

**BOSTON COLLEGE**

**OFFICE OF  
ENVIRONMENTAL HEALTH & SAFETY**

**ASBESTOS MANAGEMENT PROGRAM**

**Prepared: May, 1999  
Revised: February, 2004  
Reviewed: September, 2004**

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## **ASBESTOS MANAGEMENT PROGRAM**

### **1.0 Program Administration**

#### **1.1 Introduction**

The Boston College Asbestos Management Plan has been established to meet the requirements of the Occupational Safety and Health Administration (OSHA) Asbestos Standards for General Industry 29 CFR 1910.1001 and Construction 29 CFR 1926.1101, the Environmental Protection Agency (EPA) Title 40 Parts 61 and 763, and the Massachusetts State Regulations found at 453 CMR 6.00, The Removal, Containment and Encapsulation of Asbestos, and 310 CMR 7.00 Asbestos.

It is the policy of Boston College to maintain a safe and healthy work environment for employees, faculty, students, contractors and visitors. In recognition of the potential health problems associated with asbestos, and due to the minerals' widespread use in buildings constructed prior to 1980, the University is committed to its Asbestos Management Program. The objectives of the program include identification of asbestos materials, hazard communication, training, maintenance, and repair or removal of ACM in University facilities. The program ensures that employees and others will not be exposed to significant levels of asbestos fibers, and that asbestos will be handled in full compliance with all applicable regulations.

This policy applies to all employees who must work around or near ACM, such as Maintenance and Custodial employees, and to Project Managers who will oversee construction and renovation work that may impact asbestos materials.

Boston College does not authorize its employees to engage in Class I, Class II, or Class III asbestos removal activities but instead utilizes licensed and certified outside contractors for these services.

#### **1.2 Definitions**

**Asbestos:** includes chrysotile, amosite, crocidolite, tremolite asbestos, anthophyllite asbestos, actinolite asbestos, and any of these minerals that has been chemically treated or altered.

**Asbestos-Containing Material (ACM):** any material containing more than one percent asbestos.

**Class I Asbestos Work:** the removal of thermal system insulation and/or surfacing material (ACM or PACM).

**Class II Asbestos Work:** removal of any ACM which is not Class I, such as wallboard, floor tile, ceiling tile, linoleum, transite board, roofing materials and mastics.

**Class III Asbestos Work:** repair and maintenance operations where ACM is likely to be disturbed.

**Class IV Asbestos Work:** maintenance and custodial activities during which employees contact but do not disturb ACM, and activities to clean up dust and debris which may be generated by Class I, II, or III work.

**Clearance Air Monitoring:** Air monitoring conducted by a State (DOLWD) licensed Asbestos Project Monitor at the conclusion of an asbestos project. Clearance air monitoring includes the successful completion of a final visual inspection for work area debris and the collection and analysis of air samples in accordance with Massachusetts DOLWD Regulation 453 CMR 6.00. The abatement project is considered complete when clearance air samples are analyzed by phase contrast microscopy using the NIOSH 7400 method result in a fiber concentration less than or equal to 0.010 fibers per cubic centimeter of air.

**Friable Asbestos Containing Material:** any material containing more than one percent asbestos, which when dry, may be crumbled, pulverized or reduced to powder by hand pressure.

**High Efficiency Particulate Air (HEPA) Filter:** a filter capable of trapping and retaining at least 99.97 percent of all mono-dispersed particles of 0.3 micrometers in diameter.

**Negative Exposure Assessment (NEA):** a demonstration by the employer, which complies with the criteria in OSHA 29 (CFR) 1926.1101 paragraph (f) (2) (iii), that the employee exposure during the monitored operation is expected to be consistently below the PELs.

**Non-Friable Asbestos Containing Material:** materials in which asbestos is bound in a matrix which cannot, when dry, be crumbled, pulverized or reduced to powder by hand pressure (such as floor tile and asphaltic building materials).

**Permissible Exposure Limits (PELs):**

(1) Time Weighted Average (TWA): the employer shall ensure that no employee is exposed to an airborne concentration of asbestos in excess of 0.1 fiber per cubic centimeter as an eight (8) hour time weighted average.

(2) Excursion Limit (EL): the employer shall ensure that no employee is exposed to an airborne concentration of asbestos in excess of 1.0 fiber per cubic centimeter of air as averaged over a sampling period of thirty (30) minutes.

**Presumed Asbestos Containing Material (PACM):** thermal system insulation and surfacing material in buildings constructed no later than 1980, are assumed to contain asbestos until it has been analyzed to verify or negate its asbestos content.

**Regulated Area:** means an area established by the employer to distinguish areas where airborne concentrations of asbestos exceed or there is a reasonable possibility that they may exceed the permissible exposure limits.

**Vinyl Asbestos Floor Tile (VAT):** vinyl floor tile and in some cases its mastic which contain more than one percent asbestos and must be handled as ACM.

### **1.3 Administration of Responsibilities**

#### **1.3.1 Responsibility of Employees and Supervisors**

Individual employees and their supervisors are responsible for:

1. Complying with the Asbestos Management Program, including:
  - a. Attending required annual Asbestos Awareness training sessions
  - b. Recognizing ACM and PACM and avoiding disturbance of those materials
  - c. Following all prescribed safe work practices
  - d. Reporting promptly areas with damage to supervisors and to EH&S

#### **1.3.2 Responsibility of Asbestos Project Managers**

1. It is the responsibility of the Facilities Management Department Project Manager or Facilities Services Supervisor overseeing an asbestos abatement activity to comply with the Asbestos Management Program, including:
  - a. Reviewing existing building surveys during project planning stages with EH&S.
  - b. Commissioning spot surveys for areas impacted by the project if information is deficient by Contacting the EHS Office.
  - c. Commissioning a Project Design or Scope of Work with a Massachusetts Certified Project Designer when applicable.
  - d. Obtaining bids from contractors listed on the Purchasing Department's "Approved Bidders" list.
  - e. Ensuring timely filing of required notifications by the contractor (Asbestos and Construction / Demolition as appropriate).
  - f. Deferring all communication with outside Regulatory agencies to EH&S
  - g. Communicating Hazards to all Boston College personnel and outside contractors who may encounter the project.
  - h. Collecting all necessary documentation associated with the project (such as quotes, notifications, air sampling reports, disposal manifests, and invoices) and forwarding to EH&S promptly.

- i. Certifying that the project has been completed in compliance with all Boston College policies and procedures.

Use of the Asbestos Abatement Project Management Closeout Form will assist in organizing these responsibilities (see Appendix A).

### **1.3.3 Responsibility of Environmental Health and Safety**

1. The Environmental Health and Safety office is responsible for the development, implementation and administration of the Asbestos Management Program, including:
  - a. Developing and Implementing the University's Asbestos Management Program
  - b. Developing and Implementing the University's Asbestos Awareness Training Program
  - c. Conducting and/or Supervising all asbestos building surveys and inspections
  - d. Reviewing all asbestos abatement projects for compliance
  - e. Overseeing the activities of the Asbestos consultants supervising asbestos projects and reviewing inspection reports and abatement plans for compliance and completeness
  - f. Maintaining all record-keeping and documentation
  - g. Developing and Implementing the University's Operations and Maintenance Program
  - h. Assist Project Managers and Facilities Services Supervisors in coordinating inspections, abatement project design, phasing and bidding and contract administration.

## **2.0 Hazard Identification**

### **2.1 Building Surveys**

Environmental Health and Safety will coordinate the completion of a comprehensive building survey for suspect asbestos-containing materials for each building on campus. This project will occur in phases based upon building classification and the following priority schedule:

- Residence Halls
- Houses (perimeter properties)
- Academic / Administrative Buildings
- Miscellaneous
- New Acquisitions

A qualified individual holding a valid and current Massachusetts Department of Labor and Workforce Development Asbestos Inspector License will conduct building surveys.

Project Managers should consult Environmental Health and Safety Office records during project planning stages to determine whether or not a completed survey is available prior to any building renovation and or demolition activity. Where no previous survey has been conducted or incomplete bulk sampling of existing suspect ACMs which may be impacted during renovations, it will be the responsibility of the Project Manager to conduct a survey (asbestos inspection) as a component of the project. This survey may be a comprehensive building survey or a survey limited in scope to the sections of the building where asbestos disturbance may occur. Alternately, the Project Manager may presume that the material is ACM.

All surveys will be conducted with the oversight of the Environmental Health and Safety Office and will include:

- Mechanical Room Signage and Labeling ( see section 3.0)
- Bulk sampling and analysis by polarized light microscopy in accordance with method EPA/600/R-93/116 of all homogeneous areas
- Floor plans identifying material locations
- Tables identifying room locations, classes of materials and estimated quantities
- Abatement Cost estimates
- Recommendations regarding conditions of materials
- A statement of compliance with the NESHAPs survey requirements and the credentials of the Inspector

Each time a significant asbestos abatement project is conducted, the Project Manager will commission the Environmental Consultant to update the existing survey to reflect the changes in the building conditions. This may include records such as:

- A letter of addendum to be attached to the building survey indicating amounts and locations where asbestos was removed.
- A modified building floor plan identifying areas where asbestos containing materials remain.

Asbestos building surveys shall be accessible to all University Faculty, Staff, and Students during normal business hours at the Office of Environmental Health and Safety.

## **2.2 Bulk Samples**

Bulk samples may be collected at any time there is a question regarding the asbestos content of a building component.

An individual holding a valid Massachusetts Department of Labor and Workforce Development Asbestos Inspector certification must collect bulk samples.

The Environmental Health and Safety Office will collect bulk samples upon request and arrange for laboratory analysis of the material.

In the absence of a laboratory analysis, building materials such as surfacing materials, thermal system insulation, and miscellaneous materials installed prior to 1981 must be presumed to contain asbestos (PACM).

Results of analyses will be maintained in EH&S files and will be communicated to employees via supervisors, posting at the Facilities Services (Technical Services/Trades) bulletin board and filing in the Facility Services Safety notebook.

### **2.3 Air samples**

Air samples may be collected as clearance criteria for completing an asbestos abatement response action. Refer to Section 7.0 for information.

Air samples may be collected as environmental or area samples as a component of an Operations and Maintenance Program, or to assess the extent of environmental contamination after a disturbance. Air samples collected for these purposes will be analyzed following NIOSH Method 7400 for phase contrast microscopy. A “clean” area for reoccupancy will be considered one meeting the Massachusetts Clearance Air Requirement of less than or equal to 0.010 fibers per cubic centimeter of air.

All air samples must be collected by a Massachusetts certified Asbestos Project Monitor and analyzed by a Massachusetts certified and approved Asbestos Analytical Service.

## **3.0 Signage**

### **3.1 Warning Signs for Regulated Areas**

Warning signs are required for all regulated areas. A regulated area is a zone in which the airborne asbestos fiber levels are likely to exceed the permissible exposure limit (PEL) of 0.10 fiber per cubic centimeter of air as an 8 hour time weighted average, or the excursion limit of 1.0 fibers per cubic centimeter of air as a 30 minute period, as established by OSHA. All active asbestos abatement projects will be classified as regulated areas. A space with significantly damaged ACM might also be restricted and deemed a regulated area.

All regulated area signs must read:

**DANGER  
ASBESTOS  
CANCER AND LUNG DISEASE HAZARD  
AUTHORIZED PERSONNEL ONLY**

If the regulated area also requires respiratory protection and protective clothing, the sign must also state:

**RESPIRATORS AND PROTECTIVE CLOTHING  
ARE REQUIRED IN THIS AREA**

Refer to [Appendix C](#) to review a sample of this sign.

Use of bilingual signs with graphics will be required when warranted to ensure that the employee population in the immediate area fully understands the warning. This will be determined on a case by case basis by the Project Manager.

### **3.2 Warning Signs for Mechanical Rooms**

Mechanical rooms and other areas where employees may be expected to routinely enter, and to come into contact with, ACM or PACM must be posted with warning signs. These signs must be placed at every entrance to each such room, and be clearly visible so that an entrant would be immediately warned of the materials located in the room. Typically, these signs will be hanging overhead and in the field of vision of an individual opening the door to the space.

Warning signs in mechanical rooms will be 8 ½ by 11 inches in size, printed in bold black letters on a bright yellow background, and protected by a vinyl jacket. The signs will contain the following language:

**DANGER  
ASBESTOS  
DO NOT DISTURB-AVOID CREATING DUST  
CANCER AND LUNG DISEASE HAZARD  
AUTHORIZED PERSONNEL ONLY**

In addition, there will be a checklist of materials located in the space, which contain asbestos. Entrants will be directed by the sign to contact the Environmental Health and Safety Office if there are any questions prior to disturbing the ACM.

Mechanical room signage must be maintained in place. Promptly report missing signage to EH&S. Project Managers conducting abatement and/or construction activities in mechanical rooms must ensure the integrity of these signs and must have these signs updated to reflect any changes in information content subsequent to project activities. Refer to [Appendix C](#) to review a sample of this sign.

### 3.3 Warning Labels/Mechanical Rooms

Warning labels will be affixed to representative samples of friable ACM in areas where employees may reasonably be expected to contact or disturb it, whenever feasible. This supplemental notification will be used mainly in mechanical areas and the like, in order to ensure that employees are adequately warned. Labels may also be installed on materials that are accessible and have a history of damage wherever necessary.

Labels will conform to the OSHA Hazard Communication Standard, 29 CFR 1910.1200. They will be printed in large bold letters on a contrasting background and will read:

**DANGER  
CONTAINS ASBESTOS FIBERS  
AVOID CREATING DUST  
CANCER AND LUNG DISEASE HAZARD  
DO NOT BREATHE ASBESTOS FIBERS**

Refer to [Appendix C](#) to review a sample label.

### 3.4 Asbestos Free Labels

Newly installed materials, such as thermal system insulation, should be identified by the application of a label reading:

**ASBESTOS FREE INSULATION**

This will increase employee awareness of the content of building materials in newer buildings as well as in situations where a space contains a mixture of materials. Project managers should consider instructing the installer to label materials at the time of application. Refer to [Appendix C](#) to review a sample of this label.

## 4.0 Lockout Areas

Periodically, the Environmental Health and Safety Office may determine that an area is unsafe due to asbestos contamination including debris and or significantly damaged ACM. These areas will become regulated areas and access to the space will be restricted through the use of signage and changing locks whenever feasible. These areas will remain locked until a response action has been coordinated to abate the hazard present. All lockout areas will be secured with the safety lockout key # 7.155. A report listing all lockout areas will be updated and redistributed to appropriate personnel each time an area is added to or deleted from the listing.

Employees seeking entry into lockout spaces must request approval from the Environmental Health and Safety Office. Access will be granted only to those employees whose level of training and use of personal protective equipment qualify them as individuals authorized to deal with the hazards present. Safety lockout keys will be available at the Lock Shop and EH&S Office during normal business hours, and at the Campus Police Department during off-hours.

Refer to [Appendix D](#) for a copy of the lockout area report.

## **5.0 Training**

### **5.1 Training Overview**

Boston College will provide employees with the information and training necessary to perform their work safely. Training provided will be commensurate with the class of asbestos operations as defined by the OSHA regulation. Training will be provided at no cost to the employee, during regular working hours, and in an easily understandable format. Training programs will be provided at the time of the initial assignment and repeated at least once yearly.

At the present time, Boston College employees are not authorized to perform Class I (removal of thermal system and surfacing ACM), Class II (removal of miscellaneous ACM such as wall board, floor tile and sheeting, roofing, siding and construction mastics), or Class III (repair and maintenance of thermal system and surfacing ACM likely to involve disturbance) operations. Exceptions to this directive would include only those small-scale tasks for which a negative exposure assessment has been achieved, such as spot replacement of individual vinyl asbestos tiles (See Section 6.0).

Class IV asbestos work involves maintenance and custodial activities during which employees contact but do not disturb ACM or PACM and activities to clean up dust, waste, and debris resulting from Class I, II, and III activities.

### **5.2 Asbestos Awareness**

Training for Class IV asbestos workers will be provided upon initial assignment and at least once yearly thereafter. The frequency of the Awareness Training will be determined by the EH&S Office. Supervisors will be responsible for notifying the EH&S Office of newly hired employees requiring training. Training will be equivalent in curriculum to the EPA Awareness training program found at 40 CFR 763.92 (a) (1) and will be two hours in length. At least one Supervising Manager will be present at the training sessions conducted for his/her staff. Refer to [Appendix E](#) for a Training Program Outline.

Supervisors and Managers that do not specifically perform Class IV work but who oversee employees that do should attend this training.

Project Managers who manage asbestos abatement, oversee the work of abatement contractors and environmental consulting firms, and plan for future abatement activities, should attend the 2 hour awareness training or another designated training program to address those specific needs.

Training attendance shall be recorded on the form in **Appendix F** and maintained on file in the EH&S Office. Employees may review and obtain copies of written training materials and regulatory text at the Office of Environmental Health and Safety during normal business hours.

## **6.0 Negative Exposure Assessments**

Boston College will hire outside abatement contractors and consultants to perform asbestos abatement and other activities which require special licenses, certifications, and may result in exposure to asbestos above the OSHA permissible exposure limit (PEL) and short-term exposure limit (STEL).

Boston College will ensure that no employee is exposed to an airborne concentration of asbestos in excess of 0.1 f/cc as an 8-hour time weighted average (PEL). Boston College will ensure that no employee is exposed to an airborne concentration of asbestos in excess of 1.0 f/cc as an averaged over a sampling period of 30 minutes (STEL). Where work practices are conducted near asbestos containing materials and there is a concern for a potential disturbance of asbestos fibers, the EH&S Office will arrange for exposure monitoring data to assess employee exposures.

For any one specific task that will be performed by employees who have been trained in compliance with the OSHA regulation, the employer may demonstrate that the employee exposures will be below the OSHA allowable exposure limits. This assessment will include a review of objective data, work practices, training, and exposure monitoring, as defined in the OSHA regulations. Employees and their designated representatives will be allowed to observe exposure monitoring.

When this assessment process concludes that performance of the task following the specified work practices is expected to consistently result in employee exposure below the PELs, that task may be classified as having achieved a Negative Exposure Assessment. Performance of that task under the conditions defined will be allowed as a non-regulated activity.

Exposure monitoring results will be communicated to all affected employees in writing as soon as possible and in no case later than within 15 work days after the receipt of the results. Results may be individually distributed or centrally posted in a location, such as the Facilities Technical Services bulletin board, for review. Tasks and associated work practices for which negative exposure assessments have been achieved are listed below. Specific work practices are described in the **Appendix G and K**. Report additional tasks of concern, as well as changes to these

established work practices which might result in new exposures to your Supervisor for review by the Environmental Health and Safety Officer.

- Buffing VAT flooring
- Lock core replacement on asbestos fire doors
- Routine work in the Central Heating Plant
- Painting of previously painted acoustical plaster ceilings containing ACM
- Knife cutting of small holes in VAT to allow for drilling beneath for cable work
- Routine work in mechanical rooms
- Routine plumbing work in mechanical rooms
- Routine work above ceilings near ACM
- Repainting of ACM paint on Modular Apartment ceilings.

## **7.0 Asbestos Abatement**

Asbestos abatement is any activity which has as its principle purpose, the removal, enclosure, or encapsulation of an asbestos containing material. This would include, but not be limited to, renovation, demolition or repair of facility components that would involve disturbance of thermal system, surfacing and any miscellaneous asbestos-containing materials. Refer to the Asbestos Project Management Closeout Form in [Appendix A](#).

Prior to conducting an asbestos abatement response action, the following steps are to be implemented:

### **7.1 Building Survey**

Prior to the initiation of any renovation, construction or demolition activity that may impact asbestos or suspect asbestos materials, the building owner is responsible for conducting an inspection, or building survey, of the affected portion of the building. Consult EH&S for a copy of the existing building survey. Where no survey or incomplete bulk sampling data of suspect materials exists, the Project Manager must arrange for a survey of the affected area to be completed by a Massachusetts certified Asbestos Inspector as outlined in Section 2.0.

### **7.2 Project Design**

Certain asbestos abatement activities are complicated enough in scope to warrant development of a comprehensive [Asbestos Abatement Specification](#) or [Scope of Work](#) (mini-specification or Work Plan) by a Massachusetts Certified Project Designer. The type and size of the written design will vary according to the complexity of the project. These documents can then be used as part of the bid process. Most projects are small enough in scale, and straightforward enough in concept, that no formal specification is required. However, the EH&S Office recommends that a written work plan be developed for all projects that are

competitively bid or last more than one work shift. The determination to prepare a formal Specification or Scope of Work will be made on a case by case basis after joint consultation between the Project Manager and EH&S. Factors which will be taken into consideration in this decision will include:

- The type of material(s) involved: ranging in a scale of hazard severity from most to least: (1) amosite and sprayed on fire proofing, (2) chrysotile and thermal system components, and (3) asphaltic bound materials like floor tile
- The size and total cost of the project
- The variety of types of materials involved
- The number of locations involved, including phasing and scheduling issues
- The need to conduct demolition to access ACM
- The complexity of containment and difficulties maintaining negative pressure in the regulated area
- The need to work adjacent to occupied areas and the concerns of the building occupants

A comprehensive Asbestos Abatement Specification is a large detailed document with legal language on performance and laws and very specific work methods. This type of document has been used for most large scale complex renovation projects on campus.

An Abatement Work Plan (Scope of Work) is site specific and outlines more general work procedures, highlighting complicated intricacies of a particular project. There may be some demolition or work in confined areas involved. Scope of Work Plans have been developed for larger abatement projects conducted in occupied buildings, and complete abatements of new, unoccupied properties purchased by the University.

A small project with a clear project description, such as “remove 10 linear feet of pipe as identified in the mechanical room by glovebag method” would not need a project design.

Project Managers may submit draft copies the EH&S Office for review and compliance in accordance with applicable regulations, documentation and University requirements. Copies of written project designs should be promptly forwarded to EH&S upon receipt. Alternately, the Project Manager may instruct the consultant to copy EH&S on all correspondence.

### **7.3 Project Bid Process**

The Project Manager will follow standard Boston College Purchasing Department Protocol utilizing the Approved Bidder’s listing to obtain quotes for an asbestos abatement project. Abatement companies subcontracted by General Contractors to perform work in campus buildings shall be preapproved by the Purchasing Department. Asbestos Abatement Companies shall not sub-contract any abatement processes.

## 7.4 External Notification

Once contractors have been selected to perform an asbestos abatement, and a project schedule has been determined, external notifications must be filed. Copies of all notifications must be faxed to the attention of the EH&S Department at (617) 552-1093 at the time of filing. Sample forms for notifications are included in **Appendix H.**

### 7.4.1 For All Work Involving Asbestos:

1. MA Department of Environmental Protection – Form ANF-001 (See *Appendix H (1)*).
  - File for all properties
  - Filed by asbestos contractor
  - File 10 working days in advance of project start date
  - \$50.00 fee or most current Fee for decal to attach to form
  - The DEP is responsible for sending this form on to the MA Department of Labor and Workforce Development
  - Timely notification to MA DEP satisfies the requirement to notify the U.S. Environmental Protection Agency- NESHAP Notice under 40 CFR Part 61
  
2. For Project Changes:
  - If start date will be moved later, contractor must telephone the DEP at least 24 hours prior to the original start date, followed by a fax and mailing a hard copy of the revised notice to both DEP and DLWD;
  - If start date will be moved earlier, and the 10 day advance period is still intact, follow the same phone, fax and mailing of the revised notification procedure

Commonwealth of Massachusetts  
 Department of Env. Protection  
 Asbestos Program  
 P.O. Box 120087  
 Boston, MA 02122-0087

Commonwealth of Massachusetts  
 Dept. of Labor & Workforce  
 Development, Asbestos Program  
 Saltonstall State Office Building  
 100 Cambridge Street, 11<sup>th</sup> Floor  
 Boston, MA 02202

### 7.4.2 For Boston Properties:

1. City of Boston / Public Health Commission / Office of Environmental Health OEH Notification for Non-Residential Commercial Asbestos Abatement Work (See Appendix H (2)).

- File for all Boston properties
- Filed by asbestos contractor
- Filed 10 working days in advance of project start date
- Fee designated by total cost of project, with a \$50.00 minimum for work under \$5000.

City of Boston  
Public Health Commission  
Office of Environmental Health  
1010 Massachusetts Avenue Boston, MA 02118

2. Boston Fire Department / Fire Prevention Division / Asbestos Removal Permit (See Appendix H (3)).

- Filed for all Boston properties
- Filed by abatement contractor
- Filed 10 working days in advance of project start date
- Fee equal to \$15.00 per month of project

Boston Fire Department  
Fire Prevention Division  
115 Southampton Street  
Boston, MA 02118

**7.4.3 For Newton Properties:**

1. Newton Fire Department / Boston College Hazard Communication Form (See Appendix B).

- Filed for all Newton properties
- Filed 10 days in advance of project start date
- Fax a completed copy of the Boston College hazard communication form, Notice of Asbestos Abatement, to the attention of Chief Joseph La Croix, Fax # (617) 796-2211, phone # (617) 796-2210.

Chief Joseph LaCroix  
Newton Fire Department  
1164 Centre Street  
Newton Center, MA 02459

**7.4.4 For All Emergency Asbestos Responses:**

Emergency asbestos responses may be arranged in response to unexpected incidents and uncontrolled events (see Section 7.6). Notification procedures are slightly different when there will be less than a 10 day advance notification period between the request and the abatement.

1. MA Department of Environmental Protection / Form ANF-001 (See Appendix H (1)).
  - Notify EH&S of the emergency situation
  - EH&S will contact the DEP by phone to request an Emergency Waiver Number to proceed with the project prior to a 10 day notice period (617) 654-6500 or (617) 654-6564 (John McAuley), M-F, 8:45 am to 5 pm
  - Provide EH&S with the following information:
    - a. the building name, address, and specific location for the abatement
    - b. the nature of the emergency and reason for waiver
    - c. the type and quantity of asbestos to be removed
    - d. the name of the asbestos abatement contractor
    - e. the name of the environmental consultant
    - f. the names of any other contractors performing work at this site
    - g. the BWPAQ06 Construction / Demolition notification number pertinent to work at this site, if applicable
    - h. the desired start date of the project
  - If an Emergency Waiver Number is issued, it will be communicated to the abatement contractor along with the name of the Inspector who issued it. (During weekends and late night periods, the DEP on-call representative may be notified via the Massachusetts State Police. It is also generally considered acceptable to leave a voice message at the DEP, proceed with the emergency response, and file the necessary paperwork on the next business day (888) 304-1133).
  - The abatement contractor will phone the DLWD, provide them with the DEP Waiver number, and request a DLWD Emergency Waiver number.
  - The contractor will fill out Form ANF-001, fax it to both the DEP and DLWD, and then mail hard copies with the required fees.
  - The contractor will notify Steve Morash, at Boston Fire Alarm, (617) 343-2880 (for Boston properties) and then proceed with the routine application and fee process as noted above.
  - The contractor will notify the City of Boston, Office of Environmental Health (617) 534-5966, and then proceed with the routine application and fee process noted above.
  - The Project Manager should fill out a hazard communication form and fax it to Newton Fire Department at (617) 796-2211 (for Newton properties).

#### 7.4.5 For Any Construction or Demolition Work:

1. MA Department of Environmental Protection / Construction or Demolition Notification / Form BWPAQ06 (See Appendix H (4)).
  - Filed by the owner or the contractor conducting the construction or demolition
  - Filed 10 working days in advance of the project start date
  - \$50.00 or current required fee for decal to attach to form

Commonwealth of Massachusetts  
 Department of Environmental Protection  
 Asbestos Program  
 P.O. Box 120087  
 Boston, MA 02112-0087

#### 7.5 Internal Hazard Communication Process

Project Managers are responsible for effective hazard communication relating to an asbestos abatement project. The internal hazard communication process should coincide with the external notification filing, providing Boston College personnel with the same 10 work day warning prior to the start date of the abatement. Hazard communication must be done in writing, with a copy sent to the EH&S Office for record keeping. The Notice of Asbestos Abatement form found in **Appendix B** may be used. A brief project description, including abatement locations, contractor information, and start and end dates should be distributed to the following parties:

1. The EH&S office will submit the *Notice of Asbestos Abatement* to the following personnel and departments:
  - Project Manager for renovation/construction
  - Campus Police Desk Officer and all Shift Sergeants
  - Environmental Health and Safety and Campus Fire Safety consultants
  - A contact individual (safety contact) for each department within the building\*
  - Facilities Technical Services Managers and Supervisors (as appropriate)
  - Facilities Services Assistant Director for Auxiliary (Housekeeping) Services
  - Project Monitor
  - Newton Fire Chief (for Newton properties)
  - Capital Projects: Director, Capital Construction

\* The current listing of building safety contacts may be obtained through the Work Order Center and the EH&S office.

Project Managers and Facilities Services Supervisors must also ensure that all outside contractors performing work in the building are aware of the presence,

location and quantity of asbestos containing materials in areas that they will be expected to work near, and of the activities of asbestos abatement contractors whose work will coincide with their own. This will be accomplished in part by the posting of signage in mechanical rooms and outside of regulated areas. Contractors and subcontractors who will work near ACM must be informed of this in writing and provided with building survey information as appropriate.

## **7.6 Emergency Asbestos Response**

There are certain situations that may arise for which a quick asbestos response is required. In these instances, the 10-day advance notification period becomes a hardship. Emergency situations are defined as unexpected events in which asbestos becomes damaged, or crucial building component repairs are needed and cannot be conducted without disturbing asbestos. The type and quantity of asbestos to be removed will typically be limited to that quantity which must be removed to return to a non-emergency situation. Examples of emergency situations might include:

- A burst pipe which is leaking
- A building with no heat
- An unexpected disturbance of ACM during construction work\*
- ACM damaged by a fire, flood, or roof leak

\* Requesting an asbestos emergency waiver will require providing the contractor's construction / demolition notification number. Lack of timely filing of this notification will put the University in jeopardy of a Notice of Non-compliance (NON).

Time constraints, project deadlines, and cost considerations do not factor into the classification of an incident as an emergency.

Follow the protocol outlined in Section 7.4 when requesting that the EH&S Office petition the DEP for an emergency waiver.

## **7.7 Air Monitoring & Project Oversight**

A Massachusetts Licensed Project Monitor who is not an employee or subcontractor of the Asbestos Abatement contractor will be hired to supervise the project, conduct visual inspections and perform clearance air monitoring in compliance with Massachusetts Department of Labor and Workforce Development Regulation 453 CMR 6.00. The Project Monitor will maintain close communication with the Environmental Health and Safety Office.

The services of a Project Monitor will be employed for all projects involving the removal or repair of ACM except those abatements involving small-scale remedial cleaning (removal of loose floor tile or debris) or removal/repair of less than three linear or three square feet of ACM. Part-time oversight may be performed in non-

occupied areas such as mechanical rooms or vacant buildings. Larger scale abatements, involving multiple glovebag set-ups, will require project monitoring. In order to waive the requirement for project monitoring, the Project Manager must seek the approval of the EH&S Office.

### **7.8 Waste Disposal and Manifest**

Any ACM removed from a the University must be wetted, containerized, labeled and disposed of as an asbestos waste in conformance with EPA NESHAPS Regulations at 40 CFR Part 61 and Massachusetts DEP Regulation 310 CMR 7.00, 18.00 and 19.00. ACM waste must be properly transported to an approved facility, maintaining waste shipment records during transport, and a final copy of the waste shipment record will be forwarded to the EH&S Office in a timely manner (within 45 days) for record-keeping.

### **7.9 Vinyl Asbestos Floor Tile (VAT) Policy**

Refer to [Appendix I](#) when projects may impact resilient flooring materials containing asbestos. Removal of asbestos containing linoleum and sheet flooring must always be conducted as an asbestos abatement. Removal of individual intact asbestos tiles may be conducted safely following prescribed work practices. Removal of large quantities of tile, and any removal project that involves breaking tiles (such as lifting carpet over VAT) must be conducted as an asbestos abatement after the appropriate notification period. Removal of carpeting that disturbs VAT will typically not meet the DEP criterion for an emergency waiver of the notification period.

### **7.10 Asphalt Roofing and Siding Policy**

Refer to [Appendix J](#) when projects involve the disturbance of roofing and siding materials. Removal of roofing and siding, regardless of the asbestos content, requires filing of the DEP Construction / Demolition notification (see Appendix H (4)). Removal of asbestos containing asphalt roofing and siding may be conducted as a non-asbestos project when prescribed work practices are followed. The EH&S Office recommends area air sampling for these projects. Consult the EH&S document “Maintaining Indoor Air Quality During Construction and Renovation Projects” in association with roof/ siding removal and replacement.

### **7.11 Asbestos Fire Door Policy**

Consult building surveys prior to removal or service to fire doors as certain doors on Campus do contain asbestos (interior white thermal block material). Boston College employees are prohibited from engaging in any fiber generating activities on asbestos fire doors (such as drilling or cutting into the door, or exposing the friable insulation). Removal of intact doors and performing tasks that have achieved a negative exposure assessment (such as lock core replacement) may be conducted safely.

Removal and disposal of asbestos fire doors must be classified as an asbestos abatement project, utilizing a licensed contractor and filing the 10 day advance notification. Contact EH&S for additional guidance.

## **8.0 Maintaining Indoor Air Quality During Construction and Renovation Projects**

Project Managers are advised to comply with the EH&S guidelines for maintaining indoor air quality during construction and renovation projects whenever an asbestos abatement project is undertaken. Review the EH&S document “*Maintaining Indoor Air Quality During Construction and Renovation Projects*” for guidance.

Project components such as solvent stripping of mastic and premature re-occupancy of these work zones may contribute to occupant reports of poor indoor air quality. A 24-hour ventilation period post abatement, where the area is kept under negative pressure and exhausted to the outdoors, is recommended whenever solvent stripping methods are employed.

## **9.0 Regulatory Agency Visits**

Project Managers shall inform contractors, consultants, and affected building occupants of the possibility of a site inspection by a representative of a regulatory agency such as the Environmental Protection Agency (EPA), the Occupational Safety and Health Administration (OSHA), the Massachusetts Department of Environmental Protection (DEP), the Massachusetts Department of Labor and Workforce Development (DLWD), the Massachusetts Department of Public Health (DPH), the Newton Board of Health, the Boston Board of Health, the Newton Fire Department (NFD) and/or the Boston Fire Department (BFD). Contractors and consultants should be prepared to present evidence of all appropriate licenses, certifications, notifications, and other pertinent records.

Project Managers shall inform contractors, consultants, and affected building occupants of the need to immediately notify the Environmental Health and Safety Office of a regulatory inspector’s arrival. Inspectors should be accommodated in a comfortable location to await the arrival of an Environmental Health and Safety staff member to accompany them on the inspection. In the absence of an EH&S escort, the appropriate Facilities Management Department Director(s) will be contacted to accompany the inspector. Do not begin the inspection without an escort. If a regulatory official collects any samples (bulk or air), Boston College shall collect split samples for independent analysis. Similarly, duplicates of any photographs taken shall be collected.

## 10.0 Operations and Maintenance

The Environmental Health and Safety Office oversees an ongoing Operations and Maintenance program.

- Approximately 200 employees campus-wide are trained at the 2-hour awareness level training to promptly report instances of asbestos disturbance to the EH&S Office for assessment and remedy.
- The EH&S Office oversees all asbestos abatement activity to ensure full compliance and document that there is no possibility for employee exposure.
- The EH&S Office has established a Negative Exposure Assessment employee monitoring program to document that work practices performed on and near asbestos containing materials do not generate fibers above OSHA Permissible Exposure Limits.
- The EH&S Office oversees a biannual air monitoring program to collect air samples in occupied spaces containing friable asbestos materials and document that there is no airborne exposure hazard.  
*Note: EH&S shall determine the scope, frequency, quantity and areas requiring air monitoring on a yearly basis. Historical data shall be used to provide risk assessment data for program management.*
- The EH&S Office administers the University's Asbestos Management Program, coordinating activities such as building surveys, signage, training, and setting priorities for future abatement activities.

## 11.0 Record-keeping

### 11.1 Documentation

The Environmental Health and Safety Office will serve as the repository for all asbestos related documentation. Promptly forward all project documents as listed Section 11.6 to the Environmental Health and Safety Officer, including:

- Inspection and bulk sample reports
- Specification or Work Plan copies
- State and other regulatory notifications and permits
- Project oversight/air monitoring reports
- Contractor OSHA air sampling results
- Contractor license and worker documentation
- Waste Shipments Records (Waste Manifests)

## **11.2 Building Surveys**

Written reports documenting the findings of asbestos building inspections and surveys shall be maintained on file in the EH&S Office. The University must maintain records of these and other miscellaneous bulk sampling data for as long as the data must be relied upon. Written notification on the identification, location, and quantity of any asbestos containing or presumed asbestos containing material must be maintained by the property owner for the duration of ownership and records must be transferred to successive owners. Individuals wishing to review these documents may do so during regular business hours.

## **11.3 Training Records**

The Environmental Health and Safety Office will maintain records of all employee training. OSHA requires that documentation of all training be maintained for one year beyond the last date of employment. DLWD requires that documentation of individual training programs be maintained for a minimum of 15 years. Document retention will be assigned based upon the most conservative ruling applying to each employee.

## **11.4 Personal Exposure Monitoring**

The EH&S Office will maintain records of all personal air samples collected to evaluate employee exposure to asbestos. Documents must include:

- Date of measurement
- The operation involving asbestos exposure that was monitored
- Sampling and analytical methods used and evidence of their accuracy
- The number, duration and results of samples taken
- The type of protective devices worn, if any
- The name, social security number and exposures of the employees represented

Records will be maintained for at least 30 years and will be made available for review by affected employees, former employees, designated representatives, and regulatory officials.

Air sampling data will be compared to the OSHA permissible exposure limits. Employees meeting the exposure criteria established in the OSHA standards will be enrolled in a medical surveillance program. Personal sampling results will be communicated to affected individuals by:

- A written report provided to the employee participants in the monitoring
- A written copy posted on a bulletin board, centrally located, for all affected employees to review
- And discussion as appropriate at department/shop meetings.

### 11.5 Medical Surveillance

If medical surveillance of an employee is required or conducted, the Health Services Department will maintain all confidential medical surveillance records for the duration of the employee's employment plus 30 years. The Environmental Health and Safety Office may retain abbreviated documents, such as a brief physician's written opinion about whether or not an employee may wear respiratory protection. Records maintained by health Services shall include:

- Employee's name and social security number
- The employee's medical exam results, including the medical history, questionnaires, responses, test results, and physician's recommendations
- The physician's written opinions
- Any employee medical complaints related to asbestos exposure
- A copy of any information provided to the examining physician

Employee medical surveillance records will be made available to the subject employee, anyone having specific written consent of this employee, and OSHA's Assistant Secretary.

### 11.6 Asbestos Project Documents

The Environmental Health and Safety Office shall maintain all appropriate documentation related to asbestos abatement projects. Documents will be maintained for a minimum of 30 years. Project Managers will ensure that EH&S receives all pertinent documents, including but not limited to those listed below, in a timely fashion:

- Survey and bulk sampling analysis reports
- Project Design / Scope of Work
- Bids / Quotes
- Asbestos Notification Forms
- Construction / Demolition Notification Forms
- Hazard Communication Forms
- Project Monitoring / Air Sampling Reports
- Disposal Manifests
- Invoices
- Asbestos Abatement Project Management Form

Project Managers may utilize the Asbestos Abatement Project Management Closeout Form in [Appendix A](#) as an outline for record keeping submission requirements.

## **12.0 Appendices**

### **A. Asbestos Abatement Project Management Closeout Form**

### **B. Notice of Asbestos Abatement**

### **C. Signage and Labeling**

- 1. Regulated Area Signage**
- 2. Mechanical Room Signage**
- 3. Asbestos Warning Labels**
- 4. Asbestos Free Labels**

### **D. Lockout Area Report**

### **E. Training Outline**

### **F. Training Sign In Sheets**

### **G. Negative Exposure Assessment Work Practices**

### **H. External Notification Forms**

- 1. Massachusetts DEP/DLWD Asbestos Notification**
- 2. Boston Office of Environmental Health Notification**
- 3. Boston Fire Department Notification**
- 4. DEP Construction / Demolition Notification**

### **I. Resilient Flooring Material Policy**

### **J. Asphalt Roofing and Siding Policy**

### **K. General Work Practices**

## **Appendix A**

# **Asbestos Abatement Project Management Closeout Form**

# ASBESTOS ABATEMENT PROJECT MANAGEMENT CLOSEOUT FORM

**EH&S Project #:** \_\_\_\_\_ **Building:** \_\_\_\_\_

**Floor:** \_\_\_\_\_ **Location:** \_\_\_\_\_

**Contractor:** \_\_\_\_\_ **Project Monitor:** \_\_\_\_\_

**BC Project Manager:** \_\_\_\_\_ **Funding Type:** \_\_\_\_\_

**Design/Work Plan?:** \_\_\_\_\_ **Pre-Bid:** \_\_\_\_\_

**Project Dates:** \_\_\_\_\_ **BC Notification:** \_\_\_\_\_

**General Contractor?:** \_\_\_\_\_ **SubContracted Abatement?:** \_\_\_\_\_

**Abatement Contractor Notified:** \_\_\_\_\_ **Project Monitor Notified:** \_\_\_\_\_

**Scope of Work:** \_\_\_\_\_

**Submittals:**

**A. State Notification:** \_\_\_\_\_ **Complete:** \_\_\_\_\_

**B. Project Monitoring Report:** \_\_\_\_\_ **Complete:** \_\_\_\_\_

Air samples: \_\_\_\_\_ Daily Logs: \_\_\_\_\_ Checklists: \_\_\_\_\_

**C. Waste Manifest:** \_\_\_\_\_ **Complete:** \_\_\_\_\_

**D. Invoices:** Received: \_\_\_\_\_ Approved: \_\_\_\_\_ Paid: \_\_\_\_\_

**Comments:** \_\_\_\_\_

**Asbestos Remaining in Work Area:** \_\_\_\_\_

**Appendix B**

**NOTICE OF ASBESTOS ABATEMENT**

**(EXAMPLE)**  
**NOTICE OF ASBESTOS ABATEMENT**

**TO:** Campus Police / Desk Officer

**EH&S:** Paul Matuszko, Environmental Health and Safety Officer.  
Arthur Andersen Fire Safety Consultant, Don Wood Fire Safety Officer

**Building Contacts:**

Housing: Catherine M. O'Connor  
HVAC Shop: Brian O'Connor  
Electrical Shop: Joe Ducie, Frank Martins  
Plumbing Shop: Lou Mauro  
Plant Services: Gerry Boyle  
Project Monitor: TBD  
Chief LaCroix, Newton Fire Department

**FROM:** Paul Matuszko (617-552-0303)

**NOTICE DATE:**

Please be advised that an asbestos abatement project will be conducted as listed below. Inquiries may be directed to the Project Manager or to Paul Matuszko in the EH&S Office at x 2-0303. Asbestos abatement projects are conducted in full compliance with Federal, State and Local regulations. Project documentation is kept on file and is available for review at the EH&S Office.

**PROJECT LOCATION:**

**PROJECT MANAGER:**

**ABATEMENT CONTRACTOR:**

**PROJECT MONITOR:**

**START DATE:**

**COMPLETION DATE:**

**COMMENTS:** The abatement project will involve the removal of asbestos containing.....

For Newton properties, FAX a copy of this notice to, (617) 552-2211. Documentation of Fax may be sent to EH&S for recordkeeping.

## **Appendix C**

### **Signage and Labeling**

- 1. Regulated Area Signage**
- 2. Mechanical Room Signage**
- 3. Asbestos Warning Labels**
- 4. Asbestos Free Labels**

(SEE FILE VERSION)

**Appendix D**  
**Lock Out Area Report**

## Boston College Asbestos Material Lock Out Area Report

LOCKOUT AREA	REASON FOR LOCKOUT	CONDITIONS FOR ENTRY
<b>Lyons Attic</b> - accessed by ladder through custodial closet	Sprayed on asbestos fireproofing <b>ABATED Summer '99*</b>	<b>Main Attic area – Reopened</b> Note: Side attic eaves enclosed and remains restricted access area, asbestos fireproofing remains
<b>Stuart Attic</b> - accessed via 5 <sup>th</sup> floor roof access	Spray applied asbestos fireproofing throughout attic	Access restricted due to extensive asbestos fireproofing on ceiling and floors. Entrance restricted to authorized individuals with protective clothing and respiratory protection. Access must be approved by EH&S.
<b>St Thomas More Hall Sub-basement</b> – accessed through loading dock	Damaged thermal system insulation in sub-basement and crawl space.	Access restricted due to damaged asbestos on floors. Area is rarely entered, so is not prioritized for abatement. Entrance restricted to authorized personnel wearing protective clothing and respiratory protection. Visual assessment of the space (for flooding) may be made from the doorway without special equipment. Access must be approved by EH&S.
Kostka Crawl Space	Damaged thermal system insulation in crawl space <b>* ABATED Summer '98*</b>	<b>Reopened</b>
Gonzaga Crawl Space	Damaged thermal system insulation in crawl space <b>*ABATED Summer '98*</b>	<b>Reopened</b>
Shaw Crawl Space	Damaged thermal system insulation in crawl space  <b>*ABATED December 1999*</b>	<b>Reopened</b>
Mary House Crawl Space	Damaged thermal system insulation and debris in crawl space only. <b>*ABATED January 2000*</b>	<b>Reopened</b>

LOCKOUT AREA	REASON FOR LOCKOUT	CONDITIONS FOR ENTRY
<b>Barat House</b> – pipe chases and closets – see diagram	<ul style="list-style-type: none"> <li>• Basement chases both ends of rec room</li> <li>• Basement chase under stairs</li> <li>• Basement closet behind bar in kitchen</li> <li>• 3<sup>rd</sup> Floor knee wall storage area</li> </ul> All have damaged thermal system insulation and debris.  <b>*ABATED January 2000*</b>	<b>Reopened</b>
<b>Alumni House</b> –2 <sup>nd</sup> floor A/V closet	Damaged ACM thermal system insulation  <b>*ABATED March 2000*</b>	<b>Reopened</b>
<b>Stuart Hall – crawlspace (Caution)</b>	<b>ACM debris Abated June, 2003</b> Asbestos contaminated soil remains (trace – 1.8% asbestos)	Crawlspace enclosed with poly sheeting – <b>Open for Access</b> – <b>do not impact soil to create airborne dust</b>

Prepared - 1999

Revised - January, 2004

**Appendix E**  
**Training Outline**

## **Appendix E**

### **Training Outline Asbestos Awareness 2 Hour Training Class IV Operations**

- I. Information regarding asbestos and its various types, uses and applications.
- II. Information on the health effects associated with asbestos exposure.
- III. Locations of ACM and PACM as identified by building surveys.
- IV. Recognition of damage, deterioration and de-lamination of ACM.
- V. Policies and procedures set forth in the Boston College Asbestos Management Program, including review of proper work practices, notification of damaged ACM to Supervisors, etc.
- VI. The names and telephone numbers of the responsible parties designated to carry out the responsibilities of the Asbestos Management Program (EH&S).
- VII. The availability of self-help smoking cessation programs coordinated through the Boston College Health Services Department.

**Appendix F**  
**Training Sign In Sheets**



## **Appendix G**

### **Negative Exposure Assessment Work Practices**

(\*See File Version)

## **Appendix H**

### **External Notification Forms**

- 1. DEP / DLWD Asbestos Notification**
- 2. Boston Office of Environmental Health Notification**
- 3. Boston Fire Department Notification**
- 4. DEP Construction / Demolition Notification**

(See File Version)

**Appendix I**  
**Resilient Flooring Material Policy**

## Office of Environmental Health & Safety

### Resilient Flooring Material Policy / ASB 96-001

#### I. Regulatory Authority

- A. OSHA 29 CFR 1926.1101 for Class II Work
- B. Massachusetts Department of Environmental Protection 310 CMR 7.00 and Policy # BWP-96-012 dated 4/1/96.
- C. Massachusetts Department of Labor and Workforce Development (DOLWD) 453 CMR 6.00

Note: Copies of these regulations are available for review in the Environmental Health and Safety Office.

#### II. Protocol

- A. Resilient flooring materials (vinyl asbestos tile – VAT) installed prior to 1981 must be presumed to contain asbestos until analyzed to prove otherwise. This includes both 9”x9” floor tile and 12”x12” floor tile.
- B. OSHA regulations state that resilient flooring materials in buildings constructed or completely renovated after 1981 may be assumed to be non-asbestos. **However, since asbestos was still being used in flooring materials during the 1980’s, bulk sampling and analysis for asbestos content should be conducted for all floor tile types and sizes including the underlying mastic.**
- C. For pre 1981 buildings thought to have had spot repairs with non-asbestos flooring after 1981:
  - 1. Provide documentation of non-asbestos floor tile installation with the date of the specific floor replacement and product data, or presume the flooring to contain asbestos until analyzed to prove otherwise.

#### III. Laboratory Analysis

- A. Collect a sample of each type, color and age of floor tile, and the associated mastic, in the space. Three or more samples should be collected for areas containing greater than 1,000 square of tile to prove the material non-asbestos. Contact EH&S for bulk sampling assistance. Samples will be analyzed by visual estimation using Polarized Light Microscopy via EPA Methods. Broken, damaged floor tile containing greater than 1% asbestos must be handled by an asbestos abatement contractor.
- B. Samples reported as “trace” or less than 1% asbestos by visual estimation must be confirmed by +/- Transmission Electron Microscopy in order to be considered negative (non-asbestos).

#### IV. Work Practices and Disposal Guidelines

- A. The material must not be broken, sanded, drilled, sawed, ground or bolted/shot through. Additionally, the material must not be compacted or incinerated, or dropped from an elevation.
- B. The material must be properly wetted, packaged and disposed of in a Department of Environmental Protection (DEP) permitted solid waste landfill that specifically accepts non-friable flooring asbestos waste.
- C. Any demolition involving these materials must comply with 310 CMR 7.09 (3) and (4) (Dust, Odor, Construction and Demolition).
- D. If these guidelines are strictly observed (tiles are maintained intact), the ten (10) working day advance notification need not be filed, and an Asbestos Contractor need not be hired. Examples of when these guidelines might be followed include;
  - 1. Selective removal of a few floor tiles for replacement purposes and if the tiles may be removed entirely intact, as with a heat gun or are removed intact due to water damage;
  - 2. Extensive VAT removal, which breaks any tiles, would violate these guidelines and be deemed an asbestos abatement project, and shall be performed in full compliance with the regulations by a licensed abatement contractor. Examples of situations which must be handled as an asbestos abatement project would include;
    - a. Removal of all of the VAT from a given space,
    - b. Carpet removal operation which begins to pull up large numbers of tiles, some of which break, and also leaves behind sections of flooring which then need to be scraped up prior to carpet replacement.
- E. **In-House Handling:** Loose, intact tiles shall not be disposed as general waste and shall not be thrown in dumpsters, trash cans, etc. Tiles shall be placed in plastic bags, wetted and locked in a secured mechanical or janitorial room. The EH&S office shall be promptly notified of the quantity and location of the tile for future disposal.
- F. If the material is in a deteriorated state prior to commencing demolition/renovation operations, then 310 CMR 7.15 asbestos controls shall be complied with including notification to the DEP and proper disposal.
- G. **Other Flooring Materials:** Vinyl linoleum and sheet flooring (including the underlying paper backing) which contain asbestos **is always considered friable** and is not considered non-friable VAT and must always be handled as an asbestos abatement project.
- H. Removal of VAT as an asbestos abatement project must be in full compliance with Massachusetts Department of Labor and Workforce Development Regulations, 453 CMR 6.00, Asbestos. **If a project begins under allowable handling guidelines and VAT begin to break, all activity must cease and asbestos abatement regulations will be enforced.**

- I. Asbestos abatement of VAT will require critical barriers, a decontamination chamber, negative pressure, wet removal methods, advance notification, and clearance air monitoring.

**Questions regarding this information may be directed to Environmental Health and Safety at 552-0303.**

ASB Flooring Policy 2/99  
Revised 2/04

## **Appendix J**

### **Asphalt Roofing and Siding Policy**

## Environmental Health and Safety Office

### Asphalt Roofing and Siding Policy / ASB 99-002

#### I. Regulatory Authority

- A. OSHA 29 CFR 1926.1101 for Class II Work
- B. Massachusetts Department of Environmental Protection 310 CMR 7.00 and Policy # BWP-96-012 dated 4/1/96
- C. Massachusetts Department of Labor and Workforce Development (DOLWD) 453 CMR 6.00

Note: Copies of these regulations are available for review in the Environmental Health and Safety Office.

#### II. Protocols

- A. Consult the building survey to determine if the roofing materials contain asbestos. Contact the EH&S Office (2-0303) for inspection and bulk sampling assistance.
- B. Where no survey is available, arrange to conduct bulk sampling for asbestos analysis for those materials which will be impacted by the project. This inspection should be a component of the overall project budget. Alternatively, you may assume that the material does contain asbestos and forego laboratory analysis. Suspect materials that require bulk sampling for asbestos content include:
  - 1. Built up felt roofing material;
  - 2. Flashing mesh material at perimeter edging and at HVAC equipment penetrations;
  - 3. Tar, mastic and putty;
  - 4. Additionally, asbestos materials may be present on HVAC ducting and piping systems.
- C. Roofing removal projects, whether asbestos or non-asbestos, require that a Massachusetts Department of Environmental Protection **BWPAQ06** Construction/Demolition Notification be filed 10 working days in advance of the start date.
- D. If the roof materials contain asbestos and the work can be conducted according to the DEP handling and Disposal Guidelines and the material can be handled essentially intact so that it does not become classified as an OSHA Class II Operation, then the work need not be conducted as an asbestos abatement project and the asbestos notification need not be filed.

- E. The asbestos waste must be separated from non-asbestos waste (in a separate lined dumpster) and disposed in a permitted solid waste landfill that specifically accepts non-friable asbestos roofing waste.
- F. Any demolition involving these materials must comply with 310 CMR 7.09 (3) and (4) (Dust, Odor, Construction and Demolition).
- G. **Other Materials:** This policy applies only to asphalt containing roofing and siding materials. Non-friable brittle, cementitious roofing shingles and siding (transite board) products require full compliance with asbestos regulations.

### III. Work Practices

- A. The asbestos material must not be drilled, sanded, sawed or ground by mechanical operations (power saws). An alternate cutting method must be found. Additionally, the material must not be compacted, incinerated, or dropped from an elevation greater than ten feet.
- B. During roof removal and replacement, the following building protection shall be implemented:
  - 1. Coordinate the shut down all HVAC equipment and seal openings with poly sheeting to prevent odors and dust from entering the building.
  - 2. Poly sheeting shall be placed on surfaces under the work to collect fallen debris. Additionally, all fallen debris shall be removed daily and placed in waste containers.
  - 3. Waste shall be removed from the roof safely via pre-approved methods.
- B. The material must be disposed of in a Department of Environmental Protection (DEP) permitted solid waste landfill that accepts non-friable asbestos waste.
- C. Any demolition involving these materials must comply with 310 CMR 7.09 (3) and (4): Dust, Odor, Construction and Demolition.
- D. The material must be assessed by a Competent Person and found to be intact, and to remain essentially intact during removal operations.
- E. If the material is in a deteriorated, dry or crumbled condition prior to removal, becomes deteriorated during removal procedures or this policy is not followed, then the operation must cease and the 310 CMR 7.15 asbestos controls must be complied with including notification and disposal at a Special Waste permitted landfill. (Cutting intact roofing into smaller sections does not render it non-intact.).

- G. In order to protect the University and collect documentation that there has been no airborne emission of asbestos during roofing removal, representative air monitoring by an environmental consulting firm is strongly recommended.
- H. Review replacement materials for asbestos content. When possible, select non-asbestos replacement materials.
- I. Update building surveys to reflect changes by forwarding copies of all project documentation (notifications, air sample reports, etc.) should be forwarded to EH&S for recordkeeping.
- J. Roof removal and roof replacement procedures should be done in conformance with the guidelines contained within the EH&S Policy entitled “Maintaining Indoor Air Quality During Construction and Renovation Projects” as well as OSHA regulation for Fall Protection.

Questions regarding this information may be directed to Environmental Health and Safety at 552-0303.

ASB Roofing Policy 2-99  
Revised 2/04

## **APPENDIX K**

### **General Work Practice Policies**

#### **1.0 General Policy Statement:**

- A. It is the intent and policy of the University that their employees shall not disturb, remove, repair or handle ACMs in any manner during their work activities. Employees shall not perform minor clean-up or small-scale abatement activities of ACMs and contaminated debris.
- B. Asbestos abatement activities shall be performed only by approved vendors (licensed abatement contractors). Refer to the EH& S emergency contact list and Approved Abatement Contractor List for applicable phone numbers. Asbestos abatement related work shall be undertaken by outside contractors only with approval of Boston College project managers.

#### **2.0 ACM Identification By Employees:**

- A. It is the responsibility of each employee to familiarize themselves with the general asbestos-containing material types and locations within each building that their work function is being conducted in. This information is available in the inspection reports developed for the Facility. Summary reports for each building shall be made available in a central location for review.
- B. Routine work activities that employees have the potential to come in contact with ACMs include:
  - 1. Routine maintenance work
  - 2. Routine cleaning activities
  - 3. Repair on pipes and valves where adjacent asbestos insulated pipes and fittings exist
  - 4. Electrical and other trades work on systems and equipment at/above ceilings levels where asbestos thermal system insulation exists.
  - 5. Installation of telecommunication systems at floors and above ceilings
- C. Employees shall not disturb or damage any identified confirmed or suspect ACMs. Work may be conducted safely in and around areas containing properly maintained asbestos-containing materials. Proper work practices shall be utilized as outlined in the training course and O&M Program (i.e. not disturbing the integrity of the asbestos materials).
  - 1. Employees should inform their immediate Supervisor or Manager of any suspect building materials that are disturbed or damaged. This will allow for quicker remediation of the damaged ACMs.

2. Inform the immediate supervisor if the potential for ACM disturbance exists for the job related function.
- C. Suspect materials not identified in the inspection summary reports, should be referred to the Asbestos Coordinator for evaluation prior to any work. This material should be considered asbestos-containing until bulk sample analysis proves the material is non-asbestos.
  - D. Any questions, requests, hazard recognition or other correspondence related to asbestos containing materials will be directed, through proper Departmental channels, to the Asbestos Site Coordinator as soon as possible.
  - E. Any activity that releases asbestos fibers into general workspace will require the services of an abatement contractor. Work shall cease unless emergency conditions exist (i.e. water leaks, broken pipes). The scope of work that may impact the ACMs will be decided by the Project Manager.
  - F. Any asbestos related work shall be performed in occupied areas on evenings when the building is not occupied. The HVAC system affecting the area will be shut down or modified during the activity.
  - G. If a University employee or contractor's work is not directly related to asbestos, every effort must be made to avoid damage or disturbance of asbestos containing materials. Where emergency work must be done in an area where contamination of surfaces, with asbestos fibers or friable asbestos containing materials are likely to release fibers, respiratory and personal protection shall be used and work area isolation established.

### **3.0 Prohibited Activities:**

- A. These are routine maintenance activities that are prohibited when ACM is involved:
  1. Do not drill holes in asbestos containing materials (walls, ceilings, floors, etc.).
  2. Do not hang plants or pictures on structures that contain or are covered with ACM.
  3. Do not sand or drill VAT flooring and linoleum flooring materials.
  4. Do not damage ACM while moving furniture or equipment.
  5. Do not install drapes, curtains or dividers in such a way that they damage ACM.
  6. Do not dust, floors ceilings, moldings or other surfaces in asbestos contaminated environments with a dry brush, cloth or broom.
  7. Do not use an ordinary vacuum to clean up asbestos containing debris.

8. Do not remove ceiling tiles below ACM without wearing the proper respiratory protection, clearing the area of other people, and observing asbestos removal waste disposal procedures.
9. Do not remove ventilation system filters dry.
10. Do not shake ventilation system filters.

#### 4.0 Custodial Guidelines:

##### A. Locations With Friable ACMs:

1. Do not damage or disturb friable ACMs that would create a fiber release episode. These friable materials include boiler, pipe, fitting and duct insulation, spray-applied fireproofing, plaster, etc. Contact supervisor for work and communication protocols to be implemented.

##### B. Locations With Non Friable ACM:

1. Do not damage or disturb non-friable ACMs that would create an airborne dust. Non-friable ACMs include floor tile, transite board, linoleum flooring, caulking sealants, etc.

##### C. Asbestos-Containing Flooring Material Guidelines:

1. **Avoid Stripping Floors:** The stripping of floor tiles should be performed as infrequently as possible. Properly schedule floor stripping according with maintenance schedules and during off hours and vacations periods, etc. The custodial staff shall be properly trained to operate the equipment and handling the pads, strippers and chemicals used.
2. **Proper Work Practices:** Custodial and/or maintenance staff who strip floors shall follow appropriate work practices, as outlined herein and as directed by supervisors. Additionally, perform the work in accordance with manufacturer recommendations. If required, consult manufacturer for additional information and proper work practices.
3. **Strip Floor When Wet:** Floor shall be kept adequately wet during the stripping operations. **Do Not Perform Dry Stripping.** Prior to operating machinery, an emulsion of chemical stripper in water shall be applied to the floor with a mop to soften the wax or finish coat. After stripping and before application of the new wax layer, the floor surface shall be thoroughly cleaned while wet.

4. **Machinery Operation:** If the machine is used to remove the wax or finish coat has variable speeds, it should be run at slow speed (**approximately 175-190 rpm**) during the stripping operations.
5. **Abrasive Pad Selection:** The USEPA recommends that the stripping machine be equipped with the *least abrasive pad* possible to strip wax or finish coat from asbestos-containing flooring.
6. **Do Not Strip Floor:** Stop stripping when the old surface is removed. Overstripping can damage the floor and may cause the release of asbestos fibers. **Do Not** operate the floor machine with an abrasive pad on an unwaxed or unfinished floor.
7. **Note:** Removing non-friable flooring by improper methods and lack of engineering controls may result in the release of airborne asbestos fibers. Leave floor coverings intact and in good condition. Follow procedures outlined in the O&M Program.