke tube into the aspirator bulb and insert the other end into the glove-bag.

t. Squeeze the aspirator bulb until there is adequate smoke. Do not allow too much smoke to enter the bag.

u. Take out the smoke tube, patch the hole and squeeze the bag. Seal any leaks with the duct tape. Place the smoke tube in a bucket of water for 5-10 minutes and discard.

v. Insert the wand of the garden sprayer into the same hole used for the smoke tube. Tape the wand securely with duct tape.

3. REMOVAL AND/OR REPAIR ACTIVITIES

a. If an aluminum jacket is present on the insulation, remove with tin snips and wire cutters. Fold the sharp edges inward to prevent cutting the waste disposal bag and place gently in the bottom of the bag. Be careful not to cut yourself on the sharp edges. The insulation should now be exposed.

b. Wet the asbestos pipe insulation thoroughly and begin cutting with the retractable utility knife. Water should be sprayed on the cutting area and sides of the bag throughout the process to reduce dust levels in the glove-bag. Use HEPA vacuum to filter air, if necessary. As the material is cut off gently, place the insulation in the bottom of the bag. Wet the material on the bottom of the bag as well as any remaining debris on the pipe.

c. Clean all debris off the pipe with water, scrub brush, and rags. Clean excess debris from the exposed ends remaining on the pipe.

d. Wet the cloth end pieces made from the re-wettable fiberglass cloth and apply to exposed ends of asbestos. Enclose all visible insulation with patch strips as necessary. Any asbestos that has been exposed as a result of the glove-bag

operation must be properly repaired, encapsulated, or enclosed prior to removal of the glove-bag.

4. DISPOSAL AND CLEAN-UP ACTIVITIES

a. Spray the entire inside of the bag and clean off the retractable utility knife and all cleanable equipment and tools that will be used in the future. The rags and scrub brush should be left in the bag and discarded with the rest of the waste since they cannot be adequately cleaned.

b. With the HEPA vacuum running, carefully remove the clean surfactant sprayer and quickly replace with encapsulant sprayer. Use encapsulant to lock down any invisible fibers and again spray down entire bag.

c. Grab the cleaned tools with one glove and invert the glove to the outside of the bag. Tie off the glove with string or duct tape in two areas and cut the glove between the two sealed areas. Place the section of glove containing the tools in the water bucket. Open this glove underwater and re-clean all tools in the water. Remove any gross chunks of debris and place in a pre-labeled asbestos disposal bag. Dispose of inverted glove in disposal bag.

d. Twist the glove-bag several times at the midsection (below the water sprayer hole) and seal it. This will isolate the contained debris in the bottom of the bag while the glove-bag is removed from the pipe.

e. With the HEPA vacuum running, carefully remove the encapsulant wand from the bag and tape the hole promptly and securely.

f. With the HEPA vacuum on the low-flow setting, gently collapse the glove-bag. Carefully remove the vacuum nozzle and seal off the hole with duct tape.

g. Finish twisting the bag to form an airtight constriction. Firmly secure the constriction with duct tape.

h. Slip the disposal bag around the glove-bag (still attached to the pipe). Slowly cut open the top of the glove-bag and carefully fold it down into the disposal bag. Do not remove duct tape attached to pipe.

i. Remove air from disposal bag, twist the top of the bag, and seal securely with duct tape. It is recommended that the disposal bag be double-bagged. Make sure the outside bag is properly labeled. All waste must be disposed of properly. Carefully place bag in a sealed, labeled, leak-tight container for temporary storage until disposal. Dispose of ACM as described in 'ACM Waste' in Part VII.

j. Finish cleaning the tools in the water bucket and carefully pour wash water into disposal bag, rinse bucket with a sprayer, and dispose of this water in the disposal bag as well. Properly clean floor and, if necessary, polyethylene sheeting, using either HEPA vacuum or wet methods, and fold the polyethylene sheeting inward and place in disposal bag. Remove the disposable suits and place in disposal bag.

k. Remove the respirator, clean, and store.

l. After re-wettable fiberglass cloth has dried, paint with latex to ensure ACM is sealed airtight.

Additional glove-bag techniques and requirements are also described in Appendix B of the Rule, Appendix G of OSHA 29 CFR 1926.1101, and DLS 453 CMR 6.14(4).

MINI-ENCLOSURE OPERATIONS

Any work that would require the use of a mini-enclosure operation must be performed by a Commonwealth of Massachusetts DLS licensed Asbestos Abatement Contractor and these general procedures are provided for informational purposes as part of this updated management plan for Washington Elementary School.

1. Persons not immediately involved in asbestos-related activities are to be excluded from the work area. Use physical barriers where necessary to limit access to the work area for the duration of the work.

2. Construct airtight barriers to prevent the release of asbestos fibers. Where feasible, glove-bags are permitted in place of barriers to remove insulation on pipes and ducts.

3. Adequately wet the asbestos before disturbing it. Removed asbestos and asbestos-contaminated items are to be containerized in two six-mil polyethylene bags, or double-wrapped in six-mil polyethylene sheeting. If the material has sharp edges, double-wrap or bag it and then place the material in metal, fiber, or plastic drums that can be sealed.

4. Properly repair, enclose, or encapsulate friable asbestos that has been exposed during asbestos work.

5. HEPA-vacuum and wet-wipe until there is no visible debris or dust.

6. Asbestos-containing waste must be containerized, transported, and disposed of at an approved asbestos landfill in accordance with all applicable regulations.

ASBESTOS-DEBRIS CLEAN UP PROCEDURES

Any debris suspected of containing asbestos found on the floor, on top of ceiling tiles, or other building structures should be cleaned up immediately. Asbestos debris is extremely friable. Any suspected debris that is equal to or greater than three linear or square feet must be cleaned up by a Commonwealth of Massachusetts DLS licensed Asbestos Abatement Contractor according to a plan designed by an accredited and DLS licensed Asbestos Project Designer.

1. WHEN ASBESTOS-CONTAINING DEBRIS IS DRY OR DAMP AND SMALL IN SIZE

a. Asbestos-debris clean up shall be performed after occupied school hours and must be performed by workers with asbestos training. Workers shall wear protective clothing and respiratory protection.

b. Isolate and seal the work area and post warning signs, as required by DLS 453 CMR 6.14.

c. Thoroughly wet-mop, using a bucket of water, rags and/or mops, all of the structures and items on which the debris has fallen. Be sure all visible debris is removed.

d. Vacuum the floor using a HEPA vacuum. Again, be sure all visible debris is removed.

e. When the area is dry, inspect for any visible asbestos debris. Sometimes wet asbestos debris becomes hidden during the clean-up. If any visible asbestos material is found, repeat the wet-mop or HEPA-vacuuming procedure until no visible asbestos debris is observed.

f. Dispose of the protective clothing, mop heads, and rags into a six-mil polyethylene disposable bag. Pour the water from the bucket into the disposal bag also. Twist the top of the polyethylene bag and seal it with duct tape. Double-bag the waste material with another six-mil polyethylene bag. Dispose of the bagged asbestos waste according to all applicable regulations.

g. Remove respirator, clean, and place in re-sealable storage bag.

h. Clean the bucket in a sink, if available, and thoroughly rinse the sink used.

i. Remove barriers and posted warning signs.

2. WHEN ASBESTOS DEBRIS IS TOO WET OR TOO LARGE TO BE VACUUMED

a. This type of work shall be performed after occupied school hours and must be performed by workers with asbestos training. Workers shall wear protective clothing and respiratory protection.

b. Isolate and seal the work area and post warning signs as required by DLS 453 CMR 6.14.

c. Thoroughly wet the asbestos material and the surrounding area to a distance of six inches with the garden sprayer. Use a light mist of water when wetting the area and the material, as a heavy stream of water could dislodge and disperse asbestos fibers.

d. If the material is intact and too large to be easily handled with a shovel, pick up the wet material and place it in a six-mil polyethylene disposable bag.

e. Scoop up smaller debris with a shovel, dust pan, or garden trowel and place in a six-mil polyethylene bag. Use another washable item, such as another garden trowel or ice scraper, to push the material into the shovel, dustpan, or trowel. **DO NOT USE A BROOM OR BRUSH!** A broom or brush cannot be decontaminated and also will increase the possibility of dispersing asbestos fibers into the air.

f. Wet-mop the entire area and items that the asbestos material contacted, using a bucket of water, rags, and mops. If the floor is carpeted, vacuum the carpet with a HEPA-filtered vacuum cleaner. If the carpet is wet, or the debris is wet, the carpet must be steam-cleaned. A HEPA-filtered vacuum cleaner cannot be used to pick up water or wet material unless the vacuum is designed to do so.

g. Wash the items used in the cleanup, including hands, shovel, ice scraper, etc., by holding items over the six-mil disposal bag and washing them thoroughly with the garden sprayer. Pour the bucket of contaminated water into the disposal bag.

h. Place the protective clothing, mop heads, and rags in a six-mil polyethylene disposable bag and dispose of as contaminated waste. Twist the top of the polyethylene bag and seal it with duct tape. Double-bag the waste material with another six-mil polyethylene bag.

i. Place the respirator in a re-sealable storage bag and take it to a sink to clean.

j. Clean the respirator, re-clean the bucket, and thoroughly rinse the sink. Store the respirator after cleaning.

k. Remove the barriers and posted warning signs.

ASBESTOS EMERGENCY PROCEDURES

An asbestos emergency situation is one in which there is an unexpected change in the condition of asbestos-containing material that results in the release of asbestos fibers. This is called an asbestos fiber release episode. Fiber release episodes have the potential to contaminate the area and expose the building occupants to asbestos fibers.

The following procedures should be followed in the event of an emergency:

1. Remove occupants from the immediate area and contact the appropriate building supervisor and the School's Designated Person.

2. Isolate the area as described in DLS 453 CMR 6.14.

3. Trained personnel who will perform the work should wear the appropriate disposable clothing and respiratory protection.

4. Vents and ducts leading into or out of the emergency area should be shut down and sealed with six-mil polyethylene sheeting and duct tape according to DLS 453 CMR 6.14 (2)(a)(2).

5. If the asbestos debris or material is less than three linear or square feet, continue by following the "Asbestos Debris Clean-up Procedures" described above. If the asbestos material is greater than or equal to three square or linear feet, **DO NOT TOUCH OR REMOVE THE ASBESTOS**. Contact a Massachusetts licensed asbestos abatement contractor and a Massachusetts accredited project designer.

HEPA VACUUM

The HEPA vacuum cleaner is the **ONLY** vacuum cleaner designed to clean asbestos debris. Using a household or shop vacuum will not only contaminate the vacuum cleaner itself, but will expose the user and the area to high levels of airborne asbestos dust.

It is important that personnel read and follow manufacturer's directions for proper use and maintenance of the HEPA vacuum. Some HEPA vacuum cleaners cannot pick up wet materials. Consult the manufacturer's directions.

CLEANING AND MAINTENANCE

When the inside of the vacuum cleaner needs to be accessed, whether to change a filter, a bag, or a part, the following procedures must be followed.

1. Gather the necessary equipment required by this section, including:

    a. Half-face negative pressure respirator
    b. Re-sealable storage bag or similar substitute
    c. Disposable clothing
    d. Bucket of water
    e. Sponges or rags
    f. Disposal bags
    g. Duct tape

2. Take the HEPA vacuum cleaner to a location away from non-authorized personnel.

3. Put on the half-face negative pressure respirator and disposable clothing.

4. Perform the necessary maintenance or repair according to the manufacturer's instruction. Place any of the contaminated, used, or worn parts, bags, and filters in the six-mil polyethylene disposal bag.

5. With a damp rag or sponge, clean visible debris from the interior and exterior of the vacuum cleaner.

6. Pour the bucket of water into the disposal bag. Thoroughly rinse the bucket and pour the rinse water into disposal bag.

7. Place the sponge or rag in the six-mil polyethylene disposal bag, along with the disposable clothing and any other contaminated items.

8. Seal the six-mil bag securely with duct tape, making sure there are no leaks in the bag. Place the used and sealed disposal bag into a second labeled six-mil polyethylene disposal bag. Twist the top of the bag and seal with duct tape.

9. Remove, clean, and store respirator.

10. Store and dispose of the asbestos waste properly.

9.0 RECORDKEEPING

SUMMARY

Pursuant to requirements specified in the Rule, the LEA is responsible for maintaining adequate records for all the asbestos activities listed below in two locations: (1) the Local Education Agency office; and (2) the School Administration's offices. Refer to Section 763.94 of the Rule for the specific items required to be recorded for each activity.

It is recommended that the sample forms included in this section be used as a guide from which the LEA may develop its own forms. If the sample forms are chosen to be used, the LEA must ensure they provide a record of all of the information required by the Rule and all other applicable regulations. The guidance forms included within this section in no way supersede or replace records that may be necessary to comply with any applicable asbestos regulations. The LEA must take care to remain informed and ensure compliance with all new and existing regulations and update their methods of recording activity accordingly. This is especially important as long as any ACM remains in the School and building occupants may come in contact with or otherwise handle asbestos-containing materials. It is also recommended that the LEA maintain updated copies of the blank forms it chooses to use in this Record-keeping section.

The following asbestos activities, projects, and occurrences, and the entities involved in such projects, are to be recorded as required in Section 763.94 of the Rule. The activities to be recorded include, but are not limited to:

1. Preventive Measures
2. Response Actions
3. Contractors or Personnel Involved
4. Air Monitoring and Results
5. Personnel Training
6. Periodic Surveillance
7. Cleaning (per Section 763.91© of the Rule)
8. Operation and Maintenance (O&M) Activities
9. Major Asbestos Activities (per Section 763.91(e) of the Rule)
10. Fiber Release Episodes

Additional records required by OSHA (particularly if negative pressure respirators are used) include those required for, but are not limited to, medical surveillance and respiratory protection.

10.0 FORMS

SAMPLE RECORD FORMS

In order to maintain all proper records required, it is essential to establish an organized format for record keeping. The following record forms and recommended formats are provided as guidance for creating and maintaining adequate records. The information requested in the forms should only be viewed as minimum requirements as stated in the Rule. It is important to be sure that additional records be kept as necessary to fully comply with all applicable regulations.

Additional record-keeping forms, such as medical surveillance or respiratory protection forms, may similarly be recorded and continued as necessary. Keep a blank copy of the record forms used in the Record-keeping section and revise as necessary. Copy several blank forms. Keep these blanks and completed forms in the Records section.

Project records may be compiled (copied as necessary in the case of repeat records, such as Worker Training) and grouped together, project by project, in order of occurrence.

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FORM A PERIODIC SURVEILLANCE & RE-INSPECTION SIGNOFF TABLE

SIX-YEAR PLAN

Washington Elementary School, Lowell, MA

Form No. A-

	LATEST DATE	SURVEYOR OR INSPECTOR NAME	PROJECT DATE(S)	RECORD FORM NO(S).
SURVEILLANCE: 10/2014				
SURVEILLANCE: 04/2015				
SURVEILLANCE: 10/2015				
SURVEILLANCE: 04/2016				
SURVEILLANCE: 10/2016				
RE-INSPECTION: 04/2017				
SURVEILLANCE: 10/2017				
SURVEILLANCE: 04/2018				
SURVEILLANCE: 10/2018				
SURVEILLANCE: 04/2019				
SURVEILLANCE: 10/2019				
RE-INSPECTION: 04/2020				

(Periodic Surveillance every 6 months thereafter. Re-inspection every 3 years thereafter.)

FORM B ACTIVITY / PROJECT RECORD

Washington Elementary School, Lowell, MA

Project No. _____ Form No. B-_____

Measure or Action: _____

_____

If Periodic Surveillance or Re-inspection, Record Form No(s). _____

Start Date: _____ Completion Date: _____

ACM Type: Check Appropriate Material Type; see appropriate ACM Table or Summary)

F - Friable
NF - Nonfriable
S - Surfacing
T - Thermal
M - Miscellaneous
A - Other ACM

F/S	_____	F/M	_____
NF/S	_____	NF/M	_____
A/F/S	_____	A /F/M	_____
A/NF/S	_____	A/NF/M	_____
A/T	_____	NF/O	_____

ACM Description: _____ Homogeneous Area: _____

Specific Area Location(s): _____

ACM Location in Area(s): _____

HVAC Supply: Passive Direct Air Movement: High Moderate Low

Air System: Shut Down Isolated Not Present

Was Area Isolated? Yes No Proper Signs Posted? Yes No

Project Description and Methods: _____

_____

_____

_____

Why was action taken? _____

_____

_____

Was Project Resultant of a Major Fiber Release Episode (> 3 feet)? Yes No

Was Project Resultant of a Minor Fiber Release Episode (< 3 feet)? Yes No

FORM B ACTIVITY / PROJECT RECORD (CONTINUED)

Washington Elementary School, Lowell, MA

Was any ACM Removed? Yes No Total Amount _____

If YES: Storage Record Form No. _____

Disposal Record Form No. _____

If less than or equal to 3 linear or square feet then:

School Worker Record Form No. _____

Worker Training Record Form No(s). _____

Contractor Record Form No(s). _____

If greater than 3 linear or square feet then:

Design Consultant Record Form No(s). _____

Air Monitoring Consultant Record Form No(s). _____

Laboratory Consultant Record Form No(s). _____

Contractor Record Form No(s). _____

Does ACM remain in location? Yes No Amount _____

If YES: Describe additional Preventive Measures: _____

_____

_____

* Continue with Operations and Maintenance Program.

If NO: Be sure to update asbestos location blueprint, diagrams, and/or written description and adjust periodic surveillance forms.

Date of Notification to: DLS _____ DEP _____ EPA _____

Inspection Form No(s). _____

Name of Competent or Designated Person: _____

School Worker Record Form No. _____

Signature: _____ Date: _____

Competent or Designated Person

FORM C SCHOOL WORKER RECORD

Washington Elementary School, Lowell, MA

Form No. C-_____

Project No. _____ Project Form No. _____ Project Date(s) _____

_____

Designated Person _____

Respiratory Workers' Protection Names	Date(s) of Activity	Worker Training Record Form No(s).	Medical Surveillance Record Form No(s).	Record Form No(s).

FORM D DESIGN CONSULTANT RECORD

Washington Elementary School, Lowell, MA

Form No. D-_____

Project No: _____ Project Form No.: _____

Consultant Company Name: _____

Address: _____

_____

_____

Telephone: _____

Specification Location: _____

Project Designer Name: _____

State of Accreditation: _____

Accreditation Number: _____

Completion Date Project Designed: _____

Project Designer Signature: _____

FORM E ABATEMENT CONTRACTOR RECORD

Washington Elementary School, Lowell, MA

Form No. E-_____

Project No. _____ Project Form No. _____

Project Date(s): _____

Designated Person: _____

Contractor Name: _____

Address: _____

_____

Telephone: _____

Contractor's State of Accreditation: _____

Accreditation Number: _____

Worker Name	Date on Site	State of Accreditation	Accreditation Number	Day Supervisor/ Foreman

FORM F AIR MONITORING CONSULTANT RECORD

Washington Elementary School, Lowell, MA

Form No. F-_____

Project No. _____ Project Form No. _____

Designated Person: _____

Consultant Company Name: _____

Address: _____

_____

Telephone: _____

Air Sample Collection Date: _____

Air Sample Collector's Name: _____

State of Accreditation: _____

Accreditation Number: _____

Collectors Signature: _____

Sample No.	Sample Location	Results

FORM G LABORATORY RECORD

Washington Elementary School, Lowell, MA

Form No. G-_____

Project No. _____ Project Record Form No. _____

Project Date(s): _____

Designated Person: _____

Consultant Company Name: _____

Address: _____

_____

Telephone: _____

State of Accreditation: _____

Accreditation Number: _____

Check if applicable:

_____ This laboratory is accredited by the National Institute for Standards and Technology to conduct air sample analysis using Transmission Electron Microscopy (TEM).

_____ This laboratory is enrolled in the EPA-sponsored Proficiency Analytical Testing Program for Phase Contrast Microscopy (PCM).

Sample Number	Result of Analysis	Method of Analysis	Date of Analysis	Name of Analyst	Signature Analyst

FORM H DISPOSAL RECORD

Washington Elementary School, Lowell, MA

Form No. H-_____

Project No. _____ Project Record Form No. _____

Project Date(s): _____

Designated Person: _____

Site Name: _____

Address: _____

_____

Telephone: _____

How Material is Containerized: _____

Material Quantity: _____

Date Material Transported for Disposal: _____

Transporter Name: _____

Address: _____

_____

Telephone: _____

FORM I STORAGE RECORD

Washington Elementary School, Lowell, MA

Form No. I-_____

Project No. _____ Project Record Form No. _____

Project Date(s): _____

Designated Person: _____

Storage Site: _____

Address: _____

_____

Telephone: _____

Storage Area at Site: _____

Material Quantity: _____

Area Sealed? _____ How: _____

_____

Area Secured? _____ How: _____

_____

Date Material Transported
for Disposal _____

FORM J WORKER TRAINING RECORD

Washington Elementary School, Lowell, MA

_____ Check if Designated Person Form No. J-_____

Individual's Name	Individual's Identification No.
Permanent Street Address	Emergency Contact Person
Permanent City, State, Zip Code	Emergency Contact Phone No.
Home Phone No.	Attending Physician
Job Title	Attending Physician's Phone No.

ASBESTOS TRAINING HISTORY

Course Date	Course Location	Course Title	Training Center Name	Hours of Instruction	Certification Number

THIS INDIVIDUAL IS QUALIFIED TO PERFORM THE FOLLOWING TYPE(S) OF ASBESTOS-RELATED WORK

1) Restricted to maintenance work which does not involve the disturbance of asbestos-containing building materials.

Signature

Title Date

2) May perform "small-scale, short-duration" work as defined by the applicable rules and regulations, under proper supervision.

3) May perform "small-scale, short-duration" work as defined by the rules and regulations and is qualified to supervise other workers performing the same type of work.

4) May perform work in any type of asbestos removal project under proper supervision.

5) May perform work on any type of asbestos removal project and is qualified to supervise others performing the same type of work.

FORM K GLOVE BAG REMOVAL RECORD

Washington Elementary School, Lowell, MA

Form No. K-_____

Date Performed: _____

Designated Person: _____

Performed by: _____

_____

_____

Contractor MA Certification No.: _____

DEP Notification No.: _____

Work Performed: _____

_____

_____

Worker Name: _____

Worker Massachusetts Certification No.: _____

Waste Landfill: _____

Waste Transporter: _____

11.0 MISCELLANEOUS DOCUMENTATION

(Bulk Sample Results, ACM Location Drawings, 6-Month Periodic Surveillance Records, Completed Response Action Records, Licenses, Employee Training Certificates, etc.)

THE COMMONWEALTH OF MASSACHUSETTS

DIVISION OF OCCUPATIONAL SAFETY

This is to certify that

Brian Curley

has successfully completed the course of studies

for AHERA Designated Person Training conducted by

the MA Division of Occupational Safety on May 2, 2007

DP-07-044	May 4, 2007
Registration Number	*Date of Issue*

Frank Kramarz

Frank Kramarz, Program Supervisor

This is to certify that

John Brendan Phelan

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

August 29, 2013
Course Dates

13-8451-136-259111
Certificate Number

August 29, 2013
Examination Date

August 29, 2014
Expiration Date

Training Director

16 Upton Drive, Wilmington, MA 01887 Telephone 978.658.5272 www.ieetrains.com

INSTITUTE FOR ENVIRONMENTAL EDUCATION

This is to certify that

John Brendan Phelan

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

August 29, 2014
Course Dates

14-9112-136-259111
Certificate Number

August 29, 2014
Examination Date

August 29, 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 Designer

JOHN PHELAN
Eff. Date 09/18/13
Exp. Date 09/18/14
AD900344
Member of C.O.N.E.S.
HVN

14

HV-NEW

Commonwealth of Massachusetts
Department of Labor Standards
Heather E. Rowe, Director
Asbestos Inspector

JOHN PHELAN
Eff. Date 09/18/13
Exp. Date 09/18/14
AI900523
Member of C.O.N.E.S.
HVN

14

HV-NEW

Commonwealth of Massachusetts
Department of Labor Standards
Heather E. Rowe, Director
Asbestos Management Planner

JOHN PHELAN
Eff. Date 09/18/13
Exp. Date 09/18/14
AP900428
Member of C.O.N.E.S.
HVN

14

HV-NEW

Commonwealth of Massachusetts
Department of Labor Standards
Heather E. Rowe, Director
Asbestos Project Monitor

JOHN PHELAN
Eff. Date 09/18/13
Exp. Date 09/18/14
AM900486
Member of C.O.N.E.S.
HVN

14

HV-NEW

Commonwealth of Massachusetts
Department of Labor Standards
Heather E. Rowe, Director

Asbestos Inspector

JOHN PHELAN

Eff. Date 09/17/14
Exp. Date 09/16/15
AI900523
Member of C.O.N.E.S.
HV HV - RENEW

15

Commonwealth of Massachusetts
Department of Labor Standards
Heather E. Rowe, Director

Asbestos Project Monitor

JOHN PHELAN

Eff. Date 09/17/14
Exp. Date 09/16/15
AM900486
Member of C.O.N.E.S.
HV HV - RENEW

15

Commonwealth of Massachusetts
Department of Labor Standards
Heather E. Rowe, Director

Asbestos Designer

JOHN PHELAN

Eff. Date 09/17/14
Exp. Date 09/16/15
AD900344
Member of C.O.N.E.S.
HV HV - RENEW

15

Commonwealth of Massachusetts
Department of Labor Standards
Heather E. Rowe, Director

Asbestos Management Planner

JOHN PHELAN

Eff. Date 09/17/14
Exp. Date 09/16/15
AP900428
Member of C.O.N.E.S.
HV HV - RENEW

15

This is to certify that

Dina Dellicolli

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

Asbestos Inspector Refresher

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

Course Location

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

November 19, 2013
Course Dates

13-8445-106-234030
Certificate Number

November 19, 2013
Examination Date

November 19, 2014
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

DINA DELLICOLLI

Eff. Date 12/18/13

Exp. Date 12/18/14

14

AI035703

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

HVR HV-RENEW